

Annual Report 2014-2015



Indian Institute of Technology Guwahati



Annual Symposium on Solid Waste Management - RECYCLE 2014



Workshop on GPU Programming and Applications (GPA-2014)



Participants of Ishān Vikās pilot phase



Prof. Gautam Biswas, Director, IIT Guwahati, awarding a certificate to one of the participants of the Ishān Vikās programme pilot phase



IEEE Student Branch Workshop on Advanced MATLAB (AdMAT 14)



Mathematics Training and Talent Search Programme - 2014



STC on Advanced Techniques in Cellular and Molecular Biology



National Conference on Sustainable Development of Environmental Systems (NCOSDOES 2014)



A cultural performance at a students' festival



Conference on North East in India's Look East: Issues and Opportunities



Postgraduate Level Training Programme on Differential Equations

ANNUAL REPORT 2014–2015



Indian Institute of Technology Guwahati

Guwahati 781039, INDIA

Indian Institute of Technology Guwahati

Indian Institute of Technology Guwahati is the sixth member of the IIT family. Indian Institute of Technology–Assam Society was formed in February 1989. The foundation stone of IIT Guwahati was laid in July 1992 in Guwahati. The Institute of Technology (Amendment) Act 1994, passed by the Parliament, was notified in the Gazette of India on May 26, 1994, by which the IIT Guwahati–Assam Society was made into IIT Guwahati. By the Gazette of India notification of the Ministry of Human Resource Development dated September 1, 1994, the Central Government declared September 1, 1994, as the date on which the Institute of Technology (Amendment) Act 1994 (No. 35 of 1994) came into force and IIT Guwahati was established. Enrollment of students started in 1995.

Annual Report 2014–2015: Highlights

Growth			
Particulars	2013–2014	2014-2015	Growth in %
Student Strength	4891	5186	6.03
Faculty Strength	342	372	8.77
R&D Funds Received (In crores of `)	33.67	73.95	120
Total Research Publication	1248	1250	0.2

Major R&D Projects Received:

- National Initiative for setting up of Design Innovation Centre (Department of Design) ` 100 crores (MHRD)
- A Pilot Project on Ishan Vikas, ` 60 crores (MHRD)
- Establishment of centre of excellence for training and research in frontier areas of science and technology (Department of Chemistry) ` 40 crores (MHRD)
- Mathematical model study of the river Brahmaputra with emphasis on climate change (Department of Civil Engineering) ` 2.8 crores (Govt. of India, Brahmaputra Board)
- Technical Education Quality Improvement Programme (Centre for Educational Technology) ` 2.5 crores (MHRD)

Major Conference Held:

- Conference on North East in India's Look East: Issues and Opportunities, October 2014
- International Ergonomics Conference (HWWE 2014), December 2014
- National Conference on Recent Advances in Cancer Biology and Therapeutics, December 2014
- XXI DAE-BRNS High Energy Physics Symposium, December 2014
- 5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2014), December 2014
- 3rd NKN Annual Workshop, December 2014

Annual Report 2014–2015: A Quick Look

Department/Centre	
Academic Department	11
Academic Centre	4
Service Centre	4

Grants (Rs. in crores)		
MHRD	Non-Plan: 153.33	Plan: 143.50
Total	Rs. 296.83 crores	

Students Admitted	
Preparatory	3
BTech/BDes	632
MTech/MDes	398
MSc/MA	163
PhD/DUAL Degree	369
Total	1565

Students Strength	
Preparatory	3
BTech/BDes	2570
MTech/MDes	760
MSc/MA	309
PhD/DUAL Degree	1544
Total	5186

Number of Degrees Awarded 16 th Convocation (13 July 2014)	
BTech/BDes	547
MTech/MDes	441
MSc	117
MA	21
PhD	106
Total	1232

Faculty/Staff Strength	
Faculty	372
Scientific Staff	36
Non-Teaching Staff (Group A)	33
Non-Teaching Staff (Group B & C)	347
Total	788

Research Papers	
Journal Papers	763
Conference Papers	487
Total	1250

Consultancy Projects	
New Projects	119
Outlay (Rs. in crore)	3.25

Sponsored Research Projects	
New Projects	82
Outlay (Rs. in crore)	50.00

C O N T E N T S

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PART I

Organisation

IIT Council

Board of Governors

Senate

Finance Committee

Building and Works Committee

Executive Summary

Organisation

Chairman, Council of IITs

Smt. Smriti Zubin Irani

Hon'ble Minister for Human Resource Development,
Govt. of India

Chairman, Board of Governors

Dr. R. P. Singh

Former Chairman and Managing Director
Power Grid Corporation of India Limited

Director

Prof. Gautam Biswas

Deputy Director

Prof. S. Nandi

Dean, Academic Affairs

Prof. A. K. Ghosal (Up to 15.12.2014)

Prof. M. G. P. Prasad (From 16.12.2014)

Dean, Faculty Affairs

Prof. A. Srinivasan (Up to 31.08.2014)

Prof. P. Mahanta (From 01.09.2014)

Dean, Research and Development

Prof. D. Chakraborty

Dean, Students' Affairs

Prof. Chandan Mahanta

Dean, Infrastructure, Planning and Management

Prof. A. Dutta (Up to 22.07.2014)

Prof. S. K. Kakoty (From 23.07.2014)

Dean, Alumni Affairs and External Relations

Prof. S. C. Mishra

Dean, Outreach Education Programme

Prof. A. K. Gogoi

Associate Dean, Academic Affairs

Prof. A. Saikia (From 01.04.2014)

Associate Dean, Institute Works

Dr. R. K. Bhattacharjya

Associate Dean, Research and Development

Prof. Chitrlekha Mahanta (Up to 19.11.2014)

Prof. S. R. M. Prasanna (From 20.11.2014)

Associate Dean, Students' Affairs

Prof. L. Rangan (Up to 20.11.2014)

Prof. K. Pakshirajan (From 20.11.2014)

Registrar

Dr. B. N. Raychoudhury (Up to 30.11.2014)

Mr. U. C. Das (From 01.12.2014)

Head, Department of Biosciences and Bioengineering

Prof. V. V. Dasu

Head, Department of Chemical Engineering

Prof. V. S. Moholkar

Head, Department of Chemistry

Prof. B. K. Patel

Head, Department of Civil Engineering

Prof. A. K. Sarma (Up to 19.01.2015)

Prof. S. Dutta (From 20.01.2015)

Head, Department of Computer Science and
Engineering

Prof. S. B. Nair (Up to 31.08.2014)

Prof. D. Goswami (From 01.09.2014)

Head, Department of Design

Prof. D. Chakrabarti

Head, Department of Electronics and Electrical
Engineering

Prof. R. Bhattacharjee (Up to 31.10.2014)

Prof. Chitrlekha Mahanta (From 01.11.2014)

Head, Department of Humanities and Social Sciences

Dr. A. Saikia

Head, Department of Mathematics

Prof. B. K. Sarma

Head, Department of Mechanical Engineering

Prof. P. Mahanta (Up to 02.09.2014)

Prof. A. K. Dass (From 03.09.2014)

Head, Department of Physics

Prof. S. Basu

Head, Centre for Energy

Prof. A. K. Ghoshal (Up to 01.04.2014)

Prof. P. Goswami (From 02.04.2014)

Head, Centre for the Environment

Prof. G. Das

Head, Centre for Nanotechnology

Prof. R. P. Paily

Head, Central Instruments Facility

Dr. G. Krishnamoorthy

Head, Centre for Educational Technology

Prof. P. Yammiyavar

Head, Computer Centre

Prof. D. Goswami (Up to 31.08.2014)

Prof. S. V. Rao (From 01.09.2014)

Head, Centre for Linguistics Science and Technology

Prof. S. Nandi (From 31.12.2014)

Head, Centre for Career Development

Prof. S. Natesan

Librarian

Dr. T. Guha



IIT Council

Minister in charge of Technical Education in the Central Government (Ex-Officio)	Chairman
Chairman of Board of Governors of all Indian Institutes of Technology (Ex-Officio)	Member
Director of all Indian Institutes of Technology (Ex-Officio)	Member
Chairman, University Grants Commission (Ex-Officio)	Member
Director General, Council of Scientific and Industrial Research (Ex-Officio)	Member
Chairman, Indian Institute of Science, Bangalore (Ex-Officio)	Member
Director, Indian Institute of Science (Ex-Officio)	Member
Three nominees of the Central Government	
To represent the Ministry concerned with Technical Education	Member
To represent the Ministry of Finance	Member
To represent any other Ministry	Member
Nominee of the All India Council for Technical Education (AICTE)	Member
Nominees of the Visitor (minimum 3 and maximum 5)	Member
Three Members of Parliament (two from Lok Sabha and one from Rajya Sabha)	Member
Secretary to the Council	Secretary

Board of Governors

Chairman

Dr. R. P. Singh

Former Chairman and Managing Director
Power Grid Corporation of India Limited
29, Paschimi Marg, First Floor
Vasant Vihar, New Delhi 110 057

Member (Ex-Officio)

Prof. Gautam Biswas

Director
IIT Guwahati

Member-Nominees of the IIT Council

Prof. Asis Datta

Professor of Eminence
National Institute of Plant Genome Research
Aruna Asaf Ali Marg, Post Box No. 10531
New Delhi 110 067

Prof. M. K. Chaudhuri

Vice-Chancellor
Tezpur University
Napaam, Tezpur 784 028

Shri N. K. Sinha

Joint Secretary
Bureau of Distance Learning and Scholarships
MHRD, Dept. of Higher Education
Shastri Bhavan, New Delhi 110 115

Mr. Pydah Venkatanarayana

Member, Pydah Educational Academy
3-16B-115, Santhi Nagar, Kakinada - 533 003

Dr. D. B. Goel

Former Professor, IIT Roorkee
268/5, 16 Civil Lines
Roorkee - 247 667

Member-Nominee of the Govt. of Assam

Shri H. K. Sharma, IAS

Commissioner and Secretary to the Govt. of Assam
Higher Education (Technical) Department
Dispur, Guwahati 781 006

Member-Nominee from North Eastern Region

Mr. Er. Liansanga

Ex Engineer-in-Chief, PWD
Shivaji Tillah, Khatla
Aizawl, Mizoram

Member-Nominees of the Senate

Prof. P. S. Robi (Up to 31.12.2014)

Professor
Department of Mechanical Engineering
IIT Guwahati

Prof. R. Alam (From 01.01.2015)

Professor
Department of Mathematics
IIT Guwahati

Prof. A. Chattopadhyay

Professor
Department of Chemistry
IIT Guwahati

Secretary (Ex-Officio)

Dr. B. N. Raychoudhury (Up to 30.11.2014)

Registrar
IIT Guwahati

Mr. U. C. Das (From 01.12.2014)

Registrar
IIT Guwahati

Senate

Composition of the Senate

- | | |
|---|-------------------------|
| 1. The Director | Chairman (Ex-Officio) |
| 2. The Deputy Director | Member (Ex-Officio) |
| 3. All Professors of the Institute | Members (Ex-Officio) |
| 4. Three persons, not being employees of the Institute, to be nominated by the Chairman, BOG in consultation with the Director, from among educationists of repute, one each from the fields of science, engineering and humanities
Prof. Kulendu Pathak
108A, B. K. Kakati Road, Ulubari
Guwahati 781 007

Dr. Pranab Bharali
1-A, Royal Point, House No. 18
Basisthapur, 1st Bye Lane (Gautam Upapath)
Guwahati 781 006

Prof. A. C. Bhagabati
National Highway No. 37 (Bypass)
Guwahati 781 014 | Board Nominated Members |
| 5. Head of the Academic Departments and Academic Centres | Members (Ex-Officio) |
| 6. Librarian of the Institute | Member (Ex-Officio) |
| 7. Chairman, Hostel Affairs Board | Member |
| 8. Registrar of the Institute | Secretary (Ex-Officio) |

Finance Committee

Dr. R. P. Singh

Former Chairman and Managing Director
Power Grid Corporation of India Limited
29, Paschimi Marg, First Floor
Vasant Vihar, New Delhi 110 057

Chairman (Ex-Officio)

Prof. Gautam Biswas

Director
IIT Guwahati

Member (Ex-Officio)

Director (IITs)

Department of Higher Education
Ministry of Human Resource Development, Govt. of India
Shastri Bhavan, New Delhi 110 115

Member

Director (Finance)

Integrated Finance Division, Department of Higher Education
Ministry of Human Resource Development, Govt. of India
Shastri Bhavan, New Delhi 110 115

Member

Prof. Dilip Kr. Barua (From 16.09.2014)

Former Principal, Cotton College, Guwahati

Member

Prof. P. K. Bora (From 05.09.2014)

Professor, Department of Electronics and Electrical Engineering
IIT Guwahati

Member

Dr. B. N. Raychoudhury (Up to 30.11.2014)

Registrar
IIT Guwahati

Secretary (Ex-Officio)

Mr. U. C. Das (From 01.12.2014)

Registrar
IIT Guwahati

Secretary (Ex-Officio)

Building and Works Committee

Prof. Gautam Biswas

Director
IIT Guwahati

Superintending Engineer (CPWD), Assam

Assam Central Circle-II, CPWD Complex, Garchuk, NH Bye Pass 37
Opposite DY 365 Office, Guwahati 781 035

Chief Engineer (Buildings), PWD, Assam

PWD, Govt. of Assam
Chandmari, Guwahati 781 003

Dr. Hem Chandra Bora (Up to 31.07.2014)

Former Deputy General Manager, Oil India Ltd.

Shri Debi Charan Bora (Up to 31.07.2014)

Former Commissioner and Secretary, PWD, Govt. of Assam

Shri Mrinal R. Das (From 1.08.2014)

Former Secretary, PWD, Govt. of Assam

Shri Pramathesh Choudhury (From 1.08.2014)

Director Design (Retd.) PWD, Govt. of Assam

Prof. S. Nandi

Deputy Director and Professor,
Department of Computer Science and Engineering, IIT Guwahati

Prof. S. K. Kakoty (From 23.07.2014)

Dean, Infrastructure, Planning and Management and
Professor, Department of Mechanical Engineering, IIT Guwahati

Prof. A. Dutta

Professor, Department of Civil Engineering, IIT Guwahati

Dr. B. N. Raychoudhury (Up to 30.11.2014)

Registrar, IIT Guwahati

Mr. U. C. Das (From 01.12.2014)

Registrar, IIT Guwahati

Chairman (Ex-officio)

Member (Ex-officio)

Member (Ex-officio)

Member

Member

Member

Member

Member (Ex-officio)

Member (Ex-officio)

Special Invitee

Member Secretary (Ex-officio)

Member Secretary (Ex-officio)

Executive Summary



INTRODUCTION

The year 2014 has seen its sixteenth batch of students taking their degrees in the month of July. The Institute takes pride in the achievements of its students and gladly announces that almost all the passed out students have been well placed in various government organisations and multi-national companies in India and abroad. All the achievements in academic and research areas have been successful only because of the relentless efforts of dedicated faculty members and the commendable cooperation of all other non-teaching employees of the Institute.

Here is a brief report on the activities and achievements of the Institute during the year 2014-2015.

THE BOARD OF GOVERNORS

Prof. R. Alam, Professor, Department of Mathematics, Indian Institute of Technology Guwahati joined the board in January 2015 a nominee of the Senate. Mr. U. C. Das, Registrar, Indian Institute of Technology Guwahati, joined the board in December 2014 as Secretary. Dr. B. N. Raychoudhury, Registrar, Indian Institute of Technology Guwahati, retired on 30 November 2014. I offer our heartfelt gratitude to Mr. Raychoudhury for his dedicated service to the Institute. Prof. P. S. Robi, Professor, Department of Mechanical Engineering, has completed his tenure as the nominee of the Senate in December 2014. On behalf of the Board, I welcome the new members to the Board and thank the outgoing members, Dr. B. N. Raychoudhury and Prof. P. S. Robi for their contributions during their tenure.

ACADEMIC ACTIVITIES

The Institute has 11 academic departments, 4 interdisciplinary academic centres and 3 service centres. No additions were made this year. These are:

Departments

Biosciences and Bioengineering (BSBE), Chemical Engineering (CL), Chemistry (CH), Civil Engineering (CE), Computer Science and Engineering (CSE), Design (DE), Electronics and Electrical Engineering (EEE), Humanities and Social Sciences (HSS), Mathematics (MA), Mechanical Engineering (ME), and Physics (PH)

Academic Centres

Centre for Energy, Centre for the Environment, Centre for Nanotechnology, and Centre of Linguistic Science and Technology

Service Centres

Computer and Communication Centre, Central Instruments

Facility, Centre for Educational Technology, and Centre for Career Development

The Institute offers academic programmes covering a wide range of science, engineering, and humanities disciplines as given below:

Bachelor of Technology (BTech) programmes in Biotechnology (BT), Chemical Engineering (CL), Chemical Science and Technology (CT), Civil Engineering (CE), Computer Science and Engineering (CS), Electronics and Communication Engineering (EC), Electronics and Electrical Engineering (EE), Engineering Physics (EP), Mathematics and Computing (MC), and Mechanical Engineering (ME),

Bachelor of Design (BDes) programme in the Department of Design,

Master of Technology (MTech) programmes in BT, CL, CE, CS, EE and ME,

Master of Design (MDes) programme in DE,

Master of Science (MSc) programmes in Chemistry (CH), Mathematics and Computing (MC), and Physics (PH),

Master of Arts (MA) programme in Development Studies (DS) in the Department of Humanities and Social Sciences (HS),

Doctor of Philosophy (PhD) programmes in all departments and in the Centres for Energy (EN), the Environment (EV), and Nanotechnology (NT),

A Dual (MTech+PhD) programme in CS.

The total number of enrolled students in 2014-2015 is 5186. Of these, 50.39% are post-graduate students. The detailed break up is:

Course	2013-2014	2014-2015
Preparatory	4	3
BTech and BDes	2505	2570
MTech and MDes	771	760
MSc	243	262
MA	48	47
Dual Degree (MTech+PhD)	10	13
PhD	1310	1531
Total	4891	5186

Sixteenth Convocation

In the Sixteenth Convocation held on 13 July 2014, a total number of 1232 students received their BTech, BDes, MA, MSc, MTech, MDes and PhD degrees as given below:

Programme	Nos.
BTech/BDes	
Biotechnology	36
Chemical Engineering	57
Chemical Science and Technology	33
Civil Engineering	56
Computer Science and Engineering	86
Design	39
Electronics and Communication Engineering	66
Electronics and Electrical Engineering	37



General (Dr.) Vijay Kumar Singh (C), PVSM, AVSM, YSM, (Retd.), Hon'ble Minister of State for Development of North Eastern Region (Independent Charge), External Affairs and Overseas Indian Affairs; Dr. R. P. Singh (L), Chairman, BoG and Prof. Gautam Biswas, Director, IIT Guwahati; Dr. Jyotiprasad Medhi, Professor Emeritus, Gauhati University; and Dr. Dipak C. Jain, Chaired Professor of Marketing at INSEAD along with the gold and silver medal winners at the 16th Convocation



Dr. R. P. Singh with a medal winner

Programme	Nos.
Engineering Physics	24
Mathematics and Computing	32
Mechanical Engineering	81
Total	547
MSc	
Chemistry	37
Mathematics and Computing	40
Physics	40
Total	117
MA	
Development Studies	21
Total	21
MTech/MDes	
Biotechnology	29
Chemical Engineering	56
Civil Engineering	93

Programme	Nos.
Computer Science and Engineering	78
Design	28
Electronics and Electrical Engineering	53
Mechanical Engineering	104
Total	441
PhD	
Biosciences and Bioengineering	24
Chemistry	16
Chemical Engineering	6
Civil Engineering	7



General (Dr.) Vijay Kumar Singh (C); Dr. R. P. Singh (L) and Prof. Gautam Biswas

Programme	Nos.
Computer Science and Engineering	4
Design	4
Electronics and Electrical Engineering	8
Humanities and Social Sciences	10
Mechanical Engineering	7
Mathematics	5
Physics	6
Centre for Energy	5
Centre for the Environment	3
Centre for Nanotechnology	1
Total	106
Grand Total	1232

ISHĀN VIKĀS

The Government of India is keen on developing the education scenario of the North-Eastern part of the country. In one such move to that direction, a special programme was envisaged where students of the North-Eastern states –



General (Dr.) Vijay Kumar Singh, conferring the Doctor of Science D.Sc. (Honoris Causa) to Dr. Jyotiprasad Medhi, Professor Emeritus, Gauhati University

especially schoolchildren – would be exposed to the best of the engineering institutions in different parts of the country. IIT Guwahati was given the responsibility to coordinate the efforts in that direction and to submit a report by the middle of August 2014.

Ishān Vikās, an initiative of the MHRD, therefore, was started as a comprehensive plan to bring selected schoolchildren from the North-Eastern states into close contact with the IITs and IISERs during their vacation periods. An internship programme for the engineering college students of North-Eastern states in various IITs and NITs has also come under the umbrella of this programme. One of the focal points of these visits is to open up the young minds and give them a broad overview of the future paths which they could traverse. They should get a wider perspective on how they can take a much more proactive role in shaping their own future. Schoolchildren from the North-Eastern states will be naturally motivated to acquire higher skills if they get a chance to visit the campus of a premier institute, to walk inside the hostels, sit in the classes, talk to students and meet research scholars working in the laboratories.

Until now, about 200 schoolchildren and about 150 engineering students studying in various institutions in the North East have participated in the programme. In the pilot phase of the programme, IIT Bombay, IIT Kharagpur, IIT Kanpur, IIT Guwahati, IIT Delhi, IIT Madras and NIAS

have already hosted participants of the programme. From summer 2015, more IITs, IISERs are hosting participants from the NE region.

CENTRE OF EXCELLENCE STATUS TO THE CHEMISTRY DEPARTMENT

With great pleasure I take this opportunity to inform you that the Ministry of Human Resource Development has accorded the Centre of Excellence status to Chemistry Department of the Institute. This is under the aegis of Training and Research in Frontier Areas of Science and Technology (FAST) of MHRD. A large number of publications in the top-tier interdisciplinary journals and high citations made this achievement possible. Let us join in congratulating all the faculty members, research scholars, students, project employees, and staff members of the Department. Also the roles of all the academic leaders (current and earlier Heads) involved in shaping up the Department are deeply appreciated.

MAJOR INITIATIVES IN RESEARCH AND DEVELOPMENT

Dr. Sachin Kumar and his team in the department of Biosciences and Bioengineering have sequenced the complete genome sequence of many Indian isolates of Newcastle disease virus, an important pathogen for the poultry industry in our country. His team also contributed significantly in the development of vaccines and diagnostics



Participants of Ishān Vikās pilot phase along with the coordinators

against Newcastle disease virus and classical swine fever virus, two very important animal pathogens.

Prof. V. K. Dubey and his team in the department of Biosciences and Bioengineering established molecular mechanisms of death that contribute to the anti-leishmanial activity of betulin. His team has also provided fundamental insights into role of spermidine in parasite infection and survival. The spermidine starvation as a result of LdSS inhibition is not related to elevated levels of reactive oxygen species. This suggests the involvement of spermidine in processes other than redox metabolism in *Leishmania* parasites. Their work provides a novel scaffold, i.e., hypericin, as a potent antileishmanial molecule. This is a new lead against deadly disease, Leishmaniasis (commonly known as kala-azar in India)

X-ray crystallography facility for macromolecules has been installed in the Central Instruments Facility of the Institute under the DBT sponsored project 'Studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics devices and other applications' headed by Prof. Pranab Goswami, Department of Biosciences and Bioengineering. This cutting edge research facility is also considered as great asset for the researchers of this region working in the field of protein sciences.

The Centre for Nanotechnology is implementing the DeitY project for establishing a 'Centre for Excellence in Research and Development of Nanoelectronic Theranostic Devices'. Theranostics—a combination of diagnostics and therapy, is one of the most pressing technological issues of our times. The efforts are focussed on developing a cutting edge technology for diagnosing of severe diseases. Once successful, this can directly affect the well-being of large number of people who need medical care.

ACADEMIC INFRASTRUCTURE DEVELOPMENT

A number of new equipment have been added to the



laboratories of the Departments and Centres. Some of the major equipment and facilities acquired by the Institute during the year under report are –

- MALDI-TOF (Matrix Assisted Laser Desorption/Ionisation-Time of Flight) mass spectrometer – ` 146 lakhs (CIF)
- 250 KN Servo Hydraulic Universal Testing Machine – ` 158 lakhs (CIF)
- High Performance Computational Setup – ` 51 lakhs (Biosciences and Bioengineering)
- Time-Correlated Single Photon Counting (TCSPC) Lifetime System with Microchannel Plate (MCP) Detection – ` 53 lakhs (Chemistry)
- Nano Particle Size, Zeta Potential, Molecular Weight and Measurement Facility – ` 24 lakhs (Chemistry)
- Warm Isostatic Press – ` 46 lakhs (Mechanical Engineering)

The Central Library of the Institute was named after the great pioneer of modern Assamese literature Sahityarathi Lakshminath Bezbaroa in December 2014. Being a major central service point, the library provides necessary supports for teaching, learning and research activities of the Institute by creating state-of-the-art facilities and offering innovative services to the students, faculty and staff members and visiting intelligentsia. The library operations are fully computerised and the entire premise is provided with Wi-Fi facility for connecting to the Internet and accessing Institute's electronic resources. During the reported period, the total library circulation transactions stand at about 1.5 lakhs. In addition, many users of other academic Institutions have also availed the reference facility. The library has a collection of about 1.55 lakhs printed books and bound volumes of journals, 1.46 lakhs e-books, and 120 print and 12835 online journal along with a substantial number of other documents.

The Computer and Communication Centre has developed a state-of-the-art Data Centre with an area of standard 1100 sq. ft. with a total cost of around ` 381 lakhs. This will provide



MALDI-TOF mass spectrometer

infrastructure for better management and control of data processing and IT equipment of the Institute.

RESEARCH AND DEVELOPMENT

The number of PhD students on campus is increasing every

year. This year has seen a big jump in numbers, growing from 1310 students last year to 1531 this year. The current faculty to PhD students' ratio stands at a satisfactory 4.12. The number of graduating PhD students has considerably increased to 124 from 106 in the previous year.

The other component of our research programme is sponsored (or directed) research. There are 407 research projects in progress with a total sanctioned value of about ₹ 250 crore. In the year under report we received 82 new projects with a sanctioned value of ₹ 50 crore. The R&D projects are mainly sponsored by Government Ministries and Departments with major support coming from Ministries of Environment (MoE), Human Resource Development (MHRD), Steel, Departments of Science and Technology (DST), Biotechnology (DBT), Atomic Energy (DAE), Electronics and Information Technology (DeitY), Council of Scientific and Industrial Research (CSIR) and Defence Research Labs (DRL). We also have a considerable number of industry supported research projects. 270 personnel are engaged in various research projects at the Institute.

Major research projects received during the year 2014-2015:

Project Title	Dept. / Centre	Funding Agency	Amount Sanctioned (₹ in lakhs)
National Initiative for setting up of Design Innovation Centre	Design	MHRD	1000.00
A Pilot Project on Ishan Vikas	IITG	MHRD	605.45
Establishment of centre of excellence for training and research in frontier areas of science and technology (FAST)	Chemistry	MHRD	400.00
Mathematical model study of the river Brahmaputra with emphasis on climate change	Civil Engineering	Brahmaputra Board, GoI	282.00
Technical Education Quality Improvement Programme (TEQIP-II)	Centre for Educational Technology	MHRD	250.00
Special manpower development programme for CHIPS to system design (SMDP-C2SD)	Electronics and Electrical Engineering	DeitY	236.40
DBT Pan IIT Centre for Bioenergy	Biosciences and Bioengineering	DBT	174.16
Exploring the binding space to develop an optimal transcriptional control system for abiotic stress tolerance in crops	Biosciences and Bioengineering	DBT	111.42
Investigating the role of protein dynamics on the function of a few intrinsically disordered proteins	Biosciences and Bioengineering	DBT	98.20
ICT based framework to enhance the teaching and learning experience in a large classroom	Computer Science and Engineering	DeitY	94.32

Table-1

DBT – Department of Biotechnology, Govt. of India

DeitY – Department Electronics and Information Technology, Govt. of India

MHRD – Ministry of Human Resource Development, Govt. of India



National Conference on Frontiers in Chemical Science (FICS-2014)

In addition to sponsored Research Projects, IIT Guwahati undertakes consultancy assignments for various State Government Departments, Railways, National Highways Authority of India, Oil and Gas Sector, Construction and Infrastructure Companies, Power Sector, Educational Institutes, Health and Pharmaceutical Industries and Financial Institutions. Consultancy projects are contributing to the industrial, economic and social growth of the country with special emphasis on this region.

A total of 119 consultancy projects were carried out during the year. The total value of consultancy projects undertaken during this year is ` 3.25 crores, and ` 3.62 crores was received for all consultancies.

One addition was made to the incubating companies functioning under the IIT Guwahati Technology Incubation Centre (IITG-TIC) with the total number of companies standing at seven. These incubatees are currently working in IT, electronics, bio-engineering and innovative design related projects.

The Institute has applied for fourteen number of patents during the period under report.

FACULTY AND STAFF

The faculty strength at the end of March 2015 was 372. This is an increase of 30 from 342 at the end of last year.

The number of non-teaching staff at the end of the financial year 2014-2015 was 416 which is 66 higher than the previous year.

PUBLICATIONS

The faculty members of the Institute have been actively

publishing research papers in international and national journals as well as in conference proceedings. The number of publications during the past one year is:

Papers in Journals: 763

Papers in Conference Proceedings: 487

In the previous year 784 papers in journals and 464 papers in conference proceedings were published by the faculty of the Institute.

CONFERENCES/WORKSHOPS/COURSES

Various conferences, seminars and workshops were organised by the Departments and Centres of the Institute during the year. A few of them are –

- National Conference on Sustainable Development of Environmental Systems, June 2014
- National Workshop on Molecular Modelling and Simulation of Sustainable Polymers and Nanocomposites (MSSP-14), August 2014
- National Workshop on GPU Programming and Applications (GPA3-2014), September 2014
- Dialogue on Strengthening Community Engagement in Higher Education Institutions, September 2014
- Conference on North East in India's Look East: Issues and Opportunities, October 2014
- International Ergonomics Conference (HWWE 2014), December 2014
- National Conference on Frontiers in Chemical Science (FICS-2014), December 2014
- National Conference on Recent Advances in Cancer Biology and Therapeutics, December 2014
- XXI DAE-BRNS High Energy Physics Symposium,

December 2014

- 5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2014), December 2014
- 3rd NKN Annual Workshop, December 2014
- Second Symposium on Advances in Sustainable Polymers (ASP-15), January 2015
- National Conference on Commutative Algebra and Algebraic Geometry, February 2015
- Workshop on NEMS and Theranostic Devices, March 2015

MEMORANDA OF UNDERSTANDING AND INTERNATIONAL RELATIONS

The Institute currently has fifty five active Memoranda of Understanding (MoUs) with various educational and research institutes across the world. The MoUs are mainly on academic and research collaborations, and student exchange. Eight international and six national MoUs were signed during the year under report. Some of these institutes are Missouri University of Science and Technology (USA), Emory University (USA), Hokkaido University (Japan), Yeungnam University (South Korea), Hankuk University (South Korea), Mondragon University (Spain), National Tsing Hua University (Taiwan) and Tongmyong University (South Korea).

Currently there are 32 international students enrolled for various full time courses at IIT Guwahati. Six out of them will receive degrees in this Convocation. Eight students from international institutions/universities of repute visited IIT Guwahati under various academic agreements. Two students and two staff members received fellowship for study trip to foreign universities under Erasmus Mundus fellowship



MoU with GIFU University, Japan

programme 2014-2015. Apart from that, 16 students of the Institute were selected for internship to institutes like NUS, Singapore; National Tsing Hua University (NTHU), Taiwan; Paris Tech University, France, etc.

ALUMNI ACTIVITIES

IIT Guwahati launched the online donation gateway portal for receiving donations concerning various specific and non specific activities. Mr. Siva Yellamraju, a class of 2002 Computer Science and Engineering alumnus donated Rs. 2 lakhs to facilitate a customised electrically operated wheel chair for Mr. Vishal Singh, a first year undergraduate student of Electronics and Electrical Engineering. Mr. Harish Chandra, a class of 2012 Computer Science and Engineering alumnus donated Rs. 1 lakh to start Kalyani Research Award, a new perpetual scholarship in the name of his mother to start with



XXI DAE-BRNS High Energy Physics Symposium



National Power Systems Conference (NPSC-2014)

Rs. 25,000/- per year for the next four years for Computer Science and Engineering undergraduate students to publish paper in the field of computer science.

FACULTY ACHIEVEMENTS

A number of faculty members received awards and brought accolades for the Institute during the year. Some of them are:

- IIT Guwahati has bagged four projects out of the 20 projects awarded to PANIIT-ONGC consortium. Oil and Natural Gas Corporation Limited (ONGC) and Pan-IIT – a consortium of seven premier Indian Institutes of Technology which includes IIT Kharagpur, IIT Kanpur, IIT Madras, IIT Mumbai, IIT Delhi, IIT Guwahati and IIT Roorkee – signed a Memorandum of Collaboration (MoC) to work towards a joint R&D programme to enhance exploration and exploitation of hydrocarbons and alternate sources of energy. Projects submitted by Prof. Arun Goyal, Department of Biosciences and Bioengineering; Dr.



3rd National Knowledge Network (NKN) Annual Workshop

Debashish Das, Associate Professor, Department of Biosciences and Bioengineering; Dr. S. Senthimurugan, Assistant Professor, Chemical Engineering; Dr. Rashmi Dutta Baruah, Assistant Professor, Computer Science and Engineering have been awarded.

- Dr. B. Anand, Assistant Professor, Biosciences and Bioengineering, was chosen for the National Academy of Sciences (NASI) Young Scientist Platinum Jubilee Award for the year 2014 in the field of biomedical, molecular biology and biotechnology. He was also selected for Innovative Young Biotechnologist Award for the year 2014 by the Department of Biotechnology, Govt. of India.
- Prof. Vikash Kumar Dubey, Biosciences and Bioengineering, has been selected for Dr. P. N. Raju Oration Award of Indian Council of Medical Research (ICMR) for his work on an infectious disease, Leishmaniasis. He also received Prof. Umakant Sinha Memorial Award of the Indian Science Congress Association.
- Prof. Latha Rangan, Biosciences and Bioengineering, received Dr. J. N. Baruah Memorial Award 2014 in the area of biological sciences, given by Assam Science Society.
- Dr. L. M. Pandey, Assistant Professor, Biosciences and Bioengineering, received Innovation in Science Pursuit for Inspired Research (INSPIRE) Faculty Award 2014 of Department of Science and Technology, Govt. of India, in engineering and technology discipline.
- Dr. Utpal Bora, Associate Professor, Biosciences and Bioengineering, has been awarded UXCEL award by Department of Biotechnology, Govt. of India in the form of a project entitled 'Exploration and characterisation of semi-bioresources of North East India for potential textile and non-textile applications' for three years.
- Prof. V. V. Dasu, Biosciences and Bioengineering, elected as FABP (Fellow, Association of Biotechnology and Pharmacy) in recognition of outstanding research contributions to medical biotechnology.
- Prof. Pallab Ghosh, Chemical Engineering, was awarded Shri G. M. Abhyankar Memorial Distinguished Fellowship in Chemical Engineering for the year 2014-2015 by Institute of Chemical Technology, Mumbai.
- Prof. Arun Chattopadhyay, Chemistry, was re-nominated as an editorial advisory board member of the Royal Society of Chemistry Journal Nanoscale. He was also selected a member of Task Force on Nanobiotechnology, Department of Biotechnology, Govt. of India.
- Prof. T. Punniyamurthy, Chemistry, won the Chemical Research Society of India Bronze Medal for the year 2015. He was also selected Fellow of Royal Society of Chemistry (FRSC).
- Dr. Abhishek Kumar, Assistant Professor, Civil Engineering,



Prof. Vikash Kumar Dubey, Professor, Biosciences and Bioengineering, was elected as a Fellow of Biotech Research Society of India

has received INSPIRE faculty award 2014 of Department of Science and Technology, Govt. of India.

- Dr. S. Sreedeeep, Associate Professor, Civil Engineering, has been awarded Shamsheer Prakash Research Award of IIT Roorkee for his outstanding work in the field of geotechnical earthquake engineering.
- Dr. Amit Sethi, Assistant Professor, Electronics and Electrical Engineering, was awarded IUSSTF fellowship for conducting research on prostate cancer recurrence prediction with collaborators at University of Illinois at Chicago (USA).
- Dr. Arupjyoti Saikia, Associate Professor, Humanities and Social Sciences, received Srikant Dutta Book award given by the Nehru Memorial Museum and Library, New Delhi, for the best book on North East India between 2009-2014 for his book A Century of Protests: Peasant Politics in Assam. He was also chosen for the Suryya Kumar Bhuyan Endowment Chair on Assam History in the department of Humanities and Social Sciences for the period of 2014-2019.
- Dr. Debarshi Das, Associate Professor, Humanities and Social Sciences, received Fulbright Nehru fellowship for research visit to the Department of Economics, University of Massachusetts, Amherst, USA.
- Dr. Deepak Sharma, Assistant Professor, Mechanical Engineering, received NVIDIA innovation award for his contribution towards using graphics processing unit in structure optimisation problems.
- Dr. M. Ravi Sankar, Assistant Professor, Mechanical Engineering, received Institution of Engineers India (IEI) Young Engineer Award in production engineering for the year 2014.

CONSTRUCTION AND CAMPUS DEVELOPMENT

Keeping in conformity with the continuous growth of the students, the existing infrastructure of the Institute is strengthened with new construction and extensions.

Students' Hostels

In the tenth boys' hostel, Lohit – with capacity of 200 rooms with attached toilet for PhD scholars/foreign students and 804 normal single seater rooms – 359 single seater rooms are already occupied and 373 rooms are expected to be completed and ready for occupation by the beginning of the coming academic session including the kitchen, dining hall and food court.

In order to meet the growing demand of student's accommodation, construction of one more boys' hostel with 1152 capacity (Hostel-11) has been taken up. The construction work has been allotted at a total value of ` 9665.00 lakhs in March 2015. Out of 1152 single seater rooms, 580 rooms are expected to be made ready for occupation by March 2017. The entire hostel will be completed by September 2017.

172 double seater rooms of the second girls' hostel, Dhansiri – with a capacity of 172 double seater, 176 single seater rooms – were completed in the last financial year and occupied. The remaining 176 single seater rooms are expected to be completed before the new academic session.

The existing married scholars' hostel with 108 flatlets is being extended with addition of another 96 units. 50 units are expected to be ready for occupation by the end of 2015 and the remaining 46 units are expected to complete by March 2016.

Extension of Academic Complex

The Phase IV extension works of Academic Complex is almost completed except some works in the Mechanical Engineering department. The same would be completed before the new academic session. The construction work of the Class Room Complex as well as the Research Building Complex are also progressing well.

Further expansion works of the academic complex under Phase-V have also been taken up. The works have already been awarded at a value of ` 6994.74 lakhs in March 2015. Under this phase, expansion works of the departments of Chemical Engineering, Computer Science and Engineering, Design, Humanities and Social Sciences, Mathematics, Physics and Central Instruments Facility are taken up for construction having a total area of 13,745 sqm. The work also includes a new building for the centre for Nanotechnology

and clean room of approx 5800 sqm area. The work is expected to be completed by March 2017.

Residential Quarters

The construction of 30 units of E-type residential quarters in 5 blocks (Ph-IV) has been completed with the remaining 3 blocks (18 units) handed over in September 2014. The Institute has taken up construction of G+9 storied F-type residential buildings for which site selection and engagement of architect have already been finalised. These 4 clusters of building will have 4 units in each floor and altogether 144 units.

New Guest House

The work of the new Guest House is under progress. In the first phase, 42 general rooms are expected to be handed over by November 2015 and remaining 112 rooms and 8 VIP suits in the next year.

Apart from the above, a new community hall for social get-together and different cultural activities has recently been completed and is being used. Two new dormitory buildings for hostel catering/canteen staff and security personnel respectively are under construction. The construction of boundary wall (Phase-IV) is progressing well. At the same time augmentation of electrical infrastructure is going on.

INSTITUTE EXPENDITURE

The details of expenditure during the year 2014-2015 are as follows (in crores of `):

Recurring:	133.03
Non-recurring:	164.76
Sponsored Research:	46.35
Total Expenditure:	344.14

In comparison, in 2013-2014, ` 336.17 crores were spent.

STUDENTS' ACTIVITIES

Alcheringa, the annual cultural festival of IIT Guwahati, was held during 29 January – 1 February this year. Alcheringa is



now regarded as a much anticipated students' cultural event of the North-East where thousands of students across the country take part in various youth oriented competitions, workshops, seminars and informal events. The performances of musicians and performing artistes of repute are the real crowd puller. In the past Alcheringa has featured some exhilarating performances from some of the biggest names in the entertainment industry, namely Sonu Niigaam, Shaan, Strings, KK, Euphoria, Parikrama, the Raghu Dixit Project, Shankar Ehsaan Loy, Mohit Chauhan, Javed Ali, Anoushka Shankar, the Swiss folk metal band Eluveitie, Orphaned Land – Israeli progressive metal band, etc. This year the well known playback singer Lucky Ali, performed before huge crowds.

Techniche-2014 – the annual techno-management festival of the Institute – was held during 4–7 September 2014. Techniche has been an extra-ordinary platform to showcase the latest inventions, exhibitions and technological advances from all over the globe and organises a plethora of events and competitions all designed to make the participants step outside their comfort zones and challenge the institution of conventional thinking. The 2014 edition of this festival saw the congregation of eminent personalities like Dr. Kota Harinarayana, Father of India's Light Combat Aircraft



(LCA) Tejas Programme; Dr. Tessy Thomas, Project Director for Agni-IV missile in Defence Research and Development Organisation; Dr. Bikash Sinha, Padma Bhushan, Indian physicist, active in the fields of nuclear physics and high energy physics; Dr. Peter Atkins, FRSC, English chemist and former Professor of Chemistry at the University of Oxford and a prolific writer of popular chemistry books; and Mr. Christer Fuglesang, Swedish astronaut.

Other regular student events like Manthan, Spirit, Spardha were successfully organised by the students during the year. Moreover, there have been regular events and competitions organised by the various clubs and societies of the Institute.

STUDENTS' ACHIEVEMENTS

- Mr. Ashutosh Gupta, research student, Biosciences and Bioengineering, received the best paper award at the 29th Carbohydrate Conference, Centre of Innovative and Applied Bioprocessing, Punjab, in December 2014.
- Mr. Siddharth Nimkar, research student, Biosciences and Bioengineering, won Best Poster Award in the international conference on Proteomics from Discovery to Function at IIT Bombay.



Alcheringa



Techniche

- Mr. Manishekhar Kumar, research student, Biosciences and Bioengineering, was selected for prestigious Fulbright Nehru Doctoral Research Fellowship 2014. Manishekhar will be visiting USA for nine months (starting July 2015) to pursue research work at Biomedical Engineering Department, Tufts University.
- Mr. Suradip Das, research student, Biosciences and Bioengineering, was awarded DST International Travel Support for presenting his paper at the 16th International Spinal Research Trust Meeting at London, UK in September 2014.
- Mr. Arghya Sett, research student, Biosciences and Bioengineering, was awarded DBT International Travel Support for presenting his poster at the 16th European Molecular Biology Laboratory (EMBL) PhD symposium, Heidelberg, Germany in October 2014.
- Ms. R. Dutta and Ms. Vartika Srivastava, research students, Biosciences and Bioengineering, won best paper award at Asian Plant Science Conference 2014, Nepal.
- Mr. Seim Timung, research student, Chemical Engineering, received best paper award at the International Conference

on MEMS and Sensors 2014 held at IIT Madras.

- Mr. Narsimha Mamidi, research scholar, Chemistry, won Second Prize of Lilly Outstanding Thesis Awards 2014.
- Mr. Diptesh Majumdar, MTech student, Computer Science and Engineering, won the DAAD scholarship under the IIT Masters-Sandwich programme for visiting the Institute for Real-Time Computer Systems at the University of Munich from September 2014 to March 2015.
- Mr. Rajesh D., research student, Computer Science and Engineering, received the TCS PhD Research Fellowship.
- Mr. Shashi Shekhar Jha, research student and TCS fellow, Computer Science and Engineering, received international travel grant from the Department of Science and Technology, Govt. of India, to present his paper at the 1st International Conference on Internet of Things in Urban Space (Urb-IoT 2014) in Rome, Italy. His doctoral work was selected for presentation at the Doctoral Consortium of the 12th German Conference on Multiagent System Technologies, Stuttgart, Germany, September 2014.
- Mr. Sandip Chakraborty, research student, Computer Science and Engineering, received Indian National Academy of Engineering (INAE) Innovative Student Projects Award 2014 (Doctoral Level) for his PhD thesis work on 'Capacity Enhancement, QoS and Rate Adaptation in IEEE 802.11s: A Performance Improvement Perspective'.
- Ms. Bhawna Agarwal and Ms. Richa Tripathi, BDes students, Design, won the first prize for designing the mobile application NINDIYA at Unexplored 2014 organised by YUJ Design, Pune.
- Ms. Shweta Gupta, MDes student, Design, won the first prize in the competition for designing the logo for the Unnat Bharat Abhiyan, an initiative of Govt. of India. The



Techniche



Himujjal Jibon Sarma

logo is already in use.

- Mr. Himujjal Jibon Sarma, MDes student, Design, won the prestigious Business Plan competition of Young Indian's Guwahati Chapter – Road to Ideas with his proposition on innovations in furniture design and manufacturing.
- Mr. Ankit Dalal, research student, Electronics and Electrical Engineering, received the DST grant to attend International Conference on Electrical Machines (ICEM), in Berlin, Germany in September 2014.
- Mr. S. Arun, research student, Mechanical Engineering, received Gandhian Young Technological Innovation Award (appreciation under MLM – More from Less for Many) at the Festival of Innovation at Rashtrapati Bhawan, New Delhi in March 2015 for his project on 'Injection Mouldable Polymeric Composite Based Passive Polycentric Knee joint'. He also won Best Innovation Award-2015 by the GHR Labs and Research Centre, Nagpur for the same project.
- Ms. Shuchi Singh, research student, Centre for Energy, was selected for International Travel Fellowship grant by Department of Biotechnology (DBT), Govt. of India, to attend the international conference on Sustainable Energy and Environmental Sciences at Singapore in February 2015.
- Mr. Ravi K. Biroju, research student, Centre for Nanotechnology, received the Certificate of Excellence (1st prize) for paper presentation at Reflux 2015 – the annual Chemical Engineering Symposium held at IIT Guwahati in March 2015.

TRAINING AND PLACEMENT

The placement scenario at IIT Guwahati for the year 2014-2015 has been good so far. A total of 109 companies from various sectors have already participated in campus recruitment. Out of a total of 1087 students (BTech-512,



BDes-31, MTech-299, MDes-25, MSc-102, MA-17, PhD-100) registered for placement, 73.66% BTech and BDes students have been placed. For BTech and BDes, number of job offers made is 400 for 543 students. The highest package offered to BTech student is 129,500 USD per annum with an average package of ` 12.80 lakhs per annum.

The percentage of placement till now for the MTech and MDes students is reasonable and stands at 35.49%. The highest package offered to MTech student is 115,000 USD per annum with an average package of ` 10.74 lakhs per annum. For MSc and MA programmes, 3 students have been

placed out of 119 registered candidates. 2 PhD students have also received job offers through the campus placement in various sectors.

Companies from different sectors have participated in the campus recruitment process. The percentage of participation from various sectors are 17% in Core Engineering, 44% in IT, 7% in R&D, 3.5% in Analytics, 5.5% in Consulting, 5.5% in Education, 4.5% in E-commerce and 13% in others (Finance, Telecommunication, Govt., Oil & Gas, Decision Science, Diversified Conglomerate, Health care, Management, Mining, NGO, etc.).

The branch-wise placement details are:

Discipline	UG (BTech/BDes)			PG (MTech/MDes/MA/MSc)		
	No. of Student Reg.	No. Student Placed	% of Student Placed	No. of Student Reg.	No. Student Placed	% of Student Placed
CS	73	64	88	36	25	69
EC	76	63	83	44	14	32
EE	42	29	69	-	-	-
ME	76	57	68	78	29	37
CE	62	32	52	74	27	36
CL	49	33	67	38	05	13
BT	38	21	55	29	00	00
MC	39	34	87	-	-	-
CST	30	20	67	-	-	-
EP	27	18	67	-	-	-
DE	31	29	94	25	15	60
PH (MSc)	-	-	-	29	00	00
CH (MSc)	-	-	-	37	00	00
MC (MSc)	-	-	-	36	02	03
DS (MA)	-	-	-	17	01	06

CLOSING REMARKS

In ancient times, Guwahati, known by the name Pragjyotishpur, was the leading political and cultural centre of the North East. It was a celebrated seat of learning in all spheres. It was acclaimed as a distinguished centre of rich cultural and religious activities with scholars coming from far and near. This land of Kamrupa also carried glorious chronicles of events and classical renaissance at

different turns of history. Moreover it was the north bank of the city that sheltered most of its glory. In contemporary times this old trend is rejuvenated and the IIT campus in North Guwahati is alive once more with students learning specialised subjects. There is a resurgence of learning today with the inflow of students and teachers from all over the country. Today it can be proudly said that IIT Guwahati has contributed in its own significant way to the development of the North East.



PART II

ACADEMIC DEPARTMENTS

Biosciences and Bioengineering

Chemical Engineering

Chemistry

Civil Engineering

Computer Science and Engineering

Design

Electronics and Electrical Engineering

Humanities and Social Sciences

Mathematics

Mechanical Engineering

Physics

ACADEMIC CENTRES

Centre for Energy

Centre for the Environment

Centre for Nanotechnology

CENTRALISED SERVICES AND PROGRAMME

Lakshminath Bezbaroa Central Library

Centre for Educational Technology

Central Instruments Facility

Computer and Communication Centre

DEPARTMENT OF BIOSCIENCES AND BIOENGINEERING

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 2002

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in

o Biotechnology

Master of Technology (MTech) in

o Biotechnology

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 9
- Associate Professor: 9
- Assistant Professor: 14

LABORATORIES:

The department spans the N and O blocks of the institute occupying approximately 3637 squared meters. Around 40% of the total area is dedicated for running the laboratory courses of the B. Tech. and M. Tech. academic programmes. These laboratories include "Plant Biotechnology Laboratory (O-block)", "Biochemistry and Microbiology Laboratory (O-block)", and "Biochemical Engineering Laboratory (N-block) that are used for conducting the wet-lab courses of the academic curricula. The dry lab courses are conducted in the "Computational Biology Laboratory located in the O-block. In addition, the department houses a "Bioinformatics Infrastructure Facility" funded by the Department of Biotechnology, India. The laboratories are well-equipped for smoothly carrying out the experiments of the academic curricula.

Approximately 40% of the total space is dedicated to the research laboratories. The research laboratories are used for carrying out the routine experiments. For specialized experiments, department hosts a "Cell Culture Laboratory", a "Spectroscopy Laboratory". Apart from the departmental instruments housed at different locations within the department, the department has a DBT funded Program Support Instrument Facility (N-block, ground floor) include Research laboratories I, II, and III spanning both the blocks.

The state of the art laboratory facilities are available for

biochemistry, plant biology, biochemical engineering and other experiments. The technical staffs of the department support the smooth conduct of experiments and maintenance of the laboratories. Most of the laboratories and faculty rooms are equipped with centralized air conditioning facilities. The laboratories are equipped with adequate furniture, chemical, glassware, and water supply units, maintained by the individual project grants and the IIT facility.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

Microplate Reader (Absorbance & Fluorescence mode); Lyophilizer; Peristaltic pump, etc.

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The major thrust of the department includes biochemical engineering, tissue engineering, plant biotechnology, environmental biotechnology, nanobiotechnology, molecular biology, stem cell biology, gene therapy, computational biology, cancer biology, infectious diseases and proteomics. Keeping in mind the demands of the modern biotechnological research, the plans for establishing advanced research facilities are underway. In addition department is also involved in promoting science and education in the north east pertaining to the field of biotechnology by organizing workshops, symposium and seminar.

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

a) Dr Sachin Kumar lab performed complete genome sequence of many Indian isolates of Newcastle disease virus. Development of diagnostics against infection of Newcastle disease and classical swine fever viruses.

b) Professor V.K. Dubey lab established molecular mechanisms of death that contribute to the anti-leishmanial activity of betulin. Moreover, the spermidine starvation as a result of LdSS inhibition is not related to elevated levels of reactive oxygen species. This suggests the involvement of spermidine in processes other than redox metabolism in Leishmania parasites. Our work provides a novel scaffold, i.e., hypericin, as a potent antileishmanial molecule.

c) X-ray crystallography facility for protein has been installed in CIF, IIT Guwahati. The equipment was purchased from the project "Studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics

devices and other applications" sponsored by DBT India to Prof. Pranab Goswami, Principal Investigator, Prof. V. K. Dubey and Prof. P. Mahanta from Mechanical Engineering as co-investigators.

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Debasish Das	DBT PAN-IIT Center for Bioenergy (No. BT/EB/PAN IIT/2012)	DBT	92.08	Prof. Arun Goyal	
Dr. Debasish Das	Improvement of hydrolytic enzymes by protein engineering for higher activity and SSF of plant carbohydrates to ethanol (PI)	DBT	174.00	Dr. Debasish Das (PI)	
Dr. Debasish Das	Development of Clostridium sp. as a cell factory for butanol production: Metabolic & biochemical engineering approach. (Co-PI)	DBT	2250.00	Coordinator: Prof. P. Wangi- kar (IITB)	Dec. 2014- Dec. 2019
Prof. Arun Goyal	Development of novel thermophilic glycoside hydrolases and carbohydrate binding modules and exploiting their properties for bioethanol production and for food and industrial applications	Indo-Portugal Joint Project, DST	8.04	-	June 2014 - March 2017
Prof. Arun Goyal	Synthesis, structure and application analyses of glucans from hyper-producing LAB strains from North-east Indian microbial diversity	DBT	26.65	-	Jul 2014 - March 2016
Dr. Vikash Kumar Dubey	Identification of novel drug targets of Leishmania donovani: Studies on CAAX prenyl protease I and II of the pathogen	DBT	73.69	Dr. S. P Kanaujia	2014 - 2017
Prof. L Sahoo	Exploring the binding space to develop an optimal transcriptional control system for abiotic stress tolerance in crops	DBT	111.42	Biplab Bose	3 years
Prof. L Sahoo	Plant probiotics to improve crop production in low nutrient soil	DST-JSPS	11.73	Prof. Hiroyuki Koyama (Gifu University, Japan)	2 years
Dr Piruthivi Sukumar	Advanced glycation end products and macrophage store operated calcium entry	ICMR	19.998	Dr Biman B Mandal	2.5Yr
Dr. Biman B Mandal	Electrospun Silk Bioglass Scaffold for Interfacial Tissue Engineering	(DST-UKIERI) International grant	39.99	Dr. P. Sukumar (BSBE) Dr. R. Konwarh (BSBE)	15 months
Dr. Lalit Pandey	Thermodynamics of Protein Aggregation in Bulk Solution and in the presence of Surfaces	DST	35.00	NA	5

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Nitin Chaudhary	Structural organization of huntingtin exon 1 fibrils	SERB, DST	23.8	None	3 years
Prof R. Swaminathan	Investigating the role of protein dynamics on the function of few intrinsically disordered proteins	DBT	98.20	None	Three years
Dr. Kannan Pakshirajan	Carbon monoxide conversion using native hydrogenogenic microorganisms for sulphate rich wastewater treatment	DBT	7.5	Dr. G. Pugazhenth, Chemical Engineering Department	April 2014 – June 2015
Dr Anil M Limaye	A multifaceted research program to investigate the role of the G-protein coupled estrogen receptor (GPR30) in the normal and neoplastic breast: molecular investigations using in vitro, in vivo and clinical approaches	DBT	78.85	Dr Deepak Modi (NIRRH) and Dr Vandana Raphael (NEIGRIHMS)	2014-2017
Dr. Bithiah Grace Jaganathan	Study of Cancer Promoting Role of CD90/THY1 in Leukemia Associated Stroma	DBT	25	Dr. Anil M Limaye	3 years
Dr. Bithiah Grace Jaganathan	BMP signalling in osteolytic bone metastasis of breast cancer	ICMR	20	Dr. Anil M Limaye & Dr. Gayatri Gogoi (AMCH)	2 years

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. B. Anand	"Molecular Mechanism of Ribosome Assembly in Bacteria" under "Unit of Excellence in RNA Biology"	DBT	58.80	-	18 months +
Dr. B. Anand (PI, IITG) Prof. S. Ramaswamy (PI, inStem)	Molecular Mechanism of Target Recognition and Cleavage by the CRISPR-Cas Bacterial Immune System	DBT	122.96	-	3yrs
Dr. B. Anand	Structural and Functional Characterization of Adaptation Stage of CRISPR-Cas System in Mycobacterium tuberculosis	DBT	59.182	Dr. Nitin Chaudhary	3yrs
Dr. B. Anand	Structural Basis for the Maturation of the Prokaryotic siRNA	DBT	40.44	-	3yrs
Dr. B. Anand	Dynamical Aspects of Era GTPase - 16S rRNA Interactions and its Implication in Ribosome Assembly	DAE-BRNS	16.85	-	3yrs
Dr. Sachin Kumar	Improved Infectious Bursal Disease Virus Vaccines Using Newcastle Disease Virus Vector	DBT	47.34	Nitin Chaudhary	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Sachin Kumar	Role of N-glycans of Newcastle disease virus fusion protein in the host immune signaling molecules.	BRNS	16.80	NIL	3 years
Dr. Sachin Kumar	Inspire faculty award on Newcastle disease virus	DST	35.00	NIL	5 years
Prof. Vikash Kumar Dubey	X-ray crystallographic structure elucidation of key drug target enzymes of <i>Leishmania donovani</i> .	DBT	72.69	Dr. S. Patra	2012-2015
Prof. Vikash Kumar Dubey	Deciphering the molecular mechanism underlying the activity of antitumor agents as antileishmanial agents and their potential for therapy.	DBT	68	None	2010-2015
Prof. Vikash Kumar Dubey	Variation in proteome profile of legume plants in response to heavy metal toxicity.	DST	23.5	Dr. Anil Verma, Chemical Engg	2012-2015
Dr. Senthilkumar Sivaprakasam	Design and Application of a Robust Process Analytical Technology (PAT) Platform for Real-time Monitoring and Control of Hyaluronic Acid Production	DBT	78.348	Prof. Guhan Jayaraman, IIT Madras	2013-2016
Dr. Senthilkumar Sivaprakasam	Application of Dielectric Spectroscopic Measurements for Real-time Monitoring and Control of High Cell Density Cultivation (HCDC) of <i>Pichia pastoris</i> for Production of Glycosylated Human Interferon Alpha2b	DST	20.57		2013-2016
Prof. L. Sahoo	Development of Transgenic Cowpea for Virus Resistance Using the Tool of RNA Interference (RNAi)	DBT	83.34	Prof. M. V. Rajam (UDSC, New Delhi)	3 years
Dr. Piruthivi Sukumar	Role of store operated calcium entry in diabetes and hyperlipidemia induced vascular smooth muscle dysfunction	DST SERB	24.9	--	3Yr
Dr. Ranjan Tamuli	Studies on the cellular roles of calcium signaling proteins in <i>Neurospora crassa</i> (NE-Twining project)	DBT	72.88 (Total), 50.70 (IITG)	Dr. Utpal Bora (IITG)	24.03.2011 -continuing
Dr. Biplab Bose	Integrative investigation on critical transcriptional modules involved in proliferation of malignant cells	DBT	37.2	Dr. Sudip Sen, AIIMS, New Delhi	2012-September 2015
Dr. Shankar Prasad Kanaujia	Structural and functional studies of translation initiation factors from <i>Pyrococcus horikoshii</i> OT3	DBT	52.90	Dr. Vikash Kumar Dubey	3 years
Dr. Shankar Prasad Kanaujia	Understanding the mechanism of substrate delivery through solute-binding proteins related to ABC transporters	DST	47.19	None	4 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Shankar Prasad Kanaujia	Elucidation of the substrate delivery and specificity mechanism of solute-binding proteins cognate to the ABC transporters	DST	24.00	None	3 years
Dr. Biman B Mandal	Silk2Heal.	(DBT- SWE-DEN) International grant	74.70	Dr. P. Sukumar	2014-2017
Dr. Biman B Mandal	Stem Cell Based Bioengineering of Annulus Fibrosus in an Intervertebral Disc model using North-East Silk Biomaterials.	DST		NIL	2013-2017
Dr. Biman B Mandal	Development of novel tissue engineered silk biomaterial based wound dressing patch for diabetic foot ulcers.	DBT	56.96	Dr. P. Sukumar Dr. N. Chaudhary	2014-2017
Dr. Biman B Mandal	Understanding the role of cellular cross talks for cartilage tissue repair using a 3D co-culture tissue model	DBT	37.06	Dr. S. Sivaprakasam	2013-2016
Dr. Biman B Mandal	Bioartificial Pancreas to Treat Diabetes	DST	35.00	NIL	2013-2018
Dr. Biman B Mandal	Stimulation of stem cell differentiation on silk fiber reinforced composite with tunable strength and degradation towards enhanced osteogenesis.	DST	23.00	NIL	2013-2016
Dr. Biman B Mandal	Bioengineered silk vascular grafts for blood vessel engineering.	DAE - BRNS	17.00	NIL	2012-2015
Dr. Biman B Mandal	Mechanically strong silk composite matrices for bone tissue engineering.	ICMR	10.00	NIL	2012-2015
Dr. Nitin Chaudhary, IITG, Guwahati; Dr. R. Nagaraj, CCMB, Hyderabad	Understanding the role of cation- π interaction in the self-assembly of amyloidogenic and de novo designed peptides	DBT	31.03 for IITG, Guwahati; 14.5 for CCMB, Hyderabad	None	3 years
Prof R. Swaminathan	Single molecule fluorescence investigations on the mechanism of lysozyme aggregation and RNA helicase activity	DBT	60.50	Dr. B. Anand	Three years
Prof. S.S. Ghosh	Novel nanoscale materials targeted towards antimicrobial and anticancer activities	DBT (Implemented at the Centre for Nanotechnology)	169.00	Prof. A. Chattopadhyay, Dr. Biplab Bose	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof. S.S. Ghosh (Project coordinator) Other PIs: Prof. P. Goswami; Prof. L. Sahoo, Dr. B. Bose	DBT Programme support for Fundamental Molecular Investigations in Biotechnology	DBT	1133.68	Dr. A. Ramesh, Dr. S. Patra	Since 2008
Dr. Kannan Pakshirajan	Strategy Development for the mitigation of heavy metals in surface waters around coal mining areas using native cyanobacterial strains	DBT	14.65	-	June 2012 – May 2015
Dr. Ajaikumar B. Kunnumakkara	An investigation on the expression of various protein tyrosine kinases and their phosphorylated forms in different stages of the development of oral squamous cell carcinoma	DBT	76.5	Dr. Piruthivi Sukumar & Dr. Madumita Roy (CNCI, Kolkata)	2014-2017
Dr. Ajaikumar B. Kunnumakkara	An Investigation of the Therapeutic Potential of Butein Isolated from Toxicodendron vernicifluum Against Human Oral Squamous Cell Carcinoma	DST	22.55	-	2013-2015
Dr. Manish Kumar	Deciphering the role and architecture of CRISPR/Cas defense system in Leptospira interrogans	DBT	47.95	Dr. Shankar Prasad Kanaujia	2013-2016
Dr. Manish Kumar	Purification and characterization of putative outer membrane protein of Leptospira interrogans	IIT,G	5	NIL	2012-15
Dr. Manish Kumar	Purification and characterization of recombinant outer membrane proteins of Leptospira interrogans for vaccine and diagnostics	ICMR	10	NIL	2013-16
Dr. Manish Kumar	Modulation of gene expression in Leptospira interrogans exposed to human catecholamine hormone	SERB, DST	23.5	None	2013-2016
Prof. Pranab Goswami	Studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics devices and other applications.(Implemented in the Energy Centre)	DBT India	473.00	V. K. Dubey, P. Mahanta	3 years
Prof. Pranab Goswami	Development of Bioelectrodes for Biofuel Cell Applications. (Implemented in the Energy Centre)	MNRE	33.73	P. Mahanta	3 years
Dr. Vibin Ramakrishnan	Design synthesis and Characterization of self-assembled molecular materials from heterotactic polypeptide constructs. Application in drug delivery and nanoscale energy storage devices	DBT	60.00	Senthilkumar S	3 Years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Utpal Bora (IITG); Dr. Rajlakshmi Devi (Coordinator, IASST); Dr. K. Suresh Babu (IICT)	Identification and characterization of bioactive molecules from some indigenous medicinal plants of NE region of India with special reference to anti-oxidant and hypolipidemic properties	DBT	84.8	Dr. Ranjan Tamuli (IITG); Dr. Jibon Kotoky (IASST); Dr. A.K. Tiwari (IICT)	3 years (2012-2015)
Dr. Utpal Bora (IITG)	Development of aptamer based molecular diagnostics for breast cancer	DBT	154.85	Dr. Ranjan Tamuli (IITG); Dr. A.C. Katak (BBCI); Dr. Bibhuti Bhusan Borthakur (BBCI); Dr. Jagannath Dev Sharma (BBCI); Dr. P. Nahar (IGIB)	4 years (2011-2015)
Dr Rakhi Chaturvedi	Yield enhancement strategies for production of therapeutic compounds by cell and tissue cultures of <i>Tinospora cordifolia</i> (willd.) Miers ex Hook. F. & Thoms.	DBT	82.52	Dr B.S. Bhau, NEIST, Jorhat; Prof. B.K. Patel, IITG; Prof V.S Bisaria, IIT Delhi	2011-2015
Dr. Rakhi Chaturvedi	In vitro production of doubled haploids in Tea (<i>Camellia sinensis</i> L.)	DBT	64.58	Dr. Vishal Trivedi	2014 - 2017

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. Arun Goyal	Molecular and functional characterization of dextran production in <i>Weissella</i> spp. - Superior dextran producers for cereal applications	Indo-Finland Joint Project DBT	77.03		March 2012 - March 2015
Dr. Debasish Das	Process optimization for microbial synthesis of Hyaluronic Acid from new isolates: Development of structured kinetic model and experimental validation	CSIR	14.0	Prof. Arun Goyal	Jan 2012 - Jan 2015
Prof. Vikash Kumar Dubey	Studies on trypanothione synthetase, a key enzyme of redox metabolism of <i>Leishmania donovani</i> .	DBT	27.73	None	2011-2014
Prof. Vikash Kumar Dubey	Studies on Peptide-conjugated nanoparticles mediated antileishmanial drug delivery to macrophages.	DBT	31.83	Dr. S. Patra	2011-2014

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. Vikash Kumar Dubey	An integrated computational and biochemical approach to target ornithione decarboxylase, a key enzyme involved in synthesis of trypanothione for antileishmanial drug discovery.	ICMR	31.83	Dr. V. Trivedi	2011-2014
Prof. Vikash Kumar Dubey	Betraying the parasite's redox system: Studies on spermidine synthase of <i>Leishmania donovani</i> .	DBT	82.18	Dr. V. Trivedi, BT, Dr. P.K. Iyer, Chem	
Prof. L Rangan	Molecular and physico-chemical characterization of selected ginger species from North Eastern Region	DBT	52.75	Dr A Parida (MSSRF Chennai), Dr S Mitra (JNU New Delhi)	3 years
Prof. L Sahoo	Development and evaluation of transgenic mungbean over expressing AtNHX1 and AVP1 for salt tolerance	DBT	103.03	---	5 years
Prof. L Sahoo	Development of pod borer resistant transgenic pigeonpea and chickpea	ICAR	58	Prof. S. K. Sen (BREF Biotech, IIT Kharagpur)	3 years
Dr. Biplab Bose	Inhibitor Based Selection of Blocking Antibodies against Heparin-binding EGF-like Growth Factor: Developing Potent Molecules for Antibody-based Cancer Therapy	DBT	11.72	Dr. S. S. Ghosh	2007 - 2010
Dr. Biplab Bose	Development of Therapeutic Human Antibodies Against Cripto-1: Targeting Oncogenic Signaling. (Funded by DST, 2007 - 2010)	DST	10.34	-	2007-2010
Dr. Shankar Prasad Kanaujia	Structural determinants and protein engineering of metal binding of Phospholipase A2	IIT Guwahati	5.00	None	2 years
Dr. Biman B Mandal	Silk based biomimetic scaffolds for tissue engineering applications	IITG	5.00	NIL	2011-2013
Prof. R. Swaminathan	Protein aggregation: Early molecular events, mechanisms and inhibition	DST	53.38	None	Three years
Prof. Pranab Goswami	Studies and application of redox enzymes for bioelectronics devices	DBT	98	Sanjukta Patra	5 years
Dr Anil M Limaye	Characterization of rat ventral prostate specific PBPC1BS and S100RVP gene promoters	IITG	5.00	None	2009-2011

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr Anil M Limaye	Modulation of estrogen regulated gene expression by green tea polyphenol EGCG in ER positive breast cancer cells: a microarray study	ICMR	10.00	None	2012-2015
Dr Anil M Limaye	Real-time quantitative RT-PCR based expression profiling of matrix metalloproteinases and their inhibitors in prostate cancer cell lines	DST	24.00	Dr B. G. Jaganathan	2013-2015
Dr Anil M Limaye	The SHBG-RSHBG pathway: insights from prostate cancer cell lines.	DST	19.00	None	2010-2013
Dr. Utpal Bora	Development of silk protein derived artificial nerve growth conduits for neural tissue engineering	Ministry of textiles, Govt. of India	45.30	Dr. RanjanTamuli	3 years (2011-2014)
Dr. Utpal Bora	Silk based scaffolds for Neural Tissue Engineering	DBT	58.44	Dr. RanjanTamuli	3 years (2011-2014)
Dr. RanjanTamuli	Studies on the cellular roles of calcium signaling proteins in Neurosporacassa (NE-Twining project)	DBT	72.88	Dr. Utpal Bora (IITG), Dr. Durgadas P. Kasbekar (CCMB), Dr. Ch. Mohan Rao (CCMB)	3 years (2011-2014)
Dr. Latha Rangan	DNAB (DNA Barcoding) based biodiversity inventory in Zingiberaceae of Northeast India	DIT, MCIT	71.18	Dr. Utpal Bora & Dr. L. Sahoo	5 years (2008-2013)
Dr. Utpal Bora	ElectrospunNanofiber Scaffolds for Hepatic Tissue Engineering	DBT	52.55	Dr. Pranab Goswami	3 years (2007-2010)
Dr. Utpal Bora	Nanoparticle mediated targeted siRNA delivery to cancer cell lines	DST	12.96	-	3 years (2007-2010)
Dr. Pranab Goswami	Enzymatic Biofuel cell for Biomedical application	DBT	35.00	Dr. Utpal Bora	3 years (2007-2010)
Dr. Pranab Goswami	Development of Enzyme Electrode for the Construction of Cholesterol Biosensor.	CSIR	2.25	Dr. Utpal Bora	3 years (2007-2010)
Dr. Utpal Bora	Synthesis of biodegradable nanocarriers for targeted drug delivery	DBT	14.686	Dr. Pranab Goswami	3 years (2006-2009)
Dr. S.K. Khijwania	Glucose sensor based on evanescent wave induced fluorescence spectroscopy	BRNS, DAE	9.35	Dr. Utpal Bora	3 years (2005-2008)

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. Bithiah Grace Jaganathan	Role of Rho GTPase RhoA on interaction between Human Mesenchymal Stem Cells and Hematopoietic Stem Cells	DBT	39.26	Dr. Anil M Limaye	3 years
Dr. Bithiah Grace Jaganathan	Cytoskeletal organization and migration potential of Mesenchymal Stem Cells (MSC) during different stages of differentiation	DST	24.2	-	3 years
Dr. Bithiah Grace Jaganathan	Study of Apoptotic Signalling Pathways in Mesenchymal Stem Cells during Normal and Differentiated State	DBT	91.05	Dr. Rajesh Singh (Univ. Baroda)	3 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Anil Kumar Verma, Pedro Bule, Teresa Ribeiro, Joana L. A. Brás, Joyeeta Mukherjee, Munishwar N. Gupta, Carlos M.G.A. Fontes and Arun Goyal	The family 6 Carbohydrate Binding Module (CtCBM6) of glucuronoxylanase (CtXynGH30) of Clostridium thermocellum binds decorated and undecorated xylans through Cleft A.	Archives of Biochemistry and Biophysics	DOI:10.1016/j.abb.2015.03.026		2015
Shuchi Singh, Mayank Agarwal, ShyamaliSarma, Arun Goyal and Vijayanand S. Moholkar	Mechanistic insight into ultrasound induced enhancement of simultaneous saccharification and fermentation of Partheniumhysterophorus for ethanol production	Ultrasonics Sonochemistry	DOI: 10.1016/j.ultsonch.2015.02.011		2015
RwivooBaruah and Arun Goyal	Hyper glucansucrase, glucan and oligosaccharide producing novel Weissellacibaria RBA12 isolated from Pummelo (Citrus maxima)	Annals of Microbiology	DOI: 10.1007/s13213-015-1072-7		2015
Shuchi Singh, ShyamaliSarma, Mayank Agarwal, Arun Goyal and Vijayanand S. Moholkar	Ultrasound enhanced ethanol production from Partheniumhysterophorus: A mechanistic investigation	Bioresource Technology	10.1016/j.biortech.2014.12.038		2015
Shuchi Singh, Pritam K. Dikshit, VijayanandMoholkar and Arun Goyal	Purification and characterization of acidic cellulase from Bacillus amyloliquefaciens SS35 and its utilization for hydrolyzing Partheniumhysterophorus biomass	Environmental Progress and Sustainable Energy	DOI 10.1002/ep		2015
Deeplina Das and Arun Goyal	Anti-oxidant activity and γ -aminobutyric acid (GABA) producing ability of probiotic Lactobacillus plantarum DM5 isolated from Marcha of Sikkim	LWT Food Science and Technology	DOI 10.1016/j.lwt.2014.11.013		2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Nadeem Akhtar, Aanchal, Dinesh Goyal and Arun Goyal	Simplification and optimization of media ingredients for enhanced production of CMC _{Case} by newly isolated <i>Bacillus subtilis</i> NA15	Environmental Progress and Sustainable Energy	DOI 10.1002/ep.12004		2015
Seema Patel, Rishikesh Shukla and Arun Goyal	Probiotics in valorization of innate immunity across various models	Journal of Functional Foods	14	549-561	2015
Damini Kothari and Arun Goyal	Gentio-oligosaccharides from <i>Leuconostoc mesenteroides</i> NRRL B-1426 dextranase as prebiotics and as supplement for functional foods with anti-cancer properties.	Food and Function	6	604-611	2015
Soumyadeep Chakraborty†, Vania O. Fernandez†, Fernando M.V. Dias, Jose A.M. Prates, Luis M.A. Ferreira, Carlos M.G.A. Fontes, Arun Goyal and Maria S.J. Centeno	Role of pectinolytic enzymes identified in <i>Clostridium thermocellum</i> -cellulosome	Plos One	10 (2)		2015
Arabinda Ghosh, Anil Kumar Verma, Jagan Mohan Rao T., Rishikesh Shukla and Arun Goyal	Recovery and purification of oligosaccharides from copra meal by recombinant endo- β -mannanase and deciphering molecular mechanism involved and its role as potent therapeutic agent	Molecular Biotechnology	57	111-127	2015
Immacolata Venditto, Arun Goyal, Andrew Thompson, Luis M. A. Ferreira, Carlos M.G.A. Fontes and Shabir Najmudin	Crystallization and preliminary crystallographic studies of a novel, non-catalytic carbohydrate-binding module from <i>Ruminococcus flavefaciens</i> cellulosome.	Acta Crystallographica F	F71	45-48	2015
Seema Patel and Arun Goyal	Applications of natural polymer gum Arabic: a review	International Journal of Food Properties	18 (5)	986-998	2015
Shuchi Singh, S.T.P. Bharadwaja, Pawan Kumar Yadav, Vijayanand S. Moholkar and Arun Goyal	Mechanistic investigation in ultrasound-assisted (alkaline) delignification of <i>Parthenium hysterophorus</i> biomass	Industrial & Engineering Chemistry Research	53	14241-14251	2015
Shuchi Singh, Swati Khanna, Vijayanand S. Moholkar and Arun Goyal	Screening and optimization of pre-treatments for <i>Parthenium hysterophorus</i> as feedstock for alcoholic biofuels	Applied Energy	129	195-206	2014
Arabinda Ghosh, Anil K. Verma, Ana Sofia Luis, Joana L. A. Bras, Carlos M. G. A. Fontes, Arun Goyal	Analysis of structure and ligand binding of family 35 carbohydrate binding module (CtCBM35) of <i>Clostridium thermocellum</i>	Biologia	69 (10)	1271-1282	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Arabinda Ghosh, Anil K. Verma, SaurabhGautam, Munishwar N. Gupta and Arun Goyal	Structure and functional investigation of ligand binding by a family 35 carbohydrate binding module (CtCBM35) of β -mannanase of family 26 Glycoside Hydrolase from <i>Clostridium thermocellum</i> .	Biochemistry (Moscow)	79	672-686	2014
Damini Kothari, Seema Patel and Arun Goyal	Therapeutic spectrum of non-digestible oligosaccharides: Overview of current state and prospects.	Journal of Food Science	79	1491- 98	2014
Jagan Mohan Rao T., Damini Kothari, Rishikesh Shukla and Arun Goyal	Characterization and In vitro analysis of dextran from <i>Weissellacibaria</i> JAG8 as food additive	International Journal Food Science and Nutrition	68	686-691	2014
Jagan Mohan Rao Tingirikari, Damini Kothari and Arun Goyal	Superior prebiotic and physicochemical properties of novel dextran from <i>Weissellacibaria</i> JAG8 for potential food applications.	Food and Function	5	2324-2330	2014
Jagan Mohan Rao T. and Arun Goyal	Dextranase from <i>Weissellacibaria</i> JAG8 inhibited by lysine and cysteine specific inhibitors	Current Enzyme Inhibition	10 (2)	143-149	2014
Arun Goyal, Shadab Ahmed, Carlos M.G.A. Fontes and Shabir Najmudin	Crystallization and preliminary X-ray crystallographic analysis of a novel α -L-arabinofuranosidase (CtGH43) from <i>Clostridium thermocellum</i> ATCC 27405.	Acta Crystallographica F	F70	616-618	2014
Ashutosh Gupta, Saprativ P. Das, Arabinda Ghosh, Rajan Choudhary, Debasish Das and Arun Goyal	Bioethanol production from hemicellulose rich <i>Populus nigra</i> involving recombinant hemicellulases from <i>Clostridium thermocellum</i> .	Bioresource Technology	165	205-213	2014
Swati Khanna, Anil Kumar Shukla, Arun Goyal and Vijayanand S. Moholkar	Alcoholic biofuels production from biodiesel derived glycerol by <i>Clostridium pasteurianum</i> whole cells immobilized on silica	Waste and Biomass Valorization	5	789-798	2014
Deeplina Das and Arun Goyal	Isolation, purification and functional characterization of glucanase from probiotic <i>Lactobacillus plantarum</i> DM5.	Annals of Microbiology	64 (4)	1715-1724	2014
Deeplina Das and Arun Goyal	Characterization of a noncytotoxic bacteriocin from probiotic <i>Lactobacillus plantarum</i> DM5 with potential as food preservative.	Food and Function	5 (10)	2453-2462	2014
Deeplina Das, Riwivoo Baruah and Arun Goyal	A food additive with prebiotic properties of a glucan from <i>Lactobacillus plantarum</i> DM5	International Journal of Biological Macromolecules	69	20-26	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Deeplina Das and Arun Goyal	Potential probiotic attributes and antagonistic activity of an indigenous isolate <i>Lactobacillus plantarum</i> DM5 from an ethnic fermented beverage "Marcha" of North Eastern Himalayas.	International Journal Food Science and Nutrition	65	335-344	2014
Saprativ P. Das, Deepmoni Deka, Rajeev Ravindran, Shadab Ahmed, Arabinda Ghosh, Debasish Das, Mohammad Jawed, Carlos M.G.A. Fontes and Arun Goyal	Ethanol production from water hyacinth (<i>Eichhornia crassipes</i>) by recombinant <i>Clostridium thermocellum</i> hydrolytic enzymes.	Environmental Progress & Sustainable Energy	33 (4)	1396-1404	2014
Rishikesh Shukla and Arun Goyal	Purification and characterization of dextransucrase from <i>Pediococcus pentosaceus</i> CRAG3 isolated from fermented cucumber	Indian Journal of Experimental Biology	52	1036-1044	2014
Gogoi P, Ganar K, Kumar S	Avian paramyxovirus: A brief review	Trans boundary and Emerging Diseases	-	-	2015
Kumar S	Newcastle disease virus outbreaks in India: Time to revisit the vaccine type and strategies	Vaccine	-	-	2015
Kumar R, Barman NN, Khatoon E, Rajbongshi G, Deka N, Morla S, Kumar S	Molecular characterization of E2 glycoprotein of classical swine fever virus: adaptation and propagation in porcine kidney cell	In Vitro Cellular & Developmental Biology - Animal			2015
Gogoi P, Morla S, Kaore M, Kurkure N, Kumar S	Complete genome sequence of a Newcastle disease virus isolate from an outbreak in Central India	Genome Announcements	3 (1)		2015
Kumar S	DNA vaccine against infectious bursal disease virus: still more to explore	Veterinary Microbiology	175	389-390	2015
Kumar CS, Kumar S	Species based synonymous codon usage in fusion protein gene of Newcastle disease virus	PLoS ONE	9 (12)	e114754	2014
Barman NN, Bora DP, Khatoon E, Mandal S, Rakshit A, Rajbongshi G, Depner K, Chakraborty A, Kumar S	Classical Swine fever in wild hog: report of its prevalence in North-east India	Transboundary and Emerging Diseases			2014
Rani S, Gogoi P, Kumar S	Spectrum of Newcastle disease virus stability in gradients of temperature and pH	Biologicals	42	351-354	2014
Adam V, Crosariol M, Kumar S, Ge M, Czack S, Roy S, Haczku A, Tretiakova A, Wilson JM, and Limberis M	AAV9-mediated airway expression of antibody protects old and immunodeficient mice against influenza	Clinical Vaccine Immunology	21 (11)	1528-1533	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Paldurai A, Xiao S, Kim SH, Kumar S, Nayak B, Samal S, Collins PL, Samal SK	Naturally occurring six- and twelve-nucleotide inserts do not affect Newcastle disease virus replication and pathogenesis	PLoS ONE	9 (8)	e103951	2014
Basavarajappa MK, Kumar S, Khattar SK, Gebreluul GT, Paldurai A, Samal SK	A recombinant Newcastle disease virus (NDV) expressing Infectious Laryngotracheitis virus (ILTV) gD surface protein protects against highly virulent ILTV and NDV challenges in chickens	Vaccine	32 (28)	3555-63	2014
Morla S, Tiwari AK, Joshi V, Kumar S	Complete genome sequence of a Newcastle disease virus isolate from an outbreak from Northern part of India	Genome Announcements	2(2)		2014
Ganar K, Das M, Sinha S, Kumar S	Newcastle disease virus: current status and our understanding	Virus Res	184C	71-81	2014
Shalini Singh, Shyamali Sarma, Shashank P Katiyar, Mousumi Das, Ruchika Bhardwaj, Durai Sundar Vikash Kumar Dubey	Probing molecular mechanism of hypericin induced parasitic death: An insight into role of spermidine beyond redox metabolism of Leishmania.	Antimicrobial Agents and Chemotherapy	59(1)	15-24	2015
Mousumi Das, Ritesh Kumar and Vikash Kumar Dubey	Ornithine decarboxylase of Leishmania donovani: Biochemical properties and possible role of N-terminal extension.	Protein and Peptide Letters	22(2)	130-136	2015
Prakash Saudagar and Vikash Kumar Dubey	Carbon Nanotube Based Betulin Formulation shows better efficacy against Leishmania parasite .	Parasitology International	63	772-776	2014
Prakash Saudagar, Shyam Lal Mudavath, Pipas Saha, Anil K. Saikia, Shyam Sundar and Vikash Kumar Dubey	In vivo assessment of antileishmanial property of 4-(4,4,8-Trimethyl-7-oxo-3-oxabicyclo[3.3.1]non-2-yl)-benzoic acid methyl ester, an oxabicyclo[3.3.1]nonanones.	Letters in Drug Design and Discovery	11	937-939	2014
Saudagar Prakash and Vikash Kumar Dubey	Molecular Mechanisms of In vitro Betulin Induced Apoptosis of Leishmania donovani	American Journal of Tropical Medicine and Hygiene	90	354-360	2014
Vidhyadhar N, Sushant Singh, Abhay N Singh, Vikash Kumar Dubey	Procerain B, a cysteine protease from Calotropis Procera, requires N-terminus pro-region for activity: cDNA cloning and expression with pro-sequence.	Protein Expression and Purification	103C	16-22.	2014
S Ghosh, L Rangan	Inhibition kinetics and molecular docking of α -amylase against isolated labdane diterpenes from <i>Alpinia nigra</i> analysis and hierarchical clustering. Meta Gene (Accepted)	Medicinal Chemistry Research	23 (11)	4836-4852	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
S Basak, AM Ramesh, V Kesari, S Mitra, A Parida, L Rangan	Molecular phylogeny of Hedychium from Northeast India as dissected using PCA analysis and hierarchical clustering	Meta Gene	2	459-468	2014
JN Vaughn, SR Chaluvadi, Tushar L Rangan, JL Bennetzen	Whole plastome sequences from five major zingiberaceae members facilitate marker development and define limits to barcode methodology.	PloS ONE	9 (10)		2014
S Ghosh, L Rangan	Molecular docking and inhibition kinetics of α -glucosidase activity by labdane diterpenes isolated from Tora seeds (<i>Alpinia nigra</i> B.L. Burtt.)	Applied Biochemistry Biotechnology	DOI: 10.1007/s12010-014-1366-4		2014
Satish C, Srikanth K, Arun EVR and Senthilkumar S	Statistical optimization of cassava fibrous waste hydrolysis by response surface methodology and use of hydrolysate based media for the production of optically pure d-lactic acid	Biochemical Engineering Journal	doi:10.1016/j.bej.2015.02.006		2015
Gaurav Jerath, Prakash Kishore Hazam and Vibin Ramakrishnan.	bPE toolkit: toolkit for computational protein engineering	Systems and Synthetic Biology.	8	337-341	2014
A. Mehra, Gaurav Jerath, Vibin Ramakrishnan, Vishal Trivedi.	Characterization of ICAM-1 biophore to design cytoadherence blocking peptides.	Journal of Molecular Graphics & Modelling	57	27-35	2015
Samanta, S., Goswami, S., Ramesh, A. and Das, G.	A new fluorogenic probe for solution and intra-cellular sensing of trivalent cations in model human cells	Sensors and Actuators B	194	120-126	2014
Kar, C, Samanta, S., Mukherjee, S., Datta, B. K., Ramesh, A. and Das, G.	A simple and efficient fluorophoric probe for dual sensing of Fe ³⁺ and F ⁻ : Application to bioimaging in native cellular iron pool and live cell.	New Journal of Chemistry	38, 6	2660-2669	2014
Thiyagarajan, D., Goswami, S., Kar, C., Das, G. and Ramesh, A.	A prospective antibacterial for drug-resistant pathogens: A dual warhead amphiphile designed to track interactions and kill pathogenic bacteria by membrane damage and cellular DNA cleavage.	Chemical Communications	50, 56	7434-7436	2014
Datta, B. K., Thiyagarajan, D., Kar, C., Ramesh, A. and Das, G.	A novel chemosensor with visible light excitability for sensing Zn ²⁺ in physiological medium and in HeLa cells.	Organic & Biomolecular Chemistry	12, 27	4975-4982	2014
Uday, P. S., Thiyagarajan, D., Goswami, S., Adhikari, M. D., Das, G. and Ramesh, A.	Amphiphile-mediated enhanced antibiotic efficacy and development of a payload nanocarrier for effective killing of pathogenic bacteria.	Journal of Materials Chemistry B	2, 35	5818-5827	2014

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Samanta, S., Goswami, S., Hoque, M. N., Ramesh, A. and Das, G.	An aggregation-induced emission (AIE) active probe renders Al(III) sensing and tracking of subsequent interaction with DNA.	Chemical Communications	50, 80	11833-11836	2014
Kar, C., Samanta, S., Goswami, S., Ramesh, A. and Das, G.	A single probe to sense Al(III) colorimetrically and Cd(II) by turn-on fluorescence in physiological conditions and live cells, corroborated by X-ray crystallographic and theoretical studies.	Dalton Transactions	44, 9	4123-4132	2014
Sadhukhan A, Kobayashi Y, Kobayashi Y, Tokizawa M, Yamamoto YY, Iuchi S, Koyama H, Panda SK, Sahoo L	VuDREB2A, a novel DREB2-type transcription factor in the drought-tolerant legume cowpea mediates DRE-dependent expression of stress-responsive genes and confers enhanced drought resistance in transgenic Arabidopsis	Planta	240 (3)	645-664	2014
Mishra S, Behura R, Awasthi JP, Dey M, Sahoo D, Bhowmik SSD, Panda SK, Sahoo L	Ectopic overexpression of a mungbean vacuolar Na ⁺ /H ⁺ antiporter gene (VrNHX1) leads to increased salinity stress tolerance in transgenic <i>Vigna unguiculata</i> L. Walp	Molecular Breeding	34 (3)	1345-1359	2014
Mishra S, Alavilli H, Lee B-ha, Panda SK, Sahoo L	Cloning and functional characterization of a vacuolar Na ⁺ /H ⁺ antiporter gene from mungbean (VrNHX1) and its ectopic expression enhanced salt tolerance in <i>Arabidopsis thaliana</i>	Plos One	9 (10)	41640	2014
Sadhukhan A, Panda SK, Sahoo L	VuD RIP, a putative cowpea RING E3 ubiquitin ligase interacts with transcription factor VuDREB2A in yeast	Plant Physiology and Biochemistry	83	51-56	2014
Mishra S, Alavilli H, Lee B-ha, Panda SK, Sahoo L	Cloning and characterization of a novel vacuolar Na ⁺ /H ⁺ antiporter gene (VuNHX1) from drought hardy legume, cowpea for salt tolerance	Plant Cell Tissue Organ Culture	120 (1)	19-33	2014
Mishra S, Panda SK, Sahoo L	Transgenic asiatic grain legumes for salt tolerance and functional genomics	Review in Agricultural Science	2	21-36	2014
Nath S, Panda P, Mishra S, Dey M, Choudhury S, Sahoo L, Panda SK	Arsenic stress in rice: Redox consequences and regulation by Iron	Plant Physiology and Biochemistry	80	203-210	2014
Digar Singh and Gurvinder Kaur	Production, HPLC analysis and in situ apoptotic activities of swainsonine toward lepidopteran, Sf-21 cell line,	Biotechnology Progress	30 (5)	1196-2205	2014

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Digar Singh and Gurvinder Kaur	The antileukemic cell cycle regulatory activities of swainsonine purified from <i>Metarhizium anisopliae</i> fermentation broth.	Natural Product Research	28 (22)	2044-2047	2014
Digar Singh and Gurvinder Kaur	Swainsonine, a novel fungal metabolite: optimization of fermentative production and bioreactor operations using evolutionary programming	Bioprocess and Biosystems Engineering	37 (8)	1599-1607	2014
Yuldasheva NY, Rashid ST, Haywood NJ, Cordell P, Mughal R, Viswambharan H, Imrie H, Sukumar P et al.	Haploinsufficiency of the insulin-like growth factor-1 receptor enhances endothelial repair and favorably modifies angiogenic progenitor cell phenotype.	Arteriosclerosis, Thrombosis, and Vascular Biology	34(9)	2051-8	2014
Cubbon RM, Yuldasheva NY, Viswambharan H, Baliga V, Stephen SL, Askham J, Sukumar P, et al.	Restoring Akt1 activity in outgrowth endothelial cells from South Asian men rescues vascular reparative potential.	Stem Cells	32(10)	2714-23	2014
Barman, A., and Tamuli R.	Multiple cellular roles of <i>Neurospora crassa</i> plc-1, splA2, and cpe-1 in regulation of cytosolic free calcium, carotenoid accumulation, stress responses, and acquisition of thermotolerance.	Journal of Microbiology	DOI 10.1007/s12275-015-4465-1		2015
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Ghoshal A and Ghosh SS	Purification, and Therapeutic Implications of Recombinant sFRP1 Expression	Applied Biochemistry and Biotechnology	175, 4	2087 - 2103	2015
Chaubey N and Ghosh SS	Overexpression of Granulocyte Macrophage Colony Stimulating Factor in Breast Cancer Cells Leads Towards Drug Sensitization	Applied Biochemistry and Biotechnology	175, 4	1948-1959	2015
Ghosh R, Goswami U, Ghosh SS, Paul A and Chattopadhyay A	Synergistic Anticancer Activity of Fluorescent Copper Nanoclusters and Cisplatin Delivered through a Hydrogel Nanocarrier	ACS Applied Materials and Interfaces	1, 7 (1)	209-22	2015
Mallick S, Sanpui P, Ghosh SS, Chattopadhyay A, Paul A	Synthesis, characterization and enhanced bactericidal action of a chitosan supported core-shell copper-silver nanoparticle composite	RSC Advances	12268 - 12276	12268-12276	2015
Banerjee S, Sahoo AK, Chattopadhyay A, Ghosh S.S.	Chemosensitization of Ikb α overexpressing glioblastoma towards anti-cancer agents,	RSC Advances	4	39257-39267	2014
Chockalingam S and Ghosh SS	Macrophage Colony Stimulating Factor and Cancer	Tumor Biology	35 (11)	10635-44	2014
Banerjee S, Sahoo AK, Chattopadhyay A, Ghosh S.S	Recombinant Ikb α -loaded curcumin nanoparticles for improved cancer therapeutics	Nanotechnology	29; 25 (34)		2014

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Sailapu S K, Sahoo AK, Ghosh S.S and Chattopadhyay A	Hierarchical Logic Structures Based on Responsive Fluorescent Gold Nanoclusters,	Small	29; 10 (20)	4067-71	2014
Khandelia R, Jaiswal A, Ghosh S.S and Chattopadhyay A	Polymer coated Gold Nanoparticle-Protein Agglomerates as Nanocarriers for Hydrophobic Drug Delivery	J. Mater. Chem. B	2 (38)	6472 – 6477	2014
Majumdar S, Sarmah B, Gogoi D, Banerjee S, Ghosh S.S, Chattopadhyay P, AK Mukherjee AK	Characterization, mechanism of anticoagulant action, and assessment of therapeutic potential of a fibrinolytic serine protease (Brevithrombolase) purified from <i>Brevibacillus brevis</i> strain FF02B,	Biochimie	103	50-60	2014
N. Bhardwaj, D. Devi, Biman B Mandal	Tissue-engineered cartilage: the crossroads of biomaterials, cells and stimulating factors	Macromolecular Bioscience	15	153-182	2015
N. Bhardwaj, W. T. Sow, D. Devi, K. W. Ng, Biman B. Mandal, Nam-Joon Cho .	Silk fibroin-keratin based 3D scaffolds as a dermal substitute for skin repair and regeneration	Integrative Biology	7	53-63	2015
S. K. Nandi, B. Kundu, A. Mahato, N. L. Thakur, S. Joardar, Biman B. Mandal.	In Vitro and in vivo evaluation of natural marine sponge skeleton as a bone mimicking biomaterial	Integrative Biology	7	250-262	2015
N. Dash, A. Malakar, M. Kumar, Biman B. Mandal and G. Krishnamoorthy.	Metal ion dependent “ON” intramolecular charge transfer (ICT) and “OFF” normal switching of the fluorescence: Sensing of Zn ²⁺ by ICT emission in living cells	Sensors and Actuators B: Chemical	202	1154-1163	2014
S. Yodmuang, S.L. McNamara, A. B. Nover, Biman B. Mandal, M. Agarwal, T. N. Kelly, P. G. Chao, C. Hung, D. L. Kaplan, G. V. Novakovic.	Silk microfiber-reinforced silk hydrogel composite for functional cartilage tissue repair	Acta Biomaterialia	11	27-36	2015
Abshar Hasan and Lalit Pandey	REVIEW: Polymers, Surface Modified Polymers and Self Assembled Monolayers as Surface Modifying Agents for Biomaterials	Polymer-Plastics Technology and Engineering	DOI: 10. 1080/03 602559. 2015.1021488		2015
Aditya Iyer, Anil Chandra and R. Swaminathan	Hydrolytic enzymes conjugated to quantum dots mostly retain whole catalytic activity.	Biochimica Biophysica Acta: General Subjects	1840	2935– 2943	2014
A. K. Thokchom, R. Swaminathan and A. Singh	Fluid Flow and Particle Dynamics Inside an Evaporating Droplet Containing Live Bacteria Displaying Chemotaxis.	Langmuir	30	12144-12153	2014
S. Goswami, M.B. Syiem and K. Pakshirajan	Cadmium removal by <i>Anabaena doliolum</i> Ind1 isolated from a coal mining area in Meghalaya, India: associated structural and physiological alterations	Environmental Engineering Research	20	41-50	2015

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A.S. Roy, N.A. Manikandan, J. Hazarika, K. Pakshirajan and M.B. Syiem	Heavy metal removal from multi-component system by the cyanobacterium <i>Nostoc muscorum</i> : kinetics and interaction study	Applied Biochemistry and Biotechnology	175	3863-74	2015
S. Goswami, O. Diengdoh, M.B. Syiem, K. Pakshirajan and M.G. Kiran	Zn(II) and Cu(II) removal by <i>Nostoc muscorum</i> : a cyanobacterium isolated from a coal mining pit in Chiehruhphi, Meghalaya, India	Canadian Journal of Microbiology	61	209-215	2015
N.A. Manikandan, K. Pakshirajan and M.B. Syiem	Cu(II) removal by biosorption using chemically modified biomass of <i>Nostoc muscorum</i> – a cyanobacterium isolated from a coal mining site	International Journal of ChemTech Research	7(1)	80-92	2014
V. Sinha, K. Pakshirajan and R. Chaturvedi	Chromium (VI) accumulation and tolerance by <i>Tradescantia pallida</i> : Biochemical and antioxidant study	Applied Biochemistry and Biotechnology	173	2297–2306.	2014
N.K. Sahoo, K. Pakshirajan and P.K. Ghosh	Evaluation of 4-bromophenol biodegradation in mixed pollutants system by <i>Arthrobacter chlorophenolicus</i> A6 in an upflow packed bed reactor	Biodegradation	25	705-718	2014
K. Pakshirajan, E.R. Rene and A. Ramesh	Biotechnology in environmental monitoring and pollution abatement	BioMed Research International	2014	235472	2014
Thomas D, Govindhan S, Baiju EC, Padmavathi G, Kunnumakkara AB, Padikkala J.	<i>Cyperus Rotundus</i> L. Prevents Non-Steroidal Anti-Inflammatory Drug-Induced Gastric Mucosal Damage by Inhibiting Oxidative Stress.	Journal of Basic and Clinical Physiology and Pharmacology	-	-	-
Roy M, Kunnumakkara AB, Mukherjee A, Sarkar R, Mukherjee S and Biswas J	Repair Activity Impaired by Arsenic: Recovery by Phytochemicals.	International Journal of Current Microbiology and Applied Sciences	-	-	-
Cherran E, Kunnumakkara AB, Kotoky J.	Recent Discoveries And Developments of Androgen Receptor Based Therapy for Prostate Cancer.	Medicinal Chemistry Communications	-	-	-
Khwairakpam AD, Shyamananda MS, Sailo BL, Rathnakaram SR, Padmavathi G, Kotoky J, Kunnumakkara AB	ATP Citrate Lyase (ACLY): A Promising Target for Cancer Prevention and Treatment	Current Drug Targets	16 (2)	156-63	2015
Monisha J, Padmavathi G, Bordoloi D, Roy NK, Kunnumakkara AB.	Neutrophil Gelatinase-Associated Lipocalin (NGAL): A Promising Biomarker for Cancer Diagnosis and A Potential Target for Cancer Therapeutics	Journal of Cell Science and Molecular Biology	1 (2)	106	2014

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Seraj Ahmad and Pranab Goswami	Application of chitosan beads immobilized Rhodococcus sp. NCIM 2891 cholesterol oxidase for cholesterol production	Process Biochemistry	49, 12	2149–2157	2014
Mallesh Santhosh, Somasekhar R. Chinnadayala, Ankana Kakoti, Pranab Goswami	Selective and sensitive detection of free bilirubin in blood serum using human serum albumin stabilized gold nanoclusters as fluorometric and colorimetric probe	Biosensors and Bioelectronics	59	370–376	2014
Mitun Chakraborty, Manish Goel, Somasekhar R. Chinnadayala, Ujjwal Ranjan Dahiya, Siddhartha Sankar Ghosh, and Pranab Goswami	Molecular characterization and expression of a novel alcohol oxidase from <i>Aspergillus terreus</i> MTCC6324,	PLOS ONE	9, 4	43466	
Madhuri Das, Lepakshi Barbora, Priyanki Das, Pranab Goswami	Biofuel cell for generating power from methanol substrate using alcohol oxidase bioanode and air-breathed laccase biocathode	Biosensors and Bioelectronics	59, 15	184–191	2014
Somasekhar R. Chinnadayala, Ankana Kakoti, Mallesh Santhosh, Pranab Goswami	A novel amperometric alcohol biosensor developed in a 3rd generation bioelectrode platform using peroxidase coupled ferrocene activated alcohol oxidase as biorecognition system	Biosensors and Bioelectronics	55, 15	120–126	2014
Priyamvada Jain, Babina Chakma (equal 1st author contribution), Sanjukta Patra, and Pranab Goswami	Potential biomarkers and their applications for rapid and reliable detection of malaria.	BioMed Research International	2014	43831	2014
A Ghosh, P Goswami, P Mahanta, A Verma,	Effect of carbon fiber length and graphene on	Journal of Solid State Electrochemistry	18(12)	3427-3436	2014
Dixy Jaba Sheeba J. M., Mohan, C.M., Marine Hussain, Gauri Deb, Neeraj Kumar and Anil M Limaye	Estrogen regulated extracellular matrix remodeling genes in MCF-7 breast cancer cells.	Oncology Letters	-	--	2015
Mohan C Manjegowda, Gauri Deb and Anil M Limaye	Epigallocatechin gallate induces the steady state mRNA levels of pS2 and PR genes in MCF-7 breast cancer cells.	Indian Journal of Experimental Biology	52 (4)	312-6	2014

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Gauri Deb, V S Thakur, Anil M Limaye and Sanjay Gupta	Epigenetic induction of tissue inhibitor of matrix metalloproteinase-3 by green tea polyphenols in breast cancer cells.	Molecular Carcinogenesis	doi: 10.1002/mc.22121		2014
Kumar P, Kumari RR, Kumar M, Kumar S, Chakrabarti A	Current practices and research updates on diabetes mellitus in canine	Veterinary World	7 (11)	952-959	2014
Anil Kumar, Dr.Utpal Bora	Molecular docking studies of curcumin natural derivatives with DNA topoisomerase I and II-DNA complexes.	Interdisciplinary Sciences: Computational Life Sciences	6	285-291	2014
Arghya Sett, Suradip Das, Dr.Utpal Bora,	Functional Nucleic-Acid-Based Sensors for Environmental Monitoring. Applied Biochemistry and Biotechnology	Applied Biochemistry and Biotechnology	174 (3)	1073-1091	2014
Sinha V., Pakshirajan K. and Chaturvedi Rakhi	Chromium(IV) accumulation and tolerance by Tradescantiapallida: Biochemical and Antioxidant Study	Appl Biochem Biotechnol	173	2297-2306	2014
Deshmukh R, Trivedi V	Phagocytic uptake of oxidized heme polymer is highly cytotoxic to macrophages.	PLoS One.	doi: 10.1371/journal.pone.0103706		2014
Vikram Kumara, Muthusivaramapandian Muthurajb, Basavaraj Palabhanvib, Alope Kumar Ghoshala, Debasish Das	High cell density lipid rich cultivation of a novel microalgal isolate-Chlorella sorokiniana FC6 IITG in a single-stage fed-batch mode under mixotrophic condition	Bioresource Technology	170	115-124	2014
Saravanan P, Dubey VK, Patra S.	Emulating structural stability of Pseudomonas mendocina lipase: in silico mutagenesis and molecular dynamics studies	J Mol Model	20 (11)		2014
Singh N, Patra S	Phosphodiesterase 9: insights from protein structure and role in therapeutic	Life Sci	106 (1-2)		2014

Conference/Workshop/Seminar/Symposia

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Siddharth Nimkar, Anand B	Characterizing the role of Cas3 helicase domain in CRISPR-Cas interference	International conference on "Proteomics from Discovery to Function" at IIT Bombay	-
Himanshu Sharma, Anand B	Structural basis for K ⁺ dependent hydrolysis and domain crosstalk in a highly conserved GTPase Era	International conference on "Proteomics from Discovery to Function" at IIT Bombay	-
Yoganand K.N.R, Anand B	Molecular characterization of CRISPR adaptation in Thermotoga maritima MSB8	International conference on "Proteomics from Discovery to Function" at IIT Bombay	
Ankita Punetha, Anand B	Features of the constituents of the Cascade-like complex in CRISPR-Cas type I-C system	Indo-US conference and workshop on "Recent Advances in Structural Biology & Drug Discovery" at IIT Roorkee	

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Ashutosh Gupta, Debasish Das and Arun Goyal	Improved bioethanol production from mixed pretreated leafy biomass of bamboo (<i>Bambusa dendrocalamus</i>) involving saccharification by recombinant enzymes from <i>Clostridium thermocellum</i>	Frontier Energy Research with Industry Academia Partnership (FERIAP,2015)	March 20-21, 2015
Ashutosh Gupta, Debasish Das and Arun Goyal	Bioethanol production from leafy biomass of <i>Saracaindicaby</i> involving recombinant <i>Clostridium thermocellum</i> -cellulase and <i>Saccharomyces cerevisiae</i> .	Symposium on Management and Procurement of Integrated Waste Management System	Feb. 6-7,2015
Shuchi Singh, Arun Goyal and Vijayanand S. Moholkar	Bioethanol production from <i>Partheniumhysterophorus</i> (carrot grass): Ultrasound enhanced enzymatic hydrolysis and fermentation.	4th Annual International Conference on Sustainable Energy and Environmental Sciences (SEES-2015)	Feb 9-10,2015
Ashutosh Gupta, Debasish Das and Arun Goyal	Lignocellulosic leafy biomass from- <i>Saracaindica</i> as a potential feedstock for bioethanol production involving recombinant enzymes from <i>Clostridium thermocellum</i>	102nd Indian National Science Congress	Jan 3-7, 2015
Ashutosh Gupta, Arabinda Ghosh, Debasish Das and Arun Goyal	Bioethanol production from Copra meal involving recombinant β -(1 \rightarrow 4)-Mannanase from <i>Clostridium thermocellum</i> .	29th ACCTI Carbohydrate Conference (CARBO-XXIX) on ChemBio Innovations for Bioproducts,	December 29-31, 2014,
Damini Kothari and Arun Goyal	Isomalto-oligosaccharides from <i>Leuconostocmesenteroides</i> NRRL B-1426 dextranase with functional food additive and colon cancer cells inhibiting activities.	Recent Advances in Cancer Biology and Therapeutics	Dec. 5,2014
Aruna Rani and Arun Goyal	Role of glycosaminoglycans in cancer biology	Recent Advances in Cancer Biology and Therapeutics	Dec. 5,2014
Arabinda Ghosh and Arun Goyal	Oligosaccharides as potential candidate in colon cancer therapy	Recent Advances in Cancer Biology and Therapeutics	Dec. 5,2014
Manoj Gadewar, Arun Goyal, Uptal Bora	Novel herbal drug delivery system.	International Biennial Conference on New Developments in Drug Delivery from Natural Products and Traditional Medicines	Nov. 20-22,2014
Vikky Rajulapati, Vania Fernandes, Arabinda Ghosh, Carlos M.G.A. Fontes, Arun Goyal	Cloning and expression of novel thermostable multi-substrate specific family 81 glycoside hydrolase (GH81) from <i>Clostridium thermocellum</i> ATCC 27405	55th Annual International Conference of AMI and National Conference on Empowering Mankind with Microbial Technologies (AMI-EMMT-2014),	Nov. 12-14, 2014
Shuchi Singh, Shyamali Sharma, Arun Goyal, Vijayanand S. Moholkar	Ultrasound-enhanced bioethanol production from <i>Partheniumhysterophorus</i> (carrot grass) by simultaneous saccharification and fermentation	Indo-US Conference on Advanced Lignocellulosic Biofuels,	Nov. 10-11, 2014
V.S. Moholkar, Arun Goyal and Swati Khanna	Ultrasound enhanced glycerol bioconversion: mechanistic investigations.	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014

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Shuchi Singh, Vijayanand S. Moholkar and Arun Goyal	Ultrasound-assisted intensification of bioethanol production from <i>Parthenium hysterophorus</i> .	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014
Anil Kumar Verma, Arun Goyal, Filipe Freire, Joyeeta Mukherjee, Munishwar N. Gupta, Carlos M.G.A. Fontes and Shabir Najmudin	Structure and functional analyses of recombinant glucuronoxylan-xylanohydrolase (CtXynGH30), its truncated derivative Xyn30A and associated family 6 carbohydrate binding module CtCBM6 from <i>Clostridium thermocellum</i> .	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014
Arun Dhillon and Arun Goyal	Biochemical characterization of recombinant rhamnogalacturonanlyase (CtRGL), a family 11 Polysaccharide Lyase (PL11) from <i>Clostridium thermocellum</i>	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014
Damini Kothari and Arun Goyal	Synthesis, purification and cytotoxicity of prebiotic gentiobio-oligosaccharide from <i>Leuconostoc mesenteroides</i> NRRL B-1426 dextranucrase	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014
Ashutosh Gupta, Rajan Choudhary, Debasish Das and Arun Goyal	Improved recombinant enzymatic saccharification from sugarcane bagasse in the second generation bioethanol production technology	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014
Aruna Rani and Arun Goyal	Deciphering the mode of action and kinetic parameters of chondroitin lyase of family 8 polysaccharide lyase (PsPL8a) from <i>Pedobacter saltans</i> DSM 12145	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention	Nov. 6-9, 2014
Arabinda Ghosh and Arun Goyal	Synthesis and purification of manno-oligosaccharides from coprameal by recombinant endo- β -mannanase and their prebiotic and anticancer properties	International Conference on Biotechnology and Bioengineering (ICBB-2014)	Oct 28-29, 2014
Kedar Sharma and Arun Goyal	In silico structure prediction of a family 10 glycoside hydrolase from <i>Pedobacter saltans</i> DSM12145	Indo-US Conference and Workshop on recent Advances in Structural Biology & Drug Discovery	Oct 9-11, 2014
Shuchi Singh, Vijayanand S. Moholkar and Arun Goyal	Bioethanol production by pretreatment, hydrolysis and fermentation of <i>Parthenium hysterophorus</i>	International Conference on Energy Technology, Power Engineering and Environmental Sustainability	June 21-22, 2014
Arun Rani and Arun Goyal	Effect of metal ions on activity of recombinant Chondroitin lyase (PsPL8a) from <i>Pedobacter saltans</i> DSM12145	10th European Symposium on Biochemical Engineering Sciences and 6th International Conference on Industrial bioprocesses	Sep 7-10, 2014
Deeplina Das and Arun Goyal	<i>Lactobacillus plantarum</i> DM5 ascell factory for nutraceuticals production	10th European Symposium on Biochemical Engineering Sciences and 6th International Conference on Industrial bioprocesses	Sep. 7-10, 2014

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ImmacolataVenditto, VâniaFernandes, Maja GroRydahl, Arun Goyal, Maria S.J. Centeno, LuísM.A. Ferreira, ShabirNajmudin, William G.T. Willats, Harry J. Gilbert and Carlos M.G.A. Fontes	Discovering novel CBMs families in Ruminococcusflavefacienscellulosome	5th International Conference on Plant Cell Wall Biology (PCWB2014),	Jul, 27-31, 2014
ImmacolataVenditto, Ana Sofia Luis, Arun Goyal A, Luis M.A. Ferreira, ShabirNajmudin, Harry J. Gilbert and Carlos M.G.A. Fontes	Structure and mechanism of the endo- β -1,4-gluconase B (CelB) from Bacillus halodurans	5th International Conference on Plant Cell Wall Biology (PCWB2014)	Jul, 27-31, 2014
Shuchi Singh, Vijayanand S. Moholkar and Arun Goyal	Bioethanol production by pretreatment, hydrolysis and fermentation of Partheniumhysterophorus.	International Conference on Energy Technology, Power Engineering & Environmental Sustainability (ETPEES)	Jun. 21-22, 2014
Shuchi Singh, S.T.P. Bharadwaja, Vijayanand S. Moholkar and Arun Goyal	Delignification of Partheniumhysterophorus by ultrasound assisted alkali treatment for enzymatic hydrolysis	National Seminar on Emerging Bio-inputs in Biotechnology for a Green Environment.	May 9-10, 2014
Ashutosh Gupta, Saprativ P. Das, Debasish Das and Arun Goyal	Identification of effective pretreatment along with improved saccharification by mixed recombinant Clostridium thermocellum hydrolytic enzymes for bioethanol production from water hyacinth.	National Seminar on Emerging Bio-inputs in Biotechnology for a Green Environment	May 9-10, 2014
Arabinda Ghosh and Arun Goyal	Novel thermostable recombinant endo- β -mannanase of Clostridium thermocellum for manno-oilgosaccharides production.	National Seminar on Metabolomics–A New Frontier In Natural Products Research	May 23-24, 2014
ImmacolataVenditto, VâniaFernandes, Maja GroRydahl, Arun Goyal, Maria S.J. Centeno, Luís M.A. Ferreira, Harry J. Gilbert, William G.T. Willats, Carlos M.G.A. Fontes and ShabirNajmudin	Structural and functional characterization of novel Carbohydrate Binding Module families in Ruminococcusflavefacienscellulosome.	3rd Meeting of Synchrotron Radiation Users from Portugal (ENURS, Encontro Nacional de Utilizadores de Radiação de Portugal) and European Synchrotron Radiation Facility (ESRF)	April 8, 2014
ImmacolataVenditto, Helena Santos, Arun Goyal, Luís Ferreira, Kazuo Sakka, Harry Gilbert, Carlos M.G.A. Fontes and ShabirNajmudin	Structure and characterization of the family 46 carbohydrate-binding module (CBM46) of the endo- β -1,4-gluconase B (CelB) from Bacillus halodurans.	3rd Meeting of Synchrotron Radiation Users from Portugal (ENURS, Encontro Nacional de Utilizadores de Radiação de Portugal) and European Synchrotron Radiation Facility (ESRF)	April 8, 2014

Name of Author	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
Saprativ P. Das, Ashutosh Gupta, Debasish Das and Arun Goyal	Lignocellulosic water hyacinth (<i>Eichhornia crassipes</i>) as waste for bioethanol production	Annual Symposium on Solid Waste management (Recycle 2014)	April 6, 2014
Ganar K and Kumar S	Cloning and expression of nucleocapsid protein gene of Newcastle disease virus	The international conference on host-pathogen interaction, Hyderabad, India	12-15th July 2014
Das M and Kumar S	Molecular characterization of Newcastle disease virus isolated from Northeast India	Indian Virological Society-XXIII National conference on "Recent trend in Virology Research in Omics Era"	18-20th Dec, 2014
Kumar U and Kumar S	Genotypic and pathotypic characterization of virulent Newcastle disease virus isolated from Eastern part of India	Indian Virological Society-XXIII National conference on "Recent trend in Virology Research in Omics Era"	18-20th Dec, 2014
Kumar R and Kumar S	Molecular characterization of classical swine fever virus following its adaptation in porcine kidney cells	Indian Virological Society-XXIII National conference on "Recent trend in Virology Research in Omics Era"	18-20th Dec, 2014
R Shelke, R Das, L Rangan	Evolution and distribution of LTR-retrotransposons in <i>Pongamia</i> and its correlation with genome size	Second International Conference on Biotechnology and Bioinformatics" (ICBB-2015)	6-8 Feb 2015 Pune
A Singh, A Khare, A N Panda, L Rangan	Characterization of bioactive karanjin from seeds of Karanj (Best Poster Award)	International Conference on "Medicinal Plants and Herbal Drugs for Human"	28-31 Jan 2015 Chennai
D Yadav, L Barbora, T Rado, R Blanchard, L Rangan, P Mahanta.	Small Scale Anaerobic Digesters: A case study in UK and India	Bioenergy: An Engine for Economic Growth in the Global South? UK Energy Research Centre and Department of Energy & Climate Change	28 January 2015, Welcome Trust, London, UK.
D Yadav, A Choudhary, D Bora, L Barbora, L Rangan, P Mahanta	Thermochemical and organic pretreatment of local lignocellulosic bioresources for energy production.	International Conference on Emerging Trends in Biotechnology, XI BRSI Convnetion	6-9 Nov 2014
I Jahan, A Singh, A Khare, AK Panda, L Rangan	Isolation and structure elucidation of karanjin from seeds of <i>Pongamia pinnata</i> .	4th, International Science Congress, India	8- 9 Dec 2014, Udaipur
R Das, G Juerges, P Nick, L Rangan	Genome size of four biofuel crops	4th International Science Congress, India,	8- 9 Dec 2014, Udaipur
S Ghosh, L Rangan	Unveiling the effect of plant derived labdane diterpenes as promising bactericidal and anticancer agents.	55th Annual American Society of Pharmacognosy meeting	2 - 6 August, 2014 Oxford, Mississippi, USA
Satish Cingadi, Srikanth Katla, Senthilkumar Sivaprakasam	Statistical optimization of cassava fibrous waste hydrolysis by response surface methodology and use of hydrolysate based media for the production of optically pure D-Lactic acid.	International conference on emerging trends in Biotechnology (ICETB-2014), New Delhi, India	November 6-9, 2014

Name of Author	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
Naresh Mohan, Rengesh Balakrishnan, Senthilkumar Sivaprakasam	Optimized production of ultra-low molecular weight hyaluronic acid production by <i>S.thermophilus</i> employing dairy industrial waste supplement	International conference on emerging trends in Biotechnology (ICETB-2014), New Delhi, India	November 6-9, 2014
Arun E.V.R, Katla Srikanth, Adityabarna Pal, Senthilkumar Sivaprakasam	Kinetic modelling of D-lactic acid production from cassava fibrous waste by homo-fermentative lactic acid bacteria	2nd Symposium in Advances in Sustainable Polymers, IIT Guwahati	January 21 – 22, 2015
Subbi Rami Reddy Tadi, Srikanth Katla, Anil M Limaye, Senthilkumar Sivaprakasam.	Statistical optimization of D-lactic acid production in palmyra jaggery based fermentation media	Bioprocessing India 2014	December 17 – 20, 2014
Kumar S, Alam S, Sahoo DP, Mishra S, Dey M, Panda SK,, Sahoo L	Induced overexpression of Arabidopsis NHX1 improves salinity stress tolerance in mungbean	Vth Scientific Workshop entitled "Biotechnology Research in North East India: Present & Future" organized by the DBT-AAU Centre, Assam Agricultural University, Jorhat	18th-20th September 2014
Saha B, Awasthi JP, Dey M, Mishra S, Panda SK, Sahoo L	Constitutive overexpression of Arabidopsis LEA protein, AtLEA4-1 confers drought tolerance in transgenic mustard	Vth Scientific Workshop entitled "Biotechnology Research in North East India: Present & Future" organized by the DBT-AAU Centre, Assam Agricultural University, Jorhat	18th-20th September 2014
Barik CR, Goud VV, Sahoo L	Qualitative phytochemical investigation and characterization of Seabuckthorn (<i>Hippophae salicifolia</i> D. Don) plant leaves from Northeastern India	New Frontier in Chemical Engineering & Science, Chemcon-2014, Punjab University, Chandigarh	27th-30th December 2014
Barik CR, Deshavath NN, Goud VV, Sahoo L	Morphometric, Pharmacognostical and Physicochemical Characterization of Sea Buckthorn (<i>Hippophaesalicifolia</i> D.Don): The Himalayan Wonder Plant	Asian Plant Science Conference, Bhairahawa, Nepal	1st-3rd November 2014
Barik CR, Sahoo L, Goud VV	Identification of Some Potential Energy Plants from North East India for Biomass Energy Production: an Agro-taxonomic Approach	Frontier Energy Research with Industry Academia Partnership Workshop, FERIAP-2015, Centre for Energy, IIT Guwahati, Guwahati	20th-21st March 2015
Maravi DK, Goud VV, Sahoo L	Enhanced triacylglycerol (TAG) accumulation synthesis in <i>Jatropha curcas</i> leaves upon following constitutive overexpression of an Arabidopsis diacylglycerol acyl transferase 1 (AtDGAT1)	National Conference on "Biotechnology and Human Welfare: New Vistas" organized by Department of Biotechnology, VBS Purvanchal University, Jaunpur	21st-22nd March 2015
P Sukumar	Formulating Proposal by Young Researchers: Research Question & Objectives	Symposia on Research Methodology and Biomaterials for Human applications for Clinical Translational Research, NEIGRIHMS, Shillong	20&21 Mar 2015
P Sukumar	Step by Step: Components of a Research Proposal	Symposia on Research Methodology and Biomaterials for Human applications for Clinical Translational Research, NEIGRIHMS, Shillong	20&21 Mar 2015

Name of Author	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
P Sukumar	Translational Research in Diabetes & Cardiovascular Diseases	Symposia on Research Methodology and Biomaterials for Human applications for Clinical Translational Research, NEIGRIHMS, Shillong	20&21 Mar 2015
P Sukumar	Diabetes & Vascular Diseases Journey into the riddle of antioxidants by targeting NADPH oxidase	International Conference on Multidisciplinary Research-2014, Indonesia	16-18 Oct 2014
Barman, A., Gohain, D. and Tamuli, R.	Functional analysis of calcium signaling genes and a novel approach to study direct protein-protein interaction in <i>Neurospora crassa</i> .	Research Conclave, IIT Guwahati, India.	March 23, 2015.
Laxmi V., Kumar A., Tamuli R.	Studies on essential calcium signaling genes calmodulin and calcineurin in <i>Neurospora crassa</i> .	Research Conclave, IIT Guwahati, India.	March 23, 2015.
Barman, A., Gohain, D., Laxmi, V., Deka, R., Kumar, R. and Tamuli, R.	Cellular functions of calcium signaling machinery in the model filamentous fungus <i>Neurospora crassa</i> .	Molecular intricacies of Plant-pathogenic micro-organisms (MIPPM-2015), Tezpur University, Tezpur, India.	February 21-22, 2015.
Laxmi V., Tamuli R.	Expression studies of important calcium signaling genes in <i>Neurospora crassa</i>	National Symposium on Biophysics and Golden Jubilee Meeting of Indian Biophysical Society (IBS-2015), Jamia Millia Islamia, New Delhi 10025, India.	February 14-17, 2015
Barman, A., Gohain, D. and Tamuli, R.	Reactive oxygen species and cell signaling in <i>Neurospora crassa</i> .	International conference on disease biology and therapeutics (ICDBT-2014), Institute of Advanced study in Science and Technology, Guwahati, India.	December 3-5, 2015
Gohain, D., Barman, A. and Tamuli, R.	Calcineurin and its role in drug resistance in pathogenic fungi.	International Conference on Disease Biology and Therapeutics-2014 (ICDBT-2014), Institute of Advanced study in Science and Technology, Guwahati, India	December 3-5, 2015
Laxmi V., Tamuli R.	Studies of calcium signaling pathway mediated by calmodulin and related proteins in <i>Neurospora crassa</i> .	International Conference on Disease Biology and Therapeutics-2014 (ICDBT-2014), Institute of Advanced Study in Science and Technology, Guwahati, India.	December 3-5, 2015
Tamuli R. Borkovich, K.	Studies on essential calcium-signaling genes using a conditional promoter-based system.	Riverside Postdoctoral Association Symposium (RPA-2014), University of California Riverside, USA	September 23-24, 2014.
Archita Ghoshal and Siddhartha Sankar Ghosh	Functional Implications of Recombinant sFRP1, 5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation and Apoptosis	Jawaharlal Nehru University, New Delhi, November	8-10, 2014
Sharmila Narayanan and Siddhartha Sankar Ghosh	Functional characterization of bacterially expressed recombinant phytaspase, 5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation and Apoptosis	Jawaharlal Nehru University, New Delhi, November	8-10, 2014

Name of Author	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
Md. Asif Raza and Siddhartha Sankar Ghosh	Application of redesigned E.coli cytosine deaminase in the perspective of cancer therapeutics, 5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation and Apoptosis	Jawaharlal Nehru University, New Delhi, November	8-10, 2014
Archita Ghoshal and Siddhartha Sankar Ghosh	Functional Implications of Recombinant sFRP1, 5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation and Apoptosis	Jawaharlal Nehru University, New Delhi, November	8-10, 2014
Abshar Hasan and Lalit Pandey	Polymers, surface modified polymers and surfaces with Self Assembled Monolayers as surface modifying agents for Biomaterials	International Conference on Disease Biology and Therapeutics-2014 (ICD-BT2014), Guwahati, India,	December 3-5, 2014
M.G. Kiran, K. Pakshirajan and G. Das	Heavy metal removal by sulfate reduction using anaerobic sludge biomass from a wastewater treatment plant	4th International Conference on Hydrology and Watershed Management (ICHWAM 2014) with a focal theme on Ecosystem Resilience-Rural and Urban Water Requirements	29th October-1st November 2014
Shalini Singh, Mousumi Das, Ruchika Bhardwaj and Vikash Kumar Dubey	Is Spermidine Synthase only a redox enzyme in Leishmania donovani?	83rd Annual Meeting of Society of Biological Chemists (SBCI)	17-21 December 2014
Sushant Singh, Anil Verma and Vikash Kumar Dubey	Oxidative Stress Environment Superoxide Dismutase; A Novel Antioxidative Protein Alleviating The Oxidative Stress Environment. Sustainable Development of Environmental Systems	IIT Guwahati	June 20-21, 2014
Ambuj Srivastava, Shankar Prasad Kanaujia	Interfacial analysis of oligomeric proteins in improving molecular docking algorithms.	INDO-US CONFERENCE and WORKSHOP on "Recent advances on structural Biology & Drug Discovery (RASBDD-IIT-2014) Indian Institute of Technology Roorkee	October 9-11, 2014
Mallesh Santhosh, Somasekhar R. Chinnadayala, Ankana Kakoti, Pranab Goswami*	Human serum albumin stabilized gold nanoclusters as a novel fluorescent and colorimetric probe for the detection of bilirubin-IX.	24th Anniversary World Congress on Biosensors (Biosensors 2014) organized by Elsevier in association with Biosensors & Bioelectronics, at Melbourne, Victoria, Australia	27-30 May 2014.
Madhuri Das and Pranab Goswami	Enzyme cascade based bioanode for complete utilization of methanol substrate to generate power in biofuelcell.	Frontier Energy Research with Industry Academia partnership	20-21st March 2015.
Sharbani Kaushik and Pranab Goswami	Studies on cyanobacteria for its potential biofuelcell applications	Frontier Energy Research with Industry Academia partnership	20-21st March 2015.
Priyanka Das, Madhuri Das, Lepakshi Barbora, and Pranab Goswami	Power generation from alcohol biofuelcell utilizing alcohol oxidase and laccase as biocatalysts	Frontier Energy Research with Industry Academia partnership	20-21st March 2015.

Name of Author	Title of Paper	Name of Conference/Workshop/ Seminar/Symposia	Date
Gauri Deb, Shalinee Jha, Sahil Batra, Shankar Prasad Kanaujia and Anil M Limaye	Inhibition of matrix metalloproteinase-2 (MMP-2) by the green tea polyphenol Epigallocatechin-3-gallate (EGCG): mechanistic insights from biochemical and in silico studies.	34th Annual Convention of Indian Association for Cancer Research on "Cancer research: from bench to bedside", held in Jaipur	Feb 19-21, 2015
Bajpai R. and Chaturvedi Rakhi	Production of doubled haploid embryos following colchicine treatment of microspore derived embryos of <i>Camellia assamica</i> subsp. <i>Assamica</i> (Masters)	Asian Plant Science Conference (APSC), Bhairawa, Nepal.	November 1-3, 2014
Srivastava V, Jannat W, Chaturvedi Rakhi	Establishment of in vitro culture and micropropagation protocol to raise high yielding true-to-type plantations of <i>Tinospora cordifolia</i> (willd.) Miers ex Hook. F. & Thoms	Asian Plant Science Conference (APSC), Bhairawa, Nepal	November 1-3, 2014
Dutta R, Srivastava V, Chaturvedi Rakhi	Extraction and Identification of Biologically Active Compounds from In vivo and In vitro Cultured <i>Tinospora cordifolia</i> (willd.) Miers ex Hook .F. Thomas	Asian Plant Science Conference (APSC), Bhairawa, Nepal	November 1-3, 2014
Dr. Damaris Magdalene, D. Bithiah Grace Jaganathan	Extra Ocular Muscles and Stem Cells	AAPOS Annual Meeting at New Orleans, USA	Mar 25-29, 2015
Vinoh Swu, Suraj Patil, Bithiah Grace Jaganathan	Breast cancer cell migration	5th Annual International Conference on Advances in Biotechnology, IIT Kanpur	Mar 13-15, 2015
Darilang Mawrie, Atul Kumar, Damaris Magdalene, Bithiah Grace Jaganathan	Characterisation of stem cells isolated from extra ocular muscle tissue	5th International Conference on Stem Cells and Cancer (ICSCC-2013): Proliferation, Differentiation and Apoptosis, New Delhi	Nov 8-10 2014
Chinnapaka Somaiah, Atul Kumar, Jina Bhattacharyya, Bithiah Grace Jaganathan	The Effect of Extracellular Matrix on Mesenchymal. Stem Cells	5th International Conference on Stem Cells and Cancer (ICSCC-2013): Proliferation, Differentiation and Apoptosis, New Delhi	Nov 8-10 2014

Book

Name of Author/s	Name of Book	Publisher	Total Page No.	ISBN	Year of Publication
Ajaikumar B. Kunnumakkara	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publications, Hackensack, NJ 07601, USA	404	978-981-4508-88-9	Dec 2014

Book Chapter

Name of Author/s	Name of Paper	Name of Book	Publisher	Vol / Issue	Page No.	ISBN	Year
Maravi DK, Mazumdar P, Alam S, Goud VV and Sahoo L	<i>Jatropha</i> (<i>Jatropha curcas</i> L.).	Agrobacterium Protocols (Kan Wang, Editor), Methods in Molecular Biology, Springer Protocols	Humana Press	Vol. 2	25-36	978-1-4939-1695-5	2015

Name of Author/s	Name of Paper	Name of Book	Publisher	Vol / Issue	Page No.	ISBN	Year
Behura R, Kumar S, Saha B, Panda MK, Dey M, Mishra S, Alam S, Sahoo DP, Sugla T, Panda SK and Sahoo L	Cowpea (<i>Vigna unguiculata</i> L. Walp)	Agrobacterium Protocols (Kan Wang, Editor), Methods in Molecular Biology, Springer Protocols	Humana Press	Vol. 2	255-264	978-1-4939-1658-0	2015
Salma Jasmine and Biman B. Mandal. Edited by Prof. S. C. Kundu	Non-mulberry silk biomaterials for tissue engineering.	Silk biomaterials in tissue engineering and regenerative medicine	Woodhead Publishing group, India	01	---	978-0-85709-699-9	2014
CS Krishna Murthy and Biman B. Mandal. Edited by G.P. Kothiyal and A. Srinivasan	Synthetic and Natural fibers based biomaterials	Recent trends in biomaterials research	Pan Stanford Publishing, Singapore	01	---	978-9-81461-398-9	2015
Guruvayoorappan C, Sakthivel KM, Padmavathi G, Bakliwal V, Monisha J and Kunnumakkara AB	Cancer Preventive and Therapeutic Roles of Fruits and Vegetables: An Overview	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publications, Hackensack, NJ 07601, USA	1	1-52	978-981-4508-88-9	2014
Jagadeeshan S, Kunnumakkara AB, Nair AS	Anticancer Activities of Fruits and Vegetables Against Gynecological Cancers	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publications, Hackensack, NJ 07601, USA	1	131-159	978-981-4508-88-9	2014
Mathew AJ, Padmavathi G, Kunnumakkara AB, Atulya M	Cancer Chemopreventive and Therapeutic Properties of Fruits and Vegetables Against Head and Neck Malignancies	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publications, Hackensack, NJ 07601, USA	1	161-183	978-981-4508-88-9	2014
Sakthivel KM, Kunnumakkara AB, Guruvayoorappan C	Cancer Preventive and Therapeutic Properties of Fruits and Vegetables Against Lung Cancer	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publications, Hackensack, NJ 07601, USA	1	221-250	978-981-4508-88-9	2014
Pandey MK, Kunnumakkara AB, Amin SG	Prostate Cancer: How Helpful are Natural Agents for Prevention?	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publications, Hackensack, NJ 07601, USA	1	251-275	978-981-4508-88-9	2014

Name of Author/s	Name of Paper	Name of Book	Publisher	Vol / Issue	Page No.	ISBN	Year
Monisha J , Padmavathi G, Bakliwal V, Katre N, Padikkala J, Kunnumakkara AB	Cancer Pre- ventive and Therapeutic Properties of Fruits and Veg- etables Against Commonly Oc- curring Cancers in Humans	Anticancer Properties of Fruits and Vegetables: A Scientific Review	World Scientific Publica- tions, Hack- ensack, NJ 07601,USA	1	337- 366	978-981- 4508- 88-9	2014
Suradip Das, Dr. Utpal Bora & B.B. Borthakur	Applications of silk bioma- terials in tissue engineering and regenera- tive medicine	Silk biomaterials for tissue engineering and regenera- tive medicine ed. Kundu, S.C. Woodhead	Woodhead Publishing Limited		41- 77	ISBN-13: 978 0 85709 699 9	2014
Singh M. and Chaturvedi Rakhi	An appraisal on in vitro conser- vation and bio- technological Interventions in <i>Spilanthes acmella</i> Murr	Plant Reproductive Biology and Conservation	I.K. Inter- national Publishers, New Delhi		299- 319	978-93- 82332- 90-9	2015
Srivastava P, Singh M. and Chaturvedi Rakhi	Herbal medicine and biotechnology for benefit of human health	Animal Biotechnology: Models in Discovery and Translation	Elsevier, Inc. Waltham, MA , USA		563- 575,	978012 4160026	2014
Mishra V.K. and Chaturvedi Rakhi	An overview on haploid production in trees	Tree Biotechnology	CRC press, New Delhi		151- 186	978-1- 4665- 9714-3	2014

CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Prof. Arun Goyal.	Synthesis and purification of manno- oligosaccharides from coprameal by recombinant endo- β -mannanase and their prebiotic and anticancer proper- ties.	BITS Pilani, Dubai Campus, Dubai, UAE	Oct 28-29, 2014	International
Prof. Arun Goyal	Lactobacillus plantarum DM5 as cell factory for nutraceuticals production	Lille, France.	September 7-10, 2014	International
Prof. Arun Goyal	Structure and functional analyses of recombinant glucuronoxylan-xylanohy- drolase (CtXynGH30), its truncated de- rivative Xyn30A and associated family 6 carbohydrate binding module CtCBM6 from <i>Clostridium thermocellum</i>	Jawaharlal Ne- hru University, New Delhi, India.	Nov 6-9, 2014	National
Dr. Kannan Pakshirajan	Hostel Management in Centrally Funded Technical Institutions	IIT Madras, Chennai	April 9-10, 2014	National
L Rangan	Recent Advances in BioSciences and Technology	Coimbatore, TN	25-26 Feb 2015	National

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
L Rangan	Indo_UK Seminar Series on Biomass waste utilization	Jadavpur, Kolkata	11-14 Feb 2015	National
L Rangan	15 Indo-US Flow Cytometry Workshop	Lucknow, UP	29-31 Oct 2014	National
L Rangan	TCS Annual Symposium	AllIMS, New Delhi	25-27 Oct 2014	National
Dr.Senthilkumar Sivaprakasam	Bioprocessing India 2014	ICT, Mumbai		National
Ranjan Tamuli	Molecular intricacies of Plant-pathogenic micro-organisms (MIPPM-2015).	Tezpur University, India.	February 21-22, 2015.	International
Dr. Biman B. Mandal	Advances in Polymer Science & Technology (APST-2015) National conference.	Guwahati, India	March 13, 2015	National
Dr. Biman B. Mandal	International Silk Conference.	Fudan and Soochow University, Shanghai, China	October 8-12, 2014	International
Dr. Lalit Pandey	Recent Advances in Cancer Biology and Therapeutics	IIT Guwahati	December 5, 2014	National
R. Swaminathan	Indo-US International Conference/ Workshop on "Recent Advances in Structural Biology & Drug Discovery"	IIT Roorkee	9-11 Oct 2014	International
R. Swaminathan	International Conference on Mathematical and Computational Biology (ICMCB)	IIT Kanpur	28 Feb-3 Mar, 2015	International
R. Swaminathan	National Symposium on Biophysics and Golden Jubilee meeting of the Indian Biophysical Society	Jamia Millia Islamia, New Delhi	14-17 Feb 2015	National
R. Swaminathan	National Workshop on Fluorescence and Raman techniques	Indian Institute for Science Education and Research, Pune	15-19 Dec 2014	National
R. Swaminathan	Gordon Research Conference: Intrinsically Disordered Proteins	Stonehill College, Boston, USA	6-11 July 2014	International
Ajaikumar B. Kunnumakkara	34th Convention of Indian Association for Cancer Research, February 19-21, Jaipur	Jaipur	2015	National
Ajaikumar B. Kunnumakkara	Educational empowerment held at SN Higher Secondary School, Nattika, Thrissur, Kerala	Kerala	2015	National
Ajaikumar B. Kunnumakkara	National Conference on "Advance in Cancer Genomics" Mizoram University	Mizoram	2014	National
Professor Pranab Goswami	24th Anniversary World Congress on Biosensors (Biosensors 2014) organized by Elsevier in association with Biosensors & Bioelectronics	Melbourne, Victoria, Australia	27-30 May 2014	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. B. Anand	"Functional Insights into the Mechanism of Prokaryotic Specific RNA Guided Gene Targeting CRISPR-Cas system"	National Symposium on Biophysics & Golden Jubilee meeting of Indian Biophysical Society	Jamia Millia Islamia, New Delhi	16 Feb, 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. B. Anand	"Insights into the mechanism of CRISPR RNA maturation in CRISPR-Cas type I-C system"	Indo-US conference and workshop on "Recent Advances in Structural Biology & Drug Discovery"	IIT, Roorkee	11 Oct, 2014
Prof. Arun Goyal	Structure and functional analyses of recombinant glucuronoxylanohydrolase (CtXynGH30), its truncated derivative Xyn30A and associated family 6 carbohydrate binding module CtCBM6 from <i>Clostridium thermocellum</i>	International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI Biotech Research Society India (BRSI) Convention.	Jawaharlal Nehru University, New Delhi, India.	Nov 6-9, 2014
Prof. Arun Goyal	Synthesis and purification of manno-oligosaccharides from coprameal by recombinant endo- β -mannanase and their prebiotic and anticancer properties.	International Conference on Biotechnology and Bioengineering (ICBB-2014)	BITS Pilani, Dubai Campus, Dubai, UAE	Oct 28-29, 2014
Prof. Arun Goyal	<i>Lactobacillus plantarum</i> DM5 as cell factory for nutraceuticals production	10th European Symposium on Biochemical Engineering Sciences and 6th International Conference on Industrial bioprocesses	Lille, France.	September 7-10, 2014
Dr. Kannan Pakshirajan	Heavy metal removal by bioaccumulation and biosorption using <i>Nostoc muscorum</i> , a cyanobacterium isolated from a coal mining area in Meghalaya, India	Bhabha Atomic Research Centre	Mumbai	February 3-5, 2015
Dr. Kannan Pakshirajan	Biorefinery: future green Industry	GMR Institute of Technology	Rajam, Sri-kakulam	December 12-13, 2014
Dr. Kannan Pakshirajan	Principles and applications of bioremoval of metals and metalloids	Centre for the Environment, IIT Guwahati	Guwahati	June 20-21, 2014
Prof Vikash Kumar Dubey	Modern approaches against <i>Leishmania</i> parasite.	Indian Science congress local chapter	Imphal, Manipur University	21 and 22nd January.
Prof Vikash Kumar Dubey	Vikash Kumar Dubey, Redox metabolism of <i>Leishmania</i> : A promising target for drug discovery	8th Annual Convention of the Association of Biotechnology and Pharmacy (ABAP)	School of Biotechnology, Devi Ahilya University, Indore, India	18-20 December, 2014
Prof Vikash Kumar Dubey	Admiring spermidine for its assorted functions: An integrated computational and Biochemical studies.	7th National Symposium Cum workshop on "Recent Trend in Structure Bioinformatics and Structure based drug designing"	Algappa University, Karaikudi - 630 003, Tamilnadu, India	24th -27th Feb 2015
Prof Vikash Kumar Dubey	Recent advancement in <i>Leishmania</i> research	QIP- Short Term Course on "Advances in Biomedical Engineering 2015"	Indian Institute of Technology Guwahati	Feb 25-March 1, 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof Vikash Kumar Dubey	Recent development on Leishmania research: A promising drug candidates in pipeline.	DSIR workshop	Indian Institute of Technology Guwahati	
Prof L Rangan	Morphological, biochemical and genomic studies in Karanaj	Hindustan College of Arts and Sciences	Coimbatore	26 Feb 2015
Prof L Rangan	Energy recovery from waste legume	Jadavpur University	Jadavpur	12 Feb 2015
Prof L Rangan	Application of Flow Cytometry in Plant Science	MNIT	Allahabad	28 Oct 2014
Prof L Rangan	IPR and Biotechnology	IITG	Guwahati	12 Dec 2014
Prof L Rangan	Sophisticated Instruments in Plant Science Research	IITG	Guwahati	25 Nov 2014
Dr. Senthilkumar Sivaprakasam	Real-time monitoring and control of bioprocess systems: Challenges & Opportunities	Dept. of Instrumentation Engineering, Madras Institute of Technology	Chennai	13th March 2015
Dr. Senthilkumar Sivaprakasam	BioProcess Analytical Technology	Faculty Quality Improvement Programme organized by AICTE, PSG College of Technology	Coimbatore	June 28, 2014
Dr. Senthilkumar Sivaprakasam	Industrial waste valorization of potential raw feedstock for biopolymer production – Designed biomass approach	Centre for Sustainable Polymers, IIT Guwahati	Guwahati	January 21 – 22, 2015
Dr. Senthilkumar Sivaprakasam	Real-time monitoring and control of bioprocess systems: Challenges & Opportunities	Dept. of Instrumentation Engineering, Madras Institute of Technology	Chennai	13th March 2015
Dr. Aiyagari Ramesh	1. Chemistry-Biology Interface: Nanomaterials, Synthetic Amphiphiles and Small Molecules for Sensing and Antibacterial Applications, 2. Fluorescence-based Tools in Antimicrobial Assay and Sensing Applications	Central Food Technological Research Institute (CFTRI)	Mysore	4-5 September, 2014
Dr. Aiyagari Ramesh	Nanomaterials and Synthetic Amphiphiles as Potent Antibacterials	Indian Institute of Technology Guwahati	Guwahati	4 December, 2014
Prof L Sahoo	Bioresources and Agriculture in India	Gifu University	Gifu (Japan)	12 June 2014
Prof L Sahoo	Agriculture and Bioresources of India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014
Prof L Sahoo	Culture and Heritage of India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014
Prof L Sahoo	Technology and International Cooperation in India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014
Prof L Sahoo	International Cooperation in Plant Functional Genomics Research	KAZUSA DNA Research Institute	Tokyo (Japan)	9 July 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof L Sahoo	Updates on crop transformation in National Symposium on Advances in Biotechnology for Crop Improvement (in absentia)	Eternal University	Himachal Pradesh	12 July 2014
Prof L Sahoo	Genetically Modified Crops in Agriculture	Gifu Norin Senior High School	Gifu (Japan)	17 July 2014
Prof L Sahoo	Generation of Biotic and Abiotic stress tolerant Asiatic grain legumes	Hokkaido University	Sappore (Japan)	25 July 2014
Prof L Sahoo	Exploring Japan-India Cooperation for Food and Nutritional Ventures	CHUBU Research Foundation	Gifu (Japan)	28 July 2014
Prof L Sahoo	Academic-Industry cooperation for International joint education in Food and Nutrition	KAO Corporation	Tokyo (Japan)	31 July 2014
Prof L Sahoo	Food & Nutritional Ventures in Northeast India: Japan-India Cooperation in UGSAS-GU 12 Round Table and Symposium 2014	United Graduate School of Agricultural Science (Gifu-Shizouka University)	Gifu (Japan)	5 August 2014
Prof L Sahoo	Japan-India cooperation for bio-fuel research	Frontier Research Center (Biotechnology) of TOYOTA Central R&D Labs	Aichi (Japan)	6 August 2014
Prof L Sahoo	Genetic improvement of orphan grain legumes for abiotic stress tolerance in Vth workshop under the DBT-AAU Center "Biotechnology Research in Northeast India: Present & Future	Assam Agricultural University	Jorhat	18 Sep 2014
Prof L Sahoo	Crop Improvement Program at IIT Guwahati	Indian Institute of Soil Science	Bhopal	3 November 2014
Prof L Sahoo	Agriculture and Plant Biotechnology in India	Tezpur University	Tezpur	24 November 2014
Prof L Sahoo	Bioinspired Innovations at Symposium organized by Institutional Biotech Hub at Department of Biotechnology, Gauhati University	Gauhati University	Guwahati	14 February 2015
Prof L Sahoo	How to write a good research paper in Continued Medical Education Program Workshop by Ministry of AYUSH, Govt. of India	Regional Research Institute for Homeopathy	Guwahati	23 March 2015
Prof L Sahoo	Bioresources and Agriculture in India	Gifu University	Gifu (Japan)	12 June 2014
Prof L Sahoo	Agriculture and Bioresources of India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014
Prof L Sahoo	Culture and Heritage of India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014
Prof L Sahoo	Technology and International Cooperation in India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof L Sahoo	International Cooperation in Plant Functional Genomics Research	KAZUSA DNA Research Institute	Tokyo (Japan)	9 July 2014
Prof L Sahoo	Updates on crop transformation in National Symposium on Advances in Biotechnology for Crop Improvement (in absentia)	Eternal University	Himachal Pradesh	12 July 2014
Dr Piruthivi Sukumar	Insulin resistance induced endothelial dysfunction: targeting NADPH oxidase	King George's Medical University	Lucknow	26th Nov 2014
Dr Piruthivi Sukumar	Diabetes & Cardio-vascular Diseases	Dr.B. Lal Institute of Biotechnology	Jaipur	25th Sep 2014
Dr Piruthivi Sukumar	Diabetes induced Cardio-Vascular Diseases	St. Anthony's College	Shillong	23rd Aug 2014
Dr Piruthivi Sukumar	Diabetes & Vascular Diseases	Department of Biotechnology & Bioinformatics, NEHU	Shillong	22nd Aug 2014
Dr Bose B	Emergence of Cellular Heterogeneity in Expression of an Oncofetal Protein	34th Annual Convention of Indian Association for Cancer Research (IACR2015)	Jaipur	February 2015
Dr Bose B	Cellular Heterogeneity in Expression of an Oncofetal Protein	83rd Annual Meeting of Society Of Biological Chemists (India),	Bhubaneswar	December 2014
Dr Bose B	All Cells are Equal, But Some are More Equal Than Others"	National Seminar on Recent Advances in Biotechnological Research in North East India: Challenges and Prospects,	Tezpur University	November 2014
Dr Bose B	Emergence of Cellular Heterogeneity in Expression of an Oncofetal Protein	34th Annual Convention of Indian Association for Cancer Research (IACR2015)	Jaipur	February 2015
Dr Shankar Prasad Kanaujia	Molecular modeling in drug design	Indian Institute of Technology Guwahati	Guwahati	November 7, 2014
Prof. S. S. Ghosh	Nanoscale Materials in Cancer Theranostics	Indo-Swiss one day workshop on August 30th Organized by the Centre for Nanotechnology, IITG	IIT Guwahati	30th August 2014
Prof. S. S. Ghosh	Nanoclusters as Logic Gate and Cancer Theranostics	National Seminar on Recent Advances in Biotechnological Research in North East India: Challenges and Prospects Organized by Department of Molecular Biology and Biotechnology, Tezpur University	Tezpur University	28th November 2014
Prof. S. S. Ghosh	FICS-2014	Session Chair Organized by the Department of Chemistry, IITG	IIT Guwahati	5th December 2014
Prof. S. S. Ghosh	Nanotechnology in Cancer Theranostics and Protein Therapeutics	New Advances and Horizons in Nanoscience And Nanotechnology (NanoSci-2014), IASST, Guwahati	IIT Guwahati	20th December 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. S. S. Ghosh	Nanotheranostics for integration of imaging and targeted drug delivery	National Conference on Chemistry of Chalcogens and Related Topics (NC3-2015), Organized by Dept. of Applied Chemistry, DIAT, Pune	Defence Institute of Advanced Technology (Deemed University) Pune	12th January 2015
Prof. S. S. Ghosh	A new paradigm for targeted suicide gene therapy	T TE-QIP Short term course on "Theoretical and practical aspects of cancer research" by the Department of Biosciences and Bioengineering	IIT Guwahati	6th February 2015
Prof. S. S. Ghosh	Polymer-Based Nanotheranostics: A single platform for bio-imaging and targeted delivery	Short term course on "Advances in Biomedical Research" by the Department of Biosciences and Bioengineering	IIT Guwahati	26th February 2015
Dr. Biman B. Mandal	Silk Based Tissue Engineering	KTH, School of Biotechnology, AlbaNova University Centre.	Stockholm, Sweden	October 27, 2014
Dr. Biman B. Mandal	Stem cell based Bioengineering of Tissues	UGC-NRCM Workshop on Biomaterials, Department of Materials Engineering.	IISC, Bangalore	May 23-25, 2014
Dr. Biman B. Mandal	Silk Based Tissue Engineering	Advances in Biomedical Engineering, QIP programme.	IIT Guwahati	February 26, 2015
Dr. Biman B. Mandal	Silk Biomedicals	Micro-Manufacturing for Biomedical Applications, QIP programme.	IIT Guwahati	February 23, 2015
Dr. Biman B. Mandal	Silk Biomaterials for Human Tissue Engineering	IIT Guwahati – Kyoto Institute of Technology Japan, Joint Symposium on Biobased Materials.	IIT Guwahati	January 20, 2015
Dr. Biman B. Mandal	Silk Biomaterials for Human Tissue Engineering	Smart Materials and Their Applications in Nanotechnology, QIP programme.	IIT Guwahati	December 23, 2014
Dr. Biman B. Mandal	Tissue Engineered Implants for Human Applications	Sophisticated Instruments in Interdisciplinary Research, TEQIP programme.	IIT Guwahati	November 25, 2014
Prof. R. Swaminathan	Can macromolecular crowding regulate enzyme substrate specificity?	Indian Institute of Science	Bengaluru	25th March, 2015
Prof. R. Swaminathan	Protein Aggregation and Disease: Structure, Function and Dynamics of Hen Lysozyme Aggregates	National Institute of Pharmaceutical Education and Research	Guwahati	25th November 2014
Professor Pranab Goswami	Biosensor and enzymatic biofuelcell: Emerging topics in healthcare and biomedical engineering,	Department of Biotechnology, Gauhati University,	Institutional Biotech Hub, Gauhati University	14th February 2015
Professor Pranab	key note lecture on Enzymatic Biofuel Cell for Micro Scale Electronic Devices	IITG-Kyoto Institute of Technology (KIT) Joint Symposium on Biobased Materials,	IIT Guwahati	20 January, 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Professor Pranab	Biosensors for clinical applications	Symposium on Recent Advances in Biotechnological Research in North East India: Challenges and Prospects organized by Dept. of Molecular Biology and Biotechnology	Tezpur University	November 27-29, 2014
Professor Pranab	Biotechnology: Recent advances and Future Prospects	Delivered invited lecture at University of Science and Technology, Meghalaya	University of Science and Technology, Meghalaya	on on 23rd August 2014 in
Dr Anil M Limaye	Direct inhibition of matrix metalloproteinase-2 (MMP-2) by the green tea polyphenol Epigallocatechin-3-gallate (EGCG): mechanistic insights from biochemical and in-silico studies	Recent Advances in Cancer Biology and Therapeutics-2014	Guwahati	5th Dec, 2014
Dr Anil M Limaye	Matrix metalloproteinases and tumor progression	QIP	Guwahati	4th Feb, 2015
Prof. Rakhi Chaturvedi	General applications of Plant tissue culture	Amity University	Lucknow	March 3, 2015
Dr. Bithiah Grace Jaganathan	Stem Cells in Biomedical Engineering	QIP- Short Term Course on "Advances in Biomedical Engineering 2015"	Indian Institute of Technology Guwahati	Feb 25-March 1, 2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Lecture	Name of Institute / Organization	Place	Date
Dr. Junpei Takano	Boron Transport in plants	Laboratory of molecular biology, Research Faculty of Agriculture, Graduate School of agriculture, Hokkaido University	Sapporo, Japan	05/11/14
Dr. Manab Deka.	Some latest news on bacteria and viruses	Department of Applied Sciences, Gauhati University	Guwahati	11/11/14
Prof. M. R. N. Murthy	Twists and Turns of Protein Structures	Molecular biophysics unit, IISC, Bangalore	Bangalore	14/11/14
Mr. Pedro Bule	Cellulosomes as a source of novel carbohydrate active molecules	Faculty of Veterinary Medicine, University of Lisbon, Portugal	Portugal	25/11/14
Mr. Amitava Chakraborty	Demystifying Patenting in India: Portfolio and Strategies (AC)	Indian Patent Counsel and Consultant for Applied Research Works Inc., USA	USA	12/12/14
Dr. Sudhakaran Prabhakaran	Complex Regulation of Cellular Proteome	Postdoctoral Research Fellow, Department of Systems Biology, Harvard Medical School, Boston, MA, USA	Boston, MA, USA	08/01/15
Prof. Amitabha Chattopadhyay	(I) Interaction of Membrane Cholesterol with G-Protein- Coupled receptors: Novel Insights In Health and Disease; (II) Organization and Dynamics of Membranes and Proteins using the Wavelength-Selective Fluorescence Approach	Center for Cellular and Molecular Biology (CCMB), Hyderabad, India	Hyderabad, India	16/01/15

Name	Name of Lecture	Name of Institute / Organization	Place	Date
Prof. Bharat B Aggarwal	Targeting Inflammatory Pathways for the Prevention of Chronic Diseases "Naturally" by Nutraceuticals Derived from Spices and from Traditional Indian and Chinese Medicine	Cytokine Research Laboratory, Department of Experimental Therapeutics, The University of Texas M.D. Anderson Cancer Center, Houston, Texas, USA	Houston, Texas, USA	05/12/2014
Prof. Farid Badria	One Molecule and several Therapeutic Targets	Head of Pharmacognosy Department and Drug Discovery Unit, Mansoura University, Egypt	Egypt	05/12/2014
Prof. Anupam Chatterjee	Precocious anaphase and the expression of Securin and p53 genes as candidate biomarkers for the early detection in areca-nut induced carcinogenesis	Department of Biotechnology & Bioinformatics, North Eastern Hill University	Shillong, Meghalaya	05/12/2014
Dr. B.G. Unni	Chronic Obstructive Pulmonary Disease- a probable risk factor for lung cancer	Biotechnology Division, CSIR-North East Institute of Science & Technology, Jorhat, Assam	Jorhat, Assam	05/12/2014
Dr. Ruby John Anto	Curcumin: A potential candidate to be evaluated as a chemosensitizer in the cervical cancer and breast cancer chemotherapy	Rajiv Gandhi Centre for Biotechnology, Kerala	Kerala	05/12/2014
Dr. Pranjal Deka	Molecular Biology of cancer Gallbladder	Consultant GI & HPB Surgery, GNRC Hospital, Guwahati	Guwahati	05/12/2014
Dr. Asha S. Nair	Development of novel sensitizers based on NIR dyes	Rajiv Gandhi Centre for Biotechnology, Kerala	Kerala	05/12/2014
Dr. Raghunath Chatterjee	A new function of CpG methylation	Indian Statistical Institute	Kolkata	05/12/2014
Dr. Yogeshwer Shukla	Cancer: Causes and Prevention	Proteomics Laboratory, Indian Institute of Toxicology Research, Lucknow	Lucknow	04/02/2015
Dr. Munindra Baruah	HPV and Cancer	Head and neck cancer, NECHRI	Guwahati	05/02/2015
Mr. Sumantho Basu	(I) Basics of Flow cytometry; (II) Clinical applications of FACS and Data analysis	BD Biosciences	Kolkata	05/02/2015
Dr. Madhumita Roy- Senior Scientist	Arsenic and Cancer	Chittaranjan National Cancer Institute, Kolkatta	Kolkata	06/02/2015
Dr. Alok C. Bharti	Human Papillomavirus and Cervical Cancer: Molecular Biology at the fulcrum of Disease Diagnostics and Emerging Therapeutics	Institute of Cytology & Preventive Oncology, ICMR, Noida	Noida	06/02/2015
Dr. Rupinder Singh	PCR and its applications in Cancer research	Bio-Rad Laboratories	New Delhi	06/02/2015
Dr. Rajesh Saha,	Western Blot and its applications in Cancer research	Bio-Rad Laboratories	Kolkata	06/02/2015
Mr. Hrudaya S. Chaporkar	(I) Working principle of Spectrophotometer, (II) Introduction to the latest technologies of cancer research	ThermoScientific	Kolkata	07/02/2015

Name	Name of Lecture	Name of Institute / Organization	Place	Date
Prof. Anupam Chatterjee	Techniques and approaches used in raw betel-nut induced carcinogenesis	Department of Biotechnology & Bioinformatics, North Eastern Hill University	Shillong, Meghalaya	08/02/2015
Dr. Pawan Sharma	DBT Programmes in North Eastern Region (DBT-in-NER)	Healthcare, NER-BPMC (DBT), New Delhi	New Delhi	08/02/2015
Dr. Jibon Kotoky	Drug, its Development from Natural Sources : An Overview	Biological & Chemical Sciences, Division of Life Sciences & Chairman CIF, Institute of Advanced Study in Science & Technology (IASST), Guwahati	Guwahati	08/02/2015
Prof. Punit Kaur	Structural Insights into the mechanism of action of proteins secreted during late lactation	Department of Biophysics, AIIMS, New Delhi	New Delhi	20/02/2015
Prof. P. Balaram	Mass spectrometry and Next Generation Sequencing in the Analysis of Natural Peptide Libraries: The Case of Cone Snail Venom	Indian Institute of Science Bangalore	Bangalore	Departmental Colloquium October 28, 2014
Prof. P. Balaram	Chemistry at the Fringes of Biology: Protein Sequences and Function	Indian Institute of Science Bangalore	Bangalore	Biotalk, October 28, 2014
Dr. Ch. Mohan Rao	"Chemistry, Biology and Medicine: A Continuum"	CCMB	Hyderabad	15/09/14

SEMINARS/WORKSHOPS/CONFERENCES/SHORT-TERM COURSES ORGANISED:

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./ Wor./Con.	Funded By	Date	International/ National	No. of participants
Dr. Kannan Pakshirajan	DSIR Workshop on Industrial Research in Development of Biopharmaceuticals	Department of Scientific and Industrial Research, Government of India	3rd March 2015	National	30
As a Co-coordinator; Coordinator: Dr Nitin Chaudhary and Dr Vibin Ramakrishnan	Two days workshop on "PEPTIDE DRUGS: MODELING TO PRACTICE"	TEQIP, MHRD	Guwahati 7-8th Nov 2014.	National	34
L Rangan	Flow Data Analysis Workshop	Registration Amount and BioRad	24-25 Jan 2015	National	50
Rajeev Kumar and L Rangan and	Basics and Clinical of Flow Cytometry Course	DBT- NE	10-11 Nov 2014	National	39
Dr Piruthivi Sukumar	QIP on Advances in Biomedical Engineering	CET IITG/AICTE	25th Feb to 1st Mar 2015	National	20
Biplab Bose, Convenor	Short-term Training Course on "Advanced Techniques in Cell and Molecular Biology"	DBT	June 2014	National	40

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./ Wor./Con.	Funded By	Date	International/ National	No. of participants
Dr. Biman B. Mandal	Advances in Bio-medical Engineering	AICTE	Feb 25th till March 01, 2015	National	20
Dr. Nitin Chaudhary; Dr. Vibin Ramakrishnan; Dr. Sachin Kumar	TE-QIP workshop on Peptide Drugs: Modeling to Practice	CET, IIT Guwahati	Nov 07 – Nov 08, 2014	National	33
Prof. Venkata Dasu Veeranki (Organizing Chairman), Dr. Ajaikumar B. Kunnumakkara (Organizing Secretary), Prof. Rajaram Swaminathan (Chairman-Scientific Committee)	National Conference on "Recent Advances in Cancer Biology and Therapeutics – 2014 (RACBT- 2014)"	Department of Biosciences and Bioengineering, Indian Institute of Technology Guwahati, Guwahati	5th December, 2014	National	300
Dr. Ajaikumar B. Kunnumakkara (Co-ordinator), Dr. Sachin Kumar (Co- Coordinator)	Short term Course on "Theoretical and Practical Aspects of Cancer Research"	Department of Biosciences and Bioengineering, Indian Institute of Technology Guwahati, Guwahati	4th – 8th February, 2015	National	33
Professor Pranab Goswami	Frontier Energy Research with Industry Academia partnership	DST, DBT, CSIR, Reliance Industries Ltd., Carl Zeiss India, Neofam Instrument, Bani Mandir.	20-21st March 2015	Open	84 participants and 09 experts
Dr. Utpal Bora, Secretary Organizing Committee, [organized in collaboration with Institute of Advanced Study in Science and Technology, (IASST)]	International Conference on Disease Biology and Therapeutics	DST	3rd-5th December, 2014	International	

PATENTS

Name of Faculty and co researcher	Name	Date Applied/ Granted	Application No.
Dr. Vibin Ramakrishnan, Ms. Sajitha S., Dr. Nitin Chaudhary, Mr. Gaurav Pandey	Crystalline Di-Histidine Nano-structures	March 09, 2015; Applied	243/KOL/2015
Dr. Vibin Ramakrishnan, Mr.Prakash Kishore Hazam, Dr. Nitin Chaudhary, Dr. Vishal Trivedi, Mr.Gaurav Jerath	Antimicrobial Peptides	March 26, 2015; Applied	333/KOL/2015
Dr. Nitin Chaudhary, Ms.Karabi Saikia, Ms. Durga Sravani Yalavarthi, Dr. Vibin Ramakrishnan	Antimicrobial Short Peptides	March 30, 2015; Applied	353/KOL/2015
Pranab Goswami, Ankana Kakoti, Mohd. Farhan Siddiqui	Paper based microfluidic analytical device with prefabricated customized test zone	30.12.2014	1365/KOL/2014.
Pranab Goswami, Ankana Kakoti, Mohd. Farhan Siddiqui	Leak proof paper based analytical microfluidic device and process for its preparation.	03.11.2014	1126/KOL/2014.

AWARDS AND HONOURS

- a) Dr. B. Anand was chosen for NASI-Young Scientist Platinum Jubilee Award for the Year 2014 .
- b) Professor V. K. Dubey received Prof. Umakant Sinha Memorial Award of the Indian Science Congress Association.
- c) Professor V. K. Dubey received Dr. P.N. Raju Oration Award" of Indian Council of Medical Research (ICMR)
- d) Professor V. K. Dubey elected as FBRS (Fellow, Biotech Research Society) of India in recognition of outstanding research contributions to Medical Biotechnology (2014).
- e) Professor V. K. Dubey elected as FABP (Fellow, Association of Biotechnology and Pharmacy) in recognition of outstanding research contributions to Medical Biotechnology (2014).
- f) Professor L Rangan received Dr JN Baruah Memorial Award in area of Biological Sciences, Assam Science Society, 2014
- g) Dr. L.Pandey received Innovation in Science Pursuit for Inspired Research (INSPIRE) Faculty Award 2014 by Department of Science & Technology in Engineering and Technology Discipline.
- h) Professor Pranab Goswami has been selected as editor of Biocatalysis and Agricultural Biotechnology (BAB) (Elsevier, ISSN: 1878-8181), Official journal of the International Society of Biocatalysis and Agricultural Biotechnology (ISBAB) since January 2015. [<http://www.journals.elsevier.com/biocatalysis-and-agricultural-biotechnology/editorial-board/>]
- i) Professor Pranab Goswami is the member of the selection committee (12.12.2014) for the post of Technical Superintendent, IIT Guwahati.
- j) Professor Pranab Goswami is the member of the selection committee (18.11.2014) for the post of Institute Post Doctoral Fellow.
- k) Professor Pranab Goswami is the expert member of the selection committee (28.10.2014) for the selection of faculty members in the Department of Food Processing Technology in Central Institute of Technology (CIT), Kokrajhar.
- l) Professor Pranab Goswami is the member of internal screening committee meeting (23.06.2014) for scrutinizing applications of the Academic Staff for upgradation under MFCS at IASST, Guwahati.
- m) Professor Pranab Goswami is the member of the expert committee constituted for 3 years (2014-2016) by Department of Biotechnology, Govt. of India for evaluating projects between India and another country in the area of Biotechnology.
- n) Professor Pranab Goswami is the member of the selection committee (14.02.2014) for the post of Assistant Librarian, IIT Guwahati.
- o) Dr. Utpal Bora has been awarded UXCEL award by DBT, Govt. of India in the form of a project entitled "Exploration and characterization of seri- bioresources of North East India for potential textile and non-textile applications" for 3years (2014-2017).

p) Professor V.V Dasu elected as FABP (Fellow, Association of Biotechnology and Pharmacy) in recognition of outstanding research contributions to Medical Biotechnology (2014).

STUDENTS' ACHIEVEMENTS

1. Mr. Siddharth Nimkar, a PhD student under the tutelage of Dr. B. Anand won "Best Poster Award" in the international conference on "Proteomics from Discovery to Function" at IIT Bombay
2. Ashutosh Gupta, PhD student under Prof. Arun Goyal and Dr. D. Das received 2nd best poster award for his work on "Improved bioethanol production from mixed pretreated leafy biomass of bamboo (*Bambusa dendrocalamus*) involving saccharification by recombinant enzymes from *Clostridium thermocellum* at Frontier Energy Research with Industry Academia Partnership (FERIAP, 2015), a workshop organized during March 20-21, 2015 at Center for Energy, IIT Guwahati, Assam, India.
3. Ashutosh Gupta, PhD student under Prof. Arun Goyal and Dr D. Das received best poster award and cash prize Rs 5000/- for his work on "Bioethanol production from Copra meal involving recombinant β -(1 \rightarrow 4)-Mannanase from *Clostridium thermocellum* presented at 29th ACCTI Carbohydrate Conference (CARBO-XXIX) on ChemBio Innovations for Bioproducts, December 29-31, 2014, Center of Innovative and Applied Bioprocessing (A National Institute under DBT, Govt. of India, Mohali, Punjab, India.
4. Rvivoo Baruah, a PhD student under Prof. Arun Goyal successfully completed joint international collaborative research project with University of Helsinki, Finland under Center for International Mobility (CIMO) fellowship for doctoral programme during Sept. 28, 2014 to March 28, 2015
5. Ms Anuma Singh, doctoral student under supervision of Dr L Rangan received Best Poster Award in the Session "Validation of Traditional Knowledge on Herbal Medicines" for her poster titled "Characterization of bioactive karanjin from seeds of Karanj" during International Conference on "Medicinal Plants and Herbal Drugs for Human" Chennai, from Jan 29-31, 2015
6. Mr. Satish Cingadi, M.Tech student of our department who had pursued his M.Tech project thesis at our lab was awarded 'Best Poster Presentation' in 'International Conference on Emerging Trends in Biotechnology (ICETB-2014)' organized by The Biotech Research Society India at School of Environmental Sciences, JNU, New Delhi on Nov 6-9, 2014. Mr. Satish secured this award for his thesis work entitled "Statistical optimization of cassava fibrous waste hydrolysis by response surface methodology and use of hydrolysate based media for the production of optically pure D-lactic acid
7. Mr. Bedabrata Saha was awarded first prize in poster presentation on the title "Constitutive overexpression of Arabidopsis LEA protein, AtLEA4-1 confers drought tolerance in transgenic mustard" in Vth workshop under the DBT-AAU Center "Biotechnology Research in Northeast

India: Present & Future held at Assam Agricultural University, Jorhat during 18-21 September 2014

8. Best Poster award to Ananya Barman for the poster titled "Reactive oxygen species and cell signaling in *Neurospora crassa*", presented at the International Conference on Disease Biology and Therapeutics (ICDBT-2014), Institute of Advanced study in Science and Technology, Guwahati, India, 3-5 December 2014.

9. Mr. Manishekhar Kumar (PhD student, 2012 batch) selected for prestigious Fulbright Nehru Doctoral Research Fellowship 2014. Manishekhar will be visiting USA for 09 months (starting July 2015) to pursue research work at Biomedical Engineering Department, Tufts University to work with Prof. David L. Kaplan on "Bioartificial Pancreas".

10. Best Poster Award to Mr. Jadi Praveen Kumar and Mr. Manishehar Kumar in Advances in Polymer Science & Technology (APST-2015) National conference, IASST, Guwahati, India, March 13, 2015.

11. Best Poster Award to Mr. Manishehar Kumar in Advances in Polymer Science & Technology (APST-2015) National conference, IASST, Guwahati, India, March 13, 2015.

12. Debika Datta, Best Poster Prize for the poster titled "Investigations into the role of amphiphilicity in A β 16-22 self-assembly" presented at 6th Annual Meeting of Proteomics Society India PS(I) and International Conference held at IIT Bombay during 7-9 December, 2014

13. Mr. Y. Disco Singh, research scholar of Centre for Energy and Neitho-o, M.Tech student of Department of Bioscience and Bioengineering working with Dr Utpal Bora won the best poster award on "Indigenous plants used by local populace in North-East India as house-hold remedies" at International conference on Disease Biology & Therapeutics (ICDBT 2014) organized by IASST, Guwahati from 3-5 December 2014.

14. Mrs. Shahla Kianamiry, Iranian visiting PhD Student from Department of Nanobiotechnology, Tarbiat Modares University (TMU) working with Dr. Utpal Bora, Department of Bioscience and Bioengineering won best poster award on "Optimizing of activation curcumin for conjugation with nanocarriers as an anticancer nanomedicine" at International conference on Disease Biology & Therapeutics (ICDBT 2014) organized by IASST, Guwahati from 3-5 December 2014.)

15. Manoj Gadewar, research scholar of the Department of Bioscience and Bioengineering working with Dr. Utpal Bora won second best poster award on "Novel herbal drug delivery system" at 4th Biennial International Conference on New Developments in Drug Discovery from Natural Products and Traditional Medicines held at National Institute of Pharmaceutical Education and Research (NIPER), Mohali, Punjab, India.

16. Mr. Suradip Das, research scholar of Department of Bioscience and Bioengineering working with Dr Utpal Bora was awarded DST International Travel Support for presenting a paper entitled "Nanotechnology in Neuroscience" at the 16th International Spinal Research Trust Meeting during

3-6th September, 2014 at London, UK.

17. Mr. Arghya Sett, Ph.D student under supervision of Dr. Utpal Bora, Dept. of Biosciences and Bioengineering was awarded International Travel Support by Department of Biotechnology (DBT) for presenting a poster entitled "Aptamers in breast cancer diagnostics" at the 16th EMBL PhD symposium held in EMBL, Heidelberg, Germany during 23-25th October, 2014.

18. Best paper award under supervision of Prof. Rakhi Chaturvedi to "Extraction and Identification of Biologically Active Compounds from In vivo and In vitro Cultured *Tinospora cordifolia* (willd.) Miers ex Hook .F. Thoms." at Asian Plant Science Conference, Nepal 2014

SPECIAL MENTION

a) Aadi Moolam Ramesh Completed his PhD in the year 2014 under supervision of Prof. L. Rangan

b) Supriyo Basak Completed his PhD in the year 2014 under supervision of Prof. L. Rangan

c) Tushar Completed his PhD in the year 2014 under supervision of Prof. L. Rangan

d) Gauri Deb completed her PhD in the year 2014 and will be awarded her degree in 2015 under supervision of Dr Anil Limaye

e) Dr. Utpal Bora Founded Mugagen Laboratories Pvt Ltd, the first biotech start-up company of North-East India presently incubated at IITG-Technology Incubation Centre, IIT Guwahati.

f) Dr. Utpal Bora was awarded the highly competitive Biotechnology Ignition Grant (BIG) project entitled "Exploring Muga silk fibre as a promising suture material" from BIRAC, DBT, Govt. of India (mentor institute IKP, Hyderabad) on July, 2014 for Rs. 49.92 Lakhs

g) Dr. Utpal Bora was awarded a project entitled "Implantable Scaffolds for Obstetric Fistula" under Social Innovation Programme for Products Affordable & Relevant to Societal Health (SPARSH) scheme of BIRAC, DBT, Govt of India amounting to Rs 48 Lakhs on Decemeber, 2014

h) Himangshu Sonowal completed his PhD in the year 2015 under supervision of Dr. Bithiah Grace Jaganathan

i) Prof Arun Goyal was invited as Visiting Professor

- Dec 2014 - Dec 2014 Visiting Professor, Department of Food and Environmental Science, University of Helsinki, Finland.

- Jun 2014 - Jul 2014 Visiting Professor, Department of Animal Production, Faculty of Veterinary Medicine (FMV), Technical University of Lisbon (UTL), Lisbon, Portugal.

- Jun 2014 - Jun 2014 Visiting Professor, Department of Food and Environmental Science, University of Helsinki, Finland

j) Prof Arun Goyal was Invited as one of the Panel of judges for Best Poster Awards at International Conference on Emerging Trends in Biotechnology (ICETB-2014) and XI

Biotech Research Society India (BRSI) Convention, November 6-9, 2014, Jawaharlal Nehru University, New Delhi, India

k) Prof Arun Goyal was Invited as the Judge for Best oral presentation at International Conference on Biotechnology and Bioengineering (ICBB-2014), Oct 28-29, 2014, BITS Pilani, Dubai Campus, Dubai, UAE.

l) Prof Arun Goyal

- 2015 Invited Reviewer, Environmental Progress and Sustainable Energy.
- 2015 Invited Reviewer, International Journal of Biological

Macromolecules.

- 2014 Invited Reviewer, Plos One
- 2014 Invited Reviewer, Biotechnology Progress
- 2014 Invited Reviewer, Journal of Food Science and Technology.

Prof Arun Goyal was invited as Member, Reviewing Committee, Technology Incubation Center (TIC), IIT Guwahati (June 2012)

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	B. Anand	IIT Kanpur	Assistant Professor	Structural Biology, Bioinformatics & Computational Biology, RNA Biology, Molecular Evolution
2.	U. Bora	Institute of Genomics and Integrative Biology, Delhi	Associate Professor	Biomaterials, Nanotechnology, Drug Delivery and Tissue Engineering
3.	B. Bose	AIIMS, New Delhi	Associate Professor	Cell Signaling, Computational Biology, Recombinant Proteins
4.	R. Chaturvedi	University of Delhi, Delhi	Professor	Plant Cell, Tissue & Organ Culture, Protoplast Isolation and Regeneration, Isolation, Purification and Characterization of Plant Secondary Metabolites
5.	N. Chaudhary	Centre for Cellular and Molecular Biology, Hyderabad	Assistant Professor	Peptide self-assembly and amyloid aggregates, Peptide-membrane interactions, Curvature inducing proteins
6.	D. Das	IIT Bombay	Associate Professor	Metabolic engineering, Biochemical engineering, Modelling of fermentation process, Biofuel
7.	V. V. Dasu (Head of the Department)	IIT Madras	Professor	Bioprocess Development (upstream to downstream), Metabolic Engineering, Bioenergy
8.	V. K. Dubey	Benaras Hindu University, Varanasi	Professor	Protein Biochemistry; Parasite Biochemistry
9.	S. S. Ghosh	Indian Institute of Chemical Biology, Kolkata	Professor	Gene Therapy, Expression Cloning (Mammalian Systems), Nanobiotechnology
10.	P. Goswami	NEIST, CSIR, Jorhat	Professor	Biocatalysis, Biosensor, Enzymatic Biofuel cell, and Biotransformation
11.	A. Goyal	IIT Kanpur	Professor	Molecular Biology, Protein Engineering, Structural and Functional Proteomics of Carbohydrate active enzymes and other industrial microbial enzymes
12.	B. G. Jaganathan	Frankfurt University, Germany	Assistant Professor	Stem Cells, Cancer and cell therapy
13.	S. P. Kanaujia	Indian Institute of Science Bangalore	Assistant Professor	Structural and Computational Biology
14.	M. Kumar	University of Maryland, College Park, USA	Assistant Professor	Molecular interaction of host-pathogen-vector of infectious diseases, Vector borne diseases of Zoonotic importance

Sl. No.	Name	PhD	Designation	Areas of Interest
15.	S. Kumar	University of Maryland	Assistant Professor	Identification of molecular determinants of avian paramyxovirus virulence, Reverse genetics study of avian paramyxoviruses: Newcastle disease virus as a model, Vaccine development against avian paramyxoviruses using reverse genetics system, Viral vector study-Avian paramyxoviruses and adenoviruses
16.	A. B. Kunnumakkara	University of Calicut	Assistant Professor	Role of inflammatory pathways in cancer development, Identification of novel biomarkers for cancer diagnosis and prognosis, Cancer drug discovery, Development of transgenic and gene knockout mouse models for biomedical research
17.	A. M. Limaye	IISc Bangalore	Assistant Professor	Molecular endocrinology, Cancer biology, Gene expression and regulation in Eukaryotic and Prokaryotic systems
18.	S. K. Maiti	IIT Bombay	Assistant Professor	Biochemical Engg, Biofuel, Bioprocess modeling
19.	B. B. Mandal	IIT Kharagpur	Assistant Professor	Cell based tissue engineering, Biomaterials, Stem cells, Drug delivery systems
20.	K. Pakshirajan	IIT Madras	Associate Professor	(a) Environmental Biotechnology: biological removal of organic and inorganic pollutants from water and wastewaters (b) Biotechnological Products and Process Engineering: production, characterization and properties, process design, kinetics and optimization (c) Biohydrometallurgy and (d) Biofuels
21.	L. Pandey	IIT Delhi	Assistant Professor	Surface and interfacial science, Protein's adsorption and aggregation, Environmental Biotechnology
22.	S. Patra	Central Food Technological Research Institute, Mysore	Associate Professor	Enzymes - applications in pharma and food industry
23.	V. Ramakrishnan	IIT Bombay	Assistant Professor	Computational Biology, Bioinformatics, Biophysics, Bio-Organic Chemistry, Bionanotechnology
24.	A. Ramesh	Central Food Technological Research Institute, Mysore	Associate Professor	Nanobiotechnology, Biological Activity of Synthetic Amphiphiles and Metal Complex, Probiotics and Antimicrobial Peptides
25.	L. Rangan	M.S. Swaminathan Research Foundation, Chennai, International Rice Research Institute, Philippines	Professor	Molecular systematics, Biofuel, IPR
26.	L. Sahoo	Maharshi Dayanand University, Rohtak	Professor	Genetic engineering and functional genomics of plants
27.	G. K. Saini	Andhra University, Visakhapatnam	Associate Professor	Fungal Biotechnology, Biological Control, DNA fingerprinting and Transformation studies, Studies on extracellular enzymes and toxic metabolite production, Development of a potent biopesticide

Sl. No.	Name	PhD	Designation	Areas of Interest
28.	S. Sivaprakasam	Central Leather Research Institute, Chennai	Assistant Professor	Bioprocess Analytical Technology (BioPAT), Biocalorimetry, Bioprocess Monitoring and Control Environmental Bioprocess Systems
29.	P. Sukumar	University of Leeds, UK	Assistant Professor	Smooth muscle and endothelial cell function, Cardiovascular diseases, Diabetes, Obesity
30.	R. Swaminathan	Tata Institute of Fundamental Research, Mumbai	Professor	Protein Structure, Function and Dynamics; Fluorescence Spectroscopy
31.	R. Tamuli	Centre for Cellular and Molecular Biology, Hyderabad	Associate Professor	Calcium signaling, DNA repair
32.	V. Trivedi	Jawaharlal Nehru University, New Delhi	Associate Professor	Intracellular Signaling in <i>Plasmodium falciparum</i>

DEPARTMENT OF CHEMICAL ENGINEERING

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 2002

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in

o Chemical Engineering

Master of Technology (MTech) in

o Petroleum Science and Technology (PST)

o Material Science and Technology (MST)

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 7
- Associate Professor: 15
- Assistant Professor: 13
- Adjunct Faculty : 1

NO. OF LABORATORIES WITH BRIEF INTRODUCTION:

UG Labs: 7 Nos.

o Fluid Mechanics Lab: Flow through Fluidized Bed, Centrifugal Pump Test Rig, Flow through Helical Coil, Nozzle Meter Test Rig, Packed Bed, Pitot Tube, Rotameter Test Rig, Drag Co-efficient Apparatus, Reynolds's Apparatus, Notch Tank Apparatus, Impact of Jet on Vane Apparatus, Reciprocating Pump Test Rig, Bernoulli Apparatus, Flow Meter Demonstration Rig, Energy Losses In Pipes, Energy Losses In Bends.

o Mechanical Operation Lab: Ball mill, Froth floatation cell, Hammer mill, Jaw crusher, Roll crusher, Plate and frame filtration, Rotary drum Vacuum filter, Vibrating screen, Sieve shaker, Cyclone separator, Cyclone Scrubber, Elutriator, Sedimentation, Leaf Filter.

o Heat Transfer Lab: Extended Surface heat exchanger, Tubular heat exchanger, Jacketed vessel heat exchanger, Plate heat exchanger, Shell and tube heat exchanger, Emissivity measurement apparatus, Composite wall, Conductivity of metal rod, Calandria evaporator, Vertical & horizontal condenser, Unsteady state heat transfer, Heat transfer in forced convection, Multi effect evaporator.

o Chemical Reaction Engineering: Packed bed reactor, Trickle bed reactor, RTD studies in CSTR, RTD studies in plug flow

reactor, Cascade CSTR, Isothermal batch reactor, Combined flow reactor, RTD of packed bed reactor, Spinning basket reactor, Bubble cap Distillation.

o Mass Transfer Lab: Double glass wall distillation apparatus, Bubble cap distillation set up, Packed bed distillation set up, Mass transfer with and without chemical reaction, Liquid - liquid extraction in packed bed, Solid - liquid extraction in packed bed, Absorption in packed bed, Vapour in air diffusion, Rotary drier, Forced Draft tray drier, Water cooling tower. Batch crystallization.

o Process control Lab: Two Tank Non-Interacting System, Two Tank Interacting System, Control Valve Characteristics, Temperature Control Trainer, Pressure Control Trainer, Flow Control Trainer, Level Control Trainer, Cascade Control Trainer, First-Order and Second-Order System, Multi Process Trainer, Multi Variable Control Trainer, PLC Trainer.

o Thermodynamics Lab: Vapour - liquid equilibrium apparatus, Liquid - liquid equilibria, Equilibrium Flash Distillation Apparatus, Separating & Throttling Calorimeter.

PG Labs: 1 No.

o Petroleum Lab: Acidity and Alkalimetry, Aniline point, Burning test lamp, Cloud & Pour Point, Flash & Fire Point, Melting point apparatus, Red wood Viscometer, Reid vapour pressure, Smoke point, U -Tube Viscometer, ASTM Distillation, Kinematic Viscometer bath, Drop point grease apparatus, Burning quality of kerosene, Contamination detector, Tar viscometer, Softening point apparatus, Carbon residue apparatus, Bomb calorimeter, Vapour - Liquid Equilibrium, Steam Distillation, Digital Penetrometer.

Other Labs: 2 Nos.

o Analytical Lab: Atomic absorption spectrophotometer, Autotitrator, BET surface area analyzer, Buchi rheometer, Chemisorb surface area analyzer, Differential scanning calorimeter, Digital polarimeter, Ellipsometer, Fourier Transform Infrared spectrophotometer, Gas chromatography with TCD, FID, ECD detector, Gas chromatography with TCD, FID, PFD detector, Gas chromatography mass spectroscopy, High performance liquid chromatography, Interfacial rheometer, Karl Fisher titrator, Laser particle size analyser, Microscope, Millipore water purification, Refractometer,

Rheometer, Spinning drop tensiometer, Tensiometer, Thermogravimetric analyzer, Total organic content analyzer, UV-Visible spectrophotometer, X Ray diffraction, Zeta potential.

o CoE-SusPol: Centre of Excellence for Sustainable Polymers (CoE-SusPol) is funded by Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers. The objective of CoE-SusPol is to develop cost effective and scalable technologies for the production of biodegradable polymer based end products using both petrochemical and renewable bio- feedstock and establish state of the art facilities in biodegradable polymers area. Both experimental and computational laboratory has been setup under this project facility and significant high end equipments have been purchased in the department.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

- o Emissivity measurement
- o Column Flootation setup
- o Thermo gravimetric Analyser
- o 2 stroke single cylinder Petrol engine
- o Heat transfer with forced convection
- o Batch Crystalliser
- o TGA-Hyf-FTIR
- o Modulated DSC
- o High Pressure Microwave Reactor for Polymerization
- o Mini Extruder and injection molding Machine
- o Polarizing Optical Microscope and Micro tensile stage
- o Water Vapor Transmission Tester
- o Optical Polarimeter
- o Computerized Melt Flow Index Instrument
- o Heat Deflection/Vicat Softening Temperature tester
- o Instrument for Contact Angle
- o Probe Sonicator
- o Polymer Film Extrusion line
- o Material Studio Software
- o Tear Tester
- o Polyflow

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

- Fluids
 - o Design and development of micro-pumps and actuators
 - o Surfactant Enhanced oil recovery
 - o Experimental and computational fluid dynamics
 - o Experimental and computational multiphase flows
 - o Field driven fluid flows
 - o Mechanics, patterns, and stability of fluids
 - o Micro- and nano-fluidic devices
 - o Minerals processing
 - o Multi scale bubble dynamics and applications

- o Rheology of complex fluids
- o Transport through meso-porous materials
- Reaction Engineering
 - o Catalysis electrolysis and Heterogeneous reactions
 - o Electrochemical corrosion
 - o Electroless plating
 - o Hydrocarbon processing
 - o Interfacial reactions
 - o Kinetic analysis
 - o Micro- and nano-fluidic reactors
 - o Non-equilibrium reactive systems
 - o Pyrolysis of waste plastics
 - o Separations with chemical reaction
 - o Sono-process engineering
- Chemical Engineering Science
 - o Biological physics
 - o Chemical mechanical polishing (CMP)
 - o Colloids and interfacial science
 - o Dewetting and phase separation
 - o Phase equilibria and thermodynamics
 - o Phase equilibria of ionic liquids
 - o Phase transition in polymers (nucleation, crystallization, collapse transition)
 - o Structure property relations
 - o Super-hydrophobic and self cleaning surfaces
- Environmental Pollution Control
 - o Air pollution
 - o Biological wastewater treatment (biosorption, bioaccumulation, biodegradation, bioreduction, biotransformation)
 - o Electro remediation of water/wastewater
 - o Membrane bioreactors
 - o Physiochemical water/ wastewater treatment techniques
 - o Screening of novel microbial strains for treatment of organic/inorganic wastewater
 - o Sonolysis and Sono-hybrid Advanced Oxidation techniques
 - o Treatment of industrial effluent
 - o Pollution trading
- Process Systems Engineering
 - o AI based Optimization Techniques
 - o Computational transport processes
 - o Deterministic, evolutionary and global optimization
 - o Material processing
 - o MEMS & NEMS
 - o Molecular simulation

- o Optimization and control
- o Planning and scheduling
- o Process control
- o Process design & techno-economics
- o Process intensifications
- o Process modeling
- o Randomized algorithms
- o Self-assembly and self-organization
- o Soft lithography
- o Statistical mechanics and thermodynamics
- Materials Engineering
 - o Bio-lubricant
 - o Complex organic solids
 - o Functional multiscale structures & composites
 - o Graphene synthesis and application
 - o Ionic liquids
 - o Liquid crystalline materials
 - o Low cost ceramic membranes
 - o Micro- and nano-sensors
 - o Non-Newtonian Fluids
 - o Palladium membranes
 - o Reactive systems and gels
 - o Responsive materials for environmental, biological and chemical separation
 - o Self-healing surfaces
 - o C-C Composites and C-Polymer Composites
- Polymer Science and Engineering
 - o Polymers Synthesis and Characterization
 - o Polymer Reaction Engineering
 - o Polymer Processing
 - o Polymer Rheology
 - o Polymer Solutions and Thermodynamics
 - o Polymer Simulation and Computing
 - o Polymer based Nano and biocomposites
 - o Polymer Degradation
- o Polymer and Nano-material Migration Studies
- o Polymer Recycling and Reuses
- o Biodegradable Polymers
- o Polymer based Technology Development, licensing, Training and Entrepreneurship
- o Biodegradable polymers and biobased nanocomposites
- Energy Engineering
 - o Artificial photosynthesis
 - o Biofuels: biodiesel, bioethanol, biobutanol, bio hydrogen and Bio oil
 - o Biomass gasification and pyrolysis
 - o Carbon dioxide capture and conversion to Fuel
 - o Clean coal technology
 - o Combustion and gasification reaction kinetics
 - o Fischer-Tropsch Synthesis
 - o Fuel cells
 - o Hydrogen production and storage
 - o Utilisation of lignocellulosic biomass for fuel/chemicals
 - o Solar cells
 - o Nuclear reactor
 - o Membrane reformer for hydrogen production
- Separation and Mixing Processes
 - o Adsorption
 - o Bio-separation
 - o Membrane Separation Processes
 - o Micro-mixers & separators
 - o Post CMP cleaning
 - o Separation using Supercritical Fluids
 - o Surfactant mediated separation processes

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

- o Development of Multimodal Functional superbot published in the Elsevier Journal CARBON
- o Implementation of the DeitY project at IIT Guwahati for establishing a 'Centre for Excellence in Research and Development of Nanoelectronic Theranostic Devices'

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. V. Prabu	Studies on Coal bed Methane integrated Underground Coal Gasification in Indian Coals in the Context of Greenhouse gas emission control	SERB-DST	25.4	---	2014 - 17

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof. Prabirkumar Saha	Removal of Arsenic from Drinking Water using Liquid Membrane based Separation Technique	DST	26.172	Prof. A.K. Ghoshal	2014-2017
Dr. R. Prasanna Venkatesh	Experimental characterization of carbon steel corrosion in oil and gas industries by electrochemical impedance spectroscopy	SERB-DST	22.70	---	2014 - 17
Dr. R. Anandalakshmi	Experimental investigations on thermosyphon flow and heat transfer achieved by supercritical fluid	IITG	5	-	2 years
Prof. Ramagopal Uppaluri	Development of low cost chitosan based crosslinked resins for the recovery and removal of Palladium from synthetic and spent electroless plating solutions. (Registered at Centre for Environment, IITG)	CSIR	17	Dr. Animes K. Golder (CL), Prof. P. K. Ghosh (CE)	2015 - 2018

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Ashok Kumar Dasmahapatra	Studies on Confinement-Induced Polymer Crystallization by Molecular Simulation	CSIR	12.0	NA	2014 - 2017
Prof. Bishnupada Mandal	CO ₂ -Capture by CO ₂ -Selective Thin-film Composite Polymeric Membrane Containing Amine Carrier	DST	74	None	January 2013 to January 2016
Prof. Bishnupada Mandal	Natural Gas Purification by CO ₂ -Selective Silica Membrane	CSIR	23	None	August 2013 to August 2016
Dr. Dipankar Bandyopadhyay	Centre for Excellence in Research and Development of Nanoelectronic Theranostic Devices	DeitY	5175		5 years
Dr. Dipankar Bandyopadhyay	Design and Development of Intelligent Catalytic Nanobots	DST Nano Mission	43		3 years
Dr. Dipankar Bandyopadhyay	A computational study on the phase separation induced pattern formation employing ultrathin films	CSIR	16.5		2012-2015
Dr. Dipankar Bandyopadhyay	External Field Driven Flow Induced micro/nano scale Patterning, Mixing, Heat and Mass transfer in micro/nano Fluidic Devices	DST-SERC	45		2011-2014
Prof. Pallab Ghosh	Stabilization of soft colloidal dispersions by mixed-surfactants: experimental and theoretical studies	CSIR	11.0	Nil	2012 – 2015
Dr. Pankaj Tiwari	Identification of Competent Alkali-Surfactant-Polymer Formulations for Enhanced Oil Recovery of Assam Crude Oil (Co-PI, Joint project between IIT Guwahati and Dibrugarh University)	DST	23.4	Prof. Ramgopal Uppaluri	2013-2016

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Pankaj Tiwari	Study of Interaction between Pneumatic Spray Nozzle and Bubbling gas Fluidized Bed using Radioactive Particle Tracking (RPT) and γ -ray Densitometry	BRNS	6.48	Dr. Rajesh Uppadhyay	2013-2016
Dr. Subrata Kumar Majumder	Process intensification of flotation by ionic microbubbles	CSIR	11.0	Prof. Pallab Ghosh	2012 – 2015
Dr. Tamal Banerjee	Dispersion and Dissolution of Coal in Ionic Liquids: Theoretical Predictions and Experimental Validation	CSIR	20.0	Dr. Kaustubha Mohanty	Three years
Dr. Tamal Banerjee	Quantum Chemical Understanding of Solvent Extraction Mechanism of Metal Ions in Novel Ionic Liquid Medium	BRNS	20.0	Prof. Pallab Ghosh	Three years
Dr. Tamal Banerjee	Ionic Liquid assisted Thermal Dehydrogenation of Ammonia Borane	SERB	38.0	Dr. G. Pugazhenti	Three years
Dr. R. Prasanna Venkatesh	Electrochemical Investigation of carbon steel corrosion in oil and gas industries	IIT Guwahati	5.0	---	2013 - 15
Prof. R. Uppaluri	Low cost ceramic membranes for juice clarification	DBT	18.87	None	2011-2014
Dr. Mahuya De	Development of supported noble metal catalysts using surfactant assisted electroless plating process for dehydrogenation of light alkanes	DST	39.6	Prof. Ramagopal Uppaluri	2014 – 2017
Prof. R. Uppaluri	Virtual Mass Transfer Lab	MHRD	15	Dr. A. Verma	2008 - 2014
Tapas K Mandal	Dynamic behavior and mixing characteristics of two immiscible liquids in a horizontal micro device	DST	17	None	2012-2015
Dr. Vimal Katiyar	Centre of Excellence for Sustainable Polymers (CoE-SUSPOL)	Dept. of Chemicals and Petrochemicals, Gol	600	Dr. Amit Kumar, Dr. P. Kotecha, Dr. V. V. Goud, Dr. G. Pugazhenti, Prof. A. K. Ghoshal	2014-2017
Dr. Vimal Katiyar	SustainNanoPACK	DBT	134	Dr. Biman Mandal, Dr. Debasis Das	2013-2016
Dr. Vimal Katiyar	BioThermosets	DST	22	--	2012-2015

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. Ashok Kumar Dasmahapatra	Investigation of Diblock Copolymer Crystallization by Molecular Simulation	SERB-DST	30.02	NA	2011 - 2014

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. Dipankar Bandyopadhyay	A combined experimental and theoretical study on the instability and patterning of thin liquid crystal films	DST-Fast Track	9.6		2010-2013
Dr. S. K. Majumder	Process intensification in drag reduction in high viscous multi-phase flow through pipeline	CSIR	10.42	Dr. T. K. Mandal	2011-2014
Prof. R. Uppaluri	Preparation and characterization of low cost silver-ceramic composite membranes for bacteriostatic and drinking water treatment applications	CSIR	12.96	None	2011-2014
Prof. R. Uppaluri	Fabrication of low cost dense Palladium composite membranes for hydrogen energy applications	DST	19.42	Dr. A. Verma	2011-2014
Dr. Dipankar Bandyopadhyay	External Field Driven Flow Induced Micro/Nano Scale Patterning, Mixing, Heat And Mass Transfer In Micro/Nano Fluidic Devices	DST	45	Tapas K Mandal	2011-2014
Dr. Vimal Katiyar	GreenPACK	Ministry of Food Processing Industries, Gol	30	Dr. Amit Kumar	2012-2014

Consultancy:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. Bishnupada Mandal	Development of modified amine absorption based process to separate CO ₂ from flue gas	NTPC Limited, New Delhi	175	Prof. P. Saha, Prof. A. K. Ghoshal, Dr. Sasidhar Gumma	2014-2016
Dr. Sasidhar Gumma	Commissioning, Operation and Data Analysis of a Pilot Plant for Separation of C ₅ +Gases and Water Vapor from Gas Lift Pipeline Network (or similar streams)	Oil India Limited, Duliajan	65	Prof. P. Saha, Prof. B. Mandal, Prof. A. K. Ghoshal	2013-2016
Dr. G. Pugazhenthhi	Preparation and characterization of ceramic membrane for domestic water purification system	Unilever Industries Pvt. Ltd., Bangalore	40.45	Dr. S. Senthilmurugan	3 years
Prof. Pallab Ghosh	Developing suitable pedagogical methods for various classes, intellectual calibers and e-learning: Course name: Numerical Methods for Chemical Engineers	MHRD	8.0	Dr. Tamal Banerjee	2013 – 2016

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. Pallab Ghosh	Developing suitable pedagogical methods for various classes, intellectual calibers and e-learning: Course name: Colloid and Interface Science	MHRD	8.0	Dr. Dipankar Banerjee	2013 – 2016
Prof. Pallab Ghosh	Developing suitable pedagogical methods for various classes, intellectual calibers and e-learning: Course name: Chemical Reaction Engineering – II	MHRD	8.0	Dr. Sasidhar Gumma	2015 – 2016
Dr. Chandan Das	Study of the reduction in acidity of the Kopili reservoir either by diversion of responsible stream or by taking up some chemical treatment to prevent damages of metal parts of Kopili HE Plant at Umrungso	NEEPCO	28.52	Dr. S. Pal	18 months

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
A.K. Behera, Ch V. Rao, R.K. Das, A.S. Giri and A.K. Golder	Fabrication and characterization of ag-doped titania: Impact of dye-sensitization, phenol decomposition kinetics and biodegradability index	Desalin. Water Treat.			2015
A. Das, A.K. Golder and C. Das	Enhanced extraction of Rebaudioside-A: Experimental, response surface optimization and prediction using artificial neural network	Ind. Crops and Prod.			2015
A.S. Giri and A.K. Golder	Decomposition of drug mixture in Fenton and photo-Fenton processes: Comparison to singly treatment, evolution of inorganic ions and toxicity assay	Chemosphere	127	254-261	2015
A. Das, A.K. Golder and C. Das	Separation of Rebaudioside-A from stevia extract: Membrane selection, assessment of permeate quality and fouling behavior in laminar flow regime	Sep. Purif. Technol.	144	42217	2015
P.R. Rao, N. Ngullie, A.K. Golder and P.K. Ghosh	Arsenic removal from contaminated water by various physicochemical processes	Internat. J. Environ. Sci. Develop.	6 (5)	357-362	2015
A.S. Giri and A.K. Golder	Chloramphenicol degradation in Fenton and photo-Fenton: Formation of Fe ²⁺ -Chloramphenicol chelate and reaction pathways	Ind. Eng. Chem. Res.	53 (42)	16196-16203	2014
M.K. Gagrai, C. Das and A.K. Golder	Biological reduction and removal of Cr(VI) with microbial consortia collected from local water treatment plant	Internat. J. Environ. Technol. Manage.	17 (6)	508-520	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Ch V. Rao, K. Bhakal and A.K. Golder	Biomediated synthesis of ZnO nanoparticles (ZnONPs) for photocatalytic application	Internat. J. Cur. Eng. Sci. Res.	1 (4)	26-30	2014
R.K. Das, A.S. Giri, and A.K. Golder	Role of supporting electrolytes for hydrogen peroxide generation on graphite cathode	Internat. J. Cur. Eng. Sci. Res.		31-34	2014
A.S. Giri and A.K. Golder	Kinetics and mechanisms of ciprofloxacin cleavage in light assisted Fenton reaction	Recent Res. Sci. Technol.	6 (1)	78-82	2014
Ashok Kumar Dasmahapatra, G Diwakar Reddy and Venkata Mahanth Sanka	Collapse Transition of Branched Polymers in Dilute Solutions: Telechelic Star vs. H-Polymer	Macromolecular Symposia	-	-	2015
Chitrita Kundu and Ashok Kumar Dasmahapatra	Crystallization of Double Crystalline Diblock Copolymer by Dynamic Monte Carlo Simulation	Macromolecular Symposia	-	-	2015
Chitrita Kundu and Ashok Kumar Dasmahapatra	Effect of Block Asymmetry on the Crystallization of Double Crystalline Diblock Copolymers	Journal of Chemical Physics	141 (4)	044902-1 – 044902-12	2015
Ashish Kumar Thokchom, R Swaminathan and Anugrah Singh	Fluid flow and particle dynamics inside an evaporating droplet containing live bacteria displaying chemotaxis	Langmuir	30		2014
M Mallikarjuna Reddy and Anugrah Singh	Flow of concentrated suspension through oblique bifurcating channels	AIChE Journal	60		2014
Barma, S. and Mandal, B.	Synthesis and characterization of ordered mesoporous silica membrane: Role of porous support and gas permeation study.	Microporous and Mesoporous Materials	210	43739	2015
Mondal, A. and Mandal, B.	Novel CO ₂ -Selective Cross-Linked Poly (vinyl alcohol) / Polyvinylpyrrolidone Blend Membrane Containing Amine Carrier for CO ₂ -N ₂ Separation: Synthesis, Characterization, and Gas Permeation Study.	Industrial & Engineering Chemistry Research	53 (51)	19736-19746	2014
Mishra, P., Uppara, H.P., Mandal, B. and Gumma, S.	Adsorption and Separation of Carbon Dioxide Using MIL-53 (Al) Metal-Organic Framework.	Industrial & Engineering Chemistry Research	53 (51)	19747-19753	2014
Barma, S. and Mandal, B.	Effects of sintering temperature and initial compaction load on alpha-alumina membrane support quality	Ceramics International	40 (7)	11299-11309	2014
Sujoy Bose and Chandan Das	Sawdust: From Wood Waste to Pore-former in the Fabrication of Ceramic Membrane	Ceramics International	41	4070-4079	2015
Sujoy Bose and Chandan Das	Role of binder and preparation pressure in tubular ceramic membrane processing: Design and optimization study using response surface methodology (RSM)	Industrial & Engineering Chemistry Research	53	12319 – 12329	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Vijay Singh and Chandan Das	Comparison of spiral wound UF membrane performance between turbulent and laminar flow regimes	Desalination	337	43-51	2014
Abhinav Sharma, Vineet Kumar, Joydip Chaudhuri, Seim Timung, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Alternating Current Induced Digitization of Two-Phase Flow Patterns inside Micro-channels,	RSC Advances	DOI: 10.1039/C5RA02451J		2015
Sunny Kumar, Amit Kumar Singh, Ashok Kumar Dasmahapatra, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Graphene based multifunctional super-bots	Carbon	89	31	2015
B. Ravi, Rabibrata Mukherjee, Dipankar Bandyopadhyay	Solvent Vapor Mediated Spontaneous Healing of Self-Organized Defects of Liquid Crystal Films	Soft Matter	11	139	2015
Seim Timung, Vijeet Tiwari, Amit Kumar Singh, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Capillary Force Mediated Flow-Patterns and Non-monotonic Pressure Drop Characteristics of Oil-Water Microflows	Canadian Journal of Chemical Engineering	-	-	2015
A. Ananth Praveen Kumar, Venkatanarayana Prasad Sandireddy, Tamal Banerjee, and Dipankar Bandyopadhyay	Dynamics of a Liquid Droplet on a Granular Bed of Micro-Structured Particles: From Lens Formation to Marble Effect	Ind. Eng. Chem. Res.	54	1131	2015
Kartick Mondal and Dipankar Bandyopadhyay	Electro-Capillary Instabilities of Thin Leaky Elastic-Viscous Bilayers	Physics of Fluids	26	12206	2014
Mohar Dey Dipankar Bandyopadhyay Ashutosh Sharma, Shizhi Qian, and Sang Woo Joo	Charge Leakage Mediated Pattern Miniaturization in the Electric Field Induced Instabilities of an Elastic Membrane	Ind. Eng. Chem. Res.	53	18840	2014
Abhinav Sharma, Vijeet Tiwary, Vineet Kumar, Tapas Kumar Mandal, and Dipankar Bandyopadhyay	Localized electric field induced transition and miniaturization of two-phase flow patterns inside microchannels	Electrophoresis	35	2930	2014
Samarshi Chakraborty, Manish Kumar, Kelothu Suresh and G. Pugazhenth	Influence of Organically Modified Ni-Al Layered Double Hydroxide (LDH) Loading on the Rheological Properties of poly (methyl methacrylate) (PMMA)/LDH Blend Solution	Powder Technology	256	196-203	2014

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Vijay Kumar, Manish Kumar and G. Pugazhenth	Effect of Nanoclay Content on Structural, Thermal Properties and Thermal Degradation Kinetics of PMMA/Organoclay Nanocomposites	International Journal of Nano & Biomaterials	5	27-43	2014
D. Vasanth, Kanchapogu Suresh and G. Pugazhenth	Fabrication of circular shaped ceramic membrane using mixed clays by uniaxial compaction method for the treatment of oily wastewater	International Journal of Nano & Biomaterials	5	75-88	2014
Manish Kumar, Vijay Kumar, Pradeep Upadhyaya and G. Pugazhenth	Fabrication of Poly (methyl methacrylate) (PMMA) Nanocomposites with Modified Nanoclay by Melt Intercalation	Composite Interfaces	21	819-832	2014
Ashim Kumar Basumatary, R. Vinoth Kumar, Alope Kumar Ghoshal and G. Pugazhenth	Synthesis and characterization of MCM-41-ceramic composite membrane for the separation of chromic acid from aqueous solution	Journal of Membrane Science	475	521-532	2015
R. Vinoth Kumar, Ashim Kumar Basumatary, Alope Kumar Ghoshal and G. Pugazhenth	Performance Assessment of Analcime-C Zeolite-Ceramic Composite Membrane by Separation of Cr(VI) from Aqueous Solution	RSC Advances	5	6246-6254	2015
S. R. Pilli, T. Banerjee, K. Mohanty	HOMO-LUMO Energy Interactions between Endocrine Disrupting Chemicals and Ionic Liquids using Density Functional Theory: Evaluation and Comparison	Journal of Molecular Liquids	207	112-124	2015
K. P. Shadangi, K. Mohanty	Co-pyrolysis of Karanja and Niger seeds with waste polystyrene to produce liquid fuel	Fuel	153	492-498	2015
K. P. Shadangi, K. Mohanty	Effect of Co-pyrolysis of Mahua Seed and Waste Polystyrene on Quality of Liquid Fuel	Journal of Renewable and Sustainable Energy	6	053142-1-13	2014
M. Koul, K. P. Shadangi, K. Mohanty	Thermo-chemical conversion of Kusum seed: A possible route to produce alternate fuel and chemicals	Journal of Analytical and Applied Pyrolysis	110	291-296	2014
S. R. Pilli, T. Banerjee, K. Mohanty	Liquid-liquid equilibrium (LLE) data for ternary mixtures of [C4DMIM]-[PF6]+[PCP]+[water] and [C4DMIM][PF6]+[PA]+[water] at T = 298.15 K and p = 1 atm	Fluid Phase Equilibria	381	12-19	2014
S. Bhoi, T. Banerjee, K. Mohanty	Molecular dynamic simulation of spontaneous combustion and pyrolysis of brown coal using ReaxFF	Fuel	136	326-333	2014
S. R. Pilli, T. Banerjee, K. Mohanty	1-Butyl-2,3-dimethylimidazolium hexafluorophosphate as a Green Solvent for the Extraction of Endosulfan from Aqueous Solution Using Supported Liquid Membrane	Chemical Engineering Journal	257	56-65	2014
S. Basu, A. Sarma Roy, K. Mohanty, A. K. Ghoshal	CO ₂ biofixation and carbonic anhydrase activity in <i>Scenedesmus obliquus</i> SA1 cultivated in large scale open system	Bioresource Technology	164	323-330	2014

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S. Bhoi, D. Dey, T. Banerjee, K. Mohanty	Solid-Liquid Equilibria Predictions for the Dissolution of Brown Coal in Ionic Liquids using a Continuum Solvation Model	Fuel Processing Technology	126	112-121	2014
S. R. Pilli, T. Banerjee, K. Mohanty	Performance of different ionic liquids to remove phenol from aqueous solutions using supported liquid membrane	Desalination and Water Treatment	204	1-11	2014
K. P. Shadangi, K. Mohanty	Production and characterization of pyrolytic oil by catalytic pyrolysis of Niger seed	Fuel	126	109-115	2014
S. Murugavelh, K. Mohanty	Mechanism of Cr(VI) bioaccumulation by Phanerochaete Chrysosporium	Environmental Engineering and Management Journal	13	281-287	2014
S. R. Pilli, K. Mohanty, T. Banerjee	Extraction of phthalic acid from aqueous solution by using ionic liquids: A quantum chemical approach	International Journal of Thermodynamics	17	42-51	2014
K. P. Shadangi, K. Mohanty	Kinetic study and thermal analysis of the pyrolysis of non-edible oilseed powders by thermogravimetric and differential scanning calorimetric analysis	Renewable Energy	63	337-344	2014
K. P. Shadangi, K. Mohanty	Comparison of yield and fuel properties of thermal and catalytic Mahua seed pyrolytic oil	Fuel	117	372-380	2014
K. P. Shadangi, K. Mohanty	Thermal and catalytic pyrolysis of Karanja seed to produce liquid fuel	Fuel	115	434-442	2014
Ruhit J. Konwar and Mahuya De	Synthesis of high surface area silica gel templated carbon for hydrogen storage application	Journal of Analytical and Applied Pyrolysis	107	224-232	2014
N.Vinothkumar and Mahuya De	Enhanced photocatalytic hydrogen production from water-methanol mixture using cerium and nonmetals (B/C/N/S) co-doped titanium dioxide	Materials for Renewable and Sustainable Energy	3	1-25	2014
N.Vinothkumar and Mahuya De	Hydrogen production from water-methanol solution over visible light active indium-titanium oxide photocatalysts modified with copper oxide	International Journal of Hydrogen Energy	39	11494-11500	2014
Ruhit J Konwar, Mahuya De	Development of templated carbon by carbonisation of sucrose-zeolite composite for hydrogen storage	International Journal of Energy Research	39	223-233	
Chirag K.Patel, Paran J. Sarma and Mahuya De	Comparative parametric study on development of porous structure of aluminium oxide in presence of anionic and cationic surfactants	Ceramics International	41	3578-3588	2015
R. Bhandari, V. Volli, M. K. Purkait	Preparation and Characterization of Fly ash Based Mesoporous Catalyst for Transesterification of Soybean Oil	J. Env. Chem. Eng	DOI: 10. 1016/ j.jec e.2015 .04. 008		2015
M K Sinha, M.K.Purkait	Preparation of novel thermo responsive PSF membrane, with cross linked PVCL-co-PSF copolymer for protein separation and easy cleaning	RSC Advances	5	22609-22619	2015

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N. Sharma, M.K.Purkait	Preparation of hydrophilic polysulfone membrane using polyacrylic acid with polyvinyl pyrrolidone	J Appl. Poly. Sci	DOI: 10.1002 /APP. 41964		2015
A. Asfaram, M. Ghaedi, S. Hajati, M. Rezaeinejad, A. Goudarzi, M. K. Purkait	Rapid removal of Auramine-O and Methylene blue by ZnS:Cu nanoparticles loaded on activated carbon : A response surface methodology approach	J. Taiwan Inst. Chem. Eng	doi.org/ 10.1016 /j.jtice. 2015. 02.026		2015
M K Sinha, M.K. Purkait	Preparation of fouling resistant PSF flat sheet UF membrane using amphiphilic polyurethane macromolecules	Desalination	355	155-168	2015
A. Dey, M.K.Purkait	Effect of fatty acid chain length and concentration on the structural properties of the coated CoFe ₂ O ₄ nanoparticles	J of Industrial and Engineering Chemistry	DOI.org/ 10.1016 /j.jiec. 2014. 09.027		2015
M. Ghaedi, N. Zeinali, M Maghsoudi, M.K. Purkait	Artificial neural network (ANN) method for modeling of Sunset yellow dye adsorption using nickel sulfide nanoparticle loaded on activated carbon: Kinetic and isotherm study	Journal of Dispersion Science and Technology	DOI: 10.1080/ 0 1932 691. 2014. 964359		2015
A. Goswami, M.K. Purkait	Preparation and characterization of nanoporous schwertmannite for defluoridation of water	Res. J Sci. Technol	2	65-83	2015
M. Ghaedi, H. Mazaheri, S. Khodadoust, S. Hajati, M. K. Purkait	Application of central composite design for simultaneous removal of methylene blue and Pb ²⁺ ions by walnut wood activated carbon	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy.	135	479-490	2015
A. Dey, R Singh and M.K.Purkait	Cobalt Ferrite nanoparticles aggregated Schwertmannite: A novel adsorbent for the efficient removal of arsenic	Journal of Water Process Engineering	3	42248	2014
M K Sinha, M.K.Purkait	Preparation and Characterization of Stimuli-Responsive Hydrophilic Polysulfone Membrane Modified with Poly (N-vinylcaprolactam-co-acrylic acid).	Desalination	348	16 - 25	2014
A. Goswami, M.K. Purkait	Removal of fluoride from drinking water using Nanomagnetite aggregated schwertmannite.	Journal of Water Process Engineering	1	91 - 100	2014
M. K Sinha, M.K.Purkait	Preparation and characterization of novel pegylated hydrophilic pH responsive polysulfone ultrafiltration membrane	J. Membr. Sci.	464	20 - 32	2014
A. Shamsizadeh, M. Ghaedi, A. Ansari, S. Azizian, M K Purkait	Tin oxide nanoparticle loaded on activated carbon as new adsorbent for efficient removal of malachite green-oxalate: Non-linear Kinetics and isotherm study	. Journal of Molecular Liquids	195	212-218	2014
N. Kishore and R.R. Ramteke	Slip in flows of power-law liquids past smooth spherical particles	Acta Mech.	DOI: 10.1007 / s00707 -015- 1328-0		2015
K.D. Rao, M. Vasukiran, A.R.K. Gollakota and N. Kishore	Buoyancy driven bubble rise and deformation in milli/micro channels filled with shear-thinning nanofluids.	Colloid. Surf. A	467	66-77	2015

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V.S. Nalajala and N. Kishore	Effects of contamination and power-law fluid viscosity on heat transfer phenomena of spherical bubbles	Chem. Eng. Technol.	37	1757-1764	2014
V.S. Nalajala and N. Kishore	Drag of contaminated bubbles in power-law fluids	Colloid Surf. A: Physicochemical Engineering Aspects	443	240-248	2014
Misra S., R. Reddy and P. Saha	Separation of medicinal catechins from tea leaves (Camellia Sinensis) extract using Hollow Fiber Supported Liquid Membrane (HF-SLM) module	International Journal of Automation and Computing	-	-	2015
Manna M.S., P. Saha and A.K. Ghoshal	Iron complexation of pharmaceutical catechins through selective separation	RSC Advances	4 (50)	26247-26250	2014
Bhatluri K.K., Manna M.S., P. Saha and A.K. Ghoshal	Supported liquid membrane based simultaneous separation of cadmium and lead from wastewater	Journal of Membrane Science	459	256-263	2014
Manna M.S., P. Saha and A.K. Ghoshal	Separation of medicinal catechins from tea leaves (Camellia Sinensis) extract using Hollow Fiber Supported Liquid Membrane (HF-SLM) module	Journal of Membrane Science, 471, pp. 219-226.	471	219-226	2015
Rajasekhar Kadambur, Prakash Kotecha	Multi-level production planning in a petrochemical industry using elitist Teaching-Learning-Based-Optimization	Expert Systems with Applications	42 (1)	628-641	2014
Mood Mohan, Vaibhav.V.Goud, Tamal Banerjee	Solubility of glucose, xylose, fructose and galactose in ionic liquids: Experimental and Theoretical studies using a continuum solvation model	Fluid Phase Equilibria	33	395	2015
Mood Mohan, V.V.Goud, Tamal Banerjee	Thermodynamic Insights in the Separation of Cellulose/Hemicellulose components from Lignocellulosic Biomass Using Ionic Liquids	Journal of Solution Chemistry	doi: 10.1007 /s10953-015- 0295-3		2015
A. Ananth Praveen Kumar, Venkatanarayana Prasad Sandireddy, Tamal Banerjee, and Dipankar Bandyopadhyay	Dynamics of a Liquid Droplet on a Granular Bed of Microstructured Particles: From Lens Formation to Marble Effect	Industrial & Engineering Chemistry Research	54	1131	2015
Ankit Vishnoi, Tamal Banerjee, P. Ghosh, Sk. Musharaf Ali, K.T. Shenoy	Theoretical prediction of distribution coefficients of Sr ²⁺ in nuclear waste/ionic liquid phases using COSMO-RS model	Separation and Purification Technology	133	138	2014
S. R. Pilli, Tamal Banerjee, Kaustubha Mohanty	1-Butyl-2,3-dimethylimidazolium hexafluorophosphate as a green solvent for the extraction of endosulfan from aqueous solution using supported liquid membrane	Chemical Engineering Journal	257	56	2014
Sanjukta, Kaustubha Mohanty, Tamal Banerjee,	Molecular dynamic simulation of spontaneous combustion and pyrolysis of brown coal using ReaxFF	Fuel	136	326	2014

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S. Khuntia, S. K. Majumdar and P. Ghosh	Oxidation of As(III) to As(V) using Ozone Microbubbles	Chemosphere	97	120–124	2014
K. Sainath, and P. Ghosh	Electrical properties of silicone oil–water interface in the presence of ionic surfactants and salt: importance in the stability of oil-in-water emulsions	Chemical Engineering Communications	201	1645–1663	2014
A. Vishnoi, T. Banerjee, P. Ghosh, Sk. Musharaf Ali and K. T. Shenoy	Theoretical prediction of distribution coefficients of Sr ²⁺ in nuclear waste/ionic liquid phases using COSMO-RS model	Separation and Purification Technology	133	138–148	2014
S. Khuntia, S. K. Majumdar and P. Ghosh	A pilot plant study of the degradation of Brilliant Green dye using ozone microbubbles: mechanism and kinetics of reaction	Environmental Technology	36	336–347	2014
S. Khuntia, S. K. Majumdar and P. Ghosh	Adsorption of As(V) on zirconium-based adsorbents	Desalination and Water Treatment	DOI: 10.1080 / 19443994. 2014. 978		2014
M. R. Behera, S. R. Varade, P. Ghosh, P. Paul and A. S. Negi	Foaming in micellar solutions: effects of surfactant, salt, and oil concentrations	Industrial and Engineering Chemistry Research	53	18497–18507	2014
Reshad, A.S Tiwari, P. Goud, V.V	Extraction of oil from rubber seeds for biodiesel application: Optimization of parameters	Fuel	150	636-644	2015
Dhar, P. Vangala, S.P.K Tiwari, P. Kumar, A. Katiyar, V.	Thermal Degradation Kinetics of Poly (3-hydroxybutyrate)/Cellulose Nanocrystals based Nanobiocomposite	Journal of Thermodynamics & Catalysis	5 (2)	134-141	2014
Ajit. Kumar Giri and Subrata Kumar Majumder	Pressure Drop and its Reduction of Gas-Non-Newtonian Liquid Flow in Downflow Trickle Bed Reactor (DTBR),	Chemical Engineering Research and Design	92 (1)	34–42.	2014
Snigdha Khuntia, Subrata Kumar Majumder and Pallab Ghosh	Oxidation of As (III) to As(V) using Ozone Microbubbles	Chemosphere	97	120–124	2014
Shubham Jai, Priyam Saraswat, Varsha Jain, Harish J. Pant, Rajesh K. Upadhyay	Investigation of liquid–solids fluidized bed of different particle size through radioactive particle tracking techniques	Journal of Radio analytical and Nuclear Chemistry	302 (3)	1309	2014
Rajeev Parmar and Subrata Kumar Majumder	Hydrodynamics of micro bubble suspension flow in pipes	Industrial Engineering and Chemistry Research	53 (9)	3689–3701	2014
P. Deka, K. R. Naidu, T. K. Mandal and Subrata Kumar Majumder	Flow pattern shifting and drag reduction in oil-water flow in pipe	International Journal of Research in Engineering & Technology	2 (2)	245-252	2014

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Anil Kumar Thandalam A. Tapas Kumar Mandal and Subrata Kumar Majumder	Frictional pressure drop in vertical helical coil reactor (HCR) based on flow regime	Journal of Engineering and Applied Sciences	9 (4)	97-101.	2014
Snigdha Khuntia, Subrata Kumar Majumder and Pallab Ghosh	A Pilot Plant Study of the Degradation of Brilliant Green Dye using Ozone Micro-bubbles: Mechanism and Kinetics of Reaction	Environmental Technology	36 (3)	336-347	2014
Subrata Kumar Majumder and Pallab Ghosh	Adsorption of As (V) on zirconium based adsorbents	Desalination and Water Treatment	-	1-13	2014
V. Prabu	Integration of In-Situ CO ₂ -Oxy Coal gasification with Advanced Power Generating Systems performing in a Chemical Looping approach of Clean Combustion	Applied Energy	140	41275	2015
V. Prabu, K. Geeta	CO ₂ enhanced In-Situ Oxy-Coal Gasification based Carbon-Neutral Conventional Power Generating Systems	Energy	doi: 10.1016/j.energy.2015.03.029		2015
Kaniganti C. M., Sriharsha E., Thorat P. and Uppaluri R.	Microfiltration of synthetic bacteria solution using low cost ceramic membranes	Separation Science and Technology	50 (1)	121-135	2015
Amrita A., Pujari M., Uppaluri R., and Verma A	Rate enhanced electroless fabrication of nickel-ceramic composite membranes	Surface Engineering	31 (3)	221-225	2015
Pujari M., Amrita A., Uppaluri R., and Verma A.	Effect of Pd concentration on electroless dense Pd-PSS membrane fabrication, Surface Engineering	Surface Engineering	31 (3)	209-213	2015
Amrita A., Pujari M., Uppaluri R., and Verma A.	Efficacy of Palladium solution concentration on electroless fabrication of dense metal ceramic composite membranes coupled with surfactant and sonication	Materials and Manufacturing Processes	-	-	2014
Amrita A., Pujari M., Uppaluri R., and Verma A.	A novel method of reducing agent contacting pattern for the fabrication of metal ceramic composite membranes using surfactant induced electroless plating	Applied Surface Science	320	52-59	2014
Pujari M., Amrita A., Uppaluri R., and Verma A.	Combinatorial electroless plating characteristics for dense Pd-PSS composite membrane fabrication, Materials and Manufacturing Processes	Materials and Manufacturing Processes	-	-	2014
Pujari M., Amrita A., Uppaluri R., and Verma A.	Efficacy of novel electroless plating processes for dense Pd/Cr ₂ O ₃ /PSS membrane fabrication	Materials and Manufacturing Processes	-	-	2014
Pujari M., Agarwal A., Uppaluri R., and Verma A.	Role of electroless nickel diffusion barrier on the combinatorial plating characteristics of dense Pd/Ni/PSS composite membranes	Applied Surface Science	305	658-664	2014

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Aeshala L. M., Verma A., and Uppaluri R.	Electrochemical conversion of CO ₂ to fuels: Tuning of reaction zone using suitable functional group in solid polymer electrolyte	Physical Chemistry Chemical Physics	16	17588-17594	2014
Rashmi R. Devi, Prodyut Dhar, Ajay Kalamdadh and Vimal Katiyar	Fabrication of Cellulose Nanocrystals from Agricultural Compost	Compost Science and Utilization	-	-	2015
Surendra Singh Gaur, Prodyut Dhar, Amit Kumar and Vimal Katiyar	Prospects of poly (vinyl alcohol)/Chitosan/poly (styrene sulfonic acid) and montmorillonite Cloisite30B clay composite membrane for direct methanol fuel cells	Journal of Renewable and Sustainable Energy	6	53135	2015
Ravi Babu Valapa, G. Pugazhenth and Vimal Katiyar,	Fabrication and characterization of sucrose palmitate reinforced poly(lactic acid) bionanocomposite films	Journal of Applied Polymer Science	132-3	41320	2015
Ravi Babu Valapa, G. Pugazhenth and Vimal Katiyar	Effect of graphene content on the properties of poly(lactic acid) nanocomposites	RSC Advances	36	28410-28423	2015
Prodyut Dhar, Sai Phani Kumar Vangala, Pankaj Tiwari, Amit Kumar and Vimal Katiyar	Thermal Degradation Kinetics of Poly (3-hydroxybutyrate)/Cellulose Nanocrystals based Nanobiocomposite	Journal of Thermodynamics & Catalysis	5-2	42186	2015

Conference/Workshop/Seminar/Symposia

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R.K. Das, V. Rani and A.K. Golder	Two electron transfer hydrogen peroxide generation using high purity (99.95%) isomolded graphite cathode	International Conference on Water (ICW-2015), Centre for Environment Education and Technology (CEET), Kottayam, India.	January 23-26, 2015	--
Ch V. Rao and A.K. Golder	Synthesis, characterization and photocatalytic behavior of silver-doped ZnO using chayote extract, From pollution to purification	International Conference on Water (ICW-2015), Centre for Environment Education and Technology (CEET), Kottayam, India.	January 23-26, 2015	--
V.V. Kulkarni, A.K. Golder and P.K. Ghosh	Removal of Pb(II) by weak and strong acidic cation-exchange resins: kinetic and thermodynamic studies	CHEMCON-2014, Chandigarh Regional Centre of IChE, Chandigarhi, India.	December 27-30, 2014	--
Ch V. Rao, K. Bhakal and A.K. Golder	Biomediated synthesis of ZnO nanoparticles (ZnONPs) for photocatalytic application	International Conference on Civil and Chemical Engineering (ICCCE-2014), Warangal, India.	November 30, 2014	--
R.K. Das, A.S. Giri, and A.K. Golder	Role of supporting electrolytes for hydrogen peroxide generation on graphite cathode	International Conference on Civil and Chemical Engineering (ICCCE-2014), Warangal, India.	November 30, 2014	--

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S. Khuntia and A.K. Golder	Hexavalent chromium reduction by immobilized green microalgae in continuous treatment	2nd International Conference on Algal Biorefinery (ICAB-2014), Technical University of Denmark, Lyngby, Denmark.	August 27-29, 2014	--
M.K. Gagrai, A.K. Golder and C. Das	Kinetic model of Spirulina Platensis growth in precipitated chrome tanning effluent	2nd International Conference on Algal Biorefinery (ICAB-2014), Technical University of Denmark, Lyngby, Denmark.	August 27-29, 2014	--
P.R. Rao, N. Ngullie, A.K. Golder and P.K. Ghosh	Arsenic removal from contaminated water by various physico-chemical processes,	International Conference on Substantial Environmental Technologies (ICSET-2014), Science and Engineering Institute, Dubai, UAE.	August 22-23, 2014	--
Mallikarjuna Reddy and Anugrah Singh	Numerical simulation of non-Newtonian suspension flow through asymmetric T-junction bifurcating channel	Proceedings of International Conference on Fluid Mechanics and Fluid Power, FMFP-2014, Kanpur	12-14 December 2014	--
Manjunath Reddy N., Pankaj Tiwari and Anugrah Singh	Petroleum reservoir simulation of two-phase flow	Proceedings of International Conference on Fluid Mechanics and Fluid Power, FMFP-2014, Kanpur	12-14 December 2014	--
Mridusmita Barooah, Babul Prasad, Arijit Mondal and Bishnupada Mandal	CO ₂ Separation by Facilitated Transport Polymer Membrane Containing Monoethanolamine Carrier	Indian Chemical Engineering Congress (CHEMCON 2014)	27-30 December, 2014	--
Bisweswar Das, Binay Deogam and Bishnupada Mandal	Rates of Absorption of Carbon Dioxide into Aqueous Solutions of Bis (3-Aminopropyl) amine	Indian Chemical Engineering Congress (CHEMCON 2014)	27-30 December, 2014	--
Sanjib Barma, Bishnupada Mandal	Gas Permeation Properties Of Mcm-48 Membrane: Synthesis And Characterization	Indian Chemical Engineering Congress (CHEMCON 2014)	27-30 December, 2014	--
Bisweswar Das, Binay Deogam and Bishnupada Mandal	Carbon Dioxide Absorption into Novel Amine Solvent	64th Canadian Chemical Engineering Conference (CSCHE 2014)	19-22, 2014	--
Sanjib Barma and Bishnupada Mandal	Synthesis of ordered mesoporous silica membrane on α -alumina support	64th Canadian Chemical Engineering Conference (CSCHE 2014)	19-22, 2014	--
Mridusmita Barooah, Babul Prasad, Arijit Mondal and Bishnupada Mandal	CO ₂ -Selective Polymer Membrane Containing Amine Carrier for CO ₂ Capture	64th Canadian Chemical Engineering Conference (CSCHE 2014)	19-22, 2014	--
M.K. Gagrai, A.K. Golder and C. Das	Kinetic model of Spirulina Platensis growth in precipitated chrome tanning effluent (PCTE)	2nd International Conference on Algal Biorefinery: A potential source of food, feed, biochemicals, biofuels and biofertilizers (ICAB 2014), Lyngby, Denmark	27 – 29th August 2014.	--
Chandan Das	Applications of Membrane Technology for the Treatment of Organic Pollutants	National Conference on Recent Advances in Biodegradation of Human Wastes, SaniCon 2014 for Ecofriendly, Appropriate & Affordable Sanitation Solution, DRL Tezpur,	December 16-17, 2014	--

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Saptal Rarotra, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Electrolytic Production of Hydrogen Energy by Water-Splitting in Polymer based Micro reactors. (BEST POSTER AWARD)	Select Biosciences, CSIR-IICT, Hyderabad, Flow Chemistry India	2014	--
Sunny Kumar, Mitradip Bhattacharjee, Seim Timung, Amit Kumar Singh, Tapas Kumar Mandal, Ashok Kumar Dasmahapatra and Dipankar Bandyopadhyay	Marangoni Effect Induced Drop-let Motion for Energy Harvesting, , Emerging Materials: Characterization & Application	CSIR-CGCRI, Kolkata, India	2014	--
Amit Kumar Singh, Seim Timung, Divesh Ranjan, Saptak Rarotra, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Vinegar Driven Micromotors for Nanoparticle Synthesis, , Emerging Materials: Characterization & Application	CSIR-CGCRI, Kolkata, India	2014	--
Seim Timung, Abhinav Sharma, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Field Induced Flow Behaviors of Oil-water Flow inside Microfluidic Channels(BEST PAPER AWARD)	International Conference on MEMS and Sensors, IIT Madras, Chennai, India	2014	--
Saptak Rarotra, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Field induced Conversion of CO ₂ and Sea Water into Organic Products inside a Micro-fluidic Reactor, , International Conference on MEMS and Sensors	IIT Madras, Chennai, India	2014	--
Joydip Chaudhuri, Seim Timung, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Computational Study of Transition of Oil-water Flow Morphology due to Sudden Contraction in Microfluidic Channel	COMSOL Conference, Bangalore, India	2014	--
Mitradip Bhattacharjee, Nilanjan Mandal, Harshal B. Nemade and Dipankar Bandyopadhyay	Simulation of a Voltage Controlled Resistor Mimicking the Geometry of a MOSFET Device having Graphite Channel	COMSOL Conference, Bangalore, India	2014	--
Kartick Mondal, Sunita Sen, Prashant Kumar, and Dipankar Bandyopadhyay	Influence of Charge Leakage and Slippage on the Electric Field Induced Patterns in Thin Bilayers	International Conference on Nano Science and Technology, INST, Mohali, India	2014	--

Name of Faculty	Name of Conf./Workshop	Place	Date	Vol/ Issue/ Page
Mitradip Bhattacharjee, Nilanjan Mandal, Satarupa Dutta, Saptak Rarotra, Harshal B. Nemade, Arun Chattopadhyay and Dipankar Bandyopadhyay	Controlled Drug Release: Attachment of Drugs on Magnetic Nanoparticles, , International Conference on Translational Nanomedicine	ILS, Ahmedabad, India,	2014	--
Satarupa Dutta, Nilanjan Mandal, Mitradip Bhattacharjee, Harshal B. Nemade, Arun Chattopadhyay and Dipankar Bandyopadhyay	Paper Based Optical Alpha-amylase Sensor	International Conference on Translational Nanomedicine, ILS, Ahmedabad, India	2014	--
Kanchapogu Suresh and G. Pugazhenthii,	Utilization of Fly ash in Fabrication of Ceramic Membrane	Annual Symposium on Solid Waste Management (RECYCLE 2014)	06 April 2014	4
Ashim Kumar Basumatary, A. K. Ghoshal and G. Pugazhenthii	Performance Assessment of MCM-48 Ceramic Composite Membrane by Separation of AlCl ₃ from Aqueous Solution	International Conference on Green Technology for Environmental Pollution Prevention and Control (ICGTEPC 2014)	27-29 September 2014	119
R. Vinoth Kumar, A. K. Ghoshal and G. Pugazhenthii	Fabrication of Zirconia Composite Membrane by in-situ Hydrothermal Technique and Its Application in Methyl Orange Separation	International Conference on Green Technology for Environmental Pollution Prevention and Control (ICGTEPC 2014)	27-29 September 2014	118
Kelothu Suresh, Rijumoni Boro, R. Vinoth Kumar and G. Pugazhenthii	Effect of Concentration and Temperature on Rheological Behaviour of Polystyrene Solution	International Conference on Polymer Processing and Characterization (ICPPC 2014)	11-13 October 2014	117
Tekula Srinu, Kanchapogu Suresh, A.K. Ghoshal and G. Pugazhenthii	Treatment of Oily Wastewater using TiO ₂ Microfiltration Membrane Prepared on Ceramic Support	International Conference on Advances in Chemical Engineering & Technology (ICACE '14)	16-18 October 2014	235-239
Ashim Kumar Basumatary, Partha Pratim Adhikari, A. K. Ghoshal and G. Pugazhenthii	Development and Performance Evaluation of MCM-41-Ceramic Composite Membrane by Separation of AlCl ₃ from Aqueous Solution	International Conference on Advances in Chemical Engineering & Technology (ICACE '14)	16-18 October 2014	251-255
Manish Kumar, S. Arun, Pradeep Upadhyaya and G. Pugazhenthii	Role of Various Compatibilizers on the Properties of PMMA/Clay Nanocomposite	International Conference on Advances In Materials and Processing Technology (AMPT-2014)	16-20 November 2014	
Ashim Kumar Basumatary, Partha Pratim Adhikari, R. Vinoth Kumar, A. K. Ghoshal and G. Pugazhenthii	Synthesis of FAU-type Inorganic Ultrafiltration Membrane	National Seminar on Recent trends in Fundamental and Applied Chemical Sciences (RTFACS-2014)	19-21 November 2014	40

Name of Faculty	Name of Conf./Workshop	Place	Date	Vol/ Issue/ Page
Kanchapogu Suresh and G. Pugazhenthhi	Development and Characterization of Thermally Stable Novel Ceramic Membrane from Inorganic Clay Materials for Treatment of Synthetic Oil-water Emulsions	National Seminar on Recent Trends in Fundamental and Applied Chemical Sciences (RTFACS-2014)	19-21 November 2014	67
Kelothu Suresh, R. Vinoth Kumar, M. Jeyapriya, R. Anbarasanand G. Pugazhenthhi	Study on the Effect of Organically Modified Montmorillonite (OMMT) Content on Rheological Properties of Polystyrene Nanocomposites	National Seminar on Recent Trends in Fundamental and Applied Chemical Sciences (RTFACS-2014)	19-21 November 2014	68
Ashim Kumar Basumatary, A. K. Ghoshal and G. Pugazhenthhi	Preparation and Evaluation of MCM-48 Ceramic Composite Membrane by Separation of FeCl ₃ from Aqueous Solution	Frontiers in Chemical Sciences (FICS 2014)	4-6 December 2014	56
Rahul R Ramteke and N. Kishore	Slip flow of a shear-thinning power-law fluid past an assemblage of spherical particles	Proceedings of 5th International and 41st National Conference on Fluid Mechanics and Fluid Power FMFP-2014 Kanpur, India	December (2014)	A-152
K.M. Krishna, H. Gidituri, N. Kishore and M. Vasukiran	Mixed convection heat transfer from confined square cylinder to non-Newtonian nanofluids	Proceedings of 5th International and 41st National Conference on Fluid Mechanics and Fluid Power FMFP-2014 Kanpur	December (2014)	K1-120
V.S. Nalajala, N. Kishore and H. Biswanath	Effect of contamination on rise velocity of bubble swarms in power-law fluids	Proceedings of 5th International and 41st National Conference on Fluid Mechanics and Fluid Power FMFP-2014 Kanpur, India	December (2014)	F146
A. Mishra and N. Kishore	Comparison between water flooding and polymer flooding in line drive: numerical simulation case study	Proceedings of 67th Annual Session of IChE, CHEMCON-2014 Panjab University, Chandigarh, India	December (2014)	--
P. Ghosh and N. Kishore	A numerical study on bubble dynamics in turbulent blood flow	Proceedings of 67th Annual Session of IChE, CHEMCON-2014 Panjab University, Chandigarh, India	December (2014)	--
P Saha	Computer Aided Design of Distillation Column suitable for Classroom Teaching	6th IEEE Conference on Technology for Education at Amrita University, Kerala	Dec 18-21, 2014	--
Sandeep Chauhan, Siva Durgaprasad, Prakash Kotecha	Performance comparison of evolutionary algorithm for multi level production planning	International Conference on Operational Research in conjunction with 47th Annual convention of Operational Research Society of India (ORSI)	December 1-3, 2014	--
B. K. Goshika and S. K. Majumder	Gas-liquid-liquid flow hold up in an ejector induced down flow bubble column	International conference Energy and Environmental Engineering (INCEEE)	March 20-21, 2015	--
Rajeev Parmar and S. K. Majumder	Aluminium oxide recovery by using microbubble flotation	International conference Energy and Environmental Engineering (INCEEE)	March 20-21, 2015	--

Name of Faculty	Name of Conf./Workshop	Place	Date	Vol/ Issue/ Page
Rajeev Parmar and S. K. Majumder	Recovery of fine particle by using ionic microbubble flotation	NECMICO-2014	30-31st October, 2014	--
Chandrasekhar B., Uppaluri R. and Amit Kumar	Optimization of multi-stage flash desalination networks using differential evolution algorithm	International Conference on New Frontiers in Chemical, Energy and Environmental Engineering	20-21 March 2015	--
Bhaskar Das, Tapas K Mandal Sanjukta Patra	Performance evaluation of phenol degradation by <i>Chlorella pyrenoidosa</i> in nutrient sufficient media and refinery wastewater through kinetic modelling	64th Canadian Chemical Engineering Conference, Ontario, Canada	19-22 October, 2014	--
Akhilesh Kumar Pal and Vimal Katiyar	Fabrication and Characterization of Chitosan Dispersed PLA Films for High Gas Barrier Properties	ASP-15	January 21-22, 2015	--
Ananya Das, Akhilesh Kumar Pal and Vimal Katiyar	Extraction, Characterization and Multistage Deacetylation Kinetics of Chitosan from Muga Silkworms (<i>Antheraea Assamensis</i>)	ASP-15	January 21-22, 2015	--
Arvind Gupta, Vimal Katiyar	Synthesis and Characterization of Stereocomplex PLA and Cellulose Biocomposite	ASP-15	January 21-22, 2015	--
Debashis Tarafder, Vimal Katiyar	Fabrication of Cellulose Nanocrystals from Different Cellulose Polymorphs	ASP-15	January 21-22, 2015	--
Neelima Tripathi and Vimal Katiyar	Novel Bio-based Copolymer for Structural Adhesive and Packaging Applications	ASP-15	January 21-22, 2015	--
Prodyut Dhar, Umesh Bhardwaj, Amit Kumar and Vimal Katiyar	Poly (3-Hydroxybutyrate)/ Cellulose Nanocrystals Based Nanobiocomposite for Food Packaging Applications	ASP-15	January 21-22, 2015	--
Shasanka Sekhar Borkotoky, Prakash Kotecha and Vimal Katiyar	A Review on Biodegradable Polymeric Foams	ASP-15	January 21-22, 2015	--
V. Ravi Babua, G. Pugazhenthhi and Vimal Katiyar	Studies on the Properties of Sucrose Palmitate Reinforced Poly(lactic acid) Nanocomposite Films	ASP-15	January 21-22, 2015	--
Gourhari Chakrabortya, G. Pugazhenthhi and Vimal Katiyar	Review on PLA Based Nanocomposites for Versatile Application	ASP-15	January 21-22, 2015	--

Book, Book Chapter, etc.

Name of Author/s	Name of Book	Publisher	Volume and Issue No. (If any)	Total Page No.	ISBN	Year
Ghoshal A.K. and P. Saha	Liquid - Membrane Filters; Progress in Filtration and Separation, ed. Steve Tarleton, IChemE	Elsevier	-	51	978-0-12-384746-1	2015

Name of Author/s	Name of Book	Publisher	Volume and Issue No. (If any)	Total Page No.	ISBN	Year
S. R. Varade and P. Ghosh	Ion-Specific Effect in Stability of Foams and Emulsions	Lambert Academic Publishing, Saarbrücken, Germany	Nil	76	978-3-659-57985-1	2014
Rajeev Parmar and Subrata Kumar Majumder	Flow behavior of microbubble-liquid mixture in pipes	Apple Academic Press, Taylor & Francis Group USA	Chapter 13		9781 7718 80770	2014
Prodyut Dhar, Umesh Bhardwaj, Amit Kumar and Vimal Katiyar	Cellulose Nanocrystals: A Potential Nano-filler for Food Packaging Applications	Food Additives and Packaging	American Chemical Society Symposium Series (Vol. 1162)		9780 8412 3024	2014
Umesh Bhardwaj, Prodyut Dhar, Amit Kumar and Vimal Katiyar	Polyhydroxyalkanoates (PHA)-Cellulose based Nanobiocomposites for Food Packaging Applications	Food Additives and Packaging	American Chemical Society Symposium Series (Vol. 1162)		9780 8412 3024	2014

CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	International/National
Ashok Kumar Dasmahapatra	2nd Soft Matter – Young Investigators' Meet (SM-YIM) – 2014	Pondicherry	December 18 – 20, 2014	National
Ashok Kumar Dasmahapatra	Eighth Symposium on Complex Fluids, CompFlu - 2014	Bangaluru	December 22 – 24, 2014	National
Ashok Kumar Dasmahapatra	IUPAC MACRO-2014	Thailand	July 06 – 11, 2014	International
Anugrah Singh	FMFP 2014	Kanpur, India	12-14 December 2014	International
Anugrah Singh	COMPFLU 2014	Bangalore, India	22-24 December 2014	National
Dr. Bishnupada Mandal	Urja Sangam - 2015	Vigyan Bhavan, New Delhi	27 March 2015	National
Dr. Bishnupada Mandal	Indian Chemical Engineering Congress (CHEMCON 2014)	Chandigarh	27-30 December, 2014	National
Dr. Bishnupada Mandal	Canadian Chemical Engineering Congress 2014	Niagara Falls, Canada	19-22 October, 2014	International
Dr. Bishnupada Mandal	International Conference on Chemical Industries (ICCI-2014)	PDP, Gandhinagar	22-23 August, 2014	International
Dr. G. Pugazhenth	International Conference on Advances In Materials and Processing Technology (AMPT-2014)	Dubai	16-20 November 2014	International

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Pankaj Tiwari	International symposium on CAalysis in MULTiphase Reactors (CAMURE)	Lyon France	7th-10th December 2014	International
Rajesh Kumar Upadhyay	ISCRE23 & APSCRE 7	Bangkok, Thailand	7-10 September 2014	International
Rajesh Kumar Upadhyay	CAMURE-9 & ISMR-8	Lyon, France	7-10 December 2014	International
Subrata Kumar Majumder	NECMICO-14 at	CSIR-NEIST, Jorhat Jorhat	30-31st October, 2014	National
Dr. Vimal Katiyar	ICEMA 2014	IIT Roorkee	April 5- 6, 2014	Invited Talk/ International
Dr. Vimal Katiyar	13th International Symposium on Bioplastics, Biocomposites & Biorefining (ISBBB)	Guelph, Ontario, Canada	May 19-24, 2014	Invited Talk/ International
Dr. Vimal Katiyar	International symposium on fiber science and technology 2014 (ISF)	Tokyo, Japan	Sep 28 – Oct 1, 2014	Keynote Talk/ International
Dr. Vimal Katiyar	Kyoto International Symposium on Neo Fiber Technology	Kyoto, Japan	October 2-3, 2014	Invited Talk/ International
Dr. Vimal Katiyar	Indo German workshop on supra Molecular Chemistry	Delhi University	March 30, 2015	Invited Talk/ International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Bishnupada Mandal	CO ₂ -selective dense polymer membranes and Metal Organic Frameworks for post-combustion CO ₂ -capture: Challenges and Prospects	PDPU	Gandhinagar	22 August, 2014
Dr Chandan Das	Invited talk at National Seminar cum workshop on "Innovative Prospects in Food Processing: Integration of Engineering and Biological Sciences" at Department of Food Engineering and Technology	Tezpur University, Assam	Assam	28. 3. 2015
Dr Chandan Das	Invited talk at TEQIP STC on "Tannery Wastewater Treatment by Biological Methods"	Department of Chemical Engineering, IIT Guwahati	Assam	03. 03. 2015
Dr Chandan Das	Invited talk at TEQIP STC on "Applications of Membrane Technology for the Treatment of Organic Pollutants"	Defence Research Lab, DRDO, Tezpur	Assam	17. 12. 2014
Dr Chandan Das	Invited talk on "Introduction to Membrane Separation Technology"	Centre for the Environment, IIT Guwahati, India	Assam	09. 12. 2014
Dr Chandan Das	Invited lecture on "Water and wastewater treatment using electrospun PVA nanofiber membranes"	The Centre for the Environment, IIT Guwahati, India	Assam	20. 06. 2014
Dr Chandan Das	Invited lecture on "Low cost ceramic membranes: A new approach towards membrane technology"	The Energy and Resources Institute (TERI), New Delhi	New Delhi	16. 04. 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Dipankar Bandyopadhyay	Self-propelling Microbots Decorated with Catalytic and Magnetic Nanoparticles	KTH Stockholm	Sweden	
Dr. Dipankar Bandyopadhyay	"Self-Motile Systems" International Conference on NanoTechnology	Haldia Institute of Technology	Kolkata	
Dr. Dipankar Bandyopadhyay	Applications of Microfluidics: Sensors, Reactors, Pumps, & Mixers, State of the Art in Microfluidics,	IIT Guwahati	Guwahati	
Dr. Pankaj Tiwari	Thermal Degradation Kinetic Studies of Biopolymers and Composites	IITG-KIT joint symposium IIT Guwahati	Guwahati, India	19 Jan 2015
Dr. K. Mohanty	Lignocellulosic Bioethanol & Biobutanol: Potential, Pretreatment Strategies and Future Prospects	Indian Institute of Chemical Technology (IICT)	Hyderabad	19 June 2014
Dr. K. Mohanty	Bio-Oil from Thermo-Catalytic Conversion of Non-Edible Seeds	Venice Symposium 2014	Venice, Italy	17 November 2014
Dr. K. Mohanty	Ionic Liquids as Green Solvents for the Treatment of Endocrine Disrupting Compounds using Liquid Membranes	SANICON 2014, Defence Research Laboratory	Tezpur	17 December 2014
Rajesh Kumar Upadhyay	Multiphase Flow Reactors Insights through Experiments and CFD simulations	IIT BHU, Varanasi	Varanasi	23-24 March 2015
Dr. R. Anandalakshmi	Heatline Analysis for Natural Convection within Porous Rhombic Enclosures for Various Thermal Aspect Ratios	Indo-German Frontiers of Engineering, 2015 [INDOGFOE 2015]	Agra	19-22 February 2015
Dr. R. Anandalakshmi	State of Art on Concentrated Solar Thermal Power Plants (CSP)	Frontier Energy Research with Industry Academia Partnership, 2015 [FERIAP 2015]	IIT Guwahati	20-21 March 2015
Dr. Vimal Katiyar	Sustainable Polymers: Concept, Research, Status, Policies and Regulations (In MSSP-14)	IIT Guwahati	Guwahati	4-8 Aug 2014
Dr. Vimal Katiyar	Lecture in TEQIP short term course on transport processes and optimization techniques in polymers	IIT Guwahati	Guwahati	15-20 Dec 2014
Dr. Vimal Katiyar	Lecture on 'Sustainable Polymer based nanomaterials'	IIT Guwahati	Guwahati	23-27 Dec 2014
Dr. Vimal Katiyar	Lecture on 'Biopolymer based Nanomaterials' in QIP short term course on Micromanufacturing for Biomedical Applications	IIT Guwahati	Guwahati	23-27 Feb 2015
Dr. Vimal Katiyar	Lecture on 'Development And Processing of Biomedical Related Polymers' in QIP short term course on Advances in biomedical engineering	IIT Guwahati	Guwahati	25 Feb - 1 Mar 2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Yoshiharu Kimura	KIT Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Kazunari Masutani	KIT Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015
Prof. Shinichi Sakurai	KIT Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015
Prof. Hidekazu Yasunaga	KIT Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015
Dr. Tomonari Tanaka	KIT Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015
Prof. Kensuke Naka	KIT Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015
Prof. Shigeru Okamoto	Nagoya Institute of Technology, Nagoya, Japan	IITG-KIT Joint Symposium on Biobased Materials and ASP-15	Jan 20-22, 2015
Dr. Kazuaki Sogo	Mutual Corporation, Japan	IITG-KIT Joint Symposium on Biobased Materials	Jan 20, 2015
Prof. Gaurav Manik	IIT Roorkee	IITG-KIT Joint Symposium on Biobased Materials	Jan 20, 2015
Prof. S. N. Naik	IIT Delhi	IITG-KIT Joint Symposium on Biobased Materials	Jan 20, 2015
Prof. Sadhan C. Jana	University of Akron, USA	ASP-15	Jan 21-22, 2015
Prof. Olli Ikkala	Aalto University, Finland	ASP-15	Jan 21-22, 2015
Prof. Suprakas Sinha Ray	CSIR, South Africa	ASP-15	Jan 21-22, 2015
Prof. Mikael Skrifvars	University of Borås, Sweden	ASP-15	Jan 21-22, 2015
Prof. Namita Roy Choudhury	University of South Australia, Australia	ASP-15	Jan 21-22, 2015
Prof. Jayachandran N Kizhakkedathu	UBC, Canada	ASP-15	Jan 21-22, 2015
Prof. Eamor M. Woo	NCKU, Taiwan	ASP-15	Jan 21-22, 2015
Prof. Sreekala Bajwa	North Dakota State University, USA	ASP-15	Jan 21-22, 2015
Prof. Jean-Michel Guenet	ICS, France	ASP-15	Jan 21-22, 2015
Prof. Ullrich Scherf	University of Wuppertal, Germany	ASP-15	Jan 21-22, 2015
Dr. Manohar V. Badiger	NCL Pune	ASP-15	Jan 21-22, 2015
Dr. A. Bhattacharya	CSMCRI, India	ASP-15	Jan 21-22, 2015
Dr. Susheela B. Idage	NCL Pune	ASP-15	Jan 21-22, 2015
Prof. Md. Abul Kalam Azad	SUST, Bangladesh	ASP-15	Jan 21-22, 2015
Prof. Vincent Gomes	The University of Sydney, Australia	ASP-15	Jan 21-22, 2015
Dr. Bhaskar B. Idage	NCL Pune	ASP-15	Jan 21-22, 2015
Dr. Joby Kochumalayil Jose	KTH Royal Inst. of Technology, Sweden	ASP-15	Jan 21-22, 2015
Prof. Biswajit Ray	Banaras Hindu University	ASP-15	Jan 21-22, 2015
Prof. Ramaswamy Nagarajan	University of Massachusetts, USA	ASP-15	Jan 21-22, 2015

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Naba K. Dutta	University of South Australia	ASP-15	Jan 21-22, 2015
Prof. Richard G. Weiss	Georgetown University, Washington, USA	ASP-15	Jan 21-22, 2015
Prof. Ishrat Khan	Clark Atlanta University, USA	ASP-15	Jan 21-22, 2015
Prof. Dilpreet Bajwa	North Dakota State University, USA	ASP-15	Jan 21-22, 2015
Prof. Satish A. Patil	Indian Institute of Science, Bangalore	ASP-15	Jan 21-22, 2015
Prof. Niranjana Karak	Tezpur University, India	ASP-15	Jan 21-22, 2015
Prof KC Gupta	IIT Roorkee, India	ASP-15	Jan 21-22, 2015
Mr. Frédéric Bossan	R&D, Xenocs, Sassenage, France	ASP-15	Jan 21-22, 2015
Prof. Richard Hoogenboom	Ghent University, Belgium	ASP-15	Jan 21-22, 2015
Prof. Nabanita Saha	Tomas Bata University in Zlin, Czech Republic	ASP-15	Jan 21-22, 2015
Prof. Sunil K. Sharma	University of Delhi, India	ASP-15	Jan 21-22, 2015
Dr. Gauri Shankar Mukherjee	DRDO, New Delhi	ASP-15	Jan 21-22, 2015

SEMINARS/WORKSHOPS/CONFERENCES/SHORT-TERM COURSES ORGANISED:

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
Dr. Bishnupada Mandal	Membrane Technology & Application	TEQIP	09-10 December 2014	National	30
Dr. Bishnupada Mandal	Transport Processes and Optimization Techniques in Polymers	TEQIP	15-20 December 2014	National	30
Prof. B. Mandal and Dr. C. Das (Joint coordinators)	Membrane Technology & Application, Centre for the Environment, Indian Institute of Technology Guwahati, India	MHRD	December 09-10, 2014,	National	35
Chairman: Arun Chattopadhyay, Convener: Dipankar Bandyopadhyay	A National workshop on NEMS and Theranostic Devices	DeitY	16-03-2015 to 17-03-2015	National	85
Dr. B. P. Mandal, Dr. V. Katiyar, Dr. A. kumar, Dr. P. Kotecha, Dr. R. Anandalakshmi & Dr. R. Gupta	Transport Processes and Optimization Techniques in Polymers	KIC-CET, IITG	December 15-20, 2014	National	28
K. Mohanty	Emerging Micropollutants in the Environment: Occurrence, Transportation, Monitoring and Treatment	KIC-TEQIP (MHRD)	2-5 March, 2015	National	40

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
K. Mohanty	Reflux 2015	-	27-29 March, 2015	National	250
Rajesh Kumar Upadhyay	QIP Course on Insights of Multiphase Flow Reactors through Experimental and CFD Techniques	MHRD	16-20 December 2014	National	26
Prof. R. Uppaluri (Co-ordinator)	Technical Writing	KIC-TEQIP, CET	7-8 Dec 2015	National	80
Dr. Vimal Katiyar	MSSP-14	Dept. of Chemicals and Petrochemicals	Aug. 4-8, 2014	National	35
Dr. Vimal Katiyar	First In-house Symposium on Technical Progress of Centre of Excellence for Sustainable Polymer (CoE-SusPol)	Dept. of Chemicals and Petrochemicals	Nov. 20, 2014	National	40
Dr. Vimal Katiyar	IITG-KIT Joint Symposium on Biobased Materials	Dept. of Chemicals and Petrochemicals	Jan. 20, 2015	International	70
Dr. Vimal Katiyar	ASP-15	Dept. of Chemicals and Petrochemicals, DBT (SERB), DST	Jan. 21-22, 2015	International	>100

PATENTS:

Name of Faculty and co researcher	Name	Date Applied/ Granted	Application No.
Agarwal A., Pujari M., Uppaluri R. and Verma A.	Composition and Method for Dense Palladium Ceramic Composite Membrane Fabrication	Indian Patent filed (05-06-2014)	612/KOL/2014

AWARDS AND HONOURS:

1. Dr. Animes K Golder, recently joined as the Editors of Int. J. Chem. Clean. Sep. Technol. and Int. J Chem. Eng. Proc. (Int. Journals Pub)
2. Dr. Dipanker Bandopadhyay awarded Erasmus-Mundus Visiting Faculty under the COSSE Program, KTH Stockholm, Sweden, September 2014.
3. Prof Pallab Ghosh awarded "Shri G. M. Abhyankar Memorial Distinguished Fellowship in Chemical Engineering" for the year 2014-2015 by Institute of Chemical Technology, Matunga, Mumbai, 400019, India.
4. Dr S.K. Mazumdar appointed as Editor, Journal of Chemical Engineering Research Studies, VRJ publishers Guest Editor, American Journal of Fluid Dynamics, Special Issue on "Experimental and modelling of bubbly flow for industrial

applications" published by Scientific & Academic Publishing Co., CA, 91731, USA.

5. Dr S.K. Mazumdar became Life Member of Indian Institute of Chemical Engineers (Membership No. LM 32569)
6. Dr S.K. Mazumdar became Life Member of Indian Institute of Mineral Engineers (Membership No. LM 754)
7. Dr S.K. Mazumdar became Member of Asia-Pacific Chemical, Biological & Environmental Engineering Society (Membership No. 101119)
8. Dr S.K. Mazumdar became Senior Member of International Association of Engineers, Japan (IAE) (Membership No. 153874)
9. Dr. Vimal Katiyar, Associate Professor, Department of Chemical Engineering, has been appointed for Part Time Teaching Assignment at Graduate School of Science and

Technology at Kyoto Institute of Technology, Kyoto, Japan for 2014-2015.

10. Dr. Vimal Katiyar is acting as Guest Editor for Special Issue 'Natural Fibre Composites and Biocomposites: Characterization, Modification and Environmental Ageing Effects' in International Journal of Polymer Science Hindawi Publishing Corporation, USA.

STUDENTS' ACHIEVEMENTS

o Ardhendu S. Giri received the best presentation award

for the paper entitled "Degradation of dipyrone in water by heterogeneous photo catalytic reaction: Degradation mechanism and reaction pathways", in Reflux-2.0-Annual Chemical Engineering Symposium, Department of Chemical Engineering, 29-30th March, 2014, IIT Guwahati, Assam, India

o Field Induced Flow Behaviors of Oil-water Flow inside Microfluidic Channels, Seim Timung, Abhinav Sharma, Tapas Kumar Mandal and Dipankar Bandyopadhyay, International Conference on MEMS and Sensors, IIT Madras, Chennai, India, 2014. (BEST PAPER AWARD)

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	R. Anandalakshmi	IIT Madras	Assistant Professor	Computational Heat Transfer and Fluid Flow, Process Modeling and Simulation, Solar Thermal Energy Conversion, Energy Efficient Design of Thermal Systems
2.	Dipankar Bandyopadhyay	IIT Kanpur	Associate Professor	Colloid and Interfacial Phenomena, Computational Fluid Dynamics, Micro and Nano Fluidics, Complex Flow and Fluids, Clean Energy – Fuel and Solar cells
3.	Tamal Banerjee	IIT Kanpur	Associate Professor	Phase equilibria of ionic liquids, Molecular simulations, Global optimisation, Statistical thermodynamics
4.	Jaideep Chatterjee	Illinois Institute Of Technology Chicago	Adjunct Faculty	Water Purification, Oil-water interfaces, and Surfactant Enhanced Oil Recovery
5.	Chandan Das	IIT Kharagpur	Associate Professor	Wastewater Treatment, Bioremediation, Membrane based Separation Process
6.	Ashok Kumar Dasmahapatra	IIT Bombay	Assistant Professor	Complex fluids, Phase transition in polymers (Nucleation, crystallization, collapse transition, etc.), Structure-property relations, Molecular simulations, Biological physics
7.	Mahuya De	IIT Kanpur	Associate Professor	Catalysis and reaction engineering, adsorption, hydrocarbon processing
8.	Pallab Ghosh	IIT Bombay	Professor	Interfacial phenomena, Interfacial reactions, Membrane separation, Randomised algorithms
9.	Aloke Kumar Ghoshal	IIT Kharagpur	Professor	Advanced Separation Technology, Modeling & Simulation, Environmental Pollution Control, Pyrolysis of waste plastics
10.	Partho Sarathi Gooch Pattader	Lehigh University	Assistant Professor	Stochastic dynamics, Colloid and Interface science, Tribology, Soft matter
11.	Animes Kr. Golder	IIT Kharagpur	Associate Professor	Electroremediation of water/wastewater, Physicochemical water/wastewater treatment techniques, Bioremediation, Electrochemical corrosion
12.	Vaibhav V. Goud	IIT Kharagpur	Associate Professor	Heterogeneous Reactions, Bio-energy and Green Engineering, Biolubricant, Utilisation of Lignocellulosic Biomass for Fuel/Chemicals, Supercritical Fluids
13.	Sasidhar Gumma	Cleveland State University, USA	Associate Professor	Phase Equilibria and Thermodynamics, Adsorption, Molecular simulation, Gas storage

Sl. No.	Name	PhD	Designation	Areas of Interest
14.	Raghvendra Gupta		Assistant Professor	Multiphase flow, Microfluidics and micro process engineering, Computational and experimental fluid dynamics
15.	Anki Reddy Katha	IISc Bangalore	Assistant Professor	Computational study of polymer-composites, Membranes, Poly electrolytes, Granular flows
16.	Vimal Katiyar	IIT Bombay	Associate Professor	Synthetic and Natural Polymers, Polymer Processing, Biothermoset, Nanobiocomposite, Organic Solar Cells, Biodegradable Polymers
17.	Nanda Kishore	IIT Kanpur	Associate Professor	CFD, Bubbles, Drops and Particles Dynamics, Non-Newtonian Fluids
18.	Prakash Kotecha	IIT Bombay	Assistant Professor	Optimization, Process Control, Artificial Intelligence, Planning and Scheduling
19.	Amit Kumar	University of Delaware, USA	Assistant Professor	Gas Transport in Nanoporous Materials, Molecular Simulation, Statistical Mechanics
20.	Bishnnupada Mandal	IIT Kharagpur	Professor	Separations with chemical reaction, Molecular based membrane separation, Modeling and simulation of separation processes, Environmental pollution control
21.	Tapas K Mandal	IIT Kharagpur	Associate Professor	Multiphase flow & Measurement in multiphase flow, Bio-diesel
22.	Subrata Kumar Mazumdar	IIT Kharagpur	Associate Professor	Multiphase flow and reactor development, Computational fluid dynamics in multiphase flow, Mineral processing, Process intensifications and Micro-nanobubble science and technology
23.	Kaustubha Mohanty	IIT Kharagpur	Associate Professor	Bioseparation, Biofuels, Biological wastewater treatment, Membrane technology, Ionic liquids
24.	Vijay S. Moholkar (Head of the Department)	University of Twente, Netherlands	Professor	Bubble dynamics, CFD, Sono-process engineering, Bio-mass gasification
25.	Nageswara Rao Peela	IIT Kanpur	Assistant Professor	Heterogeneous Catalysis and reaction engineering, Biomass conversion to value added chemicals, Bio-oil up-gradation to transportation fuels, Carbon dioxide activation to valuable chemicals, Metal encapsulated zeolites
26.	Vairakannu Prabu	IIT Madras	Assistant Professor	Clean Coal Technology, Combustion and Gasification, Reaction kinetics
27.	G. Pugazhenthii	IIT Kanpur	Associate Professor	Membrane Separation, Polymer Nanocomposites, Nanomaterials, Catalysis & Refinery Processes
28.	Mihir Kumar Purkait	IIT Kharagpur	Associate Professor	Advance Separation Processes, Membrane technology. Preparation/fabrication of ceramic/polymeric membranes and their application in RO, NF, UF and MF. Treatment of Industrial Effluent, Surfactant mediated separation processes, Responsive materials for environmental, biological and chemical separation
29.	Prabirkumar Saha	IIT Madras	Professor	Process Modeling, Optimisation and control, Membrane Based separation Process

Sl. No.	Name	PhD	Designation	Areas of Interest
30.	S. Senthilmurugan (Joined on 29 October 2013)	IIT Delhi	Assistant Professor	Modeling and Optimization of Novel Processes, Process Design and Operation of Membrane Separation Processes, Waste and waste water treatment (WWWT) for Process Industries, Novel Desalination Technologies, Smart Water Grid, Waste to Energy
31.	Anugrah Singh	IISc Bangalore	Professor	Computational and Experimental Fluid Dynamics, Microfluidics/Nanofluidics, Material Processing, Flow through Porous Media
32.	Pankaj Tiwari	University of Utah, Salt Lake City, UT, USA	Assistant Professor	Conventional and unconventional energies, Reservoir Engineering, Complex organic solids, Biomass conversion, Pyrolysis process, Kinetic analysis
33.	Rajesh Kr. Upadhyay	IIT Delhi	Assistant Professor	Multiphase Flow Reactor, Multiphase Flow Measurements, Computational Fluid Dynamics, Residence Time Distribution, Novel Reactors
34.	Ramgopal V. S. Uppaluri	UMIST, Manchester, UK	Professor	Major: Electroless Plating, Evolutionary Engineering Optimization, Low Cost Ceramic Membranes, Microfiltration; Minor: Bio-systems Engineering, Polymer-natural fiber composites, Process Design & Techno-economics, Refinery Engineering, Reservoir Engineering; Extracurricular: Synthesis of Science and Spirituality
35.	R. Prasanna Venkatesh (Joined 25 April 2013)	IIT Madras	Assistant Professor	Electrochemistry, Chemical Mechanical Polishing (CMP), Post CMP cleaning, Refinery Processes
36.	Anil Verma	IIT Delhi	Associate Professor	Fuel Cell, Hydrogen Production and Storage, Graphene, Carbon Dioxide Capture and Conversion to Fuel

DEPARTMENT OF CHEMISTRY

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1995

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in
o Chemical Science and Technology

Master of Science (MSc) in
o Chemistry

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 14
- Associate Professor: 16
- Assistant Professor: 5

NUMBER OF NEW FACULTY JOINED:

- Assistant Professor: 2

LABORATORIES:

Laboratories for BTech and MSc programme:

Chemistry Laboratory (B. Tech, 1st sem) / Chemical Technology Lab – I, B. Tech (CST) (Number: 1) (Area: 200 m²)
Chemical Technology Lab – II, B. Tech (CST) (Number: 1) (Area: 140 m²)
Chemical Technology Lab – III, B. Tech (CST) / Physical Chemistry Lab (M. Sc) (Number: 2) (Area: 300 m²)
Inorganic Chemistry Lab (M. Sc) / Organic Chemistry Lab (M. Sc) (Number: 1) (Area: 180 m²)

Research Laboratories:

CHL – 101, CHL – 102, CHL – 103, CHL – 104, CHL – 105, CHL – 106, CHL – 201, CHL-202, CHL-203, CHL-204, CHL – 205, CHL – 206, CHL-3201, CHL-3202, CHL-3203, CHL-3204, CHL-3207, CHL-3209, CHEL-006, CHEL-003, CHEL-004, CHEL – 101, CHEL – 102, CHEL – 103, CHEL – 104, CHEL – 105, CHEL – 106, CHEL – 107, CHEL – 108, CHEL – 109 (Number: 30) (Floor space: 80 m² average)

Analytical equipment Lab I – IV (Number: 04) (Floor space: 300 m² average)

Computer Lab I and II (Number: 02) (Floor space: 80 m² average)

Ultrapure (Millipore) water Lab (Number: 01) (Floor space:

50 m² average)

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

(i) Semi preparative HPLC system (Make: Thermo, Model: Ultimate 3000)(Order placed)

(ii) TCS PC Lifetime system with MCP detection (Make: Hariba Jobin, Model: Ultrafast-01-DD)(Order placed)

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The Department is engaged in various research and Development activities such as:

Catalysis, Supramolecular Chemistry, Nanoscale Science and Technology, Synthesis, structure and reactivity of Inorganics, Newer reagents, Protocols and Newer methodologies, Synthesis of natural products and Carbohydrate Chemistry, Bio-organic Chemistry, Bio-inorganic Chemistry and Co-ordination Chemistry & Organometallics, Chiral recognition using metal complex based host, Metal removal from wastewater using polymer based chelators, Polymer synthesis, Organic Photochemistry, Molecular dynamics, Quantum Molecular dynamics, Physical Chemistry – Spectroscopic and Theoretical investigations on Novel Materials, peptide chemistry, Development of new theoretical approaches to: Laser Assisted Control of Chemical Reactions, and, Resonances in Electron – Molecule Scattering, Biomimetic Chemistry and Chemical Biology, Computational Biophysics and Chemistry, Oxidation Catalysis, Molecular Magnetism, Synthesis of Single-Molecule Magnets (SMMs), MRI Contrast agents, Water Oxidation Chemistry, Experimental & Theoretical Physical Chemistry, Self-organization and Nonlinear dynamics, Liquid crystals, Functional Materials, Molecular Electronics, Self Assembly, Supramolecular dynamic aggregates, peptides, lipids, Time Resolved Absorption and Fluorescence Spectroscopy, SHG, MUPPETS, Synthetic organic chemistry, Natural product synthesis with the emphasis of new synthetic methodology; development of new reactions, asymmetric organocatalysis and transition metal catalysis with new catalyst design; mechanistic study, solar fuel from water, Gas/Vapor/Liquid Adsorption and Catalytic Applications of Metal-Organic Frameworks (MOFs), Peptidomimetics: Synthesis, Conformation and Biological activity etc.

RESEARCH PROJECTS**a) New Sponsored Projects**

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Shyam P. Biswas	Development of superhydrophobic metal-organic frameworks bearing water repellent functional groups for oil spill clean-up and volatile organic compounds removal	DST-SERB	23.25	None	2014-2017
Dr. Chandan Mukherjee	Transition metal-radical complexes as oxidation catalysts	CSIR	15.42	None	2015-2018
Dr. Kingsuk Mahata	Gold(I)-Mediated Self-Assembly for Medicinal Applications	DST-SERB	25.00	None	2014-2017

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dept. of Chemistry	DST-FIST Project under level-II category	DST	215.00	-	5 years
Dept. of Chemistry	FAST-For centre of Excellence for training and Research in frontier areas of Science and Technology	MHRD	400.00	-	5 years
Prof. A. Chattopadhyay	Interacting Molecules and Nanoscale Materials	CSIR	16.00	-	3 years
Prof. B. K. Patel	Development of Antimalarial and Anti-Tuberculosis Drugs	CSIR	8.00	-	3 years
Prof. B. K. Patel	Newer Approaches to Heterocycles: Mechanistic Investigations and Applications	CSIR	15.00	-	3 years
Prof. B. K. Patel	Beyond Traditional coupling leading to the synthesis of novel heterocyclic scaffolds	DST	48.00	-	3 years
Prof. T. Punniyamurthy	Study of C-H Activation for the Synthesis of Benzofused Azoles	DST	48.00	-	3 years
Prof. T. Punniyamurthy	Chiral Macromolecules for Chiral Recognition and Asymmetric Catalysis	CSIR	21.00	-	3 years
Prof. A. K. Saikia	New approaches towards the synthesis of nitrogen and oxygen heterocycles and their applications in natural product synthesis	CSIR	18.00	-	3 years
Prof. V. Manivannan	Synthesis, Characterization of New Nitrogenous	DST	35.90	-	3 Years
Prof. G. Das	Supramolecular self-assembly and anion coordination chemistry of multidentate ligand.	CSIR	9.15	-	3 Years
Dr. S. S. Bag	Genotyping Single Nucleoside Polymorphisms (SNPs) with Fluorescently Modified Nucleoside /Oligonucleotide Probes	DBT	82.12	-	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. B. Mandal	Arresting pre fibrillar aggregates of Alzheimer's amyloid by synthetic antibodies	DBT	56.00	Dr. A. C. Mondal, R. P. M. College, Uttarpara, Hooghly (W.B.)	3 years
Dr. M. Sarma	Effect of Electron Donating and Electron Withdrawing Substituents on Single Strand Breaks in Selected DNA Fragment Induced by Low Energy Electron	DST	29.46	-	3 years
Dr. Debasis Manna	Design, Synthesis and Biological Activities of Protein Kinase C Activators.	CSIR	22.42	-	3 years
Dr. D. Das	Understanding the Interaction between Cucurbituril and Amphiphilic Molecules in Aqueous Medium to Prepare Novel Self-assembled Systems	BRNS	21.26	-	3 years
Dr. G. Das	Supramolecular self-assembly and anion coordination chemistry of multidentate ligand.	CSIR	9.15	-	3 Years
Dr. G. Krishnamoorthy	Developing Simple Sensors for Chemical Applications	DST	45.00	-	3 Years
Dr. M. Qureshi	Synthesis and Characterization of Efficient Molecular Materials for Organic Light Emitting Diodes	CSIR	13.00	-	2 years
Dr. Sumana Dutta	Self-organization and Filament Dynamics in Reaction-diffusion Systems	DST-SERB	33.10	-	3 Years
Dr. L. M. Kundu	Synthesis of Modified Nucleobases and Modified Nucleic Acids for Biomolecular Applications	DST	22.80	-	3 Years
Dr. L. M. Kundu	Synthesis of Nucleobases with Modified Base-Pairing Properties and Synthesis of Non-Natural Oligonucleotides to Develop FRET Based Probes for the Detection of Single Nucleotide Polymorphisms and DNA Lesions	CSIR	12.5	-	3 Years
Dr. Chandan K Jana	Total Synthetic Studies on Potential Anticancer Natural Products Isolated From <i>Azadirachta indica</i> (Neem)	BRNS	14.15	-	3 years
Dr. Chandan K Jana	Total Syntheses of Three Potential Anticancer Natural Products and Their Unnatural Derivatives	BRNS	24.20	-	3 years
Dr. A. S. Achalkumar	Luminescent DLCs for the application in OLEDs	BRNS-DAE	25.00	-	2 years
Dr. A. S. Achalkumar	Design and synthesis of PDLCs for the Application in Organic Electronics	DSTSERB	50.00	-	3 years
Dr. K.A.Sahu	Characterization of Aspartyl-tRNA Synthetase from <i>Entamoeba Histolytica</i> by Spectroscopic Methods	DBT		-	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Subhas Chandra Pan	N-Vinyl and N-Alkynyl Pyridinium and – Ammonium Tetrafluoroborate Salts: New Electrophilic Reagents in Asymmetric Organocatalysis	DST-SERB	26.95	-	3 years
Dr. Subhas Chandra Pan	Asymmetric Organocatalytic Tandem Cyclization and Cycloaddition Reactions with 1-Acetylcyclohexene	DAE-BNRS	16.90	-	4 years
Dr. Subhas Chandra Pan	New Aminocatalytic Asymmetric Transformations	DST-MPI	40.50 Lakhs + 60,000 Euros	-	3 years
Dr. Sandip Paul	Effect of osmolytes urea and trimethylamine-N-oxide on hydrophobicity and protein folding/unfolding under confinement	DST	20.70	-	3 years
Dr. Sandip Paul	The mechanism of bioprotective effect of trehalose through hydrophobic and hydrogen bonding interactions on peptide and polypeptide: A molecular dynamics simulation study	BRNS	24.245	Dr. Debasis Manna	3 years
Dr. Sandip Paul	Counteraction of Osmolyte Trimethylamine-N-Oxide on Pressure Induced and Urea Induced Denaturation of Proteins BPTI and Rnase A: Molecular Dynamics Simulation Study	CSIR	10.62	-	3 years
Dr. Chandan Mukherjee	Development of Water Oxidation Catalysts, Single-Molecule Magnets (SMMs), and Magnetic Resonance Imaging (MRI) Contrast Agents, Employing a Common Backbone	DST	24.20	none	3 years
Dr. Chandan Mukherjee	Synthesis of Sensitizers for Dye Sensitized Solar Cell	BRNS	23.51	none	3 years
Dr. Chandan Mukherjee	Radical-Containing Transition Metal-Complex Catalyzed Aerial Oxidation of Alcohols to Aldehydes	IIT Guwahati	5.00	none	3 years
Dr. Kingsuk Mahata	Oxygen-Evolving Catalysts for Artificial Photosynthesis	IIT Guwahati	5.00	none	3 years

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. Sandip Paul	The Role of Aqueous Solutions of Trimethylamine-N-Oxide (TMAO) on the Pressure Induced Hydrophobic Interactions and the Pressure Induced Hydrogen Bond Properties and Dynamics	DST	21.382	Dr. S. S. Bag & Dr. L. M. Kundu	3 years
Dr. A. S. Anchalkumar	Photo-responsive functional surfaces for bio-nano applications	RSC-DST		None	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. Debasis Manna	Mechanistic Insights into the Phosphatidyl Inositol (IP) Binding Properties of Human Protein Lamellipodin and its Pleckstrin Homology (PH) Domain	BRNS	17.00	Prof. B. Mandal	3 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
A. Tarai, J. B. Baruah	Study on fluoride detection and assembling of hydroxyaromatic aldoximes caused by tetrabutylammonium fluoride	CrystEngComm	17 (11)	2301-2309	2015
P. Khakhlary, C. Anson, A. Mondal, A. Powell, J. B. Baruah	Structural and magnetic properties of oxy-quinolate clusters of cobalt (II) and manganese (II) and serendipitous intake of carbonate during synthesis	Dalton Transactions	44 (7)	2964-2969	2015
J. Nath, A. Kirillov, J. B. Baruah	Synthesis, structure and topological studies of solvates and salts of a chiral zwitterionic host N-(2-imidazol-5-yl-1-carboxyethyl)-1,8-naphthalimide	Crystal Growth and Des.	15 (2)	737-751	2015
Khakhlary, P., Baruah, J.B.	Polymorphs and salts of 4-nitro-N-(quinolin-8-yl)benzamide	Journal of Molecular Structure	1078	188-196	2014
P. Khakhlary, J.B. Baruah,	Studies on cluster, salt and molecular complex of zinc-quinolate	Journal of Chemical Sciences	127	215-223	2015
P. Khakhlary, J. B. Baruah	Anion-π interactions in layered structures of salts of 5-(hydroxyimino)quinolin-8-one and related salts	Journal of Chemical Sciences	127	95-102	2015
P. Khakhlary, J. B. Baruah	Selective interactions of 5-(hydroxyimino)quinolin-8-one with tetrabutylammonium fluoride and zinc(II) ions	RSC Advances	4	64643-64648	2014
J. Nath, A. Kirillov, J. B. Baruah	Unusual solvent-mediated hydrolysis of dicarboxylate monoester ligands in copper(II) complexes toward simultaneous crystallization of new dicarboxylate derivatives	RSC Advances	4	47876-47886	2014
J. Nath, A. Mondal, A. Powell, J. B. Baruah	Structures, magnetic properties and photoluminescence of dicarboxylate coordination polymers of Mn, Co, Ni, Cu having N-(4-pyridylmethyl)-1,8-naphthalimide	Crystal Growth and Des.	14 (9)	4735-4748	2014
N. Phukan, J. B. Baruah	3-Hydroxynaphthalene-2-carboxylic acid supported grid-like structure of cadmium chloride coordination polymer with 1,3-bis(4-pyridyl)propane.	Journal of Molecular Structure	1076	614-619	2014
B. R. Jali and J. B. Baruah	Fluorescence properties, aluminium ion selective emission changes and self-assemblies of positional isomers of 4-(hydroxyphenylthio)naphthalene-1,2-diones.	Dyes and Pigments	110	56-66	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
B. Nath and J. B. Baruah,	Cadmium(II)dicarboxylate complexes of 2,2'-[2-fluoro-phenylmethyl-idenebis(3,5-methyl-2-phenyleneoxy)]diacetic acid formed in different solvents	Polyhedron	79	291-299	2014
J. K. Nath and J. B. Baruah,	Twisted conformations in complexes of N-(3-imidazol-1-yl-propyl)-1,8-naphthalimide and fluorescence properties.	Inorg. Chem. Frontiers	1	342-351	2014
N. Phukan and J. B. Baruah,	Polymorphs of 1-(5-methylthiazol-2-yl)-3-phenylthiourea and various anion assisted assemblies of two positional isomers	Crystal Growth and Des.	14 (5)	2640-2653	2014
Nath, J. K., Kirillov, A. M., Baruah, J. B.	Unusual solvent-mediated hydrolysis of dicarboxylate monoester ligands in copper(ii) complexes toward simultaneous crystallization of new dicarboxylate derivatives	RSC Advances	4 (88)	47876-47886	2014
Nath, J. K., Baruah, J. B.	Solvatoemissive dual fluorescence of N-(pyridylmethyl)-3-nitro-1,8-naphthalimides	Journal of Fluorescence	24 (3)	649-655	2014
Jali, B. R., Baruah, J. B.	Fluorescence properties, aluminium ion selective emission changes and self-assemblies of positional isomers of 4-(hydroxyphenylthio)naphthalene-1,2-diones	Dyes and Pigments	110	56-66	2014
Sabyasachi Pramanik, Satyapriya Bhandari, Shilaj Roy and Arun Chattopadhyay	Synchronous Tricolor Emission-Based White Light from Quantum Dot Complex	The Journal of Physical Chemistry Letters	6 (7)	1270-1274	2015
Rama Ghosh, Upashi Goswami, Siddhartha Sankar Ghosh, Anumita Paul and Arun Chattopadhyay.	Synergistic Anticancer Activity of Fluorescent Copper Nanoclusters and Cisplatin Delivered through a Hydrogel Nanocarrier.	ACS Applied Materials and Interfaces	7 (1)	209-222	2015
Satyapriya Bhandari, Shilaj Roy, Sabyasachi Pramanik and Arun Chattopadhyay.	Double Channel Emission from a Redox Active Single Component Quantum Dot Complex.	Langmuir	31 (1)	551-561	2015
Md Palashuddin Sk, Sunil Kumar Sailapu and Arun Chattopadhyay	Luminescent Carbon Dots for Logic Operations in Two Phases	ChemPhysChem	16 (4)	723-727	2015
Satyapriya Bhandari, Shilaj Roy, Sabyasachi Pramanik and Arun Chattopadhyay.	Surface Complexation Reaction for Phase Transfer of Hydrophobic Quantum Dot from Nonpolar to Polar Medium.	Langmuir	30 (35)	10760-10765	2014
Subhamoy Banerjee, Amaresh Kumar Sahoo, Arun Chattopadhyay and Siddhartha Sankar Ghosh.	Chemosensitization of IkbA overexpressing glioblastoma towards anti-cancer agents.	RSC Advances	4 (74)	39257-39267	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Subhamoy Banerjee, Amaresh Kumar Sahoo, Arun Chattopadhyay and Siddhartha sankar Ghosh.	Recombinant IκBα-loaded curcumin nanoparticles for improved cancer therapeutics.	Nanotechnology	25 (34)	345102	2014
Nidhi Chaubey, Amaresh Kumar Sahoo, Arun Chattopadhyay and Siddhartha Sankar Ghosh	Silver nanoparticle loaded PLGA composite nanoparticles for improving therapeutic efficacy of recombinant IFN γ by targeting the cell surface.	Biomaterials Science	2	1080-1089	2014
Md Palashuddin Sk and Arun Chattopadhyay.	Induction coil heater prepared highly fluorescent carbon dots as invisible ink and explosive sensor	RSC Adv.	4 (60)	31994-31999	2014
Satyapriya Bhandari, Shilaj Roy and Arun Chattopadhyay.	Enhanced photoluminescence and thermal stability of zinc quinolate following complexation on the surface of quantum dots.	RSC Adv.	4 (46)	24217-24221	2014
Sunil Kumar Sailapu, Amaresh Kumar Sahoo, Shiddhartha Sankar Ghosh, and Arun Chattopadhyay..	Hierarchical Logic Structures Based on Responsive Fluorescent Gold Nanoclusters.	Small	10 (20)	4067-4071	2014
Rama Ghosh, Amaresh Kumar Sahoo, Shiddhartha Sankar Ghosh, Anumita Paul and Arun Chattopadhyay.	Blue-emitting copper nanoclusters synthesized in the presence of lysozyme as candidates for cell labeling.	ACS Applied Materials and Interfaces	6 (6)	3822-3828	2014
Shilpa Sharma, S Chockalingam, Pallab Sanpui, Arun Chattopadhyay and Siddhartha Sankar Ghosh.	Silver nanoparticles impregnated alginate-chitosan-blended nanocarrier induces apoptosis in human glioblastoma cells.	Advanced Healthcare Materials	3 (1)	106-114	2014
Khandelia, R., Jaiswal, A., Ghosh, S.S., Chattopadhyay, A.	Polymer coated gold nanoparticle-protein agglomerates as nanocarriers for hydrophobic drug delivery	Journal of Materials Chemistry B	20 (38)	6472-6477	2014
Behera, A.; Ali, W.; Guin, S.; Khatun, N.; Mohanta, P. R.; Patel, B. K.	Benzyl bromides as aroyl surrogates in substrate directed Pd catalysed o-arylation	RSC Adv.	5	33334	2015
Majji, G.; Rajamanickam, S.; Khatun, N.; Santra, S. K.; Patel, B. K.	Generation of bis-acyl ketals from esters and benzyl amines under oxidative conditions	J. Org. Chem	80	3440	2015
Ali, W., Rout, S.K., Guin, S., Modi, A., Banerjee, A., Patel, B.K.	Copper-catalyzed cross dehydrogenative coupling of N,N-disubstituted formamides and phenols: A direct access to carbamates	Advanced Synthesis and Catalysis	357	515-522	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Santra, S. K.; Banerjee, A.; Khatun, N.; Samanta, A.; Patel, B. K.	Palladium catalyzed ortho-halogenation of 2-arylbenzothiazole and 2,3-diarylquinoxaline	RSC Adv.	5	11960	2015
Khatun, N.; Santra, S. K.; Banerjee, A.; Patel, B. K.	Nano CuO Catalyzed Cross Dehydrogenative Coupling (CDC) of Aldehydes to Anhydrides	Eur. J. Org. Chem.	6	1309-1313	2015
Khatun, N.; Banerjee, A.; Santra, S. K.; Behera, A.; Patel, B. K.	Pd(II)-catalysed o-arylation of directing arenes using terminal aryl alkenes and alkynes	RSC Adv.	4 (97)	54532-54538	2014
Banerjee, A.; Santra, S. K.; Mishra, A.; Khatun, N.; Patel, B. K.	Copper(I) Promoted Cycloalkylation-Peroxyoxidation of Unactivated Alkenes via sp ³ C-H Functionalisation:	Org. Biomol. Chem.	13 (5)	1307-1312	2015
Santra, S. K. Banerjee, A.; Khatun, N.; Patel, B. K., .	Ceric Ammonium Nitrate (CAN) Promoted Pd(II)-Catalyzed Substrate Directed o-Benzoylation and Decarboxylative o-Aroylation	Eur. J. Org. Chem.	2	350-356	2015
Majji, G.; Guin, S.; Rout, S. K.; Behera, A.; Patel, B. K.	Cyclic ethers to esters and monoesters to bisesters with unconventional coupling partners via sp ³ C-H activation under metal free conditions.	Chem Commun.	50 (81)	12193	2014
Gogoi, A.; Modi, A.; Guin, S.; Rout, S. K.; Das, D.; Patel, B. K.,	A metal free domino synthesis of 3-aryloindoles via two sp ³ C-H activation.	Chem Commun.	50 (72)	10445-10447	2014
Ali, W.; Guin, S.; Rout, S. K.; Gogoi, A.; Patel, B. K.	Thioesterification of alkylbenzenes with thiols via copper-catalyzed cross dehydrogenative coupling without directing group.	Adv. Synth. Catal	356	3099-4084	2014
Sahoo, S. K.; Jena, H. S.; Majji, G.; Patel, B. K.	Formation of imidazolidinebenzothiazole-Cu(II) complexes via a copper mediated room temperature C-H activation of imidazolidine-carbo-thiamides.	Synthesis	46 (14)	1886-1900	2014
Guin, S.; Rout, S. K.; Gogoi, A.; Ali, W.; Patel, B. K.	A palladium II-catalysed synthesis of alpha-ketoamides via Chemoselective Aroyl Addition to cyanamides.	Adv. Synth. Catal.	356	2559-2565	2014
Rout, S. K.; Guin, S.; Ali, W.; Gogoi, A.; Patel, B. K.	Copper-catalyzed esterification of alkylbenzenes with cyclic ethers and cycloalkanes via C(sp ³)-H activation following cross-dehydrogenative coupling.	Org. Lett.	16 (11)	3086-3089	2014
Gogoi, A., Guin, S., Rout, S.K., Majji, G., Patel, B.K.	A Cu-catalysed synthesis of substituted 3-methyleneisindolin-1-one	RSC Advances	4 (104)	59902	2014
Behera, A., Rout, S.K., Guin, S., Patel, B.K.	Benzylamine as an arylcarboxy surrogate: A copper catalysed o-benzoylation of 2-phenylpyridines using benzyl amines	RSC Advances	4 (98)	55115	2014
Islam, K., Das, D.K., Khan, A.T.	Hydrated ferric sulfate catalyzed synthesis of 5,6-unsubstituted 1,4-dihydropyridines using three-component reaction	Tetrahedron Letters	55 (41)	5613-5617	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
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Das, D.K., Sarkar, S., Khan, M., Belal, M., Khan, A.T.	A mild and efficient method for large scale synthesis of 3-aminocoumarins and its further application for the preparation of 4-bromo-3-aminocoumarins	Tetrahedron Letters	35	4869-4874	2014
Sarkar, S., Das, D.K., Khan, A.T.	Synthesis of fully-substituted pyridines and dihydropyridines in a highly chemoselective manner utilizing a multicomponent reaction (MCR) strategy	RSC Advances	4 (96)	53572-53760	2014
D. Mahesh, P. Sadhu and T. Punniyamurthy,	Copper(I)-Catalyzed Regioselective Amination of N-Aryl Imines Using TMSN ₃ and TBHP: A Route to Substituted Benzimidazoles	J. Org. Chem.	80 (3)	1644-1650	2015
G. Bharathiraja, M.Sengoden M. Kannan, and T. Punniyamurthy	Expedient Synthesis of Tetrasubstituted Pyrroles via Copper-Catalyzed Cascade Inter-/Intramolecular Cyclization of 1,3-Enynes Carry a Nitro Group with Amines	Org. Biomol. Chem.	13 (9)	2786-2792	2015
M. Sengoden, M. Vijay, E. Balakumar, and T. Punniyamurthy,	Efficient Pyrrolidine Catalyzed Cycloaddition of Aziridines with Isothiocyanates, Isoselenocyanates and Carbon Disulfide "On Water"	RSC Adv.	4 (97)	54149-54157	2014
P. Sadhu, S. K. Alla, and T. Punniyamurthy,	Room Temperature Cu(II)-Catalyzed Chemo- and Regioselective Ortho-Nitration of Arenes via C-H Functionalization	J. Org. Chem.	79 (18)	8541-8549	2014
M. Kannan and T. Punniyamurthy	Effect of Ligand N,N-Substituents on the Reactivity of Chiral Copper(II) Salalen, Salan, and Salalan Complexes Toward Asymmetric Nitroaldol Reactions	Tetrahedron: Asymmetry	25 (19)	1331-1339	2014
S. K. Alla, P. Sadhu, and T. Punniyamurthy,	Organocatalytic Syntheses of Benzoxazoles and Benzothiazoles Using Aryl Iodide and Oxone via C-H Functionalization and C-O/S Bonds Formation.	J. Org. Chem.	79 (16)	7502-7511	2014
D. Sar, R. Paul, M. Sengoden, and T. Punniyamurthy	Synthesis of Substituted Pyrazoles from Vinylhydrozones via Bromoamination and Hydroamination with 2,2,6,6-Tetramethylpiperidine-1-oxyl and N-Bromosuccinimide	Asian J. Org. Chem.	3 (5)	638-643	2014
C. M. Rajesh & Manabendra Ray	Characterization of a meso-chiral isomer of a hexanuclear Cu(II) cage from racemization of L-alanine Schiff base	Dalton Transaction	43 (34)	12952-12960	2014
Chandani Rani Das, Subash K. Sahoo, and Manabendra Ray	Chiral recognition and partial resolution of 1-Phenylethylamine through non-covalent interactions using binuclear Ni(II) complex as host	Crystal Growth & Design,	14 (8)	3958-3966	2014
Borah, M., Gogoi, P., Indukuri, K., Saikia, A.K.	Diastereoselective synthesis of substituted tetrahydrothiophenes and -thiopyrans via thia-prins cyclization reaction	Journal of Organic Chemistry	80 (5)	2641-2648	2014

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Anil K. Saikia; Ramanjaneyulu Unava; Kiran Indukuri; Sujit Sarkar	Regioselective One-pot, Three-component Synthesis of Substituted 2H-Indazoles from Nitroarylaldehyde, Alkyne and Amine Catalyzed by CuBr/Zn(Otf) ₂ System	RSC Adv.	4 (98)	55296-55299	2014
Prakash Saudagar; Shyam Lal Mudavath; Pipas Saha; Anil K. Saikia; Shyam Sundar; Vikash Kumar Dubey	In Vivo Assessment of Antileishmanial Property of 4-(4,4,8-Trimethyl-7-oxo-3-oxabicyclo[3.3.1]non-2-yl)-benzoic Acid Methyl Ester, an Oxabicyclo[3.3.1]nonanones	Letters in Drug Design & Discovery	11(7)	937-939	2014
Paramartha Gogoi; Vijay Kumar Das; Anil K. Saikia	Diastereoselective Synthesis of Substituted Tetrahydrofurans via Prins Cyclization of Enol Ethers.	J. Org. Chem.	79 (18)	8592-8598	2014
Anil K. Saikia; Kiran Indukuri; Jagadish Das	Stereoselective synthesis of O-tosyl azabicyclic derivatives via aza Prins reaction of endocyclic N-acyliminium ions: application to the total synthesis of (+/-)-epi-indolizidine 167B and 209D	Org. Biomol. Chem	12 (36)	7026-7035	2014
Priya Ghosh; Pipas Saha; Somasekhar Bondalapati; Kiran Indukuri; Anil K. Saikia	Lewis Acid Mediated Intramolecular C-C bond formation of Alkyne-Epoxyde Leading to Six Membered Nitrogen and Oxygen Heterocycles	J. Org. Chem.	79 (9)	4119-4124	2014
C. Kar. S. Samanta, S. Goswami, A. Ramesh and Gopal Das	A Single Probe to Sense Al(III) Colorimetrically and Cd(II) by Turn-On Fluorescence in Physiological Conditions and Live Cells: Corroborated by X-ray crystallographic and Theoretical studies	Dalton Trans.	44	4123-4132	2015
B. Saha, J. Saikia and Gopal Das	Correlating enzyme density, conformation and activity on nanoparticle surfaces in highly functional bio-nanocomposites	Analyst	140	532-542	2015
Gogoi and Gopal Das	NIR Sensing of Zn(II) and Subsequent Dihydrogen Phosphate Detection by a Benzothiazole Functionalized Ninhydrin Based Receptor	RSC Adv.	4	55689-55695	2014
S. Goswami, D. Thiyagarajan, Gopal Das and A. Ramesh	A Biocompatible Nanocarrier Fortified with a Dipyridinium-based Amphiphile for Eradication of Biofilm	ACS Appl. Mater. Inter.	6	16384-16394	2014
R. Chutia and Gopal Das	Hydrogen and Halogen bonding in a concert act of anion recognition: F ⁻ induced atmospheric CO ₂ uptake by an iodophenyl functionalized simple urea receptor	Dalton Trans.	43	15628-15637	2014
S. Samanta, S. Goswami, Md. N. Hoque, A. Ramesh and Gopal Das	An Aggregation-Induced Emission (AIE) Active Probe Renders Al(III) Sensing and Tracking of Subsequent Interaction with DNA	Chem. Commun.	50	11833-11836	2014
B. Dattta, C. Kar and Gopal Das	A novel C _{3v} -symmetric completely water soluble turn-on chemo sensor for Cd ²⁺ and the resultant complex for iodide anion in aqueous medium	Sensor. Actuators, B. Chem	204	474-479	2014

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S. P. Uday, D. Thiyagarajan, S. Goswami, M. D. Adhikari, Gopal Das and A. Ramesh	Amphiphile-mediated Enhanced Antibiotic Efficacy and Development of a Payload Nanocarrier for Effective Killing of Pathogenic Bacteria	J. Mater. Chem B	2	5818-5827	2014
Gogoi, S. Samanta, Gopal Das	A Benzothiazole Containing CHEF based Fluorescence Turn-On Sensor for Zn ²⁺ and Cd ²⁺ and Subsequent Sensing of H ₂ PO ₄ ⁻ and P ₄ O ₇ ⁴⁻ in Physiological pH	Sensor. Actuators, B.Chem	202	788-794	2014
D. Thiyagarajan, S. Goswami, C. Kar, Gopal Das, A. Ramesh	Prospective antibacterial for drug-resistant pathogens: A dual warhead amphiphile designed to track interactions and kill pathogenic bacteria by membrane damage and cellular DNA cleavage	Chem. Commun.	50	7434-7436	2014
B. K. Datta, D. Thiyagarajan, S. Samanta, A. Ramesh, Gopal Das	A novel chemosensor with visible light excitability for sensing Zn(II) in physiological medium and in HeLa cells	Org. Biomol. Chem.	12	4975-4982	2014
J. Saikia, Gopal Das, J. Env.	Framboidal vaterite for selective adsorption of anionic dyes	Chem. Engg.	2	1165-1173	2014
Md. N. Hoque, Gopal Das	Cationic Tripodal Receptor Assisted Formation of Anion and Anion-Water Clusters: Structural Interpretation of Dihydrogen Phosphate Cluster and Sulfate-Water Tetramer [(SO ₄) ₂ -(H ₂ O) ₂] ₄ ⁻	Cryst. Growth Des.	14	2962-2971	2014
Basu, R. Chutia and Gopal Das	Dual modes of binding on hexafluorosilicate anion by a C _{3v} symmetric flexible tripodal amide ligand in solid state	CrystEng-Comm.	16	4886-4891	2014
C. Kar, S. Samanta, S. Mukherjee, B. K. Datta, Aiyagari Ramesh and Gopal Das	A simple and efficient Fluorophoric probe for dual sensing of Fe ³⁺ and F ⁻ : Application to bioimaging in native cellular iron pool and live cell	New J. Chem	38	2660-2669	2014
Basu, Gopal Das	A C _{3v} Symmetric Tripodal Urea Receptor for Anions and Ion-pairs: Formation of Dimeric Capsular Assemblies of the Receptor during Anion and Ion-pair Coordination	J. Org. Chem.	79	2647-2656	2014
Md. N. Hoque, Gopal Das	Hydrated anion glued capsular and non-capsular assembly of a tripodal host: solid state recognition of bromide-water [Br ⁻ -(H ₂ O) ₆] ₅ ⁻ and iodide-water [I ⁻ -(H ₂ O) ₄] ₂ ⁻ clusters in cationic tripodal receptor	CrystEng-Comm.	16	4447-4458	2014
Hoque, M.N., Basu, A., Das, G.	Structural insight into the anion-water cluster: Stabilised by alcohol and carboxylic acid containing tripodal ligand	Supramolecular Chemistry	26	392-402	2014
Hoque, M.N., Basu, A., Das, G.	Fluorescence turn on sensor for sulfate ion in aqueous medium using tripodal-Cu ²⁺ ensemble	Journal of Fluorescence	24 (2)	411-416	2014

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Goutam, P. J.; Iyer, P. K.	Selective detection of resorcinol using bis(benzothiazol-2-yl)pyridine based ditopic receptor.	Sensors and Actuators B	211	263-267	2015
Subbarao, N.V.V.; Gedda, M.; Iyer, P. K.; Goswami, D. K.	Enhanced environmental stability induced by effective polarization of a polar dielectric layer in a trilayer dielectric system of organic field-effect transistors: A quantitative study.	ACS Appl. Mater. Interfaces	7	1915-1924	2015
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Muthuraj, B.; Layek, S.; Trivedi, V.; Iyer, P. K.	Multiple Function Fluorescein Probe Performs Metal Chelation, Disaggregation and Modulation of Aggregated A β and A β -Cu Complex.	ACS Chemical Neuroscience	6		2015
Dey, A.; Kalita, A.; Iyer, P. K.	High performance n-channel organic thin film transistor based on naphthalene diimide.	ACS Appl. Mater. Interfaces	6	12295-12301	2014
Vasimalla, S.; Senanayak, S.; Sharma, M.; Narayan, K. S.; Iyer, P. K.	Improved Performance of Solution-Processed n-Type Organic Field-Effect Transistors by Regulating the Intermolecular Interactions and Crystalline Domains on Macroscopic Scale.	Chem. Mater.	26	4030-4037	2014
Chetia, B.; Iyer, P. K.	Selective fluoride anion sensing by simple benzimidazolyl based ligand.	Sensors and Actuators B	201	191-195	2014
Muthuraj, B.; Deshmukh, R.; Trivedi, V.; Iyer, P. K.	Highly Selective Probe Detects Cu ²⁺ and Endogenous NO Gas in Living Cell.	ACS Appl. Mater. Interfaces	6	6562-6569.	2014
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Dwivedi, A. K.; Iyer, P. K.	Therapeutic Strategies to Prevent Alzheimer Disease Pathogenesis Using Fluorescent Conjugated Polyelectrolyte.	Macromolecular Bioscience	14	508-514	2014
Subbarao, N.V.V., Gedda, M., Vasimalla, S., Iyer, P.K., Goswami, D.K.	Effect of thickness of bilayer dielectric on 1,7-dibromo-N,N ² -dioctadecyl-3,4,9,10-perylenetetracarboxylic diimide based organic field-effect transistors	Physica Status Solidi (A) Applications and Materials Science	211(10)	2403-2411	2014
Raju, T.B., Gopikrishna, P., Iyer, P.K.	Highly efficient and facile alkylation of 4H-cyclopenta-[2,1-b:3,4-b ²]dithiophene in water	RSC Advances	4 (71)	37738-37745	2014

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Dash, N., Malakar, A., Kumar, M., Mandal, B.B., Krishnamoorthy, G.	Metal ion dependent "ON" intramolecular charge transfer (ICT) and "OFF" normal switching of the fluorescence: Sensing of Zn ²⁺ by ICT emission in living cells Dedicated to Prof. S.K. Dogra on his 72nd birthday.	Sensors and Actuators, B: Chemical	202	1154-1163	2014
Shankar, B., Sahu, S., Deibel, N., Schweinfurth, D., Sarkar, B., Elumalai, P., Gupta, D., Hussain, F., Krishnamoorthy, G., Sathiyendiran, M.	Luminescent dirhenium(I)-double-hetero-stranded helicate and mesocate	Inorganic Chemistry	53 (2)	922-930	2014
Chipem, F.A.S., Behera, S.K., Krishnamoorthy, G.	Excited state proton transfer of 2-(2- OH -hydroxyphenyl)benzimidazole and its nitrogen substituted analogues in bovine serum albumin	Photochemical and Photobiological Sciences	13 (9)	1297-1304	2014
Chipem, F.A.S., Behera, S.K., Krishnamoorthy, G.	Ratiometric fluorescence sensing ability of 2-(2- OH -hydroxyphenyl) benzimidazole and its nitrogen substituted analogues towards metal ions	Sensors and Actuators, B: Chemical	191	727-733	2014
Kalita, A., Kumar, V., Mondal, B.	Nitric oxide reactivity of copper(II) complexes of bidentate amine ligands	Inorganica Chimica Acta	430	55-60	2015
Kalita, A., Ghosh, S., Mondal, B.	Nitric oxide reactivity of a manganese(II) complex leading to nitrosation of the ligand	Inorganica Chimica Acta	429	183-188	2015
Rout, K.C., Mondal, B.	Aromatic C-nitrosation by a copper(ii)-nitrosyl complex	Dalton Transactions	44 (4)	1829-1835	2015
Hazra, S., Mondal, B., De, R.N., Roy, B.	Pd-catalyzed dehydrogenative C-H activation of iminyl hydrogen with the indole C3-H and C2-H bond: An elegant synthesis of indeno[1,2-b]indoles and indolo[1,2-a]indoles	RSC Advances	5 (29)	22480-22489	2015
Kalita, A., Kumar, V., Mondal, B.	C-Nitrosation of a β^2 -diketiminato ligand in copper(ii) complex	RSC Advances	5 (1)	543-549	2015
Mondal, B., Hazra, S., Naktode, K., Panda, T.K., Roy, B.	PhI(Oac) ₂ and BF ₃ -OEt ₂ mediated heterocyclization: Metal-free synthesis of pyrimidine-annulated oxazolines	Tetrahedron Letters	55 (41)	5625-5628	2014
Mondal, B., Hazra, S., Roy, B.	Pd(II)-catalyzed regioselective direct arylation of uracil via oxidative Heck reaction using arylboronic acids	Tetrahedron Letters	55 (5)	1077-1081	2014
Mondal, B., Sen, B., Zangrando, E., Chattopadhyay, P.	A dysprosium-based metal-organic framework: Synthesis, characterization, crystal structure and interaction with calf thymus-DNA and bovine serum albumin	Journal of Chemical Sciences	126 (4)	1115-1124	2014
Hazra, S., Mondal, B., Rahaman, H., Roy, B.	Copper- and palladium-cocatalyzed intramolecular C-H functionalization/C-N bond formation: A route to the synthesis of indoloisoquinoline derivatives	European Journal of Organic Chemistry	13	2806-2812	2014

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Debasish Koner, Lizandra Barrios, Tomás González-Lezana, and Aditya N. Panda	Wave packet and statistical quantum calculations for the He + NeH+ HeH+ + Ne reaction on the ground electronic state	J. Chem. Phys.	141	114302	2014
Harikrishna Sahu and Aditya N. Panda	Computational investigation of charge injection and transport properties of a series of thiophene<96>pyrrole based oligo-azomethines	Phys. Chem. Chem. Phys.	16 (18)	8563-8574	2014
Shubhadip Das and Sandip Paul	"Exploring Molecular Insights of Aggregation of Hydrotrope Sodium Cumene Sulfonate in Aqueous Solution: A Molecular Dynamics Simulation Study"	J. Phys. Chem. B	119 (7)	3142-3154	2015
Subrata Paul and Sandip Paul	"Molecular Insights into the Role of Aqueous Trehalose Solution on Temperature Induced Protein Denaturation"	J. Phys. Chem. B	119 (4)	1598-1610	2015
Subrata Paul and Sandip Paul	"Effects of the temperature and trehalose concentration on the hydrophobic interactions of a small nonpolar neopentane solute: a molecular dynamics simulation study"	RSC Advances	4 (65)	34267-34280	2014
Dipankar Barpuzary, Avishek Banik, Aditya Panda, Mohammad Qureshi	Mimicking Heteroleptic dyes using homoleptic ruthenium dyes in dye sensitized solar cells	J. Phys. Chem. C.	119 (8)	3892-3902	2015
Qureshi, M., Chetia, T.R., Ansari, M.S., Soni, S.S.	Enhanced photovoltaic performance of meso-porous SnO ₂ based solar cells utilizing 2D MgO nanosheets sensitized by a metal-free carbazole derivative	Journal of Materials Chemistry A	3 (8)	4291-4300	2015
Dipankar Barpuzary, Anindya Sundar Patra, Jayraj V. Vaghasiya, Bharat G. Solanki, Saurabh S. Soni, Mohammad Qureshi	Highly Efficient One-Dimensional ZnO Nanowire Based Dye-Sensitized Solar Cell using a Metal-Free, D- π -A Type, Carbazole Derivative with more than 5% Power Conversion	ACS Appl. Mater. Interfaces	6 (15)	12629	2014
Anindya Sundar Patra, Natarajan Vinod Kumar, Dipankar Barpuzary, Mahuya De, Mohammad Qureshi	Strontium doped LaMnO ₃ for organo and robust photocatalytic water oxidation coupled with organo oxide	Materials Letters	131	125-127	2014
Tridip Ranjan Chetia, Dipankar Barpuzary, Mohammad Qureshi	Enhanced photovoltaic performance utilizing effective charge transfers and light scattering effects by the combination of mesoporous, hollow 3D-ZnO along with 1D-ZnO in CdS quantum dot sensitized solar cells	Phys. Chem. Chem. Phys.,	16 (20)	9625-9633	2014

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Bag, Subhendu Sekhar Pradhan, Manoj K.; Das, Suman K.; Jana, Subhashis; Bag, Raghunath	Wavelength Shifting Oligonucleotide Probe for the Detection of Adenosine of a Target DNA with Enhanced Fluorescence Signal	Bioorganic & Medicinal Chemistry Letters	24 (19)	4678-4681	2014
Bag, Subhendu Sekhar; Talukdar, Sangita; Kundu, Rajen; Saito, Isao; Jana, Subhashis	Dual Door Entry to Exciplex Emission in A Chimeric DNA Duplex Containing Non-nucleoside-Nucleoside Pair	Chemical Communications	50 (7)	829-832	2014
Bag, Subhendu Sekhar; Jana, Subhashis; Yashmeen Afsana; Senthilkumar, K; Bag, Raghunath	Triazolyl Donor/Acceptor Chromophore Decorated Unnatural Amino Acids and Peptides: FRET Event in β -Turn Conformation	Chemical Communications	50 (4)	433-435	2014
Bag, Subhendu Sekhar; Talukdar, Sangita; Das, Suman Kalyan	Design and Synthesis of Triazolyl-Donor/Acceptor Unnatural Nucleosides and Oligonucleotide Probes Containing Triazolyl-Phenanthrene Nucleoside	Current Protocols in Nucleic Acids Chemistry	58		2014
Kirtikumar B. Jadhav, Roman J. Lichtenecker, Anke Bullach, Bhubaneswar Mandal and Hans-Dieter Arndt	Dynamic combinatorial enrichment of poly-conformational D-/L-peptide dimers	Chemistry – A European Journal	21 (15)	5898-5908	2015
Ashim Paul, Krishna Chaitanya Nadimpally, Tanmay Mondal, Kishore Thalluri, and Bhubaneswar Mandal	Inhibition of Alzheimer's Amyloid- β Peptide Aggregation and its Disruption by a Conformationally Restricted α/β Hybrid Peptide	Chemical Communications	51 (12)	2245 – 2248	2015
Kishore Thalluri, Ashim Paul, Srinivasa Rao Manne, Dharm Dev, and Bhubaneswar Mandal	Microwave Assisted Chemoselective Organocatalytic Peptide Alcohol Synthesis from C-terminal Amide	RSC Advances	4(88)	47841 – 47847	2014
Dharm Dev, Nani Babu Palakurthy, Kishore Thalluri, Jyoti Chandra, and Bhubaneswar Mandal	Ethyl 2-cyano-2-(2-nitrobenzenesulfonyloxyimino)acetate (o-NosylOXY): A Recyclable Coupling Reagent for Racemization free Synthesis of Peptide, Amide, Hydroxamate and Ester	The Journal of Organic Chemistry	79 (12)	5420–5431	2014

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Krishna Chaitanya Nadimpally, Ashim Paul and Bhubaneswar Mandal	Reversal of aggregation using β breaker dipeptide containing peptides: Application to A β (1-40) self assembly and its inhibition	ACS Chemical Neuroscience	5 (5)	400–408	2014
Barman, P.; Vardhaman, A. K.; Martin, B.; Wörner, S. J.; Sastri, C. V.; Comba, P	Influence of Ligand Architecture on Oxidation Reactions by High-Valent Non-heme Manganese-Oxo Complexes Using Water as a Source of Oxygen.	Angew Chem. Int. Ed	54 (7)	2095-2099	2015
Faponle, A.; Quesne, M.; Sastri, C. V.; Banse, F.; de Visser, S. P	Differences and Comparisons of the Properties and Reactivities of Iron(III)-Hydroperoxo Complexes with Saturated Coordination Sphere.	Chem. Eur. J.	21(3)	1221-1236	2015
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R. Bhaskaran and M. Sarma	Low energy electron induced cytosine base release in 2/-deoxycytidine-3/-monophosphate via glycosidic bond cleavage:A time-dependent wavepacket study	Journal of Chemical Physics.	141(10)	104309	2014
Mamidi, N.+; Panda, S.+; Borah, R.; Manna, D.,	Synthesis and Protein Kinase C (PKC)-C1 Domain Binding Properties of Diacyltetrol Based Anionic Lipids	Molecular Biosystems	10 (11)	3002-3013	2014
Talukdar, D.+; Panda, S.+; Borah, R.+; Manna, D.	Membrane Interaction and Protein Kinase C-C1 Domain Binding Properties of 4-hydroxy-3-(hydroxymethyl) Phenyl ester Analogues	Journal of Physical Chemistry B	118(27)	7541-7553	2014
Borah, R.; Talukdar, D.; Gorai, S.; Bain, D.; Manna, D.	Bilayer Interaction and Protein Kinase C-C1 Domain binding studies of Kojic Acid Esters.	RSC Advances	4(49)	25520-25531	2014
Mamidi, N.+; Gorai, S.+; Ravi, B.; Manna, D	Physicochemical Characterization of Diacyltetrol-Based Lipids consisting of both Diacylglycerol and Phospholipid headgroups.	RSC Advances	4(42)	21971-21978	2014
Paul, S.; Panda, S.; Manna D	Mild method for the synthesis of 1H-indazoles through oxime-phosphonium ion intermediate.	Tetrahedron Letters	55(15)	2480-2483	2014
Richa Rakshit, Samir Ghorai, Amrit Sarmah, Archana Tiwari, Ram Kinkar Roy and Chandan Mukherjee..	Inter-ligand azo (N=N) unit formation and stabilization of a Co(II)-diradical complex via metal-to-ligand $d\pi-p\pi$ back donation: synthesis, characterization, and theoretical study	Dalton Tran.	44(8)	3724-3727	2015

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Samir Ghorai, and Chandan Mukherjee	Cu(II)-Mediated Transformation of a Tridentate Non-Innocent Ligand to a Tetradentate Salen-Type Innocent Ligand	Chem. Asian J.	9(12)	3518-3524	2014
Samir Ghorai, and Chandan Mukherjee.	Synthesis and Characterization of A Tetradical-Containing Octanuclear Vanadium Cluster Formed via Ligand C-N bond Breaking and C-O bond Making	RSC Adv.	4(47)	24698-24703	2014
Richa Rakshit, Samir Ghorai, Soumava Biswas, and Chandan Mukherjee	Effect of Ligand Substituent Coordination on the Geometry and the Electronic Structure of Cu(II)-Diradical Complexes	Inorg. Chem.	53(7)	3333-3337	2014
Samir Ghorai, and Chandan Mukherjee	Effect of ligand substituent on the reactivity of Ni(II) complexes towards oxygen	Dalton. Trans.	43	394-397	2014
Chandan Mukherjee, Veronika Hoeke, Anja Stammler, Hartmut Bogge, Jurgen Schnack, and Thorsten Glaser	Switching from Antiferromagnetic to Ferromagnetic Coupling in Heptanuclear [Mt ₆ Mc] n+ Complexes by Going from an Achiral to a Chiral Triplesalen Ligand	Dalton. Trans.	43	9690-9703	2014
Radhakrishnan, K., Sharma, N., Kundu, L.M.	Direct synthesis of 5- and 6-substituted 2-aminopyrimidines as potential non-natural nucleobase analogues	RSC Advances	4(29)	15087-15090	2014
Buddhadeb Mondal, Subhas Chandra Pan	Primary amino acid catalyzed asymmetric intramolecular Mannich Reaction for the Synthesis of 2-Aryl-2,3-Dihydro-4-Quinolines	Organic & Biomolecular Chemistry	12	9789	2014
Keshab Mondal, Subhas Chandra Pan	Copper(I) Catalyzed (Z)-(β-Tosyloxy) Alkenyl Iodide Synthesis from (E)-[β-(Tosyloxy)-Alkenyl](Aryl) Iodonium Tosylates: Diversity Oriented Synthesis of Trisubstituted Alkenes	European Journal of Organic Chemistry	10	2129	2015
N. P. Das, D. Mahanta and S. Dutta	Unpinning of scroll waves under the influence of a thermal gradient	Phys. Rev. E	90	22916	2014
Suraj Kumar Pathak, Ravindra Kumar Gupta, Subrata Nath, Doddamane S., Shankar Rao, S.Krishna Prasad, Ammathnadu S. Achalkumar	Columnar self-assembly of star shaped luminescent oxadiazole and thiadiazole derivatives.	J.Matter. Chem.C			2015
A.S.Achalkumar, U.S.Hiremath, D.S.Shankar Rao, C.V. Yelamaggad	Nonsymmetric dimers comprising chalcone and cholesterol entities: An investigation on structure property correlation.	New J.Chem	38	4235-4248	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
P.Prompt, A.S.Achalkumar, A.S. Walton, R.J. Bushby, C. Walti, S.D. Evans	Reversible metallization of soft UV-patterned substrates.	J.Matter. Chem.C	2	5916-5923	2014
Sujit Mahato, Md Ashraf Haque, Soumita Dwari, and Chandan K. Jana	Divergent Reaction: Metal & Oxidant Free Direct C-H Aryloxylation and Hydride Free Formal Reductive N- benzylation of N-heterocycles	RSC Adv	4	46214-46217	2014
Sujit Mahato, Surajit Halder and Chandan K. Jana	Diastereoselective α -C-H Functionalization of Aliphatic N-heterocycles: An Efficient Route to Ring Fused Oxazine.	Chem. Commun.	50	332 – 334	2014
Surajit Halder, Sujit Mahato and Chandan K. Jana	Metal and Oxidant Free Direct sp ³ C-H Arylation of Pyrrolidine	Asian J. Org. Chem.	3	44 – 47	2014
Suraj Kumar Pathak, Ravindra Kumar Gupta, Subrata Nath, Doddamane S. Shankar Rao, S. Krishna Prasad, A. S. Achalkumar	Columnar Self-assembly of Star-shaped Luminescent Oxadiazole and Thiadiazole derivatives	J. Mater. Chem.C	3	2940-2952	2015
Sachalkumar, U. S. Hiremath, D. S. Shankar Rao, C. V. Yelamaggad	Nonsymmetric dimer comprising chalcone and cholesterol entities: An investigation on structure-property correlation	New J. Chem.	38(9)	4235-4248	2014
A. S.Achalkumar, A. S. Walton, R. J. Bushby, C. Walti, S. D. Evan	Reversible metallization of soft UV Patterned substrates P. Promptinit	J. Mater. Chem.C.	2	5916-5923	2014
Julfikar Hassan Mondal, Titli Ghosh, Sahnawaz Ahmed, Debapratim Das	Dual Self-sorting by Cucurbit[8]uril to Transform a Mixed Micelle to Vesicle	Langmuir	30	11528-11534	2014
Julfikar Hassan Mondal, Sahnawaz Ahmed, Debapratim Das	Physicochemical Analysis of Mixed Micelles of a Viologen Surfactant: Extended to Water-in-oil (w/o) Microemulsion, and Cucurbit[8]uril Assisted Vesicle Formation.	Langmuir	30	8290-8299	2014
Barman, N.; Sahu, K., ,	Anomalous Modulation of Photoinduced Electron Transfer of Coumarin 102 in Aniline-Dimethylaniline Mixture: Dominant Role of Hydrogen Bonding.	Phys. Chem. Chem. Phys.	16	27096-27103	2014
Barman, N.; Sahu, K.	Reduced Fluorescence Quenching of Coumarin 102 at Higher Phenol Mole Fractions in Cyclohexane-Phenol and Anisole-Phenol Solvent Mixtures: Role of Competitive Hydrogen Bonding.	RSC Advances	4	58299-58306	2014
Singha, D.; Barman, N.; Phukon, A.; Sahu, K.	Selective Probing of Reverse Micelle Interfacial Layer Upon Silver Nanoparticle Formation Using Dynamic Stokes Shift Measurements.	J. Phys. Chem. C	118	10366-10374	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year
Buragohain, S. Biswas,	Improved Synthesis of Zirconium(IV) Muconate Metal-Organic Framework: Characterization, Stability and Gas Sorption Properties	Eur. J. Inorg. Chem.			2015
C. De Smedt, P. Spanoghe, S. Biswas, K. Leus, P. Van Der Voort,	Comparison of different solid adsorbents for the removal of mobile pesticides from aqueous solutions	Adsorption	21(3)	243-254	2015
S. Biswas, Y.-Y. Liu, M. Tonigold, M. Weil, D. Volkmer	Two 3D Coordination Frameworks Based on Benzobisimidazole Linkers Generated under Similar Conditions: Synthesis, Structures and Thermal Properties	Eur. J. Inorg. Chem.	31	5362–5369	2014
M. Vandichel, S. Biswas, K. Leus, J. Paier, J. Sauer, T. Verstraelen, P. Van Der Voort, M. Waroquier, V. Van Speybroeck	Catalytic Performance of Vanadium MIL-47 and Linker-Substituted Variants in the Oxidation of Cyclohexene: A Combined Theoretical and Experimental Approach	ChemPlusChem	79	1183-1197	2014
P. Van Der Voort, K. Leus, Y.-Y. Liu, M. Vandichel, V. Van Speybroeck, M. Waroquier, S. Biswas	Vanadium metal-organic frameworks: structures and applications	New J. Chem.	38(5)	1853-1867	2014

Book Chapter

Name of Author/s	Title of Paper	Name of Book	Publisher	Page No.	ISBN	Year
Kishore Thalluri, Dharm Dev, Nani Babu Palakurthy, Srinivasa Rao Manne, Jyoti Chandra and Bhubaneswar Mandal	The Coupling Reagents the World in Need Indeed	Applications in Pharma Industry (Proceedings of International Conference on New Dimensions in Chemistry & Chemical Technologies)	Spectrum Publications, Hyderabad-500038, A. P. India.	348-351	978-93-82829-90-4	2014
B. K. Shandilya, M. Sarma, S. Adhikari, and M. K. Mishra	Selective Photodissociation of Bonds in 18O16O16O Molecule	Advances in Laser Physics and Technology	Cambridge University Press	54-69		2015
M. Kannan, M. Sengoden and T. Punniyamurthy	Transition-Metal-Mediated Carbon-Heteroatom Cross-Coupling - An Overview	Arene Chemistry: Reaction Mechanisms and Methods for Aromatic Compounds	Wiley, Germany	Ch.20		2015

Name of Author/s	Title of Paper	Name of Book	Publisher	Page No.	ISBN	Year
Anamika Dey, Ashish Singh, Dipjyoti Das, Parameswar Krishnan Iyer	Organic Semiconductors: A New Future of Nanodevices and Applications	Thin Film Structures in Energy Applications	Springer	97-128		2015,

CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	International/National
B. K. Patel	National Symposium on "Nanomaterials & Sustainable Synthetic Strategies Department of Chemistry	Banaras Hindu University	21-22, March 2015.	National
	CSIR-IICT & Supported by IFCPAR (CEFIPRA)	CSIR-IICT	9-11 November 2014.	Indo-French
	Recent Trends in Chemical Science (RET-ICS-2014)	Sambalpur University	14-15 November, 2014	National
T Punniyamurthy	FICS 2014	Indian Institute of Technology Guwahati	December 4-6, 2014.	National
B Mandal	International conference on new dimensions in chemistry and chemical technologies applications in pharma industry	Hyderabad	23th-25th June 2014	International
Dr. M. Sarma	Theoretical Chemistry Symposium (TCS) 2014 [Invited Talk]	NCL Pune	18-21 December 2014	National
Achalkumar A.S.	National Conference on Recent Trends in Bioorganic Chemistry and its Applications to Society-	Mysore	Sep 26-27th, 2014	National
	Indo-UK seminar funded jointly by RSC and DST	UK	Feb 16-18th, 2015	International
	TE-QIP short term course on Sophisticated Instruments in Interdisciplinary Research	IIT Guwahati	Nov 24-27th, 2014	National
	AICTE-QIP short term course on 'Advances in Biomedical Engineering	IIT Guwahati	Feb 25th – March 1st, 2015	National
	AICTE-QIP short term course on 'Micro manufacturing for Biomedical Applications			
	IIT Guwahati	Feb 23rd – Feb 27th, 2015	National	
Subhas Chandra Pan	16th CRSI National Symposium in Chemistry	NCL Pune	06/02/15-08/02/15	National
Sandip Paul	Theoretical Chemistry Symposium (TCS-2014)	NCL, Pune	18-21 Dec., 2014	National
K.A.Sahu	International conference on Advances in Spectroscopy and Ultrafast Dynamics (ASUD)	(IACS), Kolkata.	December 12-14, 2014	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
T. Punniyamurthy	New Strategies for Carbon-Carbon and Carbon-Heteroatom Bonds Formation and Their Application for Medicinally Significant Heterocyclic Compounds	National Symposium, Frontiers in Chemistry, North Bengal University	West Bengal	February, 18, 2015
	Multicomponent Tandem Carbon-Carbon/Heteroatom Bonds Formation and Their Application for the Synthesis of Medicinally Significant Heterocyclic Compounds	Chemical Research Society of India, National Symposium, National Chemical Laboratory	Pune	February, 5-8, 2015.
	New Strategies for the Synthesis of Medicinally Significant Heterocyclic Compounds	TIFAC-NIIST	Thiruvananthapuram	October 10, 2014
T. Punniyamurthy	Design and Development of Novel Molecules of Biological Importance	Central Drug Research Institute	Lucknow	March 28, 2014
B Mandal	Novel Strategies for Peptide Based Drug Design against Alzheimer's Disease 13th Eurasia Conference on Chemical Sciences (EuAsC2S-13)	IISc, Bangalore.	Bangalore.	14th-18th December 2014
	Pro-drug concept for anti-alzheimer's drug design, Frontier in Chemical Sciences (FICS-2014)	IIT Guwahati	Guwahati	4th-6th December, 2014
Subhas Chandra Pan	Organocatalytic Asymmetric Cyclization Reactions	Division of International Relations, Max-Planck-Gesellschaft	IIT Madras	12/03/15-13/03/15
Sandip Paul	Molecular Insights into the Role of Aqueous Trehalose Solution on Temperature Induced Protein Denaturation	D. M. Science Collge, Manipur, Imphal	Imphal	14th March, 2015
	Molecular Insights into the Role of Aqueous Trehalose Solution on Temperature Induced Protein Denaturation	NCL, Pune	Pune	19th Dec., 2014
K.A.Sahu	Probing Excited-state H-Bonding through Fluorescence Modulation	Frontiers in Chemical Sciences, (FICS)	IIT Guwahati.	December 4-6, 2014
	Fluorescence Modulation by Excited-State Hydrogen Bonding in Solution and Characterization of a Reverse Micellar Template upon Silver Nanoparticle Formation at the national conference on,,	Sustainable Chemistry: Frontiers and Challenges at NEHU	Shillong	27th February 2014.

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Saikia, A. K.	Novel Synthetic Approaches Towards Natural Product Synthesis	8th CRSI National Symposium in Chemistry NEIST-Jorhat	Jorhat	12th July, 2014
	Novel Synthetic Approaches Towards Oxygen, Nitrogen and Sulfur Heterocyclic Compounds	REACH-2015: An international conference on Recent Advances in Chemistry NEHU-Shillong	Shillong	3-5 March, 2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Vaidhyanathan Ramamurthy	University of Miami, USA	Science and Scientist or "what I should have learned"	30.3.15
Prof. Hiroyuki Nakamura	Tokyo Institute of Technology, Japan	Talk	2.3.15
Prof. Yukihiro Shimoi	Chief Senior Researcher, Nanosystem Research Institute (NRI), National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 2, 1-1-1 Umezono, Tsukuba, Japan	Theoretical aspects of conjugated polymers and their application to various optoelectronic devices	12-15th January 2015
Dr. Sandip Bharatee	IIM, Jammu	Talk	6.1.15
Mr. Prasun Dutta	RSC, OSDP ambassador	Talk	6.1.15
Prof. Sabyasaachi Sarkar	IIT Kanpur and IEST Shibpur	Nanochemistry of carbon: do we eat graphene? Its use in bio-imaging and as Trojan horse in drug delivery.	7.11.14
Prof. Muhammad Younus	Shahjalal University	Talk	29.10.14
Prof. Makato Kiso	Kyoto University, GIFT University	Synthetic gangliosides and glycan probes for cell-material integration	22.9.14
Prof. Ram S. Mohan	Illinois Wesleyan University, USA	Environmental friendly organic synthesis using bismuth and iron compounds	20.8.14
Prof. Henry F. Schaefer	MIT, Cambridge, USA	Talk	5.3.15
Prof. Miguel Angel Yus-Astiz	University of Alicante, Spain	Talk	1.3.15
Dr. Yukihiro Shimoni	AIST, Japan	Talk	13.1.15

Seminars/Workshops/Conferences/Short-Term Courses Organised

Name of Faculty (Convenor/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
Dr. Sandip Paul	Frontiers in Chemical Sciences (FICS-2014)	DST, DBT	4-6 Dec., 2014	National	~180
Dr. Shyam P. Biswas & Dr. Kingsuk Mahata	Short-Term Course: "Solar Energy Harvesting"	MHRD	20-21 February, 2015	National	7
Prof. Parameswar K. Iyer at the Center for Nanotechnology, IIT Guwahati	1st Indo-Sweden Workshop on "Advanced Materials for Healthcare and Energy"	IIT Guwahati	30 August 2014	International	30

PATENTS:

Name of Faculty and co researcher	Name	Date Granted	Application No.
Bhubaneswar Mandal and Mr. Ashim Paul	Beta Sheet Breaker Peptides	26 September 2014	Application No. 997/KOL/2014

AWARDS AND HONOURS:

- (a). Establish a Centre of Excellence in Advanced Molecules and Materials funded by MHRD.
- (b). Prof. Arun Chattopadhyay
- Re-nominated as an Editorial Advisory Board member of the Royal Society of Chemistry Journal Nanoscale.
 - Member, Task Force on Nanobiotechnology, Department of Biotechnology, Government of India.
 - Member, Swarnajayanti Fellowship Selection Committee (Chemical Sciences), Department of Science and Technology.
 - Member, Editorial Board of the Indian Journal of Chemistry, Sec A, for the term 2015-17.
- (c). Prof. T. Punniyamurthy,
- 2015 CRSI Bronze Medal
 - Fellow of Royal Society of Chemistry (FRSC)(2015).
- (d). Prof. P. K. Iyer,
- Awarded "Head of Max Planck India Partner Group" in India by Max Planck Society, Germany and DST, India (2012-2017)
 - Appointed Member of DST, SERB Fast Track Committee (Chemical Science) from 2012-2015 (Three years)
- (e) Prof. A. T. Khan for taking the charge of Aliah University as the Vice Chancellor

STUDENTS' ACHIEVEMENTS

- Dr. Chirantan Kar received the JSPS postdoctoral fellowship for overseas researchers for the year 2015
- Dr. Himanshu Jena, received the JSPS postdoctoral fellowship for overseas researchers for the year 2015
- Dr. Harisadhan Ghosh, received the JSPS postdoctoral fellowship for overseas researchers for the year 2014
- Dr. Ramesh Yella, received the JSPS postdoctoral fellowship for overseas researchers for the year 2014
- Dr. Narsimha Mamidi has been selected for 2nd Prize of "2014 Lilly Outstanding Thesis Awards".
- Dr. Krishna Chaitanya Nadimpally, has been awarded the CSIR-Nehru Postdoctoral fellowship.
- Dr. Krishna Chaitanya has been selected for "Gandhian Young Technological Innovation Awards, 2014". Congratulations
- Mr. Ganesh Majji, a research scholar of our Department won stage 2 First prize on "In celebration of Earth day, Elsevier Reaxys Challenges you to a Green Chemistry Online Quiz"

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
01	Achalkumar, A. S.	CSMR, Bangalore	Assistant Professor	Liquid crystals, Functional Materials, Molecular Electronics, Self Assembly, Green Chemistry
02	Bag, Subhendu Sekhar	IIT Kharagpur	Associate Professor	Bioorganic Chemistry and Chemistry of Unnatural Nucleic Acid and Peptides
03	Baruah, Jubaraj B.	IISc Bangalore	Professor	Homogeneous Catalysis, Supramolecular chemistry and material design
04	Biswas, Shyam Prosad	Ulm University, Germany	Assistant Professor	Gas/Vapor/Liquid Adsorption and Catalytic Applications of Metal-Organic Frameworks (MOFs)
05	Chattopadhyay, Arun	Columbia University	Professor	Nanoscale Science and Technology
06	Chatterjee, Sunanda	IISc Bangalore	Assistant Professor	Peptidomimetics: Synthesis, Conformation and Biological activity

Sl. No.	Name	PhD	Designation	Areas of Interest
07	Das, Gopal	IIT Kanpur	Professor	Supramolecular, Bioorganic chemistry and Biomineralization
08	Das, Debapratim	IACS, Kolkata	Assistant Professor	Supramolecular dynamic aggregates, peptides, lipids
09	Dutta, Sumana	IACS, Kolkata	Assistant Professor	Experimental & Theoretical Physical Chemistry / Self-organization and Nonlinear dynamics
10	Gupta, Ashish K.	Univ. of California, Los Angeles	Associate Professor	Quantum Molecular Dynamics
11	Iyer, Parasmeswar K.	CSMCRI, Bhavnagar	Professor	Polymer synthesis, Organic / Organometallic Chemistry & Device fabrication, Sensors
12	Jana, Chandan K.	WWU Muenster, Germany	Asst. Professor	Total Synthesis/ Natural Product Based Drug Discovery/ Synthetic Methodology/ Development of New Reaction
13	Khan, Abu Taleb	Kalyani University, W.B.	Professor	Synthesis of Natural Products, Heterocycles and Carbohydrate Chemistry, Newer Methodologies
14	Krishnamoorthy, G.	IIT Kanpur	Associate Professor	Organic Photochemistry & Spectroscopy
15	Kundu, Lal Mohan	LMU Munich, Germany	Assistant Professor	Nucleic Acid / Peptide Chemistry, DNA / RNA Damage and Repair, DNA Hybrid Materials
16	Mahata, Kingsuk	University of Siegen, Germany	Assistant Professor	Solar Fuel from Water, Supramolecular Catalysis, Theranostic Nano-Medicine
17	Manivannan, V.	IACS, Calcutta	Professor	Coordination Chemistry
18	Mandal, Bhubaneswar	EPFL, Lausanne, Switzerland	Asst. Professor	Peptide Chemistry and Amyloid Research
19	Manna, Debasis	University of Illinois at Chicago	Asst. Professor	Lipid-Protein Interaction, Lipid Synthesis
20	Mondal, Biplab	IIT Bombay	Associate Professor	Coordination and Bioinorganic Chemistry
21	Mukherjee, Chandan	Max-Planck Institute of Bioinorganic Chemistry, Muelheim, Germany	Asst. Professor	Oxidation Catalysis / Molecular Magnetism / Synthesis of Single-Molecule Magnets (SMMs) / MRI Contrast agents / Water Oxidation Chemistry
22	Pan, Subhas Chandra	Max-Planck-Institut fuer Kohlenforschung, Muelheim an der Ruhr, Germany	Asst. Professor	Synthetic organic chemistry: Natural product synthesis with the emphasis of new synthetic methodology; development of new reactions, asymmetric organocatalysis and transition metal catalysis with new catalyst design; mechanistic study
23	Panda, Aditya N.	IIT Kanpur	Associate Professor	Dynamics of bimolecular scattering processes

Sl. No.	Name	PhD	Designation	Areas of Interest
24	Patel, Bhisma K. (Head of the Department)	IIT Kanpur	Professor	Bio-Organic Chemistry and Newer Methodologies
25	Paul, Anumita	Columbia University	Associate Professor	Surface Science, Catalysis, Thin Films
26	Paul, Sandip	IIT Kanpur	Associate Professor	Computational Biophysics and Chemistry
27	Punniyamurthy, T.	IIT Kanpur	Professor	Synthetic Organic Chemistry
28	Qureshi, Mohd	IIT Kanpur	Associate Professor	Materials Chemistry
29	Ray, Manabendra	IIT Kanpur	Professor	Bioinorganic and Coordination chemistry
30	Raidongia, Kalyan (Joined on 27.3.2015)	Jawaharlal Nehru centre for advance Scientific research	Asst. Professor	Physical Chemistry
31	Sahu, Kalyanasis	IACS, Kolkata	Asst. Professor	Time Resolved Absorption and Fluorescence Spectroscopy, SHG, MUPPETS
32	Saikia, Anil Kr.	RRL Jorhat	Professor	New Synthetic Methodology & Natural Product Synthesis
33	Sastri, Chivukula V.	University of Hyderabad	Asst. Professor	Biomimetic Chemistry and Chemical Biology
34	Sarma, Manabendra	IIT Bombay	Asst. Professor	Development of new theoretical approaches to Laser Assisted Control of Chemical Reactions, and Resonances in Electron – Molecule Scattering Reactions
35	Srimani, Dipankar (Joined on 30.3.2015)	IACS, Jadavpur	Asst. Professor	Organic, Organonometallic Chemistry

DEPARTMENT OF CIVIL ENGINEERING

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1998

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in
o Civil Engineering

Master of Technology (MTech) in

- (a) Structural Engineering,
- (b) Water Resources Engineering and Management,
- (c) Geotechnical Engineering,
- (d) Environmental Engineering,
- (e) Transportation Systems Engineering and
- (f) Infrastructure Engineering and Management

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 12
- Associate Professor: 17
- Assistant Professor: 14

NUMBER OF NEW FACULTY JOINED:

- Assistant Professor: 5

LABORATORIES:

Structural Engineering Laboratory:

Overhead EOT Crane for Structural test hall, Universal Test frame, Several new NDT equipment like Corrosion analyzing, Rebar locator. Permeability tester, Resistivity meter, extraction tester, Dynamic Actuator system, Earthquake simulator, Pseudo Dynamic Test Facility, FFT analyzer for vibration testing of structural elements, Resonant frequency meter, HBM-48channel data acquisition system, Hydraulic Fork Lift, A-Frame Aluminium Ladder (16ft high), Automatic Vicat's apparatus for SC, Initial and Final Setting of Cement, 300 LPM in Powerpack for MTS test system, Reaction Mass Assembly for Electoseis Long Stroke Shaker Model 113 etc. Abaqus V 6.8 software, ANSYS – v13, SAP 2000 – v14, MIDAS , Primavera etc.

Environmental Engineering Laboratory:

Laser particle size analyzer, Atomic Absorption

Spectrophotometer, Ultra-pure water System Ambient, Ambient air pollutant measurement sampler, The fine particular sampler, Micro-meteorological monitoring equipment with required accessories and data logging system and software (automatic), Trinocular laboratory microscope complete with essential accessories and digital camera etc. are in working condition.

Ozone analyzer, Automotive gas analyzer, Cascade Impactor, BOD incubator, Electric muffle furnace, Drying oven, Air compressor etc. have processed for procuring in the current year.

Geotechnical Engineering Laboratory:

De-airing apparatus for triaxial testing, Multi-channel data logging , relative density apparatus, Rock testing equipments, GeoStudio 2007 products are pc software for analysis of earth structures subjected to earthquake shaking and design are available.

Miniature Pressure Transducer Tensiometer, Refilling kit for T-5 tensiometer, Research Centrifuge with rotor, Cross permeability test apparatus, HygoclipCP302 XXPVC, Humidity Temp Controller Model – 902 Dual Channel, Guelph Permeameter kit, Upgrading of Block vibration to computerized block vibration test equipment, Direct Q-3 Ultrapure water purification system have processed for procuring in the current year.

Transportation Engineering Laboratory:

Bump integrator for pavement management, Brooke Field Viscometer for testing of bituminous material as well as marshall Design of flexible pavement facilities, HDM4 for highway development model, MXROADS for highway geometric design, rolling thin file oven, TRANSYT, ISIS, HCS software, plate compactor, CBR field apparatus, Driver vision screen tester, Universal Penetrometer for bitumen testing including automatic pnetrometer timer, Electric plate compactor for preparation of triaxial sample, Testing equipment for falling Weight Deflectometer etc. are in working condition.

Radar Gun, Video VBox 10Hz system, PTV vision software VISSIM, Standard TransCAD software (V-5) etc. has been processed for procuring in the current year.

Hydraulic and Water Resources Engineering Laboratory:

An in-situ hillslope experiment set up (size =250 m²) with fully automatic subsurface flow measurement system was designed and fabricated at the field site. The experimental set-up will quantify both subsurface and surface flow in a hillslope under high intensity storm events. 5 and 10 m tilting flume long channel, rainfall simulation apparatus for study rainfall for various studies flow, Auto-weather station, Turbines, Pump ring etc. are in working condition.

Hydraulic Tilting Flume 20m x 1.0 m x 60. Cm length, Construction of Storage tank, Micro ADV 16-MHz Splash-Proof System has been processed for procuring in the current year.

Surveying Laboratory:

Survey equipment / modern equipment like EDM, Total station, Electronic Theodolite, GIS for remote-sensing, Digitizer, GPS etc for various studies topographic, Volumetric bench with set of weir & Notchs, Impact of Jet, Free & Force Vertex flow, Losses in Pipe system are in working condition.

Engineering Geology:

Trinocular Stereo zoom Microscope, Petrographic Microscope

with digital image capturing facility, hardness box kit are available.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:**Environmental Engineering Lab**

- 01 Digital Conductivity meter
- 02 Digital Colony Counter
- 03 Digital Nephelo Turbidity meter
- 04 Hot Plate
- 05 Split Type Room Air Conditioner
- 06 Digital Spectrophotometer
- 07 Refrigerator
- 08 Gas Chromatograph
- 09 Water Purification System
- 10 High Volume Sampler
- 11 Respirable Dust Sampler with Gaseous Sampling Attachment
- 12 CO, CO₂ Air Quality meter
- 13 Atomic Absorption Spectrometer

RESEARCH PROJECTS**a) New Sponsored Projects**

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Abhishek Kumar	Propagation Path Characterization and determination of in-situ slips along difference active faults in the Shillong Plateau	DST	35.00	none	5 years
Dr. Ajay Kalamdhad and Dr. Meena Khwairakpam, NIT Meghalaya	Biodegradation of pulp and paper mill waste using different composting techniques	DST, SERB	32.93	none	3 years
Dr. H. B. Kaushik	Evaluation of a Strengthening Scheme for Unreinforced Masonry Building using Steel Bands	DST	25.20	Dr. K. Dasgupta	3 years
Dr. S. Das	Seismic Design Criteria for RC Structures Considering Mainshock-After-shock Sequence for Northeastern India	DST	23.14	Dr. H. B. Kaushik	3 years
Dr. Anjan Dutta	Studies on influence of HyFRC in enhancing seismic performance of reinforced concrete bridge pier	DST	Rs.8.27 lakhs	---	----
Dr. Anjan Dutta	Experimental investigation on the use of HyFRC in enhancing seismic performance of reinforced concrete bridge pier	M/S D2S Infrastructures Pvt. Ltd., Guwahati-1	Rs.5.66 lakhs	----	---

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof. R. Uppaluri	Development of low cost chitosan based cross linked resins for the recovery and removal of palladium from synthetic and spent electroless plating solutions	CSIR	15.8	Dr. P. K. Ghosh, Dr. A. Golder	36 months
Dr. Rajib Kumar Bhattacharjya	Numerical modeling based study for assessing quality of groundwater of Bharalu River basin of Guwahati city	NRDMS (DST)	14,25,200	Prof. Arup Sarma	2 years

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Ajay Kalamdhad	Potential of aerobic digestion (composting) and anaerobic digestion of kitchen waste	Ministry of Drinking Water and Sanitation, Gol	21	None	3 years
Dr. Ajay Kalamdhad	Composting of water hyacinth using different composting technologies	DST, SERC	18.5	none	3 years
Dr. Ajay Kalamdhad	Bio-processing of Phumdi weeds of Loktak Lake Manipur through composting	CSIR	16.7	Mr. W. Roshan Singh, Environmental Engineer, Manipur Pollution Control Board, Imphal	3 years
Dr. H. B. Kaushik	Evaluation and Enhancement of Seismic Capacity of Assam-type Housing	DST	38.72	Dr. S. Das	3 years
Dr. Rajan Choudhary	Study on Lowering of Mixing and Compaction Temperatures of Bituminous Mixes through Warm Mix Asphalt (WMA) Additives	DST	59.03	Dr. Akhilesh Kumar Maurya	3 years
Dr. Akhilesh Kumar Maurya	Development of Indo-Highway Capacity Manual (HCM)	CSIR - CRRI	100	Dr. Rajan Choudhary	5 years
Hemant B. Kaushik	Evaluation of strengthening scheme for unreinforced masonry buildings using steel bands	DST	26.30	Kaustubh Dasgupta	3 years
Dr. P. K. Ghosh	Micro-aerobic process of sulfate reduction to elemental sulfur.	CSIR	19.7	---	3 years
Dr. P. K. Ghosh	Development of Bioreactor System for simultaneous removal of multi-pollutants such as iron, nitrate, arsenic and fluoride from groundwater	MDWS, India	14.0	---	3 years
Dr. Bimlesh Kumar	Resistance Predictors for vegetated channel with suction	Ministry of Earth Sciences, GOI	9.46	---	2 years

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co- Investigator	Duration
Dr. A. Murali Krishna	Seismic Requalification of Geotechnical Structures	UKIERI	32	Dr. Subhamoy Bhattacharya, University of Bristol, UK	3 years
Dr. Ajay Kalamdhad	High Rate Composting of Institutional Organic Waste	IIT Guwahati (Start-up grant)	5	None	2 years

CONSULTANCY PROJECTS

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co- Investigator	Duration
Dr. A. Murali Krishna	Consultancy for Geotechnical assessment, Design & taking up remedial measures in connection with construction of Railway embankment in Udaipur Station Yard in Agartala-Udaipur-Sabroom	NFR, Agartala	15	Dr. S. Sreedeeep & Dr. Arindam Dey	10 Months
Dr. A. Murali Krishna	Cross hole seismic test in two sets of bore hole up to a depth of 25 meters to find out Dynamic Properties of soil at Tuiriial Power House, Mizoram	NEEPCO, Mizoram	7.86	Dr. ArindamDey	3 Months
Dr. A. Murali Krishna	Characterization of Multifilament Woven Geo-textile	Bhartia Infra Projects Ltd., Guwahati.	1.96	none	1 Month
Dr. A. Murali Krishna	Evaluation of Construction materials for Construction, Rectification and Strengthening of internal roads of IITG	PWD, Guwahati	3.06	Dr. T. Lyngdoh	2 Month
Dr. Ajay Kalamdhad	High Rate Composting of Institutional Organic Waste	IIT Guwahati (Start-up grant)	5	None	2 years
Dr. H. B. Kaushik	Inspection of quality of fabrication & erection of structure (hanger) at Air Force Station, Borjhar	M/s Modern Prefab Systems Pvt. Ltd.	2.0	Dr. A. Borsaikia	6 months
Dr. H. B. Kaushik	Review of Seismic Hazard Input for Safety Evaluation of Lower Subansiri Dam	National Hydroelectric Power Corporation	1.85	Dr. S. Das	6 months
Kaustubh Dasgupta	Proof checking of structural design of TajVivanta Hotel, Guwahati	The Indian Hotels Company Limited	7.50	Arindam Dey	1 year

RESEARCH PUBLICATIONS**Journals (International / National)**

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Sah, P. K. and Krishna, A. M.	Estimation of Rock Mass Parameters using Intact Rock Parameters	Int. Journal of Innovative Research in Science, Engg. and Technology	3-4	117-124	2014
Krishna, A. M., Bhattacharya, S., and Choudhury, D	Seismic Requalification of Geotechnical Structures	Indian Geotechnical Journal	44-2	113-118	2014
Krishna, A. M., Madhav, M. R., and Kumar, K	Ground Engineering with Granular Inclusions for Loose Saturated Sands subjected to Seismic Loadings	Indian Geotechnical Journal	44-2	205-217	2014
Varma, V.S., Chatuphale, M. Kalamdhad, A.S.	Effects of bulking agent in composting of vegetable waste and leachate control using rotary drum composter	Sustainable Environmental Research	24(4)	245-256	2014
Singh, J., Kalamdhad, A.S., 2014	Uptake of heavy metals by natural zeolite during agitated pile composting of water hyacinth	International Journal of Environmental Sciences	5(1)	42005	2014
Singh, W.R., Pankaj, S.K., Singh, J., Kalamdhad, A.S.	Evaluation of bioavailability and leachability of heavy metals during vermicomposting of phumdi biomass of Loktak Lake using Eiseniafetida	Chemical Speciation and Bioavailability	26(3)	158-166	2014
Dhamodharan K., Kalamdhad, A.S.	Pre-treatment and anaerobic digestion of food waste for high rate methane production - A Review	Journal of Environmental Chemical Engineering	2	1821-1830	2014
Sarika, D., Singh, J., Prasad, R., Vishan, I., Varma, V.S., Kalamdhad, A.S., 2014.	Study of physico-chemical and biochemical parameters during rotary drum composting of water hyacinth	International Journal of Recycling of Organic Waste in Agriculture	3	63	2014
Vishan, I., Kanekar, H., Kalamdhad, A.S.	Microbial population, stability and maturity analysis of rotary drum composting of water hyacinth	Biologia	69(10)	1303-1313	2014
Varma, V.S., Kalamdhad, A.S.	Bio-conversion of organic waste using composting technologies – a review	International Journal of Environmental Technology and Management	17(6)	483-507	2014
Devi, R.R., Dhar, P., Kalamdhad, A., Katiyar, V.	Fabrication of cellulose nanocrystals from agricultural compost	Compost Science and Utilization	23(2)	104-116	2015
Sonowal, P., Khwairakpam, M., Kalamdhad, A.S.	Vermicomposting of dewatered sludge from pulp and paper mill	International Journal of Environment and Waste Management	15(1)	24-38	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Varma, V.S., K. Ramu, Kalamdhad, A.S.	Effects of waste lime sludge on nitrogen dynamics and stability of mixed organic waste using rotary drum composter	International Journal of Environmental Research	9(1)	395-404	2015
Sonowal, P., Khwairakpam, M., Kalamdhad, A.S.	Vermicomposting of solid pulp and paper mill sludge (SPPMS) using Eudrilus Eugeniae earthworm.	International Journal of Environmental Sciences	5(3)	502-514	2015
Dhamodharan K., Kumar, K., Kalamdhad, A.S.	Effects of different livestock dung as inoculum in food waste anaerobic digestion and its kinetics.	Bioresource Technology	180	237-241	2015
Pradhan, B.	Corrosion behavior of steel reinforcement in concrete exposed to composite chloride-sulfate environment.	Construction and Building Materials	Vol. 72	398-410	2014
Choudhary, R. and Julaganti, A.	Warm Mix Asphalt: Paves Way for Energy Saving	Recent Research in Science and Technology	6(1)	227-230	2014
Kheni, D., Scott, R.H., Deb, S.K. and Dutta, A.	Ductility enhancement in beam-column connections under cyclic load using HYFRC	ACI Structural Journal	112(2)	167-178	2015
Das, A. Dutta, A. and Deb, S.K.	Performance of fiber-reinforced elastomeric base isolators under cyclic excitation	Journal of Structural Control and Health Monitoring	22 (2)	197-22	2015
Barman, P. and Singh, B.	Influence of tyre buffings on shear strength of soil-fly ash mixes	Journal of Environmental Research & Development	9-2	402-410	2014
Das, T. and Singh, B.	Deformation and strength characteristics of jute geotextile reinforced soils	Journal of Environmental Research & Development	8-4	987-995	2015
Mali, S. and Singh, B.	Influence of geocell and fibre reinforcement on strength behaviour of a sandy soil	Journal of Civil Engineering & Environmental Technology	8-4	228-233	2015
Patel, S.K. and Singh, B.	Unconfined compressive strength behaviour of fibre-reinforced lateritic soil	Journal of Civil Engineering & Environmental Technology	2-3	93-98	2014
B. P. Sahariah and S. Chakraborty	Comparative study on response of thiocyanate shock load on continuous and fed batch anaerobic – anoxic – aerobic sequential moving bed reactors	Environmental Engineering Research	20(1)	65-72	2015
Animesh Das, Anjan Dutta and S.K. Deb	Performance of fiber-reinforced elastomeric base isolators under cyclic excitation	Structural Control and health monitoring	22	197–220	2015
Dhaval Kheni, Richard H. Scott, S.K. Deb and Anjan Dutta	Ductility enhancement in beam-column connections under cyclic load using HyFRC	ACI Structural Journal	1123(2)	167-178	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Nirmalendu Debnath, S. K. Deb and Anjan Dutta	Multi-modal vibration control of truss bridges with tuned mass dampers under general loading	Journal of Vibration and Control	DOI: 10.1177/1077546315571172		2015
Sahoo, S. N. and Sreeja, P.	Determination of urbanization based on imperviousness	Urban Design and Planning ICE Publishing, Thomas Telford	167 (DP2)	-	2015
Sahoo, S. N. and Sreeja, P. (2014)	A methodology for determining runoff based on imperviousness in an un-gauged peri-urban catchment	Urban Water Journal, Taylor and Francis	11(1)	42-54	2015
RangaRaoPandu, Ngullie N., Golder, A. K. and Ghosh P. K.	Arsenic Removal from Contaminated Water by Various Physicochemical Processes.	International Journal of Environmental Science & Development.	6(5)	357-362	2015
Sahoo, N.K., Ghosh, P. K. and Pakshirajan, K..	Treatment of refinery wastewater using arthrobacterchlorophenolicus A6 in an upflow packed bed reactor	Desalination and Water Treatment			2014
Sahoo, N.K., Pakshirajan, K.andGhosh, P. K.	Evaluation of 4-bromophenol biodegradation in mixed pollutants system by Arthrobacterchlorophenolicus A6 in an upflow packed bed reactor.	Biodegradation.	25(5)	705-18	2014
Brahmacharimayum, B. and Ghosh, P. K.	Sulfate Bioreduction and elemental sulfur formation in a packed bed reactor.	Journal of Environment and Chemical Engineering..	2(3)	1287-1293	2014
Dharnaik, A. S. and Ghosh, P. K.	Hexavalent Chromium [Cr(VI)] removal by Electrochemical Ion-exchange Process..	Environmental Technology.	35(18)	2272-2279	2014
Sahoo, N. K., Pakshirajan, K. and Ghosh, P. K.	Biodegradation of 4-Bromophenol by Arthrobacterchlorophenolicus A6 in batch shake flasks and in a continuously operated packed bed reactor	Biodegradation.	25(2)	265-276	2014
BanasriSarma, Arup Kumar Sarma, ChandanMahanta and Vijay P. Singh,	Optimal Ecological Management Practices for Controlling Sediment Yield and Peak Discharge from Hilly Urban Areas	Journal of Hydrologic Engineering, ASCE	-	-	2015
KalitaHridayMoni, Sarma Arup Kumar, and Bhattacharjya Rajib Kumar,	Evaluation of Optimal River Training Work using GA Based Linked Simulation Optimization Approach	Water Resources Management	28	2077-2092	2014
ThiyamTamphasana Devi and Bimlesh Kumar	Large Eddy Simulation of Turbulent Flow in Stirred Tank with Curved Blade Impeller	Journal of Engineering Thermophysics, Springer	24, 2	152-168	2015
ThiyamTamphasana Devi and Bimlesh Kumar	Design of Gas-liquid Stirred tank with Curved Blade Impeller	Journal of Engineering Physics and Thermophysics, Springer	88, 1	76-87	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
ThiyamTamphasana Devi and Bimlesh Kumar	Scale up Criteria for Dual Stirred Gas-liquid Unbaffled Stirred tank with Concave Blade Impeller	The Korean Journal of Chemical Engineering, Springer	31, 8	1339-1348	2014
ThiyamTamphasana Devi and Bimlesh Kumar	Effect of Superficial gas velocity on Process Dynamics in Bioreactors	Thermophysics and Aeromechanics, Springer	21, 3	309-326	2014
Vishal Deshpande and Bimlesh Kumar	Does Downward Seepage Initiate Lateral Channel Shift?	National Academy Science Letters Springe	-	-	2015
Vishal Deshpande and Bimlesh Kumar	Advent of Sheet flow in Suction affected alluvial Channels	Environmental Fluid Mechanics	-	-	2015
Anurag Sharma, Mahesh Patel and Bimlesh Kumar	Turbulent Parameters and Corresponding Sediment Transport in Curved Cross-Section Channel	ISH Journal of Hydraulic Engineering	-	-	2015
VarhsaShivpure, ThokchomBebina Devi and Bimlesh Kumar	Analysing Turbulence Characteristics of Flow over Submerged Flexible Vegetated Channel	ISH Journal of Hydraulic Engineering	-	-	2015
Bimlesh Kumar	Flow Prediction in Vegetative Channel using Hybrid ANN approach,	Journal of Hydroinformatics	16, 4	839-849	2014
Bimlesh Kumar, Anjaneya, Vishal Deshpande and GopuSreenivasulu	Regression Model for Sediment Transport Problems using Multi-Gene symbolic genetic Programming	Computers and Electronics in Agriculture	103, 1	82-90	2014
Borah Triptimoni, and BhattacharjyaRajib Kumar	Development of Unknown Pollution Source Identification Models Using GMS ANN Based Simulation-Optimization Methodology	Journal of Hazardous, Toxic, and Radioactive Waste, ASCE	-	-	2014
KalitaHridayMoni, Sarma Arup Kumar, and BhattacharjyaRajib Kumar,	Evaluation of Optimal River Training Work using GA Based Linked Simulation Optimization Approach	Water Resources Management	28(8)	2077-2098	2014
BhattacharjyaRajib Kumar, Ambuj Srivastava, and Satish Mysore, G.	AHybrid-Optimization Approach for Estimating Parameters of Virus Transport Process in Aquifer	Journal of Hazardous, Toxic, and Radioactive Waste, ASCE	19(2)	0401-4025 -1-8	2015
Sahoo, S. N. and Sreeja, P.	Determination of urbanization based on imperviousness	Urban Design and Planning, ICE Publishing, Thomas Telford	167 (DP2)	49-57	2014
Sahoo, S. N. and Sreeja, P.	A methodology for determining runoff based on imperviousness in an un-gauged peri-urban catchment	Urban WaterJournal, Taylor and Francis,	11(1)	42-54.	2014
Dubey, A. K., Gupta, P., Dutta, S., & Kumar, B.	Evaluation of satellite-altimetry-derived river stage variation for the braided Brahmaputra River	International Journal of Remote Sensing	35(23)	7815-7827	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Dubey, A. K., Gupta, P., Dutta, S., & Singh, R. P.	Water Level Retrieval using SARAL/AltiKa Observations in the Braided Brahmaputra River, Eastern India	Marine Geodesy	-	-	2015
Karmaker, T., & Dutta, S.	Stochastic erosion of composite banks in alluvial river bends	Hydrological Processes,	1339	1324–1339	2014
Sarkar, R., & Dutta, S.	Parametric study of a physically-based, plot-scale hillslope hydrological model through virtual experiments	Hydrological Sciences Journal	60(3)	448–467	2015
Sarkar, R., Dutta, S., & Dubey, A. K.	An insight into the runoff generation processes in wet sub-tropics	Field evidences from a vegetated hillslope plot. Catena	128	31–43	2015

Proceedings of Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Krishna, A. M., Bhattacharjee, A. and Reddy, S.B.	Numerical Modelling of Geosystems: Reinforced Soil Retaining Structures	Indian Geotechnical Conference 2014	18-20 December 2014	2625-2636
Kumar, D.P., Reddy, S.B. and Krishna, A. M.	Evaluation of Optimum Mix of Sand-Tire Chip Mixtures For Geotechnical Applications	Indian Geotechnical Conference 2014	18-20 December 2014	723-728
Reddy, S.B., Kumar, D.P. and Krishna, A. M.	Behavior of Cantilever Retaining Wall Models with Sand-Tire Chip Mixtures	Golden Jubilee Conference of the IGS Bangalore Chapter, Geo-Innovations	30-31 October 2014	Paper No: GD4, 8p.
Sah, P. K., George, M.K. and Krishna, A.M.	Comparison of Tunnel Wall Displacement using Analytical and Numerical Method: A Case Study	North-East Students Geo-Congress on Advances in Geotechnical Engineering (NESGC 2014)	18 Oct 2014	none
Chatterjee, D. and Krishna, A.M.	Seismic Slope Stability Analysis for Layered Configurations	6th IGS on Disaster Mitigation in Special Geoenvironmental Conditions	January 21-23, 2015	505-508.
Chaudhary, B., Hazarika, H. and Krishna, A. M.	Earth pressures on reinforced soil retaining wall under dynamic loading	IACMAG 2014	22-25 September, 2014	1877-1883
Reddy, S.B., Kumar, D.P. and Krishna, A. M.	Evaluation of sand - tire chip mixture properties for sustainable geotechnical applications	International Conference on Sustainable Civil Infrastructure	17-18 October 2014	pp. 417-426.
Dammala, P. K., Sodom, B. R. and Adapa, M. K.	Experimental investigation of applicability of sand tire chip mixtures as retaining wall backfill	ASCE IFCEE 2015	17-21 March 2015	pp. 1420-1429.
Abhishek Kumar, Olympa Baro, Narayan, L. M.	Estimation of surface PGA and determination of target value for no liquefaction at Guwahati city	Geo-Innovations, IISC Bangalore, Karnataka	30-31, October, 2014	

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Abhishek Kumar, Kumaran M and Vetrivelvan, A. V.	Site specific response based on global data, liquefaction potential assessment and determination of target values for ground improvement for shallow regions in India	15th Symposium on Earthquake Engineering, IIT Roorkee, Uttarakhand	11-13 December 2014	A003
Abhishek Kumar, Kumaran M and Vetrivelvan, A. V.	Global data based site response analysis and output filtering for liquefaction assessment of shallow regions in India	Indian Geotechnical Conference, JNTU Kakinada, AP	18-20 December, 2014	T02P17
Kalamdhad, A.S.	Decentralized composting of organic waste	6th Indo-German Frontiers of Engineering Symposium Organized by Alexander Von Humboldt Foundation Germany and DST India, Potsdam, Germany	22-25 May, 2014	None
Varma, V.S., Pankaj, S.K., Singh, W.R., Singh, J., Kalamdhad, A.S.	Evaluation of bioavailability of heavy metals and nutrients during agitated pile composting of green phumdi	National Conference on Sustainable Development of Environmental System, Centre for the Environment, IIT Guwahati	20-21 June, 2014	None
Kanekar, H., Vishan, I., Kalamdhad, A.S.	Microbial succession, stability and maturity analysis of rotary drum composting of water hyacinth	National Conference on Sustainable Development of Environmental System, Centre for the Environment, IIT Guwahati	20-21 June, 2014	None
Vishan, I., Senthilkumar, S., Kalamdhad, A.S.	Isolation and biosorption of metal during rotary drum composting of water hyacinth	International Conference on Environment and Energy Jawaharlal Nehru Technological University Hyderabad	15-17 Dec., 2014	None
Dhamodharan K., Kalamdhad, A.S.	Anaerobic digestion of institutional food waste with poultry dung and rhinoceros dung as inoculums	International Conference on Environment and Energy Jawaharlal Nehru Technological University Hyderabad	15-17 Dec., 2014	None
Varma, V.S., Ramu, K., Kalamdhad, A.S.	Changes in physico-chemical parameters during pile composting of vegetable waste operated at agitated, passive and forced aerated condition	International Conference on Environment and Energy Jawaharlal Nehru Technological University Hyderabad	15-17 Dec., 2014	None
Dhamodharan K., Kalamdhad, A.S.	Methane production from digestion of food waste using goat and piggery dung as inoculums	2nd Bioprocessing INDIA Conference, Institute of Chemical Technology Mumbai	17-20 Dec., 2014	None
Pradhan, B.	Corrosion behavior of reinforced concrete exposed to sodium chloride solution and composite sodium chloride-sodium sulfate solution	Structural Engineering Convention 2014 (SEC 2014), IIT Delhi	December 22 – 24, 2014	
Shaheen, F., and Pradhan, B.	Electrochemical behaviour of steel in contaminated concrete powder solution extracts	Structural Engineering Convention 2014 (SEC 2014), IIT Delhi	December 22 – 24, 2014	

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Basha, S.H., and Kaushik, H.B.	Non-linear Behavior of Weak Brick-Strong Mortar Masonry in Compression	Proceedings of Structural Engineering Convention (SEC 2014)	22-24 December 2014	none
Deori, S., Choudhary, R., Tiwari, D., and Gangopadhyay, S.	Evaluation of Flexible Pavement Performance using Laser Based Multifunction, Automated Road Survey System	The 14th Annual International Conference on Asphalt, Pavement Engineering and Infrastructure	11-12 February 2015	14
Choudhary, R., Julaganti, A., and Banerji, A.K.	Effect of Compaction Temperature on Mechanical Properties of Modified Binder Mixes	The 14th Annual International Conference on Asphalt, Pavement Engineering and Infrastructure	17-18 October 2014	657-666
Choudhary, R., Kaulgud, H.S., and Julaganti, A.	Mix Design of Recycled Mixes Using Warm Mix Asphalt Additive Sasobit®	The 14th Annual International Conference on Asphalt, Pavement Engineering and Infrastructure	17-18 October 2014	862-869
Julaganti, A. & Choudhary R	Evaluation of Volumetric Properties of Bituminous Mixes with Evotherm	International Conference on Sustainable Civil Infrastructure organized by IIT Hyderabad and ASCE India Section	17-18 October 2014	694-702
Deori, S., Tiwari, D., Choudhary, R., & Gangopadhyay, S.	HDM-4 Pavement Deterioration Modeling for Ahmedabad Vadodara Expressway	International Conference on Sustainable Civil Infrastructure organized by IIT Hyderabad and ASCE India Section	17-18 October 2014	Page 862-869
Singh, P. and Choudhary, R.	Determination of Mixing and Compaction Temperatures of Asphalt Concrete Mixes by Density Analysis	International Conference on Sustainable Civil Infrastructure organized by IIT Hyderabad and ASCE India Section	17-18 October 2014	694-702
Patel, S. K. and Singh, B.	Strength and stiffness development of fibre-reinforced lateritic soil	Seventh International Congress of Environmental Research, ICER-14	Dec. 2014	Paper no. T-230, 10 pp.
Das, T. and Singh, B.	Experimental study on influence of waste tyre fibres on strength of compacted clayey soil-fly ash mixes	Seventh International Congress of Environmental Research, ICER-14	Dec. 2014	Paper no. T-309, 11 pp.
Patel, S. K. and Singh, B.	Models for predicting shear strength of fiber-reinforced soils	3rd International Conference on Sustainable Innovative Techniques in Architecture, Civil & Environmental Engineering, SITACEE-2014	April 2014	Vol. 1, pp. 335-342
Patel, S. K. and Singh, B.	Improvement in strength characteristics of fibre reinforced sandy soil	5th Young Indian Geotechnical Engineers Conference, SIYGEC	March 2015	Vol. 1, pp. 190-193
Patel, S. K. and Singh, B.	Modification of strength behaviour of sandy soil with synthetic fibre	Indian Geotechnical Conference, IGC-2014	Dec. 2014	Vol. 1, pp. 683-690
Deb, T. K. and Singh, B.	Lateral load carrying capacity of monopod bucket foundation in sand	North East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2014	Oct. 2014	Paper no. 6, 6 pp.

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Patel, S. K. and Singh, B.	Influence of glass fibre inclusion on strength characteristics of a sandy soil	North East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2014	Oct. 2014	Paper no. 1, 6 pp.
N. Sharma and K. Dasgupta	Review of Seismic Soil-Structure Interaction with Pile Foundation	UKIERI Workshop on Seismic Requalification of Pile Supported Structures (SRPSS)	07-09 January 2015	None
S. K. Sahu, N. Sharma and K. Dasgupta	Influence of Modeling of RC Structural Walls on Dynamic Analysis of Wall-Frame Buildings	10th US National Conference on Earthquake Engineering, USA	24-28 July 2014	Paper ID 1312
P. Sharma and K. Dasgupta	Modal Pushover Analysis of RC Frame Building with Staircase and Elevator Core	10th US National Conference on Earthquake Engineering, USA	24-28 July 2014	Paper ID 1017
Ghosh, B. and Sreeja, P.	Comparative study of double ring and tension infiltrometers to measure infiltration properties and hydraulic conductivity	HYDRO-2014, ISH, NIT Bhopal, India	Dec 18-20	-
Kulkarni, V. V., Golder, A. K. and Ghosh, P. K.	Removal Of Pb(II) by Weak And Strong Acidic Cation-Exchange Resins: Kinetic And Thermodynamic Studies	Chemcon	2014	ES/0050
Brahmacharimayum, B. and Ghosh, P. K.	Sulfate Reduction in a Fixed Film Anaerobic Reactor under Shock Loading Conditions	International Conference on Chemical, Biological and Environmental Engineering. Paris, France	September 15-16, 2014	APCBEE; Procedia, PII: S2212-6708(14). 2014
Rao, P. R., Ngullie N., Golder, A. K. and Ghosh, P. K.	. Arsenic Removal from contaminated water BY ion exchange, electro membrane and electro-chemical ion exchange processes	International Conference in Substantial Environmental technology 2014 (ICSET 2014). Dubai, UAE	August 22-22, 2014	-
Mishra, Anil Kumar and Dutta, Jagori	A Study on the Effect of Salt on the Behaviour of Compacted Bentonite	7th International Congress on Environmental Geotechnics	10-14 November, 2014	1531-1538
Mishra, Anil Kumar and Dutta, Jagori	Influence of heavy metals on the geotechnical behaviour of compacted bentonite	Indian Geotechnical Conference, Kakinada	18-20 December, 2014	1531-1538
Srikanth, V and Mishra, Anil Kumar	Influence of heavy metals on the geotechnical behaviour of compacted bentonite	International Conference on Sustainable Civil Infrastructure, Hyderabad, India	17-18 October, 2014	1531-1538
Krishanu Mukherjee, Anil Kumar Mishra	Performance enhancement of sand-bentonite mixture due to addition of fiber and geo-synthetic clay liner	Indian Geotechnical Conference, Kakinada, India	18-20 December, 2014	1531-1538
Barman Swapnali, and Bhattacharjya, Rajib Kumar,	Sensitivity of snow covered area of Brahmaputra river basin to temperature	THA 2015: International Conference on Climate Change and Water & Environment Management in Monsoon Asia	January 28-30, 2015	--

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Borah Triptimoni, and BhattacharjyaRajib Kumar	Identification of Unknown Pol- lution Sources in Groundwater Aquifer using ANN-GA based Simulation-Optimization Model	HYDRO-2014, ISH, NIT Bhopal	Dec 18-20, 2014	--
Ghosh, B. and Sreeja, P.	Comparative study of double ring and tension infiltrometers to measure infiltration properties and hydraulic conductivity	HYDRO-2014, ISH, NIT Bhopal	Dec 18-20 2014	--

Book Chapters

Name of Author/s	Chapter	Book	Pub- lisher	Vol, Iss	Page No.	ISBN	Year
Basha, S.H., and Kaushik, H.B.	Non-linear Behavior of Weak Brick-Strong Mortar Masonry in Compression	Advances in Struc- tural Engineering: Materials	Spring- er	3	-	978-81- 322-2187-6	2015
Ghosh, A., Pak- shirajan, K. and Ghosh, P. K.	Bioremediation of perchlo- rate contaminated environ- ment	Biological Reme- diation of Explosive Residues	Spring- er	-	163- 178	978-3-319- 01082-3	2014

CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. A. Murali Krishna	5th Indian Young Geotechnical Engineers Conference	Vadodara	14-15 March 2015	National
Dr. A. Murali Krishna	6th International Geotechnical Symposium on Disaster Mitiga- tion in Special Geoenvironmental Conditions	IIT Madras	January 21-23, 2015	International
Dr. A. Murali Krishna	Indian Geotechnical Conference 2014	Kakinada	18-20 December 2014	National
Dr. A. Murali Krishna	Geo-Innovations	IISc Bangalore	30-31 October 2014	National
Dr. Rajan Choudhary	Professor Training Course	National Centre for Asphalt Technology (NCAT), Auburn Univer- sity, Alabama, USA	16-20 June 2014	International
Dr. Rajan Choudhary	The 14th Annual International Conference on Asphalt, Pave- ment Engineering and Infrastruc- ture	Liverpool Centre for Materials Technol- ogy Liverpool, United Kingdom	11-12 February 2015	International
Prof. S.K. Deb	5th Asia Conference on Earth- quake Engineering	Taipei, Taiwan	Oct 16-18, 2014	International
Kaustubh Dasgupta	UKIERI Workshop Seismic Requalification of Pile Supported Structures (SRPSS)	IIT Guwahati	7-9 January 2015	National
Dr. Anil Kumar Mishra	7th International Congress on Environmental Geotechnics	Melbourne, Australia	10-14 November, 2014	International

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Prof. Rajib Kumar Bhattacharjya	THA 2015: International Conference on Climate Change and Water & Environment Management in Monsoon Asia	Bangkok, Thailand	January 28-30, 2015	International
Moharana S. and Dutta S.	"Hyperspectral remote sensing of paddy crop using in-situ measurement and clustering technique", The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, ISPRS Technical Commission VIII Symposium	Hyderabad, India	9-12 December 2014	International
Rupasree Panda, Suman Kumar Padhee, and Subashisa Dutta	"GLOF study in Tawang river basin, Arunachal Pradesh, India", Operational Remote Sensing Applications - Opportunities, Progress & Challenges, ISPRS Technical Commission VIII Symposium	Hyderabad	9-12 December 2014	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. A. Murali Krishna	Seismic Concerns in Geotechnical Engineering and Solutions	Jorhat Engineering College, Jorhat.	Jorhat	11 February, 2015
Dr. A. Murali Krishna	Seismic Design Considerations for Pile Foundations	Jorhat Engineering College, Jorhat.	Jorhat	11 February, 2015
Dr. Ajay Kalamdhad	High rate Composting of Organic Fraction of Municipal Solid Waste	Indian institute of Technology Guwahati, Guwahati, India	Centre for the Environment	20-21 June, 2014
Dr. Ajay Kalamdhad	Solid Waste Management & Disposal Strategies	Royal School of Engineering and Technology Guwahati	Department of Civil Engineering	1 November, 2014
Dr. Ajay Kalamdhad	Solid Waste Management – An Integrated Approach	IIT Guwahati	Department of Civil Engineering	9-13 March, 2015
Dr. Ajay Kalamdhad	Energy from Waste	IIT Guwahati, India	Department of Chemical Engineering	23-27 March 2015
Dr. Rajan Choudhary	Use of Industrial Wastes as Fillers	Liverpool Centre for Materials Technology	Liverpool, UK	12 February 2015
Prof. S.K. Deb	Passive and Active Control of Structural Systems	IIT Delhi	New Delhi	Dec. 12 2014
Prof. S.K. Deb	Historical Development and Current Status of Earthquake Engineering in India	NCRE	Taipei, Taiwan	Oct 13, 2014
Prof Arup Kumar Sarma	Water Engineering and Management (WEM) field of study	AIT's School of Engineering and Technology (SET)	Thailand	2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./ Univ./Org.	Purpose/ Name of Lecture	Date	Remarks
Prof. Partha Chakroborty	IIT Kanpur	Optimization in Traffic Engineering	23 February 2015	Invited lecture in QIP Course "ITTE-2015" organized by Department of Civil Engineering, IIT Guwahati
Prof. K. V. Krishna Rao	IIT Bombay	Sustainable Urban Transportation Planning	23 February 2015	
Dr. S. Velmurugan	CRRI-CSIR new Delhi	Road Safety Audit	24 February 2015	
Dr. Devesh Tiwari	CRRI-CSIR new Delhi	Pavement Management and Evaluation	26 February 2015	

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of Participants
Dr. A. Murali Krishna	UKIERI Workshop on Seismic Requalification of Pile supported structures	UKIERI Project	7-9 January 2015	International	110
Dr. Ajay Kalamdhad	Solid Waste Management- Challenges and Opportunities	TEQIP II, MHRD	12-14 January 2015	National	50
Dr. Ajay Kalamdhad	Symposium on Management and Procurement of Integrated Waste Management System	TEQIP II, MHRD	06-07 Feb. 2015	National	70
Dr. BuluPradhan and Dr. Arun Ch. Borsaikia	Short term refresher training program on 'Concrete Technology'	WSSO, PHED, Assam	11-13 February 2015	National	17
Dr. Rajan Choudhary and Dr. Akhilesh Kumar Maurya	QIP Short Term Course Innovative technologies in Transportation Engineering from 5	AICTE	23-27 February 2015	National	23
Dr. Akhilesh Kumar Maurya and Dr. Rajan Choudhary	Review Workshop on Indian Highway Capacity Manual (RICHAM-2015)	CSIR-CRRI New Delhi	February 20-22, 2015	National	65
Dr. Anil Kumar Mishra	North East Students Geocongress on Advances in Geotechnical Engineering- 2014	Indian Geotechnical Society, IITG, AEC	18 October 2014	National	130
Dr. Anil Kumar Mishra	QIP Short term course on Challenges and Recent Advances in Geotechnical Engineering Research and Practices	AICTE	9-13 March 2015	National	17

AWARDS AND HONOURS

Dr. Abhishek Kumar won the INSPIRE FACULTY AWARD 2014 given by Department of Science and Technology, Government of India.

Dr. A. Murali Krishna was elected as Executive Committee Member, Indian Geotechnical Society, New Delhi for the term 2015-2016.

STUDENTS' ACHIEVEMENTS

Mr. V. Sudharsan Varma, research scholar, won best poster award for paper "Varma, V.S., Pankaj, S.K., Singh, W.R., Singh, J., Kalamdhad, A.S., 2014. Evaluation of bioavailability of heavy metals and nutrients during agitated pile composting of green phumdi. Proc. National Conference on Sustainable Development of Environmental System (NCOSDOES-2014), 20-21 June, Centre for the Environment, Indian Institute of Technology Guwahati, Guwahati.

Protik Biswas (MTech student) is carrying out some part of his MTech. project work on Seismic Soil Structure Interaction Modelling for Bridges at Technical University, Dresden, Germany, under DAAD Sandwich programme.

Sreya Dhar (Ph.D. student) is carrying out some part of her Ph.D. thesis work on Seismic Soil Structure Interaction for Integral Bridges at Politecnico Di Milano, Dresden, Germany, under Erasmus Mundus programme.

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1	Barua, Gautam	IIT Kharagpur	Professor	Flow through porous media
2	Bharat, T. Venkata	IISc Bangalore	Assistant Professor	Behavior of unsaturated soils during infiltration & drainage, Settlement behavior of ultra-soft soils and mine tailings, Contaminant transport through landfill liners, Mineralogical aspects of clays, Inverse analysis of geotechnical & geo-environmental engineering problems
3	Bhattacharjya, Rajib Kumar	IIT Kanpur	Professor	Water Resources System Management, Genetic Algorithms, Artificial Neural Networks
4	Chakraborty, Arunasis	Trinity College, Dublin, Ireland	Associate Professor	Dynamic and Random Vibration, System identification and damage detection, Wavelet analysis
5	Chakraborty, Saswati	IIT Bombay	Professor	Water and Wastewater Treatment, Biodegradation of Industrial Wastewater, Removal of Heavy Metals from Wastewater
6	Choudhury, Rajan	IIT Roorkee	Associate Professor	Pavement Analysis and Design, Highway Construction and Quality Control, Pavement Material Characterization, Pavement Evaluation and Maintenance, Traffic Engineering
7	Das, Sandip	IIT Kanpur	Assistant Professor	Earthquake Engineering, Structural Dynamics, Random Vibration
8	Dasgupta, Kaustubh	IIT Kanpur	Assistant Professor	Earthquake Engineering, Design of Reinforced Concrete Structures, Retrofitting of Structures
9	Deb, SajalKanti	IIT Roorkee	Professor	Passive and semi-active control, Performance based seismic design, System identification & structural health monitoring, Seismic damage assessment
10	Dey, Arindam	IIT Kanpur	Assistant Professor	Geosynthetic Reinforced Foundation Beds, Geotechnical Lumped Parameter and Continuum Mechanics Modelling, Parameter Estimation of Geotechnical Models, Optimization, GA, ANN and Soft Computing in Geotechnical Engineering, Ground Modification and Improvement Practices, Soil-Structure-Foundation Interaction, Reinforced Soil Structures, Landslides and Slope Stability Analysis, Seismic and Ambient Health Monitoring of Geotechnical Structures, Reliability and Uncertainty Analysis in Geotechnical Engineering, Forensic Investigation in Geotechnical Engineering, Subsurface Profiling and Soil Investigation, Soil Dynamics and Earthquake Engineering
11	Dutta, Anjan	IIT Delhi	Professor	Finite Element Mesh Generation, Optimization, Control, Health Monitoring and Retrofitting of structures
12	Dutta, Subashisa (Head of the Department)	IIT Kanpur	Professor	Meso-Scale Distributed hydrological modelling, Satellite Remote Sensing and GIS for Water resources Management, Computational river hydraulics and its applications, Watershed and Irrigation Management

Sl. No.	Name	PhD	Designation	Areas of Interest
13	Gandhi, Indu Siva Ranjani (Joined on 07.05.2014)	IIT Madras	Assistant Professor	Light weight concrete (Foam concrete), Durability related studies on concrete, Shrinkage behaviour and thermal performance of concrete, Sustainable materials in construction, Lean concepts of construction, Construction management
14	Garg Ankit (Joined on 27.04.2015)	Hong Kong University of Science and Technology	Assistant Professor	Bio-Geotechnology, Soil-Root-Water Interaction
15	Ghosh, Pranab Kumar	IIT Kharagpur	Associate Professor	Water treatment for domestic and industrial use, Domestic and Industrial wastewater treatment, Sludge treatment by physicochemical and biological process
16	Gokhale, Sharad B.	IIT Delhi	Professor	Air Pollution and Environmental Noise
17	Goyal, Manish Kumar	IIT Roorkee	Assistant Professor	Stochastic Hydrology and Distributed Hydrological Modelling, Hydro-climatology and Statistical Downscaling, Irrigation Management and Crop Modelling Applications, Multivariate Statistical Analysis, Machine Learning Models and Data Mining
18	Hazra, Budhaditya (Joined on 28.11.2014)	University of Waterloo, Canada	Assistant Professor	Deterministic and Stochastic Structural Dynamics, System Identification, Blind source separation, Time-frequency analysis, Vibration based condition monitoring
19	Jawed, Mohammad	IIT Kanpur	Professor	Biological Processes, Anaerobic Wastewater Treatment, Heavy Metal Removal and Recovery, Water Treatment and Supply, Domestic & Industrial Wastewater Treatment
20	Kalamdhad, Ajay	IIT Roorkee	Associate Professor	Solid waste management, Mechanical composting and vermicomposting, Analysis of solid wastes
21	Kartha, Suresh A.	IIT Kanpur	Associate Professor	Flow and transport through porous media, Heap leaching, Hydrology, Numerical modelling
22	Kaushik, Hemant B.	IIT Kanpur	Associate Professor	Earthquake Resistant Design, Nonlinear Behaviour of Structures, Retrofitting of Structures, Finite Element Modeling
23	Kota, Sri Harsha (Joined on 20.08.2014)	Texas A&M University, College Station, USA	Assistant Professor	Formation, transformation and chemical mechanisms of air pollutants near roadways, Development of air quality models, Estimation of emission factors, Source apportionment of air pollutants, Regional air quality
24	Kumar, Abhishek (Joined on 12.05.2014)	Indian Institute of Science, Bangalore	Assistant Professor	Seismic hazards of Urban Centers, Ground Motion Simulations, Liquefaction, Seismic hazard for Nuclear Power Plants, Site response studies for deep basins, Multichannel Analysis of Surface Waves (MASW) and Ground Penetration Radar (GPR), Subsoil Investigations and Geotechnical Engineering, Soil Dynamics, Dynamic testing's on Piles, Ground Improvement, Reinforced earth structures, Deep Excavations
25	Kumar, Bimlesh	IISc Bangalore	Associate Professor	Small scale studies of mixing tanks, Experimental Studies of Aeration Systems, Sediment Transport analysis, Pipeline analysis, CFD simulation, Surge analysis
26	Mahanta, Chandan	Jawaharlal Nehru University, New Delhi	Professor	Water Quality, Sediment Dynamics in Fluvial Systems, Environmental Impact, Risk Assessment and Management, Environmental Geo-informatics, Engineering Geology

Sl. No.	Name	PhD	Designation	Areas of Interest
27	Mallikarjuna, Chunchu	IIT Delhi	Associate Professor	Traffic flow theory and Modeling, Traffic data collection and analysis, Travel demand modeling
28	Maurya, Akhilesh Kumar	IIT Kanpur	Associate Professor	Driver behavior, Traffic flow theory and modeling, Traffic engineering
29	Mishra, Anil Kumar	Kyushu University, Fukuoka, Japan	Assistant Professor	Chemical compatibility studies of soil-bentonite mixtures, Waste (municipal, industrial and hazardous) management and disposal, Unsaturated soil mechanics
30	MuraliKrishna, Adapa	IISc Bangalore	Associate Professor	Soil Investigation, Reinforced Soil Structures, Geosynthetics and Ground Improvement, Earthquake Geotechnical Engineering
31	Pradhan, Bulu	IIT Delhi	Associate Professor	Durability studies in concrete, Corrosion of steel reinforcement and protection measures, High performance concrete, Mass transport in cementitious materials, Non-destructive testing of concrete structures, Construction management
32	Ryntathiang, Teiborlang L.	IIT Kharagpur	Associate Professor	Pavement Materials, Precast Concrete Block Pavement, Cast In-Situ Concrete Block Pavement
33	Sarma, Arup Kumar	Gauhati University, Guwahati	Professor	Modelling & simulation in Free Surface Flow, Heuristic Method in Reservoir Optimization, GIS based Watershed Modelling
34	Sharma, Hrishikesh	Texas A&M University, USA	Assistant Professor	Impact and Blast Resistant Design, Reliability Analysis and Performance Based Engineering, Design and Optimization of Protection Measures
35	Shelke, Amit Balasaheb	The University of Arizona, USA	Assistant Professor	Ultrasonic wave propagation, Acoustic-Impact detection, Non-destructive testing
36	Siddagangaiah, Anjan Kumar (Joined on 09.02.2015)	IIT Madras	Assistant Professor	Analysis and Design of Pavement Structures, Pavement Material Characterization, Pavement Construction and Recycling, Pavement Management Systems, Pavement Evaluation using NDT, Forensic Investigations of Pavement Failures
37	Singh, Arvind K.	IISc Bangalore	Professor	Information Technology in Construction Engineering, Object-Oriented Programming, Constitutive modeling
38	Singh, Baleshwar	IIT Delhi	Professor	Marine Geotechnology, Modelling of Onshore & Offshore Foundations, Soil Stabilization & Ground Modification, Pavement Subgrade & Site Characterization
39	Singh, Konjengbam Darunkumar	Southampton University	Associate Professor	Structural Analysis and Design, Finite Element Method, Fracture and Fatigue Mechanics
40	Singh, Laishram Boeing	IIT Madras	Associate Professor	Public Private Partnerships, Risk Management, Construction Management
41	Sreedeeep, S.	IIT Bombay	Associate Professor	Behavioral studies on unsaturated porous media, Characterization of geo-materials (soils and rocks), Thermal characteristics of geo-materials, Contaminant transport and retention studies, Waste containment studies, Landslides
42	Sreeja, Pekkat	IIT Bombay	Associate Professor	Urban Flood Modeling, Modelling and Control of Open Channel Flows, Infiltration and artificial recharge, Stochastic Hydrology, River Mechanics
43	Talukdar, Sudip	IIT Kanpur	Professor	Structural Dynamics, Bridge Engineering, Wind induced vibration & control, Non destructive techniques

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1995

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in
o Computer Science and Engineering

Master of Technology (MTech) in
Computer Science and Engineering

Dual Degree (MTech + PhD) in
Computer Science and Engineering

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 7
- Associate Professor: 5
- Assistant Professor: 15
- Honorary Professor: 3
- Visiting Professor: 1

NUMBER OF NEW FACULTY JOINED:

- Assistant Professors: 1
- Visiting Professor: 1

LABORATORIES:

i) Hardware Lab.: The Department hardware laboratory is equipped with educational tools to promote better understanding of computer hardware and peripherals among the students. 8085/86 Microprocessor Trainer kits and 8031 Microcontroller kits are used to provide hands on experience to students about basic hardware. New PIC based microcontrollers and FPGA boards have also been acquired. These are supported by Colour Logic Analyzer and Pattern Generator, Function/Arbitrary wave generator, digital oscilloscopes, Wireless Transmitter/Receiver pairs, Data acquisition/ Switch units, TDM pulse code modulator/transmitter and demodulator/receiver and other similar essentials.

ii) Robotics Lab.: The Department boasts of a separate lab for Bio-inspired Robotics which is funded by the DST FIST scheme. The lab is equipped with Lego NXT Mindstorms and NI robots and sensor nodes, GPS, cameras and a wide range

of sensors. A CSL Workstation for Speech allows for studies in speech synthesis and processing for robots. The lab has developed Typhon - a mobile agent platform based on LPA Prolog's Chimera Agent System which can be used to realize Networked Robotics and an Intelligent Internet of Things. The platform supports programming and development of mobile agents that can migrate, clone and even evolve in real or overlay networks. It can also support specific robotic hardware-in-the-loop and is available for download from the Lab's website (www.iitg.ernet.in/cse/robotics). Two patents have been filed based on the work done at this lab in June 2012.

iii) Aakash Lab. (Project): This lab is part of a bigger project and is dedicated to the development of useful mobile device applications and content for use with Aakash tablets. Teachers can blend pedagogy with technology, e-contents, etc. using application developed for such tablets. Sample projects, help, etc. are currently available for download at the link <http://www.iitg.ernet.in/cseweb/aakashlab/>

iv) Library: The Department has an exclusive library cum reading room equipped with more than 4000 books/CDs and journals published by IEEE, ACM, etc.

v) USP of the Department

the Department encourages open interactions with all faculty members and non-teaching staff;

individual workspaces allotted to each student: Each student registered with the Department is provided with a cubicle and computer; and

24x7x365 access to all facilities and lab. in the Department.

vi) User Centric Computing and Networking Lab.: Spurred by the staggering amount of multimedia content on the web, cheaper consumer electronic devices, better access network connectivity and virtually limitless storage facility, there is remarkable increase in the use of portable devices for content delivery. These devices range from smart watches to complex table-top interactive displays. There has also been a paradigm shift in how, where and when the users access and consume the content. This poses several challenges in the design of computing and networking platforms to

improve the experience of the users.

Often overlooked, is the fact that the devices are used by people with diverse background in terms of age, education, culture, gender and so on. Consequently, it is very important to design applications for computing devices that caters to heterogeneous user groups. The user-centric computing paradigm (otherwise known as the human-computer interaction) therefore is indispensable in the design of such devices and applications. On one hand an increase in the number of users accessing content on mobile devices poses new challenges to the designers of web applications. On the other hand, mobility and unstable end-to-end bandwidth in wireless networks poses serious challenges to ensure good quality of content delivery.

Our group envisions the pursuit of these challenges in content delivery, and the development of technologies to ensure good quality of experience to the content consumers on heterogeneous devices and networks. We aim to address the challenges that arise in the development of user-centric networked applications, both from theoretical as well as practical perspectives.

This lab is equipped with Tobii eye tracker (model: X2-60) and associated software for usability studies, Mobile Devices (Android, iOS, Windows), Laptops, Tablets, Smart Phones, SDK Tools for Android, iOS, Windows Application Development, Desktop PCs, High performance computing servers, Wireless and Wired Gigabit Routers, Reconfigurable routers (built using 1Gbps Digilent NetFPGA Cards).

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The major areas in which research is being conducted

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Gautam Barua	Netapp Faculty Fellowship	Netapp India Pvt Ltd, Bengaluru	12.50	-	1.5
T Venkatesh	ICT based framework to enhance teaching and learning experience in large classroom	DIT, MCIT, Gol	95.00	Samit Bhattacharya	2
Santosh Biswas	Virtual Lab. Integration	MHRD	280.00	Ratnajit Bhattacharjee	3

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof Pradeep Yammiyavar (DoD)	Standardisation of Virtual Keyboards in Indic Languages	DIT, MCIT, Gol	20.00	Samit Bhattacharya	Till June 2015

includes: Algorithms; Computational Geometry; Systems Biology (Bio-computing); Bio-inspired Robotics and related algorithms; Intelligent Mobile Agent Based Cyber-physical Systems; Human-Computer Interactions; Speech Processing; Natural Language Processing; Multimedia: Image and Video Processing; Machine Learning; Information Retrieval; Data Mining; Web Mining; Formal Verification; Embedded Systems; CAD for VLSI; Multi-processor Computer Architecture; Real-time Systems and Scheduling; Computer Security; Networks; Operating Systems; Distributed Systems. The faculty members of the Department are also involved in sponsored research and consultancy in several areas.

The Department functions as a nodal centre for the ERNET, a Resource Centre for Indian Language Technology Solutions (RCILTS) and a Resource Centre for the Information Security Education & Awareness Programme.

The Department collaborates with the following entities in Industry/Academia: Microsoft University Relations, Intel India, Tata Consultancy Services Ltd., Technical University of Ilmenau Germany, ISI Kolkata, IIT Kanpur, IIT Madras, CDAC Kolkata, Carl von Ossietzky University, Oldenburg, Germany, OFFIS, Oldenburg, Germany and Institute for Real-Time Computer Systems, Technical University of Munich, Germany.

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

User Centric Computing and Networking Lab (PIs: Dr Samit Bhattacharya and Dr T Venkatesh) is started in the department. Aim of this lab is to address challenges that arise in the development of user-centric applications, both at theoretical as well as practical levels.

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Santosh Biswas	On line Testing of Complex VLSI Circuits using Failure Detection and Diagnosis Theory of Discrete Event Systems.	DIT	124.00	Prof. S Nandi, Dr. J K Deka	Feb 2013- Jan 2016
Santosh Biswas, Dr. J K Deka, Dr. A Sur	Remote Triggered Digital System Laboratory under Remote Triggered Lab.	MHRD	49.00		2011-2015
Dr P K Das	Development of Pronunciation Lexicon based on Experimental Study of Phonetics and Phonemics of Indian Languages	DIT	37.66	---	4 Years 6 months
Dr. Hemangee K. Kapoor	Reducing Cache access time in Tild Chip Multiprocessors	DIETY	79.00	Dr. Gaurav Trivedi (EEE)	3 Years
Prof. Pinaki Mitra	PEDAGOGY(Computer Graphics & Multimedia)	IIT/KGP	5.00	Prof. Samit Bhattacharya	3 Years
SRM Prasanna (PI)	Text to Speech Synthesis for Assamese and Manipuri Languages	Deity	109.00	Sanasam Ranbir Singh	3 Years
Sanasam Ranbir Singh & T Venkatesh	Setting up Aakash Application Development Lab	MHRD	55.00		2 Years
Dr. Arijit Sur	Design, Development of a Watermarking System for Scalable Video Authentication	DIT	102.051		Feb 2013 – Jan 2016
Dr. Arijit Sur	Shot Based Video Watermarking For Very Low Bit Rate Video	DST	6.40		2013 – 2015
Prithwijit Guha	Multi-Modal Broadcast Analytics - Structured Evidence Visualization for Events of Security Concern	DeitY	139	Sanasam Ranbir Singh, S Nandi, S. R. Mahadeva Prasanna	March 2013 – March 2016
Shakuntala Mahanta	Digital preservation and analysis and technology development of language of the North East	DeitY	239	S. R. Mahadeva Prasanna, S Nandi, Priankoo Sarma	February 2013 – January 2016
S. R. Mahadeva Prasanna	Speech based multi-level person authentication system	DeitY	170	S Nandi, R Sinha	April 2012 – July 2015

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Samit Bhattacharya	Modelling visibility of web page objects	DST	3.35	NA	2 years
Prof. S Nandi	Design, Development and Verification of Network Specific Intrusion Detection System using Failure Detection and Diagnosis of Discrete Event Systems	DIT New Delhi	111.78	Dr. Santosh Biswas	4 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. Pinaki Mitra	NPTTEL(Computational Number Theory & Cryptography)	IIT Chennai	3.00		

CONSULTANCY PROJECTS

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Gautam Barua	IT Consultant	GIC of India Ltd, Mumbai	5.50 per year	-	Yearly renewal
Gautam Barua	IT Consultant	IFFCO-Tokio General Insurance Ltd., Gurgaon	10.00	-	2 years
Gautam Barua	IT Consultant	Commissioner of Taxes, Govt of Assam, Guwahati	As per work volume	-	Yearly renewal
Gautam Barua	IT Consultant	NEEPCO Ltd, Shillong	5.00 per year	-	Yearly renewal
Santosh Biswas, Prof. S Nandi, Dr. A Sur	Development of Framework for Logging and Analysis of Network Traffic to secure IT infrastructure	MCIT at Manipur University, CS dept. at Guwahati University, IT dept. at Assam University	15.00		2009-2014
Dr P K Das	Real-time Monitoring and Supportive Supervision of VHND and RI using Mobile Technology	UNICEF India	25.26	Prof S B Nair	12 months
Dr P K Das	Enhancing Quality of Care and Treatment of Children Living with HIV through Off-the-grid Telemedicine in North-East India	UNICEF India	20.14	--	12 months
Dr. V. Vijaya Saradhi	Interaction with Inside View	InsideView, Hyderabad	1.50	None	6 months
Dr. V. Vijaya Saradhi	Interaction with InsideView	InsideView, Hyderabad	1.50	None	6 months (renewal every 6 months)
Arnab Sarkar	Development of Curriculum Document for the course "Data Structures and Algorithms". (Under: Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-Learning, National Mission Project on Education through ICT)	MHRD, Govt. of India	5.00	Dr. Arijit Mondal and Prof. P.P. Chakrabarti	1.5 Years

RESEARCH PUBLICATIONS**Journals (International / National)**

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Lipika Deka and Gautam Barua	Consistent Online Backup in Transactional File Systems	IEEE Transactions on Knowledge and Data Engineering	26-11	2676-2688	2014
Lipika Deka and Gautam Barua	Implementation and Evaluation of Consistent Online Backup in Transactional File Systems	Computer Society of India Journal of Computing	2-3	-	2014
Ananya Jana and Samit Bhattacharya	Design and Validation of an Attention Model of Web Page Users	Advances in Human Computer Interaction	-	-	2015
M. Agarwal, D. Pasumarthi, S. Biswas and S. Nandi	Machine Learning Approach for Detection of Flooding DoS attacks in 802.11 Networks and Attacker Localization	International Journal of Machine Learning and Cybernetics, Springer	-	-	2014
M. Agarwal, S. Biswas and S. Nandi	Advanced Stealth Man in The Middle Attack in WPA2 Encrypted Wi-Fi Networks	IEEE Communication Letters,	-	-	2015
P. Biswal and S. Biswas	A Polynomial Algorithm for Diagnosability of Fair Discrete Event Systems,	Systems Science and Control Engineering, Taylor and Francis	3-1	307-319	2015
Ramesh Singh, Sandip Chakraborty, Sushanta Karmakar	Concurrent deterministic 1-2 skip list in distributed message passing systems.	IJPEDS	30-2	135 – 174	2015
Subhrangsu Mandal, Sandip Chakraborty, Sushanta Karmakar	Distributed deterministic 1-2 skip list for peer-to-peer system	Peer-to-Peer Networking and Applications	8-1	63 – 86	2015
Sushanta Karmakar, A. Chandrakanth Reddy	An Improved Algorithm for Distributed Trigger Counting in Ring	Comput. J.	57-7	980 – 986	2014
Pinaki Mitra	Characterizing the Existence of P4	Research & Reviews: Discrete Mathematical Structures	1-3	39-41	2014
S Chakraborty, S Sarma and S Nandi	MAC Layer Channel Access and Forwarding in a Directional Multi-Interface Mesh Network	IEEE Transactions on Mobile Computing	14-3	565 – 578	2015
B K Patra, and S. Nandi	Effective data summarization for hierarchical clustering in large datasets	Knowledge and Information Systems	42-1	1 – 20	2015
S Chakraborty, S Chakraborty, S Karmakar and S Nandi	Dynamic Tree Switching for Distributed Message-Passing Applications	Journal of Network and Systems Management	23-1	1 – 40	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
A Sarma, S Chakraborty, S Nandi	Context Aware Handover Management: Sustaining QoS and QoE in a Public IEEE 802.11e Hotspot	IEEE Transactions on Network and Service Management	11-4	530 – 543	2014
S Chakraborty, S Chakraborty, S Nandi and S Karmakar	Reliability in delay sensitive sensor networks with arbitrary node failures: Deployment and topology management	International Journal of Wireless Information Networks	21-4	262 – 279	2014
S Chakraborty and S Nandi	Selective greedy routing: Exploring the path diversity in backbone mesh networks	ACM/Springer Journal of Wireless Networks	20-7	1995 – 2017	2014
S Chakraborty, S Chakraborty, S Nandi and S Karmakar	ADCROSS: Adaptive Data Collection from Road Surveilling Sensors	IEEE Transactions on Intelligent Transportation Systems	15-5	2049 – 2062	2014
S Chakraborty and S Nandi	Evaluating Transport Protocol Performance over a Wireless Mesh Backbone	Performance Evaluation	79	198 – 215	2014
A Sarma, S Chakraborty, S Nandi and A Choubey	Context Aware Inter-BSS Handoff in IEEE 802.11 Networks: Efficient Resource Utilization and Performance Improvement	Wireless Personal Communications	77-4	2587 – 2614	2014
A Yadav, M Barooah, S Chakraborty and S Nandi	Vertical Handover over Intermediate Switching Framework: Assuring Service Quality for Mobile Users	Wireless Personal Communications, Springer	77-1	507 – 527	2014
P Swain, S Nandi, and P Bhaduri	Probabilistic Model Checking of IEEE 802.11 IBSS Power Save Mode	The International Journal of Wireless and Mobile Computing	7-5	465 – 474	2014
A Yadav, M Barooah, S Chakraborty, S Nandi and S Ahuja	Evaluation of End-to-End TCP Performance for Vertical Handover using Intermediate Switching Network	The International Journal of Communication Networks and Distributed Systems	12-3	327 – 351	2014
S De, S Nandi and D Goswami	Tuple Space Enhancements for Mobile Middleware	The International Journal of Communication Networks and Distributed Systems	12-3	299 – 326	2014
Shashi Shekhar Jha, W. W. Godfrey and Shivashankar B. Nair	Stigmergy based Synchronization of a Sequence of Tasks in a Network of Asynchronous Nodes	Cybernetics & Systems: An International Journal	45-5	373 – 406	2014
W. W. Godfrey, Shashi Shekhar Jha and Shivashankar B. Nair	On Stigmergically Controlling a Population of Heterogeneous Mobile Agents Using Cloning Resource	Transactions on Computational Collective Intelligence	XIV		2014
V. Vijaya Saradhi, Charly P Abraham	Incremental Maximum Margin Clustering	Pattern Analysis and Applications	-	-	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Sangeet Saha, Arnab Sarkar, Amlan Chakrabarti.	Scheduling Dynamic Hard Real-Time Task Sets on Fully and Partially Reconfigurable Platforms	IEEE Embedded Systems Letters	7-1	23-26	2015
Arijit Sur, Sista Venkat Madhav Krishna, Nilkanta Sahu, Shuvendu Rana	Detection of motion vector based video steganography	Multimedia Tools and Applications, Springer	-		2014
Swathi Karri, Arijit Sur	Steganographic algorithm based on randomization of DCT kernel	Multimedia Tools and Applications, Springer	-		2014
Shuvendu Rana, Nilkanta Sahu, Arijit Sur	Robust watermarking for resolution and quality scalable video sequence	Multimedia Tools and Applications, Springer	-		2014
Sibaji Gaj, Ashis Singh Patel, A. Sur	Object Based Watermarking for H.264/AVC Video Resistant to RST Attacks	Multimedia Tools and Applications, Springer	-		2015
Hari Prabhat Gupta, S.V.Rao, and T.Venkaatesh	Critical Sensor Density for Partial Coverage under Border Effects in Wireless Sensor Networks	IEEE Transactions on Wireless Communication	13-5		2014

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA (PUBLISHED AND ATTENDED)

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Gargi Priyadarshini, Ashish Anand	Inferring Disease Correlation from Healthcare Data	National Conference on Medical Informatics, AIIMS, New Delhi.	30-31 October, 2014	-
Madhusudhan Paul, Ashish Anand	Detection of Highly Overlapping Communities in Complex Networks	Fifth International Conference on Computational Systems-Biology and Bioinformatics, Singapore	10-12-Nov-2014	-
Rohit Tripathi and Gautam Barua	Dynamic Internet Pricing and Bandwidth Guarantees with Nash Equilibrium	APNOMS 2014, The 16th Asia-Pacific Network Operations and Management Symposium, National Chiao Tung University, Taiwan	September 17-19, 2014	-
Rohit Tripathi and Gautam Barua	Pricing with Bandwidth Guarantees for Clients with multi-ISP Connections	The 16th International Conference on Distributed Computing and Networking (ICDCN 2015), Goa	January 3-5 2015	-
Ingo Stierand, Philipp Reinkemeier and Purandar Bhaduri	Virtual Integration of Real-Time Systems Based on Resource Segregation Abstraction	Formal Modeling and Analysis of Timed Systems, FORMATS	September 2014	206-221
Pradeep Biswal and Santosh Biswas	Diagnosability in Stochastic Petri Net based DES Models	IEEE Mediterranean Conference on Control and Automation	June 2014	434 - 439
Kamaljeet Chauhan, Piyoosh P and Arnab Sarkar and Santosh Biswas	A Priori Overload Handling in ERfair Scheduled Embedded Systems: Hybrid Automata Approach	IEEE INDICON	December 2014	1-6

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Biswajit Bhowmik and J. K Deka and Santosh Biswas	A Scalable Test Strategy for Detection of Faulty Inter-switch Links in 2-D Mesh Networks-on-Chips	IEEE ANTS	December 2014	1-6
Pulkit Verma, Mayank Gupta, Tuhin Bhattacharya, Pradip K. Das	Improving Services using Mobile Agents-based IoT in a Smart City	International Conference on Contemporary Computing and Informatics (IC3I 2014) IEEE Conference Publications, Mysore	27-29 November 2014	107-111
Shantanu Sharma, Pradip K. Das	Reduced Feature Sets for Vowel Recognition	8th International Conference on Electrical and Computer Engineering (ICECE 2014) IEEE Conference Publications, Dhaka, Bangladesh	20-22 December 2014	116-119
Pinki Roy, Pradip K. Das, Sandeep Kumar Gupta	Comparison of SVMs and NNs approach for Automatic Identification of Indian Languages	5th International Conference on Electronics Engineering & Computer Science (IEMCOM 2014), Elsevier Science & Technology, Science City, Kolkata	28-29 August 2014	-
Girish G. N., Shrinivasa Naika C.L., Pradip K. Das	Effect of Modified Convolution on Local Descriptor based Face Recognition	Eighth International Conference on Image and Signal Processing (ICISP-2014), Elsevier Science & Technology, Bangalore	July 25-27, 2014	390-397
M Pant, B Dey and S Nandi	Multihop Balanced Energy Clustering for Wireless Sensor Network	Applications and Innovations in Mobile Computing (AIMoC 2015)	February 12-15, 2015	-
S Chakraborty and S Nandi	Controlling Unfairness due to Physical Layer Capture and Channel Bonding in 802.11n+s Wireless Mesh Networks	16th International Conference on Distributed Computing and Networking	January 2015	-
S Dutt, A Chauhan, R Bhadoriya, S Nandi and G Trivedi	A High-performance Energy-efficient Hybrid Redundant MAC for Error-resilient Applications	28th International Conference on VLSI Design and 14th International Conference on Embedded Systems	January, 2015	-
S Chakraborty and S Nandi	QoS Associated Path Selection in Wireless Mesh Networks	Eighth IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS) 2014	December 2014	-
T Sinam, IT Singh, P Lamabam, N N Devi and S Nandi	Early Detection of VoIP Network Flows based on Sub-Flow Statistical Characteristics of Flows using Machine Learning Techniques	Eighth IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS) 2014	December 2014	-
Bidyut Kr. Patra, Raimo Launonen, Ville Ollikainen and Sukumar Nandi	Exploiting Bhattacharyya similarity measure to diminish user cold-start problem in sparse data	Discovery Science 2014	October 2014	-
S Chakraborty and S Nandi	Evaluating Transport Protocol Performance over High Throughput Wireless Mesh Backbone: Do Existing Protocols Scale Well?	32st International Symposium on Computer Performance, Modeling, Measurement and Evaluation 2014	(IFIP Performance 2014), October 2014	-

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Diganta Baishya, Pradip K. Das	Improving Windows Tasks Recognizer for Assamese using Bigram Analysis	IEEE 4th International Conference on Audio, Language and Image Processing (ICALIP-2014), IEEE Conference Publications, Shanghai, China.	July 7-9, 2014.	470-475.
Diganta Baishya, Pradip K. Das	Effect of End Sections in Speech Recognition	International Conference on Advances In Engineering and Technology (ICAET-2014), Roorkee, India.	May 24-25, 2014	21-25
S. Das and H. K. Kapoor	Exploration of Migration and Replacement Policies for Dynamic NUCA over Tiled CMPs	28th International Conference on VLSI Design (VLSID)	2015	-
M. LakshmiPrasad, S. Das and H. K. Kapoor	An Approach for Multicast Routing in Networks-on-Chip	13th International Conference on Information Technology (ICIT)	2014	-
V. Naik, S. Das and H. K. Kapoor	RT-DVS for Power Optimization in Multiprocessor Real-time Systems	13th International Conference on Information Technology (ICIT)	2014	-
A. Kumar and H. K. Kapoor	Modelling and Analysis of Wireless Communication over Networks-on-Chip	18th International Symposium on VLSI Design and Test (VDATE)	2014	-
N. K. Meena, H. K. Kapoor and S. Chakraborty	A New Recursive Partitioning Multicast Routing Algorithm for 3D Network-on-Chip	18th International Symposium on VLSI Design and Test (VDATE)	2014	-
S. Chakraborty, S. Das and H. K. Kapoor	Performance constrained static energy reduction using way-sharing target-banks	17th Workshop on Advances on Parallel and Distributed Processing Symposium (APDCM 2015) associated with IPDPS	2015	-
H. K. Kapoor, S. Das and S. Chakraborty	Static energy reduction by performance linked cache capacity management in Tiled CMPs	30th ACM/SIGAPP Symposium On Applied Computing (SAC)	2015	-
S. Das and H. K. Kapoor	Dynamic Associativity Management using Utility Based Way-Sharing	30th ACM/SIGAPP Symposium On Applied Computing (SAC)	2015	-
Manoj Bode, Shashi S. Jha, Shivashankar B. Nair	A Mobile Agent based Autonomous Partial Green Corridor Discovery and Maintenance for Emergency Services amidst Urban Traffic	In Proceedings of the First International Conference on IoT in Urban Space, URB-IOT'2014, Rome, Italy.	2014	-
Tonmoy R. Saha, Shivashankar B. Nair	On Grounding Symbols for Robots	Fourth International Conference on Emerging Applications of Information Technology	Dec 19-21, 2014	-
Shashi Shekhar Jha and Shivashankar Nair	Orchestrating the Sequential Execution of Tasks by a Heterogeneous set of Asynchronous Mobile Agents	12th German Conference on Multiagent System Technologies, Stuttgart, Germany, Multiagent System Technologies, Lecture Notes in Computer Science	2014	8732
Kumar, N.; Sahu, A.	DDGSim: GPU based simulator for large multicore with bufferless NoC	India Conference (INDICON), Annual IEEE	December 2014	-

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Bhoopendra Kumar, Aryabartta Sahu	Online Scheduling of Applications on 3D Stacked Large Chip Multiprocessor	The 15th IEEE International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT)	2014	-
Amrutlal, D.S.K.; Sahu, A.	Scheduling of multi-phase applications on to mesh multi-core architecture	India Conference (INDICON), Annual IEEE	December, 2014	-
Sahil Kumar, Nitesh Singal, Aryabartta Sahu	Comparison of Binding Approaches of Scheduled Multi-phase Application onto Linear Multicore Architecture	The 15th IEEE International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT)	9 – 11, December, 2014	-
Aryabartta Sahu and Saparapu Ramakrishna	Creating heterogeneity at run time by dynamic cache and bandwidth partitioning schemes	In Proceedings of the 29th Annual ACM Symposium on Applied Computing	2014	-
Saurav Kumar, Aryabartta Sahu	Benchmarking and Analysis of Variations of Work Stealing Scheduler on Clustered System	The 15th IEEE International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT)	9-11 December, 2014	-
Awnish Kumar, V. Vijaya Saradhi, T. Venkatesh	Role of Correspondence Analysis in Network Traffic Flow Analysis	IBM I-CARE, Bangalore	9-11 October, 2014	-
Swarnendu Ray, Arnab Sarkar	A Pseudo-Deadline Based O(1) proportional share scheduler for embedded systems.	18th International Symposium on VLSI Design and Test (VDATE)	July, 2014	1-2
Akash Anil, Niladri Sett, and Sanasam Ranbir Singh.	Modeling evolution of a social network using temporal graph kernels	37th international ACM SIGIR conference on Research & development in information retrieval	July 06 - 11, 2014	1051-1054
Priyatham Bollimpalli, Nilkanta Sahu and A. Sur	SIFT Based Robust Image Watermarking Resistant To Resolution Scaling	IEEE International Conference on Image Processing (ICIP) 2014	October 27th to 30th 2014	-
Shuvendu Rana, Arijit Sur	Blind 3D Video Watermarking Based on 3D-HEVC Encoder Using Depth	Eighth Indian Conference on Vision, Graphics and Image Processing (ICVGIP 2014)	December 14th to 17th 2014	-
Parikshit Juluri, T. Venkatesh, and Deep Medhi,	Look-ahead Rate Adapatation Algorithm for DASH under Varying Network Conditions	11th International Conference on Design of Reliable Communication Networks (DRCN), Kansas City, USA	March 25-27 2015	-
Hari Prabhat Gupta, S.V.Rao, and T.Venkatesh	Analysis of Stochastic k-Coverage in Wireless Sensor Networks with Boundary Deployment	IEEE Wireless Communications and Networking Conference (WCNC), Istanbul, Turkey	April 6-9 2014	-
A R Ashok Kumar, S. V. Rao, Diganta Goswami	Greening 4-4, 1-4 Data Center Network: A Greedy Approach for Finding an Energy Efficient Sub-network	IEEE 6th International Conference on Cloud Computing Technology and Science (CloudCom), 2014 doi: 10.1109/CloudCom.2014.139	15-18 Dec. 2014	869-874

Name of Author/s	Title of Paper	Name of Conference/ Workshop/ Seminar/ Symposia	Date	Vol., Issue
Sandip Chakraborty, Suchetana Chakraborty, Sushanta Karmakar, Hridoy Sankar Dutta	Hierarchical topology adaptation for distributed converge-cast applications.	SAC	405 – 407	2014

Book Chapter

Name of Author/s	Title of Paper	Name of Book	Publisher	Vol., Issue	Page No.	ISBN	Year
S Chakraborty, S Chakraborty, S Nandi and S Karmakar	Sensory Data Gathering for Road-Traffic Monitoring: Energy Efficiency, Reliability and Fault-tolerance	Modelling and Processing for Next Generation Big Data Technologies	Springer International Publishing	4	89–112	978-3-319-09177-8	2015

CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED: INTERNATIONAL, NATIONAL

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Ashish Anand	National Conference on Medical Informatics	AIIMS, New Delhi	30-31 Oct, 2014	National
Ashish Anand	5th Int Conf on Computational Systems Biology and Bioinformatics	NTU, Singapore	12-12 Nov, 2014	International
Sanasam Ranbir Singh	37th international ACM SIGIR conference on Research & development in information retrieval	Gold Coast , QLD, Australia	July 06 - 11, 2014	International
Sanasam Ranbir Singh	Workshop on Text-to-Speech Synthesis	Gandhinagar, Gujarat	16-18 June, 2014	National
Dr. Arijit Sur	IEEE International Conference on Image Processing (ICIP) 2014	Paris, France	October 27-30, 2014	International
Dr. Arijit Sur	Eighth Indian Conference on Vision, Graphics and Image Processing (ICVGIP 2014)	Bangalore	December 14-17, 2014	International
Dr. Arijit Sur (Tutorial Presentation along with Dr. Deepayan Bhowmik, Heriot-Watt University, Edinburgh, UK)	International Conference on Advances in Computing, Communications and Informatics (ICACCI) 2014 held in Greater Noida, India during	Greater Noida, India	September 24-27, 2014	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Ashish Anand	Lecture Series on Mathematical and Computational Biology	Tezpur University	Tezpur	18-19 Oct, 2014
Arnab Sarkar	Routing Algorithms in VLSI Physical Design Automation	IIT Patna	Patna	Oct, 2014
Arnab Sarkar	Introduction to Real-Time Embedded Systems Design	TEQIP STC on "RT Embedded Systems", IIT Guwahati	Guwahati	Nov, 2014

Arnab Sarkar	Real-Time Scheduling in Distributed Environments	QIP STC on "Recent Trends in Networks and Distributed Computing", IIT Guwahati	Guwahati	Feb, 2015
Arnab Sarkar	CAD for Digital VLSI Design Automation	QIP STC on "Recent Trends in Electronics and Computation", IIT Guwahati	Guwahati	Mar, 2015
Arnab Sarkar	VLSI Design Automation: From Concept to Chip	DEITY(MHRD) Workshop on "Electronics System Design and Manufacturing", IIT Guwahati	Guwahati	Mar, 2015
Sanasam Ranbir Singh	Tutorial on Android Application Development	Dept. of CS, Manipur University	Imphal	15th & 16th Dec, 2014
Sanasam Ranbir Singh	Introduction to Android Operating System	Dept. of CS, Guwahati University	Guwahati, Assam	14th & 15th Mar, 2015
Sanasam Ranbir Singh	Application of Information Technology in Investigation	North Eastern Police Academy	Shillong, Meghalaya	28th June, 2014

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Atal Chaudhuri, Jadavpur University, Kolkata	Title: Digital Fountain (Departmental Research Talk)	6/1/2015
Prof. Paramartha Dutta, Visvabharati University Santiniketan	Title: Temporal Characterization of Mobile Adhoc Network Environment (Departmental Research Talk)	6/1/2015
Dr. N. Vijayaditya, Controller of Certifying Authority - Information Technology, Ministry of Communications and Information Technology, Government of India	Motivational talk for the 1st Year UG students to pursue higher studies and research in the area of computer science and engineering	31/10/2014
Prof. Arun Kumar Majumder, Professor, Computer Science & Engineering, IIT Kharagpur West Bengal	Motivational talk for the 1st Year UG students to pursue higher studies and research in the area of computer science and engineering	31/10/2014
Dr. Sandip Rakshit, Dean, School of Computing Sciences, KAZIRANGA University, Jorhat, Assam	Handwritten Text Analytics (HTA)-For Health Care Domain	20/01/2015

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/National	No. of Participants
Ashish Anand, Arnab Sarkar	KIC-TEQIP workshop on Information and Communication Technology in Healthcare: Challenges and Promises	KIC-TEQIP	25th March, 2015	National	-
Santosh Biswas and Arnab Sarkar	Computational Methods for Smart Grids	AICTE QIP	9th – 13th March 2015	National	25
Santosh Biswas and Arnab Sarkar	Real Time Embedded Systems: Design, Verification and Test	TEQIP	27th – 29th Nov. 2014	National	25
Arnab Sarkar	QIP STC on "Computational Methods for Smart Grids"	MHRD-GOI	9th – 13th Mar, 2014	National	24
Arnab Sarkar	TEQIP Workshop on Information and Communication Technology in Healthcare: Challenges and Promises	MHRD-GOI	25th March, 2015	National	30

PATENT

Name of Faculty and co researcher	Name	Date Applied/ Granted	Application No.	Remarks
Abhay Kumar Paliwal, Vedula Vijaya Saradhi, Jason Muldoon	Predictive Intelligent Softbots on the Cloud	March 24, 2015	U.S. Patent Application No. 14/667, 592	Filed Along with Inside View Labs Team

AWARDS AND HONOURS

- i) Hemangee K. Kapoor is Elevated to Senior member of the ACM
- ii) Hemangee K. Kapoor is Elected as council member of the ACM-India
- iii) T. Venkatesh is appointed as Associate Editor, Springer Journal of Network Systems and Management from January 2015 for a period of 3 years.
- iv) Keynote Speaker: Shivashankar B. Nair Title: Mobile Agent based Systems, Conference: International Conference on Information Science, ICIS 2014, Date & Venue: July 4-5th, 2014, Kochi, Proceedings Published by CSI.
- v) Keynote Speaker: Shivashankar B. Nair Title: Emulating Bio-Inspired Mechanisms using Mobile Agents Conference: International Conference on Artificial Intelligence & Evolutionary Algorithms in Engineering Systems, (ICAES-2014) Date & Venue: 22-23rd April 2014, Kumaracoil, Kanyakumari, India, Proceedings Published by Springer.

STUDENTS' ACHIEVEMENTS

- i) Diptesh Majumdar (MTech 2013-2015) won the DAAD scholarship under the IIT Masters-Sandwich programme for visiting the Institute for Real-Time Computer Systems at the University of Munchih from September 2014 to March 2015.
- ii) Ph.D. Student Mr. Rajesh. D (126201002) Received the TCS PhD Research Fellowship in Nov, 2014.
- iii) Parikshit Juluri, with the guidance of Dr. T Venkatesh's won Best Poster Award at DRCN 2015 for the paper titled "Look-ahead Rate Adapataion Algorithm for DASH under

Varying Network Conditions"

- iv) Tushar Semwal, Dual Degree Scholar, invited to present his work at the ACM Symposium cum Workshop on IT innovation for Smart City, Allahabad, India (<http://smartcity.iita.ac.in/>). The organizers viz. IITA, provided him the necessary travel grant.
- v) Shashi Shekhar Jha, PhD Scholar & TCS Fellow, receives International Travel grant from the Department of Science and Technology, Govt. Of India, to present a paper at the 1st International Conference on Internet of Things (IoT) in Urban Space (Urb-IoT 2014) at Rome, Italy.
- vi) Shashi S. Jha, Research Scholar & TCS Fellow, presented his doctoral work entitled - "On Realizing an intelligent Internet of Things using Intelligent Agents" which was selected for presentation at the Doctoral Consortium of the 12th German Conference on Multiagent System Technologies, Stuttgart, Germany, 23-25th September 2014, pp.23-29, (Availableonline:<http://www.in.tuclausthal.de/fileadmin/homes/techreports/ifi1404lehnhoff.pdf#page=25>).
- vii) Dr Sandip Chakraborty received Indian National Academy of Engineering (INAE) Innovative Student Projects Award - 2014 (Doctoral Level) for his Ph D thesis work on "Capacity Enhancement, QoS and Rate Adaptation in IEEE 802.11s: A Performance Improvement Perspective" under Prof. Sukumar Nandi's Supervision.
- viii) S Chakraborty and S Nandi received Best Paper Award for their work titled "Controlling Unfairness due to Physical Layer Capture and Channel Bonding in 802.11n+s Wireless Mesh Networks in the 16th International Conference on Distributed Computing and Networking, Jaunary, 2015.

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1	Ashish Anand	Nanyang Technological University, Singapore	Assistant Professor	Machine Learning and applications in Computational Biology, Systems Biology, Evolutionary Algorithms
2	Amit Awekar	North Carolina State University, Rayleigh	Assistant Professor	Data Mining
3	Gautam Barua	University of California, Santa Barbara	Professor	Distributed Systems, Networks, Operating Systems, Database Management Systems
4	Rashmi Dutta Baruah (Joined on 16-06-2014)	Lancaster University, United Kingdom	Assistant Professor	(Evolving and Adaptive Intelligent Systems, Computational Intelligence, (Online) Machine Learning, Learning from Data Streams

Sl. No.	Name	PhD	Designation	Areas of Interest
5	Purandar Bhaduri	Washington State University, Pullman	Professor	Formal Modeling, Synthesis and Verification of Embedded Systems
6	Samit Bhattacharya	IIT Kharagpur	Assistant Professor	Human Computer Interaction, User Modeling, Model Based Evaluation of Interactive Systems, Rehabilitation Engineering
7	Santosh Biswas	IIT Kharagpur	Associate Professor	Networking, Fault Tolerance, VLSI Testing, Embedded Systems
8	P. K. Das	Delhi University	Associate Professor	Speech Recognition, Pattern Recognition, Man-Machine Interaction Systems
9	J. K. Deka	IIT Kharagpur	Associate Professor	Formal Verification, VLSI System Design
10	D. Goswami (Head of the Department)	IIT Kharagpur	Professor	Software Engineering, Distributed Systems
11	R. Inkulu	IIT-Chicago	Assistant Professor	Algorithms, Computational Geometry
12	Benny George	TIFR Mumbai	Assistant Professor	Word Combinatorics, Algorithms and Combinatorics
13	Hemangee Kalpesh Kapoor	London South Bank University, UK	Associate Professor	Formal Verification of Circuits
14	Sushanta Karmakar	IIT Kharagpur	Assistant Professor	Distributed algorithms, fault-tolerance, distributed algorithms for ad hoc and sensor networks
15	Deepanjan Kesh	IIT Kanpur	Assistant Professor	Computational Commutative Algebra, Data Streaming
16	Pinaki Mitra	Simon Fraser University, Canada	Associate Professor	Computational Geometry, Parallel Algorithms, Randomized Algorithms, Optimization
17	Shivashankar B. Nair	Amravati University	Professor	Bio-Inspired Robotics, Intelligent Mobile Agents and Systems and Internet of Thing
18	Sukumar Nandi	IIT Kharagpur	Professor	Networks (QoS, Wireless networks), Computer and Network Security
19	S. V. Rao	IIT Kanpur	Professor	Computational Geometry, Pattern Recognition, Image Processing
20	Aryabartta Sahu	IIT Delhi	Assistant Professor	Advanced Computer Architecture, Multicore Parallel Programming and Compiling, Embedded Systems, VLSI and FPGA Design
21	G. Sajith	IIT Kanpur	Professor	Parallel and Distributed Computing
22	V. Vijaya Saradhi	IIT Kanpur	Assistant Professor	Machine Learning, Kernel Methods and their applications
23	Arnab Sarkar	IIT Kharagpur	Assistant Professor	Real-Time and Embedded Systems, Computer Architecture, Algorithms
24	Saswata Shannigrahi	TIFR Mumbai	Assistant Professor	Data Structures and Algorithms, Combinatorial Geometry, Analysis of Social networks
25	Sanasam Ranbir Singh	IIT Madras	Assistant Professor	Web Search, Machine Learning, Information Retrieval, Data Mining especially in the area of Web Search Engine

Sl. No.	Name	PhD	Designation	Areas of Interest
26	Arijit Sur	IIT Kharagpur	Assistant Professor	Information Hiding: Steganography and Steganalysis. Multimedia Security: Image and Video Watermarking. Network Security: Intrusion Detection System and Network Steganography
27	T. Venkatesh	IIT Madras	Assistant Professor	WDM Optical Networks, IP over WDM Networks, Broadband Access Networks, Performance Evaluation of Computer Networks, Network Tomography
Honorary Faculty				
1	Deep Medhi	University of Missouri at Kansas City	Professor	Next Generation Internet Architecture, Network Design, Optimization and Performance, Network Management
2	Ashish Mukhopadhyay	University of Windsor	Professor	Computational Geometry, Approximation Algorithms, Bio-geometry
3	Sugata Sanyal	Tata Consultancy Services Ltd.	Professor	Mobile Ad Hoc Networks, Secure Mobile Computing, Steganography and Steganalysis
Visiting Faculty				
1	Vishv Mohan Malhotra		Professor	Modeling and Performance measurements, Robust Environmental Sensor Networks, Operating Systems.

DEPARTMENT OF DESIGN

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1998

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Design (BDes) in Design

Master of Design (MDes) in Design

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 5
- Assistant Professor: 19
- Visiting Professor: 2

NEW FACULTY JOINED:

- Assistant Professor: 10
- Visiting Professor: 2

LABORATORIES:

Ergonomics Laboratory: Ergonomics laboratory at Department of Design, IIT Guwahati was set-up in 1999 under leadership Prof. Debkumar Chakrabarti. This is a well-equipped laboratory with various basic and applied research facilities for both physical and cognitive ergonomics. Apart from equipment for traditional ergonomics evaluation, modern sophisticated equipment are available for virtual

ergonomics evaluation and cognitive workload study. Four (04) faculty members (Prof. D. Chakrabarti, Dr. S. karmakar, Dr. S. Pal and Dr. U.R. Salve) and 10 PhD students are currently associated with this laboratory. Facilities available in the laboratory include (a) Anthropometric measurement kit, (b) Equipment/ tools for biomechanical analysis, (c) Kit for environmental variable measurement, (d) Tools/equipment for cognitive workload analysis, (e) Digital human modeling software for virtual ergonomics evaluation, (f) Eye-tracker for visual attention analysis, and (g) Equipment for physiological variable analysis (ECG, EMG, EEG etc.).

Usibility Engineering & Human Computer Interaction Lab (UE-HCI Lab)

Embedded Lab

New Media lab & Video Lab

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

Wireless EMG System (Make: Delsys, USA; Model: DSY-DS-TOI-4), 8 Nos. Sony High-End Digital Cameras for the Media Lab

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

Cognitive ergonomics aspect of product design evaluation

RESEARCH PROJECTS:

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Pratul Ch. Kalita	Design Intervention in Street Food Vending in Assam with special emphasis to packaging, display, cart design and space design for improvement of livelihood and hygiene	Design Innovation Centre, IIT Guwahati	20	-	2 years
Sharmistha Banerjee	Toolkit for primary school teachers to deliver Education for Sustainability with an activity based teaching approach	IIT Guwahati Start-up Research Grant	5	NA	2 years
Avinash Shende	Design, Production and Branding of Bamboo craft in Meghalay	Directorate of Commerce and Industries, Govt. of Meghalaya	49	Prof. Ravi-Mokashi Punekar	1 1/2 year

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Keyur Sorathia	Research on Dhobi and Dhobighats	P&G (Brussels)	\$6960	Pankaj Upadhyay	8 months

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Sougata Karmakar		MHRD			
Pratul Ch. Kalita	Development of an online design ideation tool. It is an online integrated approach to application of various design methods viz. Quality Function Deployment, Kano Model, Marketing-Research-Finding Sensitive Visualisation and Stuart Pugh's method of Idea Screening. The online tool attempts to bring designers, technologists, design managers and users in a common platform for design ideation	AICTE	4	-	1 year
Keyur Sorathia	3D gesture control research collaboration	Nokia Research Centre	8.37	Sonali Chauhan	1 year
Keyur Sorathia	Design and development of gestural user interfaces for development region	Microsoft Research Connector	4		1 year

c) Completed Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Sougata Karmakar	Visual and Tactile Information Processing in Product Selection Process	DBT	40.83	-	3 years
Pradeep Yammiyavar	Standarsiation of Virtual Keyboard in Indic Languages - Assamese	DIT	10.92	Dr Samit Bhattacharya (CSE)	1 year
Keyur Sorathia	Research on Accessibility for smartphones	Samsung Research Institute Bangalore	2.3	Prasad Bokil	3 months

CONSULTANCY PROJECTS

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Sougata Karmakar	Short term training program on Automotive Ergonomics and Design	TATA Elxsi Ltd., Trivandrum	1.07	-	-
Amarendra Kumar Das	Impact Evaluation Study on Irrigation and Roads & Bridges Projects supported under RIDF in Assam	NABARD	29.55	Dr. Pratul Ch. Kalita	6 months

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Sharmistha Banerjee	Redesigning the Bed-Planter agro-machine according to the principles of the Human Centered Design (HCD) approach in the Cereal Systems Initiative for South Asia – Mechanization and Irrigation (CSISA-MI) in Bangladesh	International Development Enterprise Bangladesh	12,500 USD	-	4 months
D. Udaya Kumar	Design of Fruit and Vegetable Cart for Guwahati Municipal Corporation	Guwahati Municipal Corporation	2.25	Pankaj Upadhyay, Supradip Das	3 months
Keyur Sorathia	Collaborative research of accessibility on smartphones	Samsung Research Institute Bangalore	19.60		1 year
Keyur Sorathia	Generation of invention reports on future of mobile communication	Invent with Nokia (Nokia Global Patent Division)	15.64		1 year

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Patel, T., Sanjog, J. and Karmakar S.	Isometric hand grip strength of agricultural workers from northeast region of India	Agricultural. Engineering International: CIGR Journal	17(1)	130-140	2015
Patel, T., Sanjog, J., Kumar, P., and Karmakar, S.	Isometric muscular strength data of Indian agricultural workers for equipment design: Critical analysis	Agricultural. Engineering International: CIGR Journal	16(2)	70-79	2014
Chowdhury, A., Karmakar, S., Reddy, S.M. and Ghosh, S. and Debkumar Chakrabarti	Usability is more valuable predictor than product personality for product choice in human-product physical interaction	International Journal of Industrial Ergonomics	44(5)	697-705	2014
Patel, T. and Karmakar, S.	Book review: Introduction to Ergonomics, Third Edition	International Journal of Industrial Ergonomics	44(6)	892-893	2014
Patel, T. and Karmakar, S.	Book review: Automotive Ergonomics: Driver-Vehicle Interaction	Journal of Transport Geography	41	346-347	2014
Dr. Pratul Ch. Kalita, Prof. Amarendra Kumar Das	Differentiate with Attractive Features: A structured approach for design ideation	International Journal of Design Management and Professional Practice.	8 (3-4)		2015
Charu Monga	De Chakra: Method of Multidiscipline Design Education	Design for all institute of India	9-8	18	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Debayan Dhar ; Pradeep Yammiyavar	A Cross-Cultural Study of Navigational Mechanisms in Computer based Assessment Environment	Procedia Computer Science Elsevier ISSN 1877-0509	45	862-871	2015

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue and Page No.
Chowdhury, A., Reddy, S.M., Chakrabarti, D. and Karmakar, S.	Cognitive Theories of Product Emotion and Their Applications in Emotional Product Design.	International Conference on Research into Design (ICoRD 2015), Indian Institute of Science (IISc.) Bangalore	7-9 Jan 2015	Volume 1, 329-340
Reddy, S.M., Chowdhury, A., Chakrabarti, D. and Karmakar, S	Role of Colour and Form in Product Choice and Variation of Preferences Across Product Categories: A Review.	International Conference on Research into Design (ICoRD 2015), Indian Institute of Science (IISc.) Bangalore	7-9th January 2015	Volume 2, 631-640
Kumar, S., Sanjog, J., Patel, T., and Karmakar, S	Virtual Human Modeling and Simulation in Textile Industry	International Ergonomics Conference, HWWE-2014, IIT Guwahati	3rd - 5th December 2014	252 – 260
Kumar, P. N., Sanjog, J., Karmakar, S	Prevalence of awkward working posture and consequent discomforts in body parts among workers of cashew nut processing factories in coastal regions of eastern India	International Ergonomics Conference, HWWE-2014, IIT Guwahati	3rd - 5th December 2014	671 – 673
Kumar, S., Patel, T., and Karmakar, S	Scenario of handloom industry: Indian perspective	International Ergonomics Conference, HWWE-2014, IIT Guwahati	3rd - 5th December 2014	234-238
Sanjog, J., Patel, T., and Karmakar, S.	Reduction of hand grip strength as an indicator towards discomfort of upper body extremities	International Ergonomics Conference, HWWE-2014, IIT Guwahati	3rd - 5th December 2014	655 – 659
Patel, T., Sanjog, J., Sahoo, A., Das, B., Karmakar, S.	Assessment of Reliability and Technical Error of Measurement Associated with Anthropometric Data Collection	International Ergonomics Conference, HWWE-2014, IIT Guwahati	3rd - 5th December 2014	769 - 775
Nilakshi Yein, Swati Pal	Analysis of Indoor Design and related different risk factors for elderly: A review	Proceeding International Ergonomics Conference HWWE 2014	3-5 Dec 2014	Article No.56, Page no. 276.
Sharmistha Banerjee	Giving voice to the farmers, machine operators, local service providers and small scale manufacturers in designing scale-appropriate agro-machinery for Rural Bangladesh - A Case Study	ICCIG3 2015, 3rd International conference on Creativity and Innovations at (for/ from/ with) Grassroots, Ahmedabad, India	January 2015	
Utkarsh Mishra, Soumya Tiwari, Neha, Sharmistha Banerjee	Education for Sustainability – Cultural Diversity	SusCon 2015, 4th Annual International Conference on Sustainability, IIM Shilong	March 2015	
Abhishek Srivastava, Anirudha Joshi	Effects of Visuals, Menu depth, and menu positions on IVR usage by non tech savvy users.	IndiaHCI 14 : Proceedings of the India HCI 2014 conference on Human computer Interaction.	Dec-2014	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue and Page No.
Avinash Shende, Prof. A.K.Das	Enhancing creativity among students with heterogeneous background by introducing toll "IDEA WHEEL"	ICORD 15, Bangalore	January 2015	
Kumar, V, Yammiyavar, P,	What Sustainability Design Means for Novice creative designers: An exploration of their perception and mental models in the Indian context.	Design for Sustainable Wellbeing and Empowerment Df-WnE2014, Bangalore	2014	Volume 1 (pp. 333-353)
Salve, S., and Yammiyavar, P.	A study on efficiency of input devices on native language during numerical data entry	HWWE'14, International Ergonomics Conference - User Centered Design and Occupational Wellbeing, Guwahati	December 3-5; 2014	-
S. Salve, S. Shukla and P. Yammiyavar	Affect Component and Errors During Numerical Data Entry-A Study	ICoRD'15 Research into Design Across Boundaries, Bangalore	Jan 2015	Volume 1 (pp. 573-583)
Salve, S., & Yammiyavar, P	Trade-off between time and error during numerical data entry by rural / semi-urban Indian users	NCMOC 2015: National Conference On Modeling Optimization & Control, Pune	4th - 6th March 2015.	-
Yammiyavar, P, Srivastava, A., and Shashidhara, S	Design of Tangible Interactive Learning Aids for Pre-primary School Teaching Environment: A sustainable approach.	Design for Sustainable Wellbeing and Empowerment 2014, DfWnE2014, IISc Bangalore	2014	Volume 1 (pp. 391-404)
Srivastava, A., and Yammiyavar,	Tangibles as a learning medium from children: A Cognitive Ergonomics Approach	HWWE'14, International Ergonomics Conference - User Centered Design and Occupational Wellbeing, Guwahati	Dec 2014	
Srivastava, A., & Yammiyavar, P.	Effectiveness of Tangible and Tablet Devices as Learning Mediums for Primary School Children in India	ICoRD'15-Research into Design across Boundaries, Bangalore	Jan 2015	Volume 2 (pp. 353-363)
Amrit, M., Bansal, H., & Yammiyavar, P.	Studies in Application of Augmented Reality in E-Learning Courses	ICoRD'15-Research into Design Across Boundaries, Bangalore	Jan 2015	Volume 2 (pp. 375-384)
Bansal, H., Yammiyavar, P., & Anita, P. Y.	A Study on Entrances and Foyers in Shopping Malls and Their Role in Influencing Perceptions.	ICoRD'15-Research into Design Across Boundaries, Bangalore	Jan 2015	Volume 1 (pp. 457-468)
Jain, M, Yammiyavar, P,	A learning tool 'Help Pinky' for empowering adolescent girls in rural Assam	Design for Sustainable Wellbeing and Empowerment 2014, DfWnE2014, IISc Bangalore	2014	Volume 1 (pp. 333-353)
Ojha, S.P, Yammiyavar, P,	Improving Sustainability by Capturing Tacit knowledge of Artisans as Digital Information for Design Process	Design for Sustainable Wellbeing and Empowerment 2014, DfWnE2014, IISc Bangalore	2014	Volume 1 (pp. 355-362)
Pradeep Yammiyavar, Venkateshwarlu Varala	Graphical User Interface Perceptions and their role in Influencing Sustainable Usage :A Study of Semantics of Communication and Interaction Of Smart meter Usability	HWWE'14, International Ergonomics Conference - User Centered Design and Occupational Wellbeing, Guwahati	Dec 2014	-

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue and Page No.
Khilare, K., Yammiyavar, P., and Bhattacharya, S.	Development of Graphic user interface keyboard for Indian language - Assamese	HWWE'14, International Ergonomics Conference - User Centered Design and Occupational Wellbeing, Guwahati	Dec 2014	-
Harshit Agrawal, Rishika Jain, Prabhat Kumar, Pradeep Yammiyavar	FabCode: Visual Programming Environment for Digital Fabrication	International Conference on Constructionism and Creativity; IDC'14, Aarhus, Denmark	June 17-20, 2014,	-
Maulishree Pandey ¹ , Vikas Luthra ¹ , Pradeep Yammiyavar ¹ , and Anita P.Y.	Virtual Reality Based learning aid to understand projection and section of solids in architectural graphics	16th International Conference on Human Computer Interaction -HCI, Greece	June 2014	-
Shanu Shukla, Shrikant Salve Sanjram Premjit K., Pradeep Yammiyavar	Does Emotion Modulation Influence Speed-Accuracy Trade-off - in Numerical Data Entry Tasks?	HWWE 2014 - Ergonomics Conference - User Centered Design and Occupational Wellbeing	December 3-5 2014	-
Vikash Kumar and Pradeep Yammiyavar	Indian Cultural Practices as a Manifestation of Environmental World-view - An exploration as a Tool for Environmental Stress Mitigation	National Seminar on Environmental Stress and Remedies , Gwailor	2014	-
Maulishree Pandey ¹ , Vikas Luthra ¹ and Pradeep G. Yammiyavar; Anita .P.Y.	Role of immersive virtual reality in fostering creativity among architecture students	International Conference on Design Creativity (3rd ICDC) Bangalore	Januray 12-14th 2015	-
Sumita Sharma, Saurabh Shrivastava, Keyur Sorathia, Markku Turunen	Body-touching: An Embodied Interaction Technique for Health Information Systems in Developing Regions	Academic Mindtrek Conference 2014	12-14 Dec 2014	
Priyamvada Tiwari, Keyur Sorathia	Visualising and systematizing a per-poor ICT intervention for Rural and Semi-urban Mothers in India	7th International Symposium on Visual Information Communication and Interaction	5-8 August 2014	129-138
Manoj Majhi, Debkumar Chakrabarti	Interactive multimedia communication and its effectiveness in application in every sphere of our lives a case study in digitised cel animation	Humanizing Work and Work Environment Indian Society of Ergonomics, International Ergonomics Conference December 3-5, 2014, IIT Guwahati	December 3-5, 2014	Abstract, P 8
Manoj Majhi, Debkumar Chakrabarti	A paradigm-shift to wards user-centred empirical methodology in interactive multimedia communication	ICoRD'15 Conference IISC Bangalore	7-9 Jan 2015	p 663

Book

Name of Author/s	Name of Book	Publisher	Page No.	ISBN	Year
Eds: Chakrabarti, D., Karmakar, S., Pal, S. and Chatterjee, A.	'User Centered Design and Occupational Wellbeing'-Proceedings of International Ergonomics Conference, HWWE-2014	TATA Mc-GrawHill Education Pvt. Ltd.	797	978-93-392-1970-3	2014

Book Chapter

Name of Author/s	Name of Paper	Name of Book	Publisher	Vol. and Issue No.	Page No.	ISBN	Year
Himanshu Bansal, Pradeep Yammiyavarb Anita P.Y:	A study on Entrances & foyers in shopping malls and their role in influencing perceptions	Research into Design Across Boundaries Volume 1; Editor Amaresh Chakrabarti	Springer India; New Delhi	-		ISBN 978-81-322-2232-3	2015
Aditi Padhi, Apurva Gupta, Keyur Sorathia, Surbhit Varma, Bhaskar Sharma	Mubiks: Tangible music player for visual challenged	Universal Access in Human-Computer Interaction. Design and Development Methods for Universal Access	Springer International Publishing	8513	346-356	978-3-319-07436-8	2014
Surbhit Varma, Keyur Sorathia, Abdul Sameer Ashraf	Extraction of Gestures for Presentation: A Human Centered Approach	ICoRD'15 – Research into Design Across Boundaries	Springer India	35	421-431	978-81-322-2228-6	2015

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Author	Name of Conf./Workshop	Place	Date	National/International
Jagadish Kumar.V	Indinox WSSAF Conference 2015, World Stainless Steel Art Festival(WSSAF)	Mahatma Mandir, Gandhinagar, Gujrat	25th to 29th January 2015	International
Jagadish Kumar.V	Working with time-Art, Design and Nature	Department of Design, IITG	10th to 15th September 2014	National
Dr. Pratul Ch. Kalita	Role of logistics and Supply Chain Management in Development of North-East India; Name of the paper presented 'Application of Cloud Computing, MS Excel and Google Docs for Effective Supply Chain Management in MSMEs'	North-eastern Hill University, Tura Campus, Meghalaya	23rd May 2014	National
Sharmistha Banerjee	ICCIG3 2015, 3rd International conference on Creativity and Innovations at (for/ from/ with) Grassroots, Ahmedabad, India	IIM Ahmedabad	19-22 January 2015	International
Abhishek shrivastava	IndiaHCI 14 conference	IDDC, IIT Delhi	Dec, 8-10, 2014	International
Charu Monga	MIT Skolkovo International Robotics conference	Moscow	20.03.15	International
Charu Monga	Russian startup tour	St Petersburg	26.03.15	International
Charu Monga	Film heritage Foundation	Mumbai	20.02.15	National
Charu Monga	Dead Sea conference	Israel	09.07.14	International
Charu Monga	HWWE conference	IITG	03.12.14	National
Utpal Barua	Exhibition at Jahangir Art gallery	Mumbai	05.02.2014 to 11.02.2014	National
Utpal Barua	A Group International Exhibition at Gallery ,art penza	Penza ,Russia	07.02.2014 to 07,03,2014	International

Name of Author	Name of Conf./Workshop	Place	Date	National/International
Utpal Barua	Haiyan fundraising exhibition	Makati City,Philippines	2014	International
Utpal Barua	Art residency Symposium	Romania	24.07.2014 to 03.08.2014	International
Utpal Barua	International Water Color Symposium	Skopje,Macedonia	01.09.2014 to 08.09.2014	International
Utpal Barua	Conference and Symposium	Khon Kean University,Thailand	10.10.2014 to 21.10.2014	International
Utpal Barua	Malacca International Contemporary Art Exhibition	Malaysia	26.11.2014 to 01.12.2014	International
Utpal Barua	Art Penza,for yhe festival of Contemporary art chernozem	Russia	29.08.2014 to 21.09.2014	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Pratul Ch. Kalita	Visual communication and consumer behavior in retail business	Assam Institute of Management	Guwahati	20.12.2014
Pratul Ch. Kalita	Teaching methodology to trigger creativity and innovation	Indian Institute of Entrepreneurship	Guwahati	13.03.2015
Charu Monga	Tradional Craft as an Engineering Design Challenge	Shamoon College of Engineering	Israel	12.07.2014

SEMINARS/WORKSHOPS/CONFERENCES/SHORT-TERM COURSES ORGANISED:

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./ Con.	Funded By	Date	International/ National	No. of participants
Conference Chair: Prof. Debkumar Chakrabarti, Conference Secretary: Dr. Sougata Karmakar, Treasurer: Dr. Swati Pal	International ergonomics Conference HWWE 2014	Govt. and Private sponsors	1-5 Dec 2014	International	300
Coordinator: Dr. Swati Pal	Expert Meeting and Panel discussion on formulation of curriculum for Ergonomics and occupational Health	Knowledge incubation Cell (KIC), centre for Educational Technology (CET), IIT Guwahati	04.12.2014	National	9
Coordinator: Charu Monga; Co-ordinator: Jagadish Kumar	QIP on Design: Education, Research 7 innovation	AICTE funded short term course	02.02 2015 to 05.02.2015	National	25
Coordinator: Dr. Debkumar Chakrabarti, Dr. Sougata Karmakar; Co-ordinator: Nanki Nath & Charu Monga	HWWE CONFERENCE	DoD	03.12.2014	National	DoD Students
Coordinator: Prof. Debkumar Chakrabarti, Prof. A. K. Das; Co-ordinator: Charu Monga & Nanki Nath	Lecture cum demo workshop on Classical Performing arts, by Ms Bhaswati Sarma & Mr. Devanand Pathak	DoD	08.10.2014	National	45

STUDENTS' ACHIEVEMENTS

Utkarsh Mishra, Soumya Tiwari and Nehas paper on Education for sustainability-Cultural Diversity in SusCon 2015, 4th Annual International conference on sustainability, IIM Shillong won the 3rd best paper presentation prize. The paper was written in partial fulfillment for the course DD 601 Usability Engineering.

Bhawna Agarwal and Richa Tripathi won the first prize (INR 50,000) for their NINDIYA in Unexplored 2014 organized by YUJ Design, Pune. They also got an opportunity to present the project in UXIndia 2014 held in Bangalore. NINDIYA is a mobile application which helps people get aware of their sleep cycle, sleep pattern and also educates them on various foods which help in inducing sleep awake, thus reducing the overall stress and increasing productivity. The project was done under the course DD 301 Introduction to Interaction Design.

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
01	Sharmistha Banarjee	-	Assistant Professor	Design for sustainability, Bio-inspired design, Medical product Design
02	Utpal Barua	IIT Guwahati	Professor	Graphic Design, Design drawing and Visualisation, Visual design Principles and applications, Indian Symbology
03	Prasad Bokil	IIT Bombay	Assistant Professor	Visual Language, Design Semiotics, Graphic Design, Type Design, Design Research, Design ontology
04	Debkumar Chakrabarti (Head of the Department)	Calcutta University	Professor	Ergonomics Research, Human Compatibility Factor, Design ergonomics, product Environment Interface Design, Occupational Health
05	Amarendra Kumar Das	IIT Guwahati	Professor	Industrial Design, Rapid Prototyping and tooling, space Design, Environment Graphics, Design for Disabled
06	Supradip Das (Joined on 01.01.2015)	-	Assistant Professor	Origami Inspired Product Development, Toy for tomorrow, Paper Craft, Transformable furniture, Structural packaging design.
07	D. Udaya Kumar	IIT Bombay	Assistant Professor	Topography, Type Design, Information Graphics, Motion Graphics, design Research, Exhibition Design, architecture
08	Sheetal M. Gokhale (Joined on 21.07.2014)	-	Assistant Professor	Film & Video story, telling & visual scripting, Animation, Graphic Design
09	Shareka Iqbal	-	Assistant Professor	Adaptive Reuse, Solar Passive Architecture
10	Pratul Kalita (Joined on 12.12.2014)	IIT Guwahati	Assistant Professor	Design Management, Design Method, Design for Development
11	Sougata Karmakar	Bharathiar University, Coimbatore	Assistant Professor	Ergonomics, Human Factor, Design and work Environment, Design and Occupational health
12	Jagadish Kumar (Joined on 01.08.2014)	-	Assistant Professor	Visual arts-Painting & sculpture, Print making Lithography, Woodcut, New media art, Video art sound art, Folk art tribal art studios.
13	Mriganka Madhukailya	-	Assistant Professor	Short Film, New Media theory, Video Art, Documentary Film, Participatory Theory
14	Manoj Majhi	-	Assistant Professor	Animation, Special Effects, Cartooning
15	Charu Monga (Joined on 08.05.2014)	-	Assistant professor	Visual communication, Design Research, Visual Ethnography, Film Making, Animation, Game design, Edutainment.

Sl. No.	Name	PhD	Designation	Areas of Interest
16	Nanki Nath (Joined on 16.06.2014)	-	Assistant Professor	Graphic Design, Typography, Content development, Photography
17	Swati Pal (Joined on 02.06.2014)	Gujrat University	Assistant Professor	Ergo-design & Innovation, Physical Ergonomics, Cognitive Ergonomics, Design and Biomechanics, Occupational Health
18	Ravi Mokashi Punekar	IIT Bombay	Professor	Industrial Design, Space Design, Facility Design, Environmental Graphics, Design for disabled
19	Swaroop Roy (Joined on 09.02.2015)	-	Assistant Professor	Automobile Design & Styling, Automobile Sketching and Rendering, Advance Automotive Forms, Concept Design (Character, vehicles , environment. Etc.), Illustrations
20	Urmi Ravindra Salve (Joined on 14.01.2015)	University of Calcutta	Assistant Professor	Human factor engineering, occupational Ergonomics, Research Methodology
21	Avinash Shinde	-	Assistant Professor	Product Design, Furniture Design, Lighting design
22	Abhishek Srivastava (Joined on 12.11.2014)	-	Assistant professor	Interaction Design, Design for Development, New Media, graphic Design & cartooning.
23	Abhishek Singh (Joined on 27.05.2014)	--	Assistant Professor	Automotive design, Product Design, Graphic Design, Design Researce.
24	Keyur Sorathia	-	Assistant Professor	Interaction Design, Gesture controlled User Interfaces, Design for development
25	Pankaj Upadhaya (Joined on 26.06.2014)	-	Assistant Professor	Product design, Industrial Design, Design for Manufacture, Consumer product Design, Industrial Equipment design.
26	Pradeep Yammiyavar	IISc Bangalore	Professor	HCI-UE-Interaction Design, Product Design, Design Management, Experimental Design, Design research, Interdisciplinary Design Pedagogy.

DEPARTMENT OF ELECTRONICS AND ELECTRICAL ENGINEERING

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1995

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in

- o Electronics and Communication Engineering (ECE)
- o Electronics and Electrical Engineering (EEE)

Master of Technology (MTech) in

- o Signal Processing
- o VLSI
- o Power and Control
- o Communication Engineering

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 10
- Associate Professor: 8
- Assistant Professor: 18
- Visiting Professor: 2

LABORATORIES:

The Department of EEE has 20 laboratories which are equipped with state-of-the-art equipment and software. These laboratories are used for both instructional purposes and carrying out R&D activities in the various areas of interest. The list of laboratories presently functioning in the Department is as follows:

- 1 Power System Lab (Instructional)
- 2 Electrical Machine Lab (Instructional)
- 3 Electronic Circuit Lab (Instructional)
- 4 Control & Instrumentation Lab-2 (Instructional)
- 5 System Simulation Lab (Instructional)
- 6 Embedded System Lab (Instructional)
- 7 High Frequency Lab (Instructional)
- 8 Power & Control Lab (R&D)
- 9 Communication and Networking Lab (R&D)
- 10 Multimedia Analytics Lab (R&D)

- 11 Communication Lab-2 (R&D)
- 12 Control & Instrumentation Lab-1 (R&D)
- 13 Communication Lab-3 (R&D)
- 14 Image & Signal Processing Lab (R&D)
- 15 VLSI-R&D Lab
- 16 VLSI-ADSP & Communication Lab (R&D)
- 17 Signal Informatics Lab (R&D)
- 18 Electro-Medical & Speech Lab (R&D)
- 19 Image Processing and Computer Vision Lab (R&D)
- 20 HPC and FPGA Design Lab (R&D)

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

1 Workstation (Make: Dell, Model: R7610)-Two socket – single XEON E5 2650 2.6GHz, 8.0GT/s 8 Core CPU, 32GB ECC RAM 1866MHz upgradeable to 512GB, 1 GB NVIDIA Quadro K600,600GB SATA HDD, Windows 8 Pro 64 Bit, Windows 7 Ultimate 64 Bit, Windows 7 Professional 64 Bit, Windows Server 2008 R2

2 PC (Make: ACER, Model: VERITON M200-61) Intel i5-4570 Processor@3.2GHz, Intel H81 Chipwet, 4 GB DDR3 RAM, 500GB SATA HDD, 7200 22x Internal DVD Writer, Integrated HD audio, 21.5" ACER LCD Monitor, USB Mouse, Keyboard MS Windows 7

3 Synopsis EDA Tool, P. Code: 4458-0, Synopsys AsiaPac Advance TCAD (3D) University Bundle – 3 Licenses Software

4 Fiber Optics Communication Kit, Make: SALICON, Model: ST8502

5 L2+Switch with Ipv6, Make: Ruijie (DLink), Model : RG-S2952G-E, 48 port 10/100/1000 BASE-T+ 4GE SFP non-combo ports, switching capacity: 256Gbps, forwarding rate: 87Mbps; Patch Panel, Make: TYCO, Model: 1375015-2, etc.

6 a)High Voltage Test & Measuring Equipment – AC/DC/ Impulse Test Set (100kV, 140kV DC/140kV, 980 Joules Impulse) (type-ADI140-S); b)Measuring Sphere Gap (Vertical)

7 a)Dual Trace Oscilloscope, Make: Aplab, Model: 3706C; b) Function Generator, Make: Aplab, Model: MSG3M; c)Triple Output DC Power Supply, Make: Sairush, Model:MOPS04; d)3.1/2 Digit Digital Multimeter, Make: Aplab, Model: 1003

8 Arbitrary Function Generator, Make: NVIS, Model: NVIS
 9 Variable Output Linear DC Power Supply,
 Make:Aplab,Model:L12825

Relay Based Identification and Auto tuning, Control Systems,
 Control Theory Applications.

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

Image Processing, Computer Vision, Speech Processing, Biomedical Signal and Image Processing, Multimedia Signal Processing; Microwave, Antenna Design, Wireless Communication, Error Control Coding; Analog and Digital Design, MEMS, VLSI CAD, Photonics, Semiconductor Devices; Electrical Converters, Electric Drives, Smart Grids, Wind Energy, Solar Energy, Solar Photovoltaic, Power Electronics and Power Systems; Control Systems, Stochastic Systems,

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

The department has finalized its proposal to start a new M.Tech specialization in RF and Photonics and this programme is going to start from July 2015 session. This new initiative in RF and Photonics will offer academic training and research expertise in RF and Photonics Engineering ranging from microwave passive and active devices to optoelectronic integrated devices. The emphasis is to further research activities in the important area of RF, microwave, optoelectronic and optical communication.

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Suresh Sundaram	Person identification using online handwriting	DeITY	72.00	S R M Prasanna	3 years
Rohit Sinha	Speech-based access of agricultural commodity prices and weather information in 11 Indian languages/ dialects (Consortium project)	DeITY	69.00	S.R.M. Prasanna	2 years

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Sonali Chouhan	Advanced Embedded Systems Laboratory	Intel India Pvt Ltd	5.12	Hemangee Kapoor	4 years
Indrani Kar	Navigation and Path Planning of Mobile Robots and Extension to Multi-Agent Systems	DST	13.44		3 years
Prithwiji Guha	Multi-modal Broadcast Analytics: Structured Evidence Visualization for Events of Security Concern	DeITY	139.51	S.R. Singh (CSE), S.R.M. Prasanna (EEE) and S. Nandi (CSE)	3 years
Praveen Kumar	Dual Mechanical Port Based Electric Vehicle Power train	DST	54.99	S. Majhi	2 years
P. K. Bora	Development of Robust Document Image understanding System for Document in Indian Scripts (OCR)-Phase-II	DIT	28.75	M. K. Bhuyan, S. Das	5 years
M. K. Bhuyan	Development of an Indian Sign Language Education & Recognition System for Hearing Impaired students of India	MHRD	132.00	P. K. Bora	7 years
C. Mahanta	Robust Control of a Robotic Manipulator using Sliding Mode Controller	SERB, DST	15.00	-	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
S. R. M. Prasanna	Development of speech based multi-level person authentication system	DEITY	162.00	S. Nandi (CSE), R. Sinha and S. Dandapat	3 years
S. R. M. Prasanna	Development of text to speech systems in Assamese and Manipuri Languages	DEITY	109.00	R. Singh (CSE)	2 years
S. R. M. Prasanna	Development of prosodically guided phonetic engine in Assamese	DEITY	40.00	S. Dandapat	2 years
R. P. Paily	Design and Implementation of a Blind Assistance System using FPGAs and Sensors	DIT	70.26	H. B. Nemade and Josephine S.	3 years
R. Sinha	Virtual Laboratory on Signals and Systems	MHRD, under NME-ICT	30.00	S. R. M. Prasanna	3 years

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
S. Dandapat	Special Manpower Development Programme in VLSI Design and Related Software (SMDP-II)	DeitY	62.69	Roy Paily	8 years
Roy Paily	Design, fabrication and testing of low power analog front-end chip for Heart rate detection	DST	08.35	-	30 Months
Rohit Sinha	Virtual Laboratory on Signals and Systems	MHRD, under NME-ICT	30.00	S.R.M. Prasanna	3 years

CONSULTANCY PROJECTS

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Praveen Kumar	Consultancy project on Losses in Induction Machines (Phase 2)	Toshiba Mitsubishi-Electric Industrial Systems Corporation, Japan	11.00	Sisir Kr. Nayak	2 years
Kannan Karthik	Privacy preserving face retrieval	Bharat Electronics Ltd, Bangalore, CRL Labs	07.50	-	2 years
Ratnajit Bhattacharjee	To meet the telecomm need of rural India with special thrust for unconnected areas of NE region	Tashniwal Enterprises Controls Pvt. Ltd., Kolkata	09.00	T. Jacob, B. K. Rai	1.5 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. , Issue No.	Page No.	Year
Madhulika Das and Chitralekha Mahanta	Optimal Second Order Sliding Mode Control for Linear Uncertain Systems	ISA Transactions (Elsevier)	53-6	1807-1815	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Madhulika Das and Chitralakha Mahanta	Optimal Second Order Sliding Mode Control for Nonlinear Systems	ISA Transactions (Elsevier)	53-4	1191-1198	2014
Sanjoy Mondal and Chitralakha Mahanta	Adaptive Second order Terminal Sliding Mode Controller for Robotic Manipulators	Journal of the Franklin Institute (Elsevier)	351-4	2356 - 2377	2014
B. Kumbhani and R. S. Kshetrimayum	Error Performance of Two-hop Decode and Forward Relaying Systems with Source and Relay Transmit Antenna Selection	Electronics Letters	51-6	530-532	2015
M.Kulkarni, L.Choudhary, B.Kumbhani and R. S.Kshetrimayum	Performance Analysis Comparison of TAS/MRC and OSTBC in Equicorrelated Rayleigh Fading MIMO Channels	IET Communications	8-10	1850-1858	2014
M. Manohar, R. S. Kshetrimayum and A. K. Gogoi	A Compact Printed Triangular Monopole Antenna for Ultra-wideband Application	Microwave and Optical Technology Letters (MOTL)	56-5	1155-59	2014
Sam Darshi and R. Bhattacharjee	BER Analysis of Asynchronised Wireless Network in Presence of Non-Identically Distributed Interferers	Wireless Personal Communications	DOI 10.1007/s11277-015-2366-6		2015
Bajarangbali and Majhi S.	Identification of Integrating and Critically Damped Systems with Time Delay	Journal of Control Theory and Technology	13-1	29-36	2015
Bajarangbali and Majhi S.	Identification of Underdamped Process Dynamics	Journal of Systems Science and Control Engineering, (open access)	2-1	541-548	2014
Padhy P.K. and Majhi S.	Adaptive Integral Filter for the Identification of Two-Input Two-Output Processes	Int. J. Systems, Control and Communications	6-2	136-152	2014
Bajarangbali, Majhi S. and Pandey S.	Identification of FOPDT and SOPDT Process Dynamics using Closed Loop Test	ISA Transactions	53-4	1223-1231	2014
Parmar K.P.S., Majhi S. and Kothari DP	LFC of an Interconnected Power System with Multi-source Power Generation in Deregulated Power Environment	International Journal of Electrical Power and Energy Systems (IJEPES)	57	277-286	2014
Nagesh Ch and Roy Paily	Design of an Osmotic Pressure Sensor for Sensing Osmotically Active Substance	Journal of Micromechanics and Microengineering, IOP Publishing	25-4	45019	2015
Nagesh Ch and Roy Paily	Fabrication and Testing of an Osmotic Pressure Sensor for Glucose Sensing Application	Micromachines 5	3	722-737	2014
Suda, Naveen, P. V. Nishanth, Debajit Basak, Durshee Sharma and Roy Paily	A 0.5-V low power analog front-end for heart-rate detector	Analog Integrated Circuits and Signal Processing (Springer)	-	1-14	2014

Name of Author	Title of Paper	Name of Journal	Vol. , Issue No.	Page No.	Year
Rahul Shrestha and Roy Paily	Comparative Study of Simplified MAP Algorithms and an Implementation of Non-Parallel-Radix-2 Turbo Decoder	Journal of Signal Processing Systems(Springer)	-	-	2014
Wei, Y., Shen, G., Bose, S.K.	Span-restorable elastic optical networks under different spectrum conversion capabilities	IEEE Transactions on Reliability (2014)	63-2	401-411	2014
Shen, G., Lui, Y., Bose, S.K.	Follow the Sun, follow the Wind' lightpath virtual topology reconfiguration in IP over WDM network	Journal of Lightwave Technology	32-11	2094-2105	2014
Yongcheng Li, Hua Dai, Gangxiang Shen, Sanjay K. Bose	Adaptive FEC-Based Lightpath Routing and Wavelength Assignment in WDM Optical Networks	Optical Switching and Networking	14-3	241-249	2014
Gangxiang Shen, Yue Wei, Sanjay K. Bose	Optimal design for Shared Backup Path Protected Elastic Optical Networks under Single Link Failure	Journal of Optical Communications and Networking	6	649-659	2014
Sonu K. Mishra, SoumyalIndela, Sanjay K. Bose, Wen-De Zhong	Message Forwarding in a Sparsely Connected Wireless Network using Rateless Codes	Wireless Communications Letters (Early Access)	DOI: 10.1109/LWC.2014.2385855		2014
Dalal,A., Ansari, M.N., Kumar, P.	A novel steady-state model of a hybrid dual rotor motor comprising electrical equivalent circuit and performance equations	IEEE Transactions on Magnetics	50-12	-	2014
Agarwal A, Kumar M, Prajapati D.K, Singh M, Kumar P	Smart public transit system using an energy storage system and its coordination with a distribution grid	IEEE Transactions on Intelligent Transportation Systems	15-4	1622-1632	2014
Thirugnanam K, Ezhil Reena Joy, T.P., Singh, M., Kumar, P.	Mathematical modeling of li-ion battery using genetic algorithm approach for V2G applications	IEEE Transactions on Energy Conversion	29-2	332-343	2014
Santosh Kumar Yadav, Rohit Sinha, Prabin Kumar Bora	Electrocardiogram signal denoising using non-local wavelet transform domain filtering	IET Signal Processing	9-1	88-96	2015
Shivanshu Shrivastava, Alentattil Rajesh, Prabin Kumar Bora	Sliding window Dixon's tests for malicious users' suppression in a cooperative spectrum sensing system	IET Communications	8-7	1065-1071	2014
T. Malathi and M.K. Bhuyan	Estimation of disparity map of stereo image pairs using spatial domain local Gabor wavelet	IET Computer Vision	-	-	2015
M.K. Bhuyan, Karl F. Mac Dorman, Mithun Kumar Kar, Debanga Raj Neog, Brian C.Lovell and PrathikGadde	Hand Pose Recognition from Monocular Images by Geometrical and Texture Analysis	Journal of Visual Languages and Computing	-	39-55	2015
So Hayakawa, Shinji Fukui, Yuji Iwahori, M.K. Bhuyan, and Robert J. Woodham	Object Tracking Method Using PTAMM and Estimated Foreground Regions	Software Engineering Research, Management and Applications, Studies in Computational Intelligence	-	205- 218	2015

Name of Author	Title of Paper	Name of Journal	Vol. , Issue No.	Page No.	Year
M.K. Bhuyan, D. Ajay Kumar, Karl F. Mac Dorman, and Yuji Iwahori	Continuous Hand Gesture Recognition by using a Novel Set of Features	Journal on Multimodal User Interfaces	8(4)	333-343	2014
M.K. Bhuyan, V. Venkata Ramaraju and Yuji Iwahori,	Hand Gesture Recognition and Animation for Local Hand Motions	International Journal of Machine Learning and Cybernetics	5 (4)	607-623	2014
Shuya Ishida, Shinji Fukui, Yuji Iwahori, M. K. Bhuyan and Robert J. Woodham	Shadow Detection by Three Shadow Models with Features Robust to Illumination Changes	Procedia Computer Science	35	1219-1228	2014
Hiroaki Hagi, Yuji Iwahori, Shinji Fukui, Yoshinori Adachi and M. K. Bhuyan	Defect Classification of Electronic Circuit Board using SVM based on Random Sampling	Procedia Computer Science	35	1210-1218	2014
Takuya Nakagawa, Yuji Iwahori, M. K. Bhuyan	Reduction of Defect Misclassification of Electronic Board Using Multiple SVM Classifiers	International Journal of Software Innovation	2-1	25-36	2014
L.N. Sharma, R.K. Tripathy, and S. Dandapat	Multiscale energy and eigenspace approach to detection and localization of myocardial infarction	IEEE Transactions on Biomedical Engineering	-	99	2015
R. K. Tripathy, L. N. Sharma and S. Dandapat	A new way of quantifying diagnostic information from multilead electrocardiogram for cardiac disease classification" Letters, vol. 1 (4), pp 98-103, 2014.	IET Healthcare Technology Letters	1-4	98-103	2014
M. Sabarimalai Manikandan and S. Dandapat	Wavelet based electrocardiogram signal compression methods and their performances: A prospective review	Biomedical Signal Processing and Control	14	73-107	2014
A. G. Ramakrishnan, Abhiram Dikshit and S. R. M. Prasanna	Voice source characterization using pitch synchronous discrete cosine transform for speaker identification	Journal of Acoustical Society of America	-	-	2015
D. Pati and S. R. M. Prasanna	Processing of linear prediction residual in spectral and cepstral domains for speaker information	Int Journal of Speech Technology	-	-	2015
KT Deepak and SRM Prasanna	Epoch Extraction Using Zero Band Filtering from Speech Signal	Circuits, Systems, and Signal Processing	-	-	2014
Biswajit D. Sarma, S.R.M. Prasanna	Analysis of Vocal Tract Constrictions using Zero Frequency Filtering	Signal Processing Letters, IEEE	21-12	1481-1485	2014
S Shahnawazuddin, K. T. Deepak, B. D. Sarma, A. Deka, S.R.M. Prasanna and Rohit Sinha	Low complexity on-Line adaptation techniques in context of Assamese spoken query system	J Signal Process Syst	-	-	2014
G. Sai Krishna Santosh and Harshal B. Nemade	Investigation of properties of surface acoustic waves generated by periodically patterned ZnO on silicon substrate	Ultrasonics	59	40-44	2015

Name of Author	Title of Paper	Name of Journal	Vol. , Issue No.	Page No.	Year
Haris B C and R. Sinha	Low-complexity Speaker Verification with Decimated Supervector Representations	Speech Communication	-	67-2	2014
S. K. Yadav, R. Sinha and P. K. Bora	ECG Signal Denoising using Nonlocal Wavelet Transform Domain Filtering	IET Signal Processing	-	-	2014

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Basudeba Behera and Harshal B. Nemade	Optimizing preload and coefficient of friction for surface acoustic wave linear motor	5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014)	689	1-4	Dec. 12-14 2014
Ananya Patra, Sonali Chouhan	An approach to improved energy efficient hybrid clustering in wireless sensor networks,	International Conference on Signal Processing and Communications (SPCOM)	-	1-6	July 2014
Sikandar Kumar, Sonali Chouhan	Spectrum sensing in MIMO cognitive radio with temporally and spatially correlated signal	International Symposium on Wireless Communications Systems (ISWCS)	-	664-669	August 2014
Madhulika Das and Chitraklekha Mahanta	Optimal Second Order Sliding Mode Controller for Linear Systems with Mismatched Uncertainty	Indian Control Conference 2015, IIT Madras	-	-	Jan. 05-07 2015
Vinay Kumar Pandey, Indrani Kar and Chitraklekha Mahanta	Multiple Models and Second Level Adaptation for a Class of Nonlinear Systems with Nonlinear Parametrization	Ninth International conference on Industrial and Information Systems (ICIIS 2014), Gwalior	-	-	Dec. 15-17 2014
Arghya Chakravarty and Chitraklekha Mahanta	Backstepping Enhanced Adaptive Second Order Sliding Mode Controller to compensate Actuator Failures	INDICON 2014, Pune	-	-	Dec. 11-13 2014
Tousif Khan N and Chitraklekha Mahanta	Adaptive Backstepping Control for DC-DC Buck Converters using Chebyshev Neural Network	INDICON 2014, Pune	-	-	Dec. 11-13 2014
Tousif Khan N and Chitraklekha Mahanta	Adaptive Chebyshev Neural Network Based Speed Control of Buck Converter Fed DC Motor	Third National Symposium on Advances in Control & Instrumentation (SACI-2014), Mumbai	-	-	Nov. 24-26 2014
Tousif Khan N and Chitraklekha Mahanta	Adaptive Control of DCM Buck Converter via Integrated Chebyshev Neural Network based Backstepping and Sliding Mode Control	38th National Systems Conference (NSC), Hyderabad	-	-	Nov.05-07 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Nabanita Adhikary and Chitrakleha Mahanta	Backstepping Sliding Mode Controller for a Co-ordinated Links (COOL) Robot Arm	13th International Workshop on Variable Structure Systems (VSS 2014), Nantes, France	-	-	June 29- July 02, 2014
Kumar Abhishek, Amodh Kant Saxena, Ramesh Kumar Sonkar	Non-Invasive Measurement of Heart Rate and Hemoglobin Concentration Level Through Fingertip	IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems 2015, (IEEE SPICES 2015)	-	-	Feb.19-21 2015
Mohd Mansoor Khan, Ramesh Kumar Sonkar	Design and Proposal of Dual Line-of-Defense Perimeter Watchdog incorporating optimally designed FBG based Accelerometers and Strain Sensors using Single Optical Fiber	International Conference in Optics and Photonics-2015, University of Calcutta, Kolkata	IOP-15	P400-94,	Feb. 20-22 2015
Deepak Joshi, Satyabrata Dash, Ratnajit Bhattacharjee, Gaurav Trivedi	A method of analog circuit optimization using adjoint sensitivity analysis	IEEE International Conference MAREW 2015	-	-	2015
Satyabrata Dash, Vivek Bangera, Vinay B. Y. Kumar, Sachin B. Patkar and Gaurav Trivedi	Power Grid Analysis on Parallel Computing Platforms	IEEE International Conference MAREW 2015	-	-	2015
Sunil Dutt, Anshu Chauhan, Sukumar Nandi and Gaurav Trivedi	Variability-aware Parametric Yield Enhancement via Post-silicon Tuning of Hybrid Redundant MAC Units	IEEE VLSI-DAT, 2015	-	-	2015
Karnika Biswas and Indrani Kar	On Oscillations in Target Tracking by Artificial Potential Field Method	9th Int. Conference on Industrial and Information Systems, Gwalior	-	-	December 2014
Yanumula Venkata Karteek, Indrani Kar and Somanath Majhi	Consensus in Multi-Agent Systems with Switching Topologies using Position Based Back-Stepping	INDICON	-	-	December 2014
M. Manohar, U. K. Nemani, R. S. Kshetrimayum and A. K. Gogoi	A novel super wideband notched printed trapezoidal monopole antenna with triangular tapered feedline	International Conference on Signal Processing and Communications (SPCOM), Bangalore	-	-	July 2014
Apporv Vyas, Vineet Bhargav, Raghvendra Kanna, Prithwijit Guha	Commercial Block Detection in Broadcast News Videos	The Ninth Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2014)	-	-	Dec. 14-17 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Macrina Lobo, Mayank Pratap Singh, Raghvendra Kanna, Prithwijiit Guha	A Novel Method for Face Track Linking in Videos	The Ninth Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2014)	-	-	Dec. 14-17 2014
R. Jana and R. Bhattacharjee	A Tri-mode Low Cross-polarized Circular Matched Feed for Offset Reflector Antenna System	NCC 2015, IIT Bombay	-	-	Feb. 27-Mar 01 2015
K. Khanikar, R. Sinha and R. Bhattacharjee	Sparse Coding Based Spectrum Sensing in Presence of Multiple Frequency Hopping Primary Users	NCC 2015, IIT Bombay	-	-	Feb. 27-Mar 01 2015
S. Darshi and R. Bhattacharjee	Subband Allocation for Femtocells in Presence of Asynchronous Interference in Fractional Frequency Reuse Based OFDMA Networks	IEEE TENCON, 2014, Bangkok, Thailand	-	-	October 2014
S. Darshi and R. Bhattacharjee	Interference Analysis of Subband Allocation for Femtocells in Fractional Frequency Reuse Based OFDMA Networks	International Conference on Signal Processing and Communications (SPCOM), IISc Bangalore	-	-	July 2014
K. Khanikar, R. Sinha and R. Bhattacharjee	Sparse Representation Based Tracking of Frequency Hopping Primary User for Cognitive Radio	International Conference on Signal Processing and Communications (SPCOM), IISc Bangalore	-	-	July 2014
Jan Pidanic, T. Shejbal, Z. Nemecek, R. Dolecek, G. Trivedi and R. Bhattacharjee	An Optimization of a PHD Function for Association of Targets on Multistatic Radar	2014 IEEE Radar Conference, Cincinnati	-	-	May 2014
Baruah G., Majhi S. and Mahanta C.	Relay Based Identification of a Simple Fractional Order Time Delay System	Proc. of IEEE 1st Indian Control Conference, IIT Madras	-	-	Jan. 05-07 2015
Baruah G., Majhi S., Mahanta C.	On-Line Tuning of Fractional Order Pi Controller for an FOPDT System	Proc. of IEEE 1st Indian Control Conference, IIT Madras	-	-	Jan. 05-07 2015
Naik B., Ranjan A., Gunawat V., Kumar P. and Majhi S.	A brilliant Public Transportation System linked with Electric Vehicles in coordination with the Grid	11th IEEE INDICON, Yashada, Pune	-	-	Dec. 11-13 2014
Pandey S., and Majhi S.	Feedback Test for Identification of a Class of SISO Processes Using Process Reaction Curve	3rd National Symposium on Advances in Control & Instrumentation (SACI-2014), BARC, Bombay	-	-	November 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Kasi V., Kannan T., Kumar P. and Majhi S.	Node Identification for Placing EVs and PAs in a Distribution Network	IEEE PES General Meeting, Washington	-	-	July 27-31 2014
Joseph, F.; Francis, K.; Hore, A.; Roy, S.; Josephine, S. and Paily, R.P.	An efficient hardware architecture for stereo disparity estimation	18th International Symposium on VLSI Design and Test Symposium, 2014, Coimbatore	-	-	July 16-18 2014
Namami Goswami, Ujjwol Barman, Roy Paily, Biplab Bose and Siddhartha Sankar Ghosh	A Highly Sensitive Lithium Niobate Based Microcantilever for Biosensing Applications	International Conference on Emerging Trends in Electrical Engineering, ICETREE, Kollam, Kerala	-	-	Aug. 04-06 2014
Ratul Kumar Baruah and Roy Paily	Impact of Fringing Fields in a p-Channel Junctionless Transistor	International Conference on Emerging Electronics (ICEE), Indian Institute of Science Bangalore	-	-	Dec. 4-6 2014
Brajesh Rawat and Roy Paily	Performance Comparison between Graphene based Conventional MOSFET and TFET for Analog Circuits	Conference on Transport Properties in Low Dimensional Systems: Experiment and Simulation (TransLES-2014), IASST, Guwahati	-	-	Dec.11-13 2014
Rahul Shrestha and Roy Paily	Hardware Implementation and Testing of Log-MAPP Decoder Based on Novel un-Grouped Sliding-Window Technique	IEEE 5th International Symposium on Electronics System Design (ISED), Mangalore	-	-	Dec. 15-17 2014
Yongcheng Li, Hua Dai, Gangxiang Shen, Sanjay K. Bose	Adaptive FEC Selection for Lightpaths in Elastic Optical Networks	Optical Fiber Communication Conference, OFC 2014; San Francisco, CA	Article number 6887109		2014
Xaiowei Zhao, Gangxiang Shen, Sanjay K. Bose	Optimal Time-Dependent Spectrum Sharing between Neighboring Channels in Elastic Optical Networks	Optical Fiber Communication Conference, OFC 2014; San Francisco, CA	-	-	2014
Indela Soumya, Mishra Sonu K, Bose Sanjay K, Zhong, Wen-De	Network routing over erasure channels using systematic rateless codes	TENCON 2014 - 2014 IEEE Region 10 Conference	doi: 10.1109/TENCON.2014.7022276	1-6	Oct.22-25 2014
Soumya Indela, Sonu. K. Mishra, Sanjay K. Bose, Wen-De Zhong	Network Routing for Streaming Applications Using Systematic Rateless Codes	NCC-2015, IIT Bombay	-	-	Feb 2015
Santosh Kumar Yadav, Rohit Sinha, Prabin Kumar Bora	Image Denoising Using Ridgelet Transform in a Collaborative Filtering Framework	SPCOM, IISc Bangalore	-	-	June 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Gaurav Jyoti Phukan, Prabin Kumar Bora	An Algorithm for Blind Symbol Rate Estimation Using Second Order Cyclostationarity	SPCOM, IISc Bangalore	-	-	June 2014
Babita Jajodia, Rafi Ahamed Shaik and Anil Mahanta	PPM Demodulation Schemes for IEEE 802.15.6 IR-UWB WBAN Receivers	Proc. 2015 IEEE International Conference on Signal Processing, Informatics, Communication Energy Systems (SPICES-2015), NIT Calicut, India	-	-	February 2015
Bhoopal Rao G, Rafi Ahamed Shaik	Design of Cryptographically Secure AES S-Box Using Cellular Automata	Proc. 2015 IEEE International Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCS 2015), Vishakapatnam	-	-	January 2015
Surya Prakash M and Rafi Ahamed Shaik	A Distributed Arithmetic based Approach for the Implementation of the Sign-LMS Adaptive Filter	Proc. 2015 IEEE International Conference on Signal Processing and Communication Engineering Systems (SPACES 2015), Vijayawada, India.	-	-	January 2015
Ajay Kumar M, Rafi Ahamed Shaik	Separation of Artifacts from Electroencephalogram Signal using Sequential Singular Spectrum Analysis	Proc. 2015 IEEE International Conference on Signal Processing and Communication Engineering Systems (SPACES 2015), Vijayawada, India.	-	-	January 2015
Babita Jajodia, Anil Mahanta and Rafi Ahamed Shaik	A Six-Segment SRRC Pulse Generator for IEEE 802.15.6 WBAN Standard	Proc. 9th International Conference on Body Area Network (BODYNETS' 14), London, Great Britain.	-	-	September 2014
M.K. Bhuyan and T. Malathi	Performance Evaluation of Local Gabor Wavelet-based Disparity Map Computation	Proceedings of the Second International Conference on Electrical, Electronics, Computer Engineering and their Applications (EECEA2015), Manila, Philippines		79-92	2015
Wataru Higashiyama, Shinji Fukui, Yuji Iwahori, M. K. Bhuyan, Robert J. Woodham	Moving Object Extraction in Consideration of Small Movement of Background	Joint Conference of the International Workshop on Advanced Image Technology (IWAIT) and the International Forum on Medical Imaging in Asia (IFMIA), Taiwan	75	1-4	2015
Yuki Hanai, Yuji Iwahori, M. K. Bhuyan, Robert J. Woodham, Kunio Kasugai	Shape from Endoscope Image with Optimization and Two Point Light Sources	Joint Conference of the International Workshop on Advanced Image Technology (IWAIT) and the International Forum on Medical Imaging in Asia (IFMIA), Taiwan	76	1-4	2015

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Yuji Iwahori, Seiya Tsuda, Robert J. Woodham, M. K. Bhuyan and Kunio Kasuga	Improvement of Recovering Shape from Endoscope Images Using RBF Neural Network	4th International Conference on Pattern Recognition Applications and Methods (ICPRAM 2015), Lisbon, Portugal.	-	62-70	2015
Himanshu Agrahari, Yuji Iwahori, M. K. Bhuyan, Somnath Ghorai, Himanshu Kohli, Robert J. Woodham and Kunio Kasugai	Automatic Polyp Detection using DSC Edge Detector and HOG Features	3rd International Conference on Pattern Recognition Applications and Methods (ICPRAM 2014), France.	-	495-501	2014
Yuji Iwahori, Kenji Funahashi, Robert J. Woodham, and M.K. Bhuyan	Neural Network Based Image Modification for Shape from Observed SEM Images	22nd IEEE international Conference on Pattern Recognition (ICPR 2014), Stockholm, Sweden	-	2131-2136	2014
Suman Deb, S. Dandapat	A Novel Breathiness Feature for Analysis and Classification of Speech Under Stress	NCC, IIT Bombay	-	-	February 2015
Anurag Singh, J.J. Nallikuzhy, S. Dandapat	Compressed Sensing Framework of Data Reduction at Multiscale Level for Eigenspace Multichannel ECG Signals	NCC, IIT Bombay	-	-	February 2015
BhanuPriya, S. Dandapat	Linear Transformation on Speech Subspace for Analysis of Speech Under Stress Condition	NCC, IIT Bombay	-	-	February 2015
J. J. Nallikuzhy, S. Dandapat	Enhancement of the Spatial Resolution of ECG Using Multi-scale Linear Regression.	NCC, IIT Bombay	-	-	February 2015
Anurag Singh, S. Dandapat	Distributed Compressive Sensing for Multichannel ECG Signals over Learned Dictionaries	INDICON, 2014 Annual IEEE. IEEE, 2014	-	-	December 2014
S. Dandapat, L. N. Sharma, R. K. Tripathy	Quantification of Diagnostic Information from Electrocardiogram Signal: A Review	National Workshop on Advances in Communication and Computing (WACC)	-	-	September 2014
Bhanu Priya, S. Dandapat	Stressed Speech Recognition Using Similarity Measurement on Inner Product Space	National Workshop on Advances in Communication and Computing (WACC)	-	-	September 2014
Anurag Singh, S. Dandapat	Two Dimensional Processing of Multichannel ECG Signals for efficient exploitation of inter and intra-channel correlation	National Workshop on Advances in Communication and Computing (WACC)	-	-	September 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Sibasankar Padhy, S. Dandapat	SVD Analysis on Reduced 3-Lead ECG Data	National Workshop on Advances in Communication and Computing (WACC)	-	-	September 2014
J. J. Nallikuzhy, S. Dandapat	DCT Based Linear Regression Approach for 12-Lead ECG Synthesis	National Workshop on Advances in Communication and Computing (WACC)	-	-	September 2014
R. K. Tripathy, S. Dandapat	Quantifying Clinical Information in MEECG using Sample and Channel Convolution Matrices	National Workshop on Advances in Communication and Computing (WACC)	-	-	September 2014
Nagarjuna Nallam and Shouri Chatterjee	On the use of Frequency Transformations in the Design of Broad-band and Multi-band Power amplifiers	PAWR – 2015, San Diego, USA	-	-	January 2015
Joy, E.R., Kushwaha B.K., Rituraj G., Kumar P.	Impact of circuit parameters in contactless power transfer system	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	-	-	December 2014
Sameer, N. ; Prashanth, S.A. ; Dalai, A. ; Kumar, P.	Design and optimization of dual rotor motor for electric vehicle application	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	-	-	December 2014
Ansari, M.N. ; Dalai, A. ; Kumar, P.	A generalized method for developing steady state models for different electric motors	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	-	-	December 2014
Prabhakar, K.K. ; Singh, A.K. ; Reddy, C.U. ; Kumar, P.	Drive system for electric vehicle power train application using DC to AC matrix converter	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	-	-	December 2014
Singh, A.K. ; Dalai, A. ; Roy, R. ; Kumar, P.	Improved dynamic model of induction motor including the effects of saturation	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	-	-	December 2014
Singh, A.K. ; Dalai, A. ; Kumar, P.	Analysis of induction motor for electric vehicle application based on drive cycle analysis	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	-	-	December 2014
Kumar, A. , Bam, G. , Sah, B. , Kumar, P.	A hybrid micro grid for remote village in Himalayas	3rd Renewable Power Generation Conference, RPG Naples, Italy	-	-	September 2014
Kumar, P. ; Dalal, A. ; Singh, A.K.	Identification of three phase induction machines equivalent circuits parameters using multi-objective genetic algorithms	International Conference on Electrical Machines (ICEM), Berlin	-	-	July 2014
Dalal, A. ; Kumar, P.	Analytical model of a permanent magnet brushless DC motor with non-linear ferromagnetic material	International Conference on Electrical Machines (ICEM), Berlin	-	-	July 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Rituraj, G. ; Joy, E.R. ; Kushwaha, B.K. ; Kumar, P.	Analysis and comparison of series-series and series-parallel topology of contactless power transfer systems	IEEE Region 10 Conference, TENCON2014	-	-	October 2014
Mousmita Sarma, Sree Nilendra Gadre, Biswajit Dev Sarma and S. R. M. Prasanna	Speaker change detection using Excitation source and Vocal tract system information	Proc. 21st National Conference on Communications 2015, IIT Bombay	-	-	February 2015
Rohan Kumar Das, Debadatta Pati and S R M Prasanna	Different Aspects of Source Information for Limited Data Speaker Verification," in, IIT Bombay, Feb. 2015.	Proc. 21st National Conference on Communications 2015, IIT Bombay	-	-	February 2015
Banriskhem K. Khonglah, Rajib Sharma and S. R. M. Prasanna	Speech vs Music Discrimination using Empirical Mode Decomposition	Proc. 21st National Conference on Communications 2015, IIT Bombay	-	-	February 2015
R. Sharma and S. R. M. Prasanna	Characterizing glottal activity from speech using empirical mode decomposition	Proc. 21st National Conference on Communications 2015, IIT Bombay	-	-	February 2015
Himakshi Choudhury, Subhasis Mandal, Sanjeevan Devnath, S. R. M. Prasanna and S. Sundaram	Comparison of Assamese Character Recognizer using Stroke Level and Character Level Engines	Proc. 21st National Conference on Communications 2015, IIT Bombay	-	-	February 2015
Subhasis Mandal, S. R.M. Prasanna and Suresh Sundaram	Curvature Point based HMM State Prediction for Online Handwritten Assamese Strokes Recognition	Proc. 21st National Conference on Communications 2015, IIT Bombay	-	-	February 2015
Sarfaraz Jelil, Rohan Kumar Das, Khwairakpam Amitab, Fidalizia Pyrtuh, L. Joyprakash Singh, S. R.M. Prasanna	Exploring Speaker Modeling Techniques for Short Pass-Phrase Based Person Authentication System	International Conference on Computing and Communication Systems (I3CS'15), NEHU Shillong	-	-	April 2015
N. Adiga and S. R.M. Prasanna	Epochs Based Compression of LP Residual for Source Modeling in Text-to-Speech Synthesis	Proc. 20th National Conference on Communications 2014, IIT Kanpur	-	-	February 2014
Subhadeep Dey, Sujit Barman, Ramesh K. Bhukya Rohan Kumar Das, Haris B C, S. R. M. Prasanna and R. Sinha	Speech Biometric Based Attendance System	Proc. 20th National Conference on Communications 2014, IIT Kanpur	-	-	February 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Thotappa, D.; S. R.M. Prasanna	Reference and automatic marking of glottal opening instants using EGG signal	Signal Processing and Communications (SPCOM), 2014 International Conference, Bangalore	-	1-5	July 22-25 2014
Biswajit Dev Sarma, Supreeth Prajwal S. and S. R.M. Prasanna	Improved Vowel Onset and Offset Points Detection Using Bessel Features	Signal Processing and Communications (SPCOM), 2014 International Conference, Bangalore	-	1-6	July 22-25 2014
Ramesh K, S. R. M. Prasanna and Rohan Kumar Das	Significance of Glottal Activity Detection and Glottal Signatures for Text-Dependent Speaker Verification	Signal Processing and Communications (SPCOM), 2014 International Conference, Bangalore	-	1-5	July 22-25 2014
N. Adiga, D.Govind and S. R. M. Prasanna	Significance of Epoch Identification Accuracy for Prosody Modification	Pro. International Conference on Signal Processing and Communications (SPCOM), 2014, Bangalore	-	1-5	July 22-25 2014
Biswajit Dev Sarma and S. R.M. Prasanna	Detection of Vowel Onset Points in Voiced Aspirated Sounds of Indian Languages	INTERSPEECH 2014, Singapore	-	-	September 2014
Rohan Kumar Das, Abhiram B , S R M Prasanna and A G Ramakrishnan	Combining Source and System Information for Limited Data Speaker Verification	INTERSPEECH 2014, Singapore	-	-	September 2014
Biswajit Dev Sarma, Meghamallika Sarma and S. R. M Prasanna	Semiautomatic segmentation and marking of pitch contours for prosodic analysis	National Workshop on Advances in Communication and Computing 2014, Guwahati	-	-	September 2014
Biswajit Dev Sarma, Mousmita Sarma and S. R. M. Prasanna	Semi-automatic Syllable Labelling for Assamese language using HMM and Vowel onset-offset points	National Workshop on Advances in Communication and Computing 2014, Guwahati	-	-	September 2014
Rohan Kumar Das and S R M Prasanna	Speaker Verification for Variable Duration Segments and the Effect of Session Variability	National Workshop on Advances in Communication and Computing 2014, Guwahati	-	-	September 2014
K. T. Deepak, K. Ramesh and S. R. M. Prasanna	Extraction of Glottal Closure and Opening Instants using Zero Frequency Filtering	INDICON-2014, Pune	-	-	December 2014
N. Adiga and S. R. M. Prasanna	A Hybrid Text-to-Speech Synthesis using Vowel and Non Vowel like regions	INDICON-2014, Pune	-	-	December 2014
Banriskhem Khonglah, Biswajit Dev Sarma and S. R.M. Prasanna	Exploration of Deep neural networks for vowel like region detection	INDICON-2014, Pune	-	-	December 2014
Bidisha Sharma and S. R. M. Prasanna	Faster Prosody Modification using Time Scaling of Epochs	INDICON-2014, Pune	-	-	December 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Rajib Sharma, Ramesh K. and S. R. M. Prasanna	Analysis of ElectroGlottograph Signal using Ensemble Empirical Mode Decomposition	INDICON-2014, Pune	-	-	December 2014
Tony Jacob and P Sandeep	Supervised Dictionary Learning for Signals from Union of Subspaces	SPCOM 2014	-	1-5	July 22-25 2014
Tony Jacob and Jomet Thomas	Sequential change detection/isolation with stochastic energy constraints	INDICON-2014, Pune	-	1-6	December 2014
R Nallamothe, V Thomas, G Yadav, A Sethi	Interest point detection in videos using long point trajectories	Proceedings of the 9th Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP) 2014; Dec 14-17 2014	-	-	Dec 2014
A Sethi, L Sha, RJ Deaton, V Macias, AH Beck, PH Gann	Computational Pathology for Predicting Prostate Cancer Recurrence	Proceedings of American Association for Cancer Research Annual Meeting 2015; April 18-22, 2015	-	-	Apr 2015
A Vahadane, T Peng, S Albarqouni, M Baust, K Steiger, AM Schlitter, A Sethi, I Esposito, N Navab	Structure-Preserved Color Normalization for Histological Images	Proceedings of IEEE International Symposium on Biomedical Imaging (ISBI) 2015; Apr 16-19	-	-	Apr 2015
G Yadav and A Sethi	A Flow-based Interest Point Detector for Action Recognition in Videos	Proceedings of the 9th Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP) 2014; Dec 14-17 2014	-	-	Dec 2014
K Dwivedi, K Biswarnjan and A Sethi	Drowsy Driver Detection using Representation Learning	Proceedings of 4th IEEE International Advance Computing Conference (2014); Feb 21-22 2014	-	995-999	Feb 2014
S. Shahnawazuddin and R. Sinha	A Low Complexity Model Adaptation Approach involving Sparse Coding over Multiple Dictionaries	Proceedings of INTERSPEECH 2014, Singapore.	-	-	Sept 2014
S. Shahnawazuddin and R. Sinha	A low complexity cluster model interpolation based on-line adaptation technique for spoken query systems	Proceedings of International Symposium on Chinese Spoken Language Processing (ISCSLP), Singapore	-	-	Sept 2014
H. Kathania, S. Shahnawazuddin and R. Sinha	Exploring HLDA Based Transformation for Reducing Acoustic Mismatch in Context of Children Speech Recognition	Proceedings of International on Signal Processing and Communications (SPCOM), Bangalore	-	-	July 2014
Sunil Y. and Rohit Sinha	Sparse Representation Based Approach to Artificial Bandwidth Extension of Speech	Proceedings of International on Signal Processing and Communications (SPCOM), Bangalore	-	-	July 2014

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Vol. and Issue No.	Page No.	Year
Sunil Y. and Rohit Sinha	Exploration of MFCC Based ABWE for Robust Children's Speech Recognition Under Mismatched Condition	Proceedings of International on Signal Processing and Communications (SPCOM), Bangalore	-	-	July 2014

Book, Chapter, etc.

Name of Author/s	Name of Book/ Book Chapter	Publisher	Volume and Issue No.	Page No.	Year
Tousif Khan Nizami and Chitrakleha Mahanta	Hybrid Backstepping Control for DC-DC Buck Converters / Systems Thinking Approach for Social Problems, Lecture Notes in Electrical Engineering	Springer India	327	129-141	2015
Vinay Kumar Pandey, Indrani Kar and Chitrakleha Mahanta	Adaptive Control of Nonlinear Systems Using Multiple Models with Second-Level Adaptation / Systems Thinking Approach for Social Problems, Lecture Notes in Electrical Engineering	Springer India	327	239-252	2015
Sanjoy Mondal and Chitrakleha Mahanta	Chattering-Free Adaptive Second-Order Terminal Sliding-Mode Controller for Uncertain System / Systems Thinking Approach for Social Problems, Lecture Notes in Electrical Engineering	Springer India	327	253-266	2015

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Praveen Kumar	2014 IEEE PES General Meeting	Washington D.C, USA	July 27-31 2014	International
Chitrakleha Mahanta	13th International Workshop on Variable Structure Systems(VSS 2014)	Nantes, France	June 29-July 02 2014	International
S.R. Ahmed	9th International Conference on Body Area Network (BODYNETS' 14)	London, Great Britan	Sep. 29 -Oct. 01 2014	International
Prithwijit Guha	The Ninth Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2014)	Bangalore	Dec. 14-17 2014	National
S.R. Ahmed	IEEE International Conference on Signal Processing and Communication Engineering Systems (SPACES 15), Jan. 2015.	Vijayawada, India	Jan. 02-03 2015	International
Nagarjuna Nallam	Radio Wireless Week	San Diego, USA	Jan. 25-28 2015	International
M.K. Bhuyan	Second International Conference on Electrical, Electronics, Computer Engineering and their Applications (EECEA2015).	Manila, Philip-pines	Feb. 11-14 2015	International
Kalpana Dhaka	National Conference on Communications	Mumbai	Feb. 27-Mar.01 2015	National
Tony Jacob	National Conference on Communications	Mumbai	Feb. 27-Mar.01 2015	National

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
M.K. Bhuyan	Vision-based Hand Gesture Recognition for HCI	School of Informatics and Computing, University of Purdue, USA	Indianapolis, USA	April 29 2014
Tony Jacob	Introduction to probabilistic modeling of networks	Summer Workshop on Complex Networks, IIITDM Jabalpur	Jabalpur	May 19-23 2014
Kalpana Dhaka	MIMO and Cooperative Communication Systems	STC on Advances in Signal Processing and Communication, MNIT Jaipur	Jaipur	May 23 2014
Tony Jacob	Digital Signal Processing in Computational Photography	The Second National Conference on Emerging Trends in Engineering, NET 2014	GEC Kozhikode	Aug. 30 2014
Ratnajit Bhattacharjee	Recent Trends in Wireless and Mobile Communication (http://wacc.aec.ac.in/programSchedule.shtml)	National Workshop on Advances in Communication and Computing (WACC), 2014, Assam Engineering College	Guwahati	Sept. 26 2014
Ratnajit Bhattacharjee	Computational Electromagnetics (http://www.tezu.ernet.in/dphy/workshop-on-computational-aspects-of-research-in-physics-oct-31-nov-1-2014/)	Workshop on Computational Aspects of Research in Physics (Oct 31- Nov 1, 2014), Tezpur University	Tezpur	Nov. 01 2014
Sonali Chouhan	Computation-Communication Energy Trade-off in Wireless Sensor Networks: Is it Really Important?	Marmara University	Istanbul, Turkey	Nov. 03 2014
Tony Jacob	Signal Processing in Computational Photography	TEQIP Lecture, College of Engineering, Vadakara	Kozhikode	Nov. 05 2014
Ratnajit Bhattacharjee	An Overview of Virtual Labs (under NMEICT) (http://www.nkn.in/nkn-workshop2014/speakers.html)	The third NKN Annual Workshop, 15-17 Dec 2014	Guwahati	Dec. 16 2014
Ratnajit Bhattacharjee	Ethical issues in Research (http://www.titagartala.nic.in/SDPonRFandWirelessCommunication.pdf)	Faculty Development Program on Current Approaches in Teaching and Research in Science and Technology, 15th Dec -27th Dec, 2014, Tezpur University	Tezpur	Dec. 27 2014
S.R. Ahmed	Delivered a plenary talk on "Wireless Body Area Networks"	IEEE International Conference on Signal Processing and Communication Engineering Systems	Vijayawada	Jan. 02 2015
Kalpana Dhaka	Cooperative Communication	TEQIP STC on Recent Advances in Communication and Signal Processing, IIT Guwahati	Guwahati	Jan. 13 2015
Tony Jacob	Sparse Representations and Compressive Sensing	TEQIP Workshop on Recent Advances in Communication and Signal Processing, IIT Guwahati	Guwahati	Jan. 15 2015
Tony Jacob	Sparse Representations and Compressive Sensing	TEQIP Workshop on Mathematics for Engineering Education, IIT Guwahati	Guwahati	Feb. 17 2015
Ramesh Kumar Sonkar	Photonics: Integrated Circuits and Applications	QIP- RFP 2015, IIT Guwahati	Guwahati	Feb. 27 2015
Ramesh Kumar Sonkar	Non-Invasive Methods for Biological Measurements	QIP -BIOMED15, IIT Guwahati	Guwahati	Feb. 28 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Ratnajit Bhattacharjee	(a) Handset Antennas for Wireless Communication; (b) Wireless and Mobile Communication: Recent Trends (http://www.titagartala.nic.in/SDPonRFandWirelessCommunication.pdf)	Two day staff development program on Recent trends in RF and Wireless communication, Tripura Institute of Technology	Agartala	Mar. 13-14 2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Om D. Deshmukh, Sr. Research Scientist	Xerox Research Centre, Bangalore	Discussion about Project	21.04.2014 to 25.04.2014
Prof. A.K. Sinha	IIT Kanpur	In connection with NPSC-2014	07.06.14 to 09.06.14
Prof. S.P. Singh	IIT BHU		
Mr. Tomas Shejbal, Mr. Michal Mandlik	University of Pardubice, Czech Republic	In connection with Workshop and Collaborative work	04.09.2014 to 22.09.2014
Prof. S.C. Sahasrabudhe	DhirubhaiAmbani Institute of Information & Communication Technology, Gujarat 382007	To deliver motivational lecture to the students and faculty members	11.09.2014 to 13.09.2014
Prof. H.P. Khincha	IISc Bangalore		11.09.2014 to 13.09.2014
Dr. Z.V. Lakaparampil	C-DAC, Trivandrum	Discussion of Possible Collaboration between IITG and NaMPET	26.09.2014 to 27.09.2015
Prof. H.P. Khincha	IISc Bangalore	In connection with NPSC-2014	16.12.2014 to 22.12.2014
Prof. D.Thukaram	IISc Bangalore		
Prof. G. S.Raju	Former Director, IT BHU		
Prof. Bhim Singh	IIT Delhi		
Prof. S C Srivastava	Deputy Director, IIT Kanpur		
Dr. R. P. Singh	Chairman, IIT Guwahati Former Chairman & Managing Director, PGCIL		
Neerja Mathur	Central Electricity Authority, Ministry of Power, New Delhi		
Ramesh Rayudu	School of Engineering and Computer Science, New Zealand	In connection with NPSC-2014 and Discussion on Project	16.12.2014 to 22.12.2014
Dr. A.L. Das	SAMEER	Discussion regarding SAMEER Centre at IITG	01.01.2015 to 03.01.2015
Dr. Digbijoy Nath	IISc Bangalore	In connection with Academic Affiliation Program at CeNSE, IISc for students and faculty of IIT Guwahati	22.01.2015 to 25.01.2015
Mr. A. Pradeep	R&D Laboratories, BHEL Hyderabad	Discussion about Project	10.02.2015 to 11.02.2015
Prof. Utpal Das	IIT Kanpur	In connection with	
QIP STC RFP-2015	24.02.2015 to 27.02.2015		
Prof. Animesh Biswas	IIT Kanpur	In connection with	
QIP STC RFP-2015	22.02.2015 to 25.02.2015		

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Sl. No.	Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
1	Ramesh Kumar Sonkar	IEEE Workshop on Advanced MATLAB Applications-AdMAT 14	IEEE Student Branch, IIT Guwahati	August 30-31, 2014	National	116
2	Gaurav Trivedi	National Level Workshop on GPU Programming and Applications (GPA3-2014)	NVIDIA, DELL, HP, EMC2, Mellanox Technologies, ANSYS and Math-Works	September 12-14, 2014	National	130
3	Ramesh Kumar Sonkar	NI Workshop on Graphical System Design Approach for Research in Power Systems, Power Electronics and Signal Processing	National Instruments	September 27-28, 2014	National	30
4	Praveen Tripathy	National Power Systems Conference	CPRI, APDCL, PRDC, NEEPCO, POSOCO, CSIR, SERB, DST	December 18-20, 2014	National	250
5	R. Bhattacharjee and R. Sinha	TEQIP STC on Recent Advances in Communication and Signal Processing	TEQUIP, CET, IITGuwahati	January 12-16, 2015	National	30
6	Indrani Kar, Gaurav Trivedi	IEEE ARM Workshop on Embedded Systems using ARM Processors	IEEE Student Branch, IIT Guwahati and ARM Holdings PLC, NITS MIRZA	January 19-20, 2015	National	30
7	Ramesh Kumar Sonkar and K. R. Singh	QIP STC on RF and Photonics: Fundamentals & Advances	AICTE	February 23-27, 2015	National	30
8	Gaurav Trivedi (EEE) and Hemangee K. Kapoor (CSE)	Recent Trends in Electronics and Computation	TEQIP (CET), IITGuwahati	March 09-11, 2015	National	30
9	Srinivasan Krishnaswamy	Electronic System Design and Manufacturing	DEITY	March 16, 2015	National	30
10	Indrani Kar	2nd IEEE Workshop on Advanced MATLAB Applications (ADMAT 2015)	IEEE Student Branch, IIT Guwahati	April 11-12, 2015	National	200

PATENTS

Sl. No.	Name of Faculty and Co-Researcher	Name	Date Applied/ Granted	Application No.	Remarks
1	Nemade Harshal Bhalchandra and Behera Basudeba	Dual drive surface acoustic wave motor and the package	Aug. 26, 2014	Indian Patent App. No. 878/KOL/2014	Published, awaiting examination

Sl. No.	Name of Faculty and Co-Researcher	Name	Date Applied/Granted	Application No.	Remarks
2	Nemade Harshal Bhalchandraand Behera Basudeba	Dual drive surface acoustic wave linear motor and the package	Sep. 24, 2014	Indian Patent App. No. 978/KOL/2014	Published, awaiting examination
3	Gaurav Trivedi, Kalpesh Kapoor and Sameer Pawanekar	A Nonlinear Analytical Method and System for Hypergraph Partitioning	Mar.27, 2015	Indian Patent App. No. 347/KOL/2015	Patent (Pending)

AWARDS AND HONOURS

Chitralkha Mahanta

1. Elevated to the grade of Senior Member of the Institute of Electrical & Electronics Engineers (IEEE) in September 2014.
2. Received a certificate of appreciation from NPTEL for the VIDEO course titled "BASIC ELECTRONICS" attracting the highest number of viewership and rated amongst the top FIVE NPTEL courses from IITGuwahati as per Google and Youtube Analytics data.

R. S. Kshetrimayum

1. Fellow of Institution of Electronics and Telecommunication Engineers (IETE), India, 2014.
2. Fellow of Antenna Test & Measurement Society (ATMS), India, 2014.
3. Fellow of Optical Society of India (OSI), 2014.

R. Bhattacharjee

1. Served as Chairman, Eighteenth National Power System Conference (NPSC 2014). (<http://www.iitg.ernet.in/npsc2014/committee.html>)
2. Served as Area Chair, Electronics and Communication Engineering, WACC 2014, AEC Guwahati. (<http://wacc.aec.ac.in/technicalcommittee.shtml>)
3. Served as an Expert Member for the academic audit, NIT Silchar, 23-25 January 2015.

Ramesh Kumar Sonkar

1. Fellow of Optical Society of India (OSI), 2014.

S. Majhi

1. Elevated to the grade of Senior Member of the Institute of Electrical & Electronics Engineers (IEEE) in July 2014.
2. Fellow of the Institution of Electronics & Telecommunication Engineers (IETE) in Sept. 2014
3. Received a certificate of appreciation from NPTEL for the VIDEO course titled "ADVANCED CONTROL SYSTEMS"

attracting the highest number of viewership and rated amongst the top FIVE NPTEL courses from IITGuwahati as per Google and Youtube Analytics data.

4. Member, Board of Postgraduate Studies (Electronics & Communication Engg), Tezpur University, Tezpur, Assam, Feb 2015-cont.
5. Member, Board of Undergraduate Studies (Electrical Engg.), North Eastern Regional Institute of Science and Technology, Itanagar, January 2015-cont.
6. Member, Board of Undergraduate Studies (Electronics & Communication Engg.), North East Hill University Shillong, Meghalaya, India, Aug 2014-cont.

A.Sethi

1. Awarded IUSSTF Fellowship for conducting research on prostate cancer recurrence prediction with collaborators in University of Illinois at Chicago (USA).

STUDENTS' ACHIEVEMENTS:

1. Mr. Ankit Dalal got the DST grant to attend 2014 International Conference on Electrical Machines (ICEM), in Berlin, Germany from 02.09.2014 to 07.09.2014.
2. Abhishek Vahadane interned at Technische Universitat Munchen (Germany) with Prof. Nasser Navab under Heritage scholarship to work on histologic images.
3. Neeraj Kumar interned with Prof. Jerome Idier in Centre National de la Recherche Scientifique, France under Heritage scholarship on non-negative matrix factorization.
4. Harsh Vardhan Pokalla and his team reached the finals of Texas Instruments Product Design Challenge in 2014 and won the award for best video presentation for their medicine reminder system. This is a relatively unique experience among B Tech students of IITGuwahati.

SPECIAL MENTION

1. Mr. Neeraj Kumar interned with collaborator Prof. Rohit Bhargava at University of Illinois at Urbana-Champaign on modelling disease progression in organs.

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1	Ravindranath Adda (Joined on 17 April 2014)	IIT Kanpur	Assistant Professor	Power Electronics, Distributed Generation, and Power Quality
2	S.R. Ahmed	IIT Kharagpur	Associate Professor	Adaptive Signal Processing, Mobile Communications, VLSI Signal Processing, Biomedical Signal Processing

Sl. No.	Name	PhD	Designation	Areas of Interest
3	R. Bhattacharjee	Jadavpur University	Professor	Electromagnetics, Microstrip Antennas, Microwave Engineering, Wireless Communication
4	M.K. Bhuyan	IIT Guwahati	Associate Professor	Image and Video Processing, Computer Vision, Pattern Recognition and Human Computer Interactions (HCI)
5	P.K. Bora	IISc Bangalore	Professor	Image Processing and Computer Vision
6	S.K. Bose	Stony Brook, USA	Professor	Modeling, Simulation and Analysis of Communication Networks
7	A. Chatterjee	University of California	Visiting Assistant Professor	Devices
8	S. Chouhan	IIT Delhi	Assistant Professor	Wireless Sensor Networks, Coding Theory, Wireless Communications
9	S. Dandapat	IIT Kanpur	Professor	Signal Processing, Speech Processing, Biomedical Signal & Image Processing, Biomedical Instrumentation
10	S. Das	IISc Bangalore	Assistant Professor	Information theory, Error correcting codes
11	K. Dhaka	IIT Delhi	Assistant Professor	Cooperative Communication, Multi-hop relaying systems, Multiple-input multiple-output (MIMO) wireless communication system, Bluetooth 2.0+EDR Physical and MAC layer
12	A.K. Gogoi	IIT Kanpur	Professor	Electro Magnetics, Microwave Engineering, RF circuits, System Design
13	P. Guha	IIT Kanpur	Assistant Professor	Computer Vision, Machine Learning, Robotics
14	T. Jacob	IIT Kanpur	Assistant Professor	Statistical Signal Processing and Information Theory
15	I. Kar	IIT Kanpur	Assistant Professor	Control Theory and Applications, Soft Computing Applications, Neural Network Based Adaptive Control, Applications of Fuzzy Logic and Neural Networks in Nonlinear Control, Kinematic and Dynamic Control of Robot Manipulators
16	K. Karthik	University of Toronto	Associate Professor	Privacy Preserving Authentication and Multimedia Searches, Fine Grained Access Control, Image and Audio Comparisons in lower-dimensional Spaces, Blind Image Forensics and Image Phylogeny
17	S. Krishnaswamy	IIT Bombay	Assistant Professor	Control Systems, Cryptography
18	P. Kumar	Delft University of Technology, The Netherlands	Associate Professor	Optimisation of electrical motors and drives, Algorithm development for Multi-objective optimisation and multicriteria decision making in engineering systems, Simulation and design of electrical motors and actuators using Finite Element Methods (FEM), Analytical modeling of electrical motors for rapid simulation, Simulation and Analysis of Hybrid and Electric Vehicles
19	C. Mahanta (Head of the Department)	IIT Delhi	Professor	Control System Theory and Applications, Control of Nonlinear Uncertain Systems, Artificial Intelligence based Control, Identification and Control of Nonlinear Systems

Sl. No.	Name	PhD	Designation	Areas of Interest
20	S. Majhi	University of Sussex, Brighton, UK	Professor	Relay Based Identification and Auto tuning, Control Systems, Control Theory Applications
21	Nagarjuna Nallam (Joined on 23 April 2014)	IIT Delhi	Assistant Professor	Analog and RF integrated circuits
22	Shabari Nath (Joined on 19 June 2014)	University of Minnesota	Assistant Professor	Power Electronics, Application of Power Electronics to Power Systems
23	S.K. Nayak	IISc Bangalore	Assistant Professor	Power flow analysis in AC and DC traction power system, Electromagnetics, Lightning interaction with an electrical and mechanical system, High Voltage Engineering
24	H.B. Nemade	IIT Bombay	Professor	Electronic Instrumentation, Systems Design, Ultrasonic Instrumentation, Non-destructive testing, Electronic product design, EMI/EMC issues, Acoustic sensors, Under-water acoustics, Surface acoustic wave devices, MEMS
25	R.P. Paily	IIT Madras	Professor	VLSI and MEMS
26	D. Pal (Released on 30 May 2014)	IIT Bombay	Assistant Professor	Algebraic analysis, multidimensional systems, computational commutative algebra, optimal control, dissipative systems
27	S.R.M. Prasanna	IIT Madras	Professor	Speech and Signal Processing
28	B.K. Rai	IIT Bombay	Assistant Professor	Communication Systems, Coding Theory
29	A. Rajesh	IIT Kanpur	Associate Professor	Coding and Modulation Techniques
30	J. S. Sahambi (On lien)	IIT Delhi	Associate Professor	Digital Signal Processing, Wavelets, Microprocessors
31	A. Sethi	Illinois, UIUC	Assistant Professor	Computer Vision, Image Processing, Pattern Recognition, Image Processing, Visual Perception
32	H. S. Shekhawat (Joined on 31 December 2014)	University of Twente, The Netherlands	Assistant Professor	System Theory, Applied Mathematics & Signal Processing
33	G.B. Shrestha	Virginia Polytechnic Institute & State University, USA	Visiting Professor	Power Markets and Economics, Renewable Energy Sources – Photovoltaic systems, Wind Generation Systems, Generation and Transmission Planning Power System Analysis, Operation and Planning, Optimization and Uncertainty Techniques
34	K.R. Singh	NTU Singapore	Associate Professor	Electromagnetic Band Gap, Filters, Metamaterials, Computational Electromagnetics and Periodic Structures
35	R. Sinha	IIT Kanpur	Associate Professor	Speech and Audio Processing, Speech Recognition, Signal Processing
36	R.K. Sonkar	IIT Kanpur	Assistant Professor	Optoelectronics Device Characterization and fabrication, Microelectronics and III-V Compound Semiconductors, Photonics Integrated Circuits, Integrated Optics Fiber Optics Communicatio
37	S. Sundaram	IISc Bangalore	Assistant Professor	Pattern Recognition, Image / Video Processing and Computer Vision

Sl. No.	Name	PhD	Designation	Areas of Interest
38	P.Tripathy	IIT Kanpur	Assistant Professor	Power system dynamics and stability studies, Wide Area Monitoring and Control of Power System, Optimal power dispatch and state estimation, Security analysis and control, Energy management system and distribution automation
39	G.Trivedi	IIT Bombay	Assistant Professor	Circuit Simulation (Analog & Digital) and VLSI CAD, High Performance Computing, Computational Biology and Solar Photovoltaics

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1998

ACADEMIC PROGRAMMES OFFERED:

Master of Arts (MA) in Development Studies

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 4
- Associate Professor: 11
- Assistant Professor: 10
- Visiting Professor: 1

LABORATORIES:

a) Phonetics and Phonology Lab: Research on language and speech is an exciting area encompassing research in the fields of language technologies and human-computer interfaces in a way which can be employed to various ends ranging from language learning of intelligent systems to the learning capabilities of humans. To fulfill these ends this modern academic research lab which is focused on the way speech is produced and comprehended was started. The lab will be involved with experimental investigations of speech processes and their acquisition. Topics include: articulatory movements, measurements of pressures and airflows in speech production, computer-aided waveform analysis and spectral analysis of speech, perception and discrimination of speechlike sounds, speech prosody, models for speech recognition, speech disorders, and language acquisition. This laboratory will also play an important role in recording and archiving the languages of the North-East. Apart from that, the facilities in this laboratory will also promote advanced research on languages of the region.

b) Language-Cognition lab: Work on language-cognition interface in various areas of sensory perception, with focus on North East Indian languages.

c) The Sleep & Cognition Lab at present is involved in investigating the role of sleep on route learning in Humans. The present project is funded by the department of science and technology, GOI. This lab has 40 channel Nihon-Khoden polysomnography system, 2 High Speed Computing system, lomed Phosphor high precision low voltage direct current stimulator & E-prime 2.0 for designing experiment.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

The department uses the facilities of the Institute Computer Center for its Language Laboratory. Computers were procured for two newly constructed labs. High configuration desktop PCs, 67 Nos. have been purchased for laboratories. For smooth workflow new office equipment and public announcement system were procured..

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The faculties in the HSS department carry out research in several fields of humanities and social sciences. This includes English and Indian literature, Linguistics, Economics, Psychology, Philosophy, Political Science, Archeology, Sociology and History. Faculty and doctoral students pursuing research within these disciplines have been engaged in teaching and research. Major areas of research include Phenomenology and Cognitive Science, Phenomenology and Religion, Ethical Issues related to Science and Technology, Philosophy of Technology, Intellectual history of India – late 19th and 20th centuries, Focus on Ramakrishna, Aurobindo, Tagore and Gandhi; Applied Philosophy, Peace Studies, Critical Thinking, Applied Ethics, Philosophy of Education, Common Wealth Literature, Aesthetics, Cultural Studies, Ecocriticism, Literary and Cultural Theory, Subaltern and Bhakti literature, Phonetics, Phonology, Acoustic Phonetics, Tibeto-Burman tones, Psychoacoustics, Cognitive linguistics, Endangered and lesser known languages, Language typology, Sociolinguistics, Phonological theory with special interest in Optimality Theory, vowel harmony, Experimental approaches to Phonology and its acquisition, North-Eastern Archeology and Heritage Management, Development Economics, Industrial Economics, Labour Economics, Microeconomics, Agricultural Economics, Environmental Economics, Econometrics, Macroeconomics, Applied Game Theory, Issues in Food Security and Social Security, Economics of Education, economic understanding of climate risk and resilience, Urban Living and Sustainable cities, Development Economics, Informal Sector, Public Economics, Dynamic Economic Theory, Organizational Behaviour, Human Resource Management, Social/Environmental Psychology, I-O Psychology, Sleep and Information Processing, Health

and Clinical Psychology, Perception, Sociology of Science, Historical Sociology, Sociology of Gender, Sociology of Law, Sociology of Communication, Socio- Identity issues of ethnic minorities, local governance, development

policies, social movements, ethnic violence and conflict prevention, Christianity, conversion, ethnic violence, kinship and family, urban issues, Socio-economic history, Social & Environmental History of Assam.

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
AvishekParui	Memory, Consciousness and the Storytelling Self: Studies in Literature, Cognitive Psychology and Philosophy of Mind	IIT Guwahati Start Up Grant	3.70	-	2 years
N. Kipgen	Ecotourism and Sustainable Livelihoods: A Prospective Look in the Rural Areas of Manipur	ICSSR	5.00	-	18 months
N. Kipgen	Change and Continuity of Traditional Governance: A Study of Kuki Chieftainship in Manipur	IITG Start-Up Grant	5.00	-	2 years
RohiniMokashi-Punekar	Anthology of abhangas from the Varkari bhakti	ICHR	1.80	-	2 years
SambitMallick	Handloom as a Sustainable Socio-technological System: A Study of Textile Industry in North East India	ICSSR	10.00	-	2 years
Sawmya Ray	Combatting Trafficking of Women in Assam: Study of Anti-trafficking Policies and Strategies	National Commission for Women (NCW)	3.00	-	1 year
Sukanya Sharma	Pottery Making and its Prospects for Rural Employment: Kumar and Hira Communities of Assam	ICSSR	7.00	-	2 years

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Bidisha Som	A typological map of the language-cognition interface in the domain of conceptual metaphor	DST	13.55	-	3 years
Pahi Saikia	Decentralization and Social Citizenship: Assam as a Case Study	ICSSR	0.90	NA	2 years
Priyankoo Sarmah	Acoustic and Tonal Features based Analysis of Mizo	DIT	73.68	Prof. P. K. Das	3 years
Priyankoo Sarmah	A Broad Sociolinguistic Study of Assamese Vowels	ICSSR	15.0	-	2 years
Ravi Mokashi-Punekar	Creating Digital Learning Environment for Design in India"	MHRD	750.00	Prof. Rohini Mokashi-Punekar	7 years
Shakuntala Mahanta	Digital Language Preservation, analysis and technology development	DIT	203.96	Prof. S. R. M. Prassanna	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Sukanya Sharma	Virtual Anthropology Laboratory	MHRD	65.00	Prof. S. Nandi, Prof. S. R. M. Prassanna	Continuing since 2010

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Bidisha Som	An ethnolinguistic account of sensory perception among the Bodos in North East India.	ICSSR-NWO	4.21	Prof. Asifa Majid, Radboud University, The Netherlands	1 years
Sawmya Ray	Seduction, Sale and Slavery: Trafficking of Women and Children in North East India	ICSSR	5.00	-	3 years
Shakuntala Mahanta	A Sociolinguistic and phonological study of variation in Deori	ICSSR	6.38	-	2 years
Sukanya Sharma	Source Book of the Archaeology of Arunachal Pradesh	Centre for Archaeological Studies and Training Eastern India, Kolkata	2.25	-	1 year
Sukanya Sharma	Megaliths in Changing Times: A Study in Cherrapunjee	ICHR	0.50	-	2 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Archana Barua	Towards a Philosophy of Sustainability: The Gandhian Way	International journal of Sociology and Anthropology	3-2	136 – 143	2015
Archana Barua	Language and Life worlds: Wittgensteinian and Heideggerian Perspectives	International journal of Global Education	4-1	21-28	2015
Tejasha Kalita and Archana Barua	The Issue of Abortion and Mother-Fetus Relations: A study from Buddhist perspectives	Journal of Asian and International Bioethics	24-5	141-146	2014
Minakshi Das and Archana Barua	Phenomenology, Psychotherapy and the Quest for Inter-subjectivity	Journal of Phenomenology Indo-Pacific	14-2	01- 11	2014
Archana Barua	Environmental Philosophy in its dialogue with Gandhian philosophy	International Journal of Multidisciplinary Educational Research(IJMER)	10 (3)	167-171	2014
Archana Barua	An attempt at introducing Mahapurush Sankaradeva and the bhakti renaissance in Assam in light of the phenomenology of religious experience	A Tribute To Sankaradeva	Ejournal: http://www.Atributetosankaradeva.Org/articles.htm		2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Avishek Parui	No Offence Taken	Economic & Political Weekly	XLIX, 43 - 44	117-118	2014
Debarshi Das	Changing Distribution of Land and Assets in Indian Agriculture	Review of Radical Political Economics	DOI: 10.1177/04866134 1454277		
Dutta, Parag and Dutta, M. K.	Fiscal and Debt Sustainability in a Federal Structure: The Case of Assam in North East India	Romanian Journal of Fiscal Policy	5-1	01 - 19	2014
Deka R.L., Mahanta C, Nath K.K., Dutta, M. K	Spatio-temporal Variability of Rainfall Regime in the Brahmaputra Valley of North East India	Theoretical and Applied Climatology	-	-	2015
Ashima Majumdar, Saundaryya Borbora	Productive efficiency of the urban informal manufacturing sector in Assam	International Journal of Economic Policy in Emerging Economics	7-2	125-140	2014
Gopal Kumar Sarma, Saundaryya Borbora	Loan Recovery Performance of Credit Officers in Microfinance Institutions: A Case of Assam	International Journal of Science and Research (IJSR)	3-9	675-678	2014
Ashima Majumdar and Saundaryya Borbora	Production Linkages between the Formal and the Urban Informal Manufacturing Sectors: A Case Study in Assam	Review of Integrative Business & Economics Research	4 (1)	75-94	2015
S. Borbora	Disparity in Financial Penetration: A State Level Analysis in India	International Journal of Business, Management and Social Sciences	4-1	-	2014
Rohini Mokashi-Punekar	The Cosmopolitan Teacher: U R Ananthamurthy	Muse India: a literary ejournal	58	-	2014
Rohini Mokashi-Punekar	Review: Two Stalwarts	The Book Review	1	07 - 08	2015
Sawmya Ray	Delivering Justice or Reaffirming Patriarchy? : Gender, Law and Domestic Violence	Droit et Cultures, France, Special issue on Cultures Meet the Law: The Case of India	67	81-124	2014
Sukanya Sharma	Understanding Patterns: Festivals of Arunachal Pradesh	Quest	VIII, 1	38-54	2014
Sambit Mallick	The orbit of commodified technoscience: innovations in agricultural technology in India	International Journal of Innovation and Sustainable Development	8-4	346-362	2014
Dewartha Morang and V.Prabhu	A Study of Philosophical reflection on environmental value	Journal of Social Sciences and Humanities	1	17 - 24	2014

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue, Page No.
Ashima Majumdar and S. Borbora	Production Linkages between the Formal and the Urban Informal Manufacturing Sectors: A Case study in Assam	SIBR-RDINRRU 2014 Conference on Interdisciplinary Business & Economics Research	September 27-28, 2014	Volume 3 (2014), Issue 3
S Borbora	Poverty Reduction Strategies and Development, in Poverty, Livelihood Rights and the Small Tea Growers in the Northeast	Poverty Reduction Strategies for Small Tea growers'	March 22, 2012,	March 2014, pp. 17-22

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue, Page No.
S. Mahanta and Amalesh Gope	Lexical tone in Sylheti	Tonal Aspects of Language conference, Nijmegen	May 2013	-

Book

Name of Author/s	Title of Book	Publisher	Total Page No.	ISBN	Year of Publication
Sukanya Sharma	Source book of Archaeology of the Himalayan Region: Arunachal Pradesh	Centre for Archaeological Studies and Training Eastern India, Kolkata	125	978-81-930422-0-5	2014

Book Chapter

Name of Author/s	Title of Chapter	Title of Book	Publisher	Vol., Issue No.	Page No.	ISBN	Year
Avishek Parui	Dreamed Cinema, Cinematic Dreams: Dreamscape, Neurosis and Desire in Federico Fellini's 8½	Dreamscapes in Italian Cinema	Fairleigh Dickinson University Press		1-18	978-1-61147-781-8	21 January 2015
Bidisha Som & R. K. Mishra	Teaching a second language or Foreign language in the North East : Psycholinguistic and Cognitive Issues	In Awadesh K. Mishra and Kandarpa Das (Eds) Issues in teaching-learning second and foreign languages (with special reference to North East India)	Lakshi Publishers, Delhi	Forthcoming		978-81-906622-5-3	
M. Kumari and S. Mallick	Bacillus thuringiensis cotton in India: debates surrounding agricultural biotechnology	Technology and Innovation for Social Change, edited by S. Majumdar, S. Guha and N. Marakkath	Springer, New Delhi, Heidelberg, New York, Dordrecht, London		161-174	9788132220701	January 2015
PahiSaikia	The Political Economy and Changing Organizational Dynamics of the ULFA Insurgency in Assam	Ethnic Subnationalist Insurgencies in South Asia Identities, Interests and Challenges to State Authority	Routledge	NA	41-61	978-1-138-83992-2	March 12, 2015
Rohini Mokashi-Punekar	Dissenting Voices: Continuities in the Varkari Tradition	Devotion and Dissent in Indian History ed. Vijaya Ramaswamy	Cambridge University Press		145-168	978-93-82993-19-3	2014
Shakuntala Mahanta	Learning opaque segments in Vowel harmony,	Where the principles fail. A festschrift for Wim Zonneveld	Uil-OTS Publications: Utrecht		135 – 146	978-94-6093-999-0	July, 2014
A. Saikia	Making Room Inside Forests: Grazing and Agrarian Conflicts in Colonial Assam.	Shifting Ground: People, Animals, and Mobility in India's Environmental History; Eds. Mahesh Rangarajan & K Sivaramakrishnan	OUP, New Delhi			9780198098959	2014

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
A Barua	The Neo-Vedantism of Radhakrishnan: An Appraisal	Department of Philosophy, Gauhati University	12, 13 and 14 March, 2015	National
A Parui	Romanticism, Empire and Indo-British Cultural Relations	Department of English University of Hyderabad	27-28 October 2014	National
A Parui	Indian Association for Commonwealth Literature & Language Studies Annual Conference on Space, Place, Travel, Displacement, Exile	BITS Pilani, K K Birla Goa Campus	12-14 February 2015	National
A Saikia	AAS-in-Asia Conference 2014	NUS, Singapore	July, 2014	International
A Saikia	Rethinking the Nehru Legacy: The Long Twentieth Century	NMML, Delhi	17-18 November, 2014	International
A Saikia	Reimagining India's North East: Narratives, Networks and Negotiations	Jamia Milia Islamia	4-6 February, 2015	International
B Som	International workshop on The Attentive Listener in the Visual World	CNCS Hyderabad university	03.11.2014 -05.11.2014	International
B Som	Second International convention on ethics in research on human participants	Jawaharlal Nehru University	02.09.2014 -04.09.2014	International
B Sengupta	International Conference On Public Finance, Public Economics and Public Policy	Kolkata	10-11 Dec 2014	International
B Sengupta	Papers in Public Economics and Policy, NIPFP	Delhi	12-13 March 2015	National
M. K. Dutta	Annual Conference of Western Economic Association International, USA	Colorado, Denver	June 27-July 01, 2014	International
M. K. Dutta	51st Annual Conference of the Indian Econometrics Society (TIES)	Punjabi University, Patiala	December 12-14, 2014	National
M. K. Dutta	16th Annual Conference of North Eastern Economic Association (NEEA)	Tripura University, Agartala	January 7-8, 2015	National
M. K. Dutta	Workshop on Research project Writing	S. B. Deorah College, Guwahati	May 9-10, 2014	National
M. K. Dutta	Capacity Building Training Workshop on Human Development by UNDP	Dept. of HSS, IIT Guwahati	May 29-31, 2014	National
M. K. Dutta	Consultative Workshop on Assam Human Development Report	OKDISCD, Guwahati	November 4, 2014	National
M. K. Dutta	Silver Jubilee Seminar on Environment and Development	OKDISCD, Guwahati	January 21-22, 2015	International
M. K. Dutta	SAP Seminar on Identity, Governance and Development Issues of North East	Gauhati University	March 27-28, 2015	National
S. Borbora	Workshop on Research Project Writing	Guwahati	May 9-10, 2014	National
S. Borbora	Workshop on 'Capacity Building Training workshop on "Understanding Human Development: Concepts and Measurements & Procurement of Services"	Guwahati	29-31 May, 2014	National

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
S. Borbora	SIBR-RDINRRU 2014 Conference on Interdisciplinary Business & Economics Research	Hongkong	September 27th– 28th, 2014	International
S. Borbora	Workshop on HDR, Assam	Guwahati	4th November, 2014	National
S. Borbora	Workshop on Sub-Regional Cooperation : India, Bangladesh and Myanmar	Guwahati	27th November, 2014	National
S. Borbora	International Conference on Commerce, Law and Social Sciences	Bangkok	10-11 December, 2014	International
S. Borbora	16th Annual conference of NEEA	Agartala	8-9 January, 2015	National
S. Borbora	Seminar on 'Environment Development Trade-off'	Guwahati	21-22 January, 2015	National
S. Borbora	'Identity, Governance and Development Issues in N.E. India' UGC-SAP Seminar	Guwahati	27-28 March, 2015	National
N. Kipgen	Anthropology of Religion and Minorities	CCSU, Guwahati	11-12 September 2014	National
N. Kipgen	Debating Environmental History and Issues: Reading from Regional Discourses	Assam University, Diphu Campus	24-25 November 2014	National
N. Kipgen	Environment and Development Trade off	Omeo Kumar Das Institute of Social Change and Development, Guwahati	22-23 January 2015	National
P Saikia	Paper presented at the Association for Asian Studies Annual Conference	Chicago, USA	26 – 29 March 2015	International
P Saikia	Findings presented at "Symposium on "Mainstreaming university-community research partnerships"	Delhi	9th April 2015	International
R M. Punekar and A. Prasad	Towards Ecocultural Ethics: recent trends and future directions	BITS, Goa Campus	9-11 October 2014	International
R M. Punekar and K. Bora	Space, Place, Travel, Displacement, Exile	BITS, Goa Campus	12-14 February 2015	International
S. Mahanta	Tonal Approaches to Language	Nijmegen, The Netherlands	13 – 16 May 2014	International
S. Ray	International Sociological Association Annual Conference	Yokohama, Japan	13–19 July 2014	International
S. Ray	National Seminar on Prospects of And Challenges in Bridging the Gender Gap	National Law University And Judicial Academy, Guwahati	2–3 May 2014	National

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
S. Ray	Workshop on "Understanding Human Development: Concepts and measurements", Department of Humanities and Social Sciences, IITG, Government of India and UNDP.	IITG, Guwahati	28-31 May 2014	National
S. Sharma	Archaeology and Language	Pune	6th-9th October 2014	International
S. Mallick	XVIII ISA World Congress of Sociology	Yokohama, Japan	13-19 July 2014	International
S. Mallick	Debating Environmental History and Issues: Reading from Regional Discourses	Assam University, Diphu Campus	24-25 November 2014	National
S. Mallick	Ideology and Social Sciences	Omeo Kumar Das Institute of Social Change and Development, Guwahati	27-28 November 2014	National
S. Mallick	Agriculture and Rural Development Issues in Eastern India	Indian Statistical Institute Giridih	12-13 March 2015	National
V. Prabhu	International conference on Everyday life in contemporary India	University of Madras, Chennai	17-18 December 2014	International
V. Prabhu and D. Morang	5thAsian Conference on Ethics, Religion and Philosophy	Osaka, Japan.	25 - 29 March 2015	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
A. Barua	Introducing Mother Goddess Kāmākhyā	Dept. of History, Assam University,	Silchar	November 12, 2014
A. Barua	Quest for a place of one's own: Locating Ethics in the age of Globalization	Assam Don Bosco University,	Guwahati	28th November, 2015
A. Barua	Psychoanalysis and phenomenology : A Heideggerian approach	IIT Mumbai	Mumbai	December, 2014, Dept. of HSS.
A. Barua	Invited Resource person on the on the broad theme "Philosophy of Values", in the Refresher course in Philosophy	Gauhati University	Guwahati	Dec. 8 to 28, 2014
A. Barua	Resource person in the Orientation Course in Humanities and Social Sciences	Gauhati University	Guwahati	on 04-02-2015
A. Parui	"And suddenly the memory revealed itself": Consciousness, Epiphany, and Remembrance in Literature and Cognitive Neuroscience	Department of English, English and Foreign Language University, Hyderabad	English and Foreign Language University (EFLU) Hyderabad	29 October 2014
A. Parui	Travel Literature in English: New Perspectives (Two Lectures)	Department of English Sambalpur University	Sambalpur University	11-12 December 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
A. Saikia	Key Note Address: Nature and Labour: Another View of the 19th century Modernisation Project in Assam	Department of English and Foreign Language	Tezpur University	28 February, 2015.
A. Saikia	Key Note Address: An Environmental History of the Brahmaputra and Surrounding Landscapes: A Longer View	Department of History	Assam University, Diphu Campus	24th -25th November 2014.
A. Saikia	In Defense of Flood: Rethinking Water	MAKAIS and JMI	Makais, Kolkata	28 October, 2014
B. Som	Vocabulary of sensory perception in Bodo	Centre for language studies. Radboud University	The Netherlands	June 10, 2014
D. Das	Why are some states more successful in delivering food through the public distribution system in rural India?	Department of Economics, University of Massachusetts, Amherst, USA	Amherst, USA	17th July, 2014
J. Thomas	Local Agency and Missionary Work: Situating George Matthan and his Engagement with Modernity in 19th Century Travancore	Nehru Memorial Museum and Library	New Delhi	10 March 2015
M. K. Dutta	Formulation of Research Project	S. B. Deorah College	Guwahati	May 9, 2014
M. K. Dutta	Data Collection Techniques and Sampling Methods	Academic Staff College, Gauhati University	Guwahati	June 11, 2014
M. K. Dutta	Union Budget and the North East	Barbhag College	Kalag, Nalbari	September 20, 2014
M. K. Dutta	Project Formulation, Funding and Documentation	Academic Staff College, Gauhati University	Guwahati	March 16, 2015
R. M. Puneekar	Key Note Address: "Gender in Cultural and National Contexts"	ICSSR sponsored National Seminar, Nowgaon College Department of HSS,	Nowgong College	20-21 January, 2015
R. M. Puneekar	Key Note Address: " Directions for Research in the Humanties"	IIT Kharagpur	IIT Kharagpur	November 7, 2014
P. Saikia	Northeast India: Historical & Contemporary debates on Locating 'Northeast'	Emory University	Georgia, Atlanta, US	March 30, 2015
P. Sarmah	Analyzing Vowels: An Acoustic Phonetic Approach	English and Foreign Languages University, Shillong	National Workshop on Data Analysis: Tools and Methods	August 7 -8, 2014
S. Mallick	Building Scientific Institutions in India, 1857-1947	The University of Burdwan	Burdwan, West Bengal	14 January 2015
S. Mallick	Debates on Science and Nationalism in India, 1920-47	The University of Burdwan	Burdwan, West Bengal	16 January 2015
V. Prabhu	Ethics and Animal Welfare	World Philosophy Day, Cotton College State University	Guwahati	November 16 2014

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS/INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Basudev Chatterji	University of Delhi	Visiting Professor	January 2014-January 2015
Prof. Rakesh Gupta	Jawaharlal Nehru University	Visiting Professor	September-November 2014
Dr. K.V. Srikanth	IIT Guwahati	Dept. Lecture Series	14.08.2014
Prof. A. Chattopadhyay	IIT Guwahati	Dept. Lecture Series	04.09.2014
Prof. Raman Sukumar	IISc., Bangalore	Dept. Colloquium Series	05.11.2014
Prof. Amit Bhaduri	JNU, New Delhi	Dept. Colloquium Series	07.11.2014
Prof. Girish S. Setlur	IIT Guwahati	Dept. Lecture Series	27.10.2014
Prof. V. Ganeshan	IIT Madras	Dept. Lecture Series	30.10.2014
Dr. Kurush Dalal	Univ. of Mumbai	Dept. Lecture Series	28.01.2015
Prof. Bhalchandra Nemade	Padma Shri – 2011, Maharashtra foundation	Dept. Lecture Series	02.02.2015

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
A. Parui with S. Sharma	Developing and Teaching Literary Theory Courses in the 21st Century Academia	Knowledge Incubation Cell (KIC) IIT Guwahati	8-9 January 2015	National	30
A. Saikia	Cultural Ecology of the Brahmaputra	IIAS, Shimla	7-8 March, 2015	National	50
A Saikia	Annual Winter School on Research Methodology	TISS Guwahati & Stanford University	15-19 December, 2014	International	35
P. Saikia	Dialogue on Strengthening Community Engagement in Higher Education Institutions	IIT Guwahati	17-18 September 2014	National	35
P. Saikia	Conference on North East in India's Look East: Issues and Opportunities	ICSSR	28-30 October 2014	National	
S. Sharma, Co-ordinator	Human Values and Ethics	Centre for Educational Technology (CET), IITG	Jan 21st-23rd January	National	30
S. Mallick	Intellectual Property Rights and Innovation	AICTE (under QIP, IITG)	11-12 December 2014	National	32
V. Prabhu with S. Sharma (Dept. Coordinator)	TEQIP Short Term course on Human Values and Ethics	IIT Guwahati	21 – 23 January 2015	National	30

AWARDS AND HONOURS

- a) A. Saikia: 'Srikant Dutta Book' Award given by the Nehru Memorial Museum and Library New Delhi for the best book on North East India between 2009-2014 for A Century of Protests: Peasant Politics in Assam.
- b) A. Saikia: Suryya Kumar Bhuyan Endowment Chair on Assam History in the department of HSS for the period of 2014-2019.

- c) A Saikia: Nominated to the Scientific Steering Committee of Integrated History and Future of People on Earth (IHOPE), Uppsala University, Sweden.
- d) D. Das: Received Fulbright Nehru fellowship to go on research visit to the Department of Economics, University of Massachusetts, Amherst, USA from January 2015 to August 2015
- e) S. Borbora: Elected President, North Eastern Economic

Association.

f) R. M. Punekar: Elected Regional Representative of North East Zone, 2015-17, Core Committee, Indian Association of Commonwealth Literature and Languages.

g) S. Mallick: Registration Grant from International Sociological Association and Partial Travel Grant from Indian Council of Social Science Research, New Delhi to attend XVIII ISA World Congress of Sociology, Yokohama, Japan, 13-19 July 2014.

h) S. Mallick: Visiting Fellow, Department of History, The University of Burdwan, Burdwan, West Bengal, 12-16 January 2015.

STUDENTS' ACHIEVEMENTS:

a) HSS Graduate Research Meet 2014 during 31.10.201-01.11.2014: This event brought together academicians and scholars to exchange and share their search experiences on different aspects of humanities and social sciences. The meet offered multidisciplinary platform for young researchers to discuss the most recent innovations, trends, concerns,

practical challenges, encountered in research and fieldwork.

SPECIAL MENTION

1. S. Mallick

Chair, Technical Session on 'History, Development and Environmental Politics', National Seminar on Debating Environmental History and Issues: Reading from Regional Discourses, Department of History, Assam University, Diphu Campus, 24 November 2014.

2. S. Mallick

External Member, Performance Appraisal Committee, Omeo Kumar Das Institute of Social Change and Development, Guwahati, 30 December 2014.

3. S. Mallick

Chair, Session on 'Ecology, Sustainable Growth and Natural Resource Management', National Conference on Agriculture and Rural Development: Issues in Eastern India, Indian Statistical Institute Giridih, 13 March 2015.

4. V. Prabhu, Convener, World Philosophy Day organized in the Department of Humanities and Social Sciences, Indian Institute of Technology Guwahati, December 1, 2014

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Barua Anamika	University of Leeds	Associate Professor	Socio-economic understanding of climate risk and resilience, urban living and sustainable cities
2.	Barua Archana	North Eastern Hill University	Professor	Phenomenology, Existentialism, Feminist Epistemology, Applied Ethics, Philosophy of Religion, Indian Philosophy, Gandhian Philosophy
3.	Barua Krishna	Gauhati University	Professor	Commonwealth Literature, Aesthetics, Cultural Studies, Ecocriticism and Translation
4.	Borbora Saundarjya	Gauhati University	Professor	Development Economics, Industrial Economics, Labour Economics
5.	Bedamatta Rajshree	University of Calcutta	Assistant Professor	Development Economics, Informal Sector, Issues in Food Security and Social Security, Economics of Education
6.	Chatterji Basudev	Cambridge University	Visiting Professor	Economic history, Intellectual history of India – late 19th and 20th centuries, Focus on Ramakrishna, Aurobindo, Tagore and Gandhi.
7.	Das Debarshi	Jawaharlal Nehru University	Associate Professor	Development Economics, Macroeconomics, Applied Game Theory
8.	Das Liza	Dibrugarh University	Associate Professor	Literary and Cultural Theory
9.	Dutta Mrinal Kanti	Gauhati University	Associate Professor	Agricultural Economics, Environmental Economics, Development Economics
10.	Hussain Dilwar	IIT Kanpur	Assistant Professor	Health and Clinical psychology
11.	John Thomas (Joined on 20 May 2014)	JNU New Delhi	Assistant Professor	Religion and Formation of Cultural and Political Identities; Religion and Politics in North-East India; Social and Intellectual History of 19th Century Travancore; History of Missionary Encounter in South Asia

Sl. No.	Name	PhD	Designation	Areas of Interest
12.	Kashyap Naveen	IIT Bombay	Assistant Professor	Sleep and Information Processing
13.	Mahanta Shakuntala	Utrecht University, The Netherlands	Associate Professor	Phonological theory with special interest in Optimality Theory, vowel harmony, Experimental approaches to Phonology and its acquisition.
14.	Mallick Sambit	University of Hyderabad	Associate Professor	Sociology of Science, Historical Sociology
15.	Mokashi-Punekar Rohini	Gujarat University	Professor	Research Interests: Culture and Translation Studies, Modern British Literature, Indian Writing in English
16.	N. Kipgen (Joined on 15 May 2014)	IIT Delhi	Assistant Professor	Environmental Sociology, Cultural Politics, Traditional Governance, Oral History
17.	Parui Avishek (Joined on 8 July 2014)	Durham University, UK	Assistant Professor	Critical Theory; Masculinity Studies; Literature, Cognitive Psychology and Philosophy of Mind
18.	Ray Sawmya	University of Hyderabad	Assistant Professor	Sociology of Gender, Sociology of Law, Sociology of Communication
19.	Saikia Arupjyoti (Head of the Department)	University of Delhi	Associate Professor	Social & Environmental History of 19th and 20th century Assam.
20.	Saikia Pahi	McGill University, Canada	Assistant Professor	Identity issues of ethnic minorities, local governance, development policies, social movements, ethnic violence and conflict prevention.
21.	Sarmah Priyankoo	University of Florida, Gainesville	Assistant Professor	Phonetics, Phonology, Acoustic Phonetics, Tibeto-Burman tones, psychoacoustics, perception
22.	Sharma Sukanya	Deccan College PG and Research Institute	Associate Professor	Archaeology of Northeast India, Colonial history of Assam, Cultural Policy
23.	Sengupta Bodhisattva	McGill University	Assistant Professor	Public Economics, Dynamic Economic Theory
24.	Som Bidisha	Jawaharlal Nehru University	Associate Professor	Cognitive linguistics, Endangered and lesser known languages, Language typology, sociolinguistics.
25.	Tripathi Nachiketa	IIT Kanpur	Associate Professor	Organizational Behaviour, Human Resource Management, Social/Environmental Psychology, I-O Psychology.
26.	Venkataraman Prabhu	Pondicherry University	Associate Professor	Philosophy of Technology, Applied Philosophy, Peace Studies, Critical Thinking, Applied Ethics, Philosophy of Education.

DEPARTMENT OF MATHEMATICS

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1995

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in

o Mathematics and Computing

Master of Science (MSc) in

o Mathematics and Computing

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 10
- Associate Professor: 6
- Assistant Professor: 16

LABORATORIES:

The Department has three very good advanced computer laboratories with a number of high-end servers, workstations and storage area network in addition to regular facilities like PCs with wired and wireless net connectivity. Each laboratory also has LCD projectors and remote operated screens.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

Digital Lectrn System with portable PA system, Tecplot (Software), etc.

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

Analysis, Algebra and Number Theory, Theoretical Computer Science, Combinatorics, Numerical Analysis, Fluid Dynamics, Statistics & Probability, Financial Mathematics.

RESEARCH PROJECTS

a) Completed Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Bhupen Deka	A Posteriori L (L2) Error Bounds for Finite Element Methods to the Wave Equation with Discontinuous Coefficient	IIT Guwahati (Start-up Grant)	4.80	-	2 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Santu Das and Swaroop Nandan Bora	Wave damping by a vertical porous structure placed near and away from a rigid vertical wall	Geophysical and Astrophysical Fluid Dynamics.	108(2)	147-167	2014
Santu Das and Swaroop Nandan Bora	Reflection of oblique ocean water waves by a vertical rectangular porous structure placed on an elevated horizontal bottom	Ocean Engineering	82	135-143	2014
D. Chakraborty and Anupam Saikia	Another Look at Real Quadratic Fields of Relative Class Number 1	Acta Arithmetica DOI:10.4064/aa163-4-5	163 (4)	371-378	2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Shreemayee Bora, Michael Karow, Christian Mehl and Punit Sharma	Structured eigenvalue backward errors of matrix pencils and polynomials with Hermitian and related structures	SIAM Journal on Matrix Analysis and Applications	5 (2)	453-475	2014
D. Kalita and S. Pati	A reciprocal eigenvalue property for unicyclic weighted directed graphs with weights from $\{\pm 1, \pm i\}$	Linear Algebra Applications	449	417-434	2014
B. Deb, and K.Kapoor	Motion Planning in Cartesian Product Graph.	Discussiones Mathematicae Graph Theory.	34(2)	207-221	2014
Pratyosh Kumar	Fourier restriction theorem and characterization of weak L^2 -eigenfunctions of the Laplace-Beltrami Operator	J. Funct. Anal	266(9)	5584-5597	2014
Neelam Choudhary and Swaroop Nandan Bora	Linear sloshing in a vertical circular cylinder with curved bottom in the presence of a rigid baffle	Journal of Advanced Research in Applied Mathematics	6	29-45	2014
R. B. Bapat, A. K. Lal and S. Pati,	A formula for all minors of the adjacency matrix and an application	Special Matrices	2	89-98	2014
R. K. Srivastava	Real analytic expansion of spectral projection and extension of Hecke-Bochner identity	Israel J. Math.	200(1)	171-192	2014
Jiten C Kalita	Effect of boundary location on the steady flow past an impulsively started circular cylinder	International Journal of Computing Science and Mathematics.	5(3)	252-279	2014
S. Gowrisankar and S. Natesan.	Robust Numerical Scheme for Singularly Perturbed Convection-Diffusion Parabolic Initial-Boundary-Value Problems on Equidistributed Grids	Computer Physics Communications	185	2008-2019	2014
Santu Das and Swaroop Nandan Bora	Reflection of oblique ocean water waves by a vertical porous structure placed on a multi-step impermeable bottom	Applied Ocean Research.	47	373-385	2014
Partha Sarathi Mandal, and	A Statistical Approach towards Secure Location Verification in Noisy Wireless Channels	International Journal of Foundations of Computer Science (World Scientific).	25(5)	563-584	2014
Barun Gorain and Partha Sarathi Mandal	Approximation Algorithms for Sweep Coverage in Wireless Sensor Networks	Journal of Parallel and Distributed Computing (Elsevier).	74(8)	2699-2707	2014
M. Hassan and Swaroop Nandan Bora	Surge motion coefficients for a finite circular hollow cylinder radiating in water of infinite depth	International Journal of Fluid Mechanics Research	DOI: 10.1155/S0161171203209285		2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Jiten C Kalita	A super-compact higher order scheme for the unsteady 3D incompressible viscous flows	Computational and Applied Mathematics	33(3)	717-738	2014
Jitender Kumar and K. V. Krishna	The Large Rank of a Finite Semigroup using Prime Subsets	Semigroup Forum.	89(2)	403-408	2014
Santu Das and Swaroop Nandan Bora.	Damping of oblique ocean waves by a vertical porous structure placed on a multi-step bottom	Journal of Marine Science and Application.	13	362-376	2014
Kaushik Mukherjee and S. Natesan	Uniform convergence analysis of hybrid numerical scheme for singularly perturbed problems of mixed type	Numerical Methods for Partial Differential Equations.	30(6)	1931-1960	2014
S. Gowrisankar and S. Natesan	Robust Numerical Scheme for Singularly Perturbed Delay Parabolic Initial-Boundary-Value Problems on Equidistributed Grids	Electronic Transactions on Numerical Analysis	41	376-395	2014
Shyamashree Upadhyay	The Hilbert-Kunz function for Bino-mial Hypersurfaces	Algebra	doi: 10.1155/ 2014/ 525467		2014
Mohammad Hassan and Swaroop Nandan Bora	Hydrodynamic coefficients in surge for a radiating hollow cylinder placed above a coaxial cylinder at finite ocean depth	Journal of Marine Science and Technology.	19	450-461	2014
P. Das, and	Optimal error estimate using mesh equidistribution technique for singularly perturbed system of reaction-diffusion boundary-value problems	Applied Mathematics and Computation	249	265-277	2014
Jitender Kumar and K. V. Krishna	Affine Near-Semirings over Brandt Semigroups.	Communications in Algebra	42(12)	5152-5149	2014
Kuppum V. Srikanth and Raj Bhawan Yadav	On an extension of the Stone-Weierstrass theorem	Mathematical Communications	19(2)	391-396	2014
M Tripathy and R.K Sinha	Convergence of H1-Galerkin mixed finite element method for parabolic problems with reduced regularity on Initial data	Numerical Analysis and Applications	7(3)	227-240	2014
R. K. Srivastava	Non-harmonic cones are sets of injectivity for the twisted spherical means on C^n	Trans. Amer. Math. Soc	DOI: arXiv:1306.5658		2014
S. Saha and Swaroop Nandan Bora	Elastic bottom effect on trapped waves in a two-layer fluid	International Journal of Applied Mechanics (World Scientific)	-	-	2015
G. Murli Mohan Reddy and R. K. Sinha	Ritz-Volterra reconstructions and a posteriori error analysis of finite element method for parabolic integro-differential equations	IMA J. Numer. Anal	35(1)	341-371	2015

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Kaushik Mondal, Partha Sarathi Mandal and Bhabani P. Sinha	Analysis of Multiple-bound Signals towards Localization: A Theoretical Approach	Wireless Personal Communications	DOI: 10.1007/s11277-015-2379-1		2015
Dishari Chaudhuri and Anupam Saikia	On Group Algebras with Unit Groups of Derived Length at most Four	Publicationes Mathematicae Debrecen	86(1-2)	39-48	2015
P. Das and S. Natesan	Adaptive Mesh Generation for Singularly Perturbed Fourth-Order Ordinary Differential Equations	International Journal of Computer Mathematics.	93(3)	562-578	2015
Gautam K. Das, Minati De, Sudeshna Kolay, Subhas C. Nandy, and Susmita Sur-Kolay	Approximation Algorithms for maximum independent set of a unit disk graph	Inf. Process. Lett.	115 (3)	439-446	2015
Barun Gorain and Partha Sarathi Mandal	Approximation Algorithm for Sweep Coverage on Graph	Information Processing Letters	-	-	2015
Rajendra K Ray and Jiten C Kalita	Higher-order-compact simulation of unsteady flow past a rotating cylinder at moderate Reynolds numbers	Computational and Applied Mathematics	DOI: 10.1007/s40314-014-0191-2		2015
S. Das and K. Kapoor	Approximate Parameterized String Matching under Weighted Hamming Distance.	AKCE International Journal of Graphs and Combinatorics	-	-	2015
B. Deb and K. Kapoor	On Complete S-Reachable Graphs	Journal of Discrete Mathematical Sciences and Cryptography	-	-	2015

Conference Proceedings

Name of Author/s	Title of Paper	Name of Conference/Workshop/ Seminar/Symposia	Date	Vol., Issue and Page No.
S. Das, and K. Kapoor.	Fine Tuning Decomposition Theorem for Maximum Weight Bipartite Matching.	Annual Conference on Theory and Applications of Models of Computation (TAMC). Springer.	April, 2014	8402: 312-322
Jiten C Kalita, and Parikshit Upadhyaya, Murli M Gupta.	GPU accelerated flow computation by the streamfunction-velocity (Ψ - v) formulation, AIP.	International Conference on Numerical Analysis and Applied Mathematics 2014, Greece, AIP Conf. Proc.	September, 2014.	1648 : 47004 (1-4)
Barun Gorain, and Partha Sarathi Mandal	Sweep Coverage with Mobile and Static Sensors. in Proc. of 16th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2014)	Lecture Notes in Computer Science (LNCS-8756) (Springer-Verlag).	October, 2014	346-348

Name of Author/s	Title of Paper	Name of Conference/Workshop/ Seminar/Symposia	Date	Vol., Issue and Page No.
Jiten C Kalita, and Bidyut B Gogoi.	A Fourth Order Compact ADI method for the transient three-dimensional diffusion equation with a source term.	Proceedings of the Sixth International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2014).	29-31 December, 2014	46
Kaushik Mondal and Partha Sarathi Mandal	Poster: Path Planning Algorithm for Mobile Anchor	7th international conference on COMMunication System & NETworks (COMSNET 2015)	6-10 January, 2015	
S. Pawanekar, K. Kapoor, and G. Trivedi.	A Nonlinear Analytical Optimization Method for Standard Cell Placement of VLSI Circuits.	28th International Conference on VLSI Design. IEEE.	January, 2015	423-428
Barun Gorain, and Partha Sarathi Mandal	Energy Efficient Sweep Coverage with Mobile and Static Sensors	in Proc. of International Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2015) (Springer-Verlag)	8-10 February, 2015	275-285
Kaushik Mondal, Arindam Karma-kar and Partha Sarathi Mandal	Path Planning Algorithm for Mobile Anchor in Connected Sensor Networks	in Proc. of 11th International Conference on Distributed Computing and Internet Technologies (ICDCIT'15) (Springer-Verlag)	5-8 February, 2015	193-198
A. C. Nayak, and K. Kapoor	On the Language of Primitive Partial Words.	9th International Conference on Language and Automata Theory and Applications (LATA). Springer.	March, 2015	8977:436-445.

Book

Name of Author/s	Title of Book	Publisher	Volume and Issue No.	Total Page No.	ISBN	Year of Publication
S. Kirkland, K.M. Prasad, S. Pati, and S. Puntanen (eds.)	Linear Algebra with Applications, a volume in honor of Prof. Ravindra B. Bapat	Manipal University Press	NIL	361	978-93-82460-20-6	December, 2014

Book Chapter

Name of Author/s	Title of Chapter	Title of Book	Publisher	Volume and Issue No. (If any)	Page No.	ISBN	Year
Anupam Saikia	Explicit Reciprocity Law of Bloch-Kato and Exponential Maps	The Bloch-Kato Conjecture for the Riemann Zeta Function	Cambridge University Press	London Mathematical Society Lecture Note Series vol. 418	65-96	9781-1074-9296-7	2015

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Bhaba K. Sarma	38th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing	Victoria University of Wellington, New Zealand	1-5 December, 2014	International
Swaroop N. Bora	10th AIMS Conference on Dynamical Systems, Differential Equations and Applications	Madrid, Spain	7-11 July, 2014	International

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Swaroop N. Bora	10th East Asia SIAM Conference (EASIAM)	Mahidol University, Thailand	23-25 June, 2014	International
S. Natesan	Boundary and Interior Layers – Computational and Asymptotic Methods (BAIL 2014)	Prague, Czech Republic	15-19 September, 2014	International
S. Natesan	10th East Asia SIAM Conference (EASIAM)	Mahidol University, Thailand	23-25 June, 2014	International
Jiten C. Kalita	SIAM Annual Meeting	Chicago, USA	7-11 July, 2014	International
Siddhartha P. Chakrabarty	SIAM Annual Meeting	Chicago, USA	7-11 July, 2014	International
Shreemayee Bora	Householder Symposium XIX	Spa, Belgium	8-13 June, 2014	International
K.V. Krishna	International Conference on Algebra and Applications (ICAA-2014)	Andhra University, Visakhapatnam	29 April-01 May, 2014	International
Partha S. Mandal	16th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2014)	Germany	28 September – 1 October, 2014	International
Vinay Wagh	GAP Days 2014	RWTH, Germany	25-29 August, 2014	International
M. Guru Prem Prasad	International Conference on Applications of Fractals and Wavelets (ICAFW)-2015	Amrita School of Engineering, Coimbatore,	10-11 January, 2015	International
Arabin K. Dey	International Workshop on Reliability and Time Series Methodology relevant to Business and Industry	Cochin University of Science & Technology, Cochin	5-7 January, 2015	National

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Siddhartha P. Chakrabarty	Investment strategy: The case of a two asset portfolio	Andhra University, Visakhapatnam	Andhra Pradesh	13 April, 2014
Anjan K. Chakrabarty	On Convergence of Functions, Arzela-Ascoli theorem	Postgraduate Level Training Programme on Differential Equations	IIT Guwahati	2-21 June, 2014
Bhaba K. Sarma	Foundation of Mathematics	Mathematics Training and Talent Search Programme (MTTS)	IIT Guwahati	June 23-July 19, 2014
Bikash Bhattacharjya	Linear Algebra	Mathematics Training and Talent Search Programme (MTTS)	IIT Guwahati	June 23-July 19, 2014
Rafikul Alam	State-space linearization method for solution of rational eigenvalue problem	10th International Workshop on Accurate Solutions of Eigenvalue Problems (IWASEP-10)	University of Zagreb, Croatia	2-5 June, 2014
K.V. Srikanth	Real Analysis	Mathematics Training and Talent Search Programme (MTTS)	IIT Guwahati	June 23-July 19, 2014
Siddhartha P. Chakrabarty	Portfolio optimization and capital asset pricing	Indian Institute of Science, Bangalore	Bangalore	7-25 July, 2014
Jiten C. Kalita	GPU accelerated Computation of Navier-Stokes equations	National Workshop on GPU Computing organized by EEE Department	IIT Guwahati	12-14 September, 2014
Anupam Saikia	A Brief Introduction to Work of Manjul Bhargava	Tezpur University	Tezpur	September, 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Siddhartha P. Chakrabarty	Dynamics of hepatitis C: optimal therapeutic efficacy and sampling based analysis	Tezpur University	Tezpur	18-19 October, 2014
Bhaba K. Sarma	The completion problems for some classes of Q-matrices	International Conference on Linear Algebra and its Applications	Manipal University, Karnataka	18-20 December, 2014
S. Pati	On the inverse of graphs and the reciprocal eigenvalue properties	International Conference on Linear Algebra and its Applications	Manipal University, Karnataka	18-20 December, 2014
Anupam Saikia	On the Structure of Selmer Groups of CM Elliptic Curves	Beijing International Centre for Mathematical Research, Peking University	Beijing	December, 2014
Rafikul Alam	Algorithms for Singular Value Decompositions	National Workshop on Numerical Linear Algebra and Its Applications	BITS-Pilani, Hyderabad Campus	January 30 – February 01, 2015
Shreemayee Bora	QR algorithm	BIT, Pilani	Hyderabad	31 January, 2015
Bhaba K. Sarma	Fundamentals of Combinatorics	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Swaroop N. Bora	Solution of least-squares problem	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Swaroop N. Bora	Integral transform methods in solving engineering problems	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Swaroop N. Bora	Fourier Series	Refresher Course in Mathematics	Gauhati University	18th February, 2015
Swaroop N. Bora	Fourier Series to Fourier integral	Refresher Course in Mathematics	Gauhati University	18th February, 2015
Swaroop N. Bora	Differential equations: Understanding their significance	Mathematics Teaching : Pedagogy and Practice	IIT Guwahati	20-22 February, 2015
Swaroop N. Bora	Boundary value problems: how to set them up	Refresher Course in Mathematics	Gauhati University	23rd February, 2015
Rafikul Alam	Spectral perturbation theory for matrices	Refresher Course in Mathematics	Gauhati University	18th February, 2015
Rajen K. Sinha	Introduction to the theory of weak solution	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Anupam Saikia	Number Theory and Applications	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Shyamashree Upadhyay	A criterion for Richardson varieties admitting semistable points	National Conference on Commutative Algebra and Algebraic Geometry	IIT Guwahati	5-9 February, 2015
Durga C. Dalal	Numerical Analysis	KIC-TEQIP	IIT Guwahati	20-22 February, 2015
S. Pati	Linear Algebra	KIC-TEQIP	IIT Guwahati	20-22 February, 2015
M.G.P. Prasad	Fractals and Application	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Sriparna Bandopadhyay	Introduction to optimization	KIC-TEQIP	IIT Guwahati	16-20 February, 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Anjan K. Chakrabarty	Fascinating Calculus	KIC-TEQIP	IIT Guwahati	16-20 February, 2015
Partha S. Mandal	Algorithms for Wireless Ad Hoc & Sensor Networks	Quality Improvement Programme	IIT Guwahati	10-14 February, 2015
Gautam K. Das	Facility location problems in WSNs	Quality Improvement Programme	IIT Guwahati	10-14 February, 2015
Jiten C. Kalita	# Scientific Computing : What and Why ?, # Physics and Numerics : Some relevant issues in Scientific Computing	Visva Bharati	West Bengal	21 March, 2015
Rafikul Alam	Structured spectral perturbation theory for Hamiltonian matrices	International Conference on Frontiers in Mathematics (ICFM2015)	Gauhati University	26-28 March, 2015
S. Pati	The reciprocal eigenvalue properties of graphs	International Conference on Frontiers in Mathematics (ICFM2015)	Gauhati University	26-28 March, 2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Ananthnarayan Hariharan	IIT Bombay	Tales of a Local Algebraist	1st April, 2014
Prof. John C. Meakin	University of Nebraska-Lincoln	Inverse monoids and immersions of 2-complexes	21st April, 2014
Prof. C.S. Rajan	TIFR Mimbai	Local Global Principle - An Introduction	17th May, 2014
Prof. Phoolan Prasad	Indian Institute of Science, Bangalore	Question of Equivalence of Huygens' and Fermat's Methods of Wavefront Construction	2nd June, 2014
Prof. V. Muruganandam	NISER, Bhubaneswar	Harish-Chandra - Part of his mathematical Profile	27th June, 2014
Dr. Dambaru D. Bhatta	University of Texas - Pan American, Edinburg, Texas, USA	Applications of Cubic B-splines	1st July, 2014
Professor Aldric L. Brown	University College London	Best Uniform Approximation to Continuous Functions from Finite Dimensional Spaces of Continuous Functions - from 1855 to 2013.	25th September, 2014
Dr. Shanta Laishram	ISI, Delhi	Powers in products of terms of Recurrence Sequences	30th September, 2014
Prof. Kripasindhu Chaudhuri	Jadavpur University, West Bengal	Modelling of Renewable Resources Harvesting: Some Aspects; # Development of Stability Concepts in Ecology through Differential Equations; # The Optimal Joint Harvest of a Prawn Fishery and a Poultry of Birds in a Linked Bioeconomic System	16-18 December, 2014
Dr. Devraj Basu	University of Strathclyde Business School, Glasgow, United Kingdom	Mean Variance Analysis with Conditioning Information	16th January, 2015
Dr. Buddhadeb Sau	Jadavpur University, West Bengal	Semidefinite Programming and its application to localization of WSN	13th February, 2015
Prof. Martin Kreuzer	University of Passau, Germany	Border Bases and Their Applications	13th February, 2015

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Shobha Madan	IIT Kanpur	The Kakeya maximal function and Spherical Summation	19th February, 2015

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Sl. No.	Name of Faculty (Convener/Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/National	No. of participants
1	Prof. Bhaba K. Sarma, Dr. Bhupen Deka and Prof. Durga C. Dalal	Mathematics Teaching: Pedagogy and Practice	IIT Guwahati	20-22 February, 2015	National	15
2	Dr. K.V. Krishna	Mathematics Training and Talent Search (M.T.T.S.) Programme	NBHM	23 June – 19 July, 2014	National	37
3	Prof. R. K. Sinha and Dr. Bhupen Deka	Postgraduate Level Training Programme on Differential Equations	DST	2-21 June, 2014	National	47
4	Prof. M.Guru Prem Prasad and Prof. Durga C. Dalal	Mathematics for Engineering Education	IIT Guwahati	16-20 February, 2015	National	30
5	Dr. Partha Sarathi Mandal	Recent Trends in Networks and Distributed Computing	IIT Guwahati	10-14 February, 2015	National	20
6	Dr. Vinay Wagh	National Conference on Commutative Algebra and Algebraic Geometry	IIT Guwahati	05-09 February, 2015	National	40

STUDENTS' ACHIEVEMENTS:

15 M.Sc. Students qualified GATE2015 in Mathematics.

4 M.Sc and 2 PhD students qualified in CSIR-JRF 2015 in Mathematical Sciences.

A number of B.Tech students participated in internship programmes in reputed organizations within and outside India.

SPECIAL MENTION

Prof. Rafikul Alam visited Institute for Mathematics, TU Berlin, Germany, from 06-06-2014 to 31-07-2014 for collaborative research work with Prof. Volker Mehrmann.

Prof. Swaroop Nandan Bora visited KTH Royal Institute of Technology, Stockholm as part of a 3-member delegation from IIT Guwahati from September 1-13, 2014.

Prof. Swaroop Nandan Bora delivered an invited lecture 'Damping of water waves by vertical porous structures', in Department of Mathematics (Numerical Analysis), KTH Royal Institute of Technology, Stockholm, Sweden, September 8, 2014.

Dr. Shyamashree Upadhyay visited TIFR, Mumbai from 01-07-2014 to 14-07-2014 for research work.

Dr. P.A.S. Sree Krishna visited Universidad Central Del Ecuador, Ecuador from 23-09-2014 to 10-10-2014 for research work.

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1	R. Alam	IIT Bombay	Professor	Linear and Numerical Linear Algebra
2	S. Bandopadhyay	ISI Delhi	Assistant Professor	Operations Research
3	B. Bhattacharjya	IIT Kanpur	Assistant Professor	Graph Theory
4	S. Bora	IIT Guwahati	Associate Professor	Perturbation Theory, Numerical Linear Algebra
5	S. N. Bora (Head of the Department)	Dalhousie University, Canada	Professor	Water Wave Dynamics, Ocean Engineering, Flow through Porous Media

Sl. No.	Name	PhD	Designation	Areas of Interest
6	S. P. Chakrabarty	University of Illinois, Chicago, USA	Associate Professor	Mathematical Biology, Optimal Control Theory, Mathematical Finance
7	A. K. Chakrabarty	IIT Kanpur	Assistant Professor	Functional Analysis
8	D. C. Dalal	IIT Kharagpur	Professor	Fluid Dynamics
9	G. K. Das	ISI Kolkata	Assistant Professor	Computational Geometry, Approximation Algorithms, Wireless Networks
10	B. Deka	IIT Guwahati	Assistant Professor	Numerical Analysis, Finite Element Methods, Interface Problems, Numerical Solutions to Integro Differential Equations
11	A. K. Dey	IIT Kanpur	Assistant Professor	Distributions models and its applications, Survival Analysis
12	S. Dutta	IIT Kanpur	Assistant Professor	Quantum Computing, Complexity Theory
13	J. C. Kalita	IIT Guwahati	Professor	Computational Fluid Dynamics, Numerical methods for PDEs
14	S. Kamal	TIFR, Mumbai	Assistant Professor	Probability, Random graphs
15	K. Kapoor	London South Bank University, UK	Associate Professor	Programming Languages, Concurrency, Software Testing
16	P. A. S. Sree Krishna	SUNY, Buffalo	Assistant Professor	Hyperbolic 3-manifolds, Low-dimensional topology
17	K. V. Krishna	IIT Delhi	Associate Professor	General Algebra, Theoretical Computer Science
18	P. Kumar	IIT Kanpur	Assistant Professor	Harmonic Analysis
19	P. S. Mandal	Jadavpur University	Associate Professor	Wireless Sensor Networks, Distributed Computing
20	S. Natesan	Bharathidasan University, Thiruchirappalli	Professor	Differential Equations, Homogenization, Numerical Analysis
21	S. Pati	ISI Delhi	Professor	Spectral Graph Theory
22	M. G. P. Prasad	IIT Kanpur	Professor	Complex Dynamics and Fractals
23	H. Ramesh	IIT Madras	Assistant Professor	Formal Languages and Automata Theory, Membrane Computing
24	A. Saikia	University of Cambridge, U.K.	Professor	Algebraic Number Theory
25	B. K. Sarma	Delhi University	Professor	Spectral Graph Theory, Combinatorial Matrix Theory
26	N. Selvaraju	IIT Madras	Associate Professor	Stochastic Modelling, Queueing Theory, Stochastic Modelling, Operations Research
27	R. K. Sinha	IIT Bombay	Professor	Numerical Analysis
28	K. V. Srikanth	SUNY, Buffalo	Assistant Professor	Low Dimensional Topology
29	R. Srivastava	IIT Kanpur	Assistant Professor	Harmonic Analysis
30	J. Swain	IIT Madras	Assistant Professor	Harmonic Analysis
31	S. Upadhyay	CMI, Chennai	Assistant Professor	Algebraic Combinatorics
32	V. V. Wagh	University of Pune	Assistant Professor	Algebraic Geometry

DEPARTMENT OF MECHANICAL ENGINEERING

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1995

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in

o Mechanical Engineering

Master of Technology (MTech) in

o Machine Design

o Fluid & Thermal Engineering

o Computer Assisted Manufacturing and

o Computational Mechanics

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 15
- Associate Professor: 13
- Assistant Professor: 16
- Visiting Professor: 1
- Visiting Associate Professor: 1

NUMBER OF FACULTY JOINED:

- Assistant Professor: 16
- Visiting Professor: 1
- Visiting Associate Professor: 1

LABORATORIES:

- Advanced Manufacturing Laboratory: Equipped with advanced equipments for manufacturing including micro-fabrication facility using CO₂ Laser cutting technology.
- Strength of Materials Laboratory: Basically dedicated for doing all kinds of testing including tensile testing, fatigue testing, compressive testing, torsion testing, hardness testing, impact testing etc.
- Materials Science Laboratory: Dedicated for carrying out metallographic studies using highly precise microscope, XRD etc.
- Fluid Mechanics Laboratory: This lab has basic fluid mechanics set-up. The lab is equipped with different flow measuring set-ups such as venturimeter, orifice-plate, pitot

tube, rotometer etc., where students can visualize the basic theory of working of the flow meter.

- Thermal Science Laboratory: This lab consists of heat exchangers, equipments for conducting experiments on conduction, convection and radiation, refrigeration systems etc. All these equipments facilitate learning of basic Thermodynamics and Thermal Engineering at undergraduate level.
- Turbo-machinery Laboratory: This lab has different table-top model of pumps and turbines where students can study the performance characteristics of those machines. Students can strengthen their basic understandings of working and applications of these machines.
- IC Engine Laboratory: This lab is for both undergraduates and graduate students. Some of the experiments which are performed by under-graduate students are performance studies of both C.I. and S.I. engines, etc. Moreover students on the glorioc values, exhaust gas characteristics, extensive studies of bio-diesel with both engines are done by post-graduate students in their respective project works
- Vibrations and Acoustics Laboratory: This lab demonstrates basic vibrational instruments to students at undergraduate level. Also provides facilities for measurement of frequency signals, rpm etc, and facilities for data-acquisition which are very much beneficial for research activities in the domain of vibrational analysis.
- Mechatronics and Robotics Laboratory: The Mechatronics and Robotics lab is equipped with various facilities to educate the students at the undergraduate and postgraduate levels. Most of the robotics activities are facilitated to students by this lab.
- Instrumentation Laboratory: This lab performs calibration of pressure transducer/ gauge and other mechatronics apparatus, provides strain-gauge measurement facilities etc.
- Theory of Machines Laboratory: This lab consists of all basic equipments for understanding mechanisms, apparatus etc. at undergraduate level such as gyroscope, governor, jib-crane, screw jack, worm-wheel apparatus etc.
- Tribology Laboratory: Provides facilities for carrying out wear test of specimens of different materials under the

condition of with lubrication/without lubrication.

- CAD/CAM Laboratory: Specialized in extending computer-assisted software tools needed for design and analysis such as ABAQUS, ANSYS, Master CAM, Pro/E, ADAMS etc.
- Metrology Laboratory: Provides facilities for carrying out dimensional measurements up to high degree of accuracy.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

- a) Shock tube facility through AR&DB sponsored project

- b) 3 axis CNC MACHINING CENTER with 10000 rpm capacity (price 19 lacs)

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

- a) Laser bending; single point diamond turning; thin wall machining
- b) The research and development activities presently comprising on: Robotics, Mechanisms, Design and Development of various mechanical parts, Biomimetics and Flexible system.

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. P Muthukumar	Design and development of dehumidification system	IIT Guwahati	12	Dr. Chandra Mohan Somayaji	2
Dr.S.Kanagaraj	Fabrication and characterization of the next generation material for articulating surface in total joint replacements using medical grade UHMWPE reinforced with nanocrystalline hydroxyapatite and single walled carbon nanotubes	SERB, DST	47.30 lakh	Prof.Bikramjit Basu, IISc Bangalore and Dr.D.C.Sundaresh, M S Ramaiah Medical College & Hospitals, Bangalore	3 years from March 2015
Dr.S.Kanagaraj	Development of a single station hip joint wear simulator for simulated in vivo characterization of acetabulum cups	SERB, DST	43.40 lakh	Dr. S. Senthilvelan, Dept. of Mechanical Engineering, IITG	3 years from July 2014
Dr. Pankaj Biswas	Development of Plasma Arc Assisted Friction Stir Welding Process for Low Carbon Steels	NRB	43.9	Dr. S. D. Kore	2015-2018
Dr. U.S. Dixit	Modeling of Advanced Materials for Simulation of Transformative Manufacturing Processes	DST	20.936 (IIT G budget) Total budget: 217.50 (with IITD, IISC)		3 years
Dr. U.S. Dixit	Estimation of temperature distribution in laser welding	DRDL, Hyderabad	9.7	Dr. Pankaj Biswas	18 months

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. D. N. Basu	Analysis of supercritical natural circulation loops with water and carbon dioxide as working medium	SERB, DST	9.46	-	3 years
Dr. D. N. Basu	Development and experimental characterization of a supercritical natural circulation loop considering steady-state and stability aspects	IIT Guwahati (Start-up grant)	5.00	-	2 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Poonam Kumari	Development of three-dimensional solutions for piezoelectric plates subjected to arbitrary boundary conditions	IIT Guwahati (Start-up grant)	5.00	No	2 year
Dr. Satyajit Panda	Active control of harmonically excited nonlinear vibrations of functionally graded cylindrical shells using PFRC constrained layer damping treatment	SERB, DST	10.32	NA	3 years
Dr. P Muthukumar	Development of Thermal Energy Storage Systems for Solar Thermal Power Plant	DST	128.00	Nil	4 years
Dr. S. Kanagaraj	Development of Copper (Cu) – Carbon Nanomaterial (CN) based nanocomposite formulations for heat recovery in different processes in a steel plant	Steel Development Fund, Ministry of Steel, India, and M/s Tata Steel, Jamshedpur	336.00	Prof. S. Ramaprabhu, Physics, IIT Madras, Dr. Prathab Baskar and Dr. Sumitesh Das, Chief, R&D division, Tata Steel	3 years
Dr. S. Kanagaraj	Developing light weight, durable and user friendly artificial limbs through Nanotechnology-based modification of conventional materials and optimizing mechanical component design for enhancing their functional performance	DBT	56.87	Dr. Bhaskar Borgohain and Mr. Balaphrang Marbaning from NEIGRIHMS, Shillong	3 years
Dr. U. S. Dixit	Estimation of temperature distribution in laser welding	DRDO	9.7	Dr. Pankaj Biswas	2 years
Dr. Niranjana Sahoo	Shock Tube Development and Verification of Capabilities of Existing Correlation for Stagnation Point Heat Transfer Rate	AR&DB	16.04	Dr. Vinayak Kulkarni	2 years
Dr. Vinayak Kulkarni	Development of a conjugate heat transfer solver for hypersonic applications	AR&DB	11.63	Dr. Niranjana Sahoo & Dr. Ganesh Natarajan	2 years
Dr. Sukhomay Pal	Development of monitoring system for friction stir welding	SERB	9.24	Nil	3 years
Dr. S. N. Joshi	Improving productivity and product quality in machining of thin-walled components	DST	37.9	-	3 years
Dr. A. Dalal	Development of a General Purpose CFD Solver over a Hybrid Unstructured Grid	BRNS, DAE	300.88	Dr. G. Natarajan and Dr. N. Kishore (CL)	5 years
Dr. A. Dalal	Numerical Modeling of All-Vanadium Redox Flow Battery	SERB, DST	16.08	NIL	3 years

c) Completed Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. Pankaj Biswas	Numerical and Experimental Study on Residual Stress and Distortion Control of Welded Structures	IIT Guwahati	5.0	N/A	2 years
Dr. Pankaj Biswas	Preparation of Lab Manual for strength of material Lab of Mechanical Engineering Department	IIT Guwahati	0.15	Dr. KSRK Murty	1 year
Dr. Niranjana Sahoo	Design, Development and Performance Evaluation of Stress Wave Force Balances for Aerospace Applications	Department of Science and Technology (DST)	14.40	-	2 years

CONSULTANCY PROJECTS

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. N. R. Mandal, IIT Kharagpur	Structural Analysis of Ships (SRAS)	GRSE Kolkata	8.824	Dr. Pankaj Biswas	2012-2013
Prof. U.K. Saha	Setting of Confidential Papers for Engineering Non-Executives of a Govt. of India Enterprise	BCPL (Brahmaputra Cracker and Polymer Limited)	0.25	Dr. Pankaj Biswas	2013-2013
Prof. P. Mahanta	Failure Analysis of Damaged Burner Pipe	New India Assurance Co. Ltd.	0.39	Dr. Pankaj Biswas & Dr. S. Pal	2015-2015
Dr. Sukhomay Pal	Design and development of custom made remotely operable Shot blasting system with robotic arms for use in steeply inclined long penstocks	NEEPCO	30.175	Dr. K Kalita, Prof. SK Kakoty	
Dr. K Kalita	Feasibility study for implementing HTS generator in a hydro-electric power plant for generation modernization to increase efficiency	NEEPCO	30	Dr. S Pal, Prof. SK Kakoty	2 years
Dr. Chandan Das	Study of the reduction in acidity of the Kopili reservoir either by diversion of responsible stream or by taking up some chemical treatment to prevent damages of metal parts of Kopili HE Plant at Umrongso	NEEPCO	28.52	Dr. S Pal	18 Months
Prof. S K Kakoty	Testing consultancy	Assam Carbon Ltd.,	0.37	Dr. S Pal, Dr. S Senthilvelan	1 Month
Dr. S. N. Joshi	Mechanization of FCI Godown Operations	Food Corporation of India (FCI)	14.36	Dr. S. D. Kore	3 years

RESEARCH PUBLICATIONS**Journals (International / National)**

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
MKS Sarkar, AK Tilak & DN Basu	A State-of-the-art Review of Recent Advances in Supercritical Natural Circulation Loops for Nuclear Applications	Annals of Nuclear Energy	73	250-263	2014
DN Basu, S Bhattacharyya & PK Das	A Review of Modern Advances in Analyses and Applications of Single-phase Natural Circulation Loop	Nuclear Engineering and Design	280	326-348	2014
AK Tilak & DN Basu	Computational Investigation of the Dynamic Response of a Supercritical Natural Circulation Loop to Aperiodic and Periodic Excitations	Nuclear Engineering and Design	284	251-263	2015
VK Mishra, SC Mishra & DN Basu	Combined Mode Conduction and Radiation Heat Transfer in a Porous Medium and Estimation of Optical Properties of the Porous Matrix	Numerical Heat Transfer Part A	67 (10)	1119-1135	2015
DN Basu & A Ganguly	Conceptual Design and Performance Analysis of a Solar Thermal-Photovoltaic-Powered Absorption Refrigeration System	ASME Journal of Solar Energy Engineering	137 (3)	031020 (1-9)	2015
P. Kumari, S. Behera, S. Kapuria	Coupled three-dimensional piezoelectricity solution for edge effects in Levy-type rectangular piezolaminated plates using mixed field extended Kantorovich method	International Journal of Solids and Structures	-	-	2015
Panda S, Reddy NH, Kumar ASP	Design and finite element analysis of a short piezoelectric fiber-reinforced composite actuator	Archive of Applied Mechanics	DOI: 10.1007/s00419-015-0982-y	2015	
Kumar AMS, Panda S, Chakraborty D.	Design and analysis of a smart graded fiber-reinforced composite laminated plate	Composite Structures	124	176-195	2015
Panda SP, Panda S.	Micromechanical finite element analysis of effective properties of a unidirectional short piezoelectric fiber reinforced composite	International Journal of Mechanics and Materials in Design	11-1	41-57	2015
Kumar AMS, Panda S, Chakraborty D.	Piezo-viscoelastically damped nonlinear frequency response of functionally graded plates with a heated plate-surface	Journal of Vibration and Control	DOI: 10.1177/1077546314532672		2014
Kumar AMS, Panda S, Chakraborty D	Harmonically excited nonlinear vibration of heated functionally graded plates integrated with piezoelectric composite actuator	Journal of Intelligent Material Systems and Structures	DOI: 10.1177/1045389X14536005		2014
Kadam PA, Panda S.	Nonlinear analysis of an imperfect radially graded annular plate with a heated edge	International Journal of Mechanics and Materials in Design	10-3	281-304	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Sachin Singh , M. Ravi Sankar, U. S. Dixit	State of art on micro-abrasive flow Finishing (μ -AFF) process	Journal of Manufacturing Technology Research	5-3/4	167-177	2014
R. R. Behera, E. Anisha, M. Ravi Sankar, U. S. Dixit	Experimental Investigations of CO ₂ Laser Micro Channel Engraving on Hardened AISI 1040 Alloy Steel	Journal of Manufacturing Technology Research	5-3/4	179-194	2014
Lototskyy MV, Sekhar BS, Muthukumar P, Pollet BG, Linkov V	Niche applications of metal hydrides and related thermal management issues	J. Alloys and Compounds	doi:10.1016/j.jallcom.2014.12.271		2015
Sekhar BS, Muthukumar P	Development of Double-Stage Metal Hydride based Hydrogen Compressor for Heat Transformer Application	ASCE's Journal of Energy Engineering,	10.1061/(ASCE)EY.1943-7897.0000246		2015
SatyaSekhar B, Muthukumar P	Thermal modelling of a double-stage metal hydride based heat transformer	Numerical Heat Transfer	67	883–901	2015
Hakeem Niyas, Likhendra Prasad, Muthukumar P	Performance Investigation of High-Temperature Sensible Heat Thermal Energy Storage System during Charging and Discharging Processes	Clean Technologies and Environmental Policy	17	501–513	2015
SatyaSekhar B, Muthukumar P	Performance Investigation of a Single-stage Metal Hydride Heat Transformer	Int. J Green Energy,	DOI:10.1080/15435075.2014.892879		2014
Anbarasu S, Muthukumar P, Mishra SC	Thermal modeling of LmNi _{4.91} Sn _{0.15} based Solid State Hydrogen Storage Device with Embedded Cooling Tubes	Int. J. Hydrogen Energy	39:00:00	15549 -15562.	2014
Anbarasu S, Muthukumar P, Mishra SC	Tests on LmNi _{4.91} Sn _{0.15} based Solid State Hydrogen Storage Device with Embedded Cooling Tubes – Part B: Desorption Process	Int. J. Hydrogen Energy	39(10):	4966–4972	2014
Anbarasu S, Muthukumar P, Mishra SC	Tests on LmNi _{4.91} Sn _{0.15} based Solid State Hydrogen Storage Device with Embedded Cooling Tubes – Part A: Absorption Process,	Int. J. Hydrogen Energy	39(7)	3342-3351	2014
Sachin S. Gautam and Roger A. Sauer	A composite time integration scheme for dynamic adhesion and its application to gecko spatula peeling	International Journal of Computational Methods in Engineering	11 (5)	1350104 -1 - 1350104 -28	2014
Sachin S. Gautam and R. K. Saxena	A finite element study on effect of frictional heating in the Taylor rod impact problem	World Journal of Engineering	11(6)	529-542	2014
PS Rama Sreekanth, S Kanagaraj	Influence of multi walled carbon nanotubes reinforcement and gamma irradiation on the wear behaviour of UHMWPE	Wear	-	-	2015
PS Rama Sreekanth, S Kanagaraj	Influence of MWCNTs and gamma irradiation on thermal characteristics of medical grade UHMWPE	Bulletin of Material Science	37(2)	347-356	2014
N. Shanmugapriya, Chandramohan Somayaji, S. Kanagaraj	Characterization and optimization of Ce _{0.6} Zr _{0.4-x} Mn _x O ₂ (x \leq 0.4)	Journal of Nanoparticle Research	DOI: 10.1007/s11051-014-2661-2		2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
N. Shanmugapriya, C. Somayaji, S. Kanagaraj.	Optimization of Ce _{0.6} Zr _{0.4} -xAl _{1.3} O ₂ solid solution based on oxygen storage capacity	Journal of Nanoparticle Research	16(2),	-	2014
S. Arun, P S Rama Sreekanth, S. Kanagaraj	Mechanical characterization of PMMA/SWNTs bone cement using Nanoin-denter	Materials Technology: Advanced Biomaterials	29(B1)	-	2014
P S Rama Sreekanth, K Acharyya, I Talukdar, S Kanagaraj	Studies on structural defects on 60Co irradiated multi walled carbon nanotubes	Procedia Materials Science	6	1967-1975	2014
P Manivel, S Kanagaraj, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan	Rheological behavior and electrical, thermal properties of polypyrrole/graphene oxide nanocomposites	Journal of Applied Polymer Science	131	40642	2014
P Manivel, S Kanagaraj, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan	Rheological behavior and electrical properties of polypyrrole/ thermally reduced graphene oxide nanocomposite	Colloids and Surfaces A: Physicochemical and Engineering Aspects	441	614-622	2014
Kumar D. A., Kadian Arun Kumar and Biswas Pankaj	Numerical and experimental study on influence of tool plunging force and shoulder size on thermal history of Friction Stir Welding	International Journal of Manufacturing Research (IJMR-Inderscience)	10-1	64-86	2015
Mandal N. R, Sharat Kumar and Biswas Pankaj	Distortion Measurement of Ship Blocks using Photogrammetry	Journal of Ship Production and Design	29	1-8	2014
Deepati Anil Kumar, Tikader Sujoy and Biswas Pankaj	Experimental Investigation of Mechanical Properties on Friction Stir Welding of Dissimilar Aluminum Alloys	International Journal of Current Engineering and Technology	2	242-246	2014
Narang H. K., Mahapatra M. M., P. K. Jha and Biswas Pankaj	Optimization and prediction of angular distortion and weldment characteristics of TIG square butt joints	Journal of Materials Engineering and Performance	23(5)	1750-1758	2014
B. K. Debnath, U. K. Sahoo and N. Sahoo	A comprehensive review on the application of emulsions as an alternative fuel for diesel engines	Renewable and Sustainable Energy Reviews	42	196-211	2015
A. Hens , G. Biswas and S. De	Evaporation of water droplets on Pt-surface in presence of external electric field - A molecular dynamics study	The Journal of Chemical Physics	143	1-11	2015
P. Randive, A. Dalal, K.C. Sahu, G. Biswas, P. Mukherjee	Wettability effects on contact line dynamics of droplet motion in an inclined channel	Physical Review E	91	1-16	2015
S. Biswas, P. Sharma, B. Mondal and G. Biswas	Analysis of Mixed Convective Heat Transfer in a Ribbed Channel using The Lattice Boltzmann Method	Numerical Heat Transfer Part A	68	75-98	2015

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
B. Ray, G. Biswas and A. Sharma	Regimes during liquid drop impact on a liquid pool	Journal of Fluid Mechanics	768	492-523	2015
D. Chatterjee and G. Biswas	Dynamic behavior of flow around rows of square cylinders kept in staggered arrangement	Journal of Wind Engineering and Industrial Aerodynamics	136	1-11	2015
P. Saha, G. Biswas and S. Sarkar	Comparison of winglet-type vortex generators periodically deployed in a plate-fin heat exchanger – A synergy based analysis	International Journal of Heat and Mass Transfer	74	292-305	2014
R. K. Arun, K. Chaudhury, M. Ghosh, G. Biswas, N. Chanda and S. Chakraborty	Controlled splitting and focusing of a stream of nanoparticles in a converging-diverging microchannel	Lab on a Chip	14	3800-3008	2014
A. Hens, G. Biswas and S. De	Analysis of interfacial instability and multimode bubble formation in saturated pool boiling using Coupled Level Set and Volume- of- Fluid approach	Physics of Fluids	26	1-14	2014
A. Hens, R. Agarwal and G. Biswas	Nanoscale study of boiling and evaporation in a liquid Ar film on a Pt heater using molecular dynamics simulation	International Journal of Heat and Mass Transfer	71	303-312	2014
S. Sarkar, S. Ganguly and G. Biswas	Buoyancy driven convection of nanofluids in an infinitely long channel under the effect of a magnetic field	International Journal of Heat and Mass Transfer	71	328-340	2014
G. Natarajan, N. Sahoo, V. Kulkarni	Optimal fore-body shape for minimum drag in supersonic flow	Journal of the Institution of Engineers (India): Series C	96 (1)	-	2015
B. K. Debnath, B. J. Bora, N. Sahoo and U.K. Saha	Influence of emulsified palm biodiesel as pilot fuel diesel engine	ASCE Journal of Energy Engineering	140	-	2014
B. K. Debnath U. K. Saha and N. Sahoo	A theoretical route towards the estimation of second law potential of an emulsified palm biodiesel run diesel engine	ASCE Journal of Energy Engineering	140	-	2014
R. K. Peetala, D. Das, V. Kulkarni and N. Sahoo	Conjugate heat transfer analysis for a finite thickness cylinder in a hypersonic flow	Heat Transfer – Asian Research	DOI: 10.1002/htj.21158		2014
B. K. Debnath, U. K. Saha and N. Sahoo	An experimental way of assessing the application potential of emulsified palm biodiesel towards alternative diesel	ASME Journal of Engineering for Gas Turbines and Power	136	-	2014
Biswajit Parida, Shiv Dayal Vishwakarma and Sukhomay Pal	Design and Development of Fixture and Force Measuring System for Friction Stir Welding Process Using Strain Gauges	Journal of Mechanical Science and Technology	29-2	739-749	2015
Biswajit Parida and Sukhomay Pal	A fuzzy assisted grey Taguchi approach for the optimization of multiple weld quality properties in friction stir welding process	Science and Technology of Welding and Joining	20-1	35-41	2015

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Prakash Kumar Sahu and Sukhomay Pal	Multi-Response Optimization of Process Parameters in Friction Stir Welded AM20 Magnesium Alloy by Taguchi Grey Relational Analysis	Journal of Magnesium and Alloys	3-1	36-46	2015
D. Kumar Yaduwanshi, S. Bag and Sukhomay Pal	Effect of preheating in hybrid friction stir welding of aluminum alloy	Journal of Materials Engineering and Performance	23-10	3794-3803	2014
S. Singh, N. Yadaiah, S. Bag and Sukhomay Pal	Numerical simulation of welding induced residual stress in fusion welding process using adaptive volumetric heat source	I Mech. E, Part C: Journal of Mechanical Engineering Science	228-16	2960-2972	2014
M. Chandrasekaran, M. Muralidhar and U.S. Dixit	Online optimization of finish turning process: strategy and experimental validation	International Journal of Advanced Manufacturing	75-5	783-791	2014
S. Mahto and U.S. Dixit	Parametric study of double link flexible manipulator	Universal Journal of Mechanical Engineering	2-7	211-219	2014
S. Mahto and U.S. Dixit	Shape optimization of revolute-jointed rigid-flexible manipulator	Journal of Institution of Engineers (India), Series C	95-4	335-346	2014
N. J. Baishya, D. Sharma and U.S. Dixit	Optimization of pressure vessel under thermo-elastic condition	Journal of Institution of Engineers (India), Series C	95-4	389-400	2014
BarkacharyBorad M. and Joshi S. N.	Integrated finite element method (FEM) and response surface methodology (RSM) based modeling and simulation of single point diamond turning (SPDT) of silicon	International Journal of Machining and Machinability of Materials	-	-	2015
Bora BJ, and Saha UK	Improving the performance of a biogas powered dual fuel diesel engine using emulsified rice bran biodiesel as pilot fuel through adjustment of compression ratio and injection timing	ASME Journal of Engineering for Gas Turbines and Power	137	-	2015
Roy S, and Saha UK	Wind tunnel experiments of a newly developed two-bladed Savonius-style wind turbine	Applied Energy	137	117 – 125	2015
Bora BJ, Saha UK, Chatterjee S, and Veer V	Effect of compression ratio on performance, combustion and emission characteristics of a dual fuel diesel engine run on raw biogas	Energy Conversion and Management	87	1000–1009	2014
Roy S, and Saha UK	An adapted blockage factor correlation approach in wind tunnel experiments of a Savonius-style wind turbine,	Energy Conversion and Management	86	418 - 427	2014
Deepak Sharma, Kalyanmoy Deb	Generation of Compliant Mechanisms using Hybrid Genetic Algorithm	Journal of The Institution of Engineers (India): Series C	95 (4)	295-307	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Bhardwaj, S., and Dalal, A.,	Effect of Undulations on the Natural Convection Heat Transfer and Entropy Generation Inside Porous Right-angled Triangular Enclosure	Numerical Heat Transfer: Part A	67(9)	972-991	2015
Randive, P., Dalal, A., and Mukherjee, P. P.	Mesoscopic Simulation of Blob Resonance in a Model Porous Pathway	Microfluidics and Nanofluidics	18(2)	215-232	2015
Bhardwaj, S., and Dalal, A., and Pati, S.	Influence of Wavy Wall and Non-uniform Heating on Natural Convection Heat Transfer and Entropy Generation Inside Porous Complex Enclosure	Energy	79	467-481	2015
Dulhani, J. P., and Dalal, A.	Flow Past an Equilateral Triangular Bluff Obstacle: Computational Study of the Effect of Thermal Buoyancy on Flow Physics and Heat Transfer	Numerical Heat Transfer: Part A	67	476-495	2015
Randive, P., and Dalal, A.	Influence of Viscosity Ratio and Wettability on Droplet Displacement Behavior: A Mesoscale Analysis	Computers and Fluids	102	15-31	2014
Dulhani, J. P., Sarkar, S., and Dalal, A.	Effect of Angle of Incidence on Mixed Convective Wake Dynamics and Heat Transfer Past a Square Cylinder in Cross Flow at Re=100	International Journal of Heat and Mass Transfer	74	319-332	2014
Randive, P., Dalal, A., and Mukherjee, P. P.	Lattice Boltzmann Modeling of Two-phase Behavior Under Acoustic Excitation: Capillarity-wettability Interaction	International Journal of Heat and Mass Transfer	74	460-472	2014
Randive, P., Dalal, A., and Mukherjee, P. P.	Probing the Influence of Superhydrophobicity and Mixed Wettability on Droplet Displacement Behavior	Microfluidics and Nanofluidics	17	657-674	2014
Sarkar, S., Ganguly, S., and Dalal, A.	Analysis of Entropy Generation during Mixed Convective Heat Transfer of Nanofluids past a Rotating Circular Cylinder	ASME Journal of Heat Transfer	136(6)	062501 (1-10)	2014
Dillip Kumar Biswal, Dibakar Bandopadhyaya, and Santosha Kumar Dwivedy	Development of an active catheter mechanism using IPMC for invivo inspection	Journal of Mechatronics and Automation	1-1	1-10	2014
Dillip Kumar Biswal, Dibakar Bandopadhyaya, and Santosha Kumar Dwivedy	Theoretical and Experimental Investigation of Non-linear Vibration Response of an IPMC Actuator Subjected to Alternating Electric Potential	Journal of Mechatronics and Automation	1-1	11-26	2014
Chakraborty Debaleena, Murthy K S R K and Chakraborty D	A new single strain gage technique for the accurate determination of mode I stress intensity factor in orthotropic composite materials	Engineering Fracture Mechanics	124-125	142-154	2014

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol, Issue, Page No.
VK Mishra, SC Mishra & DN Basu	Combined Mode Conduction and Radiation Heat Transfer in a 2-D Porous Medium and Simultaneous Estimation of its Optical Properties	11th International Conference on Flow Dynamics, Sendai, Japan	October 08-10, 2014	-
DN Sarkar & DN Basu	Thermodynamic Analysis of the Effect of Generator Temperature on the Performance of a Single-effect Absorption Refrigeration Cycle	2nd International Conference on Advances in Mechanical Engineering and its Interdisciplinary Areas (ICAMEI 2015), Kolaghat, India	January 02-04, 2015	136-143
P. Kumari, S. Behera, S. Kapuria	Accurate estimation of inter-laminar stresses for the adhesively bonded piezolaminated plates	Proceedings of ACMFMS 2014, Japan	10-13 Oct. 2014	449-452
S. Behera, P. Kumari	Assessment of IZIGT for boundary layer effects in levy-type smart piezolaminated plate	5th International Congress on Computational Mechanics and Simulation (ICCMS)	CSIR-Chennai 10-13 Dec. 2014	616-625
P. Kumar, S. K. Dwivedy, P. Kumari	Nonlinear Dynamic analysis of piezoelectric based energy harvester	6th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM)	IIT Kharagpur 29-31 Dec. 2014	----
P. Kumar, S. K. Dwivedy, P. Kumari	Dynamic analysis of piezoelectric based energy harvester under periodic excitation	12th International Conference on Vibration Problems (ICOVP)	IIT Guwahati 14-17 Dec, 2015	Abstract Submitted
Kishor Kumar Gajrani, Sumit Shekhar, M. Ravi Sankar	Experimental Comparative Study of Conventional, Micro-textured and Coated Micro-textured Cutting Tools in Machining	Proceedings of the International Colloquium on Materials Manufacturing and Metrology	8-9 Aug., 2014	pp. 866-869
Rokkham Pavan Kumar Reddy, Kishor Kumar Gajrani, M. Ravi Sankar	Experimental comparative study of conventional and micro-textured tools during machining of AISI 1040 alloy steel	5th International and 26th National All India Manufacturing Technology Design and Research (AIMTDR-2014)	12-14 Dec., 2014	pp. 51(1-6)
M. Ravi Sankar, Tarun Kumar, Kishor Kr. Gajrani, J. Swaminathan, U. S. Dixit	Experimental investigations on CO ₂ laser micro texturing on near-titanium alloy (IMI 834)	5th International and 26th National All India Manufacturing Technology Design and Research (AIMTDR-2014)	12-14 Dec., 2014	pp. 619(1-6)
Arbind Prasad, Dheeraj Gupta, M. Ravi Sankar, A.N. Reddy	Experimental Investigations of Ni/La ₂ O ₃ Composite Micro-Cladding on AISI 1040 Steel through Microwave Irradiation	5th International and 26th National All India Manufacturing Technology Design and Research (AIMTDR-2014)	12-14 Dec, 2014	55(1-6)
Y.chittara, A.yadav, M. Ravi Sankar, Arbind Prasad, B.N.Mondal, N.Mondal U. Batra	Effect of calcination temperature on quality of HAp fabricated from fishscale biowastes	International Conference (PFAM-2014)	5-7 Dec, 2014	Vol-1, 65-77
Arbind Prasad, B. Devender, M. Ravi Sankar, P.S. Robi	Micro-scratch based tribological characterization of Hydroxyapatite (HAp) Fabricated Through Fish Scales	International Conference (IC-MPC-2015)	14-15 March, 2015	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol, Issue, Page No.
Sachin Singh, M. Ravi Sankar, V. K. Jain, J. Ramkumar	Modeling of Finishing Forces and Surface Roughness in Abrasive Flow Finishing (AFF) Process using Rheological Properties	5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014), IIT Guwahati	December 12th–14th, 2014	pp. 49(1-6)
Sachin Singh, M. Ravi Sankar	Design and Performance Evaluation of Abrasive Flow Finishing Process during Finishing of Stainless Steel Tubes	4th International Conference on Materials Processing and Characterization (ICMPC 2015), GRIET, Hyderabad	March 14th -15th, 2015	
Rasmi Ranjan Behera, M. Ravi Sankar, Indrajeet Kumar, A. K. Sharma, Alikakhare, J. Swaminathan	Experimental Study on Micro-machining of 304 Stainless Steel Under Water Using Pulsed Nd:YAG Laser Beam	5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014), IIT Guwahati	December 12th–14th, 2014	pp. 380(1-6)
Rasmi Ranjan Behera, M. Ravi Sankar	State of the art on Under Liquid Laser Beam Machining	4th International Conference on Materials Processing and Characterization (ICMPC 2015), GRIET, Hyderabad	March 14th -15th, 2015	
Hakeem Niyas, Tanvir E Alam, Muthukumar P, Jaspreet D-hau, Goswami DY	Performance Investigation of Packed Bed Latent Heat Thermal Energy Storage Systems	International Conference on Polygeneration (ICP 2015), Chennai,	18-20th Feb. 2015	
Rao CHC, Muthukumar P, Somayaji CM	Performance Comparison of Sensible Heat Storage Beds for Solar Thermal Power Plant Applications	International Conference on Polygeneration (ICP 2015), Chennai,	18-20th Feb. 2015	
Muthukumar P, Selvan VP, Manojkumar SP, Imran M	Performance Tests on Compressor-Driven Metal Hydride Based Cooling System	International Conference on Polygeneration (ICP 2015), Chennai,	18-20th Feb. 2015	
Hakeem Niyas, Shukla AK, Muthukumar P	Thermal characterization of phase change materials used for thermal energy storage in solar thermal power plants	23rd International Conference on Processing and Fabrication of Advanced Materials, IIT Roorkee	5-7th December 2014	
S. K. Singh, S. S. Gautam and U. S. Dixit	Effect of Different Surface Coatings on Laser Forming of Mild Steel Sheets	5th International and 26th National All India Manufacturing, Technology, Design and Research Conference, IIT Guwahati, Guwahati, Assam, India.	December 12th-14th, 2014	
Arpan Kumar Mondal, Biswas Pankaj & Swarup Bag	A comparative study on weld quality between square and v-groove submerged arc welded butt joint	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Arpan Kumar Mondal, Biswas Pankaj, Swarup Bag & Manas M Mohapatra	Prediction of weld induced angular distortion of single sided and double sided fillet joint by SAW process	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Sujoy Tikader, Biswas Pankaj & Asit Puri	A Study on Tooling and Its Effect on Heat Generation and Mechanical Properties of Welded Joints in Friction Stir Welding	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol, Issue, Page No.
Rakesh Bhadra, Biswas Pankaj and M. Ravi Sankar	Effect of process parameters on thermal history of laser welding of AISI-304 stainless steel	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Rakesh Bhadra, Biswas Pankaj and M. Ravi Sankar	A Literature Review On Co2 Laser Welding	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Arun Kadian & Biswas Pankaj	Prediction of Thermal History of Friction Stir Welding by Considering Combined Stick & Slip Condition of AA1100	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Arun Kadian & Biswas Pankaj	Effect of tool geometry and process parameters on the material flow of friction stir welding	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Biplab Das & Biswas Pankaj	Development of a Mathematical Formulation for generating of compound curved surfaces by laser line heating	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
Chandan Kumar, Manas Das & Biswas Pankaj	A 3-D finite element analysis of transient temperature profile of laser welded Titanium (Ti-6Al-4V) alloy	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR, IIT Guwahati	December 12-14, 2014	
S. Agarwal, S. Parvat, and N. Sahoo	Numerical analysis of a coaxial surface junction thermocouple for transient measurement in the exhaust of an internal combustion engine	Proceedings of 5th International and 41st National Conference on Fluid Mechanics and Fluid Power (FMFP), IIT Kanpur	December 12-14, 2014	
S. Brahmachary, G. Natarajan and N. Sahoo	A hybrid aerodynamic shape optimization approach for axisymmetric body in hypersonic flow	Proceedings of 5th International and 41st National Conference on Fluid Mechanics and Fluid Power (FMFP), IIT Kanpur	December 12-14, 2014	
S. Sarma and N. Sahoo	Computational study of a thin film heat transfer gauges for transient measurements	Proceedings of 5th International and 41st National Conference on Fluid Mechanics and Fluid Power (FMFP), IIT Kanpur	December 12-14, 2014	
S. Sarma, S. Agarwal and N. Sahoo	Numerical and experimental study for measurement of exhaust gas temperature and heat flux using thermal sensors in an internal combustion engine	Proceedings of 6th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTA-CEM), IIT Kharagpur,	December 29-31, 2014	
S. Brahmachary, G. Natarajan and N. Sahoo	Multi-fidelity shape optimization framework for hypersonic flows	Proceedings of 6th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTA-CEM), IIT Kharagpur,	December 29-31, 2014	
H. Mishra, S. Bharati, G. Natarajan, N. Sahoo	Chemical kinetics for combustion of biofuels – A numerical study	Frontier Energy Research with Industry Academic Partnership, FERIAP 2015, IIT Guwahati, Guwahati	20-21st March 2015	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol, Issue, Page No.
Prakash Kumar Sahu and Sukhomay Pal	Optimization of process parameters on influencing mechanical properties of friction stir welded AM20 Magnesium Alloy	IIW International welding congress (IC 2014)	9-11 April, 2014	pp. 718-723
Biswajit Parida and Sukhomay Pal	Statistical analysis on tensile property of friction stir welded aluminium alloy	IIW International welding congress (IC 2014)	9-11 April, 2014	
D. Yaduwanshi, S. Bag and Sukhomay Pal	Dissimilar hybrid friction stir welding of pure copper and AA1100	IIW International welding congress (IC 2014)	9-11 April, 2014	
Biswajit Parida and Sukhomay Pal	Effect of Process Parameters on Tensile Properties of Friction Stir Welded Joints	AIMTDR 2014	12-14 Dec., 2014	
Bipul Das, Sukhomay Pal, Swarup Bag	Monitoring of friction stir welding process through signals acquired during the welding	AIMTDR 2014	12-14 December, 2014	
D. Yaduwanshi, S. Pal and S. Bag	Effect of Preheating on Mechanical Properties of Hybrid Friction Stir Welded Dissimilar Joint	AIMTDR 2014	12-14 December, 2014	
Prakash Kumar Sahu, Sukhomay Pal	Effect of shoulder diameter and plunging depth on mechanical properties and thermal history of friction stir welded magnesium alloy	AIMTDR 2014	12-14 December, 2014	
U.S. Dixit and S.M. Kamal	Developments in autofrettage process, Keynote paper	Aspects of Mechanical Engineering for Industry, NERIST, Nirjuli, India	December 6-8, 2014	
Rosang Pongen, U.S. Dixit and D. Sharma	Preliminary experimental studies on laser tube bending process	Aspects of Mechanical Engineering for Industry, NERIST, Nirjuli, India	December 6-8, 2014	
V. Yadav, A.K. Singh and U.S. Dixit	An efficient inverse method for determining the material parameters and coefficient of friction in warm rolling process	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	December 12-14, 2014	
S. M. Kamal and U.S. Dixit	Feasibility study of thermal autofrettage process	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	December 12-14, 2014	
A. Eideh, U. S. Dixit and R. Echempati	A Simple Analytical Model of Laser Bending Process	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	December 12-14, 2014	
Besufekad N. Fetne and U. S. Dixit	Finite element simulations of laser bending of small sized sheets	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	December 12-14, 2014	
Gutu J. Woldetinsay, Mamilla Ravi Sankar and U. S. Dixit	Surface Alloying of Aluminum with Copper using CO2 Laser	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	December 12-14, 2014	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol, Issue, Page No.
Kant Ravi and Joshi S. N.	Experimental studies on laser bending of magnesium M1A alloys sheets	3rd International Conference on Laser and Plasma Applications in Materials Science	January 15th-17th, 2015	
Bolar Gururaj, Joshi S. N.	3D finite element modeling of thin-wall machining of aluminum 7075-T6 alloy	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014, IIT Guwahati	December 12-14, 2014	pp. 135 (1) - 135 (6)
Bhuyan Parag M., Kant Ravi, Joshi S.N.	Experimental investigation on laser bending of metal sheets using parabolic irradiations	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014, IIT Guwahati	December 12-14, 2014	pp. 708(1) - 708(6)
Singh SS, ShantakumarKh., Khare A and Joshi S.N.	Fabrication of Micro-Channels on Mild Steel Using Laser Induced Micro-Machining	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014, IIT Guwahati,	December 12-14, 2014	pp. 878(1) - 878(5)
Bolar Gururaj, Joshi S. N.	Three dimensional finite element modeling and simulation of curvilinear thin-wall machining of aluminum 7075-T6 alloy	Processing and fabrication of advanced materials PFAM XXIII, IIT Roorkee	Dec 05-07, 2014	
Banerjee A, Roy S, Mukherjee P, and Saha UK	Unsteady flow analysis around an elliptic-bladed savonius-style wind turbine	ASME Gas Turbine India Conference, New Delhi	December 15-17, 2014	Paper No. GTINDIA 2014 -8141
Roy S, Mukherjee P, and Saha UK	Aerodynamic performance evaluation of a novel savonius-style wind turbine under an oriented jet	ASME Gas Turbine India Conference, New Delhi	December 15-17, 2014	Paper No. GTINDIA 2014-8152
Bora BJ, Saha UK, Chatterjee S, and Veer V	Effect of load level on the performance and emission characteristics of a biogas run dual fuel diesel engine	5th International (& 41st National) Conference on Fluid Mechanics and Fluid Power, IIT Kanpur.	December 12-14, 2014	--
Zayoud A, Sarbassov Y, Mahanta P, Saha UK, Gu S	Influence of aeration on the hydrodynamic behaviour of pressurized circulating fluidized bed	5th International (& 41st National) Conference on Fluid Mechanics and Fluid Power, IIT Kanpur.	December 12-14, 2014	--
Bora BJ, and Saha UK	On the attainment of optimum injection timing for pilot fuel in a dual fuel diesel engine run on biogas	ASME 12th Biennial Conference on Engineering Systems Design and Analysis, Copenhagen, Denmark	June 25-27, 2014	Paper No. ESDA 2014-20162
Verma VS, Bora BJ, Sarkar A, and Saha UK	Experimental investigation of a dual fuel diesel engine run on scrubbed biogas using the method of adsorption	ASME 12th Biennial Conference on Engineering Systems Design and Analysis, Copenhagen, Denmark.	June 25-27, 2014	Paper No. ESDA 2014-20164
Roy S, and Saha UK	Performance of a Savonius-style vertical axis wind turbine under a concentrated and oriented jet	ASME Turbo Expo 2014, Dusseldorf, Germany	June 16 – 20, 2014	Paper No. GT 2014 - 26518
Pandey, P., Dalal A., and Biswas G.	Bubble Formation in Film Boiling including Electrohydrodynamic Forces	IUTAM Symposium on Multiphase Flows with Phase Change: Challenges and Opportunities	December 8-11, 2014	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol, Issue, Page No.
Bajpai, A., Manik, J., Parmananda, M., Dalal A., and Natarajan G.	Computation of Variable Density Flows on Hybrid Unstructured Grids	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Das, D., and Dalal, A.	Numerical Simulation of Solidification and Melting Problems on Unstructured Grid	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Dusad, S., Manik, J., and Dalal, A.	Evaluating Turbulence Model on Hybrid Unstructured Meshes for Wall Bounded Flows	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Kotoky, S., Dalal, A., and Natarajan, G.	Eulerian-Eulerian Modeling of Dispersed Laminar Gas-particle Flows over an Unstructured Grid	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Manik, J., Dalal, A., and Natarajan, G.	A Hybrid Grid Based Algebraic Volume of Fluid Method for Interfacial Flows	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Randive, P., Bhardwaj, S., and Dalal, A.	Lattice Boltzmann Modelling of Capillarity-Induced Resonance of Blob Inside a Circular Tube	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Sathisha, H. M., and Dalal, A.	3D Unsteady Numerical Simulation of All-Vanadium Redox Flow Battery	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Sunil, G. N., Dalal, A., and Natarajan, G.	Computation of Flow Coupled with the Electric Field on Unstructured Grid	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	December 12-14, 2014	
Chakraborty, D and Rathore, P	Optimal locations of collocated/ non-collocated sensors/actuators in smart composite shell structures	10th International Conference on Vibration Engineering and Technology of Machinery (VE-TOMAC X), University of Manchester, UK	9-11th September 2014	

Book

Name of Author/s	Title of Book	Publisher	Page No.	ISBN	Year
U. S. Dixit, R. G. Narayanan, M. Ravi Sankar	Proceedings of 5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2014)			978-8-19274-612-8	2014
P. M. Dixit and U. S. Dixit	Plasticity: Fundamentals and Applications	CRC Press, Boca Raton	583	978-1-4665-0618-3	2015
M. Hazarika and U. S. Dixit	Setup Planning for Machining	Springer, New York	137	978-3319133195	2015

Book Chapter

Name of Author/s	Title of Chapter	Title of Book	Publisher	Page No.	ISBN	Year
Rakesh Bhadra, Pankaj Biswas, M. Ravi Sankar	A literature review on CO2 laser welding	Laser Based Manufacturing	Springer	381-398	978-81-322-2351-1	2015

Name of Author/s	Title of Chapter	Title of Book	Publisher	Page No.	ISBN	Year
Woldetinsay Jiru, M. Ravi Sankar, U. S. Dixit	Surface alloying of aluminum with copper using CO2 laser	Laser Based Manufacturing	Springer	107-116	978-81-322-2351-1	2015
Sachin S. Gautam	Continuum Damage Mechanics and Ductile Fracture	Plasticity: Fundamentals and Applications By U. S. Dixit and P. M. Dixit	CRC Press, Boca Raton	461-514	9781466506183	2014
S Arun and S. Kanagaraj	Polymer-Nanotube nanocomposites for trans-femoral socket	Polymer Nanotube Nanocomposites	Scrivener Publishing Inc, Wiley, USA	187-210	978-1-118-94592-6	2014
B. Bhaskar, S. Arun, P. S. Rama Sreekanth, S. Kanagaraj	Biomaterials in Total Hip Joint Replacements: The evolution of basic concepts, trends and current limitations: A review	Trends in Biomaterials	Pan Stanford, Singapore		9789814613989	2015
R.M. Guedes, S.Kanagaraj, P.S.R. Sreekanth, Monica Oliveira, M. Fonseca	Ultra high molecular weight polyethylene and its reinforcement with carbon nanotubes in medical devices	Polyethylene based blends, composites and nanocomposites	John Wiley and Scrivener publishing		978-1-118-83128-1	2015
Kumar Mondal Arpan, Biswas Pankaj, Bag Swarup and Mahapatra M. M.	Prediction of Weld Induced Angular Distortion of Single Sided and Double Sided Fillet Joint by SAW Process	Advances in Material Forming and Joining,	Springer	-	-	2015
Das Biplab and Biswas Pankaj	Mathematical formulation for the Development of Compound Curve Surface by Laser Line Heating	Laser Based Manufacturing	Springer	-	-	2015
Kumar Chandan, Das Manas and Biswas Pankaj	A 3-D finite element analysis of transient temperature profile of laser welded Ti-6AL-4V alloy	Laser Based Manufacturing	Springer	-	-	2015

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Dr. Poonam Kumari	4th Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS)	Nara, Japan	10-13 Oct 2014	International
Dr. P. Muthukumar	2nd World Congress on Petrochemistry and Chemical Engineering 2014	Las Vegas	October 27-29, 2014	International
Dr. P. Muthukumar	International Conference on Polygeneration (ICP 2015), Chennai	Chennai	18-20 Feb 2015	International
Dr. Sachin S. Gautam	5th International and 26th National All India Manufacturing, Technology, Design and Research Conference	IIT Guwahati, Guwahati, Assam, India	12.12.2014-14.12.2014	International and National

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Dr. S. Kanagaraj	Indo-Australian Conference on Biomaterials, Tissue Engineering, Drug Delivery System & Regenerative Medicine (BiTERM 2015)	Chennai	5-7 Feb 2015	International
Dr. S. Kanagaraj	International Conference on Advancements in Polymeric Materials (APM 2015)	Bangalore	20-22 Feb 2015	International
Dr. S. Kanagaraj	IITG-KIT Joint Symposium on Biobased Materials	Guwahati	20 Jan 2015	International
Dr. Pankaj Biswas	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014	IIT Guwahati	December 12-14, 2014	International
Dr. U.S. Dixit	Aspects of Mechanical Engineering for Industry, NERIST, Nirjuli, India	NERIST, Nirjuli, India	December 6-8, 2014	National
Dr. U.S. Dixit	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	IIT Guwahati, India	December 12-14, 2014	International/National
Dr. S. N. Joshi	3rd International Conference on Laser and Plasma Applications in Materials Science	Lake Land Country Club, Kolkata	January 15th-17th, 2015	International
Dr. S. N. Joshi	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014, IIT Guwahati	IIT Guwahati	December 12-14, 2014	International
Dr. Deepak Sharma	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014	Guwahati	12-14 December 2014	International and National
Dr. A. Dalal	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	IIT Kanpur	December 12-14, 2014	International
Dr. Debabarata Chakraborty	VETOMAC X	University of Manchester, UK	9-11 September, 2014	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. P. Muthukumar	Research Activities on Hydrogen and Thermal Energy Storage Systems and Porous Medium Combustion at IIT Guwahati	Clean Energy Research Centre, University of South Florida, USA	Florida, USA	11th June, 2014
Dr. M. Ravi Sankar	Applications of Polymer Rheological Abrasive Medium in Finishing of Human Implants	-	Chennai	August 01, 2014.
Dr. M. Ravi Sankar	Nano Finishing of Human Implants	IIT Guwahati	Guwahati	Dec 15-16, 2014
Dr. M. Ravi Sankar	Micro-manufacturing	IIT Guwahati	Guwahati	Feb 23-27, 2015.
Dr. Pankaj Biswas	Overview of Welding Processes	NIT Agartala	NIT Agartala, India	30/01/2014
Dr. Pankaj Biswas	Welding Joint Design	NIT Agartala	NIT Agartala, India	30/01/2014
Dr. Pankaj Biswas	Recent research in welding technology	NIT Agartala	NIT Agartala, India	31/01/2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Pankaj Biswas	Defect and testing of welded sample	NIT Agartala	NIT Agartala, India	31/01/2014
Dr. Pankaj Biswas	Distortion & residual stress control in Welding	IIT Guwahati	Guwahati, India	23/12/2014
Dr. Pankaj Biswas	Physics of welding	IIT Guwahati	Guwahati, India	30/12/2014
Dr. Pankaj Biswas	Principles of welding processes	IIT Guwahati	Guwahati, India	30/12/2014
Dr. Pankaj Biswas	Testing and defects assessment in fusion welding	IIT Guwahati	Guwahati, India	31/12/2014
Dr. S. N. Joshi	Bending of difficult-to-form materials using Lasers	APM 2015 organized by Advanced Research School for Technology and Product Simulation (ARSTPS), R&D wing of CIPET	IISc Bangalore	February 20-21, 2015
Dr. A. Dalal	Simulation of Droplet Motion on Mixed Wettability Surface	Department of Chemical Engineering, IIT Hyderabad	Hyderabad	04.03.15

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date	Remarks
Prof. Suman Chakraborty	Professor, Department of Mechanical Engineering IIT Kharagpur	Health-care Engineering for Medical Diagnostics	September 23, 2014	
Prof. Uma Batra	Professor and Head, Dept. of Materials & Metallurgical Engg., PEC Univ. of Technology, Chandigarh	Unleashing Potentials of Nanoscale Bioceramics	July 25, 2014	
Prof. N. R. Manal	IIT Kharagpur	Thermo-mechanical tensioning in welding structure	19/03/2015	Invited Lectures
Prof. Prashant P. Date	IIT Bombay	Welding & Sheet Metal Forming	16/03/2015	Invited Lectures
Mr. Muneesh Narain	IWS / Ador Fontech Ltd.	Thermal Coating	19/03/2015	Invited Lectures

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Sl. No.	Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
1	Dr. K. Kalita, Dr. A. Dalal, Dr. S. Kanagaraj & Dr. D. N. Basu	Brainstorming Workshop on Development of Processes & Devices for Bio-medical Applications	CET, IIT Guwahati	October 08, 2014	International	50
2	Dr. D. N. Basu & Dr. A. Dalal	Workshop on State of the Art in Microfluidics	TEQIP, CET, IIT Guwahati	January 09, 2015	National	41

Sl. No.	Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
3	Dr. M. Ravi Sankar, Dr. K. S. R. K. Murthy	TEQIP sponsored short term course on Advanced Machining and Finishing processes	MHRD, CET-IITG	15-16 Dec., 2014	National	42
4	Dr. M. Ravi Sankar	QIP sponsored short term course on Micro manufacturing for biomedical applications	AICTE, MHRD	23-27 Feb., 2015	National	30
5	Dr. Pankaj Biswas & Dr. S. D. Kore	Modern Scenario on Wildling Technology (Short-Term Courses)	CET, IIT Guwahati	16th to 20th March 2015	National	56
6	Dr. Manas Das and Dr. Sukhomay Pal	Micromanufacturing	QIP	December 22-26, 2014	National	30
7	Dr. U. S. Dixit (Organizing Secy.), Dr. R. Ganesh Narayanan and Dr. M. Ravi Sankar (Jt. Organizing Secy.)	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, India	DST, AERB, ONGC, AM-ETEK etc.	December 12-14, 2014	International/ National	400
8	Dr. S. N. Joshi	Recent Developments in Materials Testing	Zwick Roell Testing Machines Pvt. Ltd.	23rd January 2015	National	45
9	Dr. S. N. Joshi	Quality Improvement Program Short Term Course on "Micro-manufacturing Technologies"	AICTE	March 23-27, 2015	National	37
10	Dr. Deepak Sharma	QIP Short-term course on Genetic Algorithms for Engineering Optimization	CET, IIT Guwahati	28th December 2014 – 1st January 2015	National	29
11	Dr. D. N. Basu and Dr. A. Dalal	A state of the art in Microfluidics	TEQIP	09.01.15	National	40
12	Dr. K. Kalita and Dr. A. Dalal	Development of processes and devices for bio-medical applications	TEQIP	08.10.14	National	40
13	Dr. A. Narayana Reddy and Dr. K. S. R. Krishna Murthy	Theory and Applications of Finite Element Analysis	QIP	23rd -27th March, 2015	National	40
14	Prof. P. Muthukumar and Dr. Chandramohan Somayaji	Advancement in Renewable Energy and Utilization Technologies	QIP	2nd March – 6th March 2015	National	40
15	Prof. P. Muthukumar and Dr. Chandramohan Somayaji	Recent Trends in Renewable Energy Utilization Systems	TEQIP	January 23-24, 2015	National	40

PATENTS

Sl. No.	Name of Faculty and co researcher	Name	Date Applied/Granted	Application No.	Remarks
1	Mishra SC, Muthukumar P, Pantangi VK	Porous Radiant Burner for Domestic LPG Cooking Device with Improved Thermal Efficiency and Reduced Emissions of CO and NOx	-	Patent Number: 73/KOL/2013 and Reference Number: E-2/548/2013-KOL	Patent has been published
2	Subhash C. Mishra, Muthukumar P and Niraj Kumar Mishra	Self-Aspirated LPG Domestic Cooking Stove with a Two-Layer Porous Radiant Burner	-	Accepted for publishing	-
3	Subhash C. Mishra, P. Muthukumar P, Niraj Kumar Mishra and SnehasishPanigrahi	Medium-Scale Self-Aspirated Improved Air Entrainment LPG Cooking Stove with a Two-Layer Porous Radiant Burner		Submitted to TIFAC, New Delhi, November 2014	
4	S. Arun and S. Kanagaraj	Injection mouldable polymeric composite based passive polycentric knee joint	Applied	2761/DEL/2014	
5	S. Arun, Mrutyunjay Maharana, S. Kanagaraj	A walking simulator to test walking condition of prosthetic knee joint before fitting to the patient	Applied	630/DEL/2015	
6	Swapnita Kakati, S. Kanagaraj	Nanofuel composition and performance enhancement of conventional domestic kerosene stoves using the same	Applied	43/KOL/2015	

AWARDS AND HONOURS

1. Dr. M. Ravi Sankar: Institution of Engineers India (IEI) Young Engineer Award in Production Engineering, 2014
2. Dr.P.Muthukumar: President (Elect), Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), Guwahati sub-chapter from March 2015 onwards
3. Dr.P.Muthukumar: Bhaskara Advanced Solar Energy Fellowship (BASE Fellowship), Indo - U.S. Science and Technology Forum, Visited Clean Energy Research Centre, University of South Florida, USA from June – November 2014.
4. Dr. D. Sharma: Received NVIDIA Innovation Award 2014 in 21st IEEE International Conference of High Performance Computing, December 17-20, 2014, Goa, India, for uniquely using graphics card in structure topology optimization problem.

STUDENTS' ACHIEVEMENTS

1. Mr. S. Arun received first prize in Best Innovation Award-2015 for the project of "Injection mouldable polymeric composite based passive polycentric knee joint" by the GHR Labs & Research Center, Nagpur with cash prize of Rs.1 lakh.
2. Mr. S. Arun received an appreciation under MLM (More from Less for Many) category from Dr.R.A.Mashelkar, Chairperson, National Innovation Foundation - India (NIF) during the Festival of Innovation at Rashtrapati Bhawan New Delhi on March 8, 2015 for his work on "Injection Mouldable Polymeric Composite Based Passive Polycentric Knee joint."

SPECIAL MENTION

a). student participation in conferences

R.Vignesh Babu, International conference & Exhibition PM 15 on Powder metallurgy and particulate materials, Mumbai, 19-21 Jan'2015.

Devarshi Kashyap, Indo-Australian Conference on Biomaterials, Tissue Engineering, Drug Delivery System & Regenerative Medicine (BiTERM 2015), Chennai, 5-7 Feb'2015

b). Mr. Pranjol Paul, Technical Officer, was lected as an Associate Member of Institution of Engineers India (IEI), Assam State Centre.

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1	Bag, Swarup	IIT Bombay	Assistant Professor	Fusion welding processes, Finite element method, Laser microjoining, Heat transfer and fluid flow in fusion welding, Residual stress and distortion, Recrystallization in hot metal forming process, Optimization in manufacturing process
2	Bandopadhyaya, Dibakar	IIT Kanpur	Associate Professor	Active materials, Artificial muscle materials, Smart structures, Robotics and mechanism, Composites, MEMS, Bio inspired design
3	Banerjee, Atanu	IIT Kanpur	Assistant Professor	Compliant Mechanism, Shape memory alloy, Bio-mimetic devices
4	Basu, Dipankar Narayan	IIT Kharagpur	Assistant Professor	Nuclear Thermalhydraulics, Supercritical Natural Circulation Loops, Domestic Air-conditioning, Computational Fluid Dynamics and Heat Transfer
5	Biswas, Pankaj	IIT Kharagpur	Associate Professor	Manufacturing and Design: Computational weld mechanics, Solid state welding, Soft computing modeling of welding processes, FEM, Line heating
6	Biswas, Gautam	IIT Kharagpur	Professor and Director of the Institute	Computational Fluid Dynamics, Convective Heat Transfer, Turbulence, Boiling Heat Transfer, Heat Transfer Augmentation, Turbomachinery
7	Chakraborty, Debabrata	IIT Kharagpur	Professor	FRP, Composites, FEM, Fracture Mechanics and Design
8	Dalal, Amaresh	IIT Kanpur	Associate Professor	Computational Fluid Mechanics and Heat Transfer, Finite Volume Methods and Unstructured Grid Techniques, Natural and Mixed Convection Flows
9	Das, Manas	IIT Kanpur	Assistant Professor	Advanced Finishing and Nano-finishing Processes, Magnetorheological Finishing (MRF) Process, Advanced / Non-traditional Machining Processes, Machining of Advanced Engineering Materials, Micromanufacturing
10	Dass, Anoop K. (Head of the Department)	IISc Bangalore	Professor	Computational Fluid Dynamics and Turbomachines
11	De, Arnab Kumar	IIT Kanpur	Assistant Professor	Numerical Methods in Fluid Flow and Heat Transfer, Convection, Turbulence
12	Dixit, Uday S.	IIT Kanpur	Professor	Design and Manufacturing : FEM, Neural Network and Fuzzy Set Application; Mechatronics
13	Dwivedy, Santosha K.	IIT Kharagpur	Professor	Non-linear Dynamics, Design and Robotics, vibrations
14	Gadgil, Hrishikesh P.	IISc Bangalore	Assistant Professor	Liquid atomization and fuel sprays, combustion, propulsion
15	Gautam, Sachin S.	IIT Kanpur	Assistant Professor	Design and Manufacturing : Nonlinear Finite Element Analysis, Computational Contact Impact Analysis, Adhesion, Rough Surfaces, Time Integration Schemes, Mixed Time Integration Schemes, Plasticity, Ductile Fracture, Continuum Damage Mechanics

Sl. No.	Name	PhD	Designation	Areas of Interest
16	Joshi, Shrikrishna N.	IIT Bombay	Assistant Professor	Micro fabrication: Laser micro forming, Micro machining: Micro electric discharge machining (EDM), Web based manufacturing, Process modeling and optimization of advanced manufacturing processes, Application of soft computing techniques in manufacturing
17	Kakoty, Sashindra K.	IIT Kharagpur	Professor	Tribology, Duct Acoustics, Mechanical System Design, Rural Technology
18	Kalita, Karuna	University of Nottingham	Associate Professor	Rotordynamics, Coupled Dynamics of Electro-Mechanical Systems, Vibration
19	Kanagaraj, S.	IIT Kharagpur	Associate Professor	Biomaterials, Carbon nanotubes based nanocomposites, Nanofluids, Materials characterization
20	Kore, Sachin D.	IIT Bombay	Associate Professor	Experimental and numerical study of electromagnetic pulse processing, Solid state welding, Joining of similar, dissimilar and lightweight metals like Al, Steel, Al-Li, and Mg
21	Kulkarni, Vinayak	IISc Bangalore	Associate Professor	High enthalpy flows, scramjet engine, experimental, aerodynamics, measurement science, CFD simulations
22	Kumari, Poonam	IIT Delhi	Assistant Professor	Theory of plates and shells, Computational mechanics, Smart structures
23	Kumar, Bhaskar (Joined on 10.03.2015)	-	Assistant Professor	Hydrodynamic Stability, Bluff Body Flows, Computational Fluid Dynamics
24	Madhusudhana, Gavara	IISc Bangalore	Assistant Professor	Computational Fluid Dynamics, Heat Transfer, Cooling of Electronics, Multi-phase flows, Cooling at Micro/Mini scales, Turbulent Fluid Flow and Heat transfer
25	Mahanta, Pinakeswar	IIT Guwahati	Professor	Thermal Radiation with Participating Media, Fluidization, Energy Conservation and Renewable Energy
26	Mishra, Subhash C.	IIT Kanpur	Professor	Analysis of Heat Transfer Problems involving Thermal Radiation
27	Murthy, K. S. R. Krishna	IIT Kharagpur	Associate Professor	Finite Element Methods, Error Estimation and Fracture Mechanics
28	Muthukumar, P.	IIT Madras	Professor	Coupled heat and mass transfer analysis; Metal hydride based thermal machines, Conventional and Non-conventional refrigeration systems
29	Narayanan, Ganesh R.	IIT Bombay	Associate Professor	Metal Forming: Sheet forming & Cold forging, Computer applications in Metal Forming
30	Natarajan, Ganesh	IISc Bangalore	Assistant Professor	Computational Fluid dynamics, Grid Adaptation, Error Estimation, Immersed Boundary methods, Parallel computing, Biofluid dynamics
31	Pal, Sukhomay	IIT Kharagpur	Associate Professor	Welding Process Monitoring and Control, Tool Condition Monitoring, Non-Conventional Machining Process Application of Artificial Neural Network, Genetic Algorithms and Fuzzy logic in manufacturing
32	Panda, Satyajit	IIT Kharagpur	Associate Professor	Composite materials, Nonlinear vibrations, Smart materials and structures, FEM, Functionally Graded materials and structures, Micromechanics.

Sl. No.	Name	PhD	Designation	Areas of Interest
33	Pandey, Manmohan	IIT Kanpur	Professor	Two-phase flow instabilities, Nuclear reactor thermal hydraulics, Heat transfer in microchannels, Heat transfer in fluidized beds
34	R, Sangamesh Deepak	IISc Bangalore	Assistant Professor	Kinematics and Dynamics of rigid multi-body systems, Compliant Mechanisms, Topology Optimization, Static Balancing
35	Reddy, Narayana	IISc Bangalore	Assistant Professor	Inverse Problems, Biomechanics, Compliant Mechanisms, Topology Optimization, Nonlinear FEM, MEMS and Design of Materials
36	Robi, P. S.	IIT Bombay	Professor	Coating, Fracture Mechanics, Materials Processing, Metal Matrix composite, Metal Casting, P/M Processing
37	Saha, Ujjwal K.	IIT Bombay	Professor	Propulsion, Turbomachinery, Wind Energy Conversion, Internal Combustion Engines
38	Sahasrabudhe, Anil D. (On deputation)	IISc Bangalore	Professor	Vibration and Noise, Condition Monitoring, CAD/CAM
39	Sahoo, Niranjan	IISc Bangalore	Professor	Fluid and Thermal Engineering, Aerodynamics, Gas Dynamics, Instrumentation, Measurements and Experiments in Fluid
40	Sankar, Ravi M.	IIT Kanpur	Assistant Professor	Machining & Advanced Machining Processes, MEMS & NEMS, Sustainable Machining, Micromanufacturing, Composite Materials, Online monitoring of Manufacturing Processes, Tribology, Precision Engineering
41	Senthilvelan, S.	IIT Madras	Associate Professor	Composites, Fatigue, Wear and Failure Analysis
42	Sharma, Deepak	IIT Kanpur	Assistant Professor	Optimal Design: Modeling and Computation, Engineering Design and Optimization, Genetic Algorithms, Multi-objective Optimization
43	Somayaji, Chandramohan	Mississippi State University	Associate Professor	Renewable Energy, Non-Conventional Energy Sources, Engine After treatment Systems, Design of Heat Transfer Equipments, Chemical Reaction Engineering
44	Saxena, Anupam (Joined on 05.12.14)	University of Pennsylvania, Philadelphia, PA, USA	Visiting Associate Professor	Compliant Mechanisms, Topology Design, CAD, Robotics, MEMs, Optimization, Large Deformation Systems
45	Tiwari, Rajiv	IIT Kanpur	Professor	Rotor Dynamics, Vibrations, Identification in Mechanical Systems, Rolling Element Bearing Design and Analysis, Application of Active Magnetic Bearings in Rotors, Vibrations based Condition Monitoring of Industrial Rotating Machines
46	Unal, Aynur (Joined on 23.03.15)	-	Visiting Professor	Smart Systems and Services

DEPARTMENT OF PHYSICS

YEAR OF ESTABLISHMENT OF THE DEPARTMENT: 1995

ACADEMIC PROGRAMMES OFFERED:

Bachelor of Technology (BTech) in

o Engineering Physics

Master of Science (MSc) in

o Physics

Doctor of Philosophy (PhD)

FACULTY STRENGTH:

- Professor: 10
- Associate Professor: 12
- Assistant Professor: 12
- Visiting Professor: 1

NUMBER OF NEW FACULTY JOINED:

Assistant Professor: 2

LABORATORIES:

The Department of Physics at IIT Guwahati has 23 laboratories, with the following break up for teaching and research labs.

(a) Teaching Labs : (5 teaching laboratories)

- i) B. Tech 1st year lab-01
- ii) M. Sc lab-01
- iii) Numerical lab-01
- iv) Electronics lab-01
- v) Advanced Physics lab-01

(b) Research labs: (18 research labs)

- i) Fiber optics lab
- ii) Non linear optics lab
- iii) Laser and Photonics lab
- iv) XRD labs (02 Nos.)
- v) Magnetism lab

- vi) Computational lab
- vii) Furnace lab
- viii) Material Science lab
- ix) Solid State lab, Spectroscopy lab
- x) Semiconductor labs (02 Nos.)
- xi) Holography and Optical imaging lab
- xii) Thin film lab
- xiii) Low temperature lab
- xiv) Electro-ceramics lab
- xv) High Energy Physics lab
- xvi) Terahertz Photonics and Plasmonics lab

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The major research focus of the department is evenly poised between different branches of theoretical and experimental Physics. The thrust areas are:

- (i) Optics (Theory & Experiments)
- (ii) Condensed Matter Physics (Theory and Experiments)
- (iii) High Energy Physics (Theory and Experiment)
- (iv) Theoretical Physics
- (v) Laser and Photonics
- (vi) Amorphous and nanocrystalline semiconductor thin films for solar cells and other devices. Thin film and Hetero-junction solar cells.
- (vii) Terahertz plasmonics and metamaterials.
- (viii) Astrophysics

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

A number of sponsored projects received funding from different agencies and quite a number of them were completed successfully, also a significant number of research papers got published in different reputed journals.

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Gagan Kumar	Plasmonic metamaterials based terahertz guided wave devices	SERB	26.65		3 years

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof. Saurabh Basu	Phases of the interacting Bose Gas – simulating quantum phenomena at large length scales	CSIR	14.20	None	2012-2015
Dr. Bosanta R. Boruah	Design and implementation of a high speed wavefront sensor of light beams	DietY	67.21	Prof. A. Khare	2011-15
Dr. Bosanta R. Boruah	Design and implementation of confocal microscopes with spatial light modulator based beam scanning and programmable beam manipulation mechanism	DST, SERB	89.66	Dr. U. Bora	2012-15
Dr. Bipul Bhuyan	Collaboration by Indian Physicists on Neutrino Projects at Fermi Lab (USA)	DST	131.48	None	2012-2015
Dr. Tarak Nath Dey	Diffraction-less multidimensional light propagation in coherently controlled media	DST-SERB	18.82		3 years
Dr. Subhradip Ghosh	Theory of phonon excitations in substitutionally disordered alloys	Swedish Research Council, Sweden	51.44	Biplab Sanyal, Uppsala University, Sweden	2012-14
Prof. P. K. Giri	Development of Semiconductor Nanowire Based Advanced Bio-Sensors for Biomedical Applications	CSIR	24.00	Prof. P. Goswami	2013-2016
Dr. P. K. Padmanabhan	Factors Influencing Fast Ion Conduction In Solids: Atomistic Modeling And Computer Simulation Studies On NASICON-type Solids	DST/SERB	30.25	none	3 years
Dr. D. Pamu	Deposition and characterization of Ba ₅ Nb ₄ O ₁₅ -BaWO ₄ films for complementary metal oxide semiconductor applications	DST-Fast Track (Young Scientist in Physical Sciences)	15.00	-	3 Years
Dr. D. Pamu	Dielectric and thermal characterization of Mg(Zr _{0.05} Ti _{0.95})O ₃ ceramics for microwave window applications	BRFST	41.58	Dr. S. Thota	3 Years
Prof. A. Perumal	Magnetic and magnetoresistance properties of multilayer structured CoFeB alloy films for spintronic applications	DST	39.46	-	2014-2016
Prof. S. Ravi	Neutron Diffraction studies in Transition element doped LaCrO ₃	UGC-DAE-CSR, Mumbai	03.00	-	2 years
Prof. S. Ravi	Fe Doped In ₂ O ₃ Thin Films: Growth Optimization and Investigation of Electrical Transport, Magnetic and Optical Properties for Spintronics Applications	CSIR	14.36	-	3 years
Dr. Amarendra K. Sarma	Parity-time symmetry in Nonlinear Optics	DST-SERB	14.77	-	2014-2017

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Amarendra K. Sarma	Optical force in a two and three level atomic system superimposed to an intense ultrashort pulsed laser field beyond the rotating wave approximation	CSIR	11.72		2013-2016
Prof. A. Srinivasan	Development of Ni-Mn based alloys exhibiting high magneto-caloric effect near room temperature	CSIR	18.6	None	2012-15
Prof. A. Srinivasan	Development of Heusler alloys based thin films for magneto-caloric and spintronic application	DRDO	34.92	None	2012-15
Dr. P. K. Iyer	Design, Development and fabrication of OLED organic solar cells & organic TFTs based on molecular polymeric & composite materials	DST	523	Prof. A. Srinivasan, Dr. D. Goswami, Dr. Md. Qureshi	2010-15

c) Completed Sponsored Projects:

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. Pratima Agarwal	Development of facilities for fabrication of amorphous silicon-crystalline silicon Heterojunction Solar cells	DST	50.00	-	21/2 years
Prof. Pratima Agarwal	Development of amorphous silicon based solar cells on plastic and other flexible substrate	DRDO	34.00	-	4 years
Dr. Bipul Bhuyan	Search for new physics beyond Standard Model using data from Belle experiment and detector R & D for the superKEKB experiment	DST	38.00	-	3 years
Dr. D. Pamu	Preparation and characterization of Mg ₂ TiO ₄ ceramics by mechanical alloying	DRDO	17.50	Prof. A. Perumal	3 years
Dr. D. Pamu	Fabrication of K _{0.5} Na _{0.5} NbO ₃ Ferroelectric Thin Film Capacitors by RF Magnetron Sputtering	DAE - BRNS	18.00	-	3 years
Prof. A. Perumal	Development of Nano Composite Permanent Magnets based on (FePt/Fe) _n Multilayer Thin Films	DRDO	35.13	-	3 years
Prof. S. Ravi	Critical Behavior Studies in SnO ₂ based Diluted Magnetic Semiconductors	DST	38.00	-	3 years
Dr. Ashwini K. Sharma	Studies on laser-induced breakdown in liquid and solid-liquid interface	DST	31.80	Prof. Alike Khare	3 years
Prof. A. Srinivasan	Development of polymer/bioactive glass nanocomposites	BRNS	24.48	-	3 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
M. Singh, A. Yadav, S. Kumar and Pratima Agarwal	Annealing induced electrical conduction and band gap variation in thermally reduced graphene oxide films with different sp ² /sp ³ fraction	Applied Surface Science	326	236-242	2015

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Himanhsu S. Jha, Asha Yadav, Mukesh Singh, Shailendra Kumar and Pratima Agarwal	Growth of wide-band gap nano-crystalline silicon carbide films by HWCVD: Influence of filament temperature on structural and optoelectronic properties	Journal of Electronic Materials	44	922-928	2015
Himanhsu S. Jha and Pratima Agarwal	Effects of substrate temperature on structural and electrical properties of cubic silicon carbide films deposited by hot wire chemical vapor deposition technique	Journal of materials Science: Materials in Electronics	26	2844-2850	2015
Himanhsu S. Jha and Pratima Agarwal	High crystalline silicon carbide thin films grown at low substrate temperature by HWCVD technique	Journal of materials Science: Materials in Electronics	26	1381-1388	2015
Mukesh Singh, Himanhsu S. Jha and Pratima Agarwal	Growth of large sp ² domain size single and multi-layer grapheme films at low substrate temperature using hot filament chemical vapor deposition	Materials Letters	126	249-252	2014
Apurba Barman and Saurabh Basu	Phase Diagram of multi-component bosonic mixtures: emergence of mixed superfluid and insulating phases	Journal of Physics B: Atomic, Molecular and Optical Physics	48	55301	2015
Apurba Barman and Saurabh Basu	Phase diagram of Correlated Bosons	Journal of Physical Society of Japan (Conf. Series)	3	16007	2014
Md. Gaffar and B. R. Boruah	Poynting vector profile of a tightly focused radially polarized beam in the presence of primary aberrations	JOSA A	32 (4)	660-668	2015
Md. Gaffar and B. R. Boruah	Generation of a boat-shaped beam due to a tightly focused comatically aberrated azimuthally polarized beam	Journal of Optics (IOP)	16 (10)	105709	2014
Biswajit Pathak and B. R. Boruah	Improved wavefront reconstruction algorithm for Shack–Hartmann type wavefront sensors	Journal of Optics (IOP)	16(5)	55403	2014
D. Dutta, B. Bhuyan et. al. (Belle Collaboration)	Search for $B_0 \rightarrow \gamma\gamma$ and a measurement of the branching fraction for $B_0 \rightarrow \gamma$	Phys. Rev. D	91, 011101	-	2015
B. Bhuyan et. al. (BaBar Collaboration)	Search for a light Higgs resonance in radiative decays of the $Y(1S)$ with a charm tag.	Phys. Rev. D	91, 071102	-	2015
B. Bhuyan et. al. (BaBar Collaboration)	Observation of the decay $B_0 \rightarrow \eta' K_s^0$ (892)0	Phys. Rev. D	90, 072009	-	2014
B. Bhuyan et. al. (BaBar Collaboration)	Observation of $D_0 - D_0^*$ Mixing in e^+e^- Collisions	Phys. Rev. Lett.	112, 11	-	2014
B. Bhuyan et. al. (BaBar Collaboration)	Search for $B_0 \rightarrow \rho \Lambda \pi - \gamma$ at Belle	Phys. Rev. D	89, 05110	-	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Sayan Chakrabarti, T�rence Delsate, Norman G�rlebeck and Jan Steinhoff	I-Q relation for rapidly rotating neutron stars	Physical Review Letters	112	201102	2014
Santabrata Das, Indranil Chattopadhyay, Anuj Nandi and D. Molteni	Periodic mass loss from viscous accretion flows around black holes	Monthly Notices of the Royal Astronomical Society	442	251-258	2014
Santabrata Das, Indranil Chattopadhyay, Anuj Nandi and Biplob Sarkar	On the possibilities of mass loss from an advective accretion disc around stationary black holes	Bulletin of the Astronomical Society of India	42	1	2014
Onkar N. Verma and Tarak N. Dey	Steering, Splitting and Cloning of Optical Beam in a Coherently Driven Raman Gain System	Physical Rev A	91(1)	13820	2015
Souvik Paul, Subhradip Ghosh and Biplab Sanyal	Emergence of spin spiral magnetic order in Mn based Inverse Heusler alloys	Journal of Physics Condensed Matter	26-19	196004	2014
Souvik Paul, Ashis Kundu, Biplab Sanyal and Subhradip Ghosh	Anti site disorder and improved functionalities in Mn ₂ NiX (X=Al, Ga, In, Sn) inverse Heusler alloys	Journal of Applied Physics	116-13	133903	2014
Souvik Paul, Biplab Sanyal and Subhradip Ghosh	First-principles study of the lattice instabilities in Mn ₂ NiX (X=Al, Ga, In, Sn) magnetic shape memory alloys	Journal of Physics Condensed Matter	27-3	35401	2015
Bappaditya Pal, Soumen Dhara, P. K. Giri and D. Sarkar	Room Temperature Ferromagnetism with High Magnetic Moment and Optical Properties of Co Doped ZnO Nanorods Synthesized by a Solvothermal Route	J. Alloys. Comp.	615	378	2014
Ravi K. Biroju and P. K. Giri	Defect Enhanced Efficient Physical Functionalization of Graphene with Gold Atoms Probed by Resonance Raman Spectroscopy	J. Phys. Chem. C	118	13833	2014
Sumen Dhara, Kenji Imakita, P. K. Giri and Minoru Fujii	Strain Dependence of the Nonlinear Optical Properties of Strained Si Nanoparticles	Optics Lett.	13	3833	2014
Batakrushna Santara, P. K. Giri, Soumen Dhara, Kenji Imakita and Minoru Fujii	Oxygen Vacancy Mediated Enhanced Ferromagnetism in Undoped and Fe Doped TiO ₂ Nanoribbons	J. Phys. D: Appl. Phys.	47	235304	2014
Sk. Md. Obaidulla, Dipak K Goswami and P. K. Giri	Low bias stress and reduced operating voltage in SnCl ₂ Pc based n-type organic field-effect transistors	Appl. Phys. Lett.	104	213302	2014
Batakrushna Santara, P. K. Giri, Kenji Imakita and Minoru Fujii	Microscopic Origin of Lattice Contraction and Expansion in Undoped Rutile TiO ₂ Nanostructures	J. Phys. D: Appl. Phys.	47	215302	2014

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Ravi K. Biroju, P. K. Giri, Soumen Dhara, Kenji Imakita and Minoru Fujii	Graphene Assisted Controlled Growth of Highly Aligned ZnO Nanorods and Nanoribbons: Growth Mechanism and Photoluminescence Properties	ACS Appl. Mater. Interf.	6	377	2014
Ravi K. Biroju and P. K. Giri	Controlled Fabrication of Graphene--ZnO Nanorod, Nanowire and Nanoribbon Hybrid Nanostructures	J. Nanosci. Lett.	4	34	2014
Ramesh Ghosh, P. K. Giri, Kenji Imakita and Minoru Fujii	Origin of Visible and Near Infrared Photoluminescence from Chemically Etched Si Nanowires Decorated with Arbitrary Shaped Si Nanocrystals	Nanotechnology	25	45703	2014
Ravi K. Biroju, Nikhil Tilak, Gone Rajender, S. Dhara and P. K. Giri	Catalyst Free Growth of ZnO Nanowires on Graphene and Graphene Oxide and Its Enhanced Photoluminescence and Photo-response	Nanotechnology	26	145601	2015
Ramesh Ghosh, P. K. Giri, Kenji Imakita and Minoru Fujii	Photoluminescence Signature of Resonant Energy Transfer in ZnO Coated Si Nanocrystals Decorated On Vertical Si Nanowires	J. Alloys. Comp.	538	419	2015
A. T. T. Mostakoa, Alike Khare, C. V. S. Rao, Sudhirsinh Valab, R. J. Makwanab and T. K. Basub	Effect of deuterium ion beam irradiation onto the mirror-like pulsed laser deposited thin films of rhodium	Nuclnst and Methods in Phys Res B	342	150-157	2015
Satchi Kumari and Alike Khare	Studies on slowing down of light to few m/s in photorefractive BaTiO ₃ at room temperature for tunable optical delay	Horizon- A Journal of Physics	3	89-90	2014
Archana Kushwaha, Indrajeet Kumar and Alike Khare	Laser Induced breakdown of PMMA in air	J Physical Science and Application	4 (7)	426-429	2014
Archana Kushwaha, Satchi Kumari and Alike Khare	Effect of pump intensity on two photon induced UV Photoluminescence in PLD thin film of ZnO	Asian J of Physics	23 (4)	567-572	2014
Satchi Kumari and Alike Khare	Studies on nonlinear response of epitaxial Ruby thin film	IEEE J of Quantum Electron	50 (8)	645-650	2014
Satchi Kumari and Alike Khare	Langmuir probe studies of laser ablated Ruby plasma and correlation with pulsed laser deposited Ruby thin film properties	Laser and Particle beam	32 (3)	359-367	2014
Indrajeet Kumar and Alike Khare	Raman Spectra of PLD deposited DLC thin films on Si substrate	AIP Conf Proceedings	1591	1018-1020	2014
A. T. T. Mostako and Alike Khare	Large area deposition of Rh Single and Rh/W/Cu multilayer thin films on stainless steel substrate by pulsed laser deposition technique	Review of Scientific Instruments	85 (4)	046101-3	2014
Partha P. Dey and Alike Khare	Fabrication of luminescent a-Si:SiO ₂ structures by direct irradiation of high power laser on Silicon surface	Applied Surface Science	307	77-85	2014

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Indrajeet Kumar and Alika Khare	Multi- and few-layer graphene on insulating substrate via Pulsed laser deposition technique	Applied surface science	317	1004-1009	2014
P. Munendhar, R. Aneesh and Sunil Khijwania	Development of an All-optical, Temperature Insensitive Non-pendulum type Tilt Sensor Employing Fiber Bragg Gratings	Applied Optics	52	5493	2014
Gagan Kumar	Controlling terahertz surface plasmon properties on a periodically structured silicon surface	Journal of Spectroscopy	Article ID: 543985	-	2015
Shanshan Li, Mohammad M. Jadidi, Thomas E. Murphy, and Gagan Kumar	Plasmonic terahertz waveguide based on anisotropically etched silicon substrate	IEEE Transactions on Terahertz Science Technology	4	254	2014
J. R. Knab, X.-C. Lu, Felipe A. Vallejo, Gagan Kumar, Thomas E. Murphy, and L. Michael Hayden	Ultrafast carrier dynamics and optical properties of nanoporous silicon at broadband terahertz frequencies	Optical Material Express	4	300	2014
Debaprasad Maity and Pankaj Saha	Modified natural inflation: A small single field model with a large tensor to scalar ratio	Phys. Rev. D	91	23504	2015
Andrea Alberti, Paolo Gambino, Kristopher J. Healey and Soumitra Nandi	Precision Determination of the Cabibbo-Kobayashi-Maskawa Element V_{cb}	Phys. Rev. Lett.	114(6)	61802	2015
K. Sau and P. Padma Kumar	Ion Transport in $\text{Na}_2\text{M}_2\text{TeO}_6$: Insights from Molecular Dynamics Simulation	Journal of Physical Chemistry C	119	1651-1658	2015
T. Santhosh Kumar and D. Pamu	Effect of V_2O_5 on Microwave Dielectric Properties of Non-Stoichiometric MgTiO_3 Ceramics	Material Science and Engineering B	194	86-93	2015
R. K. Bhuyan, T. Santhosh Kumar, D. Pamu, J. M. Renehan and M. V. Jacob	Low Temperature and Broadband Dielectric Properties of V_2O_5 doped Mg_2TiO_4 Ceramics	Materials Express	4	349-358	2014
R. K. Bhuyan, T. Santhosh Kumar, D. Pamu, J. M. Renehan, and M. V. Jacob	Cryogenic microwave dielectric properties of Mg_2TiO_4 ceramics added with CeO_2 nanoparticles	Advances in Materials Research	3	105-116	2014
Pallabi Gogoi, T. Santhosh Kumar, P. Sharma and D. Pamu	Structural, Optical, Dielectric and Electrical Studies on RF Sputtered Nanocrystalline Zr Doped MgTiO_3 thin films	Journal of Alloys and Compounds	619	527-537	2015
Mahesh Peddigari, Bashaiah Sindam, K.C. James Raju and Pamu Dobbidi	Optical and Microwave Dielectric Properties of Phase Pure $(\text{K}_{0.5}\text{Na}_{0.5})\text{NbO}_3$ Thin Films Deposited by RF Magnetron Sputtering	Journal of the American Ceramic Society	98 (5)	1444-1452	2015

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P. Mahesh and D. Pamu	Effect of deposition temperature on structural, mechanical, optical and dielectric properties of radio frequency sputtered nanocrystalline (Kx Na _{1-x})NbO ₃ thin films	Thin Solid Films	562	471-477	2014
C. Anil Kumar and D. Pamu	Dielectric, optical and electric studies on nanocrystalline Ba ₅ Nb ₄ O ₁₅ thin films deposited by RF magnetron sputtering	Applied Surface Science	340	56-63	2015
D. Pamu, T. Santhosh Kumar, B. Shreedhar and Anil K. Bhatnagar	Optical, Dielectric and X-ray Photoelectron Spectroscopy Studies on Nanocrystalline Ba(Zn _{1/3} Ta _{2/3})O ₃ Thin Films Deposited by Pulsed Laser Deposition,	Proceedings of the National Academy of Sciences, India Section A: Physical Sciences	84 (3)	457	2014
Rahul Das, S. Sarma, B. Deka, A. Perumal and A. Srinivasan	Variations in structural and magnetic phase transitions of Ni-Mn-In-Si alloy with change in Ni/Mn ratio	Physics Express	4	7	2014
P. Saravanana, Jen-Hwa Hsu, A. Perumal, AnabilGayen, G.L.N. Reddy, Sanjiv Kumar and S.V. Kamat	Study on the depth profile analysis of Fe/Co intermixing in [SmCo ₅ /Fe] ₁₁ magnetic multilayers	Physica B	448	1	2014
Thatikonda Santhosh Kumar, Pallabi Gogoi, Alagarsamy Perumal, Pramod Sharma and Dobbidi Pamu	Effect of Cobalt Doping on the Structural, Microstructure and Microwave Dielectric Properties of MgTiO ₃ Ceramics Prepared by Semi Alkoxide Precursor Method	Journal of the American Ceramic Society	97	1054	2014
Shyni P. C and A. Perumal	Thermomagnetic properties of nanocrystalline Fe-Si alloys with high Si content	Physica B	448	60	2014
Bhagaban Kisan and A. Perumal	Room temperature ferromagnetism in finite sized ZnO nanoparticles	Physica B	448	115	2014
A. Gayen, B. Biswas, A.K. Singh, P. Saravanan and A. Perumal	Magnetic Properties of FePt based Nanocomposite Thin Films Grown on Low Cost Substrates	Physics Procedia	54	23	2014
Santhosh Kumar Thatikonda, PallabiGogoi, BhagbanKisan, Alagarsamy Perumal and Pamu Dobbidi	Magnetic properties of Co doped MgTiO ₃ ceramics	Physica B	448	330	2014
R. Das, Perumal Alagarsamy and A. Srinivasan	Critical behavior and magnetic entropy change at magnetic phase transitions in Ni ₅₀ Mn ₃₅ In ₁₄ Si ₀₁ ferromagnetic shape memory alloy	Europhysics Letter	108	66004	2014
Rahul Das, A. Perumal and A. Srinivasan	Estimation of entropy change at the first order martensitic transition in Ni-Mn-X based ferromagnetic shape memory alloys	Physica B	448	327	2014

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Bhagaban Kisan, P. Saravanan, Samar Layek, H. C. Verma, David Hesp, Vinod Dhanak, Satheesh Krishnamurthy and A. Perumal	Effect of annealing on the magnetic properties of ball milled NiO powders	Journal of Magnetism and Magnetic Materials	384	296	2015
D. Mishra, A. Srinivasan and A. Perumal	Magnetic properties of mechanically alloyed amorphous Fe-(Mn)-Zr-B powders	ScienceJet	4	110	2015
P. C. Shyni and Perumal Alagarsamy	Structural and magnetic properties of Al and Cr substituted nanocrystalline Fe ₈₀ Si ₁₅ Co ₅ alloy powders	ScienceJet	4	146	2015
Bhagaban Kisan, P. Ravikumar, A. Das, A. Srinivasan and A. Perumal	Structural, vibrational, optical and magnetic properties of NiO nanoparticles	ScienceJet	4	160	2015
S. Moretti, S. Munir, and P. Poulose	125 GeV Higgs Boson signal within the complex NMSSM	Phys. Rev. D	89, 015022	17	2014
B. Ananthanarayan, Sumit K. Garg, C.S. Kim, Jayita Lahiri and P. Poulose	Top Yukawa coupling measurement with indefinite CP Higgs in $e^+e^- \rightarrow e^+e^- \gamma \gamma \rightarrow e^+e^- \gamma \gamma \rightarrow e^+e^- \gamma \gamma$	Phys. Rev. D	90, 014016	16	
Satendra Kumar, P. Poulose and Shibananda Sahoo	Study of Higgs-gauge boson anomalous couplings through $e^+e^- \rightarrow e^+e^- W^+W^-$ at ILC	Accepted for publication in Phys. Rev. D	-	-	2015
Tribedi Bora and S. Ravi	Sign reversal of magnetization and tunable exchange bias field in NdCr _{1-x} Fe _x O ₃ ($x = 0.05 - 0.2$)	Journal of Magnetism and Magnetic Materials	386	85-91	2015
Junmoni Barman, Tribedi Bora and S. Ravi	Study of exchange bias and training effect in NiCr ₂ O ₄	Journal of Magnetism and Magnetic Materials	385	93-98	2015
T. R. Gopalarao, S. Ravi and D. Pamu	Effect of post annealing process on electrical and magnetic properties of Nd _{0.7} Sr _{0.3} MnO ₃ thin films	Journal of Superconductivity and Novel magnetism	28	1571-1576	2015
Junmoni Barman and S. Ravi	Study of exchange bias behavior in Ni(Cr _{1-x} Fe _x) ₂ O ₄	Solid State Communications	201	59-63	2015
Tribedi Bora and S. Ravi	Sign reversal of magnetization and ferromagnetism in NdCr _{1-x} Mn _x O ₃ ($x = 0 - 0.50$)	Journal of Superconductivity and Novel magnetism	28	869-872	2015
Tribedi Bora and S. Ravi	Bipolar switching of magnetization and tunable exchange bias in NdCr _{1-x} Mn _x O ₃ ($x = 0.0 - 0.30$)	Journal of Applied Physics	116	063901 (6)	2014
R. Padam, S. Ravi, S. Ramakrishnan, A. K. Grover and D. Pal	Exchange bias in non-collinear spin-spiral system Co(Cr _{1-x} Cox) ₂ O ₄ ($x = 0.0 - 0.1$)	Journal of Magnetism and Magnetic Materials	371	144-148	2014
Bipul Deka, S. Ravi, A. Perumal and D. Pamu	Ferromagnetism and ferroelectricity in Fe doped BaTiO ₃	Physica B: Condensed Matter	448	204-206	2014

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R. Padam, S.Ravi and D.Pal	Entanglement of lock-in transition and exchange bias in $\text{Co}(\text{Cr}_{0.9}\text{Co}_{0.1})_2\text{O}_4$	Physica B: Condensed Matter	448	191-193	2014
T. R. Gopalarao, Tribedi Bora, S. Ravi and D. Pamu	Structural, optical and magnetic properties of $\text{Nd}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films	Physics Procedia	54	70- 74	2014
Tribedi Bora and S. Ravi	Effect of Ce doping on the magnetic properties of LaCrO_3	Physica B: Condense Matter	448	233-236	2014
Himangsu Bhaumik, J. A. Ahmed and S. B. santra	Crossover from rotational to stochastic sandpile universality in the random rotational sandpile model	Phys Rev E	90	62136	2014
Amarendra K. Sarma	Modulation instability in nonlinear complex parity-time (PT) symmetric periodic structures	Journal of Optical Society of America B (JOSA-B)	31	1861	2014
Amarendra K. Sarma, M-A. Miri, Z. H. Musslimani, and D. N. Christodoulides	Continuous and discrete Schrödinger systems with parity-time-symmetric nonlinearities	Physical Review E	89, 052918	-	2014
Subhadeep Chakraborty and Amarendra K. Sarma	Optical trap potential control in N-type four level atoms by femtosecond Gaussian pulses	Journal of Optical Society of America B	32	270	2015
Kanchan K. De, Amit Goyal, C. N. Kumar and Amarendra K. Sarma	Few-cycle optical solitary waves in cascaded-quadratic-cubic-quintic nonlinear media	Communications in Nonlinear Science and Numerical Simulation	20	629	2015
Poulami Ghosh and A. K. Sharma	Effect of substrate temperature on the growth of pulsed-laser deposited ZnO nanostructures	Applied Physics A	116 (4)	1877	2014
Poulami Ghosh and A. K. Sharma	Growth and optical characterization of diamond-shaped zinc oxide nanostructures by pulsed laser deposition	Applied Physics A	115 (1)	235	2014
Poulami Ghosh and A. K. Sharma	Growth and characterization of ZnO nanorods, nanowires and nanobelts on ZnO seed layer by pulsed layer deposition	Advanced Science, Engineering & Medicine	6 (4)	393	2014
Biswajit Karmakar and Arunansu Sil	Nonzero ν_{I} and leptogenesis in a type-I seesaw model with A_4 symmetry	Phys. Rev. D	91, 013004	-	2015
A. El-Zant, Shaaban Khalil and Arunansu Sil	Warm dark matter in a $B-L$ inverse seesaw scenario	Phys. Rev. D	91, 035030	-	2015
Arnab Kumar Das and Ananthkrishanan Srinivasan	Ferromagnetic behaviour in electrospun ZnO nanofibers	Physica B	448	112	2014
Nisha Shankhwar, G.P. Kothiyal and A. Srinivasan	Understanding the magnetic behaviour of heat treated $\text{CaO-P}_2\text{O}_5\text{-Na}_2\text{O-Fe}_2\text{O}_3\text{-SiO}_2$ bioactive glass using electron paramagnetic resonance studies	Physica B	448	132	2014

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Bhargab Deka, Dibyashree Chakraborti and Ananthkrishnan Srinivasan	Magnetic properties of Co ₂ Fe(Ga _{1-x} Si _x) alloys	Physica B	448	173	2014
N. Aomoa, T. Sarmah, A. Sharma, U. Deshpande, V. Sathe, A. Baneerjee, T. Shripathi, V. R. Reddy, N. P. Lalla, A. Gupta, R. Gupta, D. N. Srivastava, R. K. Bordoloi, S. Sarma, A. Srinivasan and M. Kakati	Plasma assisted synthesis of carbon encapsulated magnetic nanoparticles with controlled sizes correlated to smooth variation of magnetic properties	Carbon	84	24	2015
D. C. Joshi, S. Thota, S. Nayak, D. D. Harish, P. Mahesh, A. Kumar, D. Pamu and Md. Qureshi	The dielectric behavior of Zn _{1-x} Ni _x O/NiO two-phase composites	Journal of Physics D: Applied Physics	47	435305	2014
S. Thota, K. Patyal, S. Nayak, Ch. Simon, J. Kumar and W. Prellier	The ac-magnetic susceptibility and dielectric response of complex spin-ordering process in Mn ₃ O ₄	Journal of Applied Physics	116	103906	2014
M. Peddigari, S. Thota, D. Pamu	Dielectric and ac-conductivity studies of Dy ₂ O ₃ doped KNaNbO ₃ ceramics	AIP Advances	4 (8)	87113	2014
A. Kumar, S. Thota, D. Deva and J. Kumar	Ion induced secondary electron emission, Optical and hydration resistance behavior of MgO, Mg-Mo-O and Mg-Ce-O thin films	Thin Solid Films	556	260	2014
T. S. Kumar, P. Gogoi, S. Thota, D. Pamu,	Structural and Dielectric studies of Co doped MgTiO ₃ thin-films fabricated by RF magnetron sputtering	AIP Advances	4	67142	2014
S. Thota, V. Narang, S. Nayak, S. Sambasivam, B. C. Choi, T. Sarkar, M. S. Andersson, R. Mathieu and M. S. Seehra	On the nature of magnetic state in the spinel Co ₂ SnO ₄	Journal of Physics.: Condensed Matter	27	166001	2015
Vipin Kumar, Enamullah, Upendra Kumar, Girish S. Setlur	Band structure effects on the nonlinear optical response of bilayer graphene	The European Physical Journal B	87	1	2014
Enamullah, Vipin Kumar, Upendra Kumar, Girish S. Setlur	Quantum Rabi oscillations in graphene	JOSA B	31	484	2014

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Upendra Kumar, Vipin Kumar, Enamullah, Girish S. Setlur	Band-anisotropy induced Bloch–Siegert shift in graphene	JOSA B	31	3042	2014
Enamullah, Vipin Kumar, Upendra Kumar, Girish S. Setlur	Strain Effect on the Nonlinear Electromagnetic Response of 2D Carbon Based Material	Advanced Science Letters	20	1459	2014
Vipin Kumar, Enamullah, Upendra Kumar, Girish S. Setlur	Coherent nonlinear electromagnetic response in twisted bilayer and few-layer graphene	Pramana – Journal of Physics	83	597	2014
Enamullah, Vipin Kumar, Upendra Kumar, Girish S. Setlur	A theoretical study of pump-probe experiment in single-layer, bilayer and multi-layer graphene	Pramana – Journal of Physics	82	1085	2014
Subhaditya Bhattacharya, Shreyashi Chakdar, Kirtiman Ghosh, S.Nandi	Non-universal SUGRA at LHC: Prospects and Discovery Potential	Phys. Rev. D	89	015004	2014
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Subhaditya Bhattacharya, Blazenka Melic, Jose Wudka	Pionic Dark matter	JHEP	1402	115	2014

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Ramakrishna Madaka, Asha Yadav, Venkanna Kanneboina and Pratima Agarwal	Electrical and structural properties of a-Si:H on flexible substrates	The Annual Chemical Engineering Symposium, Reflux 2015, IIT Guwahati, Guwahati, India	27-29th Mar, 2015	56
Mukesh Singh, Shailendra Kumar and Pratima Agarwal	Compositional and structural changes in reduce graphene oxide films using XPS and UV-PES (Invited Paper)	59th DAE, Solid State Physics Symposium, VIT University, Vellore, India	16-20 Dec, 2014	42

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Ramakrishna Madaka, Asha Yadav, Venkanna Kanneboina and Pratima Agarwal	Comparison of electrical conductivity of a-Si:H films deposited on flexible polyimide and corning glass substrate	Transport properties in low dimensional Systems: Experiment and Simulation, TransLES 2014, IASST, Guwahati, India	11-13 Dec, 2014	102
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S. Bhattacharya	Prospects of using temperature accelerated schemes for simulations of solvated biomolecular systems	7th Indo-German Frontiers of Engineering Symposium 2015	19-22 Feb, 2015	Vol 1, 64
P. K. Giri, Gone Rajender and Ravi K. Biroju	Tunable Photoluminescence from Functionalized Graphene Quantum Dots and Graphene- ZnO Nanowires Hybrid	International Conference on Nanoscience and Nanotechnology	2-4 Feb, 2015	-
Ramesh Ghosh and P. K. Giri	Effect of Rapid Thermal Annealing and Laser Heating on the Photoluminescence Properties of Si Nanocrystal Decorated on Si Nanowires	The first International Conference on Emerging Materials: Characterization & Application (EMCA-2014)	4-6 Dec, 2014	

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K. Md. Obaidullah and P. K. Giri	Growth dynamics of SnCl ₂ Pc thin-films deposited on a organic CuPc layer	The first International Conference on Emerging Materials: Characterization & Application (EMCA-2014)	4-6 Dec, 2014	
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Gone Rajender, Batakushna Santara and P. K. Giri	Control of defects and defect mediated room temperature ferromagnetism in undoped TiO ₂ nanoparticles grown by a ball milling method	International Conference on Nanoscience and Engineering Applications (ICONSEA-14)	26-28 June, 2014	
Gone Rajender, Ravi K. Biroju and P. K. Giri	One step solvothermal synthesis of graphene quantum dots: structural and optical studies	National Conference on Nanotechnology and Renewable Energy (NCNRE-2014)	28-29 April, 2014	
Gyan Prakash Bharti and Alike Khare	Single photon assisted random lasing action in ZnO thin films deposited via Pulsed Laser Deposition Technique	4th International conference on Current Developments in Atomic, Molecular, Optical & Nano Physics with Applications (CDAMOP-2015), University of Delhi	11-14 Mar, 2015	150
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Sanasam Sunderlal Singh, Kh. Shantakumar, Alika Khare and S. N. Joshi	Fabrication of Micro-channels on Mild Steel using Laser induced Micro-machining	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014, IIT Guwahati, December 12-14, 2014	12-14 Dec 2014	878(1) - 878(5)
Prahlad K. Baruah, Kh. Shantakumar Singh, A. K. Sharma and Alika Khare	Effect of laser energy on nanoparticles produced by laser ablation of copper in distilled water	National Symposium on Plasma Science & Technology and the International Conference on Plasma & Nanotechnology (PLASMA 2014), Mahatma Gandhi University, Kottayam, Kerala	8-11 Dec 2014	166
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Eshita Mal and Alika Khare	Laser Induced Breakdown Spectroscopy of stainless steel sample	34		
Partha P. Dey and Alika Khare	Nd-YAG ns-pulsed laser induced Structural and compositional modification of Silicon surface: Formation of Photoluminescent a-Si:SiO ₂ nanostructures	National Conference on Nanotechnology and Renewable Energy (NC-NRE-14), New Delhi, India	28-29 April 2014	281-287
P. Munendhar and Sunil Khijwania	Fiber Bragg Grating Based Humidity Sensor With Wide Linear Dynamic Range	SPIE OPTICS & PHOTONICS, San Diego, USA	17 – 21 August 2014	-

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Date	Vol., Issue, Page No.
Sunil Khijwania (invited)	Optical fiber sensing techniques: Emerging applications in environmental and structural health monitoring	SPIE	2015	-
Gagan Kumar	Engineering terahertz propagation properties using plasmonic metamaterials on silicon	12th International Conference on Fiber Optics and Photonics 2014	13-16 Dec., 2014	-
K. Sau and P. Padma Kumar	Molecular dynamics investigation of Na ⁺ in Na ₂ Ni ₂ TeO ₆ Na ₂ M ₂ TeO ₆	58th DAE solid state physics symposium 2013; date: 17-21 Dec 2013. Patiala, Punjab, India	24/ 4/ 2014	AIP Conf. Proc.; 1591, 1361 (2014).
P. Mahesh and D. Pamu	Raman and Dielectric Studies on Lead free (K _{0.5} Na _{0.5}) NbO ₃ Piezoelectric Ceramics	International Conference on Materials Science and Technology (ICMST 2012)	10th to 14th June, 2012	73, 012141, 02/2015
C. Anil Kumar and D. Pamu	Dielectric and electrical properties of BaWO ₄ film capacitors deposited by RF magnetron sputtering	9th Asian Meeting on ferroelectricity Asian Meeting on Electroceramics (AMF-AMEC-2014)	26th-30th Oct, 2014	-
A. Perumal, A. K. Singh, S. Mallik and S. Bedanta,	Thickness and Spacer layer driven magnetic domains and magnetic properties in amorphous FeTaC thin films	International Conference on Magnetic Materials and Application (IC-MagMA-2014)	14. 09. 2014 – 16. 09. 2014	1, 23
B. Sethi, A. Perumal, A. Srinivasan and S. B. Santra	Magnetic phase transition in Iron rich Fe-Zr-B-Co alloy ribbons			1, 171
B. Kisan and A. Perumal	Room temperature ferromagnetism in NiO nanoparticles prepared by sol-gel method			1, 192
A. Gayen and A. Perumal	Thickness dependent magnetic properties of amorphous CoFeB thin films	International Conference on Magnetic Materials and Application (IC-MagMA-2014)		1, 224
B. Deka, S. Ravi and A. Perumal	Effect of Sm doping on the structural and magnetic properties of BiFeO ₃			1, 293
A. Perumal, A. K. Sinigh, A. Gayen and C. Das	Nature of interlayer coupling and magnetization reversal process in amorphous nanocrystalline multi-layer FeTaC thin films	Indo-Japan workshop on Magnetism at Nanoscale	10.01. 2015 – 12.01. 2015	1, IO-23
A. Perumal, A. K. Singh, P.C. Shyni, B. Kisan, A. Gayen and C. Das	Role of nanostructure on the materials' properties and applications	National Conference on New Approaches of Basic Sciences Towards the development of engineering and technology – 2015	27.02. 2015 – 28.02. 2015	1, 18

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Date	Vol., Issue, Page No.
Himangsu Bhaumik and S. B. Santra	Directed Sandpile on Scale-free Network	2nd Indian Statistical Physics Community Meeting at the International Centre for Theoretical Sciences, Bangalore, India	13.02. 2015-15.02. 2015	-
Bappaditya Roy and S. B. Santra	Random cluster growth with suppression: No evidence of Explosive percolation		-	
Sourav Chattopadhyay, Gopal Gorai and S. B. Santra	Dynamic Phase Transition In Diluted Ising Model	59th DAE SSPS 2014, VIT University, Vellore, Tamilnadu	16-20 Dec 2014	-
Samit Kumar Gupta and Amarendra K. Sarma	Periodic optical rogue waves in parity-time (PT) symmetric Bragg-grating structure	AIP Conference Proceedings		Vol. 1620, p. 452 (2014)
Subhadeep Chakraborty and Amarendra K. Sarma	Coherent population transfer and optical dipole force by chirped Gaussian femtosecond pulses in four level 87-Rb			Vol. 1620, p. 549 (2014)
Kh. Shantakumar Singh and A. K. Sharma	A 2D finite element model to simulate temperature field and ablation depth during laser ablation	2nd National Symposium On Nonlinear And Complex Phenomena 2015, Institute of Advanced Study in Science and Technology (IASST), Guwahati	26-28 Mar 2015	53
Kh. Shantakumar Singh and A. K. Sharma	Effect of uniform magnetic field on nanostructuring by laser ablation of copper at atmospheric pressure	4th International Conference on Current Developments in Atomic, Molecular & Optical Physics with Applications (CDAMOP), University of Delhi	11-14 Mar 2015	160
Rasmi Ranjan Behera, Mamilla Ravi Sankar, Indrajeet Kumar, A. K. Sharma, Alike Khare and J. Swaminathan	Experimental Study on Micro-machining of 304 Stainless Steel Under Water Using Pulsed Nd:YAG Laser Beam	5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014), IIT Guwahati	12-14 Dec 2014	380
Kh. Shantakumar Singh and A. K. Sharma	Effect of uniform transverse magnetic field on the lifetime of laser-produced copper plasma	29th National Symposium on Plasma Science & Technology and the International Conference on Plasma & Nanotechnology (PLASMA 2014), Mahatma Gandhi University, Kottayam, Kerala	8-11 Dec 2014	299
Kh. Shantakumar Singh, Alike Khare and A. K. Sharma	Spectroscopic study of laser-produced copper plasma in uniform magnetic field	Proc. National Laser Symposium, Sri Venkateswara University, Tirupati	3-6 Dec 2014	146
Nisha Shankhwar and A. Srinivasan	Sol-gel derived magnetic bioglass and bioglass ceramic for hyperthermic application	Proc. Intl. Conf. Asian Union of Magn. Soc. (IcAUMS-2014)	28 Oct. - 2 Nov. 2014	-

Name of Author/s	Title of Paper	Name of Conf./Wor./Sem./Sym.	Date	Vol., Issue, Page No.
Arnab Kumar Das and A. Srinivasan	Solvothermal synthesis of CaFe ₂ O ₄ nanoparticles	Proc. Intl. Conf. Emerging Mater: Charac. Appl. (EMCA-2014)	04-06 December 2014, Kolkata	
Nisha Shankhwar, R. K. Singh and A. Srinivasan	Preparation and characterization of silicate bioglass-ceramics containing zinc-ferrite			-
R. Modak, B. Deka, M. Manivel Raja and A. Srinivasan	Significant room temperature magneto-caloric effect in Ni-Mn-Sn thin films			-
A. Srinivasan	Heusler alloys as spintronic materials – Progress and challenges (Invited Talk)	9th Natl. Conf. Phys. Acad. North East	17-19 Dec 2014	-
R. Modak, B. Deka, A. K. Singh, A. Gayen, A. Perumal, M. Manivel Raja and A. Srinivasan	Structural and magnetic properties of Ni-Mn-Sn thin films	Proc. 59th DAE Solid State Physics Symp.	16-20 Dec 2014	-
A. Srinivasan	Development of nanocomposites for biomedical application	2nd Intl. Conf. Nanotech (ICNT 2015)	19-22 Feb. 2015	-
S. Nayak, D. C. Joshi and S. Thota	Micro-Raman and Electron Spin Resonance studies of Co _{3-x} Ti _x O ₄	2nd International Conference on Nanotechnology ICNT-2015 & Indo-USA joint symposium	Haldia (W.B.)	-
S. Thota, S. Nayak, A. Mallick, D. C. Joshi, S. Sambasivam and Md. Qureshi	On the growth mechanism and Electron Spin Resonance studies of cubic- phase ZrO ₂ nanostructures stabilized with Cu ²⁺	2nd International Conference on Nanotechnology ICNT-2015 & Indo-USA joint symposium		-
D. C. Joshi, D.D. Harish, D. Roy, S. Nayak, Md. Qureshi, R.L.N. Sai Prasad, T. Shiyani, D. Pamu and S. Thota	Growth mechanism and Electron-Spin-Resonance studies of Zn _{1-x} Ni _x O/NiO two-phase nanocomposite (will appear in IEEE Xplore Conference Proceedings)	2nd IEEE International Conference on Emergin Electronics ICEE-2014	3- 6 Dec 2014	-
S. Thota. K. Pisane, S. K. Singh, and M. S. Seehra	On the cubic phase stability and magnetic properties of Cu-doped ZrO ₂	Bulletin of American Physical Society, APS 3-7th March, 2014 meeting	Denver, Colorado (USA).	-
S. K. Singh, M. S. Seehra and S. Thota	Effect of Cu doping on the magnetism of MnCo _{2-x} Cu _x O ₄ cubic spinels			-

Book

Name of Author/s	Name of Book	Publisher	Volume, Issue	Page No.	ISBN	Year
A. Perumal Alagarsamy, S. Pandian and A. Srinivasan	Selected papers from International Conference on Magnetic Materials and Applications (MagMA-2013)	Physica B (Elsevier)	448	1-356	-	2014

Name of Author/s	Name of Book	Publisher	Volume, Issue	Page No.	ISBN	Year
A. Perumal Alagarsamy, S. Pandian and A. Srinivasan	International Conference on Magnetic Materials and Applications, MagMA-2013	Physics Procedia (Elsevier)	54	1-184	-	2014
Girish S. Setlur	Dynamics of Classical and Quantum Fields: An Introduction	CRC Press	-	388	9781466556287	2013
Girish S. Setlur (Co-contributor with Eric Mazur, Harvard University)	Principles & Practice of Physics, Global Edition	Pearson	-	2050	9781292078878	2015

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Prof. Pratima Agarwal	DAE Solid State Physics Symposium	VIT Vellore	16-20th Dec, 2014	National
Dr. B. R. Boruah	Photonics Asia	Beijing, China	October, 2014	International
Dr. Bipul Bhuyan	Belle & Belle 2 Analysis Workshop	IIT Madras	08-18th March, 2015	International
Dr. Bipul Bhuyan	6th Asian Forum for Accelerators and Detectors (AFAD 2015)	National Synchrotron Radiation Center, Taiwan	26-28th January, 2015	International
Dr. Bipul Bhuyan	DAE-DST Vision Meeting	BARC, India	24-25th August, 2015	National
Dr. Santabrata Das	Hard X-ray Astronomy: Astrosat and beyond	International Center, Goa	24-26th September, 2014	International
Dr. S. Bhattacharya	7th Indo-German Frontiers of Engineering Symposium 2015	Agra	19-22nd Feb, 2015	International
Dr. Tarak Nath Dey	ICTS School & Discussion Meeting on Frontiers in Light-Matter Interactions	Kolkata	08th-22nd December, 2014	International
Dr. Subhradip Ghosh	TRANSLES 2014	IASST Guwahati	December, 2014	International
Dr. Subhradip Ghosh	DST-SERB School on Density Functional Theory & beyond	MS University Baroda, Baroda	December, 2014	National
Dr. Subhradip Ghosh	CTCMP 2015	NISER, Bhubaneswar	February, 2015	International
Dr. Subhradip Ghosh	KKR HOC workshop 2014	LMU, Munich, Germany	October, 2014	International
Prof. P. K. Giri	3rd International Conference on Nanoscience & Nanotechnology (ICONN2015)	Chennai	4-6th Feb, 2015	International
Prof. P. K. Giri	International Conference on Emerging Materials: Characterization & Application (EMCA-2014)	Kolkata	4-6th Dec, 2014	International
Prof. Alika Khare	National Laser Symposium (NLS-23)	Sri Venkateshwara University Tirupati	03-06th Dec, 2015	National
Prof. Sunil Khijwania	International Conference in Optics and Photonics (ICOP – 15)	Kolkata	20-22nd February, 2015	International

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Prof. Sunil Khijwania	UKIERI workshop on Photonics for Imaging and Sensing	University of Calcutta	27th March, 2015	International
Dr. P. Poullose	Workshop on LHC and Darkmatter, 2015	IACS, Kolkata	24-28th Feb, 2015	International
Dr. P. K. Padmanabhan	National Conference on Materials for Energy Conservation and Storage.	VIT University, Chennai	19-21st March, 2015	National
Dr. P. K. Padmanabhan	Materials Research Society of Indonesia (MRS-Id Meeting).	Bali, Indonesia	26-28th Sept, 2014	International
Dr. P. K. Padmanabhan	National Workshop on Molecular Modelling and Simulation of Sustainable Polymers	Chem. Engg., IIT Guwahati	4-8th Aug, 2014	National
Dr. D. Pamu	International Conference on Nano Science & Engineering Applications (ICONSEA-2014)	JNTU Hyderabad, Andhra Pradesh	26-28th June, 2014	International
Dr. D. Pamu	9th Asian Meeting on ferroelectricity Asian Meeting on Electroceramics (AMF-AMEC-2014)	Shanghai, China	26-30th Oct, 2014	International
Prof. A. Perumal	International Conference on Magnetic Materials and Application (IC-Mag-MA-2014)	Pondicherry	14-16th Sept, 2014	International
Prof. A. Perumal	Indo-Japan workshop on Magnetism at Nanoscale	Bhubaneswar	10-12th Jan, 2015	International
Prof. A. Perumal	National Conference on New Approaches of Basic Sciences Towards the development of engineering and technology – 2015	Guwahati	27-28th Feb, 2015	National
Prof. S. Ravi	4th International Conference on Superconductivity and Magnetism	Antalya, Turkey	27th April-2nd May, 2014	International
Prof. A. Srinivasan	9th Natl. Conf. Phys. Acad. North East	NERIST, Nirjuli	17-19th December 2014	National
Prof. A. Srinivasan	Intl. Conf. Asian Union of Magn. Soc. (IcAUMS-2014)	Haikou	28th Oct.-2nd Nov, 2014	International
Prof. A. Srinivasan	32nd Intl. Conf. Nanotech (ICNT 2015)	Haldia Inst. Tech, Haldia	19-22nd Feb, 2015	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Pratima Agarwal	Research activities on Thin film semiconductors and solar cells at IIT Guwahati	Gifu University, Japan	Gifu University	3rd Dec, 2014
Prof. Pratima Agarwal	Recent Trends in Renewable Energy Systems (TEQIP-STC on Recent Trends in Renewable Systems)	Center for Energy, IIT Guwahati	IIT Guwahati	23rd Jan, 2015
Prof. Pratima Agarwal	Solar Cells : Fundamentals (QIP Short Term Course on Recent Advances in Energy Research)	Department of Chemical Engineering, IIT Guwahati	IIT Guwahati	26th Mar, 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Pratima Agarwal	Solar cell technologies: Materials & Designs (QIP Short Term Course on Recent Advances in Energy Research)	Department of Chemical Engineering, IIT Guwahati	IIT Guwahati	26th Mar 2015
Prof. Saurabh Basu	Disordered Transport in nanostructures	IASST	Guwahati	12th Dec, 2014
Prof. Saurabh Basu	Magnetism and Magnetic Materials: Fundamentals and applications	College Teacher's conference organized by NITTTR, Kolkata	Bamunimaidan, Guwahati	10th March, 2015
Dr. B. R. Boruah	Dynamic control of the amplitude and phase of laser beam in the laboratory	Invited Talk under DBT Star College Scheme organized by Mangaldai College	Mangaldai College	March, 2015
Dr. B. R. Boruah	Fourier Transform in optics	Workshop on Computational Aspects of Research in Physics, organized by Department of Physics, Tezpur University	Tezpur University	November, 2014
Dr. Bipul Bhuyan	CP-Odd Light Higgs Searched at B-factories	IIT Madras	Chennai, India	12th March 2015
Dr. Bipul Bhuyan	Distributed Computing and Network Bandwidth for HEP experiments: Indian Perspective	National Synchrotron Radiation Center, Taiwan	Hsinchu, Taiwan	26 January, 2015
Dr. Bipul Bhuyan	Search for the decay $B_s \rightarrow \eta\eta$ at $\Upsilon(5S)$ resonance	XXI DAE-BRNS High Energy Physics Symposium	IIT Guwahati	08-12th December, 2014
Dr. Bipul Bhuyan	Cosmic Muons Induced Electromagnetic Shower in Nova Detector			
Dr. Bipul Bhuyan	Exclusive $b \rightarrow s$ gamma decays	4th symposium on prospects in the physics of discrete symmetries (DISCRETE 2014)	King's College, London	02-06th December, 2014
Dr. Bipul Bhuyan	B-Physics at Belle and Belle 2 experiments at KEK, Japan	BIT, Mesra	Ranchi, India	1st May, 2014
Dr. Sayan Chakrabarti	Black hole bombs and super radiance	Workshop on : "Cosmology at the interface", at Saha Institute of Nuclear Physics	Kolkata, India	28th-30th January, 2015
Dr. Santabrata Das	Stars and stellar evolution	Cotton College State University	Guwahati	16-21st July, 2014
Dr. Santabrata Das	Accretion on to black holes	Gauhati University		22nd August, 2014
Dr. Santabrata Das	Two temperature shocked accretion flow around black holes	International center, Goa	Goa	September 24th, 2014
Dr. Santabrata Das	Astrophysical Flow around Compact Objects	IASST	Guwahati	1st Nov, 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Tarak Nath Dey	Coherent Population Trapping, Electromagnetically Induced Transparency and Electromagnetically Induced Absorption	ICTS School & Discussion Meeting on Frontiers in Light-Matter Interactions, Indian Association for the Cultivation of Science, Kolkata	Kolkata	08th-22nd December 2014
Dr. Tarak Nath Dey	Steering, Splitting and Cloning of Optical Beam in a Coherently Driven Raman Gain System	National Institute of Science and Education Research Bhubaneswar, Odisha	Bhubaneswar	2nd March, 2015
Dr. Subhradip Ghosh	Density Functional Theory-II	MS University, Baroda	Baroda	6th Dec, 2014
Dr. Subhradip Ghosh	First-principles based computation of phonon spectra in disordered alloys	IASST, Guwahati	Guwahati	10th Dec, 2014
Dr. Subhradip Ghosh	Phonon spectra of chemically and magnetically disordered alloys by Green's function method	NISER, Bhubaneswar	Bhubaneswar	20th February, 2015
Prof. Pravat K. Giri	Site Selective Physical Functionalization of Graphene and Its Application in the Fabrication of Graphene-ZnO Nanowire Based Efficient Photodetectors	Materials Research Society of India (MRSI), Kalpakkam chapter	Indira Gandhi Center for Atomic Research (IGCAR), Kalpakkam, India	5th Feb, 2015
Prof. Pravat K. Giri	Raman Spectroscopy & Raman Imaging	TEQIP Course on Sophisticated Instruments in Interdisciplinary Research	IIT Guwahati	10th Nov, 2014
Prof. Pravat K. Giri	Raman Spectroscopy & Raman Imaging for Biomedical Research	TEQIP Micromanufacturing for Biomedical Applications		26th Feb, 2014
Prof. Alika Khare	Non Linear Optics	2nd National Symposium on Nonlinear & Complex Phenomena (NSNCP-2015)	IASST, Guwahati	26-28th Mar, 2015.
Prof. Alika Khare	Optical properties of material & the Advancement of Optical Technology	Short Term Training Programme on "Physics of Material"	Guwahati Extension centre of NITTR, Kolkata	09-13th Mar, 2015.
Prof. Alika Khare	Laser Spectroscopy: A versatile tool for identification of atomic and molecular system	New Approaches of Basic Sciences towards the development of Engineering and Technology – 2015 (NABSET-2015)	Assam Don Bosco University, Guwahati,	27-28th Feb., 2015
Prof. Alika Khare	Pulsed Laser Deposition: A versatile Technique for Fabrication of Thin Films for Different Applications	29th National conference on Plasma Science & Technology Plasma(2014)	M G University Kottayam	8-11th Dec., 2015.
Prof. Alika Khare	Thin films via PLD technique for Photonics applications	Recent trends in Optics and Quantum Optics (IOQO-2014)	IIT Patna	7-8th Nov., 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Alika Khare	Introduction to Laser	QIP, STC on Micromachining Manufacturing Technology	Department of Mechanical Engineering, IIT Guwahati	23rd March, 2015
Prof. Sunil Khijwania	Optical fiber sensing techniques: Emerging applications in environmental and structural health monitoring	International Conference in Optics and Photonics (ICOP- 15)	Kolkata	20-22nd February, 2015
Prof. Sunil Khijwania	Development of Optical Fiber Sensor for Structural Health Monitoring	UKIERI workshop on Photonics for Imaging and Sensing	University of Calcutta	27th March, 2015
Prof. Sunil Khijwania	Fiber Optics to sensing: Review of Technological Progress towards Emerging Applications	QIP Short Course on RF and Photonics	IIT Guwahati	24th February, 2015
Prof. Sunil Khijwania	Fiber Optics: Growth, Impact and Revolution	UKIERI workshop on Photonics for Imaging and Sensing	University of Calcutta	26th March, 2015
Dr. Gagan Kumar	Terahertz plasmonic metamaterials	IIT Kanpur	Kanpur	10th April, 2015
Dr. Gagan Kumar	Terahertz Science and Applications	Kurukshetra University, Kurukshetra	Department of Physics	10th Feb., 2015
Dr. D. Pamu	Advanced Technology Oriented Materials (ATOM-2014)	Department of Physics, Government College	Rajahmundry, Andhra Pradesh	8-9th December 2014
Prof. S. Ravi	Magnetic Properties of Nanocrystalline Perovskite Manganites and Diluted Magnetic Semiconductors	International conference on Nano Science and Engineering Applications' organized by Jawaharlal Nehru Technological University, Hyderabad.	Hyderabad	26-28th June, 2014
Dr. Amarendra Kumar Sarma	Parity-time symmetry in nonlinear optics settings [National Symposium on Nonlinear & Complex phenomena]	Institute of Advanced Study in Science and Technology, Guwahati-35	Guwahati	26th March, 2015
Dr. Amarendra Kumar Sarma	Matrix methods in Physics (Four lectures) [Refresher course for college and University teachers]	Academic Staff college, Gauhati University		23rd February, 2015
Dr. Ashwini Kumar Sharma	Advances in Lasers (QIP STC on RF & Photonics: Fundamentals and Advances)	Department of Electronics & Electrical Engineering, IIT Guwahati	IIT Guwahati	26th Feb, 2015
Dr. Ashwini Kumar Sharma	Lasers in Biomedical Applications (QIP STC on Micromanufacturing for Biomedical Applications)	Department of Mechanical Engineering, IIT Guwahati		25th Feb, 2015
Dr. Ashwini Kumar Sharma	Pulsed laser ablation – a versatile technique for thin film deposition (QIP STC on Smart Materials and Their Applications in Nanotechnology (SMATAN-2014)	Department of Physics, IIT Guwahati	IIT Guwahati	26th Dec, 2014
Dr. Ashwini Kumar Sharma	Basics of Laser (QIP short term course on Micromanufacturing)	Department of Mechanical Engineering, IIT Guwahati	IIT Guwahati	24th Dec. 2014

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Ashwini Kumar Sharma	Basic laser theory & applications in manufacturing (TE-QIP short term course on Advanced Machining & Finishing Processes)	Department of Mechanical Engineering, IIT Guwahati	IIT Guwahati	16th Dec, 2014
Dr. Subhash Thota	Physics of Electronic Devices: Concepts and Applications	MHRD-National Institute of Technical Teachers Training and Research	NITTR - Kolkata Extension center at Guwahati	09th March, 2015
Dr. Subhash Thota	Spin caloritronics for on-chip cooling applications	Department of Mechanical Engineering	Vignan University, Guntur	28th Jan, 2015
Dr. Subhash Thota	Dielectric Elastomers: Soft Active Material For Soft Machines.	QIP Short term Course Smart Materials and Their Applications, SMATAN-2014	Depart of Physics-IIT Guwahati, India	26th Dec, 2014
Dr. Subhash Thota	Importance of Wide-bandgap Semiconductor Nanostructures for Emerging Electronic Devices	Department of Electrical Engineering, LAQSHYA Institute of Technology & Sciences	LAQSHYA Institute of Technology & Sciences, Khammam	27th Jan, 2015
Dr. Subhash Thota	The Impact of Nanotechnology on Modern day Electronic Devices	Department of Electrical and Electronics Engineering	Sree Kavita Engineering College, Karepalli	27th Jan, 2015

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date	Remarks
Prof. K. Sridhar	TIFR, Mumbai	Exploring the Warped Bulk with Kaluza-Klein gluons	9th Feb, 2015	TPSC invited lecture
Prof. Anand Kulkarni	Michigan Technological University, USA	Optical Absorption in Nanostructures for Photovoltaic Applications	26th Feb, 2015	Invited Lecture
Dr. Samir Mandal	IIST, Trivandrum	Radiative Properties of Accretion Disc around black holes	20th May 2014	-
Dr. Subhadip Mitra	Postdoctoral Fellow, Laboratoire de Physique Théorique d'Orsay, France	Vector-like Quarks in the Warped-space Models	2nd May, 2014	-
Dr. Sugata Mukherjee	S. N. Bose National Centre for Basic Sciences, Kolkata	First-principles calculations of electronic properties of Graphene and related two-dimensional Nanomaterials	15th Oct. 2014	-
Dr. S. B. Roy	Head, Materials & Advanced Accelerator Sciences Division Raja Ramanna Centre for Advanced Technology Indore	Glass, Spin-glass and Magnetic-glass	21st Oct, 2014	-
Prof. L. N. Hazra	Calcutta University	Super-resolution over a restricted field of view	25th Nov, 2014	-

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Sl. No.	Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
1.	Dr. Bipul Bhuyan	XXI DAE-BRNS High Energy Physics Symposium	DAE-BRNS	08-12th December, 2015	National	320

2.	Prof. A. Perumal and Dr. D. Pamu	QIP-STC Course on Smart Materials and Their Applications in Nanotechnology (SMATAN-2014)	Centre for Educational Technology	23.12.2014 – 27.12.2014	National	32
3.	Dr. Arunansu Sil (Jt. Convener)	XXI DAE-BRNS High Energy Physics Symposium	DAE-BRNS	08-12th December, 2015	National	320

PATENTS

Sl. No.	Name of Faculty and co researcher	Name	Date Applied/Granted	Application No.
1.	B. R. Boruah and Biswajit Pathak	A Method and Device for Zonal Wavefront Sensing by Beam Splitting	Dec 26, 2014	3935/DEL/2014 d
2.	B. R. Boruah and Biswajit Pathak	A Method and Device for Zonal Wavefront Sensing Via Sequential Spatially Shifted Grating Array Patterns	Dec 18, 2014	3752/DEL/2014

AWARDS AND HONOURS

Prof. P. K. Giri got selected for Nanoscience Research Leader Award 2015, Cognizure Corporation.

Prof. P. K. Giri is a Member, Editorial Board, Journal of Nanomaterials, Hindawi Publishing Corporation, USA.

Prof. P. K. Giri is a Senior Editor, Journal of Nanoscience Letters, Cognizure - Publishing Division, USA.

Prof. P. K. Giri is a Regional Editor, American Journal of Nanotechnology, Science Publication, Australia.

STUDENTS' ACHIEVEMENTS

Mr. Samit Kumar Gupta, working under the supervision of Dr. Amarendra Kumar Sarma got the Best OSA (Optical Society of America) Poster Prize Award in International Conference on Optics and Photonics held at University of Calcutta during February 20-22, 2015. The prize included a cash prize of Rs. 30,000/ also.

Dr. T. Santhosh Kumar got best poster presentation certificate in International Conference on Nano Science & Engineering Applications (ICONSEA-2014).

SPECIAL MENTION

Prof. Saurabh Basu completed NPTEL course on Mathematical Physics.

Dr. Bipul Bhuyan, Associate professor in the department visited Fermi National Accelerator Laboratory, USA during June 2 - July 14, 2014 to work on the Nova and the LBNE experiments.

Dr. Gagan Kumar, Assistant Professor in the department got selected for the prestigious award of Ramanujan Fellowship.

Dr. Subhaditya Bhattacharya received DST, INSPIRE research grant, for amount 35 lakhs, and of duration 2014-2019

FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Pratima Agarwal	IIT Kanpur	Professor	Thin films and heterojunction solar cells, nanocrystalline semiconductors, nanomaterials, optoelectronic properties.
2.	Saurabh Basu (Head of the Department)	IIT Kanpur	Professor	Condensed Matter Physics (Theory); High T C superconductors, Optical lattices, Transport in Magnetic semiconductors.
3.	Bosanta R Boruah	Imperial College London	Associate Professor	Lasers and Optics (Experiment & Theory); Programmable Diffractive Optics, Confocal Microscopy, Phase Stepping Interferometry, Vectorial Diffraction Theory.
4.	Bipul Bhuyan	Delhi University	Associate Professor	High Energy Physics (Experiment); CP violation, Rare K and B meson decays, ILC R & D.
5.	Swati Bhattacharya	MPIP, Mainz, Germany	Assistant Professor	Soft Condensed Matter Theory and Simulation, Computational Biophysics, Bio-Nano Interface

Sl. No.	Name	PhD	Designation	Areas of Interest
6.	Subhaditya Bhattacharya	HRI, Allahabad	Assistant Professor	High Energy Physics (Theory), Phenomenology of Standard Model and Beyond, Supersymmetry, Dark Matter, LHC.
7.	Sayan Chakrabarti	SINP, Kolkata	Assistant Professor	: High Energy Physics (Theory), General relativity, Black hole perturbations, Gravitational waves, Cosmology.
8.	Santabrata Das	SNBNCBS, Kolkata	Assistant Professor	Astrophysics (Theory); Astrophysical flows around compact objects, Ultra high energy cosmic rays.
9.	Tarak Nath Dey	PRL, Ahmedabad	Associate Professor	Quantum Optics (Theory); Coherent control of pulse propagation, Nonlinear optics, Optical solitons, Negative index media, Bose-Einstein condensates.
10.	Subhradip Ghosh	SNBNCBS, Kolkata	Associate Professor	Condensed Matter Physics (Theory); Electronic Structure theory, Ordering and Phase stability of disordered alloys, Vibrational properties of metallic alloys.
11.	Pravat Kumar Giri	IIT Kanpur	Professor	Condensed Matter Physics (Experimental); Semiconductor nanostructures, Ion-solid interactions, Optoelectronic materials & devices, Nanotechnology.
12.	Charudatt Y Kadolkar	IIT Bombay	Associate Professor	Condensed Matter Physics (Theory); Magnetism, Defects in Ionic Materials, Group Theoretical approaches to Molecular Problems.
13.	Alika Khare	IIT Kanpur	Professor	Laser and Photonics (Experiment and Theory)
14.	Sunil K. Khijwania	IIT Delhi	Professor	Fiber Optics (Experiment & Theory); Fiber & Integrated Optics, Photonic Crystal Fiber and Applications, Surface Plasmon Resonance based Sensors, Fiber Bragg Gratings and based Devices, Fiber Optic Sensor, Bio/Nano-Photonics.
15.	Gagan Kumar	IIT, Delhi	Assistant Professor	Terahertz Plasmonics and metamaterials, Guided Wave Devices, Ultrafast Spectroscopy.
16.	Debaprasad Maity	IACS, Kolkata	Assistant Professor	High Energy (Theory); Cosmology, Ads/CMT.
17.	Uday Narayan Maiti (Joined on 16 December 2014)	Jadavpur University, Kolkata	Assistant Professor	Graphene, carbon nanotube, Inorganic nanostructures, Energy storage and conversion, Nanomaterials based electronic devices.
18.	Bibhas Ranjan Majhi (Joined on 11 December 2014)	SNBNCBS, Kolkata	Assistant Professor	High Energy Physics (Theory); General theory of relativity, Field theory on curved spacetimes, Black holes, Cosmology, Thermodynamical aspects of gravity, Fluid-gravity correspondence.
19.	Malay Kumar Nandy	IIT Kanpur	Associate Professor	Theoretical Physics; Statistical Physics, Condensed Matter Physics, Turbulence Field Theory, Plasma Physics, Quantum Computation.
20.	Soumitra Nandi	Univ. of Calcutta	Assistant Professor	High Energy Physics (Theory); Quark and Lepton Flavour Physics, Flavour Symmetries, CP violation, precision calculations in the SM, Special interest in QCD, Heavy Quark Effective Theory and Soft Collinear Effective Theory.
21.	Padma Kumar Padmanabhan	IISc, Bangalore	Associate Professor	Condensed matter (Theory); Atomistic Modeling and Simulation of Condensed States of Matter.
22.	Dilip Pal	TIFR, Mumbai	Associate Professor	Low Temperature Physics and Material Science (Experimental); Strongly Correlated Electron Systems, Vortex states in superconductors, Superconductivity and Magnetism.
23.	D. Pamu	Univ. of Hyderabad	Associate Professor	Condensed Matter Physics; High-k and low loss materials, Ferroelectrics Ceramics, Oxide thin films Nanomaterials.

Sl. No.	Name	PhD	Designation	Areas of Interest
24.	Perumal Alagarsamy	IIT Kharagpur	Professor	Condensed Matter Physics (Experimental); Magnetism, Nanostructured Materials, Nanocrystalline Materials, Magnetic Thin Films, Metallic Glasses.
25.	Poulose Poulose	PRL, Ahmedabad	Associate Professor	Theoretical Physics; High energy physics phenomenology, CP violation, Mass Generation mechanism, Low energy Gravity.
26.	Udit Raha	University of Bonn, Germany	Assistant Professor	Quantum Chromodynamics and Nuclear Effective Field Theories.
27.	Seenipandian Ravi	Univ. of Hyderabad	Professor	Condensed Matter Physics (Experimental); Magnetism, Superconductivity, Low temperature Physics.
28.	Sitangshu Bikas Santra	Bose Institute, Kolkata	Professor	Condensed Matter Physics (Theory); Condensed Matter Physics, Statistical Physics.
29.	Amarendra Kumar Sarma	IIT Delhi	Associate Professor	Photonics (Theory) and Theoretical Physics; Solitons, Metamaterials and Plasmonics, Ultrafast optics, Nonlinear Fiber Optics, Nonlinear Optics.
30.	Ashwini Kumar Sharma	IIT Kanpur	Associate Professor	Laser ablation, characterization, deposition and applications of nanostructures
31.	Girish Sampath Setlur	Univ. of Illinois	Professor	Theoretical Physics; Optoelectronic properties of graphene, Nonchiral bosonization of fermions in one and higher dimensions.
32.	Arunansu Sil	Univ. of Calcutta	Assistant Professor	High Energy Physics & Cosmology (Theory); Phenomenology of Physics beyond the Standard Model, Supersymmetry and its breaking, Neutrino Physics, Matter-antimatter asymmetry of the Universe, Inflation.
33.	Ananthakrishnan Srinivasan	IISc, Bangalore	Professor	Condensed Matter Physics (Experimental); Glasses and Disordered Materials, Thin Films, Metallic Alloys, Nanophase materials, Shape Memory Alloys.
34.	Subhash Thota	IIT Kanpur	Assistant Professor	Material Science and Engineering; Magnetic Nanostructures, Oxide Heterostructures, superlattices, Magnetocaloric effects Semimagnetic semiconductors Bandgap Engineering.

CENTRE FOR ENERGY

YEAR OF ESTABLISHMENT OF THE CENTRE: 2004

ACADEMIC PROGRAMMES OFFERED:

Doctor of Philosophy (PhD)

NO. OF LABORATORIES WITH BRIEF INTRODUCTION:

There are eight (8) laboratories in the Centre. The facilities available in each laboratory is briefly provided below-

[i] Energy Efficiency Laboratory: Fuel testing facility (calorific value, viscosity, flash point, fire point, cloud & pour point, cetane index), proximate analysis facility, anemometer, pump testing setup, biomass gasification unit, flue gas analyzer, GC for biogas analysis, natural convection grain drier, fuel cell demonstration unit, fibre analysis system etc. A portion of the energy efficiency laboratory is based in the technology complex (TC) to house the noisy, rugged and robust facilities like biomass gasifier units, IC engine set up, pump testing set-up etc.

[ii] Bio-energy Laboratory: Micro propagation facility for energy and bio-fuel crops, autoradiogram development facility, genetic engineering facility, biotransformation and cloning

[iii] Solar Energy Laboratory: Demonstration unit for efficient use of solar energy, characterization and study of the photovoltaic module, energy spectrum measuring facility, spectral response/ photoconductivity/ quantum efficiency and other transport measurements in the presence of light of photovoltaic modules, materials and devices. A facility for preparation of thin films by physical vapor deposition method and development of heterojunction and thin film solar cells based on amorphous and microcrystalline silicon is also available.

[iv] Fuel Cells Laboratory: Fabrication and characterization of bioelectrodes for biofuelcell and biosensors applications, etc. Facility for development and characterization of composite proton exchange membranes for fuel cell applications.

[v] X-ray Crystallography Laboratory: Sample preparation for studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics devices such as biofuel cell & other applications.

[vi] Biofuel Laboratory: Facility for production and analysis of biofuels, Fischer tropesch process.

[vii] Analytical Laboratory: Houses facility for analysis of gas, oil, volatile materials, gravimetric analysis, thermo gravimetric analysis of samples, microbial incubation, sterilization.

[viii] Biogas Development and Training Centre (BDTC): The biogas development and training centre (BDTC), funded by Ministry of New and Renewable Energy (MNRE), New Delhi has been functioning from the Centre for Energy at the technology complex for promotion of biogas technology in the NE states since 2006.

[ix] Internal Combustion Engine Laboratory: Facility of recent developments to petrol and diesel engines and testing of various alternative fuels, located at Technology Complex.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

i) X-ray crystallography facility (RIGAKU) for macromolecule and state-of art facility for protein bioelectronic science have been developed through a project sponsored by DBT India and installed the equipment at Central Instrument Facility centre, IIT Guwahati for use by other researchers/scientist from IIT Guwahati and NE India.

ii) Refrigerated Orbital Incubator Shaker with illuminator and Refrigerated Orbital Incubator Shaker without illuminator

iii) Advance Research Metallurgical and Biological Fluorescence Microscope with Scientific Digital Camera

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The faculty members, associated with the centre, are carrying out research based projects, funded by various government departments like Department of Science and Technology (DST), Ministry of New and Renewable Energy (MNRE), Defense Research & Development Organization (DRDO), Department of Biotechnology (DBT), Assam Science and Technology Environment Council (ASTECC), Council of Scientific and Industrial Research (CSIR) etc as well as foreign funding agencies namely, ADnENERGY. In the last seven years the centre has received 31 (thirty one) research

projects and as many as 17 (seventeen) consultancies in the areas of biomass gasification, biogas technology, wind energy, solar energy, biological fuel cells, engine testing with alternate fuels, biodiesel, energy efficient machines, multi-fuel variable compression engine, CO₂ capture, lubricant formulation, bioelectronics devices etc. MNRE has identified the centre as the hub for promotion of biogas development and training in the NE states of India and has been funding yearly since 2006. The major areas of research and development of the centre are Biogas technology (production, storage, value addition, lignocellulose waste utilization), Fluidized bed gasification (pressurized gasification), Wind Energy, Carbon capture by using pressure

swing adsorption technique, Biofuel (biodiesel, biobutanol, bioethanol and biohydrogen), Utilization of bio-waste for generating power in diesel engine, Tissue culture technology for bioenergy crops, Energy storage, Latent heat storage, Improvement of IC engines, Clean coal technology, Waste heat recovery, Improved cooking stove, Solar Energy, Catalysis, Fischer-Tropsch synthesis, Hydrodynamics and heat transfer characteristics with biomass blends in pressurized CFB, Chemical and biological fuel cell, Fluid and Thermal Engineering, Drying Technology and solar energy, Smart grid, Urban traffic pollution, amorphous and noncrystalline semiconductor thin films for solar cells and other devices. Thin film and Hetero-junction solar cells etc.

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. V. V. Goud	Phototrophic biofilm based waste water recycling for sustainable water usage in rubber latex coagulation	DBT	30.00	-	1 year

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Pranab Goswami	Studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics devices and other applications.	DBT	473.00	V. K. Dubey, P. Mahanta	3 years
Pranab Goswami	Development of Bioelectrodes for Biofuel Cell Applications.	MNRE	33.73	P. Mahanta	3 years
Prof. P. Mahanta	Biogas Development and Training Centre	MNRE	26.00	Prof. P. Mahanta	Continuing project
Dr V.V.Goud	A novel energy efficient Hydrodynamiccavitational technique for bio-diesel.	CSIR	19.80	Prof. L. Sahoo	Continuing project
Prof. P. Mahanta	Sub Project Title – ‘Small-scale Anaerobic Digestion’ under the ‘Rural Hybrid Energy-Enterprise Systems (RHEES)’; Indo – UK Collaborative Research Initiative on ‘Bridging the Urban and Rural Divide’	DST	82.684	Prof. P.S. Robi, Prof. A.K. Das, Dr. K. Kalita, Dr. L. Barbora	3 years
Dr. V.V. Goud	Investigating the effect of co-digestion and advanced sludge pre-treatment methods on the anaerobic conversion potential of the organic wastes	DBT	8.36	-	3 Years
Dr. Mahuya De	Development of supported noble metal catalysts using surfactant assisted electroless plating process for the dehydrogenation of light alkanes	DST	39.4	Dr. Ramagopal Uppaluri, Dr. M. Qureshi	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. V. V. Goud	A novel synthetic approach for chemical modification of vegetable oils for lubricant formulation	National oilseed and vegetable oils Development Board	68.16	-	3 years
Dr. V. N. Kulkarni	Design, development and performance assessment of multi-fuel variable compression engine	DST	18.05	-	3 years
Dr. A. Verma	Development of polymer electrolyte membrane fuel cell using indigenously prepared low cost composite bipolar plate	CSIR	13.00	Prof. P. Goswami and Prof P. Mahanta	3 years
Dr. V.S. Moholkar	Design and optimization of 1, 3- Propanediol and n-butanol from biodiesel derived crude glycerol using immobilized Clostridial strains	CSIR	15.00	-	3 years
Prof. U.K. Saha	Utilization of Bio-waste for Generating Power in Diesel Engines	DRL (DRDO), Tezpur	9.91	Dr. N. Sahoo	3 years
Dr. V.S. Moholkar	Design, development and commercialization of a circulating fluidized bed biomass gasifier	MNRE	53.00	Prof. P. Mahanta, Mr. P. Kalita	3 years
Prof. P. Agarwal	Optoelectronic and Transport studies on Thin silicon films (nc-Si and nc-Si/a-Si: Hsuperlattice) and solar cells	CSIR	30.00	-	2 years
Prof. Niranjansahoo	Laser based calibration methodology for thermal sensors in combustion measurements	DRDO	12.40	Dr. Vinayak Kulkarni	2 years

RESEARCH PUBLICATIONS

Journals (International / National)

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
Singh S, Khanna S, Moholkar V S, Goyal A	Screening & optimization of pretreatments for Partheniumhysterophorus as feedstock for alcoholic biofuels	Applied Energy	195-206	129	2014
S. Singh, S.T.P. Bharadwaja, P.K. Yadav, V.S. Moholkar, and A.Goyal	Mechanistic Investigation in Ultrasound-Assisted (Alkaline) Delignification of Partheniumhysterophorus Biomass	Industrial & Engineering Chemistry Research	53 (37)	14241-14252	2014
S. Singh, P.K. Dikshit, V.S. Moholkar, and A.Goyal	Purification and characterization of acidic cellulase from Bacillus amyloliquefaciens SS35 for hydrolyzing Partheniumhysterophorus biomass	Environmental Progress	DOI: 10.1002/ep.12046		2014
S. Singh, S. Sarma, M. Agrawal, A. Goyal, and V.S.Moholkar	Ultrasound enhanced ethanol production from Partheniumhysterophorus: A mechanistic investigation	Bioresource Technology	http:// dx.doi.org/ 10.1016/j.biortech. 2014.12.038		2014

Name of Author	Title of Paper	Name of Journal	Vol. and Issue No.	Page No.	Year of Publication
S.T.P. Bharadwaja, S. Singh, and V.S. Moholkar	Design and optimization of a sono-hybrid process for bioethanol production from Parthenium hysterophorus	Journal of the Taiwan Institute of Chemical Engineers	http:// dx.doi.org /10.1016/ j.jtice. 2015. 01.022		2015
M. Singh, A. Yadav, S. Kumar, and P. Agarwal	Annealing induced electrical conduction and band gap variation in thermally reduced graphene oxide films with different sp ² /sp ³ fraction	Applied Surface Science	326	236-242	2014
H.S. Jha, A. Yadav, M. Singh, S. Kumar, and P. Agarwal	Growth of wide band gap nanocrystalline Silicon Carbide films by HWCVD: influence of filament temperature on structural and opto-electronic properties	Journal of Electronic Materials	44	922-928	2015
Madhuri Das, Lepakshi Barbora, Priyanki Das, Pranab Goswami	Biofuel cell for generating power from methanol substrate using alcohol oxidase bioanode and air-breathed laccasebiocathode	Biosensors and Bioelectronics	59, 15	184-191	2014
A Ghosh, P Goswami, P Mahanta, A Verma,	Effect of carbon fiber length and graphene on carbon-polymer composite bipolar plate for PEMFC	Journal of Solid State Electrochemistry	18(12)	3427-3436	2014
Singh S., Agrawal M., Sarma S., Goyal A. and Moholkar V. S.	Mechanistic insight into ultrasound induced enhancement of simultaneous saccharification and fermentation of Partheniumhysterophorus for ethanol production	Ultrasonics Sonochemistry	http:// dx.doi.org/ 10.1016 /j.ultsonch. 2015.02.011		2015
A. J. Chaudhari, N. Sahoo, V. Kulkarni	Simulation models for spark ignition engine: A comparative performance study	Energy Procedia	54	330-341	2014

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue & Page
A. Yadav, M. Singh, and P. Agarwal	a-Si:H/nc-Si:H thin film super lattice by Hot Wire Chemical Vapor Deposition	ICRANN 2014, Jawaharlal Nehru University	15-16 Dec 2014	114
A. Yadav, M. Singh, and P. Agarwal	Influence of hydrogen dilution on structural, electrical and optical properties of silicon thin films by HWCVD technique	TransLES 2014, IASST Guwahati	11-13 Dec 2014	53
A. Yadav, M. Singh, and P. Agarwal	Laser induced crystallinity in amorphous silicon thin film	EMCA 2014, NIT Durgapur & CGCRI Kolkata	4-6 Dec 2014	77
P. Eliaers, J.R. Pati, S. Dutta, J. De Wilde	Modeling and simulation of biomass drying in vortex chambers	Chemical Engineering Science 123	2014	DOI: 10.1016/ j.ces. 2014. 11.043
Madhuri Das and PranabGoswami	Enzyme cascade based bioanode for complete utilization of methanol substrate to generate power in biofuelcell.	Frontier Energy Research with Industry Academia partnership	20-21st March 2015.	35

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue & Page
SharbaniKaushik and PranabGoswami	Studies on cyanocabteria for its potential biofuelcell applications	Frontier Energy Research with Industry Academia partnership	20-21st March 2015.	38
Priyanki Das, Madhuri Das, LepakshiBarbora, and PranabGoswami	Power generation from alcohol biofuelcell utilizing alcohol oxidase and laccase as biocatalysts	Frontier Energy Research with Industry Academia partnership	20-21st March 2015.	39
DiptiYadav, Deep Bora, AbhinavChoudhury, LepakshiBarbora, LathaRangan, and P Mahanta	Thermochemical and Organic Pretreatment of Local LinocellulosicBioresources for Energy Production	International Conference on Emerging Trends in Biotechnology (ICETB 2014), JNU	6-9th Nov 2014	E 62
DiptiYadav, LepakshiBarbora, TanjaRado, Richard Blanchard, LathaRangan and P Mahanta	Small scale Anaerobic Digestors: A case study in UK and India	Bioenergy: An Engine for Economic Growth in the Global South at Welcome Trust, London	28 Jan 2015	114
Barik CR, Sahoo L, Goud VV	Identification of Some Potential Energy Plants from North East India for Biomass Energy Production: an Agro-taxonomic Approach	Frontier Energy Research with Industry Academia Partnership Workshop, FERIAP-2015, Centre for Energy, IIT Guwahati	20th-21st March 2015	-
Maravi DK, Goud VV, Sahoo L	Enhanced triacylglycerol (TAG) accumulation synthesis in <i>Jatropha curcas</i> leaves upon following constitutive overexpression of an Arabidopsis diacylglycerol acyl transferase 1 (AtDGAT1)	National Conference on "Biotechnology and Human Welfare: New Vistas" organized by Department of Biotechnology, VBS Purvanchal University, Jaunpur	21st-22nd March 2015	-
Ramakrishna Madaka, AshaYadav, VenkannaKanneboina, PratimaAgarwal	Comparison of electrical conductivity of a-Si:H films deposited on flexible polyimide and corning glass substrate	Transport properties in low dimensional System: Experiment and Simulation, TransLES 2014, IASST, Guwahati	11-13 Dec 2014	102
Mukesh Singh, AshaYadav, PratimaAgarwal	Transition from 3D to 2D Mott variable range hopping conduction in reduced graphene oxide thin films	International Conference on Recent Advances on Nanoscience and Nanotechnology, ICRANN 2014, JNU	15-16 Dec 2014	28
AshaYadav, PratimaAgarwal	Optical properties of silicon thin films for solar cell application: Influence of hydrogen dilution.	Frontier Energy Research with Industry Academic Partnership, FERIAP 2015, IIT Guwahati	20-21 March 2015	47
Ramakrishna Madaka, AshaYadav, VenkannaKanneboina, PratimaAgarwal	Electrical and structural properties of a-Si:H on flexible substrates	The Annual Chemical Engineering Symposium, Reflux 2015, IIT Guwahati	27-29th Mar 2015	56
Singh S., Goyal A. and Moholkar V.S.	Bioethanol production from <i>Parthenium hysterophorus</i> (carrot grass): Ultrasound enhanced enzymatic hydrolysis and fermentation.	4th Annual International Conference on Sustainable Energy and Environmental Sciences (SEES 2015), Singapore.	9-10 February 2015	21
Singh S., Sarma S., Goyal A. and Moholkar V.S.	Ultrasound-enhanced Bioethanol production from <i>Parthenium hysterophorus</i> (carrot grass) by simultaneous saccharification and fermentation	Indo-US Conference on Advanced Lignocellulosic Biofuels (Indo-US CALB-2014), CSIR-IICT, Hyderabad	10-11 November, 2014	79

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue & Page
Borah A., Goyal A. and Moholkar V. S.	Establishing invasive weeds as a new feedstock for biorefinery: From pain to gain	Indo-US Conference on Advanced Lignocellulosic Biofuels (Indo-US CALB-2014), CSIR-Indian Institute of Chemical Technology, Hyderabad, India.	10-11 November, 2014	74
Singh S., Moholkar V.S. and Goyal A.	Ultrasound-assisted intensification of bioethanol production from <i>Partheniumhysterophorus</i> .	International Conference on Emerging Trends in Biotechnology and 11th Convention of the Biotech Research Society, India (BRSI). Jawaharlal Nehru University	6-9 November, 2014	E51-E52
Singh S., Bharadwaja S.T.P., Moholkar V.S. and Goyal A.	Ultrasound assisted delignification of acid pretreated <i>Partheniumhysterophorus</i> for enzymatic hydrolysis.	National Seminar on Emerging Bio-inputs in Biotechnology for a Green Environment, Department of Bioengineering and Technology, Gauhati University Institute of Science and Technology, Gauhati University	9-10 May, 2014	64
Singh S., Moholkar V.S. and Goyal A.	Bioethanol production by pretreatment, hydrolysis and fermentation of <i>Partheniumhysterophorus</i> .	International Conference on Energy Technology, Power Engineering and Environmental Sustainability. Jawaharlal Nehru University	21-22 June, 2014	International Journal of Applied Research, 9(9), 1149
A. J. Chaudhari, V. Kulkarni and N. Sahoo	Performance assessment of octane fuels on a variable compression ratio spark ignition engine	Proceedings of 6th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM), IIT Kharagpur	29-31 December 2014	A. J. Chaudhari, V. Kulkarni and N. Sahoo
A. J. Chaudhari, V. Kulkarni and N. Sahoo	Combined effect of variable compression ratio and exhaust gas recirculation with biogas fuel in spark ignition engine	Frontier Energy Research with Industry Academic Partnership, FERIAP 2015, IIT Guwahati	20-21st March 2015	A. J. Chaudhari, V. Kulkarni and N. Sahoo
H. Mishra, S. Bharati, G. Natarajan, N. Sahoo	Chemical kinetics for combustion of biofuels – A numerical study	Frontier Energy Research with Industry Academic Partnership, FERIAP 2015, IIT Guwahati	20-21st March 2015	H. Mishra, S. Bharati, G. Natarajan, N. Sahoo

Book Chapter

Name of Author/s	Title of Chapter	Title of Book	Publisher	Vol, Issue No.	Page No.	ISBN	Year
H.A. Choudhury, S. Chakma, V.S. Moholkar	Biomass gasification integrated Fischer-Tropsch synthesis: Perspectives, opportunities and challenges.	In: Recent Advances in Thermochemical Conversion of Biomass	Elsevier BV, Amsterdam		383-435	978-0-444-63289-0	2015

Name of Author/s	Title of Chapter	Title of Book	Publisher	Vol, Issue No.	Page No.	ISBN	Year
V.S. Moholkar, H.A. Choudhury, S. Singh, S. Khanna, A. Ranjan, S. Chakma, J. Bhasarkar	Physical and chemical mechanisms of ultrasound in biofuel synthesis.	Production of Biofuels and Chemical with Ultrasound, Biofuels and Biorefineries series	Springer Science + Business Media, Dordrecht	4	35-86		2015
D.K. Maravi, P. Mazumdar, S. Alam, Vaibhav V. Goud, and L. Sahoo	Jatropha (Jatropha curcas L.)	Agrobacterium Protocols (Kan Wang, Editor) vol.2, Methods in Molecular Biology	Springer Protocols, Humana Press	1224	25-36	978-1-4939-1695-5	2015

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Title of Lecture/Paper	Name of Conf./Workshop	Place	Date
Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Pranab Goswami	Biosensor and enzymatic biofuel cell: Emerging topics in healthcare and biomedical engineering,	Department of Biotechnology, Gauhati University,	Institutional Biotech Hub, Gauhati University	14th February 2015
Pranab Goswami	key note lecture on Enzymatic Biofuel Cell for Micro Scale Electronic Devices	IITG-Kyoto Institute of Technology (KIT) Joint Symposium on Biobased Materials,	IIT Guwahati	20 January, 2015
Pranab Goswami	Biotechnology: Recent advances and Future Prospects	Delivered invited lecture at University of Science and Technology, Meghalaya	University of Science and Technology, Meghalaya	on on 23rd August 2014 in
L Sahoo	Technology and International Cooperation in India	Gifu Norin Senior High School	Gifu (Japan)	17 June 2014
L Sahoo	Japan-India cooperation for biofuel research	Frontier Research Center (Biotechnology) of TOYOTA Central R&D Labs	Aichi (Japan)	6 August 2014
Pratima Agarwal	Research activities on Thin film semiconductors and solar cells at IIT Guwahati	Gifu University, Japan	Gifu University	Dec 03, 2014

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. S. Nonomura, Prof. M. Koketsu and Prof. U.Yoshihiko	GIFU University Japan	Collaboration in terms of faculty-student exchange and joint research projects	21/04/2014
Dr. Ranjit S Patil	Department of Mechanical Engineering – Goa campus, BITS Pilani	Talk on 'Characteristics of Flow in Fluidized Bed and Microtubes'	26/06/2014

SEMINARS/WORKSHOPS/CONFERENCES/SHORT-TERM COURSES ORGANISED

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./ Wor./Con.	Funded By	Date	International/ National	No. of participants
Prof. PranabGoswami	Frontier Energy Research Industry Academia Partnership (FERIAP 2015)	Department of Science & Technology, Department of Biotechnology, Reliance Industries Limited, Council of Scientific & Industrial Research, BaniMandir, Carl-Zeiss	20th -21st March 2015	International	84 Participants and 09 Experts
Dr. P Muthukumar	Recent Trends in Renewable Energy Utilization Systems	TE-QIP	23-24th Jan 2015	National	35

Workshop (Frontier Energy Research Industry Academia Partnership) organized by Centre for Energy during 20-21 March 2015. A large number of participants from various part of India has joined the workshop and presented their work. Nine eminent speakers namely Prof. S P Sukhatme, Prof. L M Das, Prof. K K Pant, Dr. PranabBharali, Prof. Michele Clarke, Dr. SantanuDasgupta, Mr. GiridharPatowari and Dr. R Anandalakshmi including our honourable Director Prof. GautamBiswas delivered highly illuminating lectures in the workshop. Among the participant which presented the posters following the Best Poster Award were instituted & presented in the valedictory function:

Best Poster: "Design And Experiment Of A Solar Power Unmanned Aerial Vehicle (Uav) For Various Purposes" Presented By Suvanjan Bhattacharyya, Shramona Chakraborty, Ahiry Ghosal And Suman Chandra.

2nd Best Poster: "Improved Bioethanol Production From Mixed Pretreated Leafy Biomass Of Bamboo (Bambusa Dendrocalamus) Involving Saccharification By Recombinant Enzymes From Clostridium Thermocellum" Presented By Ashutosh Gupta

3rd Best Poster: "Wind Energy: A Tesla Turbine For Power Generation In A Moving Train" Presented By Suvanjan Bhattacharyya, Anindya Guin And Ayan Halder

STUDENTS' ACHIEVEMENTS

i) The paper entitled "Mechanistic and kinetic investigations in ultrasound assisted acid catalyzed biodiesel synthesis" published in Chemical Engineering Journal (Elsevier, Impact Factor = 4) authored by Miss PriyankaParker (MTech 2011 batch, Chemical EnggDept) and Dr. HanifChoudhury (PhD 2014, Center for Energy) has received the Top Cited Paper award for the years 2011-12.

ii) Miss ShyamaliSarma (Research Scholar, Center for Energy) received the Best Poster Award (3rd Prize) in Indo-US Conference on Advanced Lignocellulosic Biofuels held in IICT, Hyderabad in November 2014 for her poster on Ultrasound Enhanced Bioethanol Synthesis by Simultaneous Saccharification and Fermentation.

iii) Ms. Shuchi Singh (Research Scholar, Center for Energy) was selected for International Travel Fellowship grant by Department of Biotechnology (DBT), Government of India, to attend International conference on Sustainable Energy and Environmental Sciences (SEES-2015) during February 9-10, 2015 at Singapore.

FACULTY MEMBERS ASSOCIATED WITH THE CENTRE

Sl. No.	Name	Designation and Department
1.	Agarwal, P.	Professor, Department of Physics
2.	Das, A. K.	Professor, Department of Design
3.	Das, D.	Assistant Professor, Department of Biotechnology
4.	De, M.	Assistant Professor, Department of Chemical Engineering
5.	Dubey, V. K.	Professor, Department of Biotechnology
6.	Goswami, P. (Head, Centre for Energy)	Professor, Department of Biotechnology
7.	Goud, V. V.	Assistant Professor, Department of Chemical Engineering
8.	Kalita, K.	Assistant Professor, Department of Mechanical Engineering

Sl. No.	Name	Designation and Department
9.	Kulkarni, V.	Assistant Professor, Department of Mechanical Engineering
10.	Mahanta, P.	Professor and Head, Department of Mechanical Engineering
11.	Mohanty, K.	Associate Professor, Department of Chemical Engineering
12.	Moholkar, V. S.	Professor and Head, Department of Chemical Engineering
13.	Robi, P. S.	Professor, Department of Mechanical Engineering
14.	Qureshi, M.	Associate Professor, Department of Chemistry
15.	Saha, U. K.	Professor, Department of Mechanical Engineering
16.	Sahoo, L.	Professor, Department of Biotechnology
17.	Sahoo, N.	Associate Professor, Department of Mechanical Engineering
18.	Uppaluri, R.	Professor, Department of Chemical Engineering
19.	Verma, A.	Associate Professor, Department of Chemical Engineering

CENTRE FOR THE ENVIRONMENT

YEAR OF ESTABLISHMENT OF THE CENTRE: 2004

ACADEMIC PROGRAMMES OFFERED:

Doctor of Philosophy (PhD)

LABORATORIES:

- Research Laboratory – I
- Research Laboratory – II
- Analytical Laboratory
- Computational Laboratory
- Mammalian Cell Culture Laboratory

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

- Oil bath with magnetic stirrer
- Miclins Peristaltic pump
- Refrigerated shaking incubator
- pH meter
- FTIR Spectrometer
- 15 ton Hydraulic press for making pellet in FTIR
- High temperature tubular furnace
- Sartorius Analytical Balance
- Recirculating Chiller
- Scigenics Incubator Shaker

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

- Water and Wastewater Treatment
- Solid Waste Management and Recycling
- Environmental Bioremediation/ Environmental Biotechnology
 - Biosorption & Bioremediation of heavy metals
 - Biofiltration for treating waste gases and green solvents
 - Removal of Toxic and Recalcitrant Compounds
 - Biodegradation/Bio-detoxification of Toxic Wastes
- Environmental Genomics and Proteomics
- Green Chemistry
- Greenhouse gas Capture and Storage.
- Biofuels
- Air pollution- Dispersion, Control & Modeling
- Waste Immobilization
- Soil-water-contaminant Interaction
- Contaminant Transport and Retention in Porous Media
- Environmental History
- Environmental Economics
- Green Design
- Global Warming and Climate Modeling

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Utpal Bora, Dr. Sewa Ram, (DWR, Karnal)	Aptamer probes for detection of celiac disease epitopes of gluten in commercial varieties of Indian wheat, rye and barley	DBT	80.35	Dr. Sneh Narwal (DWR, Karnal), Dr. Ranjan Tamuli (IITG)	3 years
Dr. Utpal Bora	Exploration and Characterization of Seri-Bioresources of Northeast India for Potential Textile and Non Textile Applications	DBT	154.25	-	3 years

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof. Ramagopal Uppaluri	Development of low cost chitosan based crosslinked resins for the recovery and removal of palladium from synthetic and spent electroless plating solutions	CSIR	19.00	Dr. Animes K Golder (Co-PI), Prof. P K Ghosh (Co-PI)	3 years

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dr. Ranjan Tamuli	Molecular investigation of epigenetic modifications caused by environmental pollution using <i>Neurospora crassa</i> as a model system	DBT	55.00	Dr. Utpal Bora	3 years
Dr. Utpal Bora, Dr. Ranjan Tamuli, Prof. Chandan Mahanta	Establishment of Institutional Biotech Hubs by DBT under special programme for N.E states of India	DBT	26.00	-	5 years
Prof. A.K Ghoshal	Assessment of microbial communities and their biodegradation potentials in petroleum hydrocarbon contaminated environments in Assam	DBT	21.8	-	3 years
Dr. V. K. Dubey	Variations in proteome profile of legume plants in response to heavy metal toxicity	DST	23.28	Dr. Anil Verma	3 years

c) Completed Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Dr. M.K. Purkait	Treatment of contaminated drinking water using electrocoagulation technique	DRL, Tezpur (DRDO)	9.72	-	3 years
Prof. A. K Ghoshal	Petroleum Wastewater treatment in packed Bed reactor using suitable Microorganism(s)	CSIR	16.00	-	3 years
Prof. Gopal Das	Synthesis, Characterization of Metal Oxides and Their Application to Wastewater Treatment	CSIR	16.88	-	3 years

RESEARCH PUBLICATIONS**Journals (International / National)**

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Bhaskar Das, Tapas K Mandal, Sanjukta Patra	A comprehensive study on <i>Chlorella Pyrenoidosa</i> for phenol degradation and its potential applicability as bio-diesel feedstock and animal feed	Applied Bio-chemistry and Biotechnology, Springer	-	-	2014
Isha Vishan, Hiranmayee Kanekar, Ajay S. Kalamdhad	Microbial population, stability and maturity analysis of rotary drum composting of water hyacinth.	Biologia	69/10	1303-1313	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Samarpita Basu, Abhijit Sarma Roy, Kaustubha Mohanty, Alope K. Ghoshal	CO ₂ biofixation and carbonic anhydrase activity in <i>Scenedesmus obliquus</i> SA1 cultivated in large scale open system	Bioresource Technology	164	323-330	2014
Surya Singh, Bedika Phukan, Chandan Mukherjee, Anil Verma	Salen ligand complexes as electro-catalysts for direct electrochemical reduction of gaseous carbon dioxide to value added products	RSC Advances	5	3581-3589	2015
Surya Singh, Chandan Mukherjee, Anil Verma	Development of catalytic activity protocol for electrochemical reduction of carbon dioxide to value added products	Clean Technologies and Environmental Policy	17	533-540	2015

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue, Page No.
Bhaskar Das, Tapas K Mandal, Sanjukta Patra	Characterization of phenol degradation by a novel diatom species BD1IITG isolated from petroleum refinery wastewater.	Proceeding of National Conference on sustainable development of environmental systems	June 20-21, 2014	Pg-30
Bhaskar Das, Gowtham Selvaraj, Tapas K Mandal, Sanjukta Patra	Biodegradation of phenol by microalgae.	Proceeding of National Conference on sustainable development of environmental systems, IIT Guwahati.	June 20-21, 2014.	Pg-75
Bhaskar Das, Tapas K Mandal, Sanjukta Patra	Isolation and growth kinetics of a phenol degrading novel diatom species.	64th Canadian Chemical Engineering Conference. Ontario, Canada	October 19-22, 2014.	BD1IITG.
Bhaskar Das, Tapas K Mandal, Sanjukta Patra	Performance evaluation of phenol degradation by <i>Chlorella pyrenoidosa</i> in nutrient sufficient media and refinery wastewater through kinetic modeling.	64th Canadian Chemical Engineering Conference. Ontario, Canada.	October 19-22, 2014	
Bhaskar Das, Sanjukta Patra	Mechanism of phenol degradation in <i>Chlorella Pyrenoidosa</i> .	Asian Plant Science Conference, Lumbini, Nepal.	1-3rd November 2014	
Gowtham Selvaraj, Bhaskar Das, Sanjukta Patra	Recent advances in algal biodiesel production.	Asian Plant Science Conference., Lumbini, Nepal	1-3rd November 2014	
M Gopi kiran, Kannan Pakshirajan and Gopal Das	Heavy metal removal by sulfate reduction using anaerobic sludge biomass from a wastewater treatment plant	International Conference on Hydrology and Watershed Management-2014	29th October -2nd November, 2014	Volume 1, 379-386
M Gopi kiran, Kannan Pakshirajan and Gopal Das	"Heavy metal Removal by sulfate reduction using anaerobic rotating biological contactor reactor	National conference on sustainable Development of environmental systems NCOS-DOES2014	20th -21st, June 2014	

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date	Vol., Issue, Page No.
M Gopi Kiran	Workshop	Emerging micro pollutants in the Environment: occurrence, transportation, monitoring and treatment	2nd – 5th March	
Ponnala Vimal Mosahari	Artificial Neural Network Modelling of Blood Flow through Stenosis: A Review	International Conference on Disease Biology and Therapeutics 2014	03-05 Dec., 2014	Only abstract published in the Abstract Book.

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty/Student	Name of Conf./Workshop	Place	Date	International/National
Deepmoni Deka	International conference on disease biology and Therapeutics	IASST, Ghy	3-5 Dec, 2014	International
Deepmoni Deka	National conference on recent advances in cancer biology and therapeutics	IIT Ghy	5th Dec, 2014	National
Deepmoni Deka	International conference on Energy and Environment	JNTU, Hyderabad	15-17 dec, 2014	International
Bhaskar Das	Workshop on Environment and Development: New Frontiers of Research in North East India	IIT Guwahati.	January 3-4, 2014.	National
Ponnala Vimal Mosahari	Conference on Exploitation of Seribiodiversity for Novel Product Development	IIT Guwahati	29.11.14 To 30.11.14	International
Ponnala Vimal Mosahari	Biotech Hub Symposium 2014	IIT Guwahati	02.12.14	International
Ponnala Vimal Mosahari	International Conference on Disease Biology and Therapeutics	IASST, Guwahati	03.12.14 To 05.12.14	International
Ponnala Vimal Mosahari	Symposium on IPR in Innovation and Entrepreneurship	IIT Guwahati	16.03.15	National

VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANIZATIONS / INVITED LECTURES:

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. P.J. Raju	Andhra Pradesh State Sericulture Research and Development Institute (APSSRDI)	Transgenic Silkworm	11th March 2015
Dr. N. S. Sharma	IASST, Boragaon, Guwahati	Effects of Nanoparticles on swelling properties of polymer gels and polymer based sensor for the detection of nitro-aromatic pollutants.	13th February 2015
Dr. S. Deka	IASST, Boragaon, Guwahati	Impact of oil pollution on rice field soil of upper Assam and its control	13th February 2015
Dr. R.K. Barman	ASTEC, Guwahati	IPR- Environmental Health	13th February 2015
Dr. U. Sarmah	ASTEC, Guwahati	GIS in Environmental Health	13th February 2015

Name	Name of Inst./Univ./ Org.	Purpose/ Name of Lecture	Date
Dr. S. Baruah	Don Bosco University, Guwahati	Diagnosing Environmental Health; Nanotechnology for Environmental Remediation	12th February 2015
Dr. D. Thakuria	ICAR, Shillong	Metagenomics Survey for Community Ecology and Ecosystem processes: Restoration Ecology perspectives; Plant microbe interactions for habitat adaptive fitness against environmental stresses	11th February 2015
Dr. P. Sharma	Gauhati University, Guwahati	Effect of Fluoride and some Heavy Metals; Metal toxicity with special reference to Arsenic	10th February 2015
Dr. K.K. Sharma	AAU, Khanapara, Guwahati	Impact of Environmental Degradation on large wild mammals with special reference to the Elephants and its mitigation	9th February 2015
Dr. P. Kalita	Tezpur University, Tezpur	Power Industry and health Hazards; Issues related to Energy, Sustainability and the Environment	9th February, 2015
Padmashree V. Prakash	CFTRI, Mysore	Innovating the Innovation for Value addition to Agri-resources from Farm to Folk in the Food Chain through Strategic Entrepreneurship"	2nd December 2014
Prof. Bharat B. Aggarwal	M. D. Anderson Cancer Centre, U.S.A.	Targeting Inflammatory Pathways for Chronic Diseases by Nutraceuticals	2nd December 2014
Prof. Kapil Mehta	M. D. Anderson Cancer Centre, U.S.A.	Clinical Implications of Retinoid-Induced CD38 Antigen in Myeloid Leukemias	2nd December 2014
Dr. Pradip Nahar	IGIB, New Delhi	Is BSA necessary for blocking in ELISA Technique	2nd December 2014
Mr. Dulal Chowdhury	47, Ashram Road, Near South Sarania L.P. School, Guwahati	Muga The Golden Silk	30th November 2014
Dr. Bhuban Ch. Chutia	CMER & TI, Lahdoigarh	Exploration of wild silk varieties in Nagaland, North East India	30th November 2014
Dr. Ajoy Kumar Das	Arya Vidyapeeth College, Guwahati	Host specificity of muga silkworm and conservation of their host plants	30th November 2014
Dr. Ruli Borthakur	Arya Vidyapeeth College, Guwahati	Sericulture-Overview	30th November 2014
Dr. Dulur Brahma	Bodoland University, Kokrajhar	The prospects of a cross-breed between <i>Samia ricini</i> and <i>Samia canningi</i>	30th November 2014
Dr. Uma Dutta	Cotton College State University, Guwahati	Chironomous Spp. (Chironomidae : Diptera) as Bio-indicator of Environmental Stress	30th November 2014
Prof. Isao Kobayashi	National Institute of Agro-biological Sciences, Japan	Production of human enzyme in transgenic silkworm	29th November 2014
Dr. Keiro Uchino	National Institute of Agro-biological Sciences, Japan	Production and preservation of transgenic silkworm	29th November 2014
Dr. Bulbuli Khanikor	Gauhati University, Guwahati	An avenue for reducing constraints in sericulture with special reference to uzi fly, <i>Exorista sorbillans</i>	29th November 2014
Dr. Mainak Das	IIT Kanpur, Kanpur	Power from silk cocoon	29th November 2014

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Name of Faculty (Convener/ Co-ordinator,etc.)	Name of Sem./Wor./ Con.	Funded By	Date	International/National	No. of participants
Prof. Gopal Das & Dr. L. M. Kundu	CPCB Training Programme on Clean Technologies and Waste Minimization for Prevention of Industrial Pollution	CPCB	16-18th Jan 2015	National	25
Dr. Utpal Bora (Co-ordinator)	Next Generation Sequencing and Data Analysis	Biotech Hub, Center for the Environment (sponsored by DBT)	14-17th May 2014	National	45
Dr. Utpal Bora (Co-ordinator)	Exploitation of Seri biodiversity for Novel Product Development	Unit of Excellence on Seribiotechnology, Centre for the Environment (sponsored by DBT)	29-30th November, 2014	International	69
Dr. Utpal Bora (Co-ordinator)	Biotech Hub Symposium	Biotech Hub, Center for the Environment (Sponsored by DBT)	2nd Dec 2014	International	200
Dr. Utpal Bora (Organised in collaboration with IASST, Guwahati)	International Conference on Disease Biology and Therapeutics	DST	3rd-5th December, 2014	International	
Dr. Utpal Bora & Prof. Chandan Mahanta (Co-ordinators)	Quality Improvement Programme- Short Term Course (QIP-STC) on "Advances in Environmental Health"	Centre for Educational Technology, Center for the Environment (Sponsored by AICTE)	9th to 13th February 2015	National	35
Dr. Ajay Kalamdhad (Co-ordinator)	Short term course on Solid Waste Management Challenges and Opportunities	Knowledge Incubation Cell, Centre for Educational Technology	12th January to 14th January 2015	National	30
Prof. Bishnupada Mandal, Dr. Chandan Das (Co-ordinator)	Short term course on Membrane Technology & Application	Knowledge Incubation Cell, Centre for Educational Technology	December 09-10, 2014	National	
Prof. Gopal Das (Chairman), Deepmoni Deka (Convener)	National conf on sustainable development of environmental systems		June, 20-21, 2014	National	Around 120

AWARDS AND HONOURS:

Dr. Utpal Bora has been awarded UXCEL award by DBT, Govt. of India in the form of a project entitled "Exploration and characterization of seri- bioresources of North East India for potential textile and non-textile applications" for 3years (2014-2017).

STUDENTS' ACHIEVEMENTS

- Surya Singh: Joint 1st Prize, for presenting a paper entitled "Study on Electrocatalysts for electrochemical reduction of CO₂ to value added products" on the occasion of "Research Scholars Day - 2015" organized by Centre for the Environment, IIT Guwahati, Assam on Jan. 19, 2015.
- Bhaskar Das: Joint 1st Prize on research scholar day 2015 IIT Guwahati.
- Isha Vishan: 2nd prize on research scholar day 2015 IIT Guwahati.
- D. Narendra Naik: 3rd prize on research scholar day 2015 IIT Guwahati paper entitled "Production, purification and characterization of Epothilone B from isolated Soragium cellulosum strains".

- Isha Vishan: Best paper presentation in National symposium on management and procurement of solid waste 2015, IIT Guwahati.

FACULTY MEMBERS ASSOCIATED WITH THE CENTRE

Sl. No.	Name	Designation and Department
1.	Bag, S. S.	Associate Professor, Department of Chemistry
2.	Barua, A.	Associate Professor, Department of Humanities and Social Sciences
3.	Bora, U.	Associate Professor, Department of Biotechnology
4.	Chakraborty, S.	Professor, Department of Civil Engineering
5.	Das, C.	Assistant Professor, Department of Chemical Engineering
6.	Das, G. (Head, Centre for the Environment)	Professor, Department of Chemistry
7.	Dasu, V. V.	Professor, Department of Biotechnology
8.	Dubey, V. K.	Professor, Department of Biotechnology
9.	Dutta, M.K.	Associate Professor, Department of Humanities and Social Sciences
10.	Ghosh, P. K.	Associate Professor, Department of Civil Engineering
11.	Ghosal, A. K.	Professor, Department of Chemical Engineering
12.	Gokhale, S.	Professor, Department of Civil Engineering
13.	Golder, A. K.	Associate Professor, Department of Chemical Engineering
14.	Goud, V. V.	Assistant Professor, Department of Chemical Engineering
15.	Goyal, A.	Professor, Department of Biotechnology
16.	Jawed, M.	Professor, Department of Civil Engineering
17.	Senthilkumar, S.	Assistant Professor, Department of Biosciences and Bioengineering
18.	Kundu, L. M.	Assistant Professor, Department of Chemistry
19.	Kalamdhad, A.	Assistant Professor, Department of Civil Engineering
20.	Mahanta, C.	Professor, Department of Civil Engineering
21.	Mandal, B.	Professor, Department of Chemical Engineering
22.	Mandal, T. K.	Assistant Professor, Department of Chemical Engineering
23.	Mohanty, K.	Associate Professor, Department of Chemical Engineering
24.	Mukherjee, C.	Assistant Professor, Department of Chemistry
25.	Pakshirajan, K.	Associate Professor, Department of Biotechnology
26.	Patel, B. K.	Professor, Department of Chemistry
27.	Purkait, M.K.	Associate Professor, Department of Chemical Engineering
28.	Patra, S.	Associate Professor, Department of Biotechnology
29.	Ray, M.	Professor, Department of Chemistry
30.	Sarma, A. K.	Professor, Department of Civil Engineering
31.	Sastri, C. V.	Associate Professor, Department of Chemistry
32.	Tamuli, R.	Assistant Professor, Department of Biotechnology

CENTRE FOR NANOTECHNOLOGY

YEAR OF ESTABLISHMENT OF THE CENTRE: 2004

ACADEMIC PROGRAMMES OFFERED:
Doctor of Philosophy (PhD)

LABORATORIES:

The centre has eleven laboratories as detailed below. Out of these two have been set up in the CIF.

XRD Lab; TEM Lab; OLED Lab; Nanobiotech Lab; Cell culture Lab; Synthesis Lab; Nano Fabrication Lab; MEMS & NEMS Lab; SPM Lab; Thin Film and Micro Fluidics Lab

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

Equipment: 1) Filter Wheel Glued, 2) Tank Filter, 3) Materials Studio Software, 4) Integral Board (B20) for Bruker D8 Advance XRD, 5) Magnetic stirrer cum hot plate Digital, 6) UV transilluminator, 7) Rocking platform, 8) Water Bath, 9) Water Bath Shaker, 10) Benchtop Incubator cum Orbital Shaker, 11) Micropipette, 12) Incubator, 13) Desktop PC, 14) Photocopier machine, 15) Spectroline E-Series Hand-Held UV Lamp, 16) Gel Electrophoresis, 17) Spin Coater, 18) NISA- Microsystems software version 17.0, 19) Muffle furnace

Facilities: 1) 12V, 17 AH UPS Batteries, 2) 12V, 26 AH Battery (Quanta), 3) Cartridge, 4) Argon gas, 5) Upgradation of Xe Lamp Source, 6) Nitrogen gas 99.999% purity, 7) Cu grids, 8) Spare parts of FACS, Spectrophotometer, 9) Cell Culture Dish, 10) Tissue Culture Plate sterile, 11) Petridish with triple vent radiation sterile, 12) Safe skin purple nitrile gloves, 13) Petridish with triple vent radiation sterile, 14) Accupipet -variable volume pipette, 15) PROGARD 2 Pretreatment.

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

The centre is pursuing research in the multi-disciplinary area of Nanotechnology required to meet the future challenges, to augment academic partnerships with industry in the area of Nanotechnology.

A research Grant of Rs. 51.75 Crore sanctioned from DeitY for establishing a 'Centre for Excellence in Research and Development of Nanoelectronic Theranostic Devices' is implemented at the Centre. Nano -Electronics by VLSI group focuses on development SAW sensors, ECG amplifier and blind assisted walker. Nanoscale science and technology group has recently developed a new model for observation of autonomous motion of particles in aqueous medium (On chemical locomotives).

Gene Therapy group is mainly focused in developing 'Gene Therapy Vectors'. They have established molecular mechanism of cell death via apoptotic signaling in suicide gene therapy. Nanobiotechnology group is pursuing interdisciplinary collaborative research at the Centre for Nanotechnology on "nanoparticles and nanocomposites". They are developing new nanoclusters for the potential applications as sensors, antimicrobial and anticancer agents.

Nanophysics group is working on the various aspects on the defects of carbon nanotube and their possible application as sensor. A combined group of faculty members from Chemistry and Physics have developed prototype organic light emitting diode (OLED) and nanotube based transistors. In addition Centre is also involved in fostering growth of science and education in the north east in the field of nanotechnology by conference, workshops, symposium and seminars.

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

- (a) Development of Multimodal Functional superbot published in the Elsevier Journal CARBON
- (b) Implementation of the DeitY project at IIT Guwahati for establishing a 'Centre for Excellence in Research and Development of Nanoelectronic Theranostic Devices'

RESEARCH PROJECTS**a) Ongoing Sponsored Projects**

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Dipankar Bandopadhyay	Design and Development of Intelligent Catalytic Nanobots	DST Nano-Mission	43.00	-	3 years
Arun Chattopadhyay	Centre for Excellence in Research and Development of Nanoelectronic Theranostic Devices	DeitY	5775.00	R. P. Paily, D. Bandyopadhyay and others	5 years
Dipankar Bandopadhyay	A computational study on the phase separation induced pattern formation employing ultrathin films	CSIR	16.50	-	3 years
Dipankar Bandopadhyay	External Field Driven Flow Induced micro/nano scale Patterning, Mixing, Heat and Mass transfer in micro/nano Fluidic Devices	DST-SERC	45.00	-	3 years

b) Completed Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration
Prof. S. S. Ghosh	Novel nanoscale materials targeted towards antimicrobial and anticancer activities.	DBT	169.00	Prof. A. Chattopadhyay & Dr. Biplab Bose	3 years
Dipankar Bandopadhyay	A combined experimental and theoretical study on the instability and patterning of thin liquid crystal films	DST-Fast Track	9.60		3 years

RESEARCH PUBLICATIONS**Journals (International / National)**

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
NageshCh and Roy Paily	Design of an Osmotic Pressure Sensor for Sensing Osmotically Active Substance	Journal of Micro-mechanics and Microengineering	25 and 4	45019	2015
NageshCh and Roy Paily	Fabrication and Testing of an Osmotic Pressure Sensor for Glucose Sensing Application	Micromachines	5 and 3	722-737	2014
Sabyasachi Pramanik, Satyapriya Bhandari, Shilaj Roy and Arun Chattopadhyay	Synchronous Tricolor Emission-Based White Light from Quantum Dot Complex	The Journal of Physical Chemistry Letters	6 and 7	1270-1274	2015
Rama Ghosh, Upashi Goswami, Siddhartha Sankar Ghosh, Anumita Paul and Arun Chattopadhyay	Synergistic Anticancer Activity of Fluorescent Copper Nanoclusters and Cisplatin Delivered through a Hydrogel Nanocarrier	ACS Applied Materials and Interfaces	7 and 1	209-222	2014
Satyapriya Bhandari, Shilaj Roy, Sabyasachi Pramanik and Arun Chattopadhyay	Double Channel Emission from a Redox Active Single Component Quantum Dot Complex	Langmuir	31 and 1	551-561	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
Md Palashuddin Sk, Sunil Kumar Sailapu and Arun Chattopadhyay	Luminescent Carbon Dots for Logic Operations in Two Phases	Chem Phys Chem	16 and 4	723–727	2015
Satyapriya Bhandari, Shilaj Roy, Sabyasachi Pramanik and Arun Chattopadhyay	Surface Complexation Reaction for Phase Transfer of Hydrophobic Quantum Dot from Nonpolar to Polar Medium	Langmuir	30 and 35	10760–10765	2014
Subhamoy Banerjee, Amaresh Kumar Sahoo, Arun Chattopadhyay and Siddhartha Sankar Ghosh	Chemosensitization of IkbA over-expressing glioblastoma towards anti-cancer agents	RSC Advances	4 and 74	39257–39267	2014
Subhamoy Banerjee, Amaresh Kumar Sahoo, Arun Chattopadhyay and Siddhartha sankar Ghosh	Recombinant IkbA loaded curcumin nanoparticles for improved cancer therapeutics	Nanotechnology [IOP]	25 and 34	345102	2014
Nidhi Chaubey, Amaresh Kumar Sahoo, Arun Chattopadhyay and Siddhartha Sankar Ghosh	Silver nanoparticle loaded PLGA composite nanoparticles for improving therapeutic efficacy of recombinant IFN γ by targeting the cell surface	Biomaterials Science	2 and 8	1080–1089	2014
Rumi Khandelia, Amit Jaiswal, Siddhartha Sankar Ghosh and Arun Chattopadhyay	Polymer coated Gold Nanoparticle-Protein Agglomerates as Nanocarriers for Hydrophobic Drug Delivery	Journal of Materials Chemistry B	2 and 38	6472–6477	2014
Md Palashuddin Sk and Arun Chattopadhyay	Induction coil heater prepared highly fluorescent carbon dots as invisible ink and explosive sensor	RSC Advances	4 and 60	31994–31999	2014
Satyapriya Bhandari, Shilaj Roy and Arun Chattopadhyay	Enhanced photoluminescence and thermal stability of zinc quinolate following complexation on the surface of quantum dots	RSC Advances	4 and 46	24217–24221	2014
Sunil Kumar Sailapu, Amaresh Kumar Sahoo, Siddhartha Sankar Ghosh and Arun Chattopadhyay	Hierarchical Logic Structures Based on Responsive Fluorescent Gold Nanoclusters	Small	10 and 20	4067–4071	2014
Abhinav Sharma, Vineet Kumar, Joydip Chaudhuri, Seim Timung, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Alternating Current Induced Digitization of Two-Phase Flow Patterns inside Microchannels	RSC Advances	DOI: 10.1039/C5RA02451J	2015	
Sunny Kumar, Amit Kumar Singh, Ashok Kumar Dasmahapatra, Tapas Kumar Mandal and DipankarBandyopadhyay	Graphene based multifunctional superbots	Carbon	89,31		2015
B. Ravi, Rabibrata Mukherjee, DipankarBandyopadhyay	Solvent Vapor Mediated Spontaneous Healing of Self-Organized Defects of Liquid Crystal Films	Soft Matter	11, 139		2015
SeimTimung, VijeetTiawari, Amit Kumar Singh, Tapas Kumar Mandal, DipankarBandyopadhyay	Capillary Force Mediated Flow-Patterns and Non-monotonic Pressure Drop Characteristics of Oil-Water Microflows	Canadian Journal of Chemical Engineering	-	-	2015

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
A. Ananth Praveen Kumar, Venkatanarayana Prasad Sandireddy, Tamal Banerjee and Dipankar Bandyopadhyay	Dynamics of a Liquid Droplet on a Granular Bed of Micro-Structured Particles: From Lens Formation to Marble Effect	Ind. Eng. Chem. Res.	54, 1131	-	2015
Kartick Mondal and Dipankar Bandyopadhyay	Electro-Capillary Instabilities of Thin Leaky Elastic-Viscous Bilayers	Physics of Fluids	26, 12206	-	2014
Mohar Dey, Dipankar Bandyopadhyay, Ashutosh Sharma, Shizhi Qian and Sang Woo Joo	Charge Leakage Mediated Pattern Miniaturization in the Electric Field Induced Instabilities of an Elastic Membrane	Ind. Eng. Chem. Res.	53, 18840	-	2014
Abhinav Sharma, Vijeet Tiwary, Vineet Kumar, Tapas Kumar Mandal, and Dipankar Bandyopadhyay	Localized electric field induced transition and miniaturization of two-phase flow patterns inside microchannels	Electrophoresis	35, 2930	-	2014
A.Ghoshal and S.S.Ghosh	Purification, and Therapeutic Implications of Recombinant sFRP1 Expression	Applied Biochemistry and Biotechnology	175, 4	2087-2103	2015
N.Chaubey and S.S.Ghosh	Overexpression of Granulocyte Macrophage Colony Stimulating Factor in Breast Cancer Cells Leads Towards Drug Sensitization	Applied Biochemistry and Biotechnology	175, 4	1948-1959	2015
R.Ghosh, U.Goswami, S.S.Ghosh, A.Paul and A.Chattopadhyay	Synergistic Anticancer Activity of Fluorescent Copper Nanoclusters and Cisplatin Delivered through a Hydrogel Nanocarrier	ACS Applied Materials and Interfaces	1, 7 (1)	209-22	2015
S.Mallick, P.Sanpui, S.S.Ghosh, A.Chattopadhyay, A.Paul	Synthesis, characterization and enhanced bactericidal action of a chitosan supported core-shell copper-silver nanoparticle composite	RSC Advances	12268-12276	12268-12276	2015
S.Banerjee, A.K.Sahoo, A.Chattopadhyay, S.S.Ghosh	Chemosensitization of I κ B α over-expressing glioblastoma towards anti-cancer agents,	RSC Advances	4	39257-39267	2014
S.Chockalingam and S.S.Ghosh	Macrophage Colony Stimulating Factor and Cancer	Tumor Biology	35 (11)	10635-44	2014
S.Banerjee, A.K.Sahoo, A.Chattopadhyay, S.S.Ghosh	Recombinant I κ B α -loaded curcumin nanoparticles for improved cancer therapeutics	Nanotechnology	29; 25 (34)	-	2014
S.K.Sailapu, A.K.Sahoo, S.S.Ghosh and A.Chattopadhyay	Hierarchical Logic Structures Based on Responsive Fluorescent Gold Nanoclusters	Small	29; 10 (20)	4067-71	2014
R.Khandelia, A.Jaiswal, S.S.Ghosh and A.Chattopadhyay	Polymer coated Gold Nanoparticle-Protein Agglomerates as Nanocarriers for Hydrophobic Drug Delivery	J. Mater. Chem. B	2 (38)	6472 - 6477	2014

Name of Author	Title of Paper	Name of Journal	Vol., Issue No.	Page No.	Year
S.Majumdar, Sarmah B, Gogoi D, Banerjee S, Ghosh S.S, Chattopadhyay P, AK Mukherjee AK	Characterization, mechanism of anticoagulant action, and assessment of therapeutic potential of a fibrinolytic serine protease (Brevithrombolase) purified from <i>Brevibacillus brevis</i> strain FF02B	Biochimie	103	50-60	2014
Ravi K. Biroju and P.K.Giri	Defect Enhanced Efficient Physical Functionalization of Graphene with Gold Nanoparticles Probed by Resonance Raman Spectroscopy	J. Phys. Chem. C	118 (25)	13833-13843	2014
Ravi K. Biroju, Nikhil Tilak, Rajender Gone, Dhara. S and P. K. Giri	Catalyst free growth of ZnO nanowires on graphene and graphene oxide and its enhanced photoluminescence and photo-response	Nanotechnology	26 (14)	145601	2015
N.V.V.Subbarao, M.Gedda, P.K.Iyer, D. K.Goswami	Enhanced environmental stability induced by effective polarization of a polar dielectric layer in a trilayer dielectric system of organic field-effect transistors: A quantitative study.	ACS Appl. Mater. Interfaces	7	1915-1924	2015
M.Gedda, N.V.V.Subbarao, S.Vasimalla, P.K.Iyer, D.K.Goswami	Effect of thickness of bi-layer dielectric on 1,7-Dibromo-N,N'-Dioctadecyl-3,4,9,10-perylene-tetracarboxylic diimide based organic field-effect transistors	Physica Status Solidi A: Applications and Materials Science	DOI 10.1002/pssa.201431304	2014	
A.Dey, A.Kalita, P.K.Iyer	High performance n-channel organic thin film transistor based on naphthalene diimide	ACS Appl. Mater. Interfaces	6	12295-12301	2014

Conference/Workshop/Seminar/Symposia

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
Archita Ghoshal and Siddhartha Sankar Ghosh	Functional Implications of Recombinant sFRP1	5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation and Apoptosis Jawaharlal Nehru University	2014
Sharmila Narayanan and Siddhartha Sankar Ghosh	Functional characterization of bacterially expressed recombinant phytaspase		
Md. Asif Raza and Siddhartha Sankar Ghosh	Application of redesigned E.coli cytosine deaminase in the perspective of cancer therapeutics		
Saptal Rarotra, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Electrolytic Production of Hydrogen Energy by Water-Splitting in Polymer based Micro reactors	Flow Chemistry India, Select Biosciences, CSIR-IICT, Hyderabad	2014

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
Sunny Kumar, MitradipBhattacharjee, SeimTimung, Amit Kumar Singh, Tapas Kumar Mandal, Ashok Kumar Dasmahapatra and DipankarBandyopadhyay	Marangoni Effect Induced Drop-let Motion for Energy Harvesting	Emerging Materials: Characterization & Application CSIR-CGCRI, Kolkata	2014
Amit Kumar Singh, SeimTimung, Divesh Ranjan, SaptakRarotra, Tapas Kumar Mandal and DipankarBandyopadhyay	Vinegar Driven Micromotors for Nanoparticle Synthesis	Emerging Materials: Characterization & Application CSIR-CGCRI, Kolkata	2014
Seim Timung, Abhinav Sharma, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Field Induced Flow Behaviors of Oil-water Flow inside Microfluidic Channels	International Conference on MEMS and Sensors, IIT Madras, Chennai	2014
SaptakRarotra, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Field induced Conversion of CO ₂ and Sea Water into Organic Products inside a Micro-fluidic Reactor	International Conference on MEMS and Sensors, IIT Madras, Chennai	2014
Joydip Chaudhuri, Seim Timung, Tapas Kumar Mandal and Dipankar Bandyopadhyay	Computational Study of Transition of Oil-water Flow Morphology due to Sudden Contraction in Microfluidic Channel	COMSOL Conference Bangalore	2014
Mitradip Bhattacharjee, NilanjanMandal, Harshal B. Nemade and Dipankar Bandyopadhyay	Simulation of a Voltage Controlled Resistor Mimicking the Geometry of a MOSFET Device having Graphite Channel,	COMSOL Conference Bangalore	2014
Kartick Mondal, Sunita Sen, Prashant Kumar, and Dipankar Bandyopadhyay	Influence of Charge Leakage and Slippage on the Electric Field Induced Patterns in Thin Bilayers,	International Conference on Nano Science and Technology, INST, Mohali	2014
Mitradip Bhattacharjee, Nilanjan Mandal, Satarupa Dutta, SaptakRarotra, Harshal B. Nemade, Arun Chattopadhyay and Dipankar Bandyopadhyay	Controlled Drug Release: Attachment of Drugs on Magnetic Nanoparticles,	International Conference on Translational Nanomedicine ILS, Ahmedabad	2014
Satarupa Dutta, NilanjanMandal, MitradipBhattacharjee, Harshal B. Nemade, Arun Chattopadhyay and Dipankar Bandyopadhyay	Paper Based Optical Alpha-amy-lase Sensor,	International Conference on Translational Nanomedicine ILS, Ahmedabad	2014
Namami Goswami, Ujjwol Barman, Roy Paily, Biplab Bose and Siddhartha Sankar Ghosh	A Highly Sensitive Lithium Niobate Based Microcantilever for Biosensing Applications	International Conference on Emerging Trends in Electrical Engineering ICETREE, Kollam, Kerala	4-6 August, 2014
Ratul Kumar Baruah and Roy Paily	Impact of Fringing Fields in a p-Channel Junctionless Transistor	International Conference on Emerging Electronics (ICEE) Indian Institute of Science Bangalore	4-6 December, 2014
Brajesh Rawat and Roy Paily	PerformanceComparison between Graphene based Conventional MOSFET and TFET for Analog Circuits	Conference on Transport-Properties in Low Dimensional Systems: Experiment and Simulation(TransLES-2014) IASST, Guwahati	11-13, December 2014

Name of Author/s	Title of Paper	Name of Conference/Workshop/Seminar/Symposia	Date
Ravi K. Biroju and P. K. Giri	Graphene Based 2D-0D Transition Metal Hybrids and Fabrication of 2D-1D Semiconducting Nanowire Heterostructures with Improved Optoelectronic Properties: A New Class of 2D-1D Hybrid Photodetectors	Reflux-2015, The annual Chemical Engineering Symposium, Organized by Department of Chemical Engineering, IIT Guwahati	March 27-29, 2015.
Ravi K. Biroju and P. K. Giri	Graphene enhanced UV photo-detector based on graphene-ZnO nanowires hybrid: fabrication, photoresponse and photoluminescence studies	First International Conference on Emerging Materials: Characterization and Application (EMCA-2014), Kolkata	December 4-6th, 2014
Ravi K. Biroju and P. K. Giri	Fabrication of graphene/ZnO and graphene/CoPc semiconducting nanowire hybrid structures and their optoelectronic properties	International Conference on Nanoscience and Technology (ICON-SAT-2014), Institute of Nanoscience and Technology (INST), Punjab University, Mohali	March 23-25, 2014
P. K. Giri and Ravi K. Biroju	Site Selective Physical Functionalization of Single Layer Graphene and Its Application in the Growth of 1-D Semiconductor Nanostructures on Graphene	First International Conference on Emerging Materials: Characterization & Application (EMCA-2014), CGCRI, Kolkata	Dec 4-6, 2014
Rajender, Ravi K. Biroju and P. K. Giri	Effect of reduction and oxidation treatment on the photoluminescence of edge functionalized graphene quantum dots	First International Conference on Emerging Materials: Characterization and Application (EMCA-2014), Kolkata	December 4-6, 2014
Rajender, Ravi K. Biroju and P. K. Giri	Strong visible luminescence from edge functionalized 0-dimensional graphene quantum dots	National Conference on Transport properties in low dimensional systems: Experiment and Simulation (TransLES-2014), Guwahati	December 11-13, 2014
Rajender, Ravi K. Biroju and P. K. Giri	One step solvothermal synthesis of graphene quantum dots: structural and optical studies	National Conference on Nanotechnology and Renewable Energy (NCNRE-2014), New Delhi	April 28-29, 2014

Book Chapter

Organic Semiconductors: A New Future of Nanodevices and Applications in "Thin Film Structures in Energy Applications" Springer publications by Anamika Dey, Ashish Singh, Dipjyoti Das, Parameswar Krishnan Iyer, 2015, pp 97-128.

CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty/Student	Name of Conf./Workshop	Place	Date	International/ National
Prof. Arun Chattopadhyay	5th Interdisciplinary Symposium on Materials Chemistry	BARC, Mumbai, India	09-13 December 2014	International
Prof. Arun Chattopadhyay	Advances in Spectroscopy and Ultrafast Dynamics	IACS, Kolkata, India	12-14 December 2014	International
Prof. Arun Chattopadhyay	1st International Conference on Emerging Trends of Nanotechnology in Drug Discovery	Delhi University	26-27 May 2014	International
Prof. Arun Chattopadhyay	India – Tunisia Join Workshop On Nanomaterials & Nanotechnology	Hotel Africa, Tunis, Tunisia	28-30 October 2014	International

Name of Faculty/ Student	Name of Conf./Workshop	Place	Date	International/ National
Prof. Arun Chattopadhyay	India-Finland workshop on Applications of nanostructures in photovoltaics	IIT Delhi	21 October 2014	International
Prof. Arun Chattopadhyay	International symposium on Micro- And Nano-machines 2014	Hannover, Germany	2-4 July 2014	International
Dr. Dipankar Bandyopadhyay	Self-Motile Systems - International Conference on NanoTechnology	Haldia Institute of Technology	2015	International
Dr. Dipankar Bandyopadhyay	Applications of Microfluidics: Sensors, Reactors, Pumps, & Mixers - State of the Art in Microfluidics	IIT Guwahati	2014	International
Dr. Dipankar Bandyopadhyay	Self-propelling Microbots Decorated with Catalytic and Magnetic Nanoparticles	KTH Stockholm, Sweden	2014	International
Prof. P. K. Giri	First International Conference on Emerging Materials: Characterization and Application (EMCA-2014)	Kolkata	December 4-6, 2014	International
Prof. P. K. Giri	3rd International Conference on Nanoscience and Nanotechnology (ICONN 2015)	Chennai	February 4-6, 2015	International

INVITED LECTURES OF FACULTY: IN INDIA, ABROAD:

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. S.S. Ghosh	Nanoscale Materials in Cancer Theranostics	Indo-Swiss one day workshop on August 30 2014 Organized by the Centre for Nanotechnology, IITG	IIT Guwahati	30th August 2014
Prof. S.S. Ghosh	Nanoclusters as Logic Gate and Cancer Theranostics	National Seminar on Recent Advances in Biotechnological Research in North East India: Challenges and Prospects, Organized by Department of Molecular Biology and Biotechnology, Tezpur University	Tezpur University	28th November 2014
Prof. S. S. Ghosh	FICS-2014	Session Chair, Organized by the Department of Chemistry, IITG	IIT Guwahati	5th December 2014
Prof. S. S. Ghosh	Nanotechnology in Cancer Theranostics and Protein Therapeutics	New Advances and Horizons in Nanoscience And Nanotechnology, (NanoSci-2014), IASST, Guwahati	IIT Guwahati	20th December 2014
Prof. S. S. Ghosh	Nanotheranostics for integration of imaging and targeted drug delivery	National Conference on Chemistry of Chalcogens and Related Topics (NC3-2015) Organized by Dept. of Applied Chemistry, DIAT, Pune	Defence Institute of Advanced Technology, Pune	12th January 2015
Prof. S.S. Ghosh	A new paradigm for targeted suicide gene therapy	TTE-QIP Short term course on "Theoretical and practical aspects of cancer research" by the Department of Biosciences and Bioengineering	IIT Guwahati	6th February 2015
Prof. S. S. Ghosh	Polymer-Based Nanotheranostics: A single platform for bio-imaging and targeted delivery	Short term course on "Advances in Biomedical Research" by the Department of Biosciences and Bioengineering	IIT Guwahati	26th February 2015

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
Chairman: Prof. Arun Chattopadhyay; Convener: Dr. Dipankar Bandyopadhyay	A National workshop on NEMS and Theranostic Devices	DeitY	16-17 March 2015	National	85
Convener: Prof. Parameswar K. Iyer	1st Indo-Sweden Workshop on "Advanced Materials for Healthcare and Energy"	Centre for Nanotechnology	30 August 2014	International	40

AWARDS AND HONOURS:

Prof. Arun Chattopadhyay

- Re-nominated as an Editorial Advisory Board member of the Royal Society of Chemistry Journal Nanoscale.
- Member, Task Force on Nanobiotechnology, Department of Biotechnology, Government of India.
- Member, Swarnajayanti Fellowship Selection Committee (Chemical Sciences), Department of Science and Technology.
- Member, Editorial Board of the Indian Journal of Chemistry, Sec A, for the term 2015-17.

Prof. Parameswar K. Iyer

- Invited to serve as Editorial Board Member for Scientific Reports, a journal from Nature Publishing Group, the publishers of Nature for a period of two years.

Dr. Dipankar Bandyopadhyay

- Erasmus-Mundus Visiting Faculty under the COSSE Program, KTH Stockholm, Sweden, September 2014.

STUDENTS' ACHIEVEMENTS:

- Shyam Trivedi received the best Poster Award for the paper entitled "ZnO nanorod based 36°-YX LiTaO₃ Love wave resonator for DNA detection" in the International Conference on MEMS and Sensors (ICMEMSS 2014), December 18-20, organized by the Centre for NEMS and Nanophotonics at IIT Madras.
- Ravi K. Biroju received the best Poster Award in International Conference on Nanoscience and Technology (ICONSAT-2014), Institute of Nanoscience and Technology (INST), Punjab University, Mohali, March 23-25, 2014.
- Ravi K. Biroju received the Certificate of Excellence (1st prize) for the Paper Presentations (MST), Reflux2015, The annual Chemical Engineering Symposium, Organized by Department of Chemical Engineering, IIT Guwahati, India, March 27-29, 2015.

FACULTY MEMBERS ASSOCIATED WITH THE CENTRE

Sl. No.	Name	Designation and Department
1	Bandyopadhyay, D.	Assistant Professor, Department of Chemical Engineering
2	Bose, B.	Assistant Professor, Department of Biotechnology
3	Chattopadhyay, A.	Professor, Department of Chemistry
4	Ghosh, S. S.	Professor, Department of Biotechnology
5	Giri, P. K.	Professor, Department of Physics
6	Goswami, D. K.	Associate Professor, Department of Physics
7	Iyer, P. K.	Professor, Department of Chemistry
8	Mandal, T. K.	Assistant Professor, Department of Chemical Engineering
9	Nemade, H. B.	Associate Professor, Department of Electronics and Electrical Engineering
10	Paily, R. P. (Head, Centre for Nanotechnology)	Professor, Department of Electronics and Electrical Engineering
11	Paul, A.	Associate Professor, Department of Chemistry
12	Sahoo, L.	Professor, Department of Biotechnology

LAKSHMINATH BEZBAROA CENTRAL LIBRARY

The Central Library of the Institute was named after legendary literary doyen Sahityarathi Lakshminath Bezbaroa on 5th December, 2014. The Lakshminath Bezbaroa Central Library is housed on a four stored building having a floor area of about 7500 sq. meter. This user-focused and excellence-driven facility has up-to-date, multi-faceted printed, electronic and multi-media collection. The library provides a window to the world of latest information in all branches of academic pursuit. Being a major central service point, it provides necessary supports for teaching, learning, research activities of the Institute by creating state-of-the-art facilities and offering innovative services to the students, faculty and staff members and visiting intelligentsia. The library operations are fully computerized and the entire premise is provided with wi-fi facility for connecting to the internet and accessing Institute's electronic resources.

During the reported period, the total library circulation transactions stand about 1.5 lacks. In addition, 228 users of other academic Institutions have also availed the reference facility of the Lakshminath Bezbaroa Central Library. To provide the reading facility to the Institute's academic community, Library remains open from 8.00 am to 12.00 midnight throughout the year.

1. Collection Development:

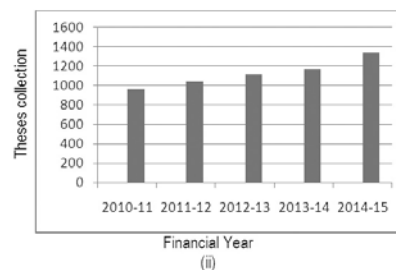
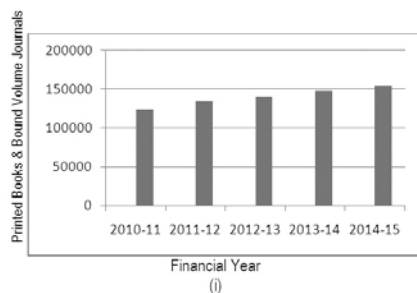
a) The library has a fast growing collection of books, journals, magazines both in print and digital format. A large number of books, database, international and national journals on various subjects have been added during the Financial Year 2014 -15. The total collection strength of the Library now stands as follows:

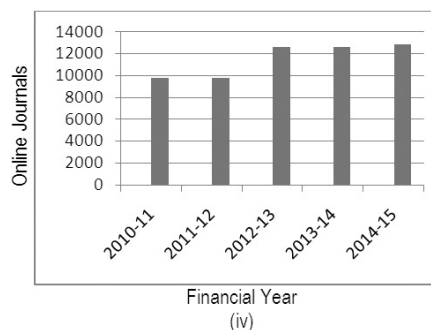
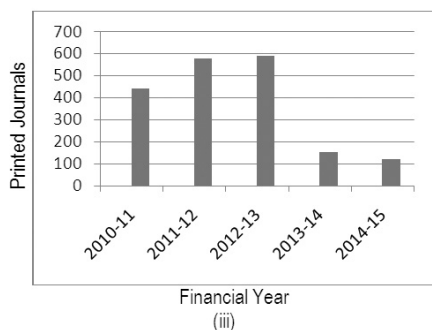
Details	Collection Size
Printed Books and bound volume journals	154564
E- books	145770
Back file electronic journals	2042
Theses, standards, Reports etc.	2675
Non-Book material (CD, DVD, etc.)	4952
Print & Online Journal Subscription (F.Y.2014-15)	2291
Current electronic journals (including journals subscribed and access provided by Consortia)	12835

b) The growth of the collections during last five years stands as follows:

Sl. No.	Collection	F.Y.				
		2010-11	2011-12	2012-13	2013-14	2014-15
(i)	Printed Books and Bound Volume Journals	124358	134687	140434	148181	154564
(ii)	Theses collection	965	1048	1119	1169	1343
(iii)	Printed Journals	441	578	591	151	120
(iv)	Online Journals	9795	9795	12630	12656	12835

c) As most of the research activities are heavily dependent on the journal publications, Library has emphasized on regular





subscription of the current journals. Further, for better accessibility of the contents, efforts have been made to increase the online journals over the printed journals. Presently the Library is subscribing 2291 titles across all academic areas of which 2216 are online journals. In addition to that Institute is having access to 10619 online journals through 'INDEST-AICTE Consortium' and 'DeLCON: DBT-Electronic Library Consortium'.

d) Apart from the above, Library has procured some of the world's most renowned abstract database like SciFinder, MathSciNet, Scopus, Web of Science, INSPEC, etc. and some national level database i.e. CMIE Prowees, EPWRFTime Series, IEC during the reporting period.

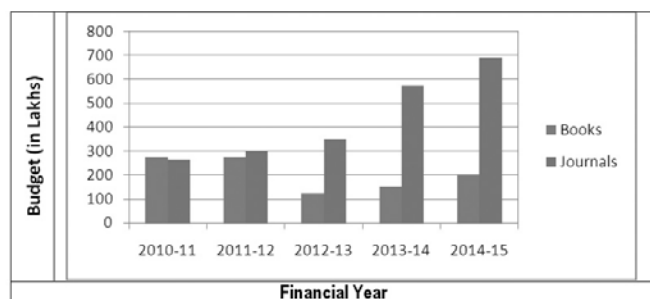
e) During the reporting period the Library has added about 1.38 lakhs of ebooks across all disciplines of academic interests.

f) To make awareness about the regional culture and to generate interest about the vernacular literature, Library has also developed a reasonably good collection on Assamese language and on literary works of Sahityarthi Lakshminath Bezbaroa.

2. Budget:

The books and research journal budget of the Lakshminath Bezbaroa Central Library has also increased over the last 5 financial years, details of which as follows:

Year	Books (Rs. in Lakhs)	Journals (Rs. in Lakhs)
2010-11	275.00	265.49
2011-12	275.00	301.90
2012-13	125.00	350.00
2013-14	150.00	573.00
2014 -15	200.00	690.00



3. Services and Facilities:

a) To provide sufficient reading facility, the Central Library has added 49 seating capacity during the reporting period. With this the total seating capacity now stands 250.

b) To extend better searching of huge electronic resources of the Library a world renowned Discovery Service has been incorporated.

c) A new user-friendly webpage has been designed for easy access to electronic resources accessible to the Institute.

d) Barcode based automated circulation system continues to provide hassle free transactions for the users' community. The system is being revamped with better barcode technology for faster transactions.

e) For safe keeping of personal belongings of the library users, key based Locker Units has been made available throughout the library operation hours.

4. Infrastructural development :

a) For enabling better delivery of circulation facility, the library management software has been upgraded to web-based version. This helped to provide better browsing of the library collection, instant email and SMS generation for individual library transactions.

b) RFID based circulation and security system is being implemented for helping the users to do self check-in / check-out of library books in near future.

c) A shade on the Podium Walk Way area, outside 1st Floor of the Library building, has been erected for leisure reading.

d) Online catalogue kiosks have been installed for the users to browse the library collection.

e) Separate computer terminals have been provided for the visitors to access internet and library facilities.

LIBRARIAN

Dr. Tamal Kumar Guha

CENTRE FOR EDUCATIONAL TECHNOLOGY

YEAR OF ESTABLISHMENT OF THE CENTRE: 2004

ACADEMIC PROGRAMMES OFFERED:

1	Masters and PhD (All Engineering Departments)	QIP
2	Short Term courses for Teachers of Technical Institutes under QIP	Curriculum Development Cell
3	1. Short term courses; Training Programs under TEQIP	Knowledge Incubation Cell (KIC): Quality Circles-TEQIP
	2. Canadian and Indian Student Exchange Programme	
4	Summer & Winter Academy offering International Courses with credits	GIAN

LABORATORIES:

- Web Laboratory:

Uploads & maintains NPTEL Content on Servers for National & International web cast via NPTEL HQ at IITM.

- Video Studio

Captures using HD cameras educational content of lectures, shows, demonstrations, etc given by Authors of NPTEL Courses.

- Sound & Broadcast Studio

Edits sound in educational content created at IITG

- Instruction Design Lab:

Works on Instructional Design using Educational Psychology and Pedagogy to enhance educational content created at IITG for NPTEL, MOOCs and other NMEICT projects at CET.

- Graphic Design Studio: Gives graphic design inputs to educational content that is created and uploaded.

- Server Room & Digital Archives :

Provides a mirror Server , backup storage and preserves original Video & sound tapes on which educational content is recorded.

- 3D Virtual Content Creation Lab :

Conducts Research on creation of next generation 3D Virtual reality educational content using a Virtual Reality System with Headgear mount.

- E-Learning Class Room :

Provides all facilitates to conduct ON Line lectures and connects across the Nation. Provides facilities for IITG Faculty to conduct Lectures in other IITs, & institutions from IITG campus. Has a seating capacity of 50 students. Students of IITG can display Webcasts and lectures held elsewhere in other institutions. Due to space constraints Digital Recording Studio and Webcast Studios are co located in E-Learning class Room.

- NKN-Video Conferencing Room:

Provides Conferencing Facilities for 25 participants through NKN dedicated line using which IITG Faculty conduct classes for other IITs /Institutions from within IITG. This space also doubles up for use as Regular Conference & meeting room for CET.

- VR Labs: Physically located in 6 departments at IITG in which ON Line & Remote Triggered Labs are operated.

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

Wireless Pen Tablet

Interactive Teach Bar

Document Camera

Interactive Projector

NI ELVIS II + Circuit Design Bundle

Emona ETT-211 FOTEX Fiber Optic Communication Trainer

1 x High Torque Encoder DC Servo Motor 900rpm + 2x High Torque Encoder DC Servo Motor 300rpm

3 x High Torque Encoder DC Servo Motor 900rpm

DELL PRECISION T7610 Workstation

NI PXIe-8135 core i7-3610QE 2.3 GHz Controller

NI PXIe-6563, X Series multifunction DAQ(32 AI, 48 DIO, 4AO), 2MS/s single channel sampling rate

NI PXI-6723 32-channel analog output board

NI Standard service program for systems with traceable calibration

HP Laptop Pavillion Notebook
 PXIe-1082, 8-slot 3U PXI express chassis
 SCB-68A Noise rejecting, Shielded I/O Connector block
 SHC68-68-EPM shielded cable, 68-D-Type to 68 VHDCI
 offset, 2 m

MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

Educational Content Creation, Pedagogy & Instructional Design Research, Multidisciplinary Teaching Applications using Online Educational Technology, Training & Continuing Education.

MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT:

Name	Courses Developed and Hosted Online	Labs De-veloped
NPTEL	20 (16 Web courses & 4 Video Courses) (Total 80 Courses are online till now)	02
Virtual Lab Project	13 Experiments (Total 165 Experiments are completed till now)	05
D. Source	Course 24; 14 Case studies; 15 Design Resources	

RESEARCH PROJECTS

a) New Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
Prof. PradeepYammiyavar	Student Mobility for Canadian Students for Research at IITs	MHRD	-	-	-
Prof. PradeepYammiyavar	Global Initiative on Academic Network (GIAN)	MHRD	-	-	-

b) Ongoing Sponsored Projects

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (Rs. in Lakh)	Co-Investigator	Duration (years)
PradeepYammiyavar	NPTEL-II	NMEICT	325.84	-	3 years
Dr. Jatindra Kumar Deka	Pedagogy Research Project, Main Phase	MHRD, GOI	91.94	-	3 years
Prof. PradeepYammiyavar	Knowledge Incubation Cell	MHRD-TEQIP-II	250	Dr. Praveen Kumar	3 years.
PradeepYammiyavar	QIP -Curriculum Development Cell	AICTE		-	Annual
Prof. Ravi Mokashi Punekar	D-Source -E-Kapla	NMEICT	157		3 years
Prof. Ratnajit Bhattacharjee	Virtual Lab	NMEICT	319	-	3 years

RESEARCH PUBLICATIONS

Conference/Workshop/Seminar/Symposia

Name of Author/s	Name of Paper	Name of Conference/ Workshop/Seminar/Symposia	Date	Vol., Issue and Page No.
Salve, S., and Yammiyavar, P.	A study on efficiency of input devices on native language during numerical data entry	HWWE'14, International Ergonomics Conference - User Centered Design and Occupational Wellbeing , Guwahati	December 3-5; 2014	McGraw McGrawHill Education (India) Pvt. Ltd. New Delhi. ISBN (13): 978-93-392-1970-3

Name of Author/s	Name of Paper	Name of Conference/ Workshop/Seminar/Symposia	Date	Vol., Issue and Page No.
Yammiyavar, P., Srivastava, A., and Shashidhara, S	Design of Tangible Interactive Learning Aids for Pre-primary School Teaching Environment: A sustainable approach.	Design for Sustainable Wellbeing and Empowerment 2014, DfWnE2014, IISc Bangalore	2014	Volume 1 (pp. 391-404). ISBN (IISc Press): 978-81-925707-1-6, ISBN (TU Delft): 978-9496186-345-4
Khilare, K., Yammiyavar, P., and Bhattacharya, S.	Development of Graphic user interface Keyboard for Indian Language Assamese	HWWE'14, International Ergonomics Conference - User Centered Design and Occupational Wellbeing, Guwahati	Dec 2014	Proceedings of International Ergonomics Conference HWWE 2014; McGraw Hill Education, ISBN (13): 978-93-392-1970-3, ISBN (10): 93-392-1970-
Maulishree Pandey ¹ , Vikas Luthra ¹ , Pradeep Yammiyavar ¹ , and Anita P.Y.	Virtual Reality Based learning aid to understand projection and section of solids in architectural graphics	16th International Conference on Human Computer Interaction -HCI, Greece	June 2014	Proceedings. Springer International
Maulishree Pandey ¹ , Vikas Luthra ¹ and Pradeep G. Yammiyavar; Anita .P.Y.	Role of immersive virtual reality in fostering creativity among architecture students	International Conference on Design Creativity (3rd ICDC) Bangalore	Januray 12-14th 2015	Proceedings, ISBN 978-1-904670-60-5

SEMINARS/WORKSHOPS/CONFERENCES /SHORT-TERM COURSES ORGANISED

Sl. No.	Name of Faculty (Convener/ Co-ordinator)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
Under TEQIP						
1.	Dr. Karuna Kalita & Dr. Amaresh Dalal	Brainstorming Workshop on Development of Processes and Devices for Bio-medical Applications	MHRD	8-Oct-14	National	50
2.	Dr. Praveen Kumar & Dr. Pradeep Yammiyavar	Workshop on Internal Quality Assurance Mechanism	MHRD	21-Oct-14	National	15
3.	Dr. Nitin Chaudhary & Dr. Vibin Ramakrishnan	Peptide drugs: From Modeling to Practice	MHRD	Nov 07-08, 2014	National	34
4	Dr. G. Krishnamoorthy	Sophisticated Instruments in Interdisciplinary Research	MHRD	Nov 10-13, 2014	National	17
5	Dr. Pankaj Upadhyay & Dr. Ravi Mokashi Puneekar	Creative Learning Methods in Technical Education Design	MHRD	Nov 11-15, 2014	National	24
6	Dr. Arnab Sarkar & Dr. Santosh Biswas	Real-time Embedded System: Design, Verification and Test	MHRD	Nov 27-29, 2014	National	26
7	Dr. Swati Pal	Expert meeting and panel discussion on Formulation of Curriculum for Ergonomics and Occupational Health	MHRD	Dec 04, 2014	National	10

Sl. No.	Name of Faculty (Convener/ Co-ordinator)	Name of Sem./Wor./Con.	Funded By	Date	International/National	No. of participants
8	Dr. Ramgopal Uppaluri	Technical Writing Workshop	MHRD	Dec 06-07, 2014	National	52
9	Dr. Bishnupada Mandal & Dr. Chandan Das	Membrane Technology & Application	MHRD	Dec 09-10, 2014	National	33
10	Dr. Bishnupada Mandal, Dr. Vimal Katiyar,	Transport Processes and Optimization Techniques in Polymers (Module I),	MHRD	Dec 15-16, 2014	National	28
11	Dr. Amit Kumar, Dr. Prakash Kotecha	Transport Processes and Optimization Techniques in Polymers(Module II),	MHRD	Dec 17-18, 2014	National	
12	Dr. Anandalakshmi & Dr. Raghvendra Gupta	Transport Processes and Optimization Techniques in Polymers(ModuleIII)	MHRD	Dec 19-20, 2014	National	
13	Dr. M. Ravi Sankar	Advanced Machining and Finishing Processes	MHRD	Dec 15-16, 2014	National	
14	Dr. Manish Kumar Goyal, Dr. A.K. Sarma	Water Resources Management and climate Change Impacts Assessment	MHRD	Dec 22-26, 2014	National	33
15	Dr. Swarup Bag	Advances in Welding and Joining Technologies Mech. Engg.	MHRD	Dec 29-31, 2014	National	27
16	Dr. Avishek Parui	Developing and Teaching Literary Theory Courses in the 21st Century Academia	MHRD	Jan 08-09, 2015	National	30
17	Dr. A. Dalal, Dr. D.N. Basu	State of the art in Microfluidics	MHRD	Jan 09, 2015	National	41
18	Dr. Ajay Kalamdhad	Solid Waste Management-challenges and opportunities Environment	MHRD	Jan 12-14, 2015	National	52
19	Dr. Ratnajit Bhattacharjee	Recent Advances in Communication and Signal Processing	MHRD	Jan 12-16, 2015	National	19
20	Dr. V. Prabhu	Workshop on Human Values and Ethics	MHRD	Jan 21-23, 2015	National	26
21	Dr. Chandramohan Somayaji, Dr. P. Muthukumar	Recent Trends in Renewable Energy Utilization System	MHRD	Jan 23-24, 2015	National	21
22	Dr. AB Kunnumakkara	Theoretical and Practicle Aspects of Cancer biology	MHRD	Feb 4-8, 2015	National	33
23	Dr. L. Boeing Singh, Dr. Ajay Kalamdhad	Symposium on Management and Procurement of Integrated Waste Management System	MHRD	Feb 06-07, 2015	National	49
24	Dr. M. G. P. Prasad	Mathematics for Engineering Education	MHRD	Feb 16-20, 2015	National	25
25	Dr. B. K Sarma, Dr. Bhupen Deka	Mathematics Teaching: Pedagogy and Practice	MHRD	Feb 20-22, 2015	National	16
26	Dr. K. Mahata, Dr. S.P. Biswas	Solar Energy Harvesting	MHRD	Feb 20-21, 2015	National	7

Sl. No.	Name of Faculty (Convener/ Co-ordinator)	Name of Sem./Wor./Con.	Funded By	Date	International/National	No. of participants
27	Dr. K. Mohanty, Dr. Tamal Banerjee	Emerging Micro pollutants in the Environment: Occurrence, Transportation, Monitoring and Treatment	MHRD	Mar 23-27, 2015	National	35
28	Dr. Gaurav Trivedi, Dr. Hemangee Kapoor	Recent Trends in Electronics and computation	MHRD	March 9-11, 2015	National	37
29	Dr. Ashish Anand, Dr. Arnab Sarkar	Information & Communication Technology in Healthcare- Challenges & promises	MHRD	Mar 25, 2015	National	
30	Prof. P. Yammiyavar, Dr. Utpal Bora	IPR in Innovation and Entrepreneurship	MHRD	March 16, 2015	National	65
Total						805
STC under QIP						
31	Dr. Benny George K, Dr. Saswata Shannigrahi	Teaching Data Structures and Algorithms	MHRD	1.12.14 to 5.12.14		14
32	Dr. Sambit Mallick	Intellectual Property Rights and Innovation	MHRD	11.12.14 to 12.12.14		32
33	Dr. Rajesh Kumar Upadhyay, Dr. Raghvendra Gupta	Multiphase Flow Reactors Insights through Experimental and CFD Techniques	MHRD	16.12.14 to 20.12.14		25
34	Dr. Biman B. Mandal, Dr. Piruthivi Sukumar	Workshop on Advance in Biomedical Engineering	MHRD	25.02.15 to 01.03.15		20
35	Dr. Manas Das, Dr. Sukhomoy Pal	Micro-manufacturing	MHRD	22.12.14 to 26.12.14		30
36	Dr. A. Perumal, Dr. D. Pamu	Smart materials and their application in nanotechnology	MHRD	23.12.14 to 27.12.14		35
37	Dr. Deepak Sharma	Genetic Algorithms for Engineering Optimization	MHRD	28.12.14 to 01.01.15		35
38	Dr. Hrishikesh Sharma	Impact and Blast Resistant Design of Structures	MHRD	January 2015		22
39	Asst. Prof. CharuMonga	DESIGN: Education, Research & Innovation (DERI)	MHRD	2.02.15 to 6.02.15		25
40	Dr. Utpal Bora, Prof. Chandan Mahanta	Advances in Environment Health	MHRD	09.02.15 to 13.02.15		35
41	Dr. Partha Sarathi Mandal	Recent Trends in Networks and Distributed Computin	MHRD	10.02.15 to 14.02.15		20
42	Dr. S.N Joshi, Prof. U.S Dixit	Micro-manufacturing Technology	MHRD	23.03.15 to 27.03.15		37
43	Dr. Mamilla Ravi Sankar	Micro-manufacturing for Biomedical Applications	MHRD	23.02.15 to 27.02.15		25
44	Prof. Ranjan Choudhary, Prof. Akhilesh Kumar Maurya	Innovative Technologies in Transportation Engineering	MHRD	23.02.15 to 27.02.15		23

Sl. No.	Name of Faculty (Convener/ Co-ordinator)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
45	Dr. Ramesh Kumar Sonkar, Dr. Kshetrimayum Rakesh Singh	RF and Photonics: Fundamentals &Advances	MHRD	23.02.15 to 27.02.15		27
46	Dr. V V Goud, Dr. PankajTiwari	Recent Advances in Energy Research	MHRD	23.03.15 to 27.03.15		25
47	Dr. Chandramohan Somayaji, Dr. P. Muthukumar	Advancement in Renewable Energy and Utilisation Technology	MHRD	02.03.15 to 06.03.15		30
48	Dr. Arnab Sarkar, Dr. Santosh Biswas	Computational Methods for Smart Grids	MHRD	9.03.15 to 13.03.15		32
49	Dr. Anil Kumar Mishra, Dr. T V Bhat	Recent Advances and Challenges in Geotechnical Engineering Research and Practices	MHRD	9.03.15 to 13.03.15		17
50	Dr. Pankaj Biswas, Dr. Sachin D. Kore	Modern Scenario in Welding Technology	MHRD	16.03.15 to 20.03.15		42
51	Dr. Sushanta Karmakar	Algorithm and Game Theory	MHRD	10.03.15 to 14.03.15		24
52	Dr. A. Narayana Reddy, Dr. K.S.R.K Murthy	Theory and Applications of Finite Element Analysis	MHRD	23.03.15 to 27.03.15		31
Total						606
Workshop under Virtual Lab						
53	Dr. Ratnajit Bhattacharjee, Dr. Santosh Biswas	Virtual Lab Outreach Workshop at Don-bosco University, Guwahati	MHRD	18th March 2015		150
54	Dr. Ratnajit Bhattacharjee, Dr. Santosh Biswas	Virtual Lab Outreach Workshop, IIIT Guwahati	MHRD	19th March 2015		90
55	Dr. Sukanya Sarma	Virtual Lab Outreach Workshop, Madhya Kamrup College, Barpeta	MHRD	28th March 2015		40
Total						280
ALL TOTAL REGISTERED PARTICIPANTS						1691
TOTAL NO OF STC, WORKSHOPS,EVENTS COMPLETED						55

FACULTY MEMBERS ASSOCIATED WITH THE CENTRE

Sl. No.	Name	Designation and Department
1	Bhattacharjee, R.	Professor, Department of Electronics and Electrical Engineering
2	Deka, J.	Associate Professor, Department of Computer Science and Engineering
3	Kumar, P.	Associate Professor, Department of Electronics and Electrical Engineering
4	Punekar, R. M.	Professor, Department of Design
5	Yammiyavar, P. (Head, Centre for Educational Technology)	Professor, Department of Design

CENTRAL INSTRUMENTS FACILITY

YEAR OF ESTABLISHMENT OF THE CENTRE: 2004

EXISTING FACILITIES (MAJOR EQUIPMENT):

- 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer, Make: Varian, Model: Mercury plus
- Electron Spin Resonance (ESR) Spectrometer, Make: JEOL, Model: JES-FA200
- Scanning Electron Microscope (SEM), Make: LEO, Model: 1430vp
- Confocal Laser Scanning Microscope (CLSM), Make: Zeiss, Model: LSM 510Meta
- Field Emission Scanning Electron Microscope (FESEM), Make: Zeiss, Model: Sigma
- Atomic Force Microscope (AFM) and Scanning Tunneling Microscope (STM), Make: Agilent, Model 5500 series
- Laser Micro Raman System, Make: Horiba Jobin Vyon, Model LabRam HR
- High Temperature Differential Scanning Calorimetry (DSC)/Thermo Gravimetric (TG) System, Make: Netzsch Model: STA449F3A00
- Transmission Electron Microscope (TEM), Make: JEOL, Model: JEM 2100
- Vibrating Sample Magnetometer (VSM), Make: Lakeshore, Model: 7410 series
- Liquid Chromatography Mass Spectrometer (LCMS/MS), Make: Waters, Model: Q-ToF Premier
- Picosecond Time-resolved cum Steady State Luminescence Spectrometer, Make: Eddinburg Instruments, Model: FSP920
- Physical Property Measurement System (PPMS), Make: Quantum Design, Model: PPMS-9
- Nanoindenter Make: CETR, Model: UNMT-1
- Spectroscopic Ellipsometer Make: SEMILAB, Model: GESSE
- Single Crystal X-ray Diffractometer, Make: Agilent Model: Single source supernova E (Mo source).
- Surface Area and pore size analyzer Make: Quantachrome Instruments, Model: Isorb HP1

- High pressure gas sorption analyzer, Make: Quantachrome Instruments, Model: Autosorb, IQ MP
- Impedance and Material Analyzer (IMA), Make: Quantachrome Instruments, Model: Autosorb, IQ MP
- 600 MHz Nuclear Magnetic Resonance (NMR) Spectrometer, Make: Bruker, Model: Ascend 600
- Micro Particle Image Velocimetry, Make: DANTEC, Model: 9080M0571
- Isothermal Titration Calorimeter, Make: Wipro GE, Model: itc200
- High Temperature Gel Permeation Chromatography, Make: Agilent, Model: G 7820A

MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

- Universal Tasting Machine (UTM)
- MALDI Toff -Toff Mass spectrophotometer

SPECIAL MENTION:

- External Sample Collection: An amount equals to Rs. 1,83,031.00 approximately has been collected as charges of external samples analysis for the period from 1st April 2013 to 31st March 2014.
- Short Term course: For the first time a short term course on "Sophisticated Instruments in Interdisciplinary Research" was organized by the center from 24th to 27nd November 2014.

Significant Person Visited

Prof. V. Ramamurthy, Senior Editor Laungmuir, University of Miami, USA on 31st March 2015

Institute benefitted from the facilities of CIF

1. Gauhati University, Guwahati
2. Tezpur University, Tezpur
3. Manipur University, Manipur
4. Girizananda Institute of Pharmaceutical Science, guwahati
5. National Institute of technology (NIT) Tiruchiraapalli
6. Banaras Hindu University, Varanasi
7. North Eastern Hill University (NEHU), Shillong
8. Assam Don Bosco University, Guwahati

9. Veterinary College, Khanapara
10. Institute of Advanced Study in Science and Technology (IASST), Guwahati
11. Aligarh Muslim University (AMU), Aligarh
12. Shri Shankaradeva Nethralaya, Guwahati
13. National Institute of Technology (NIT) Silchar
14. Regional Dental College & Hospital, Guwahati
15. C. Abdul Hakeem College of Engineering and Technology, Melvisharam
16. Regional Institute of Pharmaceutical Science and Technology, Agartala
17. Central Institute of Technology (CIT), Kokrajhar
18. Institute of Bioresources and Sustainable development, Manipur
19. North Eastern Regional Institute of Science and Technology (NERIST), Itanagar
20. LNM Institute of Information Technology, Jaipur

FACULTY MEMBER ASSOCIATED WITH THE CENTRE

Krishnamoorthy, G., Associate Professor, Department of Chemistry (Head, Central Instruments Facility)

COMPUTER AND COMMUNICATION CENTRE

INTRODUCTION

The Computer and Communication Centre of IIT Guwahati is the central computing resource pool of the institute. The Centre is responsible for:

- Providing Email service and Internet connectivity to the institute
- Catering to the general purpose as well as high computational need of the users
- Maintenance of the campus network
- Hosting and maintenance of Institute's web pages
- Providing EPABX services
- Providing Office Automation services

The Centre has been involved in development of several in-house software packages. It is also providing assistance to other academic institute of north-east region of India. The centre also conducts summer training to facilitate external students.

The computer lab of the centre presently has more than 280 computers with configurations like 4 GB RAM, tri/core-i3 processors etc. The lab remains open for 16 hours in a day which is accessible to all authorized users of the Institute. Computer practical for the common courses are held in the Centre. The computer lab facilities of the Centre are also extended to the students of other institutes. The resources of the Centre are constantly upgraded to meet the ever evolving standards of information technology.

The Centre provides and maintains the PCs of the faculty and staff members of the Institute. In addition to providing direct support to the members of the Institute, the Computer and Communication Centre also frequently hosts write-ups (HOW-TOs, FAQs etc.) in its Intranet website. The Centre also maintains an online E-Notice board for posting and viewing notices electronically campus-wide, a web-based Complain Management Information System etc.

MAJOR EQUIPMENT AND FACILITIES

The major equipment purchased in 2014-2015:

Data Centre

A 1100 sq ft Data Center has been build up with all latest

equipments like Precision Air Conditioning, VESDA, Fire Detection and prevention mechanism in the 3rd floor of the building to cater the recent needs for the institute. The Centre will move all its servers to the Data Center as soon as it is ready. A new set of 80KVA x 3 nos. UPS has also been installed for uninterrupted power supply to Data Center.

Computer Network Enhancement

The centre is responsible for providing the network connectivity to upcoming hostels/building as well as to reinforce the existing network infrastructure. To cater the need a number of network equipment were purchased. They include Wall-mount racks, LIUs and other Fibre passive components like patch cord, pig-tail etc. The center has also extended the network and voice facility to some new offices and infrastructures, like Civil department extension block, New Boys and girls hostel, new academic extension blocks of various departments.

Apart from these, for the upcoming IITG Data Centre, we have procured managed network switches and its various associated passive components.

Also, the existing Bharti Airtel 45 Mbps internet link has been successfully upgraded to 60 Mbps.

Servers and PCs

On the Server front, the Computer Centre has two Clusters – one high availability Cluster meant for regular programming and the other is meant for High Performance Computing (HPC), which is integrated with the Nation-wide Garuda Grid. Apart from these, a mix of high-end Servers from IBM, Dell, SUN, and HP caters to the need for Authentication, E-mail, Proxy, Automation and Web services.

This year a total of 15 new high end servers has been procured to upgrade the Proxy servers, Mail Exchanger etc. and a blade chassis with five blade servers to be used in Automation project specifically.

We have also replaced the paper based Email and Proxy request process to an on-line request process. We had also increased the storage capacity of our mail backup server with an addition of 2TB. Moreover, we had upgraded the mail filters with new hardware and updated software under

the hardware refresh policy of Barracuda.

Renewal/Procurement of MoU/ Licenses/Softwares

This year the Centre had signed a MoU with CDAC, Pune, for setting up an establishment of State-of-the-Art CDAC – IIT Guwahati Supercomputing Facility.

Also, the Centre had renewed the Microsoft Campus License, the Matlab software with 165 licenses and Plagiarism detection Software TURNITIN with 1000 student user licenses.

Expansion of existing EPABX system

With the expansion of the campus, the Centre has increased the capability of the existing EPABX system and also extended its telephone network to new offices and expansion wings of the institute.

It has been observed that due to carbon decomposition and subsequent damaging of Krons in the outdoor telephone cables, we have been facing a lot of problems in EPABX based solutions. So, this year we have taken up a major work for the renovation of the whole IITG campus telephone outdoor terminations.

Office Automation Services

The Computer and Communication Centre has been involved in development of several in-house software packages for providing services to institute's various office automation work. These include online (Dual-Degree+MA+MTech-MDes/MS+MTCS+PhD) application as well as data process, Training and Placement, Student Course Registration, Alumni Registration, Student Affairs, Faculty Online Leave, Staff Administration, Faculty Administration, Student Course Feedback, e-Payment application, ID Card online application, IITG Payroll online.

This year, we have released IITG Payroll online and new online application for PhD-JRF and MTech-TCS. We have also integrated Donation module to the existing e-Payment application, Staff+Faculty+Alumni ID Card module to the existing ID Card online application and backlog course registration module to the existing Student Course Registration. We are planning to implement Application Software for different purposes for Academic, Student affairs, Medical section and Accounts along with the inclusion of hostel dues payment through e-Payment, automation of electricity bill and PDA .

ONGOING SPONSORED PROGRAMMES

National Knowledge Network (NKN) Project

Our Institute is an active partner of the National Knowledge Network (NKN). This year our Bandwidth from NKN has been upgraded to 2Gbps connectivity for video conferences, virtual classrooms and high-speed internet services.

This year NKN had organised its prestigious 3rd NKN Annual Workshop at IIT Guwahati where delegates from all over India and abroad had participated.

ERNET Point of Presence

IIT Guwahati, a PoP (Point-of-Presence) for ERNET India in the whole of North-Eastern India is entrusted with the task of networking the academic institutions of the region and provide technical assistance where required. Currently the following, seven educational and research institutes have taken Internet connectivity from the ERNET PoP.

IIT Guwahati, (1:1) 8 Mbps leased line

Tezpur University, Assam, (1:1) 2 Mbps leased line

Assam Agricultural University, Guwahati. (1:1) 2 Mbps leased line

National Research Centre on Pigs, (1:1) 1 Mbps leased line

Centre of Central Inland Fisheries Research Institute, (1:1) 2Mbps leased line

Rajiv Gandhi University, Arunachal Pradesh, (1:1) 2 Mbps leased line

North Lakhimpur College, Assam, (1:1) 2 Mbps leased line

The ERNET node is upgraded with high end Juniper routers, switches and firewalls. Now, the PoP backbone is upgraded to 1 Gbps connectivity to NKN Guwahati, NKN Delhi, and NKN Mumbai.

CONSULTANCY AND OTHER COMMUNITY SERVICES

The Centre has been involved in setting up of campus network and providing consultancy services to nearby educational institutes and state government.

WORKSHOP ORGANISED

The 3rd NKN Annual Workshop was jointly organized with National Informatics Centre (NIC) during 15-17 December 2014.

FACULTY MEMBER ASSOCIATED WITH THE CENTRE

Rao, S. V., Professor, Computer Science and Engineering (Head of the Computer and Communication Centre)

PART III

APPENDICES

Faculty

Officers and Scientific Staff (Group A)

Degree Awardees

Progress in Construction Works

Details of Research and Development Projects

Summary of Institute Accounts

Appendix-I

FACULTY

Name	Designation	Department
Baskaran, A.	Assistant Professor	Biosciences and Bioengineering
Bora, U.	Associate Professor	Biosciences and Bioengineering
Bose, B.	Associate Professor	Biosciences and Bioengineering
Chaturvedi, R.	Professor	Biosciences and Bioengineering
Chaudhary, N.	Assistant Professor	Biosciences and Bioengineering
Das, D.	Associate Professor	Biosciences and Bioengineering
Dasu, V. V.	Professor	Biosciences and Bioengineering
Dubey, V. K.	Professor	Biosciences and Bioengineering
Ghosh, S. S.	Professor	Biosciences and Bioengineering
Goswami, P.	Professor	Biosciences and Bioengineering
Goyal, A.	Professor	Biosciences and Bioengineering
Jaganathan, B. G.	Assistant Professor	Biosciences and Bioengineering
Kanaujia, S. P.	Assistant Professor	Biosciences and Bioengineering
Kumar, M.	Assistant Professor	Biosciences and Bioengineering
Kumar, S.	Assistant Professor	Biosciences and Bioengineering
Kunnumakkara, A. B.	Assistant Professor	Biosciences and Bioengineering
Limaye, A. M.	Assistant Professor	Biosciences and Bioengineering
Maiti, S. K.	Assistant Professor	Biosciences and Bioengineering
Mandal, B. B.	Assistant Professor	Biosciences and Bioengineering
Pakshirajan, K.	Associate Professor	Biosciences and Bioengineering
Pandey, L. M.	Assistant Professor	Biosciences and Bioengineering
Patra, S.	Associate Professor	Biosciences and Bioengineering
Ramakrishnan, V.	Assistant Professor	Biosciences and Bioengineering
Ramesh, A.	Associate Professor	Biosciences and Bioengineering
Rangan, L.	Professor	Biosciences and Bioengineering
Sahoo, L.	Professor	Biosciences and Bioengineering
Saini, G. K.	Associate Professor	Biosciences and Bioengineering
Sivaprakasam, S.	Assistant Professor	Biosciences and Bioengineering
Sukumar, P.	Assistant Professor	Biosciences and Bioengineering
Swaminathan, R.	Professor	Biosciences and Bioengineering
Tamuli, R.	Associate Professor	Biosciences and Bioengineering
Trivedi, V.	Associate Professor	Biosciences and Bioengineering
Anandalakshmi, R. (From 02.06.2014)	Assistant Professor	Chemical Engineering
Bandyopadhyay, D.	Assistant Professor	Chemical Engineering
Banerjee, T.	Associate Professor	Chemical Engineering
Das, C.	Assistant Professor	Chemical Engineering
De, M.	Associate Professor	Chemical Engineering
Ghosh, P.	Professor	Chemical Engineering
Ghoshal, A. K.	Professor	Chemical Engineering
Golder, A. K.	Associate Professor	Chemical Engineering

Name	Designation	Department
Goud, V. V.	Associate Professor	Chemical Engineering
Gumma, S.	Associate Professor	Chemical Engineering
Gupta, R. (From 14.07.2014)	Assistant Professor	Chemical Engineering
Katha, A. R. (From 15.09.2014)	Assistant Professor	Chemical Engineering
Katiyar, V.	Associate Professor	Chemical Engineering
Kishore, N.	Associate Professor	Chemical Engineering
Kotecha, P.	Assistant Professor	Chemical Engineering
Kumar, A.	Assistant Professor	Chemical Engineering
Mahapatra, A. D.	Assistant Professor	Chemical Engineering
Majumder, S. K.	Associate Professor	Chemical Engineering
Mandal, B.	Professor	Chemical Engineering
Mandal, T. K.	Associate Professor	Chemical Engineering
Mohanty, K.	Associate Professor	Chemical Engineering
Moholkar, V. S.	Professor	Chemical Engineering
Pattader, P. S. G. (From 12.09.2014)	Assistant Professor	Chemical Engineering
Peela, N. R. (From 21.07.2014)	Assistant Professor	Chemical Engineering
Pugazhenthii, G.	Associate Professor	Chemical Engineering
Purkait, M. K.	Associate Professor	Chemical Engineering
Rajaraman, P. V.	Assistant Professor	Chemical Engineering
Saha, P. K.	Professor	Chemical Engineering
Senthilmurugan, S.	Assistant Professor	Chemical Engineering
Singh, A.	Professor	Chemical Engineering
Subbiah, S.	Assistant Professor	Chemical Engineering
Tiwari, P.	Assistant Professor	Chemical Engineering
Upadhyay, R. K.	Assistant Professor	Chemical Engineering
Uppaluri, R. G. V. S.	Professor	Chemical Engineering
Vairakannu, P.	Assistant Professor	Chemical Engineering
Verma, A.	Associate Professor	Chemical Engineering
Bag, S. S.	Associate Professor	Chemistry
Baruah, J. B.	Professor	Chemistry
Biswas, S. P.	Assistant Professor	Chemistry
Chatterjee, S.	Assistant Professor	Chemistry
Chattopadhyay, A.	Professor	Chemistry
Das, D.	Assistant Professor	Chemistry
Das, G.	Professor	Chemistry
Dutta, S.	Assistant Professor	Chemistry
Gupta, A. K.	Associate Professor	Chemistry
Iyer, P. K.	Professor	Chemistry
Jana, C. K.	Assistant Professor	Chemistry
Khan, A. T.	Professor	Chemistry
Krishnamoorthy, G.	Associate Professor	Chemistry
Kundu, L. M.	Assistant Professor	Chemistry
Mahata, K.	Assistant Professor	Chemistry
Mandal, B.	Associate Professor	Chemistry
Manivannan, V.	Professor	Chemistry
Manna, D.	Assistant Professor	Chemistry
Mondal, B.	Associate Professor	Chemistry
Mukherjee, C.	Assistant Professor	Chemistry
Pan, S. C.	Assistant Professor	Chemistry
Panda, A. N.	Associate Professor	Chemistry
Patel, B. K.	Professor	Chemistry
Paul, A.	Associate Professor	Chemistry
Paul, S.	Associate Professor	Chemistry
Punniyamurthy, T.	Professor	Chemistry
Qureshi, M.	Associate Professor	Chemistry

Name	Designation	Department
Raidongia, K. (From 27.03.2015)	Assistant Professor	Chemistry
Ray, M.	Professor	Chemistry
Sahu, K.	Assistant Professor	Chemistry
Saikia, A. K.	Professor	Chemistry
Sarma, M.	Assistant Professor	Chemistry
Sastri, C. V.	Assistant Professor	Chemistry
Srimani, D. (From 30.03.2015)	Assistant Professor	Chemistry
Sudhakar, A. A.	Assistant Professor	Chemistry
Barua, G.	Associate Professor	Civil Engineering
Bharat, T. V.	Assistant Professor	Civil Engineering
Bhattacharjya, R. K.	Associate Professor	Civil Engineering
Chakraborty, A.	Associate Professor	Civil Engineering
Chakraborty, S.	Professor	Civil Engineering
Choudhury, R.	Assistant Professor	Civil Engineering
Das, S.	Assistant Professor	Civil Engineering
Dasgupta, K.	Assistant Professor	Civil Engineering
Deb, S. K.	Professor	Civil Engineering
Dey, A.	Assistant Professor	Civil Engineering
Dutta, A.	Professor	Civil Engineering
Dutta, S.	Professor	Civil Engineering
Ghosh, P. K.	Associate Professor	Civil Engineering
Gokhale, S. B.	Associate Professor	Civil Engineering
Goyal, M. K.	Assistant Professor	Civil Engineering
Hazra, B. (From 28.11.2014)	Assistant Professor	Civil Engineering
Jawed, M.	Professor	Civil Engineering
Kalamdhad, A.	Assistant Professor	Civil Engineering
Kartha, S. A.	Associate Professor	Civil Engineering
Kaushik, H. B.	Associate Professor	Civil Engineering
Kota, S. H. (From 20.08.2014)	Assistant Professor	Civil Engineering
Kumar, A. (From 12.05.2014)	Assistant Professor	Civil Engineering
Kumar, B.	Assistant Professor	Civil Engineering
Mahanta, C.	Professor	Civil Engineering
Mallikarjuna, C.	Associate Professor	Civil Engineering
Maurya, A. K.	Associate Professor	Civil Engineering
Mishra, A. K.	Assistant Professor	Civil Engineering
Murali Krishna, A.	Associate Professor	Civil Engineering
Pekkat, S.	Associate Professor	Civil Engineering
Pradhan, B.	Associate Professor	Civil Engineering
Ranjani, G. I. S. (From 07.05.2014)	Assistant Professor	Civil Engineering
Ryntathieng, T. L.	Associate Professor	Civil Engineering
Sarma, A. K.	Professor	Civil Engineering
Sekharan, S.	Associate Professor	Civil Engineering
Sharma, H.	Assistant Professor	Civil Engineering
Shelke, A.	Assistant Professor	Civil Engineering
Siddagangaiah, A. K. (From 09.02.2015)	Assistant Professor	Civil Engineering
Singh, A. K.	Professor	Civil Engineering
Singh, B.	Professor	Civil Engineering
Singh, K. D.	Associate Professor	Civil Engineering
Singh, L. B.	Assistant Professor	Civil Engineering
Talukdar, S.	Professor	Civil Engineering
Anand, A.	Assistant Professor	Computer Science and Engineering
Awekar, A. C.	Assistant Professor	Computer Science and Engineering
Barua, G.	Professor	Computer Science and Engineering
Bhaduri, P.	Professor	Computer Science and Engineering
Bhattacharya, S.	Assistant Professor	Computer Science and Engineering

Name	Designation	Department
Biswas, S.	Associate Professor	Computer Science and Engineering
Das, P. K.	Associate Professor	Computer Science and Engineering
Deka, J. K.	Associate Professor	Computer Science and Engineering
Dutta Baruah, R. (From 16.06.2014)	Assistant Professor	Computer Science and Engineering
Goswami, D.	Professor	Computer Science and Engineering
Inkulu, R.	Assistant Professor	Computer Science and Engineering
Kapoor, H. K.	Associate Professor	Computer Science and Engineering
Karmakar, S.	Assistant Professor	Computer Science and Engineering
Kenkireth, B. G.	Assistant Professor	Computer Science and Engineering
Kesh, D.	Assistant Professor	Computer Science and Engineering
Malhotra, V. M. (From 01.08.2014)	Visiting Professor	Computer Science and Engineering
Mitra, P.	Associate Professor	Computer Science and Engineering
Nair, S. B.	Professor	Computer Science and Engineering
Nandi, S.	Professor	Computer Science and Engineering
Rao, S. V.	Professor	Computer Science and Engineering
Sahu, A.	Assistant Professor	Computer Science and Engineering
Sajith, G.	Professor	Computer Science and Engineering
Saradhi, V. V.	Assistant Professor	Computer Science and Engineering
Sarkar, A.	Assistant Professor	Computer Science and Engineering
Shannigrahi, S.	Assistant Professor	Computer Science and Engineering
Singh, S. R.	Assistant Professor	Computer Science and Engineering
Sur, A.	Assistant Professor	Computer Science and Engineering
Venkatesh, T.	Assistant Professor	Computer Science and Engineering
Banerjee, S.	Assistant Professor	Design
Barua, U.	Associate Professor	Design
Bokil, P.	Assistant Professor	Design
Chakrabarti, D.	Professor	Design
Das, A. K.	Professor	Design
Das, S. (From 01.01.2015)	Assistant Professor	Design
Dharmalingam, U. K.	Assistant Professor	Design
Gokhale, S. M. (From 21.07.2014)	Assistant Professor	Design
Iqbal, S.	Assistant Professor	Design
Kalita, P. C. (From 12.12.2014)	Visiting Assistant Professor	Design
Karmakara, S.	Assistant Professor	Design
Kumar, J. (From 01.08.2014)	Assistant Professor	Design
Madhukaillya, M.	Assistant Professor	Design
Majhi, M.	Assistant Professor	Design
Monga, C. (From 08.05.2014)	Assistant Professor	Design
Nath, N. (From 16.06.2014)	Assistant Professor	Design
Pal, S. (From 02.06.2014)	Assistant Professor	Design
Punekar, R. M.	Professor	Design
Roy, S. (From 09.02.2015)	Assistant Professor	Design
Salve, U. R. (From 14.01.2015)	Assistant Professor	Design
Shende, A.	Assistant Professor	Design
Sorathia, K. B.	Assistant Professor	Design
Shrivastava, A. (From 12.11.2014)	Assistant Professor	Design
Singh, A. (From 27.05.2014)	Visiting Assistant Professor	Design
Upadhyay, P. (From 26.06.2014)	Assistant Professor	Design
Yammiyavar, P. G.	Professor	Design
Adda, R. (From 17.04.2014)	Assistant Professor	Electronics and Electrical Engineering
Ahamed, S. R.	Associate Professor	Electronics and Electrical Engineering
Bhattacharjee, R.	Professor	Electronics and Electrical Engineering
Bhuyan, M. K.	Associate Professor	Electronics and Electrical Engineering
Bora, P. K.	Professor	Electronics and Electrical Engineering
Bose, S. K.	Professor	Electronics and Electrical Engineering

Name	Designation	Department
Chatterjee, A.	Visiting Assistant Professor	Electronics and Electrical Engineering
Chouhan, S.	Assistant Professor	Electronics and Electrical Engineering
Dandapat, S.	Professor	Electronics and Electrical Engineering
Das, S.	Assistant Professor	Electronics and Electrical Engineering
Dhaka, K.	Assistant Professor	Electronics and Electrical Engineering
Gogoi, A. K.	Professor	Electronics and Electrical Engineering
Guha, P.	Assistant Professor	Electronics and Electrical Engineering
Jacob, T.	Assistant Professor	Electronics and Electrical Engineering
Kar, I.	Assistant Professor	Electronics and Electrical Engineering
Karthik, K.	Associate Professor	Electronics and Electrical Engineering
Krishnaswamy, S.	Assistant Professor	Electronics and Electrical Engineering
Kumar, P.	Assistant Professor	Electronics and Electrical Engineering
Mahanta, C.	Professor	Electronics and Electrical Engineering
Majhi, S.	Professor	Electronics and Electrical Engineering
Nallam, N. (From 23.04.2014)	Assistant Professor	Electronics and Electrical Engineering
Nath, S. (From 19.06.2014)	Assistant Professor	Electronics and Electrical Engineering
Nayak, S. K.	Assistant Professor	Electronics and Electrical Engineering
Nemade, H. B.	Professor	Electronics and Electrical Engineering
Pal, D. (Released on 30.05.2014)	Assistant Professor	Electronics and Electrical Engineering
Palathinkal, R. P.	Professor	Electronics and Electrical Engineering
Prasanna, S. R. M.	Professor	Electronics and Electrical Engineering
Rai, B. K.	Assistant Professor	Electronics and Electrical Engineering
Rajesh, A.	Associate Professor	Electronics and Electrical Engineering
Sahu, P. R.	Associate Professor	Electronics and Electrical Engineering
Sethi, A.	Assistant Professor	Electronics and Electrical Engineering
Shekhawat, H. S. (From 31.12.2014)	Assistant Professor	Electronics and Electrical Engineering
Shrestha, G. B.	Visiting Professor	Electronics and Electrical Engineering
Singh, K. R.	Associate Professor	Electronics and Electrical Engineering
Sinha, R.	Associate Professor	Electronics and Electrical Engineering
Sonkar, R. K.	Assistant Professor	Electronics and Electrical Engineering
Sundaram, S.	Assistant Professor	Electronics and Electrical Engineering
Tripathy, P.	Assistant Professor	Electronics and Electrical Engineering
Trivedi, G.	Assistant Professor	Electronics and Electrical Engineering
Barua, A.	Professor	Humanities and Social Sciences
Barua, A.	Associate Professor	Humanities and Social Sciences
Barua, K.	Professor	Humanities and Social Sciences
Bedamatta, R.	Assistant Professor	Humanities and Social Sciences
Borbora, S.	Professor	Humanities and Social Sciences
Chaterjee, B.	Visiting Professor	Humanities and Social Sciences
Das, D.	Associate Professor	Humanities and Social Sciences
Das, L.	Associate Professor	Humanities and Social Sciences
Dutta, M. K.	Associate Professor	Humanities and Social Sciences
Gupta, R. K. (01.09.2014 – 26.11.2014)	Vist. Professor	Humanities and Social Sciences
Hussain, D.	Assistant Professor	Humanities and Social Sciences
Kashyap, N.	Assistant Professor	Humanities and Social Sciences
Kipgen, N. (From 15.05.2014)	Assistant Professor	Humanities and Social Sciences
Mahanta, S.	Associate Professor	Humanities and Social Sciences
Mallick, S.	Associate Professor	Humanities and Social Sciences
Parui, A. (From 08.07.2014)	Assistant Professor	Humanities and Social Sciences
Punekar, R. M.	Professor	Humanities and Social Sciences
Ray, S.	Assistant Professor	Humanities and Social Sciences
Robinson, R. (Up to 31.07.2014)	Professor	Humanities and Social Sciences
Saikia, A.	Associate Professor	Humanities and Social Sciences
Saikia, P.	Assistant Professor	Humanities and Social Sciences
Sarmah, P.	Assistant Professor	Humanities and Social Sciences

Name	Designation	Department
Sengupta, B.	Assistant Professor	Humanities and Social Sciences
Sharma, S.	Associate Professor	Humanities and Social Sciences
Som, B.	Associate Professor	Humanities and Social Sciences
Thomas, J. (From 20.05.2014)	Assistant Professor	Humanities and Social Sciences
Tripathi, N.	Associate Professor	Humanities and Social Sciences
Venkataraman, P.	Associate Professor	Humanities and Social Sciences
Alam, R.	Professor	Mathematics
Bandyopadhyay, S.	Assistant Professor	Mathematics
Bhattacharjya, B.	Assistant Professor	Mathematics
Bora, S.	Associate Professor	Mathematics
Bora, S. N.	Professor	Mathematics
Chakrabarty, A. K.	Assistant Professor	Mathematics
Chakrabarty, S. P.	Assistant Professor	Mathematics
Dalal, D. C.	Professor	Mathematics
Das, G. K.	Assistant Professor	Mathematics
Deka, B.	Assistant Professor	Mathematics
Dey, A. K.	Assistant Professor	Mathematics
Dutta, S.	Assistant Professor	Mathematics
Kalita, J. C.	Professor	Mathematics
Kamal, S.	Assistant Professor	Mathematics
Kapoor, K.	Associate Professor	Mathematics
Krishna, K. V.	Associate Professor	Mathematics
Kumar, P.	Assistant Professor	Mathematics
Mandal, P. S.	Assistant Professor	Mathematics
Mitra, D.	Assistant Professor	Mathematics
Palaparthy, A. S. S. K.	Assistant Professor	Mathematics
Pati, S.	Associate Professor	Mathematics
Prasad, M. G. P.	Professor	Mathematics
Ramesh, H.	Assistant Professor	Mathematics
Saikia, A.	Associate Professor	Mathematics
Sarma, B. K.	Professor	Mathematics
Selvaraju, N.	Associate Professor	Mathematics
Sinha, R. K.	Professor	Mathematics
Srikanth, K. V.	Assistant Professor	Mathematics
Srinivasan, N.	Professor	Mathematics
Srivastava, R. K.	Assistant Professor	Mathematics
Swain, J.	Assistant Professor	Mathematics
Upadhyay, S.	Assistant Professor	Mathematics
Wagh, V. V.	Assistant Professor	Mathematics
Bag, S.	Assistant Professor	Mechanical Engineering
Bandopadhyay, D.	Assistant Professor	Mechanical Engineering
Banerjee, A.	Assistant Professor	Mechanical Engineering
Basu, D. N.	Assistant Professor	Mechanical Engineering
Biswas, G.	Professor and Director	Mechanical Engineering
Biswas, P.	Assistant Professor	Mechanical Engineering
Chakraborty, D.	Professor	Mechanical Engineering
Dalal, A.	Assistant Professor	Mechanical Engineering
Das, M.	Assistant Professor	Mechanical Engineering
Dass, A. K.	Professor	Mechanical Engineering
De, A. K.	Assistant Professor	Mechanical Engineering
Deepak, S. R.	Assistant Professor	Mechanical Engineering
Dixit, U. S.	Professor	Mechanical Engineering
Dwivedy, S. K.	Professor	Mechanical Engineering
Gadgil, H. P.	Assistant Professor	Mechanical Engineering
Gautam, S. S.	Assistant Professor	Mechanical Engineering

Name	Designation	Department
Gavara, M. R.	Assistant Professor	Mechanical Engineering
Joshi, S. N.	Assistant Professor	Mechanical Engineering
Kakoty, S. K.	Professor	Mechanical Engineering
Kalita, K.	Assistant Professor	Mechanical Engineering
Kanagaraj, S.	Associate Professor	Mechanical Engineering
Kore, S. D.	Assistant Professor	Mechanical Engineering
Krishna Murthy, K. S. R.	Associate Professor	Mechanical Engineering
Kulkarni, V. N.	Assistant Professor	Mechanical Engineering
Kumar, B. (From 10.03.2015)	Assistant Professor	Mechanical Engineering
Kumari, P.	Assistant Professor	Mechanical Engineering
Mahanta, P.	Professor	Mechanical Engineering
Mamilla, R. S.	Assistant Professor	Mechanical Engineering
Mishra, S. C.	Professor	Mechanical Engineering
Muthukumar, P.	Professor	Mechanical Engineering
Narayanan, R. G.	Assistant Professor	Mechanical Engineering
Natarajan, G.	Assistant Professor	Mechanical Engineering
Pal, S.	Assistant Professor	Mechanical Engineering
Panda, S.	Assistant Professor	Mechanical Engineering
Pandey, M.	Professor	Mechanical Engineering
Reddy, A. N.	Assistant Professor	Mechanical Engineering
Robi, P. S.	Professor	Mechanical Engineering
Saha, U. K.	Professor	Mechanical Engineering
Sahasrabudhe, A. D.	Professor	Mechanical Engineering
Sahoo, N.	Professor	Mechanical Engineering
Saxena, A. (From 05.12.2014)	Associate Professor	Mechanical Engineering
Senthilvelan, S.	Associate Professor	Mechanical Engineering
Sharma, D.	Assistant Professor	Mechanical Engineering
Somayaji, C.	Assistant Professor	Mechanical Engineering
Tiwari, R.	Professor	Mechanical Engineering
Únal, A. (From 23.03.2015)	Visiting Professor	Mechanical Engineering
Agarwal, P.	Professor	Physics
Alagarsamy, P.	Professor	Physics
Basu, S.	Professor	Physics
Bhattacharya, S.	Assistant Professor	Physics
Bhattacharya, S.	Assistant Professor	Physics
Bhuyan, B.	Associate Professor	Physics
Boruah, B. R.	Associate Professor	Physics
Chakrabarti, S. K.	Assistant Professor	Physics
Das, S.	Assistant Professor	Physics
Dey, T. N.	Assistant Professor	Physics
Ghosh, S.	Associate Professor	Physics
Giri, P. K.	Professor	Physics
Kadolkar, C. Y.	Associate Professor	Physics
Khare, A.	Professor	Physics
Khijwania, S. K.	Associate Professor	Physics
Kumar, G.	Assistant Professor	Physics
Lahiri, J. (Up to 25.04.2014)	Assistant Professor	Physics
Maiti, U. N. (From 16.12.2014)	Assistant Professor	Physics
Maity, D.	Assistant Professor	Physics
Majhi, B. R. (From 11.12.2014)	Assistant Professor	Physics
Nandi, S.	Assistant Professor	Physics
Nandy, M. K.	Associate Professor	Physics
Padmanabhan, P. K.	Associate Professor	Physics
Pal, D.	Associate Professor	Physics
Pamu, D.	Associate Professor	Physics

Name	Designation	Department
Poulose, P.	Associate Professor	Physics
Raha, U.	Assistant Professor	Physics
Ravi, S.	Professor	Physics
Santra, S. B.	Professor	Physics
Sarma, A. K.	Associate Professor	Physics
Setlur, G. S.	Professor	Physics
Sharma, A. K.	Associate Professor	Physics
Sil, A.	Assistant Professor	Physics
Srinivasan, A.	Professor	Physics
Thota, S.	Assistant Professor	Physics
Tripathi, S. M. (Up to 04.08.2014)	Assistant Professor	Physics

Appendix-II

OFFICERS AND SCIENTIFIC STAFF (GROUP A)

Officers (Group A)

Name	Designation	Dept./Section
Raychoudhury, B. N. (up to 30.11.2014)	Registrar	
Das, U. C.	Deputy Registrar (up to 30.11.2014) Registrar (from 01.12.2014)	F&A
Barua, S. K.	Deputy Registrar (up to 31.12.2014) Academic Registrar (from 01.01.2015)	Academic Affairs
Bhuyan, K.	Deputy Registrar	Establishment and Quality Improvement Programme
Boro, D.	Deputy Registrar	Alumni Affairs and External Relations
Goswami, D. J. (on deputation)	Deputy Registrar	Administration
Mishra, A. (up to 04.04.2014)	Deputy Registrar	Finance and Accounts
Sharma, D.	Deputy Registrar	Administration
Borgohain, P.	Assistant Registrar	Faculty Affairs
Choudhury, S. (on lien)	Assistant Registrar	Establishment
Das, G.	Assistant Registrar	Engineering Section
Deka, S. (on lien)	Assistant Registrar	Administration
Haokip, T. T.	Assistant Registrar	S&P
Kakati, M.	Assistant Registrar	Students' Affairs
Konwar, L. K.	Assistant Registrar	Public Relations
Mandal, S.	Assistant Registrar	R&D
Phukan, A.	Assistant Registrar	Director's Office
Salhotra, N. D.	Assistant Registrar	Legal Cell
Goswami, A.	Superintending Engineer (Elect.)	Engineering Section
Singh, T. J.	Superintending Engineer (Civil)	Engineering Section
Bhagawati, D.	Exe. Engineer (Elect.)	Engineering Section
Roy, N.	Exe. Engineer (Civil)	Engineering Section
Dutta, D.	Asst. Exe. Eng. (Civil)	Engineering Section
Gogoi, A. K.	Asst. Exe. Eng. (Civil)	Engineering Section
Sarma, N. K.	Asst. Exe. Eng. (Civil)	Engineering Section
Senapati, S.	Asst. Exe. Eng. (Civil)	Engineering Section
Guha, T. K.	Librarian	LNB Central Library
Saibaba, B.	Deputy Librarian	LNB Central Library
Deka, S.	Assistant Librarian	LNB Central Library

Name	Designation	Dept./Section
Rajbangshi, R. K.	Assistant Librarian	LNB Central Library
Borthakur, M.	Chief Medical Officer (NFSG)	Medical
Barua, L.	Chief Medical Officer (NFSG)	Medical
Baruah, A. K.	Chief Medical Officer (NFSG)	Medical
Gogoi, L. C. (up to 20.06.2014)	Sr. Security Officer	Security

Scientific Staff (Group A)

Name	Designation	Department/Centre
Biswanath, H.	Technical Officer Gr. II	Chemical Engineering
Kalita, R.	Technical Officer Gr. II	Chemical Engineering
Das, B.	Technical Officer Gr. I	Chemistry
Baruah, A. M.	Technical Officer Gr. II	Chemistry
Borsaikia, A. C.	Technical Officer Gr. I	Civil Engineering
Saikia, J.	Technical Officer Gr. II	Civil Engineering
Kalita, K.	Technical Officer Gr. II	Civil Engineering
Kalita, S.	Technical Officer Gr. II	Civil Engineering
Borah, B.	Technical Officer Gr. II	Computer Science and Engineering
Kachari, N. A.	Technical Officer Gr. II	Computer Science and Engineering
Das, M. P.	Technical Officer Gr. II	Electronics and Electrical Engineering
Das, S.	Technical Officer Gr. I	Electronics and Electrical Engineering
S., Josephine	Technical Officer Gr. I	Electronics and Electrical Engineering
Sharma, L. N.	Technical Officer Gr. I	Electronics and Electrical Engineering
Paul, P.	Technical Officer Gr. II	Mechanical Engineering
Saikia, R.	Technical Officer Gr. II	Mechanical Engineering
Sarma, D. K. (on lien)	Workshop Supdt.	Mechanical Engineering
Sarma, S.	Technical Officer Gr. I	Physics
Borgohain, C.	Technical Officer Gr. I	Central Instruments Facility
Senapati, K. K.	Technical Officer Gr. I	Central Instruments Facility
Gogoi, D.	Technical Officer Gr. II	Central Instruments Facility
Barbora, L.	Technical Officer Gr. I	Centre for Energy
Baruah, D.	Technical Officer Gr. II	Centre for Energy
Deka, D.	Technical Officer Gr. I	Centre for the Environment
Kumari, N. K. P.	Technical Officer Gr. II	Centre for the Environment
Borah, M. M.	Technical Officer Gr. I	Computer and Communication Centre
Das, S.	Technical Officer Gr. I	Computer and Communication Centre
Dutta, P. K.	Technical Officer Gr. I	Computer and Communication Centre
Ghosh, J. K.	Technical Officer Gr. II	Computer and Communication Centre
Inam, I.	Scientific Officer Gr. II	Computer and Communication Centre
Islam, J.	Scientific Officer Gr. II	Computer and Communication Centre
Pathak, D.	Technical Officer Gr. II	Computer and Communication Centre
Saikia, G. K.	Scientific Officer Gr. II	Computer and Communication Centre
Sairam, A. S. (on lien)	Technical Officer Gr. I	Computer and Communication Centre
Acharyya, K.	Technical Officer Gr. I	Nanotechnology
Das, P.	Technical Officer Gr. II	Nanotechnology

Appendix-III

DEGREE AWARDEES

In the 16th Convocation held on 13 July 2014, a total number of 1232 students received their BTech, BDes, MA, MSc, MTech, MDes and PhD degrees as given below:

Programme	Degree Awarded
BTech/BDes	
Biotechnology	36
Chemical Engineering	57
Chemical Science and Technology	33
Civil Engineering	56
Computer Science and Engineering	86
Design	39
Electronics and Communication Engineering	66
Electronics and Electrical Engineering	37
Engineering Physics	24
Mathematics and Computing	32
Mechanical Engineering	81
Total	547
MSc	
Chemistry	37
Mathematics and Computing	40
Physics	40
Total	117
MA	
Development Studies	21
Total	21
MTech/MDes	
Biotechnology	29
Chemical Engineering	56
Civil Engineering	93

Programme	Degree Awarded
Computer Science and Engineering	78
Design	28
Electronics and Electrical Engineering	53
Mechanical Engineering	104
Total	441
PhD	
Biotechnology	24
Chemistry	16
Chemical Engineering	6
Civil Engineering	7
Computer Science and Engineering	4
Design	4
Electronics and Electrical Engineering	8
Humanities and Social Sciences	10
Mechanical Engineering	7
Mathematics	5
Physics	6
Centre for Energy	5
Centre for the Environment	3
Centre for Nanotechnology	1
Total	106
Grand Total	1232

Doctor of Science D.Sc. (Honoris Causa)

Dr. Jyotiprasad Medhi
Professor Emeritus, Gauhati University

Dr. Dipak C. Jain
Chaired Professor of Marketing at INSEAD- the international business school with campuses in France, Singapore and Abu Dhabi

Gold and Silver Medalists

President of India Gold Medal
Aritra Sasmal
BTech (Mechanical Engineering)

Silver Medal
Priyatham Bollimpalli
BTech (Computer Science and Engineering)

Silver Medal
Sonu Kumar Mishra
BTech (Electronics and Communication Engineering)

Silver Medal
Komaragiri Satyavati
BTech (Civil Engineering)

Silver Medal
Mohit Singh
BTech (Biotechnology)
Silver Medal
Aakanksha
BTech (Chemical Engineering)

Silver Medal
Mayank Thakur
BTech (Electronics and Electrical Engineering)

Silver Medal
Prannay Balla
BTech (Engineering Physics)

Silver Medal
Nadimpalli Dinesh Varma
BTech (Chemical Science and Technology)

Silver Medal
Rajat Kateja
BTech (Mathematics and Computing)

Silver Medal
Mannu Amrit
BDes (Design)

Silver Medal
Dipanweeta Bhattacharyya
MSc (Physics)

Silver Medal
Aniket Mishra
MSc (Chemistry)

Silver Medal
Gopal Dutta

MSc (Mathematics and Computing)

Silver Medal
Prakash Gupta
MA (Development Studies)

Dr. Shankar Dayal Sharma Gold Medal
Atishay Jain
BTech (Electronics and Communication Engineering)

List of students who have fulfilled the requirements for the award of BTech degree in Computer Science and Engineering

List of students who have fulfilled the requirements for the award of B.Tech. degree in Computer Science and Engineering

Roll No	Name
10010101	ABHISHANK SAHU
10010102	ABHISHEK JOSHI
10010103	ABHISHEK NAGAR
10010104	ACHAL SHAH
10010105	ADITYA KANETKAR
10010107	ADUTIPAL SINGH JASSAL
10010108	ALLURI NITISH
10010109	AMERINENI ROHITH
10010110	AMOGH TOLAY
10010111	ANIL KAG
10010112	ARKO SABUI
10010113	ARPIT AGARWAL
10010114	AVINASH UTTAV
10010115	CHARU JAIN
10010117	CHUKKA ADITYA HARISH
10010118	DEEPANSHU GOYAL
10010119	EDARA NIPUN CHOWDARY
10010120	GAURAV VERMA
10010121	GHEWARI RISHIKESH SANJAY
10010122	HARSH GUPTA
10010124	JITENDRA SINGH SOLANKI
10010125	JUVVIGUNTA NARASIMHA TEJA
10010126	K A V SAI KALYAN
10010127	KALE KARTIK VINAYAK
10010129	KASARAPU KIRANMAYI
10010130	KETHAVATH GOPAL
10010131	AASTHA VERMA
10010132	KOMAL AGARWAL
10010133	MEGHA GANDHI
10010134	MOHIT
10010135	MUDIT GUPTA
10010136	NANDURI RAJASRI
10010137	NEHA GOYAL
10010139	NITESH SINGHAL
10010140	PALLAV MAJUMDAR
10010142	PAWAN KUMAR
10010143	PRADEEP BANSAL

10010144	PRAFUL JOHARI	10010202	ADARSH SAURAV
10010145	PRAJAPATI S. ANANDBHAI	10010203	AGAM KUMAR GARG
10010148	PRIYATHAM BOLLIMPALLI	10010204	AKRITI GUPTA
10010149	PYDI PEDDIGARI VENKAT SAI	10010206	AKUMALLA MOUNIKA
10010150	PYDI PRASANNA SAI KAMANURU	10010207	AMBIKA ASHIRVAD MOHANTY
10010151	R ANURADHA RAJU	10010208	ANUBHAV RAI
10010152	RANUVA SAI TEJA	10010210	AROOSH DAYAL
10010153	REVANTH BHATTARAM	10010211	ARPAN THACKER
10010154	ROHIT SINGLA	10010212	ASHISH KUMAR VERMA
10010157	SANEPALLE VISWANATH REDDY	10010213	BALVEER MEENA
10010159	SAURAV KUMAR PATEL	10010215	BUKKE VENUGOPAL NAIK
10010160	SEJAL SHARMA	10010216	CHADARAM ROHIT
10010162	SHER SINGH MEENA	10010217	DHARAVATH ASHOK NAIK
10010163	SHIVANGI SRIVASTAVA	10010219	GONTLA VENKATA SRI CHARAN
10010164	SHRINIVAS ACHARYA	10010220	GUBBALA A R V SURYA TEJA
10010166	SUDHANSHU MITTAL	10010221	JATIN MEHTA
10010167	SUNKU VINESH REDDY	10010222	JYOTIKRISHNA DASS
10010168	TALASILA SAI DEEPAK	10010223	K SRI SATYA SUDHANVA
10010170	VIRESH GEHLAWAT	10010226	KINSHUK DHIR
10010172	VIVEK SINGH	10010228	KURISETI M. PRASANTHKUMAR
10010173	RANTI DEV SHARMA	10010229	LAKKAM DHEERAJ KUMAR
10010174	GUNAMGARI SHARATH REDDY	10010230	M ANISHA
10010175	SAHIL KUMAR	10010231	MEDISETTY SUNDEEP
10010176	ANUJ GUPTA	10010232	MOUNICA LAKSHMI SAI BATTULA
10010177	MEHTA HARSH HEMANTKUMAR	10010233	MRIDUL KRISHNA
10010178	KASHISH BABBAR	10010234	NIKUNJ DAGA
10010179	PRATIK HORA	10010235	NUVVULA D. CHANDRA KAUSHIK
10010180	PASUMARTHI VENKATASAI DILEEP	10010237	PALLEKONDA SAI KRISHNA
09010115	DEEPAK SINGH NEGI	10010238	PANKAJ KUMAR DESWAL
09010116	GAURAV RATHI	10010239	PARTH PATIL
09010117	GUNJAN KUMAR	10010240	PASUNOORI MANAV
09010120	K TEJA	10010241	PATLEY GOUTHAM
09010121	KARTIKEY GUPTA	10010243	PEDDI SHIVA CHAITHANYA
09010127	NAGENDRA RAM	10010245	PRAVEEN PATIDAR
09010129	NARESH MEHRA	10010247	RAHUL JAIN
09010136	RAHUL BHATNAGAR	10010248	RAHUL NALLAMOTHU
09010142	RISHI RAJ BORAH	10010249	RAJENDER SINGH CHARAN
09010143	ROHIT RAJ	10010253	SAMALA SRAVAN KUMAR
09010145	SAURABH SAXENA	10010256	SHALVI RAJ
09010149	SHYAM SUNDER SINGH	10010258	SUBRATA SARKAR
09010152	SUHAIL SHERIF	10010259	SWATI VYAS
09010155	SUNIL RATNU	10010260	UTTAM NANDI
09010156	TEJINDER SINGH	10010261	VIGNESH B
09010159	VULLI KRISHNA CHAITANYA	10010262	VINEET BHARGAVA
09010164	BHARAT KHATRI	10010263	VINEETH T
08010106	ANUBHAV JEPH	10010265	VINOD KUMAR KALA
08010129	KURAKULA VENKATA NARENDRA	10010267	YAJJALA MANOJ KUMAR
08010130	LAVUDYA SRIDHAR NAIK	10010268	SONU KUMAR MISHRA
06010133	NAPOLEAN DANG	10010269	OM PRAKASH BEDANT
		10010270	DHRUV RATRA
		10010271	ATISHAY JAIN
		10010272	ROMIL SANDAL
		10010273	SAKSHAM SHARMA
		10010274	INDELA SOUMYA
		10010275	SHUBHAM MITTAL
		10010276	SACHIN KUMAWAT

List of students who have fulfilled the requirements for the award of B.Tech. degree in Electronics and Communication Engineering

Roll No	Name
10010201	ABHIRAJ KUMAR

09010212	DEEPCHAND PRAJAPATI	10010348	PRATEEK GUPTA
09010226	KUMAR SAURAV	10010350	PRAVESH PAINKRA
09010242	RAHUL RAJ	10010351	RAHATGAONKAR ABHIRAM MUKUND
09010252	VIVEK KUMAR	10010352	RAHUL VINOD UPPUTURI
09010253	YELUVAKA DILEEP KUMAR	10010353	RAJAT GUPTA
08010214	ESAMPALLY ABHINAV	10010354	RAMNIWAS
08010228	MARLAPATI CHAITANYA	10010355	RAVI KUMAR
08010245	SUGALI SURESH NAIK	10010357	RISHI RAWAT
07010248	VIVEK KUMAR	10010359	SAI VATSALYA MOKKA

List of students who have fulfilled the requirements for the award of B.Tech. degree in Mechanical Engineering

Roll No	Name	Roll No	Name
10010301	AAKASH JAISWAL	10010360	SANDEEP ANAND SAXENA
10010303	ADITYA VIKRAM GUGLANI	10010361	SANDEEP VUDUKULA
10010304	AJAY CHANDRASHEKAR	10010362	SATISH KUMAR SAGAR
10010305	ANGSHUMAN KASHYAP	10010363	SHIVAM PORWAL
10010306	ANKUR KUMAR SINGH	10010364	SHREEYASH UDAY LALIT
10010307	ARIJIT KUMAR RAY	10010365	SHRIKANT PANDEY
10010308	ARITRA SASMAL	10010366	SREE PRASANNA RAJAGOPAL
10010309	ARUN NAGER	10010367	SUMAN DAS
10010310	ASHUTOSH PANDEY	10010369	SURAJ JAIN
10010311	AVINASH YADAV	10010370	TARUN JAIN
10010312	B CHAITANYARAJ KIRAN	10010371	TUSAR RANJAN DEORI
10010313	BABLOO KUMAR	10010372	TUSHAR THULKAR
10010314	BHASKAR BHATTACHARYYA	10010373	VAIBHAV JAIN
10010315	BHUKYA P K A SINGH NAIK	10010374	VEDULA SHAILESH
10010316	BISWAJIT BHARAT	10010375	VIKAS JAISWAL
10010318	BUDDE SANTHOSH CHANDRA	10010376	VISHNU GANESH
10010319	DEEPENDRA JEWARIA	10010377	VOORA SAI GOUTHAM
10010320	DEVARSHI KUMAR RAI	10010378	YUGAL CHITTARA
10010321	DIVYANSH GUPTA	10010379	SIDDHARTH JAIN
10010322	DUKHISHYAM SOREN	10010380	JAYDEV KALIVARAPU
10010323	GAURVENDRA SINGH YADAV	10010381	KATRE SUDHINDRA JITENDRA
10010324	GAUTAM PURI	10010382	PRATYUKSH BANSAL
10010325	JAI SINGH JUDGE	09010307	APOORVA AGARWAL
10010326	JITENDER	09010309	ASHUTOSH NEGI
10010328	JOSS DAIMARI	09010311	BENDURTHI JASWANTH KUMAR
10010329	JYOTISHMAN SARMA	09010321	HEMANT VERMA
10010330	K KISHORE REDDY	09010325	KODAMATTI DINESH REDDY
10010331	KAPIL KRISHNAPADA GAIN	09010329	MAARLAPUDI NIKHIL CHANDRAPAL
10010332	KARIDI SIDDHARTHA	09010345	RAJESH KUMAR MOSALPURIA
10010333	KAUSHAL SETH	08010327	MALLABOINA ANIL KUMAR
10010334	KESHAV KUMAR MEENA		
10010335	LANJEWAR AMOL VASANT		
10010336	LAVURI RAKESH		
10010337	LERREL JOSEPH PINTO		
10010338	M SRAVAN KUMAR		
10010339	MANISH KUMAR AGARWAL		
10010340	MATURU SIVATEJA		
10010341	MD IDUL AHMED		
10010343	NARENDRA VUTLA		
10010344	NAVDEEP SHARMA		
10010345	NITIN KUMAR CHANDRAKAR		
10010346	P NIKHIL REDDY		

List of students who have fulfilled the requirements for the award of B.Tech. degree in Civil Engineering

Roll No	Name
10010402	ACHAL GOYAL
10010404	ALPANA KUMARI
10010405	ANAND YADAV
10010406	ANISH PRASAD
10010407	ANKIT KUMAR
10010410	ANSHUL GOYAL
10010411	ARI SIVA PRASAD
10010412	ARKAPRABHA GHOSH
10010413	ARPIT MAHESHWARI
10010414	BODDA SARAN SRIKANTH
10010415	BUDHA RAM
10010416	CHILKEPALLI ANKITH

10010417	DALVI GUNJAN DILIP	10010613	GIRISH SINGHAL
10010418	DARA VARAPRASAD	10010614	HARI SINGH MEENA
10010419	DIVYAKANT	10010616	K DHEERASAMEER
10010420	DIVYAM BENIWAL	10010617	KUSHAL RATHORE
10010421	E PRANEET REDDY	10010618	M VENKATA SEETHA RAMA SASTRY
10010424	JEETENDRA KUMAR MEENA	10010620	MANISH GOEL
10010425	K AKSHAY REDDY	10010621	MEHUL GARG
10010426	KANWARPAL SINGH	10010622	MOGALI SANJAY RAJ
10010428	KATTIKA LALITH KUMAR	10010623	MOHIT SINGH
10010432	KUMAR UJJWAL	10010625	NAMAN KATRE
10010433	MAHAJAN VINEET VASUDEO	10010626	NARAYAN LAL SALVI
10010435	MANISH KUMAR MEENA	10010629	PINNAMANENI JAI VARDHAN RAO
10010436	MONISH GARG	10010630	PRABAL PEGU
10010439	NEERAJ BALOT	10010633	RAUNAK
10010440	NEERAJ MALPANI	10010634	RAVI RAJ
10010442	PANKAJ KUMAR	10010638	SAMEER JAYANTH DIXIT
10010444	PAWAN KUMAR PAUL	10010639	SANJANA GUPTA
10010445	PRAGYA VAISHNAV	10010640	SAURABH GULATI
10010446	PRATIK RAJ	10010641	SHASHANK SRIVASTAVA
10010447	RAGHAV GROVER	10010642	SHUBHAM GARG
10010448	RAHUL KUMAR MEENA	10010645	TAPISH NANDWANA
10010449	RAKESH KUMAR MEENA	10010648	VATSHANK CHATURVEDI
10010450	ROHIT DIDEL	10010649	VISWESWARA S. MANTRIPRAGADA
10010452	SAHIL MEDAWALA	10010650	VIVEK AMARNANI
10010454	SHAIK KHWAJA RAHIL AHMED	10010651	VIVEK SINGHAL
10010455	SHASHANK BURMAN	09010610	G RAJESH
10010456	SHIPHA	09010624	PEDDIBOYINA DINESHNADH
10010457	SHRUTI SONI	09010637	UJJWAL NANDAN
10010458	SHSHANK MITTAL	07010608	BIDYUT BIKAS BRAMHA
10010460	SOJJANYA MANDADI		
10010461	SUMIT KUMAR		
10010462	SUMIT RATHORE		
10010464	URWASHI KUMARI		
10010465	VEMULA YASHWANTH		
10010466	VIKAS BHARTI		
10010467	VIMAL KUMAR		
10010468	VISHWAJIT ANAND		
10010469	KOMARAGIRI SATYAVATI		
09010420	GUDIGOPURAM YESHWANTH REDDY		
09010423	H RATHOLU		
09010439	PAVULURI YESHWANTH KUMAR		
09010442	RAJAT AWASTHI		
08010420	JEETESH GAURAV		
08010434	PANIGRAHI SAINATH		

List of students who have fulfilled the requirements for the award of B.Tech. degree in Biotechnology

Roll No	Name
10010601	ABHISHEK MEHRA
10010602	ASHISH KAWDIA
10010605	BORA SAURABH SATISH
10010609	DEEPAK JAIN
10010610	DHARMASOTH VENKATESH
10010611	DHRISHNI CHAKRABORTI
10010612	GANAR KETAN ASHOK

List of students who have fulfilled the requirements for the award of B.Tech. degree in Chemical Engineering

Roll No	Name
10010701	AAKANKSHA
10010702	ABHISHEK ANAND
10010703	ABHISHEK GUPTA
10010705	AKASH KUMAR VIKAL
10010706	AKASH TRIPATHI
10010707	AKHILESH PREMKUMAR
10010708	AKSHAY VERMA
10010709	AMIT CHAUDHARY
10010710	AMIT KALER
10010711	AMIT KUMAR
10010712	ANSHUL AGARWAL
10010713	AVISEK MISRA
10010714	B ASHWIK REDDY
10010716	BIDYUT BIKASH CHANGMAI
10010717	BIPIN KUMAR
10010719	DEEPAK KUMAR KEWAT
10010720	DEVARAKONDA KARTHIK
10010722	DHIREN BARO
10010723	DIPAK KUMAR BHARTI
10010724	HIMANSHU BHATIA
10010726	ISHAAN TRIPATHI
10010727	JAYANT ASHOK DHOTE

10010728	JAYANT BORANA
10010730	K ANKITH KUMAR
10010731	KODURU MOHAN KRISHNA
10010732	KOTAPROLU NAGA TEJA RAM
10010733	KSHETRIMAYUM PUNICHA CHANU
10010734	KSHITIJ SWAROOP
10010735	MAHESH DANGI
10010736	MANDADI NARENDRA
10010738	NEHA BHATTACHARYA
10010739	NIKUNJ AGARWALLA
10010740	NITISH KUMAR
10010741	P YASHASWINI
10010742	PESALA SAI RAHUL REDDY
10010744	PRERONA DAS
10010745	PRITOM SHARMA
10010746	RIJUMONI BORO
10010747	ROHITASH MEENA
10010750	SANDEEP KUMAR BAHESHWAR
10010751	SARTHAK DUBE
10010752	SATTALURI LAXMI PAVANI
10010753	SAURABH JALAN
10010754	SHRISHTI SUYOG
10010756	SRIDHAR AKSHAY
10010757	TAUSEEF SHAHIDI
10010760	VINEET KUMAR
10010762	VISHAL SHARMA
10010763	VISHESH DHARIWAL
09010710	ANKIT CHOUKSEY
09010713	ARPIT AGARWAL
09010722	GUDAPATI SAI SATEESH
09010726	KONDAPALLI PRUTHVI
09010746	TUHIN KANTI MONDAL
09010747	UNGRATWAR RAJESH VITTHALRAO
09010750	VISHNU CHAUHAN
08010742	VISHAK BHARADWAJ P

List of students who have fulfilled the requirements for the award of B.Tech. degree in Electronics and Electrical Engineering

Roll No	Name
10010801	ABHAY GUPTA
10010802	AISHVARYA AGRAWAL
10010803	APOORV VYAS
10010804	APURVA GUPTA
10010806	ASHISH RANJAN
10010808	BIPUL VAIBHAV
10010809	DHARMENDRA KUMAR PRAJAPATI
10010813	G. VAMSI MANOHAR REDDY
10010817	HRISHIKESH KUMAR
10010818	KARTIK DWIVEDI
10010820	KULDEEP NAGAR
10010821	KUMAR GAURAV
10010822	KUMAR SAMBHAV
10010823	MAHESH KUMAR
10010824	MAYANK PRATAP SINGH

10010825	MAYANK THAKUR
10010826	P S SENTHIL
10010827	P T V B NARASIMHA KUMAR
10010829	PRASHANT KUMAR SINGH
10010830	RAJENDER LAVUDIYA
10010831	RAJIB DAS
10010832	S NANDA KISHORE
10010835	SANJEET KUMAR SAHU
10010836	SAURAV KUMAR
10010837	SHARIQ HAROON
10010838	SHREYANSH JAIN
10010841	SURENDRA SWAMI
10010844	PULKIT JAIN
10010845	KUMAR BISWARANJAN
10010846	MACRINA LOBO
10010847	DEVANSHU CHAUDHARY
09010804	AMIT YADAV
09010810	DHYANENDRA SINGH
09010812	JASPREET SINGH
09010815	KUMAR GAURAV
09010821	SAMALA BHARGAV
09010827	TARUN KATHURIA

List of students who have fulfilled the requirements for the award of B.Tech. degree in Engineering Physics

Roll No	Name
10012101	AKASH YADAV
10012102	ANAND RAJ
10012103	ANJANI KUMAR MAURYA
10012104	ANKESH KUMAR
10012107	ASHISH KUMAR
10012109	BAGADI DEVI PRASAD
10012110	PRANNAY BALLA
10012111	BANANI BISWAS
10012112	CHETAN DESHMUKH
10012113	CHIRAG
10012114	DAYAPULE DURGA HARISH
10012115	DEEPLYOTI DEB
10012116	E S RAJDEEP SAGAR
10012117	HAMENT CHOUDHARY
10012119	LALIT MOHAN PRADHAN
10012121	KANCHAN KESHAORAO MOPARI
10012124	RAHUL S NARYANI
10012127	RITESH MOHAN KRISHNA
10012129	SUDEEP SHUKLA
10012130	T NEHA
10012131	TEJUS B G
10012133	TILAK NIKHIL MOHAN
10012134	VAIBHAV DWIVEDI
09012120	PANDHARPURKAR ANURAG

List of students who have fulfilled the requirements for the award of B.Tech. degree in Chemical Science and Technology

Roll No	Name	Roll No	Name
10012201	AAYUSHI BAJPAYEE	10012328	RAJESH YARLAGADDA
10012202	ADITYA PUROHIT	10012329	RAJU RAM
10012203	AJAY SINGH MEENA	10012331	SHAGUN RAWAT
10012204	ASHISH KUMAR	10012332	SIZIL KRISHNA GOOJAR
10012205	BABLI KUMARI	10012333	TANAY LUTHRA
10012206	BIDHAN CHANDRA SARKAR	10012335	VIBHASH KUMAR
10012207	BODDU SATWICK	10012336	VIPIN KUMAR SINGHAL
10012208	CHILLALE TEJAS PURANDAR	10012338	RAJAT KATEJA
10012209	CHINTALA SATYANARAYANA MURTHY	10012339	ABHINANDAN
10012210	DARNESH NARLA	10012340	SACHIN GUPTA
10012211	DHARWADKAR INDRANEEL AVINASH	10012341	NIMISH SRIVASTAVA
10012212	DIVYA DINESH NANDWANA	10012342	REVANT KUMAR
10012213	HARSH KHETAN	10012343	KHUSHI SUNIL GUPTA
10012214	KARAN HANDA	09012312	KUMAR BRAJESH
10012216	KUMAR MANGALAM	09012317	MOIRANGTHEM CHINGKHEINGANBI
10012217	KUSH KUMAR		
10012220	MURAKONDA RATNAKAR		
10012221	NADIMPALLI DINESH VARMA		
10012224	PAMU RAVI KUMAR		
10012225	RAHUL KUMAR		
10012227	RAVI KUMAR		
10012228	RAVI PRAKASH SINGH		
10012229	RISHESH AMERIYA		
10012230	SATISH KUMAR		
10012232	SHUBHAM NASHINE		
10012233	SIDHARTH THAKUR		
10012234	SUMINAKSHI DAS		
10012236	U. ADITYA PUSHYAMITRA SARMA		
10012237	YEDLA SRUTHI		
09012204	CHITYALA SUDHEER KUMAR		
09012208	GUTA ANIRUDH KUMAR		
09012228	SRIKANT JAYARAMAN		
08012222	R VAMSHI KRISHNA		

List of students who have fulfilled the requirements for the award of B.Des. degree in Design

List of students who have fulfilled the requirements for the award of B.Tech. degree in Mathematics and Computing

Roll No	Name	Roll No	Name
10012304	AKANKSHA GUPTA	10020501	ABDUL SAMEER ASHRAF
10012306	ALOK MALAKAR	10020502	ABHINAV KRISHNA AADIRAJU
10012307	AMAN GUPTA	10020503	ABHISHEK SINGH
10012308	AMAN KESARWANI	10020504	ADITI PADHI
10012310	ANURAG PRATIK	10020506	ANKIT PARIKH
10012311	ARGHYA SARKAR	10020507	ANUPARTHY CHAYAPATHI
10012312	ARJUN SHARMA	10020508	ANVAY MESHRAM
10012313	BIKASH KUMAR SHAW	10020509	APURVA GUPTA
10012315	CHIRAG MAHESHWARI	10020510	ARKA BANI MAINI
10012316	DEBASISH PATTANAYAK	10020511	ASHOK B THARIYAN
10012319	JAYANT GUPTA	10020512	BHASKER SHARMA
10012322	LAVLEEN	10020514	DUSHYANT PALRIWAL
10012323	MUKUND SHIVAJI RAUT	10020515	HARSHIT AGRAWAL
10012324	PAKSHIT UPADHYAYA	10020516	HIMANSHU BANSAL
10012325	PRAKASH KUMAR	10020517	JARUPALA SRIDHAR
10012326	RAHUL AGRAWAL	10020518	JATIN PHERWANI
10012327	RAHUL SINGH SAINI	10020520	K THIRUPATHI
		10020523	MANNU AMRIT
		10020524	MAULISHREE ARVIND PANDEY
		10020525	MEHUL AGRAWAL
		10020526	MINAL JAIN
		10020527	MOHIT YADAV
		10020528	NEHA KUMAR
		10020529	NENAWATH RAMESH
		10020532	PRABHAT KUMAR
		10020534	RISHIKA JAIN
		10020535	SACHIN KODATI
		10020536	SARAYU AGARWAL
		10020537	SATYAN CHAWLA
		10020538	SHUBHAM JAIN
		10020539	SURBHIT VARMA
		10020540	T. S K SATYA DHARMA PHALGUN
		10020541	TIGMANSHU BHATNAGAR
		10020542	TUSHAR CHHABRA
		10020543	VARUN NAGPAL
		10020544	VIKAS LUTHRA

09020521 RITHVIK RAMADAS
 08020513 MITTA RAVI SHANKAR
 08020523 VEMU NAVEEN NISCHAL

List of students who have fulfilled the requirements for the award of M.Sc. degree in Physics

Roll No	Name
122121001	AAKANSHA
122121002	ABUBAKKAR SIDDIK
122121004	ANIRBAN BHOWMICK
122121005	ARGHYA MUKHERJEE
122121006	ASADULLAH SK
122121007	BAISHALI DUTTA
122121008	BANIBRATA CHAKRABORTY
122121009	BIKASH MANDAL
122121010	BIPASHA PAUL
122121011	BISWAJIT MANDAL
122121012	DEBASMITA MAITI
122121013	DEBDATTA PANIGRAHI
122121014	DINESH YADAV
122121015	DIPANGKAR BORAH
122121017	DIPANWEETA BHATTACHARYYA
122121019	GOPAL GORAI
122121020	GOUTAM KUMAR SAHOO
122121021	INDU KALPA DIHINGIA
122121022	JAYANTA KUILA
122121023	JAYJIT KUMAR DEY
122121024	KAJAL MAJI
122121026	MANGESH BHATTARAI
122121027	MITHUN ROY
122121028	MOUMITA DAKUA
122121029	MRIGANKA SINGH
122121030	NAWAZ SARIF MALLICK
122121031	NIVEDITA GHOSH
122121032	PREETHA SAHA
122121033	PREETI KUMARI
122121034	PURUSOTTAM GHOSH
122121035	RAJARSHI SINHA ROY
122121038	SANDIP DAS
122121041	SOUMADRI SAMANTA
122121043	SUSHANTA LENKA
122121044	TAMAL GUHA
122121045	TARAK NATH MAITY
11212108	BHUWAN CHAND
11212115	DEEPAK CHAUDHARY
11212116	DEEPAN BEJA
11212141	SUMIT PRATAP SINGH

List of students who have fulfilled the requirements for the award of M.Sc. degree in Chemistry

Roll No	Name
122122001	ABIR GOSWAMI
122122002	ACHINTA SANNIGRAHI
122122003	ANANTA KALITA

122122004	ANIKET MISHRA
122122005	ANKIT KAUSHIK
122122006	ANKUSH BANERJEE
122122008	ANWESHA MUKHERJEE
122122009	ARPAN MUKHERJEE
122122010	AYAN PAL
122122011	CHUMKI DALAL
122122012	DEBAPRATIM DAS
122122013	DEEPAK KUMAR PAL
122122014	DIPANKAR BAIN
122122015	INESSA BANERJEE
122122016	JAGADISH DAS
122122017	JAYANTA MONDAL
122122018	KRISHANU SAMANTA
122122019	KRISHNADIPTI SINGHA
122122020	KRISHNANGSU PRADHAN
122122021	MOSTAKIM SK
122122022	NILOTPAL SINGHA
122122023	PRIYANKA SAMANTA
122122024	RAJAT SUBHRA GIRI
122122025	RIA MUKHERJEE
122122027	SANJAY DUTTA
122122028	SANTANU KAYAL
122122030	SHUBHADEEP CHAKRABORTY
122122032	SOURAV MONDAL
122122033	SOURENJIT NASKAR
122122034	SRESTHA BASU
122122035	SUDESHNA CHATTERJEE
122122039	SUMITAVA MALLIK
122122040	SURAJIT BARMAN
122122041	TANAY DEB BARMAN
122122042	TURJYA RAY
122122043	UTSAB MANNA
122122044	VIVEK SHARMA

List of students who have fulfilled the requirements for the award of M.Sc. degree in Mathematics and Computing

Roll No	Name
122123001	ABHILASH SAHU
122123002	AMIT KUMAR
122123005	ANIRBAN DAWN
122123006	ARKABRATA GHOSH
122123008	AVIJIT HALDER
122123010	BHAGGYADHAR PAHAR
122123012	BISWAJIT MANDAL
122123013	DEBASHIS BHOWMIK
122123014	DEEPANSHU KARNWAL
122123015	DHEERENDRA SINGH
122123016	GOPAL DUTTA
122123017	GOPIKA SHARMA
122123018	HARIOM VERMA
122123019	KANCHAN MANDAL
122123023	MUDIT KUMAR
122123024	NAMRATA SHUKLA
122123029	RAJESH KUMAR MISHRA

122123031	RASHMI NIDHI TOPPO	122241001	ABHAY PRATAP SINGH
122123033	SAMIR KAR	122241004	BHRIGU RANJAN BORTHAKUR
122123034	SANDIPAN DUTTA	122241005	DEEKSHA ARORA
122123035	SANGITA JHA	122241006	DEEPA GUPTA
122123037	SHIBAPADA MAHATO	122241010	HIMANGSHU DAS
122123040	SOUGATA MARIK	122241011	JIMALI BORO
122123041	SUCHISMITA PATRA	122241012	JIMMY SEBASTIAN DAIMARY
122123042	SUDIPTA GAYEN	122241013	KAUSHAL KISHOR KAUSHAL
122123043	SUMAN SARKAR	122241014	KHURSHID ALAM AHMED
122123044	SUNANDA DAS	122241017	MINAKSHEE DAS
122123046	SURABHI VISHWAKARMA	122241018	NAZIBUL ISLAM
122123047	SURJEET	122241020	PARISHMITA SAIKIA
122123048	TIASHA SAHA ROY	122241021	PRAKASH GUPTA
122123049	TUHINA MUKHERJEE	122241023	RAHUL SHUKLA
122123050	VIKAS KUMAR	122241024	RAMA DEVI
122123051	VEEKESH KUMAR	122241025	RISHI KISHORE
11212303	ABHISHEK RAJAN	122241026	RITU RAJ DEORI
11212312	GAJENDRA KUMAR NAGAR	122241027	SUPRIYA TIWARY
11212326	NIRMOY KUMAR DAS	122241028	VELUR VEDVIKASH REDDY
11212329	PRATAP BHANU SHARMA	122241029	VINEET KESHAW
11212332	PRIYANKA MANDAL	11224135	RINKU DAS
11212336	SANTU MANDAL		
11212342	TANMAY KAYAL		

List of students who have fulfilled the requirements for the award of M.A. degree in Development Studies

Roll No Name

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Computer Science and Engineering

Roll No	Name	Project Title
10410134	Manojit Ghose	Hybrid Subset Based Cache Replacement Policy to Reduce Number of Misses in LLC
11410103	Hindol Adhya	Comparison of Community Finding Algorithms
11410104	Arnab Ray	A Study on Structural Properties of Stock Market Graph
11410105	Abhirup Seal	Implicit Feedback Based Query Expansion
11410106	Shachee Mishra	Barrier Coverage in Camera Sensor Networks
11410107	Prateek Halwe	Controlled Cache Partitioning of Multicore LLC
11410108	Saswata Dutta	Polygonal Domain Shortest Path Problem on GPU
11410109	Patel Rushiraj Parsotambhai	Test Case Generation Using Model Checking
11410110	Kunal	Emulating an Idiotypic Network for Networked Robots
11410111	Anupama Nandi	Implementation and Performance Evaluation of External Minimum Spanning Tree
11410112	Jithin Mathews	Construction of non-2-colorable Uniform Hypergraphs
11410113	Argha Sen	A Discrete Event System Approach To Fault-Tolerant Real-Time Multi-processor Systems
11410114	Rama Krishna Rayudu	STXXL IMPLEMENTATION AND PERFORMANCE EVALUATION OF TWO ALGORITHMS FOR HESSENBERG DECOMPOSITION
11410115	Dipak Kumar Mangal	Study of Spectral Based Link Prediction

11410116	Debarghya Banerjee	Game Theoretic Analysis of Cascading Effects in Stock Markets
11410117	Prabal Kumar Ghosh	Discrete Event System Approach to Evil Twin Attack Detection
11410118	Dhanya R Mathews	Congestion Management in LANs using Redundant Links
11410119	Rahul Kumar Kundra	Analyzing Real-Time Systems using BIP
11410120	Basma Alam	Dynamic Replication in a Hadoop Cluster based on Access Pattern
11410121	Harshit Awasthi	Routing in Cluster Mesh With Hierarchy of NOC
11410122	Krishna Mohan Agrawal	Popularity based Cache Partitioning Scheme and Caching Algorithm for IPTV Networks
11410123	T Harsha Sai	Network traffic Analysis using principal component graphs
11410125	Dehedkar Sayali Suresh Rao	Making Reduce Task Locality Aware in Hadoop Map Reduce
11410129	Shuvendu Rana	Robust Scalable Watermarking on H.264/SVC Video Sequences
11410130	Geetesh Rahule	Packet Based Approach For Time Sensitive Applications in 4-4,1-4 Architecture
11410131	Desai Sureshkumar Amrutlal	Scheduling And Binding of Multiphase Applications Onto Large Multi-core System
11410132	Soumyajit Das	Support for Transactions in the EXT3 File System
11410133	Sachin Kumar	System and Methods for Converting English Text into SQL
11410134	Marpina Bhargava	Job Scheduling in Multiprocessor System With Prereservation
11410135	Ashish Kumar	System and Methods For Converting Speech into SQL
11410136	Saurabh Kumar Singh	On Realizing Emotional Memories
11410139	Ashish Singh Patel	Object Based Watermarking for H.264/AVC Video Resistant to RST Attacks
11410143	Sourav Mandal	Automated Updates in SOA Systems
11410144	Gargi Priyadarshini	Inferring Clinical Rules from Electronic Health Records
11410145	Debjani Saha	Static Scheduling of Control Tasks using Model Checking
11410148	Khade Ganesh Dnyanoba	Web Object Attention Model for Both Image and Text Object
11410149	Ramesh Singh	Concurrency Control in Deterministic 1-2Skip List in Distributed Environment
11410151	Prashant Kumar Gurga	Streaming Algorithm for Interval Graph
11410152	Sanjib Das	An Intrusion Detection System for DNS Cache Poisoning Attack
11410153	C. Vanlalchhanhima	Scalable Secure Multicast Key Distribution Using Node Balancing
11410155	Leuva Pratikkumar Khushalbhai	Hybrid System Approach to Online Fault Detection in Power Converter Circuit (Case Study : DC DC Boost Converter)
11410156	Sudhakar Kumar	Web Object Attention Model for Text Based Webpage
124101003	Kaushik Baruah	A Transactional ext3 File System
124101005	Kunj Kothari	Anytime Algorithms for Mutual Exclusion Rule Mining
124101006	Sachin Shah	Computational Modeling for Detecting Emotion through Indirect Cues for Touch Screen Devices
124101009	Karanam L. S. Sai Kumar	Conference Recommendation System for Authors
124101011	Pratik Agrawal	Simulation of MIPS Architecture based Large Multicore System on GPU
124101014	S Santhosh	Low Overhead QoS Aware Downlink Scheduling for Multimedia Services in LTE Systems
124101015	Saimanoj Kumar Y	Document Reduction: Indexing with Representative Terms
124101020	Umang Sharma	Learning-based approach to infer social ties in Twitter

124101021	Piyooosh P	Discrete Event Systems (DES) Approach to Fault Tolerance in Real Time System on Homogenous and Heterogeneous Multiprocessor Platform
124101022	Shantanu Sharma	Issues in Feature Reduction for Speech Recognition
124101023	Ashish Jain	STXXL Implementation of Algorithms for the Generalized Eigenvalue Problem
124101024	Manohar Singh Gour	Identification of Entities: Case Study on Recipe & NER using Cross-Lingual Information
124101026	Kamaljeet Chauhan	Real Time Scheduling strategies with incomplete information using Discrete Event System(DES)
124101027	Gaurav Ajmera	Land Price Prediction
124101030	Abhishek Suman	Inferring social ties from common activities in Twitters
124101031	Avinash Kumar	Implementation of QR Decomposition Algorithm using STXXL
124101035	Harshad Baban Raut	Study of the characteristics of different types of facebook users by exploiting user's timeline activities
124101037	Prajapati Jaykumar Shailesh-bhai	Secondary Market Analysis
124101039	Shailesh Prajapati	FP-tree based mutual exclusion rule mining algorithms
124101040	Vanapalli Kartheek	Searching Mechanisms for Dynamic NUCA in Chip Multiprocessors
124101041	Dinesh R	Data Eviction and Data Target Policy for Dynamic NUCA in Chip Multiprocessors
124101042	Prayag Surendran	An Open source toolkit for developing mining algorithms with Wikipedia
124101043	Koushik Konar	Online Testing of Digital Circuit case Study at Comparator
124101046	Arghya Kusum Majumder	Online testing of digital VLSI circuits
124101049	Barun Halder	Dynamic 2-Level Recommendation Based Trust Model for Cloud System
124101050	Chetti Prasad	Evaluation of Community Detection Algorithms: An alternative Approach
124101051	T. Thangkhunlun	A GENERIC EXTENSION TO OVERLAPPING COMMUNITY DETECTIONS ALGORITHMS AND COMPARISON BETWEEN THEM
124101052	Vinod Kumar Meena	An Optimal Algorithm for On-line Testing of Digital Micro-Fluidic Bio-chips
124101053	Karsing Panging	Comparison of Link Prediction Algorithms on Co-authorship Networks
124101055	Diganta Baishya	Improving Speech Recognition using Bigram Analysis for Assamese Language
124101056	Zinabu Haile Abirha	FPGA Implementation of Parallel Pattern Matching to Accelerate NIDS
124101057	Tonmoy Saha Roy	On Grounding Symbols for Robots
124101059	Tambe Vishal Baban	Analysis of ARLBP on various Machine Learning Algorithms
124101060	Tarun Kumar Agrawal	Scheduling Parallel Multiphase Applications onto Multiprocessor

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Computer Science and Engineering with Specialization in Information Security

Roll No	Name	Project Title
10410149	Manab Mohan Borah	Attack Analysis on AODV with SHORT in Ad-Hoc Wireless Networks
10410152	Bhri guraj Borah	Security in Windows System Call and SSDT

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Electronics and Electrical Engineering with Specialization in Signal Processing

Roll No	Name	Project Title
11410211	Shah Jaimeen Hiteshbhai	Temporally Scalable Compression of Animation Geometry
11410213	V.Satya Aditya Murakonda	CROSS SPEED GAIT RECOGNITION USING SHAPE AND STRIDE
11410214	Rahul S	Single Image Super Resolution using Dictionary Learning Methods in the Wavelet Domain
11410216	Sandeep Reddy C	Development of Bilingual Speech Synthesis System
11410223	Suman Deb	Speaker Verification using Speaker Specific Behavioral Features
11410224	Veeramallu S Manikanta	FACE RETRIEVAL BASED ON EIGEN-CORRESPONDENCES
11410225	Vinal Patel	HUMAN ACTIVITY RECOGNITION IN VIDEO SEQUENCES
11410227	Kartheek Ganta	CONTINUOUS HAND GESTURE RECOGNITION BY USING A NOVEL SET OF FEATURES
11410229	Uday Bhaskar Rao Yedla	Audio Declipping and Artificial Bandwidth Extension using Sparse Representations
11410230	Kausik Das	FACE RECOGNITION USING GLOBAL AND LOCAL FEATURES
11410234	Rathlavath Krishnanaik	Assamese Handwritten Strokes Recognition using Hidden Markov Models
11410262	Amit Dhar	ESTIMATION OF LIGHT SOURCE DIRECTION FOR BLIND FORENSICS OF IMAGES USING VANISHING POINTS
11410263	Sanjay Viswanath	Performance Evaluation of Video Descriptors
11410265	Abdulkareem V.	AUDIO FINGER PRINTING FOR MULTI-LINGUAL RETRIEVAL OF INDIAN FILM SONGS
11410266	Santhosh Kumar Podugu	Probabilistic Latent Component Analysis based Artificial Bandwidth Extension for Speech Signals
11410267	Niladri Das	Capacity of Sum-Networks
124102012	Sharath Jotawar	Improving Sparse Representation using NN-LASSO for Robust Automatic Speech Recognition
124102014	Kiran Francis	Methods for Image and Video Forensics
124102016	Deepak	Synthesis of 12-Lead ECG from Reduced Lead Subset: Patient-Specific Approach
124102024	Nerella V V Manikanta	Addressing the Robustness of Point Process Model based Keyword Spotting
124102025	Shashikant	Stressed Speech Classification
124102029	Harshit B	TRANSPARENT FACE HASHING BASED ON GLOBAL INTENSITY SUBSTITUTION
124102064	Manoj Rupchand Sarve	Fundus Image Analysis for Qualification of Retinal Abnormalities

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Electronics and Electrical Engineering with Specialization in VLSI

Roll No	Name	Project Title
11410201	Sushant Pandey	Simulation of Electrostatic and Electromagnetic Energy Harvesters
11410202	Anas M M	Simulation on Energy Band Gap Opening of Graphene Nanoribbons
11410203	R. Kameswaranagamahesh	Design of Ultra-Wide Band Physical Layer(PHY) Transceiver for IEEE 802.15.6 WBAN Baseband
11410205	Akash G	A Transceiver Baseband Design for Ultra-Wide Band Physical Layer of IEEE 802.15.6 Standard in Bluespec

11410207	Burra Shravan Kumar	VLSI IMPLEMENTATION OF SIGN-LMS BASED ADAPTIVE FILTER USING SPT ALGORITHM
11410208	Nandlal Yadav	Study of Scaling Effects in Analog Circuits
11410243	Niraj Kumar	VLSI IMPLEMENTATION OF LINEAR MMSE DETECTOR FOR MIMO-OFDM COMMUNICATION SYSTEMS

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Electronics and Electrical Engineering with Specialization in Communication Engineering

Roll No	Name	Project Title
11410226	Alok Singh Chauhan	Analysis of QAM System under Different Fading Channels with Channel Impairments
11410237	P. Babu Sukumar Chowdary	Improved detection and Cooperative sensing in a cognitive Radio Network Scenario
11410240	Kalpant Pathak	Analysis of Switched Diversity Receivers over k - μ and n - μ Fading Channels
11410242	Jeevan Kuriakose	Improved Modulation Classification using the spectral Correlation function
11410246	P Anoop	Design of Dual Mode Feed Horns for Offset Reflector Antennas
11410247	Arijit Roy	MIMO and Multiuser UWB Communication Systems using Orthogonal Frequency Coded SAW Correlators
11410248	Pawan Kumar	ABER Performance of MRC Receiver in k - μ fading with Channel Estimation Error
11410251	Sandip Kumar Gupta	Heuristic Approaches for Multicasting using Anypath Routing in Wireless Mesh Network
11410256	Kumbhar Sushant Anil	Performance Analysis of MIMO Detection Techniques
124102032	Jomet Thomas	Sequential Algorithms with Stochastic Energy Constraints
124102037	Priyank Bharadwaj	FULL WAVE ANALYSIS OF PRINTED ANTENNA USING SPATIAL DOMAIN METHOD OF MOMENTS
124102040	Ashok Kumar	Full wave Analysis of Printed Antennas and Circuits using Spectral Domain Method of Moments
124102044	Vishnu R C	Topics in Polar Codes
124102045	Vimal K M	Performance Analysis of Space Time Block Coded Spatial Modulation in Correlated Fading Channels
124102053	L N Baya Reddy	Performance Analysis of Cooperative Communication Over Generalized Fading Channels
124102054	Sunju John	Prevention of Collusion Attack in Collaborative Spectrum Sensing – A Game Theoretic Approach
124102061	Hagenimana Venuste	On the capacity of Multiple-Unicast Networks

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Electronics and Electrical Engineering with Specialization in Applied Control

Roll No	Name	Project Title
11410259	Nidhin A.K.	Adaptive Fast Terminal Sliding Mode Control for Buck Converters
124102051	Kurian C Kurian	"Thin" characteristic sets for 2D discrete scalar autonomous systems
124102056	Patel Shrenik Babulal	ROBUST FINITE TIME CONTROLLER FOR ROBOTIC MANIPULATORS
124102059	Kuruganti Chatan Kumar	Optimal Control of Multi-Agent Systems

124102063	Narahari Santosh Kumar	Dissipativity Analysis of SISO Systems using Nyquist-Plot Compatible (NPC) Supply rates
124102068	Surjagade Piyush Vinayakrao	FAULT TOLERANT CONTROL FOR UNCERTAIN SYSTEMS

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Mechanical Engineering with Specialization in Machine Design

Roll No	Name	Project Title
11410302	Naveen Kumar Singh	Online Monitoring of Cutting Forces in a Turning Operation using Bridge Currents of an Induction with Motor Winding Bridge Configured
11410303	Mirzaul Karim Hussain	Determination of Mode I Stress Intensity Factors using Goal Oriented Adaptive Finite Element Procedures
11410304	Kopal Agarwal	DYNAMIC ANALYSIS OF MAGNETORHEOLOGICAL ELASTOMER BASED SANDWICH BEAM USING TIMOSHENKO BEAM THEORY
11410305	Veluguri Sandeep Kumar	Thermal Based Performance Analysis
11410307	Gohil Sanjaysinh Popatji	DETERMINATION OF STRESS INTENSITY FACTORS USING EXTENDED FINITE ELEMENT METHOD
11410309	Avinash Vishwas Chougale	Estimation of Active Magnetic Bearing Dynamic Parameters in Fully Levitated Rotors
11410310	Sai Prasad Panda	Micromechanical analysis of unidirectional short piezoelectric fiber reinforced composite material
11410311	Kanhaiya Kumar	Optimum Positioning of SMA Wire Actuator for discrete Actuation
11410312	Nanivadekar Vivek Kishor	Study of Electromechanical Analysis of a Cage Induction Machine with Bridge Configured Winding Considering Material Nonlinearity
11410313	Shedage Anup Ramchandra	Theoretical experimental and analysis of SMA wire behavior for arbitrary stress and temperature variation
11410314	Kishor Kumar Gajrani	Thermo-mechanical Analysis of Plate bending by laser line heating
11410316	Ankit Dave	Parametric Study of a stress wave force balance for Short Duration Measurements
11410317	Prabhakaran N	Design and Development of a Walking Apparatus
11410318	Sandeep Kumar	Effective elastic properties of graded unidirectional continuous fiber reinforced composite
11410319	Swetha Gottumukkala	Residual Stress and Fatigue Life Prediction of Welded Structure
11410322	Waghole Vikas Karbhari	Optimum Design and Analysis of Spherical and Needle Roller Bearings
11410323	Prafulla Verma	Fabrication and Characterization of Functionality Graded Materials
11410324	Ashutosh Kumar	Optimization of Groove Size and Groove Locations for two Groove Journal Bearings
11410325	Nayan Jyoti Baishya	Modeling and Optimization of Pressure Vessel under Thermo-Elastic Condition
11410327	Susanta Behera	Preparation and characterization of copper-carbon nanotube nanocomposite via powder metallurgy technique
11410328	Sarpe Nitin Shreedharrao	Performance Evaluation of CNT Based Polymer Asymmetric Spur Gears
11410329	Kunwar Singh	EFFECT OF LIME COATING ON LASER BENDING PROCESS
11410331	Padawale Niranjan Damodhar	Nonlinear free and forced vibration of radially graded annular plate with a hearted-plate-edge
11410387	Mafidur Rahman	Design and Development of a bridge configured winding based induction machine

11410388	Bijay Kumar Roy	PREPARATION AND CHARACTERIZATION OF SHAPE MEMORY POLYMER NANOCOMPOSITES FOR STENTS
124103011	Kumbhar Sachin Sitaram	Active vibration control in Electrical machine using built-in actuators
124103013	Ravi Shankar Shukla	Hysteresis and Damage Tolerance of CNT/PP Composites
124103018	Vaibhav Jaiswal	Multi-Tool Turning: Process Parameters, Specimen Accuracy and Tool Wear Issues
124103020	Rakesh Singh Kushwaha	Characterization of System Dynamics for a Blunt Cone Geometric Configuration using Linear System Theory
124103021	Surendra Singh	Topology Optimization of Structural Stiffness and Structural Frequency
124103029	Gade Narendra Rangnath	Evaluation and Analysis of Fatigue Loading on Polyester Resin based Glass Fiber Composite Material
124103083	Narode Deepak Govind	Coupled rotor dynamic and electromagnetic dynamic model for flexible rotor electrical machines.
124103100	Sanjoy Naskar	Design and Development of Micro-Fluidic Valve for Small Scale Applications

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Mechanical Engineering with Specialization in Fluids and Thermal Engineering

Roll No	Name	Project Title
11410333	Patel Priteshkumar Hiralal	Performance analysis of Compressor Driven Metal Hydride Colling System
11410335	Hemanshul Garg	Least Squares based meshless framework for incompressible fluid flows
11410336	Mangukiya Bharatkumar Jagdishbhai	Numerical Analysis of Flow Instabilities in Supercritical Fluid Systems
11410337	Vinod Pandey	Conjugate heat transfer analysis for composite configurations in hypersonic flow
11410340	Subhransu Sekhar Mallick	Prediction of hydrodynamics and heat transfer along the riser of a Circulating Fluidized Bed
11410343	Mukul Parmananda	Development of Three-dimensional Navier-Stokes Solver on Hybrid Unstructured Grid
11410347	U S Tejaswini	CFD INVESTIGATION OF HEAT TRANSFER CHARACTERISTICS AND SCALING OF SUPERCRITICAL FLUID SYSTEMS
11410348	Debabrat Samantaray	Numerical Simulation of Unsteady Compressible Flow – A Shock Tube Problem
11410349	Ashish Kumar	NUMERICAL SIMULATION AND ANALYSIS OF CRYOGENIC ABLATION OF TUMOR IN A TISSUE
11410351	Kaushik Roy	COMPRATAIVE STUDY OF CENTRAL AND UPWIND SCHEMES WITH RESPECT TO HIGH SPEED FLOWS
11410353	Kharche Swapnil Prabhakar	Experimental Study on Medium Scale LPG Cooking Stove with a Porous Radiant Burner
11410354	Wadekar Shrikant Sadashiv	NUMERICAL ANALYSIS OF HEAT TRANSFER IN 1-D AND 2-D POROUS RADIANT BURNER
11410355	M. Kishore Kumar	Computation of flows involving Shock-boundary layer interaction
11410358	Gulshan Dewangan	CFD investigations for non-equilibrium hypersonic flow
11410359	Randhir Kumar	Hexagonal boron-nitrate based nanofluid as a transformer coolant
11410360	Mohd Shariq Khan	A sharp interface immersed boundary method for incompressible flows
11410361	Basanta Kumar Rana	Flow and heat transfer from the Annular Fin Heat Exchanger using Winglet Type Vortex Generators

11410362	Ajay Kumar	Modeling and Optimization of Proton Exchange Membrane fuel cell Reformer
11410363	Tarun Kumar Shakya	Experimental Investigations of CO ₂ LASER Micro Drilling on High Temperature Materials
11410364	Baisalini Sethi	Investigations on Flow and Heat Transfer Characteristics of Minichannel Arrays
11410365	Subash Babu Matta	Experimental Studies on CO ₂ Laser Beam Micro Drilling of AISI 1040 Steel and Titanium Alloy
11410367	Ajit Singh	Modeling of Combined cycle power plant
11410369	Anisha Ekka	Experimental Study of CO ₂ Laser Micromachining of AISI 1040 Alloy Steel
11410370	Manash Jyoti Borah	Numerical and Experimental Study on CO ₂ Laser Welding Process Parameters on Temperature Distribution
11410371	Shyam Singh Kanwar	Numerical Study of the Effect of Counter Flow Injection on Drag Reduction in Hypersonic Speeds
11410375	Saurabh Bhardwaj	Numerical Simulation of Natural Convection Flow in a Porous triangular Enclosure
11410380	S.Muthukrishnan	Study of conjugate heat transfer in open cavities with discrete surface-mounted discrete heaters
11410383	Sawan Kumar Sethy	Experimental Investigation of Emulsified Fuel in a Variable Compression Ratio Diesel Engine
11410386	Santosh Kumar Hotta	Drying of Ginger in a Natural Convection Dryer using Waste Heat
11410391	Mahendra Kumar Gupta	Numerical simulation of miscibility and surface tension for incompressible flows with unstructured meshes
124103028	Atul Keshao Khobragade	INVESTIGATION OF LATENT HEAT STORAGE SYSTEM USING PHASE CHANGE MATERIALS
124103037	Dusad Sagar Gopal	Implementation of Turbulence Models on Unstructured Grid
124103039	Siddharth Kar	Calibration Methodology of Thin Film Gauges during Short Duration Transient Temperature Measurements
124103040	Harvendra Pratap Singh	Compressible Viscous Flow Simulation Using Immersed Boundary Technique
124103041	Debraj Das	Numerical Simulation of Solidification and Melting Problems on Un-saturated Grid
124103042	Siddesh Desai	Computational Investigation of Non-equilibrium Chemistry Effects in Hypersonic Flows
124103043	Ankit Bajpai	Computation of Variable Density Flows on Hybrid Unstructured Grid
124103044	Rajendra Singh	Experimental and Numerical Studies of Zero Head Water Turbine
124103048	Snehasish Panigrahy	NUMERICAL ANALYSIS OF HEAT TRANSFER IN A LPG FUELLED POROUS RADIANT BURNER
124103050	Abhilash Kumar Tilak	Nonlinear Stability Analysis and Dynamic Performance Evaluation of a Rectangular Supercritical Natural Circulation Loop
124103053	Naveen Kumar Pushpak	Experimental Studies on Pressure Swirl Atomization
124103055	Rahul Kumar Chaurasia	ANALYSIS OF DUAL-PHASE LAG CONDUCTION AND RADIATION HEAT TRANSFER IN A 1-D GEOMETRY USING THE LATTICE BOLTZMANN METHOD AND THE DISCRETE TRANSFER METHOD
124103057	Sanjay Singh Yadav	Thermo-chemical investigation of biomass gasification process in a downdraft gasifier

124103058	Gumeet Kumar Sahu	Model Development and Analysis of Hydrogen Production Using Bio-mass
124103059	Siddhant Parvat	Experimental Investigation and Numerical Simulation for a Coaxial Surface Junction Thermocouple during Short Duration Measurement
124103060	Anand Kumar Sahu	Experimental Studies on Variable Compression Ratio (VCR) Spark Ignition (SI) Engine
124103062	Vishnu Kumar	Investigation on drying with rotary fluidized bed in static geometry
124103064	Pradip Kumar	Heat and mass transfer study in a natural convection dryer
124103067	Yogesh Kumar Ratre	Investigation of The Effect of Channel Inclination on Adiabatic Flow Pattern Maps for Small Diameter Channel: An Experimental Study
124103068	Bukke Kiran Naik	PERFORMANCE INVESTIGATION OF WATER COOLED AND AIR COOLED CONDENSER BASED A/C PLANTS IN A HUMID SUBTROPICAL REGION
124103071	Abhisek Banerjee	Computational and Experimental Investigations of Elliptical-bladed Savonius Rotor
124103072	Saurabh Sharma	RADIATION EFFICIENCY AND EMISSION MEASUREMENTS IN A 2-LAYER POROUS RADIANT BURNER
124103087	Nanal Narendra Shriram	USE OF IMMersed BOUNDARY METHOD FOR COMPUTING HYPER-SONIC FLOWS
124103099	Seet Mei Seer	Computation of Flows involving shock-boundary layer interaction

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Mechanical Engineering with Specialization in Computer Assisted Manufacturing

Roll No	Name	Project Title
11410373	Ashish Verma	Prototype Development of Nature Inspired All Terrain Robot
11410374	Desai Rahul Satish	Finite element based thermo-mechanical molding of micro laser-spot welding process
11410379	Ghatule Pravin Achut	FEM studies on Effect of Process Parameters on Electromagnetic Forming of Axissymmetric Components
11410381	Boddepalli Durga Rao	Formability and Springback of Friction stir welded sheets made of dissimilar Aluminium alloys
11410389	Debarupam Gogoi	Compliant Analysis of Constant Force Mechanism and a Bistable Switch using Shooting Method
11410390	Leena Harshal Nemade	Numerical and Experimental Study of Friction Stir Welding for Similar and Dissimilar Metals
11410394	Sajan Kapil	Dynamic Analysis of Chatter in Cold Rolling Mills
11410398	Prashant Kumar Sahu	Finite element modeling of ultra-shot pulse laser welding using non-Fourier heat conduction
114103100	J. Rajesh	Design and development of custom made remotely operable Shot blasting system with robotic arms for use in steeply inclined long penstocks
114103101	Dhrubajyoti Doley	Influence of Wire reinforcement on the Forming Behaviour of adhesive bonded steel sheets
124103075	Chaturvedi Himanshu Ajay	Numerical and experimental study of friction stir welding of dissimilar metals
124103078	Avinash Kumar Yadav	SPRINGBACK OF ADHESIVE BONDED SHEETS OF SIMILAR AND DISSIMILAR STEEL
124103085	Valvi Sharad Rajaram	CAFÉ MODELING TO PREDICT THE FORMING DURING FRICTION STIR WELDING OF ALUMINIUM GRADES

124103096	Korade Laxmikant Somnath	Computational Investigation of the Effect of Infiltration Heat Recovery through a Building Envelope on Indoor Airflow Pattern
124103098	Aghyad Eideh	Determination of parameters during laser bending by inverse analysis
124103104	Kasif Ansari	EFFECT OF PROCESS PARAMETER ON MICRO PLASMA ARC WELDING OF SS & TI SHEETS
124103111	Medipati Chandra Sekhar	STUDY OF COMPRESSOR DRIVEN METAL HYDRIDE BASED COOLING SYSTEM

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Civil Engineering with Specialization in Structural Engineering

Roll No	Name	Project Title
11410401	Kapinjal Kishore Sharma	BENING TORSION COUPLED VIBRATION OF NON-UNIFORM THIN WALLED SECTION BEMAS INCLUDING WARPING
11410402	Chandra Prakash	Seismic analysis of RC Skew slab bridges with Base Isolation
11410403	Vishal Chauhan	Behaviour of Integral Abutment Bridge with Geofoam layer in backfill soil
11410405	Arijit Acharjya	Investigation of Seismic Behaviour of RC Wall-Frame Building with Staircase and Elevator Core by Static Analysis
11410406	Benazir Fatima Ahmed	Investigation of Seismic Behaviour of RC Flat Plate Building with Staircase by Static Analysis
11410407	Parul Kumari	Seismic analysis of Integral Abutment Bridge
11410408	Samim Mustafa	BAYESIAN PROBABILISTIC APPROACH FOR MODEL UPDATING AND DAMAGE DETECTION
11410409	Biswajit Chand	EFFECTS OF RC BRACINGS ON EARTHQUAKE RESPONSE OF RC FRAMES
11410410	Nithin V L	INVESTIGATION VARIATIONS OF NON-LINEAR RESPONSE QUANTITIES AND DAMAGE PATTERN FOR RC FRAMES USING SPECTRUM COMPATIBLE ACCELEROGRAMS
11410411	D. Dastagiri	SEISMIC EVALUATION AND STRENGTHENING OF WOODEN HOUSES
11410413	Kumar Abhishek	Chloride induced rebar corrosion in concrete under accelerated condition
11410414	Kintada Maharshi	Finite Element implementation of fibre composite layered shell
11410415	Swarup Mahato	Fragility Analysis and Performance Design based of RC Frame
11410416	Tuhin Patari	Analysis of Solid and voided skew bridge decks: Modeling issues
11410418	Raj Kishore	Effect of curing type, aggregate size and condition on properties of concrete
11410419	Jackie Brahma	SHAPE EFFECT ON THE BUCKLINS BEHAVIOUR OF THIN-WALLED LDSS STUB AND SLENDER COLUMNS
11410490	Kambam Kiran Singh	BUCKLING OF CRACKED LDSS HOLLOW CIRCULAR COLUMNS UNDER PURE AXIAL COMPRESSION
124104002	Ankinapalli Chenchu Mahendra Reddy	Fatigue Life Estimation of Steel truss from girder bridges
124104007	Shubhanshu Tiwari	Nonlinear System Identification of RC Buildings
124104010	Mane Rohan Dadasaheb	Effect of Multi-cell Cross Section on Lean Duplex Stainless Steel Hollow Columns
124104012	Deeptimayee Balabantaray	Component mode synthesis for finite element model updating using Bayesian statistical framework
124104013	Botsa Srinivasa Rao	Investigation of Seismic Behaviour of RC Frame Building with Staircase and Elevator Core by Dynamic Analysis

124104020	Bayyavarapu Ravi	Static, Buckling and Free Vibration Analysis of Steel arch bridge of different geometrical profiles
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List of students who have fulfilled the requirements for the award of the M.Tech. degree in Civil Engineering with Specialization in Water Resources Engineering and Management

Roll No	Name	Project Title
11410453	Abhijit Rout	Spatial Hydrological Modeling Using GIS Tool for an Ungauged Catchment
11410454	Bhagwan Das	Evaluation Infiltration Characteristics of Locally Available Soils
11410459	Harish Kumar Patel	Stability of Lane's Shape with Seepage
11410462	Mukesh Kumar Patidar	An iterative method for estimating travel times of water particles in a subsurface flow system
11410463	Satish Patel	Resistance relationship with Seepage in Alluvial Channel
11410464	Laveti N. V. Satish	Environmental flow computation in the Ganga River basin using SWAT modeling and time series analysis
11410465	Rajesh Athanere	GROUND WATER MODELING OF BIHAR SUB REGION OF GANGA BASIN
11410467	Jayshree Hazarika	FUZZY CLUSTERING TO IDENTIFY HOMOGENEOUS REGIONS FOR WATER RESOURCES PLANNING CONSIDERING CLIMATE CHANGE
124104058	Rohan Kar	MORPHOLOGICAL ISSUES IN HYDRODYNAMIC MODELING OF BRAMHAPUTRA RIVER
124104059	Subhrangshu Purkayastha	A General Analytical Model for the One-Dimensional Steady State Advection- Diffusion Equation
124104067	Chavan Rutuja Manohar	Development of Incipient motion criteria for Alluvial Channel
124104071	Supradeep Singh	A Study on Scouring around Bridge Piers
124104107	Arnab Nandi	SEDIMENT BUDGET, LOCAL TRANSPORT CAPACITY ESTIMATES AND 1D SEDIMENT TRANSPORT MODELING IN A LARGE ALLUVIAL RIVER

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Civil Engineering with Specialization in Geotechnical Engineering

Roll No	Name	Project Title
11410421	Parambeer Singh Rawat	Soil nailing and Nailed Slopes Modeling and Parametric Behavioral Study
11410422	C. M. Jibeesh	COMPACTION AND HYDRAULIC PERFORMANCE EVALUATION OF BENTONITE FLY ASH MIXES
11410423	Giridhar Rajesh Bande	Embankments Resting on PVD Incorporated Soft Soil: Modeling Issues, Analysis and Interpretation
11410424	Atik Uddin Ahmed	SHEAR STRENGTH CHARACTERISTICS OF SOIL-FLY ASH MIXES BLENDED WITH TYRE BUFFINGS AND CEMENT
11410425	Digvijay Kumar Singh	LOAD-DEFORMATION BEHAVIOUR OF MONOPILE AND PILE GROUP FOUNDATIONS FOR WIND TURBINES
11410426	Sudheerkumar Yamsani	SLOPE STABILITY AND EROSION CONTROL OF MULTILAYER COVER SYSTEM FOR NEAR SURFACE WASTE DISPOSAL FACILITY
11410427	Abhijit Rout	Hydraulic Performance of Multi-Layered Cover System for Shallow Waste Disposal
11410428	Avinesh Kumar	A Study on the swelling, hydraulic and compressibility behaviour of various sand-bentonite mixtures
11410430	Patil Milind Satish	Piled raft Foundations: PLAXIS FE Modeling and Parametric Study

11410431	Mali Shivanand Mahadeo	INFLUENCE OF FIBER AND GEOCELL ON STRENGTH BEHAVIOR OF FINE-GRAINED AND GRANULAR SOILS
11410432	Romio Chingtham	Influence of salt contamination on the behaviour of compacted bentonite
11410433	Ashutosh Sachan	ANALYSIS OF BEARING BEHAVIOUR OF PILED RAFTS WITH VARYING PILE PARAMETERS
11410436	Bimalendu Mandal	Effect of Compaction Condition on the Hydraulic and Compressibility Behaviours of Various Fly ash-Bentonite mixtures
11410437	Rayapudi Ramesh Babu	STUDIES ON USE OF SHREDDED TIRES IN FOUNDATION APPLICATIONS
11410438	Yagom Gapak	Performance Evaluation of Geosynthetics used in Landfill Cover System
11410491	Arup Deka	A Study on Static and Dynamic behavior of model Retaining wall
11410494	Bino Albert	MODEL STUDIES ON STONE COLUMN REINFORCED FOUNDATIONS
124104025	Kadam Anil Ravaji	Factors Affecting Ultimate Bearing Capacity of Shallow Foundation on Rocky Slope
124104026	Abhijit Anand	Bearing Capacity of Strip Footing on Slopes Finite Element Modeling and Parametric study
124104027	Buragadda Venkatesh	Influence of Size of exchangeable ions on the geotechnical behavior of clays
124104030	Naveen Kumar	Behavior of Rigid and Sheet Pile Walls: Limit Equilibrium and Finite Element Analysis
124104037	Lokesh Choudhary	Geotextile Reinforced Unpaved Roads Resting on C- Φ Subgrade: Analytical and Finite Element based Design
124104038	Abhra Sarkar	A Numerical Study on the Effect of Soil Layering and Vertical Load on laterally loaded Pile
124104098	Krishanu Mukherjee	PERFORMANCE ENHANCEMENT OF SAND-BENTONITE MIXTURE DUE TO ADDITION OF FIBER AND GEOSYNTHETIC CLAY LINER

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Civil Engineering with Specialization in Environmental Engineering

Roll No	Name	Project Title
11410476	Dina Zaman	Adsorption Kinetics and Equilibria for Mono- and binary Metal Ion Systems of Cr(III) and Pb(II)
11410477	Chatuphale Mayur Nandkumar	Rotary Drum Composting of vegetable Waste
11410478	D. Sarika	Evaluation of Biochemical and Humic Substances during Drum Composting of Water Hyacinth
11410479	Nilesh Jain	SIMULATION AND FIELD INVESTIGATION OF WIND FLOW AND CARBON MONOXIDE DISPERSION IN AN URBAN STREET CANYON
11410480	Nitin Pandey	Eco restoration and Conservation Strategy and Technology for an Urban River
11410482	Abhay Anand M. V.	SIMULATION OF CARBON MONOXIDE DISPERSION IN A BASEMENT PARKING LOT
11410484	Rahul Priyadarshi	Ecological Engineering and Management Practices for Conservation of Urban Rivers
11410487	Subrat Kumar Mallick	REMOVAL OF ANIONIC AZO DYE ACID ORANGE 8 FROM WASTE WATER USING SHORT CHAIN POLYANILINE SYNTHESIZED ON JUTE FIBER
11410489	Rajesh Meena	FLUORIDE REMOVAL BY ADSORPTION AND ION EXCHANGE PROCESS

114104106	Gouri B. S	Assessment of Water Quality Parameters of a Rainfed Lake of IIT Guwahati Campus for Growth and Sustenance of Fishes
114104110	Mahasweta Laskar	A Study on Kinetics of Sulfate Bioreduction and Sulfide Oxidation by Mixed Microbial Consortia

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Civil Engineering with Specialization in Transportation Systems Engineering

Roll No	Name	Project Title
11410429	Mote Amit Arun	Induction loop based traffic detectors for heterogeneous traffic
11410439	Balanagu B Naga Kishore	Safety Indicators for Heterogeneous Non Lane Based Traffic
11410440	Gurpreet Singh	An experimental Study on Strength Behaviour of Soil Blended with RBI-81
11410443	Budde Tharun	Analysis of lateral gap maintaining behavior of vehicles moving in heterogeneous traffic stream
11410445	Budhkar Anuj Kishor	Development of Bidirectional Traffic Flow Model for Indian Scenario
11410450	Haradhan Sarkar	Behaviour of Interlocking Concrete Block Pavement Laid Over Confined Single Size Aggregate Grouted with Stone Dust
11410466	Printal Chandra Halder	Experimental and Numerical Study of Stone Dust Cushioned Single Aggregate Confined in Plastic Cells as a Subbase Material
11410492	Rupjyoti Bordoloi	Analysis and Modeling of land use effect on travel behavior
124104043	Pankil Khandelwal	Study of Inter vehicular Gaps in Heterogeneous Traffic Stream
124104044	Amin Harsh Jigishbhai	Study of Uncontrolled Intersection with Mixed Traffic and weak Lane Discipline
124104045	Pratap Kumar Pradhan	Heterogeneous traffic flow modeling using cell transmission model
124104048	Ujjwal Sugandhi	Analysis and Modeling of Lateral position adjustments of Motorized two-wheelers in the heterogeneous traffic stream
124104052	Devesh Kumar Patel	Vehicle Classification using Adaptive Neuro Fuzzy Inference Systems(ANFIS)
124104053	Alavalapadu Gangadhar	Evaluation of Interlocking Concrete Block Pavement Laid Over Confined Crushed Jhama Bricks Grouted With River Sand
124104055	Dhanyasi Vinay Kumar	Review and Parametric Study of Flexible Pavement design
124104079	Arvind Kumar	Study of Gap Acceptance Behavior at Unsignalized Intersection with Mixed Traffic
124104100	Turyazoor Gerald	A laboratory Study on Single Size Over burnt Brick Aggregate With Sand Grouting Confined in Plastic Cells as base/Subbase Material
124104105	Siddharth Vishwakarma	Identification of important model parameters and development of GUI for heterogeneous traffic simulation
124104106	Sandeep	Significance of residential sorting effect in work trip mode choice decisions

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Civil Engineering with Specialization in Infrastructure Engineering and Management

Roll No	Name	Project Title
11410468	Dolla Tharun	A Study of Assessment of Public Private Partnership Project in terms of Sustainability
11410469	Shinde Harshvardhan Narayan	Corrosion behavior of steel bar in concrete power solution extracts conyaminated with chloride and sulfate salts

114104103	Arya Anuj Jee	Effect of Mix Parameters heating temperature and sulfate ion concentration on chloride ingress in Concrete
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List of students who have fulfilled the requirements for the award of the M.Tech. degree in Biotechnology		
Roll No	Name	Project Title
11410605	Patel Ashish Ashokbhai	Setting up total internal reflection fluorescence microscopy and employing it for single molecule studies of hen eggwhite lysozyme aggregation
11410619	A Allen Samuel	Identification and Characterization of Riboswitches from Mycobacterium tuberculosis
124106002	Yachna Garg	Development of T7 RNA polymerase based vector system for expression in Bacillus subtilis
124106003	Ashutosh Gupta	Bioethanol production from hemicelluloses rich Populus nigra involving recombinant hemicellulases from Clostridium thermocellum
124106004	Vidushi Kapoor	Studies on Zinc-complexing Ligand as an Anti-biofilm Agent
124106005	Surojeet Das	Injectable silk fibroin hydrogels for tissue engineering and drug delivery
124106006	Sanjay Kumar	Dairy wastewater as a cheap substrate for biodiesel production by using Rhodococcus opacus
124106007	Shilpa Kumari	Exploring significance of mycolyltransferases in tuberculosis therapeutics
124106008	Abhinav Singh	Isolation, identification and bio-active potential of endophytic fungi from selected plants
124106009	Shalinee Jha	In silico studies of matrix metalloproteinase-2 inhibition using EGCG and like molecules
124106010	Sugandha Sinha	Effect of Newcastle disease virus fusion protein cleavage site mutation in the immune signaling molecules
124106011	Prateek Shrivastav	Purification and characterization of novel putative outer membrane protein of Leptospira interrogans
124106012	Shashank Mishra	Cloning and Expression of GDF3 in Mesenchymal Stem Cells
124106015	Ashish Kumar Singh	Studies on glutamine synthetase of Leishmania donovani
124106016	Sween Gilotra	Electrospun sericin/PVA mat as a prospective wound dressing material
124106017	Paras Gupta	Investigating the contextual architecture around TIS in plants and a comparative analysis thereof between monocots and dicots
124106018	Ankur Kumar	Studies on CAAX prenyl protease I of Leishmania donovani
124106019	Danish Warsi	STUDIES ON THE PREPARATION OF GOLD NANOCCLUSERS IN THE PROTEIN MATRIX
124106020	Vishakha	Characterization of a Ca ²⁺ and/or CaM binding protein from Neurospora crassa
124106021	Ajit Kumar Akela	An investigation on the therapeutic potential of Coronarin D isolated from Hedychium coronarium against breast cancer and leukemia cells
124106023	Ranjana Kumari	Silk based high density animal cell culture system
124106024	Sushant Kumar	Studying Pathogenic Endothelial Cell – RBC Interaction in context to the Cerebral Malaria Patho-physiology
124106025	N Vignesh	Batch Cultivation of Streptococcus sp. in a Cassava Starch Hydrolysate Medium for Production of Hyaluronic Acid
124106026	Dixcy Jaba Sheeba J.M.	Regulation of genes involved in extracellular matrix remodeling by estrogen: Insights from in vitro and in silico studies

124106027	Atul Pradhan	Elicitor induced metabolite production in cell lines of tea (<i>Camellia assamica</i> ssp. <i>lasiocalyx</i>) established from ovary explants and the relative cell biomass growth in shake flask and modified stirred tank bioreactor
124106028	C Satish	Optimization of Hydrolysis of Cassava Starch Waste for Production of D-Lactic Acid Employing <i>Lactobacillus</i> sp.
124106029	Prem Prakash Das	Design, synthesis and characterization of aggregating peptides for therapeutic investigations.
124106030	Bholanath Mallick	Investigating Hen Lysozyme Aggregation using Single Molecule Fluorescence
124106033	Priya Devi	Recombinant Antibody for Diagnosis of Hepatitis B

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Chemical Engineering with Specialization in Petroleum Science and Technology

Roll No	Name	Project Title
11410703	M Mallikarjuna Reddy	FLOW OF CONCENTRATED SUSPENSIONS IN ASYMMETRIC BIFURCATION CHANNELS
11410704	Shamik Misra	Model Predictive Control using Kautz Filter
11410705	Suman Mahato	Pure component and Phase Equilibria Prediction of Ionic Liquid systems using Perturbation based Association Theory
11410706	Tellagorla Ramesh	Offset Elimination in State Space based Model Predictive Controller
11410707	Chayan Sarkar	Modeling and Simulation of Continuous Bioreactor for Wastewater Treatment
11410708	Phanikumar Pentyala	Synthesis and Characterization of Poly(lactic-acid)-co-Poly(furfuryl alcohol) Copolymers and Thermoset
11410710	Samarshi Chakraborty	Synthesis, Characterization, Thermal Degradation Kinetics and Rheological Study of Polymer/Layered Double Hydroxide Nanocomposite
11410711	Partha Pratim Goswami	SONOCHEMICAL SYNTHESIS AND CHARACTERIZATION OF METAL FERRITE NANOPARTICLES
11410712	Rajasekhar Reddy Chinta	Momentum and Heat Transfer Phenomena of Confined Spherical and Non-Spherical Particles in Power-law Liquids
11410713	Goshika Bharathkumar	HYDRODYNAMICS OF VISCOUS OIL-WATER FLOW THROUGH INCLINED PIPELINE
11410714	K Rambhoopal Naidu	DRAG REDUCTION OF OIL-WATER TWO-PHASE FLOW THROUGH PIPELINE
11410716	Priyesh J.P.	Synthesis, Characterization and Defluoridation Performance of Al ₂ O ₃ Nanoassembly
11410717	Manik Dutta	Net adsorption Framework for Calculation of Adsorption Enthalpy
11410718	Manohar C.V.	Improving Separation Efficiency in Aromatic Extraction Processes using Ionic Liquid with Co-solvents
11410720	Gautam Ganeshan	Thermo-chemical Conversion of Mango Seed towards Value-added Product
11410721	Thorat Prashant Bhausaheb	Development and Application of Low cost Ceramic Membranes for Juice clarification
11410723	Harendra Rathore	FOULING AND CLEANING CHARACTERISTICS OF SPIRAL WOUND MEMBRANE MODULES
11410724	Medikonda Prudhviraaj	Sulfur Removal from Liquid Fuels by Adsorption on MOFs: Preliminary Studies on the Role of Saturated Metal Sites

11410726	Proloy Das	INFLUENCE OF HYDROXYLATION AND ALKOXYLATION ON THE PROPERTIES OF METHYL ESTERS
11410727	Vinoth Kumar R	Fabrication and Characterization of Analcime-C Zeolite Composite membrane for the Removal of Chromium (VI) from Aqueous Solution
11410730	Ankur Patowary Momin	Cr (VI) Reduction by Photo-Generated Fe(II) and Effect of TiO ₂
11410733	Gulshan Kumar	PROCESS INTENSIFICATION OF OIL BENEFICIATION BY AERATION
11410757	Rahul Saha	Ultrasound-assisted transesterification of non-edible oil for biodiesel production
124107001	Nallapusala Manjunath Reddy	PETROLEUM RESERVOIR SIMULATION OF TWO-PHASE FLOW
124107003	Katila Dilleswara Rao	Buoyancy Driven Bubble Rise and Deformation in Milli/Micro Channels Filled with Shear-Thinning Nanofluids
124107005	S T P Bharadwaja	Mechanistics Investigation in Ultrasound Assisted Delignification and Enzymatic Hydrolysis of Parthenium Hysterophorous for Bioethanol Production
124107009	Vivek Chaudhary	Synthesis and Characterization of Poly (methyl methacrylate) (PMMA)/ Co-Al layered Double Hydroxide (LDH) Nanocomposites
124107012	Delli Ganesh Venkateshan	STOKESIAN DYNAMICS SIMULATION OF SUSPENSION FLOW IN CONFINED GEOMETRIES
124107014	Rapally Rajamahender	Evaluation of Solid polymer electrolyte for direct electrochemical reduction of carbon dioxide
124107015	Arkadeepa Bayal	Bacterial degradation of Benzene, Toluene, Xylene and Ethyl Benzene from Petroleum wastewater
124107017	Debanjan Dey	Thermodynamic Insights for the Dissolution and Dispersion of Coal in Green Solvents
124107018	Gidituri Harinadha	Mixed Convection Heat Transfer from an Isothermal Cylinder to Non-Newtonian Nanofluids in a Vertical Channel
124107019	Ravi Kumar	CO ₂ capture by 2-(1-Piperazinyl)-Ethylamine Activated 2-Amino-2-Methyl -1-Propanol
124107020	Manjakuppam Malika	"Synthesis and Application of Mono- and Bi-Metal Doped TiO ₂ : Dye Decomposition, Reaction Mechanisms and Biodegradability"
124107024	Amit Mandal	Synthesis and Application of PVA/Amine Membrane for Flue Gas CO ₂ Capture
124107025	Amit Kumar Behera	Studies on Dye-sensitization of Ag-doped Titania for phenol Decomposition
124107028	Mood Mohan	Extraction of Total Reducing Sugars from Lignocellulosic Biomass Under Subcritical Water Treatment and Their Solubility Study Using Quantum Chemical Approach

List of students who have fulfilled the requirements for the award of the M.Tech. degree in Chemical Engineering with Specialization in Materials Science and Technology

Roll No	Name	Project Title
11410737	Prankur Dixit	Nano Particle Dispersion and Aggregation in Polymer Nano Composites
11410739	Surendra Singh Gaur	Fabrication and Characterization of Polymer Electrolyte Composite Membrane for Fuel Cell Applications
11410741	Meneka Banik	Electrical and Rheological Properties of Fluid-Fluid Interfaces
11410744	Kuntal Maiti	TREATMENT OF PVA-RICH EFFULENT BY SPINNING BASKET MEMBRANE MODULE

11410745	Paran Jyoti Sarma	Study of non-ionic surfactant modified alumina supported nickel and zinc oxides for desulfurization of fuels
11410746	Umesh Bhardwaj	Utilization of Lignocellulosic Biomass for the Fabrication of Cellulose Nanocrystals and its Applications
11410748	Vikram Singh P	Development and Characterization of MCM-48 Composite Membrane
11410749	Ch Venkatanarasimha Rao	Degradation Brilliant Green Dye in Fenton Oxidation: Decomposition Mechanism and Influence of Fe (II)/ Fe (III)
11410750	Ajay Kumar	Studies on pyrolysis behavior of different biomass derived material
11410752	Aravindu S.	Carbon monoxide methanation study over surfactant modified Ni/Al ₂ O ₃ -ZrO ₂
11410753	Anirban Dey	Synthesis and characterization of surface modified cobalt ferrite nanoparticles and their application in arsenic removal
124107033	Shaik Md Ehtesham Hussain	Development and performance evaluation of polymer electrolyte membrane fuel cell stack
124107034	Mithelesh Koul	THERMO-CHEMICAL CONVERSION OF KUSUM AND CASTOR SEEDS TO LIQUID FUEL
124107035	Ankit Vishnoi	THEORETICAL PREDICTION OF DISTRIBUTION COEFFICIENTS OF Sr ²⁺ , Cs ⁺ IN NUCLEAR WASTES
124107038	Anup Ashok	Fabrication and Characterization of Nano Electrode Materials for Polymer Solar Cells
124107039	Abhijna Das	Defect Induced Nano-patterning of Thin Polymer Films
124107059	Vangala Sai Phani Kumar	Thermal Degradation Kinetic Studies of Biopolymers and composite
124107060	Tekula Srinu	Fabrication and Performance Evaluation of TiO ₂ and γ -Al ₂ O ₃ Composite Membranes by Separation of Oil-Water Emulsions
124107064	Aman Kumar	Stability study of Supported Liquid Membrane

List of students who have fulfilled the requirements for the award of the M.Des. degree in Design

Roll No	Name	Project Title
124205001	Thomas Grey Manih	'Colours of the Hynniewtrep'; Documenting the danceform and costumes of Silk Mynsiem & Shad Rah Kynthei of Meghalaya
124205002	Harshvardhan Upadhyay	Indian Identity Program
124205003	Kumar Sourabh	"Aurupadrumam Tasya Phalam"- Exploration of creation of form from formless
124205004	Anusmita Das	Modular Structure- exploration through Emergence
124205005	Sarrika	Life around Food: Reviving the Social Life of Food
124205006	Saubhagya Ranjan Bhuyan	Contemporary task lamp design
124205008	Moupiya Ukil	"Krishti – A tangible interface to facilitate playful learning environment for conventional museums"
124205009	Sanket Saurav	"Chitrapatalaya – A tribute to Indian cinema" (Enhancing user experience in Museum)
124205010	Manmohan Vashisht	Animation On Social Issue
124205011	Brijesh Kumar	Effectiveness of multiple medium of communication in guiding on user to be able to avoid harmful habits
124205012	Ujjwal Roy	Weaver's Dream of a Golden Thread-(An exploration of Kantha motifs)
124205013	Himujjal Sarma	Recomposing Reality – Extending Use of camera applications on mobiles
124205014	Sadabhar Verma	Sculpt Art- A collaboration between sculpture and architecture

124205015	Swakul Kedar Sunil	Design of "Tejaswi", a new Devanagari font
124205016	Umme Hani	Space for enhancing learning through fun and activity
124205017	Ranjan Kumar Bordoloi	Furniture design depicting Indian Culture & Identity
124205018	Swaraj T G	Light Weight Convertible (3 Wheel / 2 wheel + Mat-track) MTV
124205019	Satpute Pranav Ashok	Design of Sweeping device
124205020	Akhil Raveendran	Inland Waterway Mobility
124205021	John Elias Kumar	Designing An Exploration of the medium of communication to express on effective message
124205022	Deenaz Fuljhalay	Urban Furniture for Guwahati City
124205023	Hemant Kumar Singh	Signage System for Central Library, IIT Guwahati
124205024	Dinesh Pal Gautam	Devanagri Typeface for Screen
124205025	Abhijit Padun	Designing for Children – An approach for an edutainment product
124205026	Suman Meena	"Knowledge Repository" in the field of Usability engineering
124205027	Oyun-Erdene Togtokh	STOP MOTION ANIMATION Bringing back vanishing cultural heritage, traditional musical instrument
124205028	Uyanga Baasankhuu	Designing a Kitchen for Urban Community in Mongolia
124205029	Deepak Kumar	Mobile Application Design for IIT Guwahati

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Computer Science and Engineering

Roll No	Name	Thesis Title
07610107	Ferdous Ahmed Barbhuiya	Design and Development of Intrusion Detection System: A Discrete Event System Approach
08610103	Pravati Swain	Performance Analysis of IEEE 802.11 DCF Power Save Mode in IBSS
11610105	Sandip Chakraborty	Capacity Enhancement, QoS and Rate Adaptation in IEEE 802.11s: A Performance Improvement Perspective
11610108	Suchetana Chakraborty	Tree Based Data Gathering from Sensors: Topology Management Sustaining QoS

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Electronics and Electrical Engineering

Roll No	Name	Thesis Title
06610210	S. Padam Priyal	HAND POSTURE RECOGNITION USING DISCRETE ORTHOGONAL MOMENTS
07610212	Krishna Pal Singh Parmar	STATE SPACE BASED LOAD FREQUENCY CONTROL OF MULTI-AREA POWER SYSTEMS
07610213	Govind D	EPOCH BASED DYNAMIC PROSODY MODIFICATION FOR NEUTRAL TO EXPRESSIVE SPEECH CONVERSION
08610202	Sanjoy Mondal	ADAPTIVE SECOND ORDER SLIDING MODE CONTROL STRATEGIES FOR UNCERTAIN SYSTEMS
09610204	Samar Shailendra	MULTIPATH TRANSPORT AND FLOW DIVISION FOR MULTIHOMED HOSTS
09610205	Sayantana Hazra	CHANNEL MODELING FOR LAND MOBILE SATELLITE COMMUNICATIONS
09610214	Gayadhar Pradhan	SPEAKER VERIFICATION UNDER DEGRADED CONDITIONS USING VOWEL-LIKE AND NONVOWEL-LIKE REGIONS

09610215	Kannan T.	Fuzzy Based Smart Charging Station for Electric Vehicle Application to Mitigate Peak Power Demand
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List of students who have fulfilled the requirements for the award of the Ph.D. degree in Mechanical Engineering

Roll No	Name	Thesis Title
07610307	Biswajit Nayak	DYNAMIC STABILITY OF MAGNETORHEOLOGICAL ELASTOMER BASED SANDWICH BEAMS
07610308	M. Chandrasekaran	CLOUD COMPUTING BASED MACHINING OPTIMIZATION
08610305	Mohit Lal	IDENTIFICATION OF MULTIPLE FAULT PARAMETERS IN ROTOR-BEARING-COUPLING SYSTEMS BASED ON FORCED RESPONSE MEASUREMENTS
08610309	Rakesh Kumar	DESIGN, FABRICATION AND NOVEL CALIBRATION TECHNIQUES FOR HEAT TRANSFER GAUGES DURING SHORT-DURATION TRANSIENT MEASUREMENT
09610305	Biplab Kumar Debnath	EXPERIMENTAL AND THEORETICAL ROUTES TOWARDS ASSESSING THE POTENTIAL OF EMULSIFIED PALM BIODIESEL AS AN ALTERNATIVE TO DIESEL FUEL
09610313	P.S. Rama Sreekanth	Feasibility Studies on Ultra High Molecular Weight Polyethylene/Multi Walled Carbon Nanotubes Composites for Total Joint Replacements
10610308	Bhogilla Satya Sekhar	Studies on Metal Hydride Based Heat Transformer

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Civil Engineering

Roll No	Name	Thesis Title
02610402	Dipika Devi	OBJECT-ORIENTED NONLINEAR FINITE ELEMENT ANALYSIS FRAMEWORK FOR IMPLEMENTING MODIFIED CAM CLAY MODEL
06610402	Diganta Barman	Geospatial approaches of deriving hydro-morphological information for flood hazard management
08610402	Poly Buragohain	A study on multiple contaminant-soil interaction and its effect on contaminant fate prediction
08610405	Sanat Nalini Sahoo	Determination of Imperviousness and its Impact on Risk Based Urban Flood Modeling
08610410	P. S. Bokare	MODELLING OF ACCELERATION AND DECELERATION BEHAVIOUR OF VEHICLES
09610401	Nirmalendu Debnath	OPERATIONAL MODAL ANALYSIS OF AN EXISTING LARGE TRUSS BRIDGE AND PASSIVE VIBRATION CONTROL USING UPDATED MODEL
10610405	Jiwan Singh	CHEMICAL SPECIATION AND BIOAVAILABILITY OF HEAVY METALS DURING WATER HYACINTH COMPOSTING

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Design

Roll No	Name	Thesis Title
07610501	Jabeen Rahman Ghosh Dastidar	An Analysis of Textile designs of the Tai-Phake and Tai-Khamiyang communities
09610507	Debayan Dhar	User Interface Design Features and their effects on Computer Based Educational Assessment: A Cross Cultural Study
09610508	Shatarupa Thakurta Roy	AESTHETIC CONTINUUM OF CONTEMPORARY FOLK PAINTINGS OF INDIA CASE STUDY OF FIVE TRADITIONAL PRACTICES
10610502	Deshpande Yogesh Dattatray	Adaptivity and Interface Design: A Human-Computer Interaction Study in E-Learning Applications

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Biotechnology		
Roll No	Name	Thesis Title
06610602	Kausik Sen	TEXTILE DYEING WASTEWATER TREATMENT POTENTIAL OF PHANEROCHAETE CHRYSOSPORIUM: EXPERIMENTS AND SIMULATION
07610612	Vijay Kumar Mishra	ESTABLISHMENT OF IN VITRO HAPLOIDS OF TEA (CAMELLIA SPP) AND THEIR POTENTIAL FOR THE PRODUCTION OF SECONDARY METABOLITES
08610601	V. Kohila	Genetic Engineering of Suicide Genes to Improve Therapeutic Efficacies
08610602	P. Jayasekhar Babu	GREEN SYNTHESIS, CHARACTERIZATION AND FUNCTIONALIZATION OF GOLD NANOPARTICLES USING SOME MEDICINAL PLANTS OF NORTH EAST INDIA
08610605	Rishikesh Shukla	Dextranase and dextran with anticancer properties from probiotic <i>Pediococcus pentosaceus</i> Crag3 isolated from fermented cucumber
08610606	Manab Deb Adhikari	Nanomaterials in Bacterial Estimation and Development of Antimicrobial Agents
08610608	Chockalingam S.	Role of Macrophage Colony Stimulating Factor in Drug Resistance
08610609	Ganesh Thapa	Cloning and Functional Characterization of Putative Heavy Metal Stress responsive (Echmr) gene from <i>Eichhornia crassipes</i> (Solm L.)
08610614	Subhamoy Banerjee	Nanocarrier Encapsulated Recombinant I κ B α as Potential Therapeutic Agent
08610617	Nidhi Chaubey	Molecular Cloning, Expression, Purification and Functional Implications of Recombinant Cytokines
08610618	Shraddha Shukla	Production, structure analysis and sourdough applications of dextran and gluco-oligosaccharides from hyper-dextran producing <i>Weissella confusa</i> Cab3 isolated from sauerkraut
09610602	Supriyo Basak	MOLECULAR PHYLOGENY OF ZINGIBEROIDEAE
09610604	Saprativ Puspall Das	Lignocellulosic ethanol production from wild grass and water hyacinth involving recombinant <i>Clostridium thermocellum</i> cellulase and hemicellulase
09610606	Digar Singh	STUDIES ON PRODUCTION, ANALYSIS AND CYTOTOXICITY OF INDOLIZIDINE ALKALOID, SWAINSONINE, FROM AN INSECT PATHOGENIC FUNGUS <i>METARHIZIUM ANISOPLIAE</i>
09610609	Rekha Deka	STUDIES ON CELLULAR ROLES OF CALCIUM SIGNALING GENES IN <i>NEUROSPORA CRASSA</i>
09610610	Aadi Moolam Ramesh	Cyto-genetic studies in elite genotype of <i>Pongamia pinnata</i> (L.), a versatile legume
09610612	Deeplina Das	Bacteriocin, antioxidant and novel glucan production from probiotic <i>Lactobacillus plantarum</i> DM5 isolated from Maricha of Sikkim
09610618	Ravi Kumar	GENETIC ANALYSIS OF CALCIUM SIGNALING GENES IN <i>NEUROSPORA CRASSA</i>
09610619	Prakash Saudagar	Insights into redox metabolism of <i>Leishmania</i> parasite: Studies on key enzymes for novel drug candidates
09610624	Rohitas Deshmukh	INVESTIGATION OF MACROPHAGE MEDIATED HOMEOSTASIS DURING MALARIA
09610625	P. Saravanan	BIOINFORMATICS APPROACH TO UNDERSTAND AND EXPLOIT THE POTENTIAL OF LIPASES
09610627	T. Jagan Mohan Rao	Characterization of dextranase and dextran from <i>Weissella cibaria</i> JAG8 and in vitro analysis of dextran as prebiotic

10610615	Sudipta Ghosh	Isolation, Structural Elucidation and Biological Evaluation of Labdane Diterpenes from Seeds of <i>Alpinia nigra</i> (Gaertn.) B.L. Burt
10610618	Krishnamoorthy Hegde	NOVEL CUTINASES FROM THERMOBIFIDA FUSCA: PRODUCTION, CHARACTERIZATION AND APPLICATIONS

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Chemical Engineering

Roll No	Name	Thesis Title
08610709	Mahesh Kumar Gagrai	Spirulina Platensis for Decontamination of Chromium Laden Aqueous Effluent
09610701	Soumya Sasmal	Simultaneous Production of Ethanol and Hydrogen from Agricultural Waste and Forest Residues Available in North-East India
09610703	Kartick Mondal	Self-organized Interfacial Instabilities of Thin Films: Influence of Charge Leakage, Dielectric Anisotropy, and Confinement
09610710	Aparajita Goswami	Treatment Of Fluoride Containing Water Using Adsorption And Precipitation Followed By Microfiltration
09610712	A. Ananth Praveen Kumar	STABILITY OF LIQUID FILMS AND DROPLETS ON POROUS-GRANULAR BEDS
09610716	Vijay Singh	Membrane Based Separation of Oily Wastewater, Coal-solvent Mixture and Fruit Juice

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Physics

Roll No	Name	Thesis Title
08612102	Rahul Das	STUDY OF PHASE TRANSITIONS AND MAGNETO-CALORIC EFFECT IN Ni-Mn-X (X = Ga, Sn, In) FERROMAGNETIC SHAPE MEMORY ALLOYS
08612105	Abu Talat Tahir Mostako	Studies on pulsed laser deposited Mo, W and Rh thin films for First Mirror application
08612110	Satchi Kumari	Studies on Pulsed Laser Deposited Ruby and Barium Titanate Thin Films for Tunable Optical Delay and Temperature Sensing Applications
08612111	Manirupa Saha	Study of Modulation Instability and Solitary Waves in Nonlinear Optical Systems
08612112	Supriya Roy	Computer Simulation Studies of Structure and Ion Transport in NASICON Fast Ion Solids
09612114	Parvendra Kumar	Coherent control and manipulation of atoms using femtosecond pulses

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Chemistry

Roll No	Name	Thesis Title
05612205	Soumya Chatterjee	Photophysical and Photochemical Properties of Some Push-Pull Aromatic Olefins and Photochemistry of a Few Ortho-Substituted Stilbenes
07612203	Sadhucharan Mallick	Metal Nanoparticle and Polymer Composites for Antimicrobial Applications
07612213	Md. Serajul Haque Faizi	Investigation on Metal and Halogen Dependent Cyclization of Schiff base or Reduced Schiff base Precursor into Fluorescent Pyrido[1,2-a]quinoxalin-11-ylum Derivatives
07612221	Subhojit Das	Inorganic – Organic Hybrid Nanocrystalline Materials in Zero to Three Dimensions
08612202	Rajesh Paul	Copper(I) Catalyzed Synthesis of Phenols and Benzo[d]isothiazol-3-ones and their Application for the Synthesis of Alkyl Aryl Ethers and Benzo[d]isothiazol-3-one-1-oxides

08612203	Anasuya Mishra	Photophysics of a Few Bichromophoric Organic Molecules in Homogeneous and Microheterogeneous Environments
08612205	Deb Kumar Das	Access to Tetrahydro(pyrimidines/quinolines) and Fused Coumarin Containing Nitrogen Heterocycles Using Multicomponent Reactions
08612209	N. K. Chaitanya	Concept of β -Breaker Dipeptides and its Application in Alzheimer's Amyloid Disruption
08612210	Raihana Begum	Engineering Optical Properties of Doped Quantum Dots by Chemical Reactions
08612216	Arghya Basu	Solid and Solution State Recognition of Anions and Ion-Pairs by Acyclic Receptors
08612217	Nani Babu Palakurthy	Direct Synthesis of Activated Sulfonate Esters and Their Application in Organic Transformations Directed to the Synthesis of Anti-Diabetes type II Peptide-Conjugates
08612218	Pankaj Kumar	Nitric oxide reactivity of copper(II) complexes with N-donor ligands: Development of NO sensors
08612219	Babulal Das	Supramolecular aspects of metal (M) dipicolinate anionic frameworks[M = Mn(II), Co(II), Ni(II), Cu(II) and Zn(II)]
09612202	Apurba Kalita	Formation and reactivity of copper(II)-nitrosyl complexes
09612213	Rapolu Kiran Kumar	Studies Toward the Synthesis of Benzfused Azoles
09612226	Rahul Sarma	Molecular Dynamics Simulation Study for Investigating the Role of Trimethylamine-N-Oxide in Stabilizing Protein Conformation

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Mathematics

Roll No	Name	Thesis Title
07612305	Manideepa Saha	On Nonnegative Matrices and Generalized M – matrices
08612303	G. Murali Mohan Reddy	A POSTERIORI ERROR ANALYSIS OF FINITE ELEMENT METHOD FOR PARABOLIC INTEGRO-DIFFERENTIAL EQUATIONS
08612305	Pratibhamoy Das	ROBUST NUMERICAL SCHEMES FOR SINGULARLY PERTURBED BOUNDARY-VALUE PROBLEMS ON ADAPTIVE MESHES
09612316	Gowrisankar S	UNIFORMLY CONVERGENT NUMERICAL SCHEMES FOR SINGULARLY PERTURBED PARABOLIC PARTIAL DIFFERENTIAL EQUATIONS ON ADAPTIVE GRID
09612318	Biswajit Deb	On Motion Planning in Graphs

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Humanities and Social Sciences

Roll No	Name	Thesis Title
05614104	Monalisha Saikia	Reconstruction of Culture and Immigrant Identity in Selected Novels of Bharati Mukherjee
06614101	Gopal Kumar Sarma	Microfinance Repayment Performance and Related Issues in Microfinance Institutions Model: An Empirical Examination in the Brahmaputra Valley of Assam, India
06614103	Kalpna Bora	Metropolis Bombay: Spatial Representations in Contemporary Indian Fiction in English
07614101	Tejasha Kalita	INTERPRETATION OF THE PROBLEM OF ABORTION: THE ISSUE OF FOETUS-KILLING IN THE LIGHT OF TRADITIONAL AND CONTEMPORARY ETHICS

07614103	Sarika Kaushal	Assessment of Post-implementation Success and Key Future Challenges of Banking Information Systems: The Role of Technological, Organizational, and Human Factors
08614103	Tanuja Kalita	A Critical Evaluation of Peter Singer's Ethics
08614104	Kawal Deep Kour	History of Intoxication: Opium in Assam, 1800-1959
08614105	Rashmirekha Sarma	Culture Change, Globalization and Disappearance: A Study in Arunachal Pradesh
08614107	Jnana Ranjan Prusty	CONFLICTING TECHNOLOGICAL SYSTEMS IN TEXTILE INDUSTRY: A STUDY OF SELECTED HANDLOOM AND POWERLOOM INDUSTRIES IN ODISHA
10614102	Vanlaltanpuia	OVERCOMING METAPHYSICS: A HEIDEGGERIAN APPROACH TO THE TRUTH OF BEING

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Energy

Roll No	Name	Thesis Title
06615104	Lepakshi Barbora	Synthesis and Characterization of Nafion Composite Membrane for Reduced Methanol Crossover in DMFC
07615101	Adreeja Basu	Morphometric, Molecular and Biochemical characterization of Jatropha germplasm of North-East India
07615103	Purabi Mazumdar	Germplasm Evaluation, Environmental Impact Assessment and Genetic Improvement Studies in Jatropha curcas
08615106	Hanif Ahmed Choudhury	Synthesis of Green Transportation Fuel: Investigations in Sonochemical Route to Biodiesel Production
09615101	Pankaj Kalita	INVESTIGATION OF HYDRODYNAMICS AND HEAT TRANSFER CHARACTERISTICS WITH BIOMASS BLENDS IN A PRESSURIZED CIRCULATING FLUIDIZED BED

List of students who have fulfilled the requirements for the award of the Ph.D. degree in The Environment

Roll No	Name	Thesis Title
06615203	Atreyi Ghosh	STUDIES ON MICROBIAL REDUCTION OF PERCHLORATE IN BATCH AND CONTINUOUS SYSTEMS
08615206	Rajib Lochan Deka	CLIMATE CHANGE IN THE BRAHMAPUTRA VALLEY AND IMPACT ON RICE AND TEA PRODUCTIVITY
09615202	Sushant Singh	Studies on Superoxide Dismutase: An antioxidative protein from Cicer arietinum seedlings

List of students who have fulfilled the requirements for the award of the Ph.D. degree in Nanotechnology

Roll No	Name	Thesis Title
10615303	Amit Jaiswal	Fluorescent Nanomaterials for Biological Applications

Appendix-IV

PROGRESS IN CONSTRUCTION WORKS

Sl. No.	Works	Cost of works (in lakhs)	Physical Progress		Total Progress upto 31.03.2015		Remarks
			Upto 31.03.14	During 2014-2015	Physical	Financial (in lakhs)	
1.	Boys' Hostel No. 10 (956 capacity with 31050 sqm floor area)	8228.00	40%	30%	70%	4533.50	All piling works completed. Block A & B: 359 out of 528 rooms have been occupied since last academic session. Another 145 rooms are ready for occupation for this academic session. Dining and Kitchen area: Painting work and finishing work is in progress. The work will be completed within June 2015. Block C: 90% structural work completed. 50% Brickwork and plastering completed. 228 rooms will be completed within July 2015. Block D: 50% foundation completed.
2.	Girls' Hostel No. 2 (500 capacity with 13790 sqm floor area)	4240.17	60%	30%	90%	3180.23	Block A: 172 double seater rooms and dining hall and kitchen handed over for occupation in July 2014. Block B: Fabrication works for roof truss of open canteen works above dining hall is in progress and whole works shall be completed within July 2015. Block C: All RCC, brickwork, plastering works completed. (1) Flooring and other finishing works, plumbing works are in progress. (2) The block shall be completed within June 2015.
3.	Married Scholars' Hostel and Dormitory Building (96 flatlet covering 6712 sqm floor area)	2532.53	12%	38%	50%	1249.97	Married Scholar Building: R.C.C. for all structural works is completed and the other finishing works are in progress. Dormitory Building: The finishing works are in progress and expected to be completed by June 2015.
4.	Boys' Hostel No. 11 (1152 capacity with 34785 sqm floor area)	9665.03	-	5%	5%	641.28	580 rooms shall be made available for occupation by March 2017. The entire hostel will be completed by September 2017.

Sl. No.	Works	Cost of works (in lakhs)	Physical Progress		Total Progress upto 31.03.2015		Remarks
			Upto 31.03.14	During 2014-2015	Physical	Financial (in lakhs)	
5.	Extension of Academic Complex						
a)	Phase-IV & Classroom Department of Chemistry, EEE & ME class room (9875 sqm floor area)	6094.68	40%	25%	65%	3410.21	Phase-IV (i) The expansion in the Department of Chemistry and Department of Electronics and Electrical Engineering has been completed. The work of the Department of Mechanical Engineering is expected to be completed within July 2015. Class Room (i) Structural work upto 4th floor completed. Brick work and plastering work in progress. It is expected that the work will be completed within March 2016.
b)	Research Building Complex	5675.46	25%	10%	35%	1608.45	The structural framing work upto 3rd floor is completed and AAC block masonry work at ground and 1st floor is in progress. It is expected that the work will be completed within March 2016. Work has been allotted in March 2015 and started mobilization.
c)	Phase-V Department of Design, CSE, Physics, Chemical Engg, HSS, Mathematics, CET and CIF (19045 sqm floor area)	6944.71	-	-	-	-	
6.	Residential Quarters 30 units of E-type in 5 blocks (4548 sqm)	918.88	95%	5%	100%	851.60	Work is already completed and handed over for occupation.
7.	Guest House 2 (15090 sqm floor area)	4059.00	30%	15%	45%	1459.54	Foundation work 90% completed. 80% of Structural work and masonry works for three floors were completed. The finishing works of 42 rooms are under progress now.
8.	Community Hall near D-Type Quarters (875 sqm floor area)	273.46	80%	20%	100%	183.45	Work is completed.
9.	Dormitory Buildings (2 Nos. covering 325 sqm floor area each)	808.03	-	-	-	-	Work was allotted in March 2015 and started mobilization.
10.	Boundary Wall (Phase-IV)	1476.90	10%	50%	60%	775.00	Foundation completed. 3m height wall 50% completed.
11.	Data Centre at Computer and Communication Centre	381.47	-	100%	100%	379.50	Work has been completed. Commissioning will be started soon

Appendix-V

DETAILS OF RESEARCH AND DEVELOPMENT PROJECTS

NEW RESEARCH PROJECTS

Research projects received during the year 2014-2015 are given below:

Project Title	Principal Investigator	Funding Agency	Department/ Centre	Amount Sanctioned (Rs.)
Aptamer probes for detection of celiac disease epitopes of gluten in commercial varieties of Indian Wheat ,rye and barley	Dr. Utpal Bora	DBT	Centre for the Environment	80,354.00
Biodegradation of pulp and paper mill waste using different composting techniques	Dr. Ajay Kalamdhad	SERB	Civil Engineering	130,000.00
Tradeoffs in Reachability and Shortest path Algorithms	Dr. R. Inkulu	DAE	Computer Science and Engineering	249,000.00
Anthology of abhangas from the Varkari bhakti tradition of Maharashtra in English translation	Prof. R.M. Punekar	ICHR	Humanities and Social Sciences	252,000.00
Procurement Management of PPP Regional Municipal Solid Waste Management Facility at Taloja Maharashtra	Dr. L. Boeing Singh	PMI	Civil Engineering	256,500.00
Study on combating trafficking of women in Assam: Study of anti-trafficking policies and strategies	Dr. Sawmya Ray	NCW	Humanities and Social Sciences	330,300.00
Memory, consciousness and the storytelling self: an interdisciplinary research in literature, cognitive psychology and philosophy of mind	Dr. Avishek Parui	IITG	Humanities and Social Sciences	370,000.00
Research on Dhobi and Dhobi ghats	Dr. K. Sorathia	Procter & Gamble, Belgium	Design	431,520.00
Evaluation of the impact created by various methodologies and programs employed by schools to impart Educational for Sustainable Design (ESD) in the Indian context and Design of a framework for a high impact ESD strategy (method/curriculum/guideline)	Dr. sharmistha Banerjee	SG-IITG	Design	500,000.00
Optimum power electronic converter for efficient integration of variable DC and variable AC power sources	Dr. Shabari Nath	IITG	Electronics and Electrical Engineering	500,000.00

Project Title	Principal Investigator	Funding Agency	Department/ Centre	Amount Sanctioned (Rs.)
Computational investigation of novel materials for sea-water desalination	Dr. Anki Reddy Katha	IITG	Chemical Engineering	500,000.00
Characterization and modelling of a Schottky diode in a standard CMOS process	Dr. Nagarjuna Nallam	IITG	Electronics and Electrical Engineering	500,000.00
George Matthan and the construction of modern self in 19th century Travancore	Dr. John Thomas	IITG	Humanities and Social Sciences	500,000.00
Modulation strategies for gate control signal generation of switched boost inverter	Dr. Ravindranath Adda	IITG	Electronics and Electrical Engineering	500,000.00
Comparison of the conformational preferences of backbone constrained gamma amino acid residue gabapentin and unconstrained gamma 4 ^o amino acids	Dr. Sunanda Chatterjee	IITG	Chemistry	500,000.00
Reduction in drying shrinkage of mix formed foam concrete using shrinkage reducing admixtures	Dr. G. Indu Siva Ranjani	IITG	Civil Engineering	500,000.00
Inertial focusing of particle and droplets in microchannels	Dr. Raghvendra Gupta	IITG	Chemical Engineering	500,000.00
Wetting transition of dynamic liquid droplets on structured surface	Dr. Partho Sarathi Goohpattader	IITG	Chemical Engineering	500,000.00
Multiple object Tracking, Learning and Detection with Dynamic RGB (D) Imaging Sensors	Dr. P. Guha	SG-IITG	Electronics and Electrical Engineering	500,000.00
Evaluation of spine based font design approach with Bezier technology and its application for the development of design methodology for Indic type design	Dr. Prasad Bokil	SG-IITG	Design	500,000.00
Ecotourism and sustainable livelihoods: A prospective look in the Rural areas of Manipur	Dr. Ngamjahao Kipgen	ICSSR	Humanities and Social Sciences	500,000.00
Surrendered	Dr. Gagan Kumar	IITG	Physics	500,000.00
A posteriori L (L) error bounds for finite element methods to the wave equation with discontinuous coefficient	Dr. Bhupen Deka	IITG	Mathematics	500,000.00
Change and continuity of traditional governance: A study of Kuki chieftainship in Manipur	Dr. Ngamjahao Kipgen	IITG	Humanities and Social Sciences	500,000.00
Kinetic of initial cell adhesion on surface with mono and mixed self assembled monolayer (SAMs)	Dr. Lalit M Pandey	IITG	Biosciences and Bioengineering	500,000.00
A system for litter monitoring and control using non-intrusive sensors and off-the-shelf robotic platforms	Dr. Rashmi Dutta Baruah	IITG	Computer Science and Engineering	500,000.00

Project Title	Principal Investigator	Funding Agency	Department/ Centre	Amount Sanctioned (Rs.)
Experimental investigation on the use of HYFRC in enhancing seismic performance of reinforced concrete bridge pier	Prof. Anjan Dutta	M/s D2S Infrastructures Pvt. Ltd., Ghy	Civil Engineering	566,400.00
Development of novel thermophilic glycoside hydrolases and carbohydrate binding modules and exploiting their properties bioethanol production and for food and industrial applications	Dr. A. Goyal	DST	Biosciences and Bioengineering	804,000.00
Studies on influence of HyFRC in enhancing of reinforced concrete bridge pier	Prof. Anjan Dutta	SERB	Civil Engineering	827,000.00
Numerical modelling based study for assessing quality of groundwater of Bharalu River Basin of Guwahati	Dr. Rajib Kumar Bhattacharjya	DST	Civil Engineering	850,000.00
NBHM Post Doctoral Fellowship in the Department of Mathematics	Dr. Anuradha Jha	DAE	Mathematics	852,000.00
Phototrophic biofilm based waste water recycling for sustainable water usage in rubber latex coagulation	Dr. V. V. Goud	DBT	Centre for Energy	890,000.00
Chemistry based tuning of optical properties of quantum dots	Dr.A. Chattopadhyaya	DST	Chemistry	920,000.00
Resistance characteristics of alluvial channel with mobile bed vegetation	Dr. Bimlesh Kumar	Ministry of Earth Sciences	Civil Engineering	921,360.00
Estimation of temperature distribution in laser welding	Dr. U.S. Dixit	DRDL	Mechanical Engineering	970,000.00
Handloom as a sustainable Socio-technological System: A study of Textile Industry in Northeast India	Dr. Sambit Mallick	ICSSR	Humanities and Social Sciences	1,000,000.00
Advanced glycation end products and macrophage store operated calcium entry	Dr. Piruthivi Sukumar	ICMR	Biosciences and Bioengineering	1,099,962.00
Development of optimal bioprocess strategy for production of D-Lactic acid (DLA) from cassava waste by amyolytic acid bacteria (Lab)	Dr. S. Sivaprakasam	CSIR	Biosciences and Bioengineering	1,100,000.00
NetApp Faculty Fellowship	Dr. Gautam Barua	Advance Technology Group, Karnataka	Computer Science and Engineering	1,250,000.00
Transition metal-radical complexes as oxidation catalysts	Dr. Chandan Mukherjee	CSIR	Chemistry	1,542,000.00
Exploration of in situ generated bromonium/iodinium ion involving peroxovanadium complexes in carbohydrate Chemistry	Prof. A.T. Khan	CSIR	Chemistry	1,792,000.00
Development of low cost chitosan based crosslinked resins for the recovery and removal of palladium from synthetic and spent electroless plating solutions	Dr. Ramagopal Uppaluri	CSIR	Centre for the Environment	1,792,000.00

Project Title	Principal Investigator	Funding Agency	Department/ Centre	Amount Sanctioned (Rs.)
Asymmetric total syntheses of potential anticancer natural products, phomoarcherin A and B and their synthetic analogs	Dr. C.K. Jana	CSIR	Chemistry	1,847,000.00
Physical and Mathematical modeling study for stabilization of volatile zones in NW2 (River Brahmaputra)	Dr. S. Dutta	IWAI	Civil Engineering	1,916,000.00
Modelling of advanced materials for simulation of transformative manufacturing processes	Dr. U.S. Dixit	DST	Mechanical Engineering	2,093,600.00
Synthesis, characterization and evaluation of novel metal oxides/chalcogenides/polymer based ternary hetero structures for their photocatalytic properties	Dr. S. Arora	DST	Chemistry	2,160,000.00
Experimental characterization of carbon steel corrosion in oil and gas industries by electrochemical impedance spectroscopy	Dr. R. Prasanna Venkatesh	SERB	Chemical Engineering	2,270,000.00
Characterization of Aspartyl-tRNA Synthase from Entamoeba Histolytica by spectroscopic methods	Dr. Kalyanasis Sahu	DBT	Chemistry	2,275,000.00
Seismic design criteria for RC structures considering Mainshock sequence for Northeastern India	Dr. S. Das	DST	Civil Engineering	2,314,614.00
Development of Superhydrophobic metal-organic frameworks bearing water repellent functional groups for oil spill cleanup and volatile organic compounds removal	Dr. S. P. Biswas	SERB	Chemistry	2,325,000.00
Structural organization of huntingtin exon 1 fibrils	Dr. Nitin Choudhary	SERB	Biosciences and Bioengineering	2,380,000.00
Molecular modeling and screening of Phytochemical reservoir from Tea (<i>Camellia sinensis</i> , L) as a lead immune-stimulatory agent	Dr. V. Trivedi	NTRF	Biosciences and Bioengineering	2,453,640.00
Gold (I)- mediated self-assembly for medical applications	Dr. K. Mahanta	SERB	Chemistry	2,500,000.00
Development and Marketing of crafts of Meghalaya	Dr. Avinash Shende	Directorate of Commerce and Industries, Meghalaya	Design	2,500,000.00
Evaluation of a strengthening scheme for unreinforced masonry building using steel bands	Dr. H. B. Kaushik	SERB	Civil Engineering	2,520,000.00
Studies on coal bed methane integrated underground coal gasification in Indian coals in the context of green gas emission control	Dr. V. Prabu	SERB	Chemical Engineering	2,540,000.00
removal of arsenic from drinking water using liquid membrane based separation technique	Dr. P. Saha	DST	Chemical Engineering	2,617,200.00
An integrated approach for snowmelt hydrological modeling at downstream of Sikkim Glaciers	Dr. Manish K. Goyal	SERB	Civil Engineering	2,651,000.00

Project Title	Principal Investigator	Funding Agency	Department/ Centre	Amount Sanctioned (Rs.)
Fabrication and characterization of the next generation materials for articulating surface in total joint replacements using medical grade UHMWPE reinforced with nanocrystalline hydroxyapatite and single walled carbon nanotubes	Dr. S. Kanagaraj	SERB	Mechanical Engineering	2,659,000.00
Innovation in Sciences Pursuit for Inspired Research	Dr. Manish Kumar Goyal	DST	Civil Engineering	3,500,000.00
Unraveling the underlying mechanisms in few atom- diatom collision systems	Dr. Aditya Narayan	SERB	Chemistry	3,510,000.00
Development of bioprocess for the production of recombinant human interferon gamma (IFNG)	Dr. V.V. Dasu	DBT	Biosciences and Bioengineering	3,828,400.00
A multifaceted research program to investigate the role of the G-protein coupled estrogen receptor (GPR30) in the normal and neoplastic breast: molecular investigations using invitro, invivo and clinical approaches	Dr. Anil Mukund Limaye	BCIL	Biosciences and Bioengineering	3,995,000.00
Transient analysis of ditch drainage networks subjected to variable ponding distributions at the surface of the soil	Dr. Gautam Barua	SERB	Civil Engineering	4,031,400.00
Development of a single station Hip Joint wear simulator for simulated in vivo characterization of acetabulum	Dr. S. Kanagaraj	SERB	Mechanical Engineering	4,340,000.00
Beyond traditional couplings leading to the synthesis of novel heterocyclic scaffolds	Dr. B. K. Patel	SERB	Chemistry	4,590,000.00
Synthesis and study of metallopolymers tailored for specific applications	Dr. P.K. Iyer	SERB	Chemistry	4,690,000.00
Identification of novel drug targets of Leishmania donovani: studies on CAAX prenyl protease I and II of the pathogen	Dr. V.K. Dubey	BCIL	Biosciences and Bioengineering	5,070,000.00
Speech based access of agricultural commodity prices and weather information in 11 Indian languages/Dialects (Automatic speech recognition)	Dr. Rohit Sinha	DIT	Electronics and Electrical Engineering	6,900,000.00
Development of person identification system using online handwriting	Dr. Suresh Sundaram	DIT	Electronics and Electrical Engineering	7,200,000.00
Developing Suitable Pedagogical Methods for various classes, intellectual calibers and e-learning	Dr. J. K. deka	MHRD	Centre for Educational Technology	9,194,000.00
ICT -based framework to enhance the teaching and learning experience in a large classroom	Dr. T. Venkatesh	DEITY	Computer Science and Engineering	9,432,000.00
Investigating the role of protein dynamics on the function of a few intrinsically disordered proteins	Dr. R. Swaminathan	DBT	Biosciences and Bioengineering	9,820,000.00

Project Title	Principal Investigator	Funding Agency	Department/ Centre	Amount Sanctioned (Rs.)
Exploring the binding space to develop an optimal transcriptional control system for abiotic stress tolerance in crops	Dr. Lingaraj Sahoo	DBT	Biosciences and Bioengineering	11,142,000.00
DBT Pan IIT Center for Bioenergy	Dr. Debasish Das	DBT	Biosciences and Bioengineering	17,416,000.00
Special manpower development programme for CHIPS to system design (SMDP-C2SD)	Prof. R.P. Paily	DeitY	Electronics and Electrical Engineering	23,640,000.00
Technical Education Quality Improvement Programme (TEQIP-II)	HoC, CET	MHRD	Centre for Educational Technology	25,000,000.00
Mathematical model study of river Brahmaputra with emphasis on climate change	Dr. A. K. Sarma	Brahmaputra Board, Gol	Civil Engineering	28,200,000.00
Establishment of centre of excellence for training and research in frontier areas of science and technology (FAST)	HoD Chemistry	MHRD	Chemistry	40,000,000.00
A Pilot project on Ishan Vikas	Prof. Gautam Biswas, Director IITG	MHRD	IITG	60,545,000.00
National Initiative for setting up of Design Innovation Centre	HoD, Design	MHRD	Design	100,000,000.00

CONSULTANCY PROJECTS

The following consultancy projects were received during the year 2014-2015:

Project Title	Principal Investigator	Department	Clients
Vetting Structural Drawings for Aanganbari Centre	Dr. A. Chakraborty	Civil Engineering	M/S Frontier Sales Corporation, Guwahati
Quality Test on RCC Structure of Under Construction Jawahar Navodaya Vidyalaya at Mizoram	Dr. A. Chakraborty	Civil Engineering	M/S ZORAM Industries Development Corporation New Secretariat Complex, Aizwal, Mizoram
NDT of Transmission Line Tower Foundation	Dr. A. Chakraborty	Civil Engineering	Power Grid Corporation of Limited Laplang Shillong
Vetting of Structural Drawing and Foundation Plan of Pre-Engineered Building for Assam Police Barack (G+1) with Kitchen	Dr. A. Chakraborty	Civil Engineering	Assam State Co-operative Housing Federation Ltd Beltola - Baistha Road, Guwahati
Test on Physical properties of SAIL GI Strip	Dr. A. Dutta	Civil Engineering	Mr. S. Sengupta, Director, Expansive SAS Fabrication & Training, Guwahati
Proof checking of structural design and drawing of superstructure of a bridge in west Champaran district	Dr. A. Dutta	Civil Engineering	M/s D2S Infrastructures Pvt. Ltd., A. T. Road, Guwahati
Test on Physical properties of SAIJI TMT Bar	Dr. A. Dutta	Civil Engineering	Under Secretary, PWD Dept, Dispur, Guwahati

Project Title	Principal Investigator	Department	Clients
Test of physical parameters of HSFG Nut & Bolts for construction of RCC Arch. Br. No.4/2 over river Bhogdoi on A. T. Road to facilitate trade and commerce (L=60M)	Dr. A. Dutta	Civil Engineering	M/s JSMV Engineering & Construction Co. MRD Road, Bamuni-maidan, Guwahati
Test on Physical properties of SAIJI TMT Bar	Dr. A. Dutta	Civil Engineering	M/s Shree Sayenji Rolling Mills, Sarab Bhati, Guwahati
Proof checking of design and drawings of works	Dr. A. Dutta	Civil Engineering	M/s D2S Infrastructures Pvt. Ltd., A. T. Road, Guwahati
Proof checking of design and drawings of foundation and substructure of 20nos of bridges for N. E Railway in Mizoram	Dr. A. Dutta	Civil Engineering	STUP Consultants Pvt. Ltd.P-11 Darga Road,Park Circus, Kolkata
Investigation of Fine aggregates & coarse aggregates	Dr. A. Dutta	Civil Engineering	LPG Botling Plant, North Guwahati, Guwahati
Testing Consultancy Registration	Dr. A. Dutta	Civil Engineering	M/s. Silk Country Products Pvt. Ltd, Guwahari
NDT in North East Mega Food Park Ltd	Dr. A. Dutta	Civil Engineering	Mega Food Park Limited , Hotel Brahmaputra Ashok M. G. Road, Guwahati
Proof consultancy of Bridge No. 5/1 connecting Goalpara & Numberpara village from Tulungia at NH-31 via Barghola, Kirtanpara & Chakla in Bongaigaon district	Dr. A. Dutta	Civil Engineering	Mr. Rudra Kumar pathak, Govt. Regd. Contractor, P.W.D Road & Building, Abhayapuri S. S. Road, Assam
Revised design of titled well of Bridge no.184/1-A2	Dr. A. Dutta	Civil Engineering	M/s KMC Construction Ltd., Kamrup Metro, Assam.
Proof checking of Design & drawings of viaduct-Package EWE-2RI (Duttabad)	Dr. A. Dutta	Civil Engineering	Mr. Sanjay Ray, GPT Infraprojects Ltd., P-11, Darga Road, Park Circus, Kolkata
Testing of Metal Beam crash barrier for work of Widening and strengthening of existing NH-37 from two lanes from KM 230.500 to KM 205.000 of Dharamtul to Jagiroad in Assam on East West Corridor Phase- II programme of NHDP (Package No. EW-AS-19)	Dr. A. Dutta	Civil Engineering	Mr. Sunil Mukherjee, RE, AS-19, RITES Ltd.,
Review of Vetting of Mogra ROB Railway span of West Bengal Highway Development Corporation	Dr. A. Dutta	Civil Engineering	Mr. Partha Sarathi Sengupta, Project Director, WBHDCL
Testing of Wire Strand, Anchorage, Distribution Plate and Sheathing duct for Pre stress Concrete	Dr. A. Dutta	Civil Engineering	Mr. B. K. Mahapatra, RE/AS-6, Stup Consultants Pvt. Ltd., Nalbari, Assam
Operation and maintenance services of sewage system in IIT Guwahati	Dr. A. Kalamdhad	Civil Engineering	M/S D. P. Traders
Drinking water testing & suitability	Dr. A. Kalamdhad	Civil Engineering	M/S BSCPL Infrastructure Ltd., Meghalaya
Operation and maintenance services of sewage in IIT Guwahati	Dr. A. Kalamdhad	Civil Engineering	HoD, CE Deptt, IIT Guwahati
Evaluation of water sample for construction purpose	Dr. A. Kalamdhad	Civil Engineering	Mr. R. B. Singh, Senior Manager (FQA), NTPC, Ltd Bongaigoan

Project Title	Principal Investigator	Department	Clients
Evaluation of water sample for construction purpose	Dr. A. Kalamdhad	Civil Engineering	Mr. R. V. Raman Kumar, AGM(FQA), NTPC Ltd., Bongaigaon Thermal Power Project, Salakathi (P), Kokrajhar (BTAD), Assam
Operation and maintenance services of sewage system in IIT Guwahati	Dr. A. Kalamdhad	Civil Engineering	M/s D P Traders
Technical consultancy towards the development of a traffic sensor	Dr. A. K. Maurya	Civil Engineering	M/s ITS Planters and Engineers Pvt. Ltd., Hyderabad
Pile Foundation and Basement Works for the Proposed Permanent Corporate Office Building of NRL at Guwahati	Dr. A. K. Mishra	Civil Engineering	M/s . NRL , G. S. Road Christian basti , Guwahati
Sub Soil Investigation report for construction of NH-52 (B)	Dr. A. K. Mishra	Civil Engineering	Executive Engineer, PWD, Jorhat N. H. Division, Jorhat
Implementation of Integrated Land use Planning & Water Resources Management through Ecological Management practices in pilot watershed	Dr. A. Kr. Sarma	Civil Engineering	M/S Guwahati Metropolitan Dev. Authority Bhangagarh, Guwahati
Cross hole seismic test in two sets of bore hole up to a depth of 25 meters to find out Dynamic Properties of soil at Tuirial Power House, Mizoram	Dr. A. M. Krishna	Civil Engineering	M/S NEPCO, Mizoram.
Characterization of Multifilament Woven Geo textile	Dr. A. M. Krishna	Civil Engineering	M/s N. F. Railway Agartala
Evaluation of Construction materials for construction, rectification and strengthening of internal roads of IITG	Dr. A. M. Krishna	Civil Engineering	Mr. Anil Das, Mirza, Kamrup
Widening and strengthening of existing National Highway from 2lane to 4 lane from Km 93 to Km 60.0 of Bijni to Assam West Bengal border in Assam of NH31C	Dr. A. Dey	Civil Engineering	M/S Gayatri- ECI (JV), B-1, T. R. S. Towers, 6-3-1090, Rajbhavan Road, Somajiguda, Hyderabad
Distress & destabilization of the Guard wall of transmission tower (Tower No. 26 of the 220KV 4CKT Sarusajai Jawahar Nagar line) at Sarusajai, Guwahati	Dr. A. Dey	Civil Engineering	Deputy General Manager (Civil), AEGCL, Bijulee Bhawan, Paltan Bazar, Guwahati
Widening and strengthening of existing National Highway from two lanes to four lanes from km 60.00 to km.93.00 of Bijini to Assam/West Bengal Section NH-31C on East Corridor under phase-II programme of NHDP	Dr. A. Dey	Civil Engineering	The Louise Berger Group. Inc, Bongaigoan, Assam
Concrete Mix Design M-25 with OPC 43 for Development/ Construction of new Campus/Educational Institute for TISS at Guwahati	Dr. B. Pradhan	Civil Engineering	M/s Hindustan Steelworks Construction Ltd., Guwahati
Test on Physical properties of TATA TISCON SD TMT Bar	Dr. B. Pradhan	Civil Engineering	M/s Numaligarh Refinery Ltd., G. S. Road, Guwahati

Project Title	Principal Investigator	Department	Clients
Design Mix for payment quality concrete (PQC-45kg/cm ²) and investigation of materials: CA(AF) CHAB/07 of 2012-13, work service for provn of overlay and extension of ORA at AFS Chabua	Dr. B. Pradhan	Civil Engineering	M/s NSC Project Pvt. Ltd
Investigation of Boulder Sample	Dr. C. Mahanta	Civil Engineering	Mr. S. K. Das(Res. Er) URS Scott Wilson India Pvt. Ltd Nagoan
Investigation of Boulder Sample	Dr. C. Mahanta	Civil Engineering	Mr. Kishor Kr. Nath, Guwahati.
Feasibility study on construction if an additional floor in the administrative building of NRL	Dr. H. B. Kaushik	Civil Engineering	M/S NRL Ltd, Guwahati
Test on Physical & Mechanical properties of TATA Tiscon Fe 600	Dr. H. B. Kaushik	Civil Engineering	Mr. Kamlesh Kumar, Sr. Manager Sales, Honoram Boro Path, 4th Floor Subham Velocity, Tata Steel, Guwahati
Test on Physical & Chemical properties of Star Cement OPC 43	Dr. H. B. Kaushik	Civil Engineering	M/S HSCL, Kolkata
Concrete Mix Design M-25 with OPC OPC 43 grade for pile which is of 15 meter depth for Development/ Construction of NEW Campus/Educational Institute for TISS at Guwahati	Dr. H. B. Kaushik	Civil Engineering	M/S HSCL, Kolkata
Investigation of Cement (Brand: Max) to be used in Pile foundation and Basement works for the Proposed Permanent Corporate Office building of NRL at Guwahati	Dr. H. B. Kaushik	Civil Engineering	Mr. Kulajit Talukdar, Senior manager (project), Numaligarh Refinery Ltd., 122A, Christianbasti, G. S. road, Guwahati
Investigation of Fine aggregates & Coarse aggregates (20mm & 10mm) to be used in Pile Foundation and Basement works for the Proposed Permanent Corporate Office building of NRL at Guwahati	Dr. H. B. Kaushik	Civil Engineering	Mr. Kulajit Talukdar, Senior manager (project), Numaligarh Refinery Ltd.,122A,Christianbasti, G. S. road, Guwahati
Mix Design of Concrete M-25 and Investigation of material	Dr. H B Kaushik	Civil Engineering	Hill Cement Company, Guwahati
Concrete mix design of M-20 Grade of OPC-43 Grade	Dr. H. B. Kaushik	Civil Engineering	Hill Cement Company, Guwahati
Construction of Administrative Block, Academic Building, Library Hall etc. of National Institute of Technology, Meghalaya at Sohra (Cherrapunji), Meghalaya- Package - I	Dr. H. Sharma	Civil Engineering	Deputy General Manager, RITES Limited, Sohra (Cherrapunji), Meghalaya
Strengthening of existing 45m self Support TV Tower at LPT Ukhrul (Manipur)	Dr. H. Sharma	Civil Engineering	Prasar Bharati, Office of Addl. Director General (E)(NEZ), All India Radio & Doordarshan, Doordarshan complex, R. G. B. Road, Guwahati
Proof checking consultancy for Ship Repair Facility (Slipway) at Pandu, Guwahati, NW-2	Dr. H. Sharma	Civil Engineering	M/s. HOWE Engineering Projects (India) Pvt. Ltd., Howe India House, 81, Nehru Place, New Delhi

Project Title	Principal Investigator	Department	Clients
Vertically and twist angle test report of 50M Tower at various 1 KW FM	Dr. H. Sharma	Civil Engineering	Prasar Bharati
Concrete mix Design M-25 with OPC 43 grade for construction of residential and Non- Residential Buildings for 31st Battalion- ITBP at Yupia, Itanagar, Arunachal Pradesh	Dr. H. Sharma	Civil Engineering	M/S Hindustan Steelworks Construction Ltd., Guwahati
Mix design of concrete M-30 and investigation of materials	Dr. K. Dasgupta	Civil Engineering	Coastal Project Ltd.
Mix design of concrete M-25 & M-30 for work of construction of Academic Building & Library Block of National Institute of Technology, Nagaland & Investigation of cement	Dr. K. Dasgupta	Civil Engineering	B. K. Geetha, Resident Chief Construction Manager, NIT Nagaland Phase II Expansion, M/s. FEDO, Udyogmandal, Kochi
Test on Physical & Chemical properties of TMT Bar (Perfect TMX TMT)	Dr. K. Dasgupta	Civil Engineering	M/s Bhutan Rolling Mills Limited, Bhutan
Test on Physical & Mechanical properties of Strip & Zinc coating for the construction of Head Master Room & Additional Class Room	Dr. K. Dasgupta	Civil Engineering	M/S Akshay Trading, Nagaon, Assam
Test on Physical properties of Shree Ultra Red Oxide PPC	Dr. A. Kalamdhad	Civil Engineering	M/S Star Cement, Mayur Garden, G. S. Road, Guwahati
Test on Physical properties of Interlocking Paver Block	Dr. A. Kalamdhad	Civil Engineering	M/S Devi Concrete Products Industry, Guwahati
Mix design of concrete M-25 & M-30 for work of construction of Academic Building & Library Block of National Institute of Technology, Nagaland & Investigation of cement	Dr. K. Dasgupta	Civil Engineering	M/s. Prasad & Co., Hyderabad
Design Mix for M25 Grade of Concrete for RCC works at NRL Site	Dr. K. Dasgupta	Civil Engineering	M/s. Tribeni Construction Ltd., GS road, Ulubari, Guwahati
Concrete Mix Design M-25 with PPc and M-25 for piling	Dr. K. D. Singh	Civil Engineering	Mr. Pradeep Chadha , AE (Civ), AGE B/R Guwahati
Mix design of concrete M-25, M-320& M-35 for work of IWT Ro-Ro Terminal at Dhubari, Assam an Investigation of Cement	Dr. K. D. Singh	Civil Engineering	M/s. Tribeni Constriction Ltd, G. S/ Road Uiubari, Guwahati
Test on physical & chemical properties of TMT Bar	Dr. K. D. Singh	Civil Engineering	M/S Hindustan Steelworks Construction, Kolkata
Cost of infrastructure service provision in the state of Meghalaya	Dr. L. Boeing Singh	Civil Engineering	Shri E. Y. Chen, Joint director Institutional Finance & Ex-officio, Deputy Secretary to the Govt. of Meghalaya, Finance (Economic Affairs) Department
Evaluation of RS and SS Samples	Dr. Mallikarjuna C	Civil Engineering	M/s. G. R. Infraprojects Limited, Plot No:-80, Brahmaputra Industrial Park, Amingaoan, Guwahati
Collection and Characterization samples as per applicable standards for examination of waste water characteristics for Missamari Military Station	Dr. M. Jawed	Civil Engineering	M/S Chief Engineer, WAPCOS, Gurgaon

Project Title	Principal Investigator	Department	Clients
Evaluation of Earth Fill Material	Dr. R. Choudhary	Civil Engineering	M/s Jorhat Shillong Expressway Ltd. Beltola Survey, Guwahati
Design of Wet Mix Macadam	Dr. R. Choudhary	Civil Engineering	Mr. Bulbul Khan AE Civil, AGE (B/R)(P) AF, Pin-900 135 ,C/o 99APO
Safety Audit for Grade Separator at Barapani	Dr. R. Choudhary	Civil Engineering	M/S Jorabat Shillong Expressway Ltd., Ajanta Path, Guwahati
Investigation of Physical & Chemicals test of Satyam Steel of grade Fe-500 for the work of improvement and upgradation of SH-22 (Gogamukh- Ghilamara)	Dr. S. Das	Civil Engineering	M/S URS Scott Wilson India Pvt. Ltd, North Lakhimpur.
Mix design of concrete M-30 and Investigation of materials	Dr. S. Das	Civil Engineering	M/s. Bhartia-SMSIL (JV)
Construction of Residence, Hostels & Academic building and External Services	Dr. S. K. Deb	Civil Engineering	Sr. Manager (Civil), HSCC (India) Ltd. Tezpur
Testing of Powdered coating of Aluminium Sections for the work of construction of residences, Hostels & Academic buildings and External services	Dr. S. K. Deb	Civil Engineering	Sr. Manager (Civil), HSCC (India) Ltd. Tezpur
Test on Physical properties of Ambuja Cement PPC for construction of G+5 storied Guest House No.2	Dr. S. K. Deb	Civil Engineering	M/s Brahmaputra Infrastructure Ltd., G. S. Road, Guwahati
Investigation of Soil for Construction of G+5 storied Guest House No.2	Dr. Sreedeeep, S	Civil Engineering	M/S Brahmaputra Infrastructure Ltd.
Conducting field density for the construction of G+5 Guest House No.2 at Guwahati Campus	Dr. Sreedeeep, S.	Civil Engineering	M/S Brahmaputra Infrastructure Ltd.
Evaluation of Geo-synthetic MacDrain as drainage	Dr. S. Sreedeeep S.	Civil Engineering	M/s Maccaferri Environmental Solutions Pvt. Ltd., Mumbai
Test on Physical properties of Dalmia cement (OPC-53)	Dr. S. Talukder	Civil Engineering	M/S Om Sai Industries, Guwahati
Assessment of DAV School Building at Guwahati	Dr. S. Talukdar	Civil Engineering	M/s DAV School, Guwahati
Testing of tensile strength of GI wire	Dr. S. Talukdar	Civil Engineering	M/s Brahmaputra Infrasture Ltd., G. S. Road, Guwahati
Proof checking of Foundation and column for the work: Construction of railway at Belonia	Dr. S. Talukder	Civil Engineering	M/s Ramendra Kuthi, Agartala
Physical and Chemical analysis of Jindal Panther TMT Bar	Dr. S. Talukdar	Civil Engineering	M/s. JSPL ,Guwahati
Physical and Chemical analysis of Jindal Panther TMT Bar	Dr. S. Talukdar	Civil Engineering	M/s JSPL, Guwahati
Proff Checking of Residential and Non Residential Buildings for 4th Battalion & SHQ at Rangamati Tezpur, Assam	Dr. S. Talukdar	Civil Engineering	M/s Hindustan Steel Works Construction Ltd, Guwahati
Proff checking of Residential and Non- Residential Buildings for 31st Battalion ITBP at Yupia Itanagar	Dr. S. Talukdar	Civil Engineering	M/s Hindustan Steel Works Construction Ltd, Guwahati

Project Title	Principal Investigator	Department	Clients
Test on Physical Properties of Concrete Block: CA No:-CE(P) SEWAK-13 of 2013-14	Dr. S. Talukdar	Civil Engineering	M/s EE (Civil), OC Contract, 89 Road Constr Coy (GREF), Pin-Code-930089
Inspection of over Bridge at Motphran, Lewduh Shillong	Dr. S. Talukdar	Civil Engineering	Mr. L. Passah, Chief Engineer (NH), PWD (Roads), Shillong, Meghalaya
Inspection of existing GNRC Hospital Building at Dispur for Structural Stability	Dr. S. Talukdar	Civil Engineering	M/s GNRC Medical North Guwahati, Sila Grant, Guwahati
Inspection of Over bridge at Motphran, Lewduh Shillong	Dr. S. Talukdar	Civil Engineering	M/s Chief Engineer, (NHO, PWD (Roads) Meghalaya, Shillong
Design Mix for Dry Lean Cement concrete (DLC) and Investigation of materials CA (AF) SZ/CHAB/05 of 2014-15: Demolition of certain building and concreting of ORP at AFS Chabua	Dr. S. Talukdar	Civil Engineering	Mr. Bulbul Khan, AE (Civil), AGE (B/R) (P) AF, C/o-99 APO, Pin-900135
Design Mix for Pavement Quality Concrete (PQC-45kg/cm ²) and Investigation of materials: CA (AF) SZ/CHAB/05 of 2014-15: Demolition of certain building and concreting of ORP at AFS Chabua	Dr. S. Talukdar	Civil Engineering	Mr. Bulbul Khan, AE (Civil), AGE (B/R) (P) AF, C/o-99 APO, Pin-900135
Construction of Officer's Rest House at Tezpur and other ancillary works in connection with Rangiya - Murongselek Gauge Conversion Project	Dr. S. Talukdar	Civil Engineering	M/S Sanwar Mal Khetawat, Tarun Ram Phukan Road, Haibargaon, Nagaon
Package EW-II (AS): Widening and strengthening of existing National Highway from 2 lane to 4 lane Bijni to Nalbari Section on East-West corridor under Phase II programme on NHDP in the state of Assam	Dr. S. Talukdar	Civil Engineering	M/S KMC Construction Ltd.
Test on Physical Properties of AAC Cube	Dr. S. Talukdar	Civil Engineering	M/s. KD Infra, Changsari, Vill- Sila, Assam
Investigation of kerosene sample for its Thermodynamic Properties	Dr. T. Banerjee	Chemical Engineering	M/S Jyothy Laboratories Ltd, Pondicherry
Pavement Design with Plastic Cell Filled Concrete Block pavement	Dr. T. L. Ryn-tathiang	Civil Engineering	M/S Megha Engineering & Infrastructures Ltd., S-2 Technocrat Industrial Estate, Balanagar, Hyderabad
Evaluation of Polymer Modified Bitumen PMB-70	Dr. T. L. Ryn-tathiang	Civil Engineering	M/S Louis Berger Group Inc. USA
Evaluation of Bitumen Emulsion	Dr. T. L. Ryn-tathiang	Civil Engineering	M/S PWD (NH works) Assam, Chandmari, Guwahati
Test on physical properties of Topcem PPC against CA No.CESZ/TEZ/37 of 13-14; Construction of Security wall at Tezpur	Dr. B. Pradhan	Civil Engineering	M/s Garrison Engineer, Tezpur
Test on Physical properties of TATA TISCON SD TMT Bar	Dr. B. Pradhan	Civil Engineering	Mr. Kulajit Talukdar, Senior Manager (Project), Numaligarh Refinery Ltd., 122A, Christianbasti, G. S. Road, Guwahati

Project Title	Principal Investigator	Department	Clients
Development of modified amine adsorption based process to separate Co ₂ from flue gas	Dr. B. Mandal	Chemical Engineering	NTPC Energy Technology Research Alliance Plot No:-E-3 Echotech-II Udhog Vihar Greater Noida G B Nagar (UP) 201306
Study of the reduction in acidity of the responsible stream either by diversion from the main river feeding the Kopoli Reservoir or by taking up some chemical treatment to prevent damages of metal parts of Kopoli HE at Umrongso	Dr. C. Das	Chemical Engineering	M/s. Neepco Ltd Brook Land Compound Lower New Colony, Shillong
Analysis (Characterization) of Liquid samples(s).	Dr. P. Tiwari	Chemical Engineering	M/s Simplex Infrastructures Ltd, Kolkata
Physical techniques for enhancing life of reverse Osmosis Membrane elements	Dr. S. Murugan	Chemical Engineering	M/S Unilever R&D Bangalore 64, Main Road, Whitefield, Bangalore
Physical cleaning techniques for enhancing life of UF spiral and hollow fibre membrane module	Dr. S. Murugan	Chemical Engineering	M/s HUL, Bangalore
Foam Control	Dr. P. Ghosh	Chemical Engineering	M/S Unilever R&D Bangalore 64, Main Road, Whitefield, Bangalore
Formulation and Implementation of Organisation wide architecture for General Insurance Corporation	Prof. G. Barua	Computer Science and Engineering	General Insurance Corp. of India, "SURAKSHA", 170 J. TATA Road, Churchgate, Mumbai
Real-time monitoring and supportive of VHND and RI using mobile technology	Dr. P. K. Das	Computer Science and Engineering	M/S United Nation Children's Fund, Guwahati
Enhancing Quality of Care and treatment of Children Living with HIV through Off-the-grid Telemedicine in North East India	Dr. P. K. Das	Computer Science and Engineering	M/s UNICIF, Guwahati
Research in Smartphone Accessibility Domain	Dr. K. Sorathia	Design	M/S Samsung Research India Bangalore, 2870, Orion Building, Bagmane Constellation Business Park, Outer Ring Road, Doddanekundi Circle, Bangalore
Collaborative project between IITG & TECPL	Dr. R. Bhattacharjee	Electronics and Electrical Engineering	M/S Toshniwal Enterprises, Kolkata
Consultancy project for NERIM institute of Research and Development (NIRD)	Dr. N. Tripathi	Humanities and Social Sciences	NERIM Institute of Research and Development, Guwahati
Testing of Material - Co-efficient of thermal expansion Coefficient of friction etc	Dr. S. Kakoty	Civil Engineering	M/S. Assam Carbon Ltd. Guwahati
Setting of Confidential Papers for Engineering Non-executives of a Govt. of India Enterprise	Dr. S. K. Dwivedy	Mechanical Engineering	BCPL
Settling of confidential papers for engineering Non- executives of a Govt. of India Enterprise	Dr. S. K. Dwivedy	Mechanical Engineering	Mr. P. K. Mati, GM (HR) BCPL

Appendix-VI

SUMMARY OF INSTITUTE ACCOUNTS

Balance Sheet as on 31 March 2015

Liabilities	Current Year (Amount in Rs.)	Previous Year (Amount in Rs.)
Capital Fund and Liabilities		
Capital Fund	10,554,680,937	9,439,552,683
Earmarked/Endowment Funds	1,979,307,912	1,466,241,535
Current Liabilities and Provisions	1,289,174,247	1,051,949,581
Total:	13,823,163,096	11,957,743,799
Assets		
Fixed Assets		
Tangible Assets	7,982,444,229	7,884,892,724
Intangible Assets	-	-
Capital Works-In-Progress	2,273,949,429	1,384,050,702
Investments - from Earmarked/Endowment Funds	747,105,643	715,659,793
Long Term		
Short Term		
Investments - Others	479,043,436	321,700,000
Current Assets	1,972,157,641	1,370,637,411
Loans, Advances and Deposits	368,462,718	280,803,169
Total:	13,823,163,096	11,957,743,799

Income and Expenditure Account for the year ended on 31 March 2015

Income	Current Year (Amount in Rs.)	Previous Year (Amount in Rs.)
Academic Receipts	208,962,662	177,787,131
Grants/Subsidies	1,533,300,000	1,401,551,893
Income from Investments	-	77,994,513
(Income on Investment from earmarked/endowment, Funds transferred to Fund)		
Interest Earned	24,021,080	254,821
Other Income	33,757,424	27,568,331
Prior Period Income	1,143,741	-
Total (A):	1,801,184,907	1,685,156,690
Expenditure		
Staff Payments and Benefits	982,038,345	737,011,624
Academic Expenses	472,823,480	415,456,971
Administrative and General Expenses	267,661,132	206,941,317
Transportation Expenses	21,295,527	16,552,351
Repairs and Maintenance	82,356,172	50,421,852
Finance Cost	25,410	17,960
Depreciation	303,307,681	272,457,444
Other Expenses	8,989,314	5,783,098
Prior Period Expenses	10,896,233	11,424,317
Total (B):	2,149,393,294	1,716,066,934
Balance being Surplus/(Deficit) for the year (A-B)	(348,208,387)	(108,904,758)

Receipt and Payment Account for the Period Ended on 31 March 2015

RECEIPTS	AMOUNT (Rs.)	TOTAL (Rs.)	PAYMENTS	AMOUNT (Rs.)	TOTAL (Rs.)
I OPENING BALANCES			I EXPENSES		
a) Cash Balances	135,500.00		a) Establishment Expenses	982,038,345.00	
b) Bank Balances			b) Academic Expenses	472,823,480.00	
i) In Current Accounts	525,324,433.34		c) Administrative Expenses	267,661,132.00	
ii) Savings Accounts	685,672,149.40	1,211,132,082.74	d) Transportation Expenses	21,295,527.00	
II GRANTS RECEIVED			e) Repairs & maintenance	82,356,172.00	
a) From Govt. of India			f) Prior Period Expenses	10,896,233.00	
Plan Grant - Capital	1,435,000,000.00		g) Other expenses	9,014,724.00	1,846,085,613.00
Non - Plan Grant - Revenue	1,201,000,000.00				
Plan Grant - Recurring	332,300,000.00		II Payments against Earmarked/Endowments Funds		81,844,281.46
b) From State Government					
c) From Other Sources	28,336,640.68	2,996,636,640.68			
III Academic Receipts					
1. Entrance Fees	36,052,860.00				
2. Annual Fees/ Subscriptions	172,909,801.87	208,962,661.87	III Payments against Sponsored Project/Schemes		464,736,966.05
IV Receipts against Earmarked/Endowment Fund		141,494,846.91			
			IV Payments against sponsored fellowship/scholarship		17,979,986.50
V Receipts against Sponsored Projects/Schemes		858,746,805.91			
VI Receipts against sponsored Fellowship and Scholarship		25,209,078.50	V Investments & Deposits		
			a) On Earmarked/Endowment funds		111,613,369.80
VII Income on Investment from			b) Out of own Funds (Investment - Others)		1,046,343,436.00
a) Earmarked /Endowment Funds	52,176,878.98		VI Term Deposit With Schedule Bank		
b) Other Investment	23,052,124.00	75,229,002.98	VII Expenditure on Fixed Assets and Capital		
			Work in Progress		
			a) Fixed Assets	400,859,185.06	
			b) Capital Work in Progress	889,898,727.00	1,290,757,912.06
C/F	5,517,411,119.59	C/F			4,859,361,564.87

RECEIPTS	AMOUNT (Rs.)	TOTAL (Rs.)	PAYMENTS	AMOUNT (Rs.)	TOTAL (Rs.)
B/F	5,517,411,119.59		B/F	4,859,361,564.87	
VIII Interest received			VIII Other Payments including Statutory payments		739,519,911.05
a) Bank Deposits					
b) Loans & advances	968,956.00	968,956.00			
c) Savings Bank Account			IX Refunds Grants		
IX Investment encashed		969,167,519.67			
X Term Deposit with Schedule Banks encashed			XI Deposits and Advances		1,126,247,597.47
XI Other Income					
a) Other income	33,757,423.75				
b) Prior period Income	1,143,741.00	34,901,164.75	XI Other Payments		
XII Deposits and Advances		566,625,883.86	XII Closing Balances		
			a) Cash in Hand	161,000.00	
			b) Bank Balances		
			In Current Accounts		
			In Savings Accounts	265,595,158.01	
				1,074,933,990.25	1,340,690,148.26
XIII Misc. Receipts Including Statutory Receipts		976,744,577.78			
XIV Any Other Receipts	8,065,819,221.65				8,065,819,221.65