

# ANNUAL REPORT 2015–2016



**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 2015–2016: Highlights

<b>Growth</b>			
<b>Particulars</b>	<b>2014–2015</b>	<b>2015-2016</b>	<b>Growth in %</b>
Student Strength	5186	5533	6.7
Faculty Strength	372	402	8.06
R&D Funds Received (In crores of ₹)	73.95	65.67	- 11.2
Total Research Publication	1250	1588	27.04

**Major R&D Projects Received:**

- Scheme for financial assistance for setting up of electronics and ICT academies; Centre for Educational Technology; DeitY; ₹ 1750 lakh
- E-Kalpa-2 creating digital environment for design in India; Centre for Educational Technology; MHRD; ₹ 840 lakh
- Unnat Shikshak – Unnat Bharat, centre for excellence in science and mathematics education; Centre for Educational Technology; MHRD; ₹ 339 lakh
- Fundamental molecular investigations in biotechnology; Biosciences and Bioengineering; DBT; ₹ 248 lakh
- Visvesvaraya PhD scheme for electronics and IT; Electronics and Electrical Engg.; Media Lab Asia; ₹ 237 lakh
- Development of abiotic stress resilient tropical pulses through tailoring of ABA receptor genes; Biosciences and Bioengineering; DBT; ₹ 156 lakh

**Major Conference Held:**

- South Asian Workshop on Optics and Photonics 2015 under UNESCO IYL Celebration (SAWOP 2015), November 2015
- 4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN – 2015), December 2015
- Indian Chemical Engineering Congress 2015 (CHEMCON 2015), December 2015
- 22nd National Conference on Communications (NCC – 2016), March 2016
- 2nd National Workshop on NEMS/MEMS and Theranostics Devices (NWNTD – 2016), March 2016
- 4th Annual Chemical Engineering Symposium (REFLUX 2016), March 2016

# Annual Report 2015–2016

## A Quick Look

Department/Centre	
Academic Department	11
Academic Centre	5
Service Centre	5

Grants (₹ in crores)		
MHRD	Non-Plan: 117.15	Plan: 165.00
<b>Total</b>	<b>₹ 282.15 crores</b>	

Students Admitted		Students Strength	
Preparatory	5	Preparatory	5
BTech/BDes	639	BTech/BDes	2615
MTech/MDes/MS(R)	452	MTech/MDes/MS(R)	827
MSc/MA	157	MSc/MA	314
PhD/DUAL Degree	401	PhD/DUAL Degree	1772
<b>Total</b>	<b>1654</b>	<b>Total</b>	<b>5533</b>

Number of Degrees Awarded 17 <sup>th</sup> Convocation (8 June 2015)	
BTech/BDes	578
MTech/MDes	267
MSc	124
MA	24
PhD	124
<b>Total</b>	<b>1117</b>

Faculty/Staff Strength	
Faculty	402
Scientific Staff	35
Non-Teaching Staff (Group A)	39
Non-Teaching Staff (Group B & C)	363
<b>Total</b>	<b>839</b>

Research Papers	
Journal Papers	883
Conference Papers	705
<b>Total</b>	<b>1588</b>

Consultancy Projects	
New Projects	135
Outlay (Rs. in crore)	3.99

Sponsored Research Projects	
New Projects	116
Outlay (Rs. in crore)	61.00

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Civil Engineering	72
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Humanities and Social Sciences	105
Mathematics	114
Mechanical Engineering	121
Physics	130

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Centre for the Environment	146
Centre for Linguistic Science and Technology	151
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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** (Up to 07.02.2016)

Former Chairman and Managing Director  
Power Grid Corporation of India Limited

**Dr. Rajiv I. Modi** (From 08.02.2016)

Chairman & Managing Director  
Cadila Pharmaceuticals Limited  
Cadila Corporation Campus,  
Sarkhej-Dholka Road, Bhat,  
Ahmedabad 382 210, Gujarat

Director

**Prof. Gautam Biswas**

Deputy Director

**Prof. P. K. Bora**

Dean, Academic Affairs

**Prof. M. G. P. Prasad**

Dean, Faculty Affairs

**Prof. P. Mahanta**

Dean, Research and Development

**Prof. D. Chakraborty** (Up to 14.07.2015)

**Prof. S. R. M. Prasanna** (From 15.07.2015)

Dean, Students' Affairs

**Prof. Chandan Mahanta**

Dean, Infrastructure, Planning and Management

**Prof. S. K. Kakoty**

Dean, Alumni Affairs and External Relations

**Prof. S. C. Mishra** (Up to 21.07.2015)

**Prof. R. M. Punekar** (From 22.07.2015)

Dean, Outreach Education Programme

**Prof. A. K. Gogoi**

Registrar

**Mr. U. C. Das**

Associate Dean, Academic Affairs

**Prof. A. Saikia**

Associate Dean, Institute Works

**Dr. R. K. Bhattacharjya**

Associate Dean, Research and Development

**Prof. S. R. M. Prasanna** (Upto 14.07.2015)

**Prof. Gopal Das** (From 05.10.2015)

Associate Dean, Students' Affairs

**Prof. L. Rangan**

**Prof. K. Pakshirajan** (Upto 22.02.2016)

Head, Department of Biosciences and Bioengineering

**Prof. V. V. Dasu** (Up to 22.02.2016)

**Prof. K. Pakshirajan** (From 23.02.2016)

Head, Department of Chemical Engineering

**Prof. B. Mandal**

Head, Department of Chemistry

**Prof. B. K. Patel**

Head, Department of Civil Engineering

**Prof. S. Dutta**

Head, Department of Computer Science and  
Engineering

**Prof. D. Goswami**

Head, Department of Design

**Prof. U. Barua**

Head, Department of Electronics and Electrical  
Engineering

**Prof. Chitralekha Mahanta**

Head, Department of Humanities and Social Sciences  
**Dr. A. Saikia**

Head, Department of Mathematics  
**Prof. S. N. Bora**

Head, Department of Mechanical Engineering  
**Prof. A. K. Dass**

Head, Department of Physics  
**Prof. P. Poulouse**

Head, Centre for Energy  
**Prof. P. Goswami**

Head, Centre for the Environment  
**Prof. G. Das** (Up to 06.08.2015)  
**Prof. V. K. Dubey** (From 07.08.2015)

Head, Centre for Nanotechnology  
**Prof. R. P. Paily**

Head, Central Instruments Facility  
**Dr. G. Krishnamoorthy**

Head, Centre for Educational Technology  
**Prof. P. Yammiyavar** (Up to 12.05.2015)  
**Prof. S. K. Khijwania** (From 13.05.2015)

Head, Computer & Communication Centre  
**Prof. S. V. Rao**

Head, Centre for Linguistic Science and Technology  
**Prof. S. Nandi**

Head, Centre for Career Development  
**Prof. S. Natesan** (Up to 06.04.2015)  
**Prof. K. Mohanty** (From 07.04.2015)

Librarian  
**Dr. T. Guha**



# IIT Council

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

# Board of Governors

## Chairman

**Dr. R. P. Singh** (Up to 07.02.2016)  
Former Chairman and Managing Director  
Power Grid Corporation of India Limited

**Dr. Rajiv I. Modi** (From 08.02.2016)  
Chairman & Managing Director  
Cadila Pharmaceuticals Limited  
Cadila Corporation Campus,  
Sarkhej-Dholka Road, Bhat,  
Ahmedabad 382 210, Gujarat

## Member (Ex-Officio)

**Prof. Gautam Biswas**  
Director  
IIT Guwahati

## Member-Nominees of the IIT Council

**Prof. Asis Datta** (Up to 17.03.2016)  
Professor of Eminence  
National Institute of Plant Genome Research  
Aruna Asaf Ali Marg, Post Box No. 10531  
New Delhi 110 067

**Ms. (Dr.) Chitra Dutta** (From 18.03.2016)  
Head, Structural Biology and Informatics Division  
CSIR-Indian Institute of Chemical Biology  
Kolkatta 700 032

## Prof. M. K. Chaudhuri

Vice-Chancellor  
Tezpur University  
Napaam, Tezpur 784 028

## 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** (Up to 10.06.2015)  
Ex Engineer-in-Chief, PWD  
Shivaji Tillah, Khatla  
Aizawl, Mizoram

## Mr. C. Lalhmachhuana, ITS

(From 11.06.2015)  
Secretary, Information & Telecommunication  
Technology Department  
Government of Mizoram, Aizawl

## Member-Nominees of the Senate

**Prof. R. Alam**  
Professor  
Department of Mathematics  
IIT Guwahati

## Prof. A. Chattopadhyay

(Up to 31.12.2015)  
Professor  
Department of Chemistry  
IIT Guwahati

## Prof. C. Mahanta

(From 01.01.2016)  
Professor  
Department of Electronics & Electrical Engineering  
IIT Guwahati

## Secretary (Ex-Officio)

**Mr. U. C. Das**  
Registrar  
IIT Guwahati

# Senate

## Composition of the Senate

- |  |                         |
|--|-------------------------|
| 1. <b>The Director</b>   | Chairman (Ex-Officio)   |
| 2. <b>The Deputy Director</b>  | Member (Ex-Officio)     |
| 3. <b>All Professors of the Institute</b>  | Members (Ex-Officio)    |
| 4. <b>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</b><br>Prof. A. C. Bhagabati<br>National Highway No. 37 (Bypass)<br>Guwahati 781 014<br><br>Prof. B. P. Chetiya<br>H. No. - 2<br>Banipur Path, Beltola<br>West Guwahati 781 028<br><br>Prof. H. K. Das<br>Pro. V. C, Assam Downtown University<br>H. No. - 1, 2nd Bye lane<br>Baranachal Road, Bamunimaidam<br>Guwahati 781 021 | Board Nominated Members |
| 5. <b>Head of the Academic Departments and Academic Centres</b>  | Members (Ex-Officio)    |
| 6. <b>Librarian of the Institute</b>   | Member (Ex-Officio)     |
| 7. <b>Chairman, Hostel Affairs Board</b>   | Member                  |
| 8. <b>Registrar of the Institute</b>   | Secretary (Ex-Officio)  |

## Finance Committee

<p><b>Dr. R. P. Singh</b> (Up to 07.02.2016) Former Chairman and Managing Director Power Grid Corporation of India Limited</p>	<p><b>Chairman (Ex-Officio)</b></p>
<p><b>Dr. Rajiv I. Modi</b> (from 08.02.2016) Chairman &amp; Managing Director Cadila Pharmaceuticals Limited Cadila Corporation Campus, Sarkhej-Dholka Road, Bhat, Ahmedabad 382 210, Gujarat</p>	
<p><b>Prof. Gautam Biswas</b> Director IIT Guwahati</p>	<p><b>Member (Ex-Officio)</b></p>
<p><b>Prof. P. K. Bora</b> Professor, Department of Electronics and Electrical Engineering IIT Guwahati</p>	<p><b>Member</b></p>
<p><b>Director (IITs)</b> Department of Higher Education Ministry of Human Resource Development, Govt. of India Shastri Bhavan, New Delhi 110 115</p>	<p><b>Member</b></p>
<p><b>Director (Finance)</b> Integrated Finance Division, Department of Higher Education Ministry of Human Resource Development, Govt. of India Shastri Bhavan, New Delhi 110 115</p>	<p><b>Member</b></p>
<p><b>Prof. Dilip Kr. Barua</b> Former Principal, Cotton College, Guwahati</p>	<p><b>Member</b></p>
<p><b>Mr. U. C. Das</b> Registrar IIT Guwahati</p>	<p><b>Secretary (Ex-Officio)</b></p>

# Building and Works Committee

<b>Prof. Gautam Biswas</b> Director IIT Guwahati	<b>Chairman (Ex-officio)</b>
<b>Superintending Engineer (CPWD), Assam</b> Assam Central Circle-II, CPWD Complex, Garchuk, NH Bye Pass 37 Opposite DY 365 Office, Guwahati 781 035	<b>Member (Ex-officio)</b>
<b>Chief Engineer (Buildings), PWD, Assam</b> PWD, Govt. of Assam Chandmari, Guwahati 781 003	<b>Member (Ex-officio)</b>
<b>Shri Mrinal R. Das</b> Former Secretary, PWD, Govt. of Assam	<b>Member</b>
<b>Shri Pramathesh Choudhury</b> Director, Design (Retd.), PWD, Govt. of Assam	<b>Member</b>
<b>Prof. P.K. Bora</b> Deputy Director and Professor, Department of Electronics and Electrical Engineering, IIT Guwahati	<b>Member (Ex-officio)</b>
<b>Prof. S. K. Kakoty</b> Dean, Infrastructure, Planning and Management and Professor, Department of Mechanical Engineering, IIT Guwahati	<b>Member (Ex-officio)</b>
<b>Prof. Rajib Kr. Bhattacharjya</b> Associate Dean, Infrastructure, Planning and Management and Professor, Department of Civil Engineering, IIT Guwahati	<b>Special Invitee</b>
<b>Mr. U. C. Das</b> Registrar, IIT Guwahati	<b>Member Secretary (Ex-officio)</b>

# Executive Summary



## INTRODUCTION

The year 2015 has seen its seventeenth batch of students taking their degrees in the month of June. 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 2015-2016.

## THE BOARD OF GOVERNORS

Dr. Rajiv I. Modi, Chairman and Managing Director, Cadila Pharmaceuticals Limited has been nominated as the Chairman of Board of Governors of IIT Guwahati. He assumed his charges from 8 February 2016. I welcome Dr. Modi on behalf of the Institute.

Dr. R. P. Singh's tenure as the Chairman, Board of Governors, came to an end on 7 February 2016. I offer our heartfelt gratitude to Dr. Singh for his constant support and guidance to the Institute.

Mr. C. Lalhmachhuana, ITS, Secretary, Information and Telecommunication Technology Department, Government of Mizoram, joined the Board in June 2015 as a nominee from the North Eastern Region. Prof. Chitralakha Mahanta, Professor, Department of Electronics and Electrical Engineering, IIT Guwahati joined the Board in January 2016 as a nominee of the Senate. Prof. Arun Chattopadhyay, Professor, Department of Chemistry, has completed his tenure as the nominee of the Senate in December 2015. On behalf of the Board, I welcome the new members to the Board and thank the outgoing members for their contributions.

## ACADEMIC ACTIVITIES

The Institute has 11 academic departments, 5 interdisciplinary academic centres and 5 extramural centres. IIT Guwahati has newly created an academic centre for Rural Technology to promote multidisciplinary research and societal activities. The Centre has primary objective of teaching, research and to provide consultancy support to various needs of the Indian rural sector. Moreover an extramural centre namely Centre for Creativity was also established. 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, Centre of Linguistic Science and Technology, and Centre for Rural Technology

## Extramural Centres

Computer and Communication Centre, Central Instruments Facility, Centre for Educational Technology, Centre for Career Development, and Centre for Creativity

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 Design (DD);

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

**Master of Design (MDes) programme** in Design;

**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 the Departments and in the Centre for Energy (EN), Centre for the Environment (EV), and Centre for Nanotechnology (NT); and

**Dual (MTech+PhD) programme** in the Department of Computer Science and Engineering (CS).

A **Master of Science by Research [MS (R)] programme** in Energy (EN), and a **Dual [MS (Eng.) + PhD] programme** in Electronics and Electrical Engineering (EE), was started in July 2015.

The total number of enrolled students in 2015-16 is 5533. Of these, 52.65% are postgraduate students. The detailed break up is —

Course	2014-2015	2015-2016
Preparatory	3	5
BTech and BDes	2570	2615
MTech and MDes	760	817
MSc	262	265
MA	47	49
MS	-	10
Dual Degree (MTech+PhD)	13	29



Smt. Smriti Zubin Irani, Hon'ble Minister of Human Resource Development, Govt. of India; Sri Sarat Bokotoky (R2), Hon'ble Minister of Education, Assam; Dr. R. P. Singh (L), Chairman, Board of Governors, IIT Guwahati; Prof. Gautam Biswas (R), Director, IIT Guwahati, along with the gold and silver medal winners at the 17<sup>th</sup> Convocation



Smt. Smriti Zubin Irani, Hon'ble Minister of Human Resource Development, Govt. of India with a medal winner at the 17<sup>th</sup> Convocation



A view of the dias of the 17<sup>th</sup> Convocation with the Chief Guest, Chairman, Board of Governors, the Director and the Members of the Board of Governors

Course	2014-2015	2015-2016
PhD	1531	1743
<b>Total</b>	<b>5186</b>	<b>5533</b>

### Seventeenth Convocation

In the Seventeenth Convocation held on 8 June 2015, a total number of 1117 students received their BTech, BDes, MA, MSc, MTech, MDes and PhD degrees as given below:

Programme	Nos.
<b>BTech/BDes</b>	
Biotechnology	38
Chemical Engineering	52
Chemical Science and Technology	31
Civil Engineering	63
Computer Science and Engineering	80
Design	35
Electronics and Communication Engineering	79
Electronics and Electrical Engineering	47
Engineering Physics	28
Mathematics and Computing	48
Mechanical Engineering	77
<b>Total</b>	<b>578</b>
<b>MSc</b>	
Chemistry	42
Mathematics and Computing	46
Physics	36
<b>Total</b>	<b>124</b>
<b>MA</b>	
Development Studies	24

Programme	Nos.
<b>Total</b>	<b>24</b>
<b>MTech/MDes</b>	
Biotechnology	25
Chemical Engineering	27
Civil Engineering	58
Computer Science and Engineering	38
Design	26
Electronics and Electrical Engineering	35
Mechanical Engineering	58
<b>Total</b>	<b>267</b>
<b>PhD</b>	
Biosciences and Bioengineering	16
Chemical Engineering	19
Chemistry	16
Civil Engineering	8
Computer Science and Engineering	8
Design	2
Electronics and Electrical Engineering	10
Humanities and Social Sciences	3
Mechanical Engineering	12
Mathematics	9
Physics	15
Centre for Energy	2
Centre for the Environment	2
Centre for Nanotechnology	2
<b>Total</b>	<b>124</b>
<b>Grand Total</b>	<b>1117</b>



## ISHĀN VIKĀS

Started in 2014 with a focus on developing the education scenario of the North-Eastern part of the country, Ishān Vikās is getting the momentum it requires. IIT Guwahati has been initiating comprehensive plans, with support from the MHRD, to bring selected schoolchildren and engineering college students of the North-Eastern region in close contact with various IITs, IISERs, NITs and NIAs.

About 1000 schoolchildren and 250 engineering students studying in various institutions in the North East have participated in the programme till date. Almost all the IITs, IISERs and NIAs have acted as host institutes and the participants have greatly benefitted from their exposure to such premier institutions in engineering, technology and the pure sciences.



### Global Initiative of Academic Networks (GIAN)

The Govt. of India approved a new programme titled Global Initiative of Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs internationally, to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, to accelerate the pace of quality reform, and to elevate India's scientific and technological capacity to global excellence.

With support from GIAN, IIT Guwahati too has organised the following courses during the reporting year —

Course Name	International Expert	Indian Expert(s)	Duration
Optimisation methods to groundwater resources management	Prof. Konstantinos Katsifarakis, Aristotle University of Thessaloniki, Greece	Dr. M. K. Goyal, Civil Engineering	7-11 March 2016

More number of courses are going to be offered in the coming months. Some of them are —



High Performance Computing Cluster (HPCC)

Course Name	International Expert	Indian Expert(s)	Duration
Optimisation Methods for Engineering Planning and Design	Prof. Fouad Bennis, Ecole Centrale de Nantes, France	Prof. R. K. Bhattacharjya, Civil Engineering	4-8 May 2016
Boiling Heat Transfer	Prof. Vijay Dhir, University of California, Los Angeles, USA	Prof. Gautam Biswas, Dr. Amaresh Dalal, Mechanical Engineering	23 May – 3 June 2016
Infrastructure Projects Planning and Modelling	Dr. Hemanta Doloi, University of Melbourne, Australia	Dr. L. Boeing Singh, Civil Engineering	27 June – 8 July 2016
Campaigns, Media and Influence	Prof. Holli A. Semetko, Emory University, Atlanta, USA	Dr. Pahi Saikia, Humanities and Social Sciences	16-20 May 2016
Green Material Forming and Joining	Prof. Jay S. Gunasekera, Ohio University, USA	Dr. R. Ganesh Narayanan, Mechanical Engineering	6-11 June 2016
Distributed Network Algorithms	Dr. Stefan Schmid, Deutsche Telekom Laboratories (T-Labs) and TU Berlin, Germany	Dr. P. S. Mandal, Mathematics	27 June – 2 July 2016

### 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 –

- High Performance Computing Cluster (HPCC) ₹ 878 lakh



250 KN Servo Hydraulic Universal Testing Machine



Field Emission Scanning Electron Microscope and Electron Beam Lithography

- Field Emission Gun Transmission Electron Microscope ₹ 669 lakh
- High End Optical Microscope ₹ 284 lakh
- Oxidation Diffusion Furnace ₹ 250 lakh
- Raman Spectroscopy ₹ 132 lakh
- Material Printing System ₹ 125 lakh
- DC Probe Station ₹ 102 lakh

Lakshminath Bezbaroa Central Library is a major service centre of the Institute which provides library and information services to support the teaching, learning, research activities. During the reported period, the total library circulation transactions have increased substantially and stand at around 1.63 lakhs. The Library remains open from 8.00 am to 12.00 midnight, throughout the year to provide reading facility to the Institute’s community. The library has a collection of about 1.58 lakhs of printed books and bound volumes of journals, 1.47 lakhs of e-books, and 90 print and 24000 online journals along with a substantial number of other documents.

The Computer and Communication Centre has augmented its facilities to provide better service in connectivity. The Centre also acts as a nodal centre for various network related activities of the North-Eastern states. Projects of the National Knowledge Network and the ERNET are being actively pursued in the Centre. The Centre has also purchased a high performance computing system of around 250 TF with 300TB PFS storage with infiniband interconnect with a total cost of around 9 crore in association with CDAC, Pune, for setting up a state-of-the-art CDAC–IIT Guwahati supercomputing facility.

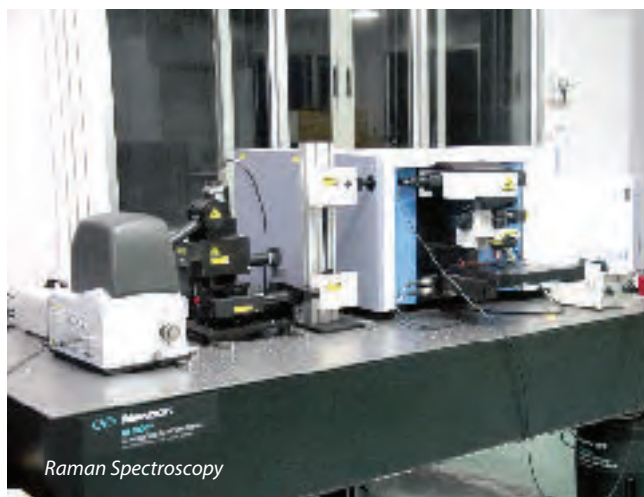
**RESEARCH AND DEVELOPMENT**

The number of PhD students on campus is increasing every year. This year has seen a big jump in number, 1531 students last year to 1743 this year. The current PhD students’ to faculty ratio stands at a satisfactory 4.34.

The other component of our research programme is sponsored (or directed) research. There are 428 research projects in progress with a total sanctioned value of about



Material Printing System



Raman Spectroscopy

₹335 crore. In the year under report we received 116 new projects with a sanctioned value of ₹61 crore. The R&D projects are mainly sponsored by Government Ministries and Departments with major support coming from the 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. 280 personnel are engaged in various research projects at the Institute with 375 Principal Investigators involved.

Some of the major research projects received during the year are—

Project Title	Department/ Centre	Funding Agency	Amount Sanctioned (₹ in lakhs)
Scheme for financial assistance for setting up of electronics and ICT academies	Centre for Educational Technology	DeitY	1750
E-Kalpa-2 creating digital environment for design in India	Centre for Educational Technology	MHRD	840
Unnat Shikshak – Unnat Bharat, centre for excellence in science and mathematics education	Centre for Educational Technology	MHRD	339
Fundamental molecular investigations in biotechnology	Biosciences and Bioengineering	DBT	248
Visvesvaraya PhD scheme for electronics and IT	Electronics and Electrical Engg.	Media Lab Asia	237
Development of abiotic stress resilient tropical pulses through tailoring of ABA receptor genes	Biosciences and Bioengineering	DBT	156
Development of comprehensive interactive well monitoring software tool for drilling supervisors	Centre for Energy	ONGC	151
Studies and application of redox enzymes for bioelectronics devices	Biosciences and Bioengineering	DBT	145
Investigation on evaluation pressure for unique redox metabolism of leishmania parasite	Biosciences and Bioengineering	BCIL	106
Terminal Oxo and Imido transition-metal complexes of group 11 (Cu,Ag,Au): Strategies for sequential C-H bond activation, functionalisation, Carbon-Heteroatom (C-N and C-O) bond-forming reactions and group-transfer catalysis	Chemistry	DST	83
Using field and modelling studies to investigate noise propagation in urban traffic corridor	Civil Engineering	MoES	56

**Table-1**

BCIL – Biotech Consortium India Limited

DBT – Department of Biotechnology, Govt. of India

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

DST – Department of Science and Technology, Govt. of India

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

MoES – Ministry of Earth Sciences, Govt. of India

ONGC – Oil and Natural Gas Corporation Limited

In addition to sponsored research projects, IIT Guwahati undertakes consultancy assignments for various State Government Departments, the Railways, the National Highways Authority of India, the Oil and Gas Sector, Construction and Infrastructure Companies, the Power Sector, Educational Institutes, Health and Pharmaceutical

Industries and Financial Institutions. Consultancy projects make significant contributions to the industrial, economic and social growth of the country with special emphasis on this region.

A total of 135 new consultancy projects were carried out



*IUPAP Conference on Computational Physics*

during the year. The total value of consultancy projects undertaken during this year is ₹3.99 crores, and ₹6.43 crores was received for all consultancies.

IIT Guwahati Technology Incubation Centre (IITG-TIC) is facilitating ten incubating companies out of which three are new. These incubatees are currently working in IT, electronics, bio-engineering and innovative design related projects. One company has successfully graduated.

The Institute has so far applied for 69 patents out of which 6 have been granted. 13 patents were applied for in the reporting year.

**FACULTY AND STAFF**

The faculty strength at the end of March 2016 was 402. This is an increase of 30 from 372 at the end of last year.

The number of non-teaching staff at the end of the financial year 2015-2016 was 437 which is 21 higher than the previous year.

**RESEARCH 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: 883
- Papers in Conference Proceedings: 705

In the previous year 763 papers in journals and 487 papers in conference proceedings were published by the faculty of the Institute. The increase of over 25% in research publications is commendable.

**CONFERENCES/WORKSHOPS/SYMPOSIA**

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

- Symposium cum Workshop on Advances in Computational Biology and Computer Aided Drug Design, June 2015
- Regional Celebration of Women in Computing, East and North-East, November 2015
- South Asian Workshop on Optics and Photonics 2015 under UNESCO IYL Celebration (SAWOP 2015), November 2015
- XXVII IUPAP Conference on Computational Physics (CCP2015), December 2015
- 4<sup>th</sup> International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015), December 2015



*5<sup>th</sup> IEEE Applied Electromagnetics Conference (AEMC-2015)*



Indian Chemical Engineering Congress 2015 (CHEMCON 2015)

- 5<sup>th</sup> IEEE Applied Electromagnetics Conference (AEMC-2015), December 2015
- Indian Chemical Engineering Congress 2015 (CHEMCON 2015), December 2015
- Workshop on Tone and Intonation-3, January 2016
- 22nd National Conference on Communications (NCC-2016), March 2016
- Research Conclave 2016 – An amalgamation of Academia, Industry and StartUps, March 2016
- 2nd National Workshop on NEMS/MEMS and Theranostics Devices (NWNTE-2016), March 2016
- 4<sup>th</sup> Annual Chemical Engineering Symposium (REFLUX 2016), March 2016

The Institute has also organised around 30 short term courses under the Technical Education Quality Improvement Programme (TEQIP), E-kalpa, Electronics and ICT Academy, projects funded by the Govt. of India. Moreover teacher training camps were also held for teachers of high and higher secondary schools under Rashtriya Madhyamik Shiksha Abhijan (RMSA). The aim of the training camps is to strengthen the quality of science (physics, mathematics and chemistry) teaching amongst



His Excellency, Mr. Richard Rahul Verma, US Ambassador to India, visited IIT Guwahati



22nd National Conference on Communications (NCC-2016)

in-service teachers of Assam.

#### MEMORANDA OF UNDERSTANDING AND INTERNATIONAL RELATIONS

The Institute signed twenty one new Memoranda of Understanding (MoUs) with various educational and research institutes across the world during the year under report. The MoUs are mainly on academic and research collaborations, and student exchange. Some of these institutes are KAIST, Korea Advanced Institute of Science and Technology, Korea; UCLA Henry Samueli School of Engineering and Applied Science, USA; University of Nevada Las Vegas (UNLV), USA; Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus (BSUIRMB), Belarus; Uppsala University, Sweden; Kyoto Institute of Technology, Japan; Queen's University Belfast, Northern Ireland, Ireland; University of Passau, Germany; University of Southampton, UK; Novosibirsk State University, Russia; University of South Pacific, SUVA, Fiji.



Prof. Gautam Biswas, Director, IIT Guwahati with the representatives of the Semi-Conductor Labs, DST



*Delegation of Gifu University, Japan, with IIT Guwahati officials*

A substantial number of international students from top universities visit IIT Guwahati every year to pursue full time masters, doctoral and short-term courses as exchange students and interns. Students who have benefitted from their association with the Institute include those from institutes like TUM, Germany, RWTH Aachen University, Germany, National University of Singapore, University of Nottingham, UK, University of Pardubice, Czech Republic and many universities of Portugal, Ethiopia, Israel, Syria, Myanmar and Bangladesh. As of today there are about 50 international students studying in the campus.

IIT Guwahati and the Chaliha Foundation signed a Memorandum of Understanding for the institution of awards/financial support scheme for the Institute students in January 2016. The trustees of the Chaliha Foundation handed over an endowment of ₹30 lakhs to the Institute for awards in memory of Late Jadav Prasad Chaliha. Late J. P. Chaliha was not only a bright student who studied at Presidency College and Scottish Church College, Kolkata but also an active nationalist who took part in the freedom

movement. He subsequently became a highly successful entrepreneur and a renowned tea-planter. His later years were spent at his Korangani Tea Estate where he utilised his scientific mind to make numerous innovations in the processes of growing and manufacturing tea. The annual interest generated from the endowment will be used to create the following awards: (i) Jadav Prasad Chaliha Award for Academic Excellence to be awarded to toppers at the



*Students from Hanyang University, South Korea, during their internship at IIT Guwahati. Seen here with Dean, AER, Prof. R. M. Punekar*

end the first year in MSc (Physics), MSc (Chemistry), MSc (Mathematics and Computing) and MA in Development Studies (ii) Jadav Prasad Chaliha Merit-cum-Means Award to be awarded to toppers at the end the first year amongst those students with yearly family income lower than ₹4.5 lakhs in the above four programmes (iii) Jadav Prasad Chaliha Award for the Differently Abled to be awarded to the student with the highest CPI at the end of the first year amongst all the students in the Differently Abled category in the BTech programme (iv) Jadav Prasad Chaliha Bursary to be awarded to a needy student with a satisfactory academic performance. Each of the above ten awards will be of ₹20,000 and will be given during the Independence Day celebrations at the Institute starting with this year. The



*Prof. Gautam Biswas, Prof. Toru Terao and Prof. R.M. Punekar after signing the MoU between IIT Guwahati and Kagawa University, Japan*

institute highly appreciates this generous gesture from the Chaliha Foundation.

### ALUMNI ACTIVITIES

The past one year has seen a steady increase in donations to the institute through its alumni and other well-wishers. Alumnus Mr. Ankit Nagori (BDes 2004 batch), a well-known name in the corporate world in India, donated ₹10 lakh to the Institute in January 2016. Many alumni have visited the campus during the year and interacted with the students and shared ideas. A couple of alumni meets and discussions were also held to strengthen ties with the alumni of the Institute.

### FACULTY ACHIEVEMENTS

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

- Prof. Arun Chattopadhyay, Department of Chemistry, was elected a fellow of the Indian Academy of Sciences (2016).
- Prof. T. Punniyamurthy, Department of Chemistry, was elected a fellow of the Indian Academy of Sciences (2016).
- Prof. Vikash Kumar Dubey, Department of Biosciences and Bioengineering, received Dr. P. N. Raju Oration Award by Indian Council for Medical Research, Government of India in January 2016.
- Dr. B. Anand, Department of Biosciences and Bioengineering, received the INSA medal for Young Scientists; associate, Indian Academy of Sciences, Bangalore, and the DBT-Innovative Young Biotechnologist Award.
- Dr. Kusum K. Singh, Department of Biosciences and Bioengineering, received Albert's Global Researcher Reunion Award, 2016.
- Dr. Biman B. Mandal, Department of Biosciences and Bioengineering, received the INSA-Medal for Young Scientists 2015 awarded by the Indian National Science Academy, India.
- Dr. P. Chandra, Department of Biosciences and Bioengineering, was selected for the award of the Ramanujan Fellowship from the Ministry of Science and Technology, Department of Science and Technology, Government of India.
- Dr. Nanda Kishore, Department of Chemical Engineering, received the Institution of Engineers (India) Young Engineers Award for the year 2015-2016 in Chemical Engineering.
- Dr. Vimal Katiyar, Department of Chemical Engineering, and his research group's work on Biobased Adhesive was awarded the Gandhian Young Technological Innovation (GYTI) Award in March 2016 at Rashtrapati Bhavan, New Delhi.
- Prof. B. K. Patel, Department of Chemistry, was given Coastal Chemical Research Society Award-2015 by Coastal Chemical Research Society.
- Prof. Parameswar K. Iyer, Department of Chemistry, received the International Association of Advanced Material Science and Technology (IAAM) Scientist Award 2016.
- Dr. Bhubaneswar Mandal, Department of Chemistry, won the Industrial Green Chemistry World Award (IGCW 2015) conferred by the Industrial Green Chemistry Foundation.
- Dr. M. Qureshi, Department of Chemistry, has been elected as a Fulbright-Nehru academic professional excellence fellow by USIEF, USA.
- Dr. Chandan Mukherjee, Department of Chemistry, has been elected as Young Associate, Indian Academy of Science, Bangalore.
- Prof. Arup Kumar Sarma, Department of Civil Engineering, was awarded the Bimla Prasad Chaliha Chair Professorship for Water Resources on December 2015.
- Dr. Manish Kumar Goyal, Department of Civil Engineering, has been awarded the PROVIA fellowship from the United Nations Environment Programme (UNEP).
- Dr. Bimlesh Kumar, Department of Civil Engineering, won the Prof. R. J. Garde Research Award 2015 of the Indian Society for Hydraulics (ISH) for outstanding research in the field of Hydraulics and Water Resources.
- Dr. Abhishek Kumar, Department of Civil Engineering, won the Young Engineer award 2015 from the Institution of Engineers (India).
- Ms. Charu Monga, Department of Design, won the Microsoft faculty research grant award 2015.
- Dr. Chandan Kumar, Department of Electronics and Electrical Engineering, was awarded the Alexander von Humboldt Research Fellowship. He also received the POSOCO Power Systems Award for doctoral work for the year 2016.
- Dr. R. S. Kshetrimayum, Department of Electronics and Electrical Engineering, won the Institution of Electronics and Telecommunication Engineers (IETE) — Manorama Rathore Memorial Award 2015.
- Dr. S. Kanagaraj, Department of Mechanical Engineering, has displayed prosthetic and orthotic products developed by his lab at various technical exhibitions



*Shri Narendra Modi, Hon'ble Prime Minister of India, Shri Padmanabha Balakrishna Acharya, His Excellency, Hon'ble Governor of Assam, Shri Tarun Gogoi, Hon'ble Chief Minister of Assam; Smt. Smriti Irani, Hon'ble Minister of HRD, GoI; Shri Sarbananda Sonowal, Hon'ble Minister for Sports and Youth Affairs and Entrepreneurship and Skill Development; Dr. Jitendra Singh, Hon'ble Minister, Ministry of Development of North Eastern Region; Shri Sarat Borkotoky, Hon'ble Minister of Education, Govt. of Assam; and other dignitaries sitting on the dais on the occasion of Hon'ble Prime Minister's address to the faculty, students and staff members of the higher education institutions of the North East.*

across India. He also received the silver award for the best innovator at the 7<sup>th</sup> India Innovation Initiative — i3 National Fair 2015— organised by the DST, AICTE and CII. Dr. Kanagaraj's project entitled "Improving hip and spine stability of trans-femoral amputees by deep squat using the inexpensive polymer/composite based polycentric knee joint" was one of the top 7 finalists in Samsung Innovation Awards 2015.

- Prof. P. Muthukumar, Department of Mechanical Engineering, became the President of the Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), Guwahati sub-chapter, from March 2016. He was also elected fellow of the Institution of Engineers (India) in September 2015. Dr. Muthukumar also won the Er. M. P. Baya National Award 2015 for outstanding Mechanical Engineer from the Institution of Engineers (India), Udaipur.
- Dr. S. Thota, Department of Physics, has been awarded the German Academic Exchange Service (DAAD) – IIT Faculty Bilateral Exchange Fellowship Award 2015. He also received the Young Scientist Research Award (YSRA) from the Department of Atomic Energy, Govt. of India.
- Dr. Shakuntala Mahanta, Associate Professor, Department of Humanities and Social Sciences, was awarded Fulbright-Nehru academic and professional excellence fellowship 2015-2016 to visit University of Massachusetts, Amherst.

Our congratulations to all of them.

#### VISIT OF HONORABLE PRIME MINISTER OF INDIA

Honorable Prime Minister of India, Mr. Narendra Modi visited IIT Guwahati on January 19, 2016 and addressed the gathering of students, faculty members and campus residents. During this visit, he inaugurated Electronics & ICT Academy of IIT Guwahati as a part of Digital India initiative. Hon'ble Prime Minister also inaugurated the new campus of IIIT Guwahati during his visit.



*Shri Narendra Modi, Hon'ble Prime Minister of India, being welcomed by Prof. Gautam Biswas, Director, IIT Guwahati. Also seen in the picture, Smt. Smriti Zubin Irani, Hon'ble Minister for Human Resource Development, Govt. of India and Prof. Gautam Barua, Mentor Director, IIIT Guwahati*

#### CONSTRUCTION AND CAMPUS DEVELOPMENT

In conformity with the continuous growth of the students, the existing infrastructure of the Institute has been strengthened with new construction and extensions.



### Students' Hostels

In the tenth boys' hostel, Lohit – with a capacity of 200 rooms with attached toilet for PhD scholars/foreign students and 804 normal single seater rooms – 684 normal rooms and 24 rooms with attached toilets are occupied, whereas another 150 rooms will be ready before the commencement of the new academic session.

Construction work of boys' hostel number eleven is progressing as scheduled. At present 50% of the foundation work has been completed. RCC framing work for the 1st floor slab has started in one block. Out of the slated 1152 single seater rooms, 580 rooms are expected to be made ready for occupation by March 2017. The entire hostel should be ready for residency by September 2017.

The second girls' hostel, Dhansiri – with a capacity of 172 double seater, 176 single seater rooms – was completed and has been handed over in July 2015 for occupation.

The extension work of the married scholars' hostel is progressing well. Out of the 96 units 32 units have been completed and occupied. The remaining 64 units are expected to be ready for occupation by October 2016.

### Class Room Complex and Research Building Complex

The construction work of the Class Room Complex as well as the Research Building Complex are progressing as per plan. They are expected to be completed by December 2016.

### Expansion of Academic Complex (Phase-V)

Expansion of the Academic Complex under Phase-V consists of expansion works in the Departments of Chemical Engineering, Computer Science and Engineering, Design, Humanities and Social Sciences, Mathematics, Physics, and a new building for the Centre for Nanotechnology and a Clean Room. The work was awarded for a value of ₹6994.74 lakhs in March 2015. Most of the structural works in all Departments are nearing completion. The piling and foundation works in the Centre for Nanotechnology and Clean Room are also nearing completion. The work is expected to be completed by March 2017 as scheduled.

### Residential Quarters

The Institute has approved an estimate for the construction of 160 units of F-Type residential quarters in 4 towers having G+9 storied residential buildings. An architect has already been engaged for providing comprehensive consultancy services. Site development work by filling of soil is in progress. On completion of the site development work, initial test pile shall be done to finalise the design of the foundation after which the construction process will be started.

Proposal for construction of 80 units of D type, 40 units of C type and 50 units of B type residential quarters has also been taken up. Architects to provide comprehensive consultancy services for these buildings have already been engaged and the plan and layout are under review. Construction is expected to start by the end of 2016.

As the construction works of the residential quarters stated above will take some time to complete, the Institute has taken up construction of 12 units of residential quarters in prefabricated structure to meet the immediate demand for accommodation of faculty and staff. Since such buildings require less construction time, the Institute has taken up this proposal in view of the serious problems faced to accommodate the newly joined faculty and staff.



Alcheringa

### New Guest House

The work of the new Guest House is under progress and around 70% works have been completed. Out of 157 general rooms, 32 rooms are being used from November 2015. The remaining rooms are expected to be completed in 2016.

### INSTITUTE EXPENDITURE

The details of expenditure during the year 2015-2016 are as follows (in crores of ₹):

Recurring:	164.45
Non-recurring:	215.23
Sponsored Research:	63.82
<b>Total Expenditure:</b>	<b>443.5</b>

In comparison, in 2014-2015, ₹344.14 crores were spent.

### STUDENTS' ACTIVITIES

Alcheringa, the annual cultural festival of IIT Guwahati, was held during 28-31 January this year. Alcheringa is now regarded as a much anticipated students' cultural event in the North-East where thousands of students



Alcheringa

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, KK, Parikrama, the Raghu Dixit Project, Shankar Ehsaan Loy, Mohit Chauhan, Javed Ali, Anoushka Shankar, Lucky Ali, etc.

Techniche-2015 – the annual techno-management festival of the Institute – was held during 1–4 September 2015. 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 2015 edition of this festival saw the congregation of eminent personalities like Daniel Domscheit-Berg, German technology activist; Claude Nicollier, astronaut; Rajdeep Sardesai, journalist and author, etc.



Alcheringa

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. The Department of Humanities and Social Sciences also hosted the Young Poet Laureate for London Ms. Aisling Fahey on 26 September 2015 for a performance poetry session after a workshop with student-poets from the Institute literary society.

## STUDENTS' ACHIEVEMENTS

- Ms. Bhaswati Deka and Mr. Abhishek Goyal, BTech students, have been chosen as the Aditya Birla Scholars for the year 2015.
- The Sahitya Akademi Award, 2015 (in Assamese Literature) has been awarded to Mr. Kula Saikia, PhD scholar of the Department of Humanities and Social Sciences, for his short-story collection *Akashar Chhabi Aru Anyanya Galpa*.
- Mr. Satyapriya Bhandari, a PhD student, Department of Chemistry, was awarded the Materials Research Society of India young scientist oral award 2015.
- Dr. Saroj Kumar Rout, a former PhD student, Department of Chemistry, received Eli Lilly Outstanding Thesis Award 2014.
- Mr. Biswajit Pathak, a PhD student, Department of Physics, won officer travel grant award from SPIE to attend the SPIE Photonics West conference in USA in February 2016.
- Mr. Devendra Kumar Maravi and Mr. Chitta Ranjan Barik, PhD students, Centre for Energy, were selected for the UGSAS-GU six month Sandwich Programme 2015, at the United Graduate School of Agricultural Science, Gifu University (UGSAS-GU), Japan, for the period October 2015 to March 2016.
- Ms. Visva Bharati Barua, a PhD student, Centre for the Environment, received the ISWA-SWIS Winter School full scholarship 2016 to attend Winter School at University of Texas, Arlington, Texas, USA on Landfill Design and Operations, in January 2016.
- Mr. Mitradip Bhattacharjee, a PhD student, Centre for Nanotechnology, and Ms. Neelima Tripathi, a PhD student, Department of Chemical Engineering, received the Gandhian Young Technology Innovation Awards (GYTI) 2016.
- Ms. Namami Goswami, a PhD student, Centre for Nanotechnology, was awarded the Google Anita Borg Memorial Scholarship (Asia-Pacific), 2015-2016. She also attended the Scholars' Retreat in September 2015 at the Google Shanghai Office.



- Mr. Anirban Chowdhury, PhD student, Department of Design, received Springer Young Researcher Award (Doctoral) from Indian Society of Ergonomics (ISE) at HWWE2015.
  - Mr. Piyoosh P. and Mr. Tushar Semwal, PhD students, Department of Computer Science and Engineering, received TCS PhD fellowship in January 2016.
  - Mr. Biswajit Bhowmick, PhD student, Department of Computer Science and Engineering, received young scientist award at IEEE TENCON 2015.
  - Mr. Harsha Vardhan, Mr. Shubhankar Jha and Mr. Vishal Kashyap, BTech students, Department of Civil Engineering, were awarded Future HKUST PhD fellow for a study trip to Hong Kong.
  - Mr. K. Dhamodharan, PhD student, Department of Civil Engineering, won best student oral presentation at the International Seminar on Renewable Energy and Sustainable Development, Thimphu, Bhutan, June 2015.
  - Ms. Boga Madhulatha, PhD student, Department of Civil Engineering, won best paper award at the North-East Students' Geo-Congress (NESGC 2016), Agartala, in January 2016.
  - Mr. Shiv Shankar Kumar, PhD student, Department of Civil Engineering, won best paper award at the Indian Geotechnical Conference (IGC2015), Pune.
  - Mr. Deepak Joshi, a PhD student, Department of Electronics and Electrical Engineering, received student best oral paper award at Radioelectronika 2015, Pardubice, April 2015.
  - Mr. Ravi Nishant and Ms. Shubhangi Gupta, BTech students, have made to the top three teams at the International Green Champ competition in 2016, an annual event held by Schneider Electric of USA.
  - IIT Guwahati was given a special award by YUVA-Unstoppable at a solemn function in IIM Ahmedabad on September 12, 2015. The award is attributed to the contributions made by consistent efforts of NSS volunteers to alleviate illiteracy in the nearby villages. The contribution of IIT Guwahati in conducting health care and skill development related activities in the nearby villages were also mentioned.
  - Mr. Atul Kumar, PhD student, Department of Biosciences and Bioengineering, was selected for EMBO travel award to attend the EMBO | EMBL Symposium: Tumour Microenvironment and Signalling at Heidelberg, Germany in April 2016.
  - Ms. Prarthana Saikia, PhD student, Department of Humanities and Social Sciences, has been awarded Sahitya Akademi Yuva Puraskar–2016 in Assamese for her novel *Jatadhari*.
- Our heartiest congratulations to all of them.

### PERFORMING ARTS

One of the most innovative concepts of the institution has been the bridging of science and arts through the discourses of performance narratives. IIT Guwahati has introduced "Performing Arts" as part of curriculum. In every semester IIT Guwahati is running zero-credit courses (Senate approved) in the following disciplines of "Performing Arts": Indian Classical Dance (with a special focus on Sattriya Dance), Instrumental Music (Violin) and Hindustani Vocal Music. At the moment, IIT Guwahati has four Artists in Residence.

- One of the artists, Dr. Anwesa Mahanta has won the prestigious Ustad Bismillah Khan Yuva Puraskar from the Central Sangeet Natak Akademi, the National Academy for Music, Dance and Theatre, New Delhi.

Our heartiest congratulations to her.

### TRAINING AND PLACEMENT

The placement scenario at IIT Guwahati for the year 2015-2016 has been very impressive so far. A total of 140 companies from various sectors have already participated in campus recruitment. The total no. of registered students for campus placement in the year 2015-2016 is 922. The overall placement of BTech and BDes students is 76.83%. For BTech and BDes, the total number of jobs offered is 431 for 561 students. An average package offered for BTech and BDes students is ₹15 lakhs per annum (treated as CTC).

The placement for MTech and MDes students is reasonable and stands at 42.45%. An average package offered for MTech and MDes students is ₹12 lakhs per annum (treated as CTC). For MSc programmes, 9 students have been placed

out of 26 registered candidates. For PhD programmes, 5 PhD students have received job offers out of 42 registered candidates in the education and research sector.

### CLOSING REMARKS

As the captain of a high-achieving and energetic team, I share its vision of excellence and holistic growth. It is a vision that is inclusive rather than exclusive, organic and deep-rooted rather than superficially target-oriented. We reflect on our annual report in order to congratulate ourselves on our laurels as well as to discover new ways in which we can continue to instruct, innovate and inspire. We seek to do that not as a functioning machine with inputs and intellect but as a healthy organism with feelings and emotions that uphold the values of our great country.

## **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 Linguistic Science and Technology

Centre for Nanotechnology

### **EXTRAMURAL CENTRES**

Lakshminath Bezbaroa Central Library

Centre for Educational Technology

Central Instruments Facility

Computer and Communication Centre

# DEPARTMENT OF BIOSCIENCES AND BIOENGINEERING

<b>The Department at a Glance</b>
<b>Year of Establishment:</b> 2002
Academic Programmes Offered: Bachelor of Technology (BTech) Biotechnology Master of Technology (MTech) Doctor of Philosophy (PhD)
Total Faculty Strength: 38 <ul style="list-style-type: none"> <li>• Professor: 12</li> <li>• Associate Professor: 11</li> <li>• Assistant Professor: 14</li> <li>• Visiting Assistant Professor: 1</li> </ul> New Faculty Members Joined: 5 <ul style="list-style-type: none"> <li>• Assistant Professor: 4</li> <li>• Visiting Assistant Professor: 1</li> </ul>
Total Student Strength: 441 BTech: 185 MTech: 63 PhD: 193
New Students Joined in 2015-2016: 128 BTech: 49 MTech: 34 PhD: 45

**LABORATORY FACILITIES**

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. Currently the department holds 30 individual research laboratories working in diverse field of biological sciences.

These laboratories include:

1. APPLIED BIODIVERSITY LAB: Addresses the research questions in areas of Applied Biodiversity with special reference to bioresources of Northeast India using an integrative approach
2. BIOCHEMICAL ENGINEERING LAB: Addresses the research questions in areas of Bioprocess development (upstream to downstream), Metabolic Engineering, Bioenergy.
3. BIOENGINEERING RESEARCH LAB: Addresses the research questions in areas of Biomedical Engineering, Biodiversity and Bio-entrepreneurship
4. BIOINTERFACE ENGINEERING LAB: Addresses the research questions in areas Surface and interfacial science particularly in the area of Bio-interfaces and Biomaterials
5. BIOMATERIAL AND TISSUE ENGINEERING LAB: Addresses the research questions in areas of developing lab grown tissue/organ replacements for human transplantation
6. BIOMEDICAL SCIENCES LAB: Addresses the research questions in specific group of calcium permeable ion channels called store operated calcium channels
7. BIOPAT LAB: Addresses the research questions in building quality in to products by innovation process design
8. BIOPHYSICAL CHEMISTRY LAB: Addresses the research questions on peptides based antibiotics, protein/peptide aggregation and peptide membrane interactions.
9. BIOPROCESS DEVELOPMENT LAB: Addresses the research questions on development for various value added products using microbes as a cell factory like biodiesel, bioethanol and butanol production.
10. BIOSENSOR LAB: Addresses the development rapid detection methods such as, lab-on-chip and biosensors for clinical applications.
11. CALCIUM SIGNALLING LAB: Addresses the research questions on calcium signaling, Genetics, DNA repair.
12. CANCER BIOLOGY LAB: Addresses the research questions on cancer development, diagnosis and its treatment
13. CARBOHYDRATE ENZYME BIOTECHNOLOGY LAB: Addresses the research questions on structural and functional proteomics of carbohydrate active enzymes and other industrial microbial enzymes
14. COMPUTATIONAL AND CELL CULTURE LAB:
15. ENZYME APPLICATIONS LAB: The lab focuses on understanding the chemical basis of enzymes which renders them their biological function.
16. FUNGAL BIOTECHNOLOGY RESEARCH LAB: The lab focuses on
  - i) Biological control
  - ii) DNA fingerprinting and Transformation studies
  - iii) Studies on extracellular enzymes and toxic metabolite production
  - iv) Development of a potent biopesticide

## 17. INFECTIOUS DISEASE BIOLOGY LAB

## 18. INTEGRATED BIOPROCESSING LAB

19. K P LAB: The lab specializes on biological removal of pollutants (organic/inorganic) and resource recovery from wastes.

20. MALARIA RESEARCH LAB: The laboratory has focused on the biological and molecular processes driving malaria related functional abnormalities with-in brain, liver and immune cells of the host.

21. MECHANISTIC APPROACHES TO BIOLOGY LAB: The main interest of this lab is in RNA Biology concerns with the mechanistic understanding of CRISPR-Cas adaptive immune system, Ribosome Assembly and Riboswitch mediated gene regulation.

22. MOLECULAR INFORMATICS AND DESIGN: The research is focused on 1) Development of peptide based antibiotics and tumor targeting drug delivery systems 2) Design of bio-nano assemblies and devices 3) Development of 'target' and 'small molecule' profiling systems for specific applications and 4) in silico and in vitro approaches to understand protein-aggregation and neuro-degeneration.

23. MOLECULAR MICROBIOLOGY LAB: Addresses the research questions in the development of diagnostics and vaccine for spirochetes.

## 24. PLANT TISSUE CULTURE AND SECONDARY METABOLITE PRODUCTION: Focus of the Laboratory

- Micropropagation / Clonal-propagation of elite medicinally and economically valuable plants for mass multiplication.

- In vitro Double-haploid and Triploid production to improve the plant yield and quality.

- Cytological and Histological studies of in vitro raised cultures to understand their development and origin.

- Somatic - embryogenesis for synthetic seed production.

- Protoplast isolation and regeneration for single cell cloning and isolation of mutants.

- Selection of elite cell lines for high yield of Secondary Metabolites of industrial importance.

## 25. PLANT TISSUE CULTURE ROOM-R.C. LAB

## 26. PROTEIN BIOCHEMISTRY AND MOLECULAR PARASITOLOGY LAB:

## 27. PROTEIN BIOPHYSICS LAB.

28. Stem and Cancer Biology Lab: Through collaborations with hospitals in the North East, the lab studies the therapeutic use of stem cells in tissue repair and regeneration. We also study chemo-resistance in several cancers with special focus on bone metastasis.

## 29. STRUCTURAL &amp; COMPUTATIONAL BIOLOGY LAB (2 Nos.):

In this laboratory, researchers try to use the knowledge of various techniques such as computational biology, molecular biology, structural biology (X-ray Crystallography) and biophysical and biochemical studies to understand the mechanism of different biological functions. At the computational Biology/Chemistry group research is focused on understanding the speed and accuracy of translation using Computer Simulations.

30. VIRAL IMMUNOLOGY LAB: Working on virology and immunology of major animal and poultry pathogens.

In addition, the dry lab courses are conducted in the Computational Biology Laboratory located in the O-block. The department also 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).

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

Equipment	Qty.
Refrigerator	03
Refrigerator	02
Water purifier	01
Peristaltic pump	01
Spectrophotometer	01
Balance (4 decimal)	02
Autoclave (table top)	02
Ultra Low Temp. freezer	03
Magnetic Stirrer cum Hot plate	02
Inverted Microscope with fluorescence	01
Chiller	03
Compressor	02
Scanner, Auto duplex, in-built LAN support	01
Nikon 5mp ccd Camera	01
Chemidoc	01

#### 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.

#### OUTREACH PROGRAMME

Schools	Date	Activities	Student participants
Delhi Public School Guwahati	1st Oct 2015	Brief presentation by Dr. Sachin Kumar on departmental activities, laboratory demonstration and visit to department common facility in groups	60, XI level Science Students alongwith their few teachers
Bongaigaon Rly. H.S. School, Bongaigaon	7th March 2016	Brief presentation by Prof. Rakhi Chaturvedi on Tissueculture and its scope, Laboratory demonstration and visit to department common facility in groups	50 +2 level Science Students alongwith their few teachers
Botany Dept., Handique Girls' College, Guwahati	18th March 2016	Brief presentation by Dr. Ranjan Tamuli on departmental activities and visit to department common facility in groups	30 students of both UG and PG of Botany Dept
Dept. of Molecular Biology and Biotechnology (MBBT), Tezpur University	19th March 2016		11 students of Integrated MSc 4thSemester along with a few faculty members



**MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT****Prof A. Ramesh:**

1. Rationally designed low molecular weight synthetic amphiphiles and their metal complex have been exploited in antibacterial and antibiofilm applications by developing delivery systems based on biocompatible nanomaterials. Another significant research endeavor has focused on exploring small molecule ligands as sensors for metals and anions having healthcare implications. Target analyte detection has been achieved both in solution as well as in live cells using imaging tools.

**Dr Sachin Kumar:**

1. Analysis of complete genome sequence of Newcastle disease virus (NDV) from Northeast.
2. Report of first outbreaks of NDV and infectious bursal disease virus (IBDV) from Northeast.
3. Development of diagnostics against Newcastle disease virus using recombinant phosphoprotein.
4. Development of diagnostics against classical swine fever virus using recombinant envelope protein

**Dr Manish Kumar:**

1. Dr Manish Kumar molecular microbiology laboratory has deciphered the architecture of *Leptospira* CRISPR- Cas subtype I-B and has further elucidated the biochemical characteristics of one of the core Cas proteins of *Leptospira*, Lep\_Cas2. This study supports their hypothesis that one of the possible reasons for difficulty in genetic manipulation of pathogenic form of *Leptospira* in comparison to saprophytic form of *Leptospira* is due to the existence of functional CRISPR-Cas defense system only in pathogenic form of *Leptospira*.

**Dr. Vikash Kumar Dubey:**

1. Conserved hypothetical proteins, LdBPK\_070020, was found to be novel drug target against *Leishmania*. LdBPK\_070020 gene knocked out *Leishmania* has several morphological changes and impaired growth and infectivity (Arch Biochem Biophys. 2016,596,10-21).
2. We report a novel molecule, PS-203 {4-(4,4,8-trimethyl-7-oxo-3-oxabicyclo[3.3.1]non-2-yl)-benzoic acid methyl ester}, as effective against a miltefosine-unresponsive strain of the parasite. Further, combinations of PS-203 with miltefosine were also showed promising results against a miltefosine-unresponsive strain (Antimicrob Agents Chemother. 2015, 59, 7826-9).

**Dr. L. M. Pandey:**

1. Kinetic studies of attachment and re-orientation of octyltriethoxysilane for formation of self assembled monolayer on a silica substrate.

2. Dual Effect of copper ion on the aggregation behavior of Albumin.

**Prof. P. Goswami:**

1. Novel fabrication method for paper based microfluidic diagnostic platform developed that prevents sample leakage during tests and thereby reducing the cost of laminating both sides of the device. New design and method for preparing the test zone of paper based microfluidic device with hassle-free spotting of reagents and treatment of the test zone was also developed and validated with both chemical and biomolecule targets. The prepared device requires low sample volume, involves reduced cost of production, and enables the integration of customized test zones.

**Dr. Biman B. Mandal:**

1. Our "Biomaterial and Tissue Engineering" laboratory is granted a "Unit of Excellence" status by DBT at Biosciences and Bioengineering Department, IIT Guwahati. We have focused on a number of tissue engineering projects generously funded by Government of India towards affordable human healthcare using natural resource North-East silk as a biomaterial. To name a few, in our research group, we are working towards developing transplantable "human corneas" for vision restoration and "bioartificial pancreas" for sustained delivery of insulin to diabetic patients. We are further developing narrow diameter "human blood vessels" for by-pass surgery patients. These vessels are of advanced level as compared to existing products in the market. In one of our International collaborative projects, we are developing "human skin" grafts and "smartwound dressings" specifically targeted for diabetic ulcer patients. To combat back pain, cartilage and bone degeneration, we are developing "intervertebral disc" for slip disc patients and "bone implants" for patients with soft tissue/ bone damage.

**Prof. R. Swaminathan:**

1. A steady state fluorometer has been built in our lab by Mr. Alark S. Kulkarni (M.tech Student) using mostly indigenous components.

**Prof. Siddhartha Sankar Ghosh:**

1. Gene Therapy: Our group is mainly focused in developing 'Gene Therapy Vectors'. We have established molecular mechanism of cell death via apoptotic signaling in suicide gene therapy. Combination therapy involving various cytokines, cell signaling molecules and nanomaterials is another area of our interest.
2. Nanobiotechnology: We are pursuing interdisciplinary collaborative research at the Centre for Nanotechnology on "nanoparticles and nanocomposites". We are developing new nanoclusters for the potential applications as sensors, antimicrobial and anticancer agents.

**Dr. L. Sahoo:**

1. The laboratory has developed transgenic cowpea and mungbean for salinity tolerance through overexpressing vacuolar sodium proton transporter gene. The lab has recently characterized of cowpea isolates of Begomo viruses severely infecting cowpea in India, demonstrated that broad-spectrum resistance in transgenic cowpea using RNAi technology against cowpea-begomoviruses. Besides, the lab has developed transgenic Jatropha with improved oil quality and mustard for tolerance to both drought and salinity.

**Dr. Yasufumi KOBAYASHI**

- 1) Novel aluminum stress signaling mediated by MPK6-related MAP cascade in Arabidopsis for implementing in acid soil agriculture
- 2) Expression regulation of iron and copper deficiency

responsive genes by excess copper stress in Arabidopsis for low nutrient soil agriculture

- 3) Molecular analysis of VuSTOP1 overexpression in cowpea to contribute in acid-soil stress tolerance.

**Dr. Rakhi Chaturvedi:**

1. Her work on two complex tree species where she developed in vitro Haploids and Triploids of Neem, and Haploids of Tea that has brought the Tissue Culturists a step closer to develop homozygous diploid (Pure) lines amenable to generate hybrid vigour which otherwise is impossible to achieve conventionally.
2. To develop a process for simultaneous recovery of three important anti-cancer pentacyclic triterpenoids - Betulinic, Oleanolic and Ursolic acids - from *L.camara* and an antimalarial alkylamide, spilanthol - from *S.acmella*, for the first time, using in vitro raised cell biomass.

**CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Prof. Arun Goyal	11th Carbohydrate Bioengineering Meeting	Espoo, Finland	10-13 May 2015	International
Prof. Arun Goyal	1st Biomass to Biovalue Summit (BBS-I), Center for Innovative and Applied Bioprocessing	Mohali, Punjab	11-12 Feb 2016	National
Prof. Arun Goyal	56th International Annual Conference of Association of Microbiologists of India (AMI)	Jawaher Lal Nehru University, New Delhi	7-10 Dec 2015	National
Prof. Kannan Pakshirajan	68th Annual Session of the Indian Institute of Chemical Engineering Congress CHEMCON 2015	IIT Guwahati	27-30 Dec 2015	National
Prof. Kannan Pakshirajan	Non Conventional Sources of Energy : Prospects and Challenges NCSE-2016	Royal Group of Institutions, Guwahati	30 Jan 2016	National
Prof. Kannan Pakshirajan	4th Annual Chemical Engineering Symposium REFLUX 2016	IIT Guwahati	25-27 Mar 2016	National
Prof. L. Rangan	22nd ISCB International Conference	Uka Tarsadia University, Surat, Gujrat	6-8 Feb 2016	International
Prof. L. Rangan	3rd International Congress of the Society for Ethanopharmacology (SFEC 2016)	Ravishankar University, Raipur.	18-21 Feb 2016	International
Prof. L. Rangan	3rd International Congress of the Society for Ethanopharmacology (SFEC 2016)	Ravishankar University, Raipur	18-21 Feb 2016	International
Prof. L. Rangan	International Conference on New Horizons in Biotechnology: 12th Annual Convention of The Biotech Research Society, India.	Trivandrum, India	22-25 Nov 2015	International

<b>Name of Faculty</b>	<b>Name of Conf./Workshop</b>	<b>Place</b>	<b>Date</b>	<b>International/ National</b>
Dr. Anil M. Limaye	3rd International conference on Herbal and Synthetic Drug Studies (HSDS-2016)	Pune	7-9 Jan 2015	International
Dr. Ranjan Tamuli	BIRAC Innovators Meet 2015	Manesar, Gurgaon, Haryana.	15-16 Sep 2015	National
Dr. Manish Kumar	9th International Leptospirosis Society Scientific Meeting, 2015	Semarang, Indonesia	7-10 Oct 2015	International
Dr. Manish Kumar	Global Symposium on "Animal Health: Newer Technologies and their Applications" in Veterinary College Khanapara	Khanapara, Assam	12-14 Feb 2016	International
Dr. Manish Kumar	Global Biotechnology Summit, New Delhi 2016	Vigyan Bhawan, New Delhi	5-6 Feb 2016	International
Dr. Sachin Kumar	National conference on new avenues in microbiology and biotechnology challenges and prospects	WBSU, Barasat, West Bengal	18-19 Mar 2016	National
Dr. Sachin Kumar	XXIX annual convention of Indian association of veterinary microbiologists, immunologist and specialist in infectious diseases	AAU Khanapara and NRCP Rani, Guwahati	12-14 Feb 2016	International
Dr. Sachin Kumar	VIROCON, XXIV National Conference of Indian Virological Society	NEIGRIHMS, Shillong Meghalaya	8-10 Oct 2015	National
Dr. Shirisha Nagotu	9th International conference on Yeast Cell Biology Invited talk – Peroxisome biogenesis in yeast	Kolkata, India	9-12 Dec 2015	International
Prof. Utpal Bora	"Fogarty Annual Symposium 2016" organized by Department of Psychiatry Guwahati Medical College Hospital, Guwahati	Hotel Lily, Guwahati	25-28 Jan 2016	International
Prof. Utpal Bora	"National Seminar on Problems & Prospects of Muga and Eri Silk Sectors" organized by CMER&TI, Lahdoigarh, Jorhat, Assam	IIE, Lalmati, Guwahati	25-26 Feb 2016	National
Dr. B. Anand	RNA-2015	University of Wisconsin-Madison, USA	26-31 May 2015	International
Dr. B. Anand	MCB-75	Indian Institute of Science, Bangalore	11-14 Dec 2015	International
Dr. B. Anand	81st Annual Meeting of Indian Academy of Sciences	IISER, Pune	6-8 Nov 2015	National
Dr. B. Anand	Annual Meeting of Indian National Science Academy	IISER, Bhopal	28-30 Dec 2015	National
Prof. Rakhi Chaturvedi	22nd ISCB International Conference – Recent Trends in Affordable Sustainable Drug Discovery and Development	Surat	6-8 Feb 2016	International
Prof. Rakhi Chaturvedi	A Bioprocessing India 2015: Innovative Bioprocesses with Engineered Cell Factories	IIT Madras	17-19 Dec 2015	International
Dr. Lalit Pandey	UNESCO SAARC Workshop on Optics & Photonics "SAWOP 2015"	IIT Guwahati	17-18 Nov 2015	International

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. Lalit Pandey	Recent Developments in Medical Biotechnology and Structure-Based Drug Designing (RDMBSBDD) 2015, IIT Guwahati	IIT Guwahati	6-7 Dec 2015.	National
Dr. Kusum K. Singh	08th RNA Meeting	CSIR-Centre for Cellular and Molecular Biology, Hyderabad	8-10 Jan 2016	National
Prof. Pranab Goswami	Elsevier Editors' conference	Beijing, China	22-25 Oct 2015.	International
Dr. Biman B. Mandal	TERMIS World Congress	Boston, USA	8-11 Sep 2015	International
Dr. Pranjal Chandra	National Conference on Function Materials during March	Deen Dayal Upadhyay Gorakhpur University	10-12, 2016	National
Prof. R. Swaminathan	10th European Biophysics Congress (EBSA 2015)	Dresden, Germany	18-22 Jul 2015	International
Prof. R. Swaminathan	Optics within Life Sciences (OWLS 2016)	Tata Institute of Fundamental Research, Mumbai	16-19 Mar 2016	International
Prof. L. Sahoo	UGSAS-GU 12 Round Table and Symposium 2015	United Graduate School of Agricultural Science, Gifu-Shizouka University, Japan	25-26 Aug 2015	International
Dr. Yasufumi Kobayashi	Techniques in Basic Biotechnology and Bioinformatics	Gauhati University	18 Mar 2016	National

#### INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Arun Goyal	Recombinant carbohydrate active enzymes and their applications in conversion of biomass to biovalued products or processes	Centre for Innovative and Applied Bioprocessing	Mohali	11-12 Feb 2016
Prof. Arun Goyal	Recombinant pectate lyase (CtPL1B) from <i>Clostridium thermocellum</i> : Characterization and applications in bioscouring and inhibition of cancer cells.	Jawaharlal Nehru University	New Delhi	7-10 Dec 2015
Prof. Kannan Pakshirajan	Bioprocess Engineering	Tezpur University	Tezpur	21-22 Nov 2015
Prof. Kannan Pakshirajan	Fungal pelleted bioreactor for wastewater treatment	IIT Guwahati	Guwahati	28 Dec 2015
Prof. Kannan Pakshirajan	Biohydrogen - prospects and potential	IIT Guwahati	Guwahati	7 Mar 2016
Prof. Kannan Pakshirajan	Biorenewables and Biofuels: prospects and challenges	Royal School of Engineering and Technology	Guwahati	30 Jan 2016
Prof. Kannan Pakshirajan	Sophorolipids: production, characterization and properties	IIT Guwahati	Guwahati	21 Jan 2016

<b>Name of Faculty</b>	<b>Name of Lecture</b>	<b>Name of Inst./Org.</b>	<b>Place</b>	<b>Date</b>
Prof. Kannan Pakshirajan	Industrial wastewater treatment using surfactants	IIT Guwahati	Guwahati	21 Jan 2016
Prof. Kannan Pakshirajan	Bioremediation of contaminated soils using biosurfactants	IIT Guwahati	Guwahati	22 Jan 2016
Prof. L. Rangan	Flow mining- Application and Progress in Plant Science, 17th Indo-US Workshop on Flow Cytometry	IISC Bangaluru	Bangalore	14-18 Mar 2016
Prof. L. Rangan	New positives of biotech research in renewable energy resources- Success story of Pongamia, National Seminar on Biofuel A Search for New Fire	SIBBR&D	Cochin	18 Dec 2015
Prof. L. Rangan	Morphological, biochemical and genomic studies in Pongamia	Central University Hyderabad	Hyderabad	26 Aug 2015
Dr. Anil M. Limaye	Molecular insights into the chemopreventive or chemotherapeutic potential of the green tea polyphenol Epigallocatechin-3-gallate.	NIRRH	Mumbai	2 Jul 2015
Dr. Anil M. Limaye	Mechanistic insights into the anticancer properties of the major green tea polyphenol (-)-epigallocatechin-3-gallate	NIPER	Guwahati	30 Mar 2016
Dr. Anil M. Limaye	Principles of hypothesis testing: z-test, t-test and ANOVA	NIPER	Guwahati	30 Mar 2016
Dr. Shankar Prasad Kanaujia	Structural Bioinformatics: Tips and Tools	Tezpur University	Tezpur, Assam	5 Mar 2016
Dr. Shankar Prasad Kanaujia	Computational methods for functional annotation of membrane proteins	IIT Guwahati	Guwahati	25 Jun 2015
Dr. Manish Kumar	"Gene Cloning and Expression as a tool for development of novel diagnostics and vaccines"	Veterinary College	Khanapara	12.Mar.2016
Prof. Rakhi Chaturvedi	Exploring Plant Improvements using Plant Tissue Culture Techniques	Gauhati University,	Guwahati	21 Mar 2016
Prof. Rakhi Chaturvedi	Exploring Plant Improvements and Bioaccumulation Capabilities of Plant Cells using Plant Tissue Culture Techniques	CSIR-NBRI	Lucknow	25-27 Feb 2016
Prof. Rakhi Chaturvedi	Screening and isolation of natural products from plant tissue cultures for the development of a new lead drug agent from the genus Spilanthes	ISCB, Lucknow and Uka Tarsadia University, Surat	Surat	7 Feb 2016
Prof. Rakhi Chaturvedi	In vitro plant cell differentiation from somatic tissues and its applicability for the production of secondary metabolites	IIT Madras	Madras	17-19 Dec 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Rakhi Chaturvedi	Plant Tissue Culture and its Applicability for Bioresource Recovery	Guwahati Biotech Park	Guwahati	20-21 Nov 2015
Dr. Senthilkumar Sivaprakasam	Biocalorimetry: State of Art and Potential Application as PAT Process Analyzer for Bioprocess Monitoring and Control	IIT Madras	Chennai	Dec 2015
Dr. Vikash Kumar Dubey	Recent development in Leishmania research: Promising drug candidates in pipeline. 8 th National symposia cum workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design	Algappa University, Karaikudi	Karaikudi	16-19 Feb 2016
Dr. Ajaikumar B. Kunnumakkara	Fruits, Vegetables and their Components in Cancer Prevention: What we learned thus far? (Keynote Lecture)	Proceedings of the 8th International Aroma Therapy Conference	San Fransisco	6-8 Nov 2015
Prof. Pranab Goswami	Biofuel cell	Assam Engineering College	Guwahati	10 Mar 2016.
Prof. Pranab Goswami	Biosensors - an Effective Tool for Disease Diagnosis	Assam Agricultural University, Khanapara	Guwahati	6 Jan 2016
Dr. Biman B. Mandal	Challenges in Tissue Engineering	IIT Guwahati	Guwahati	30 Mar 2016
Dr. Biman B. Mandal	Making Human Tissues	IIT Guwahati	Guwahati	19 Mar 2016
Dr. Biman B. Mandal	Human Tissue Engineering	IIT Guwahati	Guwahati	9 Dec 2015
Dr. Biman B. Mandal	Human stem cells for tissue engineering	BIT Mesra	Ranchi	16 Nov 2015
Dr. Pranjal Chandra	Biophysicochemical sensing systems for biomedical diagnostics and therapeutics	Deen Dayal Upadhyay Gorakhpur University	Gorakhpur.	12 Mar 2016
Prof. R. Swaminathan	Aggregation of hen lysozyme protein at alkaline pH: Mechanisms, Inhibition and Applications	FOM Institute AMOLF	Amsterdam	13 Jul 2015
Prof. R. Swaminathan	Crowding by specific dextran switches the substrate specificity of acetylcholinesterase enzyme	FOM Institute AMOLF	Amsterdam	14 Jul 2015
Prof. R. Swaminathan	Aggregation of hen lysozyme protein at alkaline pH: Mechanisms, Inhibition and Applications	University of Brest-France	Brest, France	16 Jul 2015
Prof. Lingaraj Sahoo	Applications of Molecular Tools in Plant Improvement	Tezpur University	Tezpur	13 Nov 2015
Prof. Lingaraj Sahoo	Functional Genomics for Discovery of Novel Plant Genes	Tezpur University	Tezpur	14 Nov 2015
Prof. Lingaraj Sahoo	Genetic Improvement of Orphan Grain Legumes	Tripura University	Agartala	31 Mar 2016

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Lingaraj Sahoo	Biotechnology for Crop Improvement	Nagaland University	Lumami	1 Apr 2015
Dr. Ranjan Tamuli	Biotechnology, scientist, and society	Jawahar Navodaya Vidyalaya	Nalbari	24.Nov.2015
Dr. Yasufumi Kobayashi	Aluminum and Low-pH tolerance connected by STOP1-related signaling pathway	Tezpur University	Tezpur	13-14 Nov 2015
Dr. Yasufumi Kobayashi	Multiple acid-soil stress tolerance mechanisms in plants	Tripura University	Tripura	30 Mar-1 Apr 2016
Prof. S. S. Ghosh	MALDI-TOF /TOF For Potential Therapeutic Nanomaterials	SCIEX Seminar On Mass spectrometry By AB SCIEX	Guwahati	22 Sep 2015
Prof. S. S. Ghosh	Nanotheranostics for imaging and targeted drug delivery	IIT Mandi	Mandi	6-7 Nov 2015
Prof. S. S. Ghosh	Strategies for Recombinant Protein Therapy using Nanocarriers	IIT Guwahati	Guwahati	8-11 Dec 2015
Prof. S. S. Ghosh	Session Chair	IIT Guwahati	Guwahati	8-11 Dec 2015
Prof. S. S. Ghosh	Cloning, Purification and MALDI-TOF Analysis of Recombinant Proteins to Explore Therapeutic Potentials	IASST	Guwahati	21 Jan 2016
Prof. S. S. Ghosh	Recombinant Proteins in Nanotheranostics	IIT Roorkee	Roorkee	13 Feb 2016
Prof. S. S. Ghosh	Applications of TEM in Nanotheranostics	IIT Guwahati	Guwahati	16 Feb 2016
Prof. S. S. Ghosh	Cancer Nanomedicine Smartens up	IIT Guwahati	Guwahati	21 Mar 2016
Prof. S. S. Ghosh	Theranostic Cancer Nanomedicine	North Eastern Hill University	Shillong	28 Mar 2016

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

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date	Remarks
Dr. William G. Telford	NIH, Washington, USA	Institute Lecture	20 Oct 2015	Dr. Telford is world renowned cytometrist and authority in the Laser and its application in Flow particularly as it relates to clinical and diagnostic testing
Dr. Patrick Shaw Stewart	Douglas Instruments Ltd. Douglas House, East Garston, Hungerford, Berkshire, UK	Random microseeding and multivariate experimental designs for successful protein crystallization	9 Dec 2015	Biotalk
Dr. Monica Schmidt	University of Arizona, School of Plant Sciences, BIO5 Institute, 1657 E. Helen St, Tucson, Arizona, USA	Functional Foods: Using Biotechnology to Make Foods Better for Consumers	24 Feb 2016	Biotalk

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date	Remarks
Dr. Junpei Takano	Hokkaido University	Boron Transport in Plants - Alleviating Boron Deficiency in Crops	25 Jan 2016	Classroom lecture
Prof. Tsutomu Matsui	Gifu University, Japan	Heat Induced Floret Sterility in Rice	30 Nov 2016	Lab lecture
Prof. Yoshiharu Yamamoto	Gifu University, Japan	Prediction-oriented promoter analysis to study environmental response of higher plants	17 Sep 2015	Biotalk
Mr. Kazutaka Kusunoki	Gifu University, Japan	Transcriptomics of Tree species for Understanding Stress Response	15 Sep 2015	Classroom Lecture
Prof. Takahisa Nishizu	Gifu University, Japan	Thermodynamically-Based Evaluation Method of Whipped Cream Texture	11 Aug 2015	Biotalk
Prof. Jeffrey L. Bennetzen	University of Georgia, USA	Analysis of Cereal Genome Structure and Evolution	5 May 2015	Biotalk
Dr. Krishanu Ray	Tata Institute of Fundamental Research, Mumbai	Nano-size Motors and Meter-Long Journeys	18 May 2015	Biotalk
Dr. Gopal Kundu	National Centre for Cell Science, Pune	Osteopontin, a Chemokine like Protein acts as Novel Therapeutic Target Covering all Hallmarks of Cancer	29 May 2015	Biotalk
Prof. Kasturi Datta	Jawaharlal Nehru University, New Delhi	Differential Response of Overexpression of Hyaluronan Binding Protein 1 (HABP1), A Multifaceted Protein in Diverse Cell Lines: Implications in Cancer Progression	8 Jun 2015	Biotalk
Prof. Takahisa Nishizu	Gifu University, Japan	Thermodynamically- Based Evaluation Method of Whipped Cream Texture	11 Aug 2015	Biotalk
Dr. Sarala Balachandran	Chief Scientist, CSIR and Project Director. Open Source Drug Discovery unit	Drug Discovery and Development in Tuberculosis with an Aim to Benefit the Masses	4 Nov 2015	Biotalk
Dr. Shabir Najmudin	University of Lisbon, Portugal	A Multi-faceted approach to understanding the assembly and function of the CELLULOSOME: a Mega-Dalton, Multi-Enzyme Complex involved in the deconstruction of Complex Plant Cell Wall Carbohydrates	6 Nov 2015	Biotalk
Prof. Jonathan C. Knowles	UCL Eastman Dental Institute, University College London, UK	Phosphate Based Glasses and their Development as Biomaterials for Tissue Engineering	13 Nov 2015	Biotalk
Prof. Chandrabhas Narayana	Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore	Raman Spectroscopy in Nano-Biotechnology	18 Nov 2015	Biotalk



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

<b>Name of Faculty (Convenor/ Co-ordinator, etc.)</b>	<b>Name of Sem./ Wor./Con.</b>	<b>Funded By</b>	<b>Date</b>	<b>International/ National</b>	<b>No. of participants</b>
Dr. Vikash Kumar Dubey, Dr. Sankar P Kanaujia	Recent Developments in Medical Biotechnology and Structure-Based Drug Designing [RDMBSBDD 2015]	DBT, DST, ICMR, CSIR etc	6-7 Dec 2015	International	250
Dr. Vikash Kumar Dubey, Dr. Ranjan Tamuli	Conference on Bioinformatics and Computer Aided Drug Design [CBCADD 2015]	DBT-BIF	7 Dec 2015	National	60
Dr. Vikash Kumar Dubey, Dr. Ranjan Tamuli	Symposium cum Workshop on "Advances in Computational Biology and Computer Aided Drug Design"	DBT-BIF	24_26 Jun 2015	National	120
Prof. Pranab Goswami	KIC-TEQIP Short-Term Course On Recent Trends in Fuel Cell Technology (Organized under Centre for Energy, IITG)	World bank assisted national level project of MHRD, GOI	28-29 Dec 2015	Natrional	27

**PATENTS**

<b>Name of Faculty and co researcher</b>	<b>Title</b>	<b>Date Applied/ Granted</b>	<b>Application No.</b>
Bora U. and Das S.	Silk based electrically conductive nerve conduit and the method for preparing the same	2 Jul 2015	721/Kol/2015
Vibin Ramakrishnan, Sajitha Sasidharan, Nitin Chaudhary and Gaurav Pandey	Magnetic hydrocarbon crystals	31Mar 2016	201631011471, dated. Indian Patent office Kolkota
Pranab Goswami, Ankana Kakoti	DNA aptamers specifically binding to human heart type fatty acid binding protein (FABP3)	Dec 2015	Application no.1287/ KOL/2015
Biman B Mandal and Sween Gilotra	Electrospun sericin/PVA mat as a prospective wound dressing material		638/KOL/2015
Biman B Mandal and Prerak Gupta	Patterned silk film based vascular grafts and it use thereof		1246/KOL/2015
Biman B Mandal.	Indian silk based injectable hydrogel and its use thereof		31008502
KS Shripad, H B Nemade, R. Swaminathan	Cost effective, portable optoelectronic instrument to measure steady state fluorescence and its set up.	7 Nov 2015	REF: 1136/ KOL/2015

**AWARDS AND HONOURS****Prof Arun Goyal: 2016**

1. Invited as “Member Expert Committee” of NER Twinning RnD program of NERBPMC, DBT, Govt. of India Mar 11, 2016.
2. Invited as External Examiner, Doctoral thesis, Department of Biotechnology, IIT Hyderabad, March 10, 2016.
3. Invited as “Member of Screening Committee” of NER Twinning RnD program of NERBPMC, DBT, Govt. of India to review the project proposals, Feb 2, 2016.
4. Invited as an “Expert member for Selection Committee” for recruitment of Associate Professor at Department of Forestry, North Eastern Regional Institute of Science and Technology, Jan 29, 2016.
5. Invited as an “Expert member for Selection Committee” for recruitment of Associate Professor at Department of Human Physiology, Agartala University, Tripura, Jan 15, 2016.

**Prof Arun Goyal: 2015**

6. Member, Scientific Advisory Committee, Cancer Research Foundation, India.
7. Invited to Co-chair a session during 56th International Annual Conference of Association of Microbiologists of India (AMI), December 7-10, 2015, Jawaharlal Nehru University, New Delhi.
8. Invited as member “National Jury” for India Innovation Initiative a National-level competition organized jointly by CII with DST, Government of India and All India Council for Technical Education (AICTE).
9. Invited as Expert, member selection committee for faculty members at Department of Molecular Biology & Genetic Engineering, GB Pant University of Agriculture & Technology, Uttarakhand, Oct 31, 2015.
10. Invited as an “Expert member for selection committee” for recruitment of Professor at Department of Molecular Biology and Bioinformatics, Agartala University, Tripura, October 9, 2015.
11. Invited to Chair a session in “Update on Advances in Cancer Research”, September 10, 2015, B. Barooah Cancer Institute, Guwahati, Assam, India.
12. Nominated as member, Scientific Advisory committee, Cancer Research Foundation, India.
13. Invited to Chair the session in National Conference on Challenges in Environmental Research, 4-6 June, 2015, IIT Guwahati, Guwahati, Assam, India.
14. Invited to Chair 2 sessions in 2nd North Eastern Regional Conference on Head and Neck Oncology, May 22-23, 2015, B. Barooah Cancer Institute, Guwahati, Assam, India.

**Prof. K. Pakshirajan**

- (a) Outstanding Reviewer 2015 Award of the Journal of Hazardous Materials, Elsevier, Amsterdam, The

Netherlands

- (b) Lead Guest Editor of the special issue ‘Biotechnology in Environmental Monitoring and Pollution Abatement 2015’ published in BioMed Research International, a peer-reviewed, open access journal (impact factor = 2.436) by Hindawi Publishing Corporation.
- (c) Co-editor of the book Platform Chemical Biorefinery: Future Green Industry by Elsevier Publications.

**Prof. Vikash Kumar Dubey:**

1. Dr. P.N. Raju Oration Award by Indian Council for Medical Research, Government of India (Award received during January 2016).
2. Invited and participated as an “Expert member for Selection Committee” for recruitment of Faculty members at IIT Banaras Hindu University.
3. Invited and participated as an “Expert member for Selection Committee” for recruitment of Faculty members at NIT-Arunachalpradesh.
4. Invited for several projects reviews from SERB, Govt. of India
5. Invited for several projects reviews from Ministry of Health, Govt. of Italy
6. Appointed as Member, Institutional Biosafety Committee, Pig Research Institute, Rani, Guwahati (2015 onwards).
7. Invited as External Examiner, Doctoral thesis, from many institutes including IIT Hyderabad, JNU, CDRI, NII, JNTU, NIPER-Mohali etc.

**Prof. Utpal Bora:**

1. Appointed as Member, Programme Advisory Committee, National Science and Technology Management Information System (NSTMIS), Department of Science and Technology, Government of India (2015-2018)
2. Appointed as Member, Institutional Biosafety Committee, College of Veterinary Sciences, Khanapara, Assam Agricultural University (2015 onwards)
3. Appointed as Member, Scientific Advisory Committee meeting of Muga Silkworm Seed Organization, Central Silk Board, Ministry of Textiles, Government of India (2014-2016)
4. Appointed as Expert Member, Board of Studies in Biotechnology, Mizoram University (2015)
5. Appointed as Member, Programme Advisory Committee, National Science and Technology Management Information System (NSTMIS), Department of Science and Technology, Government of India (2015-2018).

**Dr. B. Anand:**

1. INSA medal for Young Scientists.
2. Associate, Indian Academy of Sciences, Bangalore
3. DBT-Innovative Young Biotechnologist Award

**Dr. Kusum K Singh:**

1. 2016 Albert’s Global Researcher Reunion Award

**Prof. P. Goswami:**

1. Prof. Pranab Goswami has received Certificate of Outstanding Contribution in Reviewing for the quality of the journal Biosensors and Bioelectronics (Elsevier, Amsterdam, The Netherlands) awarded in June 2015.
2. Prof. Pranab Goswami has been awarded full sponsorship by Elsevier, UK to participate Editor's conference held at Beijing, China during 22-25th October 2015.
3. Prof. Pranab Goswami has been appointed as Co-Chairman of the screening committee of the NER Twinning R&D programmes for the year 2015-2016 by Department of Biotechnology, Government of India.
4. Prof. Pranab Goswami has been appointed as member of a selection committee held on 23rd February 2016 for promotion of Professor I to Professor II in IASST, Guwahati.
5. Prof. Pranab Goswami has been appointed as member of a screening committee of applications held on 23rd February 2016 for promotion of faculty members in IASST, Guwahati.
6. Prof. Pranab Goswami has been appointed as member of a selection committee meeting held on 6th June 2015 for the faculty position in the centre for energy, IIT Guwahati.
7. Prof. Pranab Goswami was appointed as viva-voce examiner of a student for PhD degree at Department of Chemistry, Gauhati University during May 2015.
8. Prof. Pranab Goswami has been Selected as editorial board member of the international journal, Biocatalysis and Agricultural Biotechnology (Elsevier, ISSN:1878-8181)

**Dr. Biman B Mandal:**

1. INSA-Medal for Young Scientists 2015 by Indian National Science Academy, India. Citation and cash award.

**Dr. P. Chandra:**

1. Selected for the award of RAMANUJAN FELLOWSHIP from the Ministry of Science and Technology, Department of Science and Technology, Government of India.

**Prof. Lingaraj Sahoo:**

1. Appointed as Guest Professor at Gifu University, Japan.
2. Nominated as Member of Board of Governors (BOG) of University of Science & Technology, Meghalaya.
3. Invited as an "Expert member for Selection Committee" for recruitment of Associate Professor at Department of Botany, Nagaland University, February 2, 2016.
4. Invited as an "Expert member for Selection Committee" for recruitment of Professor, Associate Professor and Assistant Professor at Department of Biotechnology, Cotton University, Assam, July, 2015.
5. Invited as an "Expert member for Selection Committee" for recruitment of Professor, Associate Professor and Assistant Professor at Department of Life Sciences, Sambalpur University, Orissa, December 11-12, 2015.

**Dr. Rakhi Chaturvedi**

1. Associate Editor of the Journal - In Vitro Cellular & Developmental Biology- Plant [Publisher: Springer]
2. Member, International Society for In Vitro Biology (SIVB), USA
3. Member of National Academy of Sciences, India (NASI)
4. Selected Member of the prestigious society - Plant Tissue Culture Association (India) (PTCA-I)
5. National Jury Member, India Innovation Initiative (i-3) a national level competition jointly organized by, AICTE, CII and DST with an aim to expend and strengthen entrepreneurial ecosystem of the country.

**STUDENTS' ACHIEVEMENTS**

1. Mr. Rwivoo Baruah, PhD student working under Prof. Arun Goyal won the Best Poster Award for "Characterization of glucan from Weissella cibaria RBA12 as a potential food additive and hydrocolloid" in the Food and Agricultural Biotechnology category in the International conference on New Horizons in Biotechnology (NHBT-2015) held at CSIR-National Institute for Inter-disciplinary Science and Technology, Thiruvananthapuram during November 22-25, 2015.
2. Ms Priyanka Nath, PhD student working under Prof. Arun Goyal won the Best poster award for "Identification of promising functional residues capable of introducing endo-xylanase activity into an exo-acting arabinofuranosidase (Ct43Araf) with enhanced activity: An in silico approach" presented at 56th International Annual Conference of Association of Microbiologists of India (AMI), held at Jawaharlal Nehru University, New Delhi during December 7-10, 2015.
3. Rohit P. James, an M Tech project (MTP) student working under Prof. Kannan Pakshirajan, was awarded with the Best Poster for his MTP work 'Screening of fungal strains for chitosan production using paper and pulp mill wastewater as feedstock' in the 4th Annual Chemical Engineering Symposium REFLUX2016, held at IIT Guwahati during March 25-27, 2016.
4. Poster presented by Ananya Barman, Manju Nagar, and Ajeet Kumar were among the three best posters from the Department of Biosciences and Bioengineering, and finally won second runner-up, during the Research Conclave, Indian Institute of Technology Guwahati, India, 18-20 March, 2016.
5. Atul Kumar, Ph D student under Dr. Bithiah Grace Jaganathan was selected for EMBO travel award to attend the EMBO | EMBL Symposium: Tumour Microenvironment and Signalling at Heidelberg, Germany to be held 3-6 April 2016.
6. Karukriti Kaushik Ghosh, a PhD student under supervision of Dr. Manish Kumar won "Best Poster Award" entitled

- “Characterization of Hypothesized Outer Membrane Protein of *Leptospira interrogans Copenhageni*” in the International conference on “6th Indo Global Summit and Expo on Vaccines and Vaccination” organized at Hyderabad International Convention Centre, Hyderabad in November, 2015.
7. Bhuvan Dixit, a PhD student under supervision of Dr. Manish Kumar won “Best Poster Award” entitled “Characterization of one of core Cas protein of CRISPR Cas subtype I-B in *Leptospira interrogans Copenhageni* strain Fiocruz L1-130” in the International conference on “Innovative Research in Biotechnology, Biomedical Sciences, Bioinformatics and Stem Cell application” organized at Jawaharlal Nehru University, Delhi in January, 2016.
  8. Ketan Ganar was awarded consolation prize for poster presentation in VIROCON, XXIV National Conference of Indian Virological Society held in NEIGRIHMS, Shillong Meghalaya from 8th-10th October, 2015.
  9. Barnali Nath was awarded consolation prize for poster presentation in XXIX annual convention of Indian association of veterinary microbiologists, immunologist and specialist in infectious diseases held in AAU Khanapara and NRCP Rani, Guwahati from 12-14th Feb, 2016.
  10. Moushume Das was awarded appreciation prize for poster presentation in XXIX annual convention of Indian association of veterinary microbiologists, immunologist and specialist in infectious diseases held in AAU Khanapara and NRCP Rani, Guwahati from 12-14th Feb, 2016.
  11. Prakash Saudagar, best poster award at International Conference on Infectious Diseases and Nanomedicine-2015 (ICIDN-2015), Kathmandu for following work:- Prakash Saudagar, and Vikash Kumar Dubey. “Betulin attached to functionalized carbon nanotubes showed better efficacy against *Leishmania* parasite”. 2nd International Conference on Infectious Diseases and Nanomedicine-2015 (ICIDN-2015), Kathmandu, Nepal, December 15-18, 2015. (Best poster Award)
  12. 2nd Best Paper Award to Vartika Srivastava for ‘Establishment of in vitro callus cultures for the analysis of essential phytochemical constituents from *Tinospora cordifolia* (Willd.) Miers ex Hook. F. Thoms against challenging diseases’ at International Seminar on Prevention, Promotion and Pacification of Ayurvedic Landscape, Feb 9-11, 2016, Science City Auditorium, Kolkata.
  13. Ganesan Padmavathi, a PhD student under supervision of Dr. Ajaikumar B. Kunnumakkara won ‘Best Poster Award’ for ‘Prevention of Azoxy methane induced colon carcinogenesis by the spice *Carum copticum* (Ajwain)’ at 6th International Translational Cancer Research Conference “Prevention and Treatment of Cancer: Hypes and Hopes”, Feb 4-7, 2016, Hyatt Residency, Ahmedabad.
  14. Young Scientist Award to Anindita Deka, a summer trainee under supervision of Ajaikumar B. Kunnumakkara for ‘An investigation on the anticancer activities of ‘Indian trumpet flower’ on colorectal cancer’ at 6th International Translational Cancer Research Conference “Prevention and Treatment of Cancer: Hypes and Hopes”, Feb 4-7, 2016, Hyatt Residency, Ahmedabad.
  15. Mr. Mallesh Santhosh, PhD student working under the supervision of Prof. Pranab Goswami has received 2nd best student paper award in contributory research category in the South Asian workshop on Optics and Photonics (SAWOP 15) organized by UNESCO New Delhi held during 17-18 November, 2015 at IITG, Assam, India.
  16. Sharmila Narayanan won the “Best Poster award” in the 4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)
  17. Archita Ghoshal won the “Best Poster award” in the 3rd International Conference on Biotechnology and Bioinformatics (ICBB-2016)
  18. Archita Ghoshal and Neha Arora were invited as the “Instructors” to conduct “Advances in Proteomics workshop” organized by the Bioinformatics Centre, Institute of Advanced Study in Science and Technology, Guwahati

### 18. Any Other (Special Mention)

#### Prof. Arun Goyal:

1. Jun 2015 - Jul 2015 - Visiting Professor, Department of Animal Production, Faculty of Veterinary Medicine (FMV), University of Lisbon, Lisbon, Portugal.
2. May 2015- May 2015 - Visiting Professor, Department of Food and Environmental Science, University of Helsinki, Finland

#### Prof K Pakshirajan:

1. Expert Member of the Board of Research Studies at the Assam downtown University, Guwahati, since August 2015.

## FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Baskaran, Anand	IIT Kanpur	Assistant Professor	Structural Biology, Bioinformatics & Computational Biology, RNA Biology, Molecular Evolution
2.	Bora, Utpal	Institute of Genomics and Integrative Biology, Delhi	Professor	Biomaterials, Nanotechnology, Drug Delivery and Tissue Engineering
3.	Bose, Biplab	AIIMS, New Delhi	Associate Professor	Cell Signaling, Computational Biology, Recombinant Proteins
4.	Chandra, Pranjal (Joined on 21.07.2015)	Pusan National University, Busan, South Korea	Assistant Professor	Clinical Diagnostics (Cancer cells, DNA, RNA, bio-markers) using electroanalytical methods such as cyclic voltammetry, chronoamperometry, impedance spectroscopy, Nano-biosensors (Aptamer, antibody, enzyme) based biological phenomenon investigation, Porous silicon based label free self reporting optical nanosensors, Microfluidics and Nanomachines
5.	Chaturvedi, Rakhi	University of Delhi, Delhi	Professor	Plant Cell, Tissue & Organ Culture, Protoplast Isolation and Regeneration, Isolation, Purification and Characterization of Plant Secondary Metabolites
6.	Chaudhary, Nitin	Centre for Cellular and Molecular Biology, Hyderabad	Assistant Professor	Peptide self-assembly and amyloid aggregates, Peptide-membrane interactions, Curvature inducing proteins
7.	Das, Debasish	IIT Bombay	Associate Professor	Metabolic engineering, Biochemical engineering, Modelling of fermentation process, Biofuel
8.	Dasu, Veeranki Venkata	IIT Madras	Professor	Bioprocess Development (upstream to downstream), Metabolic Engineering, Bioenergy
9.	Dubey, Vikash Kr.	Benaras Hindu University, Varanasi	Professor	Protein Biochemistry; Parasite Biochemistry
10.	Ghosh, S. S.	Indian Institute of Chemical Biology, Kolkata	Professor	Gene Therapy, Expression Cloning (Mammalian Systems), Nanobiotechnology
11.	Goswami, Pranab	NEIST, CSIR, Jorhat	Professor	Biocatalysis, Biosensor, Enzymatic Biofuel cell, and Biotransformation
12.	Goyal, Arun	IIT Kanpur	Professor	Molecular Biology, Protein Engineering, Structural and Functional Proteomics of Carbohydrate active enzymes and other industrial microbial enzymes
13.	Jaganathan, Bithiah Grace	Frankfurt University, Germany	Associate Professor	Stem Cells, Cancer and cell therapy
14.	Kanaujia, Sankar Prasad	Indian Institute of Science Bangalore	Assistant Professor	Structural and Computational Biology

Sl. No.	Name	PhD	Designation	Areas of Interest
15.	Kobayashi, Yasufumi (Joined on 23.07.2015)	The United Graduate School of Agriculture, Gifu University, Japan	Visiting Assistant Professor	
16.	Kumar, Manish	University of Maryland, College Park, USA	Assistant Professor	Molecular interaction of host-pathogen-vector of infectious diseases, Vector borne diseases of Zoonotic importance
17.	Kumar, Sachin	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
18.	Kunnumakkara, Ajaikumar Bahulayan	University of Calicut	Associate 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
19.	Limaye, Anil Mukund	IISc Bangalore	Associate Professor	Molecular endocrinology, Cancer biology, Gene expression and regulation in Eukaryotic and Prokaryotic systems
20.	Maiti, Soumen Kr.	IIT Bombay	Assistant Professor	Biochemical Engg, Biofuel, Bioprocess modeling
21.	Mandal, Biman Behari	IIT Kharagpur	Associate Professor	Cell based tissue engineering, Biomaterials, Stem cells, Drug delivery systems
22.	Nagotu, Shirisha (Joined on 23.07.2015)	University of Groningen, Groningen, the Netherlands	Assistant Professor	Organelle biology and Inter-organelle communication, Cellular Ageing, Membrane fission and fusion.
23.	Pakshirajan, K. (Head of the Department)	IIT Madras	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
24.	Pandey, Lalit Mohan	IIT Delhi	Assistant Professor	Surface and interfacial science, Protein's adsorption and aggregation, Environmental Biotechnology
25.	Patra, Sanjukta	Central Food Technological Research Institute, Mysore	Associate Professor	Enzymes - applications in pharma and food industry

Sl. No.	Name	PhD	Designation	Areas of Interest
26.	Ramakrishnan, Vibin	IIT Bombay	Associate Professor	Computational Biology, Bioinformatics, Biophysics, Bio-Organic Chemistry, Bionanotechnology
27.	Ramesh, Aiyagari	Central Food Technological Research Institute, Mysore	Professor	Nanobiotechnology, Biological Activity of Synthetic Amphiphiles and Metal Complex, Probiotics and Antimicrobial Peptides
28.	Rangan, Latha	M.S. Swaminathan Research Foundation, Chennai, International Rice Research Institute, Philippines	Professor	Molecular systematics, Biofuel, IPR
29.	Sahu, Lingaraj	Maharshi Dayanand University, Rohtak	Professor	Genetic engineering and functional genomics of plants
30.	Saini, Gurvinder Kaur	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
31.	Satpati, Priyadarshi (Joined on 01.06.2015)	Indian Institute of Science (IISc), Bangalore	Assistant Professor	Classical molecular dynamics (MD) free energy simulation, Electronic Structure calculations that predict the structure, properties, reactivity, bonding etc
32.	Singh, Kusum Kumari (Joined on 13.07.2015)	Institute of Molecular Medicine, Heinrich-Heine University of Duesseldorf, Germany	Assistant Professor	Post-transcriptional gene regulation
33.	Sivaprakasam, Senthilkumar	Central Leather Research Institute, Chennai	Assistant Professor	Bioprocess Analytical Technology (BioPAT), Biocalorimetry, Bioprocess Monitoring and Control Environmental Bioprocess Systems
34.	Sukumar, Piruthivi	University of Leeds, UK	Assistant Professor	Smooth muscle and endothelial cell function, Cardiovascular diseases, Diabetes, Obesity
35.	Swaminathan, R.	Tata Institute of Fundamental Research, Mumbai	Professor	Protein Structure, Function and Dynamics; Fluorescence Spectroscopy
36.	Tamuli, Ranjan	Centre for Cellular and Molecular Biology, Hyderabad	Associate Professor	Calcium signaling, DNA repair
37.	Thummer, Rajkumar P. (Joined on 23.07.2015)	University of Groningen, Groningen, The Netherlands	Assistant Professor	Stem Cell Biology and Regenerative Medicine
38.	Trivedi, Gaurav	Jawaharlal Nehru University, New Delhi	Associate Professor	Intracellular Signaling in Plasmodium falciparum

# DEPARTMENT OF CHEMICAL ENGINEERING

## The Department at a Glance

**Year of Establishment:** 2002

Academic Programmes Offered:

Bachelor of Technology (BTech) in

- o Chemical Engineering

Master of Technology (MTech) in

(1) Petroleum Science and Technology (PST),

(2) Material Science and Technology (MST)

Doctor of Philosophy (PhD)

Total Faculty Strength: 35

- Professor: 11
- Associate Professor: 11
- Assistant Professor: 12
- Adjunct Faculty: 1

New Faculty Members Joined: Nil

- Assistant Professor: Nil

Total Student Strength: 650

BTech: 293

MTech: 179

PhD: 178

New Students Joined in 2015-2016: 213

BTech: 78

MTech: 90

PhD: 45



**LABORATORY FACILITIES****• UG Labs: 7**

- 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**

- 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**

- 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, PPFID 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 Floatation 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

**CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. Anki Reddy Katha	Complex fluids symposium	IISER Pune	2-4 Jan 2016	National
Dr. Ashok Kumar Dasmahapatra	2nd National Workshop on NEMS/MEMS and Theranostic Devices	IIT Guwahati	21-22 Mar 2016	National
Dr. Ashok Kumar Dasmahapatra	3rd Indo-German Workshop on Advances in Materials, Reaction and Separation processes	IIT Guwahati	23-26 Feb 2016	International
Dr. Ashok Kumar Dasmahapatra	Chemcon 2015	IIT Guwahati	27-30 Dec 2015	International
Dr. Ashok Kumar Dasmahapatra	COMPFLU 2016	IISER Pune	2-4 Jan 2016	National
Dr. Ashok Kumar Dasmahapatra	IUPAP CCP 2015	IIT Guwahati	2-5 Dec 2015	International
Dr. Ashok Kumar Dasmahapatra	National Workshop on Atomistic Simulation Technique	IIT Guwahati	21-24 Dec 2015	National
Prof. G. Pugazhenth	International Conference on Environment 2015 (ICENV-2015)	Penang, Malaysia	18-19 Aug 2015	International
Dr. A. K. Golder	International Conference on Bioscience and Biotechnology- 2016	Colombo, Srilanka	2016-01-12 0000-00-00	international
Dr. Amit Kumar	4th International Hydrogen and Fuel Cell Conference	Agra	6-8 Dec 2015	International
Dr. Amit Kumar	International Conference of Chemical, Biological and Environmental Engineering	Milan, Italy	14-15 Sep 2015	International
Dr. Subrata Kumar Majumder	Chemical Engineering Congress-2015, IIT Guwahati	IIT Guwahati	27-30 Dec 2015	International

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. Subrata Kumar Majumder	Environment, Agricultural and Civil Engineering (ICEACE-2016), March 24-25, 2016	Holiday Inn Express London - Heathrow T5, London	24-25 Mar 2016	International
Prof. K. Mohanty	Global Energy Summit	New Delhi	6-8 Nov 2015	International
Dr. Pankaj Tiwari	International Conference on Bioscience and Biotechnology -2016 (BIOTECH-2016)	Colombo	12-14 Jan 2016	International
Dr. Rajesh Kumar Upadhyay	Gas-Liquid and Gas-Liquid Solid (GLS)-12	New York	28 Jun-1 Jul 2015	International

#### INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. R. Anandalakshmi	Transport Phenomena in Food Processing	GIFU University, Japan	Japan	7-15 Dec 2016
Dr. Rajesh Kumar Upadhyay	Radioisotope Applications in Chemical Engineering Research	Indian Institute of Engineering Sciences and Technology (IIST) Shibpur	Kolkata	7 Oct 2015
Dr. Dipankar Bandyopadhyay	Nano-enriched Digital Microfluidics Form Still life, Portraits, Landscapes to Impressionism	IIT Hyderabad	Hyderabad	4 Dec 2015
Dr. Tapas K. Mandal	Current research trend of fluid flow	Haldia Institute of Technology	Haldia, West Bengal	23 Jan 2016
Dr. Vimal Katiyar	Bionano-Fillers based High Performance Sustainable Polymer based Technologies	NanoSciTech	Chandigarh.	18-20 Feb 2016
Dr. Vimal Katiyar	Sustainable Approach for Production of Petrochemicals & Plastics- A Perspective'in Exclusive Workshop on Adaptation of Environmental Safety	Measures for development of Chemicals & Petrochemicals in North East	Assam	18 Feb 2016
Dr. Vimal Katiyar	High Performance Sustainable Polymer Based Technologies using Bionano-Fillers	National Cheng Kung University	Taiwan	29-30 Jan 2016
Dr. Vimal Katiyar	Polymers for fuel cell applications	IIT Guwahati	Guwahati	28-29 Dec 2015.
Dr. Vimal Katiyar	Bionano-fillers for Designing High Performance Sustainable Plastics	IIT Guwahati	Guwahati	29 Dec. 2015
Dr. Vimal Katiyar	Polymorphs of Cellulose Nanocrystals (CNCs) and its Applications	Saurashtra University	Rajkot	29-31 Oct 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. Ashok Kumar Dasmahapatra (Convener)	2nd National Workshop on NEMS/MEMS and Theranostic Devices	DeitY, Govt. of India	21-22 Mar 2016	National	200

<b>Name of Faculty (Convener/ Co-ordinator, etc.)</b>	<b>Name of Sem./Wor./Con.</b>	<b>Funded By</b>	<b>Date</b>	<b>International/ National</b>	<b>No. of participants</b>
Dr. Ashok Kumar Dasmahapatra (Member, LOC)	CCP 2015	IUPAP and others	2-5 Dec 2015	International	300
Dr. Ashok Kumar Dasmahapatra (Member, LOC)	Chemcon 2015	Reliance Industries and others	27-30 Dec 2015	International	1200
Dr. Ashok Kumar Dasmahapatra (Organizing secretary)	3rd Indo-German workshop	Max Plank Society, Germany and others	23-26 Feb 2016	International	200
Prof. K Mohanty	Reflux 2016		25-27 Mar 2016	National	150
Prof. Bishnupada Mandal	The Indian Chemical Engineering Congress (CHEMCON 2015)	Govt. and others	27-30 Dec 2015	International	1200
Dr. Prabu Vairakannu	Short term course on "Advanced clean fuel technologies and alternative energy systems"	KIC-TEQIP (MHRD)	7-11 Mar 2016	National	4
Dr. Raghvendra Gupta, Dr. Rajesh Upadhyay, Dr. Pankaj Tiwari	Short Term course on Multiphase Flow in Oil and Gas Industry	MHRD (Under TEQIP)	7-11 Mar 2016	National	9
Dr. Rajesh Kumar Upadhyaya, Dr. Pankaj Tiwari, Dr. Raghvendra Gupta	Multiphase Flow in Oil and Gas Industry	MHRD-KIC	7-11 Mar 2016	National	7
Dr. V. Prabu, Dr. R. Prasanna Venkatesh, Dr. R. Anandalakshmi, Dr. Nageswara Rao Peela	Advanced Clean Fuel Technologies and Alternative Energy Systems	MHRD	7-11 Mar 2016	National	10

**PATENTS:**

<b>Name of Faculty and co researcher</b>	<b>Name</b>	<b>Date Applied/ Granted</b>	<b>Application No.</b>
Dr. Vimal Katiyar and Rahul Patwa	Silk-Poly (lactic acid) Nanocomposite Formulations	2 Mar 2016	201631007267
Dr. Vimal Katiyar and Narendren S.	Process for Directing Electrospun Polymer Fibers	2 Mar 2016	201631007268
Dr. Vimal Katiyar and Neelima Tripathi	Biobased Adhesive -Formulation for Structural	15 Sep 2015	980/KOL/2015
Dr. Vimal Katiyar and Akhilesh Kumar Pal	Dispersible Biobased Additive Formulations for Biodegradable Polymer Packaging	15 Sep 2015	981/KOL/2015

**AWARDS AND HONOURS:**

- Dr. Nanda Kishore received IET Young Engineers Award for the year 2015 - 2016 in Chemical Engineering Division by The Institution of Engineers (India), 2015
- Dr. Vimal Katiyar's group research works on Biobased Adhesive have been awarded by Gandhian Young Technological Innovation (GYTI) Awards on Sunday, 13 March, 2016 at Rashtrapati Bhavan Cultural Centre, President's Estate, New Delhi.
- Dr. Vimal Katiyar received 6th National Awards for Technology Innovation in Petrochemicals & Downstream Plastic Processing Industry (2015-16) for Innovation in Polymer Waste Management & Recycling Technology and Green Polymeric Materials and Products "Value Added Cellulose Nanocrystals Production from Waste Resources and its High End Applications" from Gol. (January 20, 2016)
- Dr. Vimal Katiyar received 6th National Awards for Technology Innovation in Petrochemicals & Downstream Plastic Processing Industry (2015-16) on behalf of Indian Institute of Technology (IIT) Guwahati for Innovation in Polymeric Materials "Industry Production of Degradable Packaging Films for Stringent Food Packaging Applications" from Gol. (January 20, 2016)
- Dr. Vimal Katiyar received 6th National Awards for Technology Innovation in Petrochemicals & Downstream Plastic Processing Industry (2015-16) on behalf of Indian Institute of Technology (IIT) Guwahati for Innovation in Polymer Waste Management & Recycling Technology and Green Polymeric Materials and Products "Biobased Adhesive for Structural Applications" from Gol. (January 20, 2016)
- Dr. Vimal Katiyar received Distinguished Speaker Award of Indian Institute of Chemical Engineers CHEMCON

NEERI, 29th December, 2015.

- Dr. Vaibhav V Goud received Mitacs Globalink Research Award for hosting student from McGill University, Canada to carry out small project over the span of 12 weeks

**STUDENTS' ACHIEVEMENTS**

- Dr. Vimal Katiyar's group Research work on Biobased Adhesive have been awarded by Gandhian Young Technological Innovation (GYTI) Awards on Sunday, 13 March, 2016 at Rashtrapati Bhavan Cultural Centre, President's Estate, New Delhi.
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- Dr. Vimal Katiyar's group received 6th National Awards for Technology Innovation in Petrochemicals & Downstream Plastic Processing Industry (2015-16) on behalf of Indian Institute of Technology (IIT) Guwahati for Innovation in Polymer Waste Management & Recycling Technology and Green Polymeric Materials and Products "Biobased Adhesive for Structural Applications" from Gol. (January 20, 2016).

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Anandalakshmi, R.	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.	Bandyopadhyay, Dipankar	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.	Banerjee, Tamal	IIT Kanpur	Associate Professor	Phase equilibria of ionic liquids, Molecular simulations, Global optimisation, Statistical thermodynamics
4.	Chatterjee, Jaideep	Illinois Institute Of Technology Chicago	Adjunct Faculty	Water Purification, Oil-water interfaces, and Surfactant Enhanced Oil Recovery
5.	Das, Chandan	IIT Kharagpur	Associate Professor	Wastewater Treatment, Bioremediation, Membrane based Separation Process

Sl. No.	Name	PhD	Designation	Areas of Interest
6.	Dasmahapatra, Ashok Kumar	IIT Bombay	Associate Professor	Complex fluids, Phase transition in polymers (Nucleation, crystallization, collapse transition, etc.), Structure-property relations, Molecular simulations, Biological physics
7.	De, Mahuya	IIT Kanpur	Associate Professor	Catalysis and reaction engineering, adsorption, hydrocarbon processing
8.	Ghosh, Pallab	IIT Bombay	Professor	Interfacial phenomena, Interfacial reactions, Membrane separation, Randomised algorithms
9.	Ghoshal, Alope Kumar	IIT Kharagpur	Professor	Advanced Separation Technology, Modeling & Simulation, Environmental Pollution Control, Pyrolysis of waste plastics
10.	Pattader, Partho Sarathi Gooh	L e h i g h University	Assistant Professor	Stochastic dynamics, Colloid and Interface science, Tribology, Soft matter
11.	Golder, Animes Kr.	IIT Kharagpur	Associate Professor	Electroremediation of water/wastewater, Physiochemical water/wastewater treatment techniques, Bioremediation, Electrochemical corrosion
12.	Goud, Vaibhav Vasant	IIT Kharagpur	Associate Professor	Heterogeneous Reactions, Bio-energy and Green Engineering, Biolubricant, Utilisation of Lignocellulosic Biomass for Fuel/Chemicals, Supercritical Fluids
13.	Gumma, Sasidhar	Cleveland State University, USA	Professor	Phase Equilibria and Thermodynamics, Adsorption, Molecular simulation, Gas storage
14.	Gupta, Raghvendra	The University of Sydney, Australia	Assistant Professor	Multiphase flow, Microfluidics and micro process engineering, Computational and experimental fluid dynamics
15.	Katha, Anki Reddy	IISc Bangalore	Assistant Professor	Computational study of polymer-composites, Membranes, Poly electrolytes, Granular flows
16.	Katiyar, Vimal	IIT Bombay	Associate Professor	Synthetic and Natural Polymers, Polymer Processing, Biothermoset, Nanobiocomposite, Organic Solar Cells, Biodegradable Polymers
17.	Kishore, Nanda	IIT Kanpur	Associate Professor	CFD, Bubbles, Drops and Particles Dynamics, Non-Newtonian Fluids
18.	Kotecha, Prakash	IIT Bombay	Assistant Professor	Optimization, Process Control, Artificial Intelligence, Planning and Scheduling
19.	Kumar, Amit	University of Delaware, USA	Assistant Professor	Gas Transport in Nanoporous Materials, Molecular Simulation, Statistical Mechanics
20.	Mandal, Bishnnupada	IIT Kharagpur	Professor	Separations with chemical reaction, Molecular based membrane separation, Modeling and simulation of separation processes, Environmental pollution control
21.	Mandal, Tapas Kr.	IIT Kharagpur	Associate Professor	Multiphase flow & Measurement in multiphase flow, Bio-diesel
22.	Mazumdar, Subrata Kumar	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.	Mohanty, Kaustubha	IIT Kharagpur	Professor	Bioseparation, Biofuels, Biological wastewater treatment, Membrane technology, Ionic liquids

Sl. No.	Name	PhD	Designation	Areas of Interest
24.	Moholkar, Vijay S. (Head of the Department)	University of Twente, Netherlands	Professor	Bubble dynamics, CFD, Sono-process engineering, Bio-mass gasification
25.	Peela, Nageswara Rao	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.	Prabu, Vairakannu	IIT Madras	Assistant Professor	Clean Coal Technology, Combustion and Gasification, Reaction kinetics
27.	Pugazhenth, G.	IIT Kanpur	Professor	Membrane Separation, Polymer Nanocomposites, Nanomaterials, Catalysis & Refinery Processes
28.	Purkait, Mihir Kumar	IIT Kharagpur	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.	Saha Prabir Kumar	IIT Madras	Professor	Process Modeling, Optimisation and control, Membrane Based separation Process
30.	Senthilmurugan, S.	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.	Singh, Anugrah	IISc Bangalore	Professor	Computational and Experimental Fluid Dynamics, Microfluidics/Nanofluidics, Material Processing, Flow through Porous Media
32.	Tiwari, Pankaj	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.	Upadhyay, Rajesh Kr.	IIT Delhi	Assistant Professor	Multiphase Flow Reactor, Multiphase Flow Measurements, Computational Fluid Dynamics, Residence Time Distribution, Novel Reactors
34.	Uppaluri, Ramgopal V. S.	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.	Venkatesh R. Prasanna	IIT Madras	Assistant Professor	Electrochemistry, Chemical Mechanical Polishing (CMP), Post CMP cleaning, Refinery Processes



# DEPARTMENT OF CHEMISTRY

## The Department at a Glance

**Year of Establishment:** 1995

Academic Programmes Offered:

Bachelor of Technology (BTech) in

- o Core (Theory and Laboratory) and Elective courses in Chemistry

Bachelor of Technology (BTech) in

- o Chemical Science and Technology

Master of Science (MSc) in

- o Chemistry

Doctor of Philosophy (PhD)

Total Faculty Strength: 40

- Professor: 14
- Associate Professor: 16
- Assistant Professor: 10

New Faculty Members Joined: 5

- Assistant Professor: 5

Total Student Strength: 476

BTech: 159

MSc: 92

PhD: 225

New Students Joined in 2015-2016: 137

BTech: 42

MSc: 45

PhD: 50

**LABORATORY FACILITIES****Laboratories for BTech and MSc programme:**

Details	No.
Chemistry Laboratory (B. Tech, 1st sem) / Chemical Technology Lab – I, B. Tech (CST)	01
Chemical Technology Lab – II, B. Tech (CST)	01
Chemical Technology Lab – III, B. Tech (CST) / Physical Chemistry Lab (M. Sc)	02
Inorganic Chemistry Lab (M. Sc) / Organic Chemistry Lab (M. Sc)	01

**Research Laboratories:**

Details	No.
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-004, CHEL-005, CHEL-006, CHEL –101, CHEL –102, CHEL –103, CHEL – 104, CHEL – 105, CHEL – 106, CHEL –107, CHEL –108, CHEL – 109, CHEL –201, CHEL –202, CHEL –203, CHEL – 204, CHEL – 205, CHEL – 206, CHEL –207, CHEL –208, CHEL – 209, CHEL –301, CHEL –302, CHEL –303, CHEL – 304, CHEL – 305, CHEL – 306, CHEL –307, CHEL –308, CHEL – 309.	48
Analytical equipment Lab I – VI	04
Computer Lab I and II	02
Ultrapure (Millipore) water Lab	01

**MAJOR EQUIPMENT AND FACILITIES ACQUIRED**

High Performance Computer Cluster (Make: HP, Model: DL380GEN)

**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, Nanofluidics, Organometallic Chemistry and Catalysis, Bio-inspired Polymer Materials, Drug Delivery, Open Microfluidics, Chemical Sensor, Organofluorine Chemistry etc.

**MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT**

- Development of novel methods for the construction of diverse organic molecules those are of important in biological and medicinal sciences,
- Development of novel strategies for C-H activation for the regioselective carbon-carbon and carbon-heteroatom bonds formations, which are important in academia and chemical industries from both environmental and economic standpoint,
- Supramolecular chemistry of polypeptides which are important in drug delivery and nanotechnology,
- Design and development of novel approaches for the development drugs for misfolding diseases, such as Alzheimer's disease (AD) and Parkinson's disease etc.
- Development of atom economic routes for the construction of novel molecules which are important in pharmaceuticals, materials chemistry such as construction of devices etc.

**Breakthrough Innovations:**

There are some salient research achievements observed in the ongoing research and development under institutional and sponsored research projects which has appeared in reputed peer-reviewed journals recently in various fields of chemistry as mentioned below,

- C-H activations for carbon-carbon heteroatom bond formations such as Regiospecific benzylation of electron-deficient N-heterocycles with methylbenzenes via a Minisci-type reaction, Benzylic ethers as arylcarboxy surrogates in substrate directed ortho C–H functionalization catalysed by copper, Generation

of bis-acyl ketals from esters and benzyl amines under oxidative conditions, Copper-catalyzed cross dehydrogenative coupling of N,N-disubstituted formamides and phenols: A direct access to carbamates, Nano CuO catalyzed cross dehydrogenative coupling (CDC) of aldehydes to anhydrides, Copper(I) promoted cycloalkylation-peroxidation of unactivated alkenes via sp<sup>3</sup> C–H functionalization, Cyclic ethers to esters and monoesters to bis-esters with unconventional coupling partners, Thioesterification of alkylbenzenes with thiols, metal free domino synthesis of 3-aryloindoles etc.

- Natural product syntheses such as Synthesis of oxygen and nitrogen heterocyclic compounds Multicomponent Tandem Synthesis Highly Functionalized Coumarins etc,
- Green chemistry such as Synthesis of wide variety of substituted exo-hexahydro-1H-chromeno[3,4-h][1,6] naphthyridine-3-carboxylate derivatives, regioselective synthesis of di- and tri- substituted 3,4-dihydro thiochromeno [3,2-e][1,3]thiazin-5(2H)-one derivatives, synthesis of 4-phenacylidene flavones, Fused pyrido [2,3-c]coumarin derivatives, hiopyrano{2,3-b:6,5-b\_} bis(thiochromene)-12,14(13H)-diones, wide variety of 5,6-unsubstituted 1,4-dihydropyridines derivatives etc.
- Luminescent Discotic Liquid Crystals such as Columnar Self-assembly of Star-shaped Luminescent Oxadiazole and Thiadiazole derivatives, Effect of Regioisomerism on the Self-assembly and Photophysical Behavior of 1,3,4-Thiadiazole based Polycatenars, Self-assembly of luminescent N-annulated Perylene Tetraesters into Fluid Columnar phases, Perylo[1,12-b,c,d] thiophene tetraesters: A New Class of Luminescent Columnar Liquid Crystals, Bay-annulated Luminescent Liquid Crystalline Perylene Tetraesters: A Study of Structure-Property Relationships etc.
- Biological sciences such as “Direct chemoselective synthesis of N-3 substituted pyrimidinones in a microwave-assisted method”, “Development of Nitrobenzofurazan derivatives as Potent and Selective Inhibitors of Indoleamine 2,3-Dioxygenase” etc.,
- Medicinal chemistry such as “Synthesis and Antibacterial Activity of Novel Diarylmethylamines and Oxazines”, drug design etc.
- Material chemistry such as “Applications of metal-organic framework (MOF) materials in hydrocarbons adsorption and oxidation catalysis”,
- Supramolecular chemistry such as “Reversible Deformation-formation of a Multistimuli Responsive Vesicle by a Supramolecular Peptide Amphiphile”,
- Organocatalysis, etc.

#### CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	International/National
Prof. Arun Chattopadhyay	Indo-Finland joint Workshop on 'Novel Bioactive Materials'	Turku, Finland	28 Oct 2015	International
	MRS Trilateral Symposium	Institute of Nanoscience and Technology, Mohali	23-25 Nov 2015	International
	Supramolecules and Forensic Nanotechnology	Gujarat Forensic Science University	8-9 Jan 2016	National
	International Workshop On Role Of Technological Advances, Incubation Themes, And Engineering Skills	Central Institute of Technology, Kokrajhar	21-23 Jan 2016	International
	National Conference on Emerging Trends in Chemical Sciences-2016	Kirori Mal College, New Delhi	4-5 Feb 2016	National
	International workshop on Nano-biotechniques	Indian Institute of Technology Roorkee	9-14 Feb 2016	International
	Frontiers in Chemistry-2016	North Bengal University	7-8 Mar 2016	National

Name of Faculty	Name of Conf./Workshop	Place	Date	International/National
Prof. B. K. Patel	National Symposium on Natural Products: Prospects and Perspectives(NPPP-2016)	CSIR-North East Institute of Science and Technology, Jorhat	21-22 Mar 2016	National
	Weaker the Better. DU-JAIST Indo-Japan Symposium on Chemistry of Functional Molecules/ Materials	University of Delhi, Delhi	26-27 Feb 2016	International
	Intermolecular Marriages of Molecules:2nd Conference on Microscopy in Material Science	Thapar University, Patiala	25-17 Feb 2016	National
	Inter-caste Marriages of Molecules: Vth National Symposium on Advances in Chemical Sciences	Gurunanak Dev University, Amritsar	2-3 Feb 2016	National
	Inter-caste Marriages of Molecules: 52nd Annual Convention of Chemists and International Conferences on Recent Advances in Chemical Sciences	Jaipur	28-30 Dec 2015	National
	The Inter-caste Molecular Marriages, 3rd Costal Chemical Research Society (CCRS), International Conference	B.R. Ambedkar University, Srikakulam	16-17 Dec 2015.	International
Prof. T. Punniyamurthy	Regioselective C -H Functionalizations and Their Application for Medicinally Significant Heterocycles, INDIGO Research Conference	Centre for Biomedical Research, Lucknow	22 Feb 2016	International
	Regioselective C -H Functionalizations and Their Application for Medicinally Significant Heterocycles, Emerging Trends in Chemical Sciences, UGC-SAP National Seminar	Gauhati University, Guwahati	5 Nov 2015	National
	Carbon-Carbon and Carbon-Heteroatom Bonds Formation and Their Application for Medicinally Significant Heterocycles, NDCS 2015	BITS, Pilani	17 Nov 2015	International
Prof. Anil K. Saikia	1st International Caparica Christmas Conference on Translational Chemistry	Lisbon, Portugal	9-10 Dec. 2015	International
	Contemporary Developments in Chemical Sciences, CDCS-2015	Tezpur University	23-24 Nov 2015	National
	National Symposium on Natural Products: Prospects & Perspectives [NPPP-2016]	CSIR-NEIST, Jorhat	21-22 Mar 2016	National
Dr. Mohammad Qureshi	International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	IIT Guwahati	9 Dec 2015	International
Dr. Chandan K Jana	Natural Products: Prospects & perspectives	NEIST-Jorhat	21Mar 2016	National
Dr. Subhas Chandra Pan	XVII Organic Chemistry Conference organized by NOST	Jaipur	27-30 Oct 2015	International
Dr. Sunanda Chatterjee	Peptide Symposium	JNCASR, Bangalore	24-25 Sep 2016	National

<b>Name of Faculty</b>	<b>Name of Conf./Workshop</b>	<b>Place</b>	<b>Date</b>	<b>International/National</b>
Dr. K. P. Bhabak	New Frontiers in Chemistry -From Fundamentals to Applications (NFCFA2015)	Department of Chemistry, BITS Pilani KK Birla Goa Campus	18-19 Dec 2015	National
Dr. U. Manna	Workshop on corrosion and its control	National Corrosion Council of India	Sep 2015	National
	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	IIT Guwahati	Dec 2015	National
Prof. Parameswar K. Iyer	Reflux 2016	IIT Guwahati	25-26 Mar 2016	National
	Research Conclave 16	IIT Guwahati	17-20 Mar 2016	National
	Elsevier Author's Workshop	Gauhati University	5 Mar 2016	National
	ICANN 2015	IIT Guwahati	8-11 Dec 2015	International
	27th MRSI Symposium	NEIST, Jorhat	18-21 Feb 2016	National
	INUP Workshop	Tezpur University	25-26 Feb 2016	National
	MACRO 2015	IACS, Kolkata	23-26 Jan 2015	International
	IJEGMBE 2016	KIT, Wakamatsu	23-25 Dec 2015	International
	Global Mind Seminar	KIT, Tobata	19-20 Jan 2016	International
	Emerging Trends in Chemistry	NEHU, Shillong	28-29 Mar 2016	National
	Recent Advances in Chemical Sciences	AMU, Aligarh	29-30 Mar 2016	International
	APME 2015	Yokohama, Japan	18-22 Oct 2015	International
	CHEMCON 2015	IIT Guwahati	27-30 Dec 2015	National
	NWNTD-2016	IIT Guwahati	21-22 Mar 2015	National
	APTEM	IIT Guwahati	15-16 Feb 2015	National
	250thACS Meeting	Massachusetts, Boston	16-20 Aug 2015	International
Indo-German workshop on renewable energy (organic solar cells) and curriculum innovation in science education	IISc Bangalore	1 Dec 2015	International	
ICAER 2015	IIT Bombay	15-17 Dec 2015	International	

## INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. T. Pun- niyamurthy	New Cycloaddition/Cyclization Strategies for the Synthesis of Bio-active heterocycles	Nagasaki University	Japan	11 Dec 2015
	C-H Functionalization Strategies for the Construction of Medicinally Significant Heterocycles	Nagasaki University	Japan	10 Dec 2015
	New Cycloaddition/Cyclization Strategies for the Synthesis of Bio-active heterocycles	Saga University	Japan	9 Dec 2015
	C-H Functionalization Strategies for the Construction of Medicinally Significant Heterocycles	Kyushu Institute of Technology	Japan	8 Dec 2015
	New Cycloaddition/Cyclization Strategies for the Synthesis of Bio-active heterocycles	Kyushu University	Japan	7 Dec 2015
	New Cycloaddition/Cyclization Strategies for the Synthesis of Bio-active heterocycles	Osaka Prefecture University	Japan	4 Dec 2015
	Development of Small Novel Molecules of Medicinal Importance	Kobe University	Japan	3 Dec 2015
	C-H Functionalization Strategies for the Construction of Medicinally Significant Heterocycles	Yamaguchi University	Japan	2 Dec 2015
	C-H Functionalization Strategies for the Construction of Medicinally Significant Heterocycles	Yamaguchi University	Japan	1 Dec 2015
	New Cycloaddition/Cyclization Strategies for the Synthesis of Bio-active heterocycles	Kumamoto University	Japan	30 Nov 2015
	Development of Small Novel Molecules of Medicinal Importance	Kagoshima University	Japan	27 Nov 2015
	C-H Functionalization Strategies for the Construction of Medicinally Significant Heterocycles	Kumamoto University	Japan	26 Nov 2015
	C-H Functionalization and Their Application for the Construction of Medicinally Significant Heterocycles	Kumamoto University	Japan	25 Nov 2015
	Development of Small Novel Molecules of Medicinal Importance	Kyushu University	Japan	24 Nov 2015
	Dr. Bhu- baneswar Mandal	Peptide based pro-drug design against Alzheimer's disease	JNCASR, Bangalore	Bangalore
Novel and innovative strategies for peptide based drug design against Alzheimer's disease		402nd OMICS International Conference, Pharmaceutical Summit and Expo	New Delhi	8-10 Oct 2015
Dr. Debasis Manna	Oxindole Analogues with Promising Indoleamine 2,3-Dioxygenase 1 Inhibition Properties	MNIT JAIPUR	Jaipur	23-25 Nov 2015
Dr. Chandan Mukherjee	Substituent-Dependent Geometry, Electronic Structure, and Reactivity of Transition Metal-Radical Complexes	Jadavpur University, Kolkata	Kolkata	Dec 2015
Dr. Subhas Chandra Pan	Organocatalytic Asymmetric Cyclization Reactions	NEIST, Jorhat	Jorhat	21-22 Mar 2016

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Chandan K Jana	Classical Reaction Route to Direct C(sp <sup>3</sup> )-H Arylation of Aliphatic N-Heterocycles	NEIST Jorhat	Jorhat	21 Mar 2016
Dr. Uttam Manna	Superhydrophobic-Superhydrophilic Patterns for Open Microfluidics Application"	IIT Guwahati	Guwahati	22 Jan 2016

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

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
P. Balaram	IISC, Bangalore	Institute Lecture	9 Oct 2015
Prof. Ryo Irie	Kumamoto University, Japan	New synthetic approaches to heterohelicenes based on catalytic domino cyclization	18 Sep 2015
Dr. Michel Wong Chi Man	Ecole Nationale Supérieure de Chimie de Montpellier, France	New stimuli-responsive mesoporous hybrid silica as drug carriers and drug delivery	16 Feb 2016
Prof. Y. D. Vankar	IIT Kanpur	Chemistry of C-2 Functionalised Glycols: Synthesis of Some Biologically Important Molecules and A New Method of O-Glycosylation	22 Mar 2016

**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. M. Sarma (One of the organizer)	XXVII IUPAP Conference on Computational Physics (CCP 2015)	IUPAP, APS, EPS, AAPPS, NVIDIA, Intel, Fujitsu, Netweb Technologies	2-5 Dec 2015	International	500
Dr. M. Sarma (Mentor)	Ishan Vikas	IIT Guwahati	6-17 Dec 2015	National	150
Dr. Sunanda Chatterjee	Chemconvene	Thermofischer	8 Apr 2015	National	150

**PATENTS**

Name of Faculty and co-researcher	Name	Date Granted	Application No.
Arun Chattopadhyay, Anumita Paul, Srestha Basu, Amaresh Kumar Sahoo	A device for visual detection of bilirubin	Indian patent application submitted and published on 26 June 2015	631/KOL/2015
Arun Chattopadhyay, Sunil Kumar Sailapu, Deepanjalee Dutta, Amaresh Kumar Sahoo, Siddhartha Sankar Ghosh	A Device with Integrated Methods For Reverse Transcription Polymerase Chain Reaction (Rt-Pcr) And/Or Dna/ Protein Array Based Analyses	Indian patent application submitted and published on 18 March 2016	1259/KOL/2015 A
B. K. Patel	A process for the Preparation of Carbodiimides	Indian Patent	No. 270484
Guillermo C Bazan, Bin Liu, Xiong Gong, Alan J Heeger, Wanli Ma, Parameswar K Iyer	Methods and devices comprising soluble conjugated polymers	4/28/2015	10/595,179
Bhubaneswar Mandal and Ashim Paul	Beta Sheet Breaker Peptides for Anti-Alzheimer's Drug Design	17th September, 2015	E-2/1727/2015/ KOL

**AWARDS AND HONOURS**

1. Prof. Arun Chattopadhyay has been elected as a Fellow of the Indian Academy of Sciences (2016).
2. Prof. B. K. Patel elected as Costal Chemical Research Society Award-2015 by Costal Chemical Research Society.
3. Prof. T. Punniyamurthy has been elected as Fellow of Indian Academy of Sciences.
4. Prof. T. Punniyamurthy, Winner of CRSI Bronze Medal.
5. International Association of Advanced Material Science & Technology (IAAM) Scientist Award 2016 to Prof Parameswar K. Iyer.
6. Dr. Bhubaneswar Mandal, Winner of the Industrial Green Chemistry World Award (IGCW - 2015) conferred by the Industrial Green Chemistry Foundation on 4th Nov, 2015. (photo attached)
7. Dr. Bhubaneswar Mandal, Winner of the "Outstanding Faculty Award (VIFFA-2015)" conferred by the Venus International Foundation, 5th July, 2015.
8. Dr. M. Qureshi has been elected as Fulbright-Nehru Academic Professional Excellence Fellow by USIEF, USA
9. Dr. Chandan Mukherjee has been elected as Young Associate, Indian Academy of Science, Bangalore
10. International Conference on Advanced Nanomaterials and Nanotechnology-2015 held at IIT Guwahati, India.
4. Sujan Kalita became the finalist of the Samsung Innovation Award 2015 held on Oct 27, 2015 at IIT Guwahati.
5. Ashim Paul received the Talent Search Contest on Innovative Research Ideas Leading to Entrepreneurial Venture in Biotechnology and Allied Areas on 21st Nov - 2015.
6. Sumana Mandal received the Second best poster award in NPPP-2016.
7. Dr. Saroj. Kumar Rout received 2015 Eli Lilly and Company Asia Outstanding Thesis Award.
8. T Bhim Raju got BEST POSTER in APST 2015 conference held at IASST, Guwahati
9. Sameer Hussain, Akhtar H. Malik and M. Adil Afroz got BEST POSTER AWARD at both Departmental as well as Institute level poster competition held during Research Conclave 2016 at IIT Guwahati.
10. Sameer Hussain got BEST POSTER AWARD in TEQIP National Course organized by Centre for Education Technology and Department of Chemical Engineering, IIT Guwahati, India.
11. Sameer Hussain and Akhtar Hussain Malik got BEST POSTER AWARD in Annual Chemical Engineering Festival "Reflux 2015" organised by the Department of Chemical Engineering, IIT Guwahati, India.
12. Sameer Hussain got Travel Fellowship Award from Department of Science and Technology, Govt of India and Centre for International Co-operation in Science (CICS) for presenting a paper in conference APME 2011 held at Pacifico Yokohama in Yokohama, Japan,
13. Sameer Hussain got selected for BASF International Summer Course to be held in Ludwigshafen, Germany.

**STUDENTS' ACHIEVEMENTS**

1. Satyapriya Bhandari has been awarded the Materials Research Society of India young scientist oral award 2015.
2. Shilaj Roy has received best poster award at 6th Materials Research Society trilateral symposium held at Institute of Nanoscience and Technology, Mohali, India.
3. Sabyasachi Pramanik has received best poster award at

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Achalkumar, Ammathnadu Sudhakar	CSMR, Bangalore	Associate Professor	Liquid crystals, Functional Materials, Molecular Electronics, Self Assembly, Green Chemistry
2.	Bag, Subhendu Sekhar	IIT Kharagpur	Associate Professor	Bioorganic Chemistry and Chemistry of Unnatural Nucleic Acid and Peptides
3.	Baruah, Jubaraj B.	IISc Bangalore	Professor	Homogeneous Catalysis, Supramolecular chemistry and material design
4.	Bhabak, Krishna Padak (Joined on 29.04.2015)	IISc Bangalore	Assistant Professor	Organic and Bio-organic Chemistry
5.	Biswas, Shyam Prosad	Ulm University, Germany	Assistant Professor	Gas/Vapor/Liquid Adsorption and Catalytic Applications of Metal-Organic Frameworks (MOFs)



Sl. No.	Name	PhD	Designation	Areas of Interest
6.	Chattopadhyay, Arun	Columbia University	Professor	Nanoscale Science and Technology
7.	Chatterjee, Sunanda	IISc Bangalore	Assistant Professor	Peptidomimetics: Synthesis, Conformation and Biological activity
8.	Das, Animesh (Joined on 01.05.2015)	University of Goettingen, Germany	Assistant Professor	Organometallic chemistry and catalysis
9.	Das, Gopal	IIT Kanpur	Professor	Supramolecular, Bioorganic chemistry and Biomineralization
10.	Das, Debapratim	IACS, Kolkata	Associate Professor	Supramolecular dynamic aggregates, peptides, lipids
11.	Dutta, Sumana	IACS, Kolkata	Associate Professor	Experimental & Theoretical Physical Chemistry / Self-organization and Nonlinear dynamics
12.	Gupta, Ashish Kumar	Univ. of California, Los Angeles	Professor	Quantum Molecular Dynamics
13.	Iyer, Parasmeswar K.	CSMCRI, Bhavnagar	Professor	Polymer synthesis, Organic / Organometallic Chemistry & Device fabrication, Sensors
14.	Jana, Chandan Kumar	WWU Muenster, Germany	Associate Professor	Total Synthesis/ Natural Product Based Drug Discovery/ Synthetic Methodology/ Development of New Reaction
15.	Kancharla, Pavan Kumar (Joined on 23.10.2015)	IIT Kanpur	Assistant Professor	Organic Chemistry, Carbohydrate Chemistry, Development of Synthetic Methodology, Organocatalysis.
16.	Khan, Abu Taleb	Kalyani University, W.B.	Professor	Synthesis of Natural Products, Heterocycles and Carbohydrate Chemistry, Newer Methodologies
17.	Krishnamoorthy, Govindarajan	IIT Kanpur	Professor	Organic Photochemistry & Spectroscopy
18.	Kundu, Lal Mohan	LMU Munich, Germany	Associate Professor	Nucleic Acid / Peptide Chemistry, DNA / RNA Damage and Repair, DNA Hybrid Materials
19.	Mahata, Kingsuk	University of Siegen, Germany	Assistant Professor	Solar Fuel from Water, Supramolecular Catalysis, Theranostic Nano-Medicine
20.	Manivannan, V.	IACS, Calcutta	Professor	Coordination Chemistry
21.	Mandal, Bhubaneswar	EPFL, Lausanne, Switzerland	Associate Professor	Peptide Chemistry and Amyloid Research
22.	Manna, Debasis	University of Illinois at Chicago	Associate Professor	Lipid-Protein Interaction, Lipid Synthesis
23.	Manna, Uttam (Joined on 08.06.2015)	IISc, Bangalore	Assistant Professor	Bio-inspired Polymer Materials, Drug Delivery, Open Microfluidics, Chemical Sensor
24.	Mondal, Biplab	IIT Bombay	Professor	Coordination and Bioinorganic Chemistry
25.	Mukherjee, Chandan	Max-Planck Institute of Bioinorganic Chemistry, Muelheim, Germany	Associate Professor	Oxidation Catalysis / Molecular Magnetism / Synthesis of Single-Molecule Magnets (SMMs) / MRI Contrast agents / Water Oxidation Chemistry

Sl. No.	Name	PhD	Designation	Areas of Interest
26.	Pan, Subhas Chandra	Max-Planck-Institut fuer Kohlenforschung, Muelheim der Ruhr, Germany	Associate 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
27.	Panda, Aditya Narayan	IIT Kanpur	Associate Professor	Dynamics of bimolecular scattering processes
28.	Patel, Bhisma Kr. (Head of the Department)	IIT Kanpur	Professor	Bio-Organic Chemistry and Newer Methodologies
29.	Paul, Anumita	Columbia University	Professor	Surface Science, Catalysis, Thin Films
30.	Paul, Sandip	IIT Kanpur	Associate Professor	Computational Biophysics and Chemistry
31.	Punniyamurthy, T.	IIT Kanpur	Professor	Synthetic Organic Chemistry
32.	Qureshi, Mohammad	IIT Kanpur	Associate Professor	Materials Chemistry
33.	Ray, Manabendra	IIT Kanpur	Professor	Bioinorganic and Coordination chemistry
34.	Raidongia, Kalyan	Jawaharlal Nehru centre for advance Scientific research	Assistant Professor	Physical Chemistry
35.	Sahu, Kalyanasis	IACS, Kolkata	Associate Professor	Time Resolved Absorption and Fluorescence Spectroscopy, SHG, MUPPETS
36.	Saikia, Anil Kr.	RRL Jorhat	Professor	New Synthetic Methodology & Natural Product Synthesis
37.	Sastri, Chivukula Vasudeva	University of Hyderabad	Associate Professor	Biomimetic Chemistry and Chemical Biology
38.	Sarma, Manabendra	IIT Bombay	Associate Professor	Development of new theoretical approaches to Laser Assisted Control of Chemical Reactions, and Resonances in Electron – Molecule Scattering Reactions
39.	Seetharam, Akshai Kumar Alape (Joined on 01.07.2015)	IISc Bangalore	Assistant Professor	Organometallic Chemistry, Inorganic Chemistry, Organofluorine Chemistry, Catalysis (Homogeneous and Heterogeneous), C-H and C-F activation
40.	Srimani, Dipankar	IACS, Jadavpur	Asst. Professor	Organic, Organonometallic Chemistry

# DEPARTMENT OF CIVIL ENGINEERING

## The Department at a Glance

**Year of Establishment:** 1998

**Academic Programmes Offered:**

**Bachelor of Technology (BTech)** in

- o Civil Engineering

**Master of Technology (MTech)** in

1. Structural Engineering,
2. Water Resources Engineering and Management,
3. Geotechnical Engineering,
4. Environmental Engineering,
5. Transportation Systems Engineering,
6. Infrastructure Engineering and Management

**Doctor of Philosophy (PhD)**

**Total Faculty Strength: 47**

- Professor: 14
- Associate Professor: 15
- Assistant Professor: 18

**New Faculty Members Joined: 4**

- Assistant Professor: 4

**Total Student Strength: 513**

BTech: 251

MTech: 103

PhD: 159

**New Students Joined in 2015-2016: 160**

BTech: 66

MTech: 55

PhD: 39

## LABORATORY FACILITIES

### Structural Engineering Laboratory:

The Structural Engineering Laboratory in the department of Civil Engineering at IIT Guwahati is one of the best structural engineering laboratories currently existing in India. The laboratory serves a wide spectrum of activities covering those related to teaching, research, development, and consultancy. The primary activities include ambient vibration studies, experimental studies on model/prototype of structural elements and assemblies under various static and dynamic loading conditions. The Structural Engineering Laboratory also offers technical services for testing and research on the structural behavior and properties of materials. The laboratory is equipped with servo-controlled hydraulic MTS actuators (100T, 25T, and 10T compression capacity) and required data acquisition systems, which are used for cyclic testing of reinforced concrete and steel specimens. A uniaxial shake table of 5T vertical load carrying capacity, maximum stroke of 500 mm, and maximum horizontal acceleration of 2g is also available in the laboratory for simulating actual ground motions to understand the behavior of structures under dynamic loading. Other major equipments include a 100T electronic UTM, a 200T CTM, Servo-control hydraulic jacks, LVDTs, Electrical strain gauges, accelerometers, etc. Sophisticated equipments to perform Non-destructive tests like Ultrasonic pulse wave, Rebound hammer, Permeability, Half-cell potential, Resistivity, Potentiometric Titrator, Resonant frequency, Digital pH meter, Rebar locator, etc are also available and used extensively in various activities. The concrete laboratory, which is also a part of structural engineering laboratory, is equipped with all the equipments required for moderate-scale manufacturing and testing of specimens. Following figures show some of the facilities available in the structural engineering laboratory. The department has procured various state-of-the-art software required for Linear and Nonlinear Analysis of Structures (SAP2000, ABAQUS, ANSYS), Project Planning, Scheduling, Project Control (PRIMAVERA).

### Environmental Engineering Laboratory:

Laser particle size analyzer, Atomic Absorption Spectrophotometer, Ultra-pure water System Ambient, Ambient air pollutant measurement sampler, The fine particulate 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 been procured in the current year.

### Geotechnical Engineering laboratory:

A typical geotechnical engineering laboratory helps in identifying the engineering behavior of geomaterials (soils

and rocks) and byproducts such as fly ash etc. There are different physical, chemical and geotechnical properties determined in the laboratory that is required for identifying the geomaterials. This information is used by geotechnical engineer for designing the type of foundations, earthworks such as dams, embankments, tunnels, reservoirs, pavement subgrades, and specialized applications like waste containment systems. The preciseness of such design is entirely based on the experimental information obtained from a geotechnical laboratory. Therefore, geotechnical engineering laboratory has a great role to play in rendering the subsurface a safe and stable load bearing medium. The laboratory equipped with 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 been procured 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 film oven, TRANSYT, ISIS, HCS software, plate compactor, CBR field apparatus, Driver vision screen tester, Universal Penetrometer for bitumen testing including automatic penetrometer 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 procured in the current year.

### Hydraulic and Water Resources Engineering Laboratory:

The laboratory provides support to both undergraduate and graduate, teaching so that students have the opportunity to see by themselves the essential fluid mechanics principles. The hydraulics laboratory has flumes for undertaking cutting edge research in the area of pipe flow, open-channel flow, sediment transport processes and other dedicated equipments like Venturimeters, Pelton wheel, Kaplan and Francis turbines and Reynold's apparatus. Work is also being carried out in land use and land cover classification, river migration, water-shed delineation, flow accumulation and hill slope hydrology. This lab is also equipped with instruments like DGPS, Spectro-radiometer and Canopy analyzer. Latest software such as Geomatica, MIKE 21C

& CCHE2D have been installed on different computers in the Laboratory to carry out coursework. Infrastructure Engineering and Management Laboratory:

Project Management Laboratory with well-equipped computing facilities along with the state of the art project management and infrastructure planning softwares such as MS Projects, Primavera Project Planner, and Autodesk Revit Building Suite.

**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**

- 01 Hand-held particle counter; Make: MET ONE INSTRUMENTS, USA; Model:GT-521S
- 02 Automatic Macro Block Digestion System; Make: Pelican Equipments, USA; Model: KEL PLUS Automatic Macro (250ml) Block Digestion System
- 03 Research Centrifuge; Make: REMI; Model: R-241
- 04 Micro climate monitoring package; Make:Decagon Devices
- 05 5TM Moisture and Temperature Sensor, 5m cable, stereo connector for use with Decagon loggers, Minidisk Infiltration Kit, MPS-6 Matric Potential and Temp Sensor, 5m cable, stereo connector for use with Decagon loggers and Datatrak 3 graphing software-singl registration code; Make:Decagon Devices

- 06 Electronic Data Acquisition System for The Triaxial Shear Test Equipment; Make: HEICO
- 07 Snow Water Equivalent Recorder; Make: AIMIL
- 08 Digital Water Level Recorder; Make:Virtual Electronics Company
- 09 Dual Head Infiltrometer; Make: Decagon Devices, USA
- 10 Drone (Unmanned Aerial Vehicle) for airborne data acquisition with Tracking device and Mirror Stereoscope; Make: DJI, APPLE, Screen Scope; Model: INSPIRE1, IPAD Air2,
- 11 VideoVBOX PRO 10 Hz GPS Data logger with accessories; Make: RACELOGIC; Model:
- 12 Windows Server

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT**

- Structural Dynamics and Earthquake Engineering • Seismic Strengthening and Retrofitting of Structures
- Structural Health Monitoring, System Identification, and Damage Detection
- Construction Management
- Heavy metal removal and recovery using functionalized polymers in aqueous environment
- Biological treatment of phenolic wastewater
- Air quality model evaluation at traffic intersections in urban environments for regulatory compliance
- Environmental and social impact assessment of landfill and compost facility at Garchuk, Guwahati
- Reinforced soil structures
- Seismic stability of slopes and retaining walls
- Design of offshore foundations
- Seismic soil-structure interaction
- Landslides

**CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. A. Murali Krishna	NESGC 2016	NIT Agartala	22 Oct 2016	National
Dr. A. Murali Krishna	ISSMGE Workshop on Advances in Soil-Structure Interaction and Deep Foundations	Pune	15 Dec 2015	International
Dr. A. Murali Krishna	Indian Geotechnical Conference 2015	COE, Pune	16-18 Dec 2015	National
Dr. A. Murali Krishna	Second Japan-India Workshop in Geotechnical Engineering	Japan	14 Nov 2015	International
Dr. A. Murali Krishna	15th Asian Regional Conference on Soil Mechanics & Foundation Engineering	Japan	9-13 May 2015	International
Dr. Archana M. Nair	Industry Academia meet for geology in Oil Industry	Guwahati	21 Nov 2015	National

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. Arindam Dey	ISSMGE International Joint Workshop of TC207 and TC212 Advances in Soil-Structure Interaction and Deep Foundations	Pune	14 Oct 2015	International
Dr. Arindam Dey	North-East Students GeoCongress on Advances in Civil Engineering (NES GeoCongress 2016)	Agartala	22 Jan 2016	National
Dr. Arindam Dey	Indian Geotechnical Conference (IGC 2015)	Pune	15 Oct 2016	National
Dr. Arindam Dey	Consultation on Preparation of Earthquake Risk Mitigation Framework for the State of Assam organized by ASDMA along with the collaboration of NDMA and NIDM	Guwahati	24 Sept 2015	National
Dr. Arindam Dey	NHIDCL Conference on Key Challenges in Highways and Infrastructure Construction in the North Eastern Region	Guwahati	30 Jul 2015	National
Dr. T. V. Bharat	Indian Geotechnical Conference	Pune	16-19 Dec 2015	National
Dr. Rajan Choudhary	3rd International Conference of the Transportation Research Group of India (CTRG 2015)	Kolkata	17-20 Dec 2016	International
Dr. Suresh A. Kartha	Heap Leach Solutions 2015 (3rd International Conference on Heap Leaching)	Reno, Nevada, U.S.A.	14-16 Sep 2015	International
Dr. Manish Kumar Goyal	Annual International Conference on Sustainability	Shillong	17-19 Mar 2016	International
Prof. Subashisa Dutta	4th India Water Week conference	New Delhi	4-8 Apr 2016	National
Prof. Subashisa Dutta	12th International Conference on Vibration Problems, ICOVP 2015	IIT Guwahati	4-6 Dec 2015	International
Dr. H Shamra	41st Structures Congress (ASCE)	Austin, TX	2009	International
Dr. H Shamra	ICCMS	Chennai	9-14 Dec 2014	International
Dr. H Shamra	SEC	New Delhi	22-24 Dec 2014	International
Dr. Budhaditya Hazra	International Conference on Vibration Problems (ICOVP)	IIT Guwahati	10-15 Dec 2015	International

#### INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Ankit Garg	Green Geotechnics: Use of vegetation for enhancing soil strength	University of Macau	Macau	15 Jun 2015
Dr. Ankit Garg	Use of harmful and waste weed species for enhancing soil strength	University of Macau	Macau	23 Dec 2015
Dr. Ankit Garg	Application of vegetation for enhancing soil strength	South China University of Technology	Guangzhou	19 Dec 2015
Dr. Ankit Garg	Sustainable Geotechnical Engineering	University of Macau	Macau	26 Dec 2015
Prof. Sajal Kanti Deb	Experimental and numerical study on seismic response control of unreinforced masonry test model using U-FREI	BARC	Mumbai	23 Oct 2015
Dr. A. Murali Krishna	Slope Instability and Stabilization aspects for Coastal Cities	Andhra University	Visakhapatnam	5 Mar 2016

<b>Name of Faculty</b>	<b>Name of Lecture</b>	<b>Name of Inst./Org.</b>	<b>Place</b>	<b>Date</b>
Dr. A. Murali Krishna	Geotechnical Concerns in Seismic Analysis of Structures for Earthquake Disaster Mitigation	IGS Bhubaneswar	Bhubaneswar	3 Oct 2016
Dr. A. Murali Krishna	Stone Columns/Granular Piles for Improving the Liquefiable Sites	IIT Roorkee	Roorkee	27 Nov 2016
Dr. A. Murali Krishna	Geocell Reinforced Foundations	NIT Surat	Surat	14 Dec 2016
Prof. Arup Kr. Sarma	Water Management in Tea Industry Under Changing Climate	ABITA Jorhat	Jorhat	20 Feb 2016
Dr. Arindam Dey	Computation in Seismic Geotechnics	IIT Guwahati	Guwahati	27.Feb.2016
Dr. Arindam Dey	Seismic stability of slopes and earth retention structures	Jadavpur University	Kolkata	6.Feb.2016
Dr. Arindam Dey	Earth, Geology and Earthquakes	IIT Guwahati	Guwahati	13.Dec.2015
Dr. Arindam Dey	Slope Stability and Stabilization Techniques	Jorhat Engineering College	Jorhat	8.Dec.2015
Dr. Arindam Dey	Geophysical Investigation and its Role in Geotechnical Engineering	Jorhat Engineering College	Jorhat	9.Dec.2015
Dr. Arindam Dey	Soils and Landslides: Looking Behind the Curtain	PWD Arunachal Pradesh	Itanagar	19.Sep.2015
Dr. T. V. Bharat	Advancements and Opportunities in Geotechnical Engineering	RVR&JC College	Guntur	28 Dec 2015
Dr. Rajan Choudhary	Warm Mix asphalt: A Sustainable Technology in Pavement Engineering	Vivekananda Institute of Technology	Jaipur	21 Dec 2015
Dr. Rajan Choudhary	Importance of Hot Mix Asphalt Mix Design	Swami Keshvanand Institute of Technology Management & Gramothan	Jaipur	18 Jan 2016
Dr. Suresh A. Kartha	Visiting Associate Professor	Asian Institute of Technology	Bangkok	20 Sep-7 Dec 2015
Dr. Budhaditya Hazra	Probabilistic analysis in rocks	IIT-Guwahati	Guwahati	8 Apr 2016
Dr. Manish Kumar Goyal	Some climate change studies at IIT Guwahati	Aristotle University of Thessaloniki, Greece	Thessaloniki	24 Jun 2015
Dr. Bulu Pradhan	Recent Advances in Durability of Concrete	SVNIT Surat	Surat	10 Oct 2015
Prof. Subashisa Dutta	Impact of Climate Change on Floods in Brahmaputra Basin	Cotton College	Guwahati	7 Mar 2016
Prof. Subashisa Dutta	Monsoon Rainfall Driven Fluvial Disasters in Brahmaputra Basin	Kyoto University	Japan	14 Jan 2016
Prof. Subashisa Dutta	Monsoon Rainfall and Flood Generation in Brahmaputra Basin	Kyoto University	Japan	15 Jan 2016
Prof. Subashisa Dutta	Hydrological Modelling for Partially Ungauged Basin: Plot – Scale Experiments and Macro – Scale Hydrological Modelling	Tezpur University	Tezpur	9 Jan 2016

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Subashisa Dutta	Water and Sediment Waves in Braided Brahmaputra River: Scale Issues and Advanced Measurements	IIT Guwahati	Guwahati	6 Dec 2015
Prof. Subashisa Dutta	Stochastic Bank Erosion model for the Brahmaputra River	NIT Warangal	Warangal	5 Sep 2015
Dr. Ajay Kalamdhad	Challenges of Solid Waste Management And Citizens Responsibility for Successful Management	ENVIRON	Guwahati	22 Jan 2016

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

Name	Name of Inst./ Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Deepankar Choudhury	IIT Bombay	Seismic Aspects of Design of Combined Pile-Raft Foundations	28 Dec 2015
Dr. Tribikram Kundu	University of Arizona	Ultrasonic & electromagnetic waves for nondestructive evaluation and structural health monitoring	2 Feb 2016
Prof. Deepankar Choudhury	IIT Bombay	Seismic Aspects of Design of Combined Pile-Raft Foundations	28 Dec 2015
Prof. K. Katsifarakis		GIAN Course	7-11 Mar 2016
Prof. Taiichi Hayashi	Kyoto University, Japan	Applications of observational research on the climate variability in Northeastern Indian Sub-continent	27 Apr 2015
Dr. A. Senthil Kumar	IIRS (ISRO), Dehradun	Earth Remote Sensing: Social Benefits and Challenges	21 Jul 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. Rajan Choudhary	3rd International Conference of the Transportation Research Group of India (CTRG 2015), Kolkata		17-20 Dec 2015	International	350
Dr. Rajan Choudhary	Meeting of Programme Advisory Committee (PAC) on Technology Systems Development Programme (TSDP) of DST	DST, Gol	13-15 Feb 2016	National	60
Dr. Manish Kumar Goyal	Short Term Course	MHRD	7-11 Mar 2016	International	50
Prof. Subashisa Dutta and Dr. Manish Kumar Goyal	Research Opportunities in Hydrology and Water Resources under Climate Change	Ministry of Earth Science, India	3-5 Apr 2015	National	70
Prof. Subashisa Dutta and Dr. Manish Kumar Goyal	Indo – Japan Workshop for Rainfall Disaster and Human Adaptability	(GIAN) MHRD	9 Mar 2016	International	60
Dr. H. Sharma	Impact and Blast Resistant Structures	QIP	23-27 Mar 2015	National	
Dr. Ajay Kalamdhad	Biological Treatment of Solid Waste	TEQIP II, MHRD	8-10 Feb 2016	National	55



**PATENTS**

Name of Faculty and co researcher	Name	Date Applied/Granted	Application No.
B. Hazra, V. Badama, R. Panicker, V. Ryali, V. Rajagopalan, A. Behera	Methods and systems to monitor health of rotor blades	2015	United States Patent Application 20150184536

**AWARDS AND HONOURS**

- Prof. Arup Kumar Sarma: Bimla Prasad Chaliha Chair Professor for Water Resources.
- Prof.Subashisa Dutta : Prof.Subashisa Dutta was elected as Associate Editor for Elsevier Journal(Journal of Hydrology) for the term 2016 – 2018.
- Dr. Arindam Dey received the IGS SOIL-TECH BIENNIAL BEST PAPER AWARD for the work on ‘Shallow Foundations’ for the period 2014-2016. The award has been conferred by Indian Geotechnical Society at Indian Geotechnical Conference (IGC), Pune, India held on 15.10.2016.
- Dr. Manish Kumar Goyal has been awarded prestigious PROVIA Fellowship from United Nations Environment Programme (UNEP)
- Dr. Bimlesh Kumar: Prof. R. J. Garde Research Award-Awarded by the Indian Society for Hydraulics (ISH) for outstanding research in the field of Hydraulics and Water Resources (2015)
- Dr. Abhishek Kumar: Young Associate Award 2015 to Dr Abhishek Kumar from Indian National Academy of Engineers (INAE)
- Dr. Abhishek Kumar: Young Engineer Award 2015 to Dr Abhishek Kumar from Institution of Engineers , India
- Dr. Abhishek Kumar: Young Engineer Award 2015 to Dr Abhishek Kumar from Venus International Foundation, India
- Dr. Budhaditya Hazra: Certificate of recognized reviewer from Mechanical Systems and Signal Processing, Elsevier.

**STUDENTS’ ACHIEVEMENTS**

- Harsha Vardhan, Shubhankar Jha and Vishal kashyap from B.Tech 3rd year (Department of Civil Engineering) were awarded Future HKUST PhD fellow award for a study trip to Hong Kong.
- A research paper from Sanandam Bordoloi (PhD student) with a team of undergraduate students Vishal Kashyap (3rd year), Sameer Parmar (4th year), Shubham Mourya (4th year) was selected among few for India International Science Festival (IISF) held in New Delhi.
- Dhamodharan K, Kalamdhad A.S., 2015. Anaerobic digestion of food waste with different animal dung as inoculum. Proc. International Seminar on Renewable Energy and Sustainable Development, Royal university of Bhutan, Thimphu. (Best student oral presentation)
- Varma, V.S., Kalamdhad, A.S., 2014. Effects of leachate during vegetable waste composting using rotary drum composter. Environmental Engineering Research 19(1), 1-7. (The Korean Society of Environmental Engineers awarded as Most Cited paper in the year 2014)
- Boga Madhulatha, Research Scholar, received the best paper award for “Numerical investigation of failure of reinforced segmental retaining wall” jointly authored by Boga Madhulatha and Arindam Dey at the North-East Students Geo-Congress: NESGC 2016, Agartala.
- Shiv Shankar Kumar, Research Scholar, received the best paper award for “Dynamic response of river bed sands using cyclic triaxial tests” jointly authored by Shiv Shankar Kumar, Arindam Dey and A. Murali Krishna at the Indian Geotechnical Conference (IGC), Pune.

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Barua, Gautam	IIT Kharag-pur	Professor	Flow through porous media
2.	Bharat, Tadikonda Venkata	IISc Banga-lore	Assistant Professor	Behavior of unsaturated soils during infiltration & drainage, Settlement behavior of ultra-soft soils and mine tailings, Con-taminant transport through landfill liners, Mineralogical aspects of clays, Inverse analysis of geotechnical & geoenvironmental engineering problems

Sl. No.	Name	PhD	Designation	Areas of Interest
3.	Bharati, Hrishikesh (Joined on 08.09.2015)	IIT Bombay	Assistant Professor	Hyperspectral and Thermal Remote Sensing, Advance processing and Analyses of High Resolution Images and Spectra for Earth and Planetary Exploration, Optical and Microwave Remote Sensing for Natural Resource Management, Algorithm Development for Advance Image and Spectral Analyses, Geographic Information System and Modeling (3D), Thermal Characterization of Soil and Rocks, Application of Remote Sensing and GIS in Urban Planning, Airborne Remote Sensing (Unmanned Aerial Vehicles) for Mapping and Exploration
4.	Bhattacharjya, Rajib Kumar	IIT Kanpur	Professor	Water Resources System Management, Genetic Algorithms, Artificial Neural Networks
5.	Chakraborty, Arunasis	Trinity College, Dublin, Ireland	Associate Professor	Dynamic and Random Vibration, System identification and damage detection, Wavelet analysis
6.	Chakraborty, Saswati	IIT Bombay	Professor	Water and Wastewater Treatment, Biodegradation of Industrial Wastewater, Removal of Heavy Metals from Wastewater
7.	Choudhury, Rajan	IIT Roorkee	Associate Professor	Pavement Analysis and Design, Highway Construction and Quality Control, Pavement Material Characterization, Pavement Evaluation and Maintenance, Traffic Engineering
8.	Das, Sandip	IIT Kanpur	Assistant Professor	Earthquake Engineering, Structural Dynamics, Random Vibration
9.	Dasgupta, Kaustubh	IIT Kanpur	Assistant Professor	Earthquake Engineering, Design of Reinforced Concrete Structures, Retrofitting of Structures
10.	Dashora, Ajay (Joined on 01.06.2015)	IIT Kanpur	Assistant Professor	Synthetic Simulation, Sensor Calibration, Airborne and Terrestrial LiDAR, Integration of Remote Sensing Technologies, Development of Lumped Parameter Models, Flight Planning, Unmanned Aerial Vehicles (UAVs) for Mapping
11.	Deb, Sajal Kanti	IIT Roorkee	Professor	Passive and semi-active control, Performance based seismic design, System identification & structural health monitoring, Seismic damage assessment
12.	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
13.	Dutta, Anjan	IIT Delhi	Professor	Finite Element Mesh Generation, Optimization, Control, Health Monitoring and Retrofitting of structures
14.	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
15.	Gandhi, Indu Siva Ranjani	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
16.	Garg Ankit	Hong Kong University of Science and Technology	Assistant Professor	Bio-Geotechnology, Soil-Root-Water Interaction
17.	Ghosh, Pranab Kumar	IIT Kharag-pur	Professor	Water treatment for domestic and industrial use, Domestic and Industrial wastewater treatment, Sludge treatment by physico-chemical and biological process
18.	Gokhale, Sha-rad B.	IIT Delhi	Professor	Air Pollution and Environmental Noise
19.	Goyal, Manish Kumar	IIT Roorkee	Assistant Professor	Stochastic Hydrology and Distributed Hydrological Modeling, Hydro-climatology and Statistical Downscaling, Irrigation Management and Crop Modelling Applications, Multivariate Statistical Analysis, Machine Learning Models and Data Mining
20.	Hazra, Budha-ditya	University of Waterloo, Canada	Assistant Professor	Deterministic and Stochastic Structural Dynamics, System Identification, Blind source separation, Time-frequency analysis, Vibration based condition monitoring
21.	Jawed, Mo-hammad	IIT Kanpur	Professor	Biological Processes, Anaerobic Wastewater Treatment, Heavy Metal Removal and Recovery, Water Treatment and Supply, Domestic & Industrial Wastewater Treatment
22.	K., Ravi (Joined on 27.07.2015)	IISc Banga-lore	Assistant Professor	Geo-environmental engineering, Geo-energy systems, Engineering behaviour of unsaturated soils, Research on hazardous waste management
23.	Kalamdhad, Ajay	IIT Roorkee	Associate Professor	Solid waste management, Mechanical composting and vermi-composting, Analysis of solid wastes
24.	Kartha, Suresh A.	IIT Kanpur	Associate Professor	Flow and transport through porous media, Heap leaching, Hydrology, Numerical modelling
25.	Kaushik, Hemant B.	IIT Kanpur	Associate Professor	Earthquake Resistant Design, Nonlinear Behaviour of Structures, Retrofitting of Structures, Finite Element Modeling
26.	Kota, Sri Har-sha	Texas A&M University, College Sta-tion, 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
27.	Kumar, Ab-hishek	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
28.	Kumar, Bim-lesh	IISc Banga-lore	Associate Professor	Small scale studies of mixing tanks, Experimental Studies of Aeration Systems, Sediment Transport analysis, Pipeline analysis, CFD simulation, Surge analysis

Sl. No.	Name	PhD	Designation	Areas of Interest
29.	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
30.	Mallikarjuna, Chunchu	IIT Delhi	Associate Professor	Traffic flow theory and Modeling, Traffic data collection and analysis, Travel demand modeling
31.	Maurya, Akhilesh Kumar	IIT Kanpur	Associate Professor	Driver behavior, Traffic flow theory and modeling, Traffic engineering
32.	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
33.	Murali Krishna, Adapa	IISc Bangalore	Associate Professor	Soil Investigation, Reinforced Soil Structures, Geosynthetics and Ground Improvement, Earthquake Geotechnical Engineering
34.	Nair, Archana M. (Joined on 15.06.2015)	IIT Bombay	Assistant Professor	Petroleum Exploration, Hydrogeology, Environmental Geoscience and remote sensing for geological applications
35.	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
36.	Ryntathieng, Teiborlang L.	IIT Kharagpur	Associate Professor	Pavement Materials, Precast Concrete Block Pavement, Cast In-Situ Concrete Block Pavement
37.	Sarma, Arup Kumar	Gauhati University, Guwahati	Professor	Modelling & simulation in Free Surface Flow, Heuristic Method in Reservoir Optimization, GIS based Watershed Modelling
38.	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
39.	Shelke, Amit Balasaheb	The University of Arizona, USA	Assistant Professor	Ultrasonic wave propagation, Acoustic-Impact detection, Non-destructive testing
40.	Siddagangaia, Anjan Kumar	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
41.	Singh, Arvind Kumar	IISc Bangalore	Professor	Information Technology in Construction Engineering, Object-Oriented Programming, Constitutive modeling
42.	Singh, Balেশwar	IIT Delhi	Professor	Marine Geotechnology, Modelling of Onshore & Offshore Foundations, Soil Stabilization & Ground Modification, Pavement Subgrade & Site Characterization
43.	Singh, Konjengbam Darunkumar	Southampton University	Associate Professor	Structural Analysis and Design, Finite Element Method, Fracture and Fatigue Mechanics
44.	Singh, Laishram Boeing	IIT Madras	Associate Professor	Public Private Partnerships, Risk Management, Construction Management

<b>Sl. No.</b>	<b>Name</b>	<b>PhD</b>	<b>Designation</b>	<b>Areas of Interest</b>
45.	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
46.	Sreeja, Pekkat	IIT Bombay	Associate Professor	Urban Flood Modeling, Modelling and Control of Open Channel Flows, Infiltration and artificial recharge, Stochastic Hydrology, River Mechanics
47.	Talukdar, Sudip	IIT Kanpur	Professor	Structural Dynamics, Bridge Engineering, Wind induced vibration & control, Non destructive techniques

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## The Department at a Glance

**Year of Establishment:** 1995

**Academic Programmes Offered:**

**Bachelor of Technology (BTech)** in

- o Computer Science and Technology

**Master of Technology (MTech)**

**Dual Degree (MTech+PhD)**

**Doctor of Philosophy (PhD)**

**Total Faculty Strength: 30**

- Professor: 9
- Associate Professor: 5
- Assistant Professor: 14
- Honorary Professors: 2

**New Faculty Members Joined: 1**

- Assistant Professor: 1

**Total Student Strength: 566**

BTech: 357

MTech: 102

PhD: 90

MTech+PhD: 17

**New Students Joined in 2015-2016: 163**

BTech: 81

MTech: 50

PhD: 28

MTech+PhD: 4

**LABORATORY FACILITIES**

1. **Open Source Intelligence Group:** The lab focuses on systematic acquisition of data at rest and stream from publicly available multi-modal heterogeneous data sources such as web, news publications, social media, social networks etc., and processing, and deriving actionable intelligence from the acquired data. Major activities of the group include real time event detection and tracking, topic modeling, sentiment analysis, social network analysis, terrorist network analysis.
2. **User-centric Computing and Networking:** The lab focuses on the design and development of applications for computing devices that caters to heterogeneous user groups. The user-centric computing paradigm (otherwise known as the human-computer interaction) is applied in the design of applications used in large-scale content delivery, to ensure good quality of experience to the consumers on heterogeneous devices and networks. The challenges that arise in the development of user-centric networked applications are addressed 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).
3. **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.

4. **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](http://www.iitg.ernet.in/cse/robotics)).

**MAJOR EQUIPMENT AND FACILITIES ACQUIRED**

6 Nos. of DELL Power Edge R430 High Performance Computational Servers with DELL NX 3230 8 TB Network Attached Storage, DELL S 4048-ON 10/40 GbE Open Flow Switch with 1400 Gbps switching speed with Open Flow SDN support.

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT:**

Algorithms; Computational Geometry; Systems Biology (Bio-computing); Bio-inspired Robotics and related algorithms; Intelligent Mobile Agent Based Cyber-physical Systems; Human-Computer Interaction; Speech Processing; Multimedia: Image and Video Processing; Machine Learning; Information Retrieval; Data Mining; Web Mining; Formal Verification; Embedded Systems; Multi-processor Computer Architecture; Real-time Systems; Computer Security; Networks; Distributed Systems.

**CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED: INTERNATIONAL, NATIONAL**

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. T. Venkatesh	8th International Conference on Communication Systems and Networks (COMSNETS)	Bengaluru	6-9 Jan 2016	International
Dr. T. Venkatesh	7th IEEE International Conference on Technology for Education (T4E)	Warangal	10-12 Dec 2015	International
Dr. Arnab Sarkar	29th VLSI Design Conference (VLSID)	Kolkata	4-8 Jan 2016	International
Dr. Arnab Sarkar	19th International Symposium on VLSI Design and Test (VDAT)	Ahmedabad	26-29 Jun 2015	International
Dr. Santosh Biswas	23th Mediterranean Conference on Control and Automation (MED)	Malaga, Spain	16-19 Jun 2015	International
Dr. S. Ranbir Singh	IEEE SocialCom	Chengdu, China	19-21 Dec 2015	International

Name of Faculty	Name of Conf./Workshop	Place	Date	International/ National
Dr. Samit Bhat-tacharya	6th International Conference on Affective Computing and Intelligent Interaction (ACII)	Xian, China	21-24 Sep 2015	International
Dr. John Jose	IEEE 5th International Conference on Advances in Computing and Communications (ICACC)	Kochi	2-5 Sep 2015	International
Dr. John Jose	IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC)	Daejeon, Korea	4-7 Oct 2015	International
Dr. John Jose	International Workshop on Network On chip	Jaipur	11-12 Dec 2015	International
Dr. Aryabarrta Sahu	IEEE/ACM Design Automation and Test in Europe (DATE)	Dresden, Germany	14-18 Mar 2016	International

#### INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. T. Venkatesh	Graph-based Internet Traffic Classification	JNTU Kakinada College of Engineering	Kakinada (A.P)	18 Dec 2015
Dr. T. Venkatesh	Cloud Data Centers: An Overview	Assam Engineering College	Guwahati	12 Mar 2016
Dr. T. Venkatesh	Smartphone Sensing Systems: Challenges of Large Scale Deployment	IIT BHU	Varanasi	18 Feb 2016
Dr. Arnab Sarkar	Energy Aware Proportional Fair Scheduling	IIT Bombay	Mumbai	30 Jun 2015
Prof. S. B. Nair	On Mobile Agents for Bio-inspired cyber physical systems	NCIT	Itanagar	16 Sep 2015
Dr. S. Ranbir Singh	Challenges in building Manipuri TTS	NIT Manipur	Imphal	30 Nov 2015
Dr. S. Ranbir Singh	Opinion Mining from Social Network	MIT Manipur	Imphal	1 Feb 2016
Dr. S. Ranbir Singh	Understanding Object Oriented Concepts	MIT Manipur	Imphal	1 Jan 2016
Dr. S Ranbir Singh	Social Media Analysis	Gauhati University	Guwahati	5 Jan 2016
Dr. John Jose	On-chip interconnection networks: A computer Architecture Perspective	Don Bosco University,	Guwahati	28 Aug 2015
Dr. John Jose	Adaptive Routing in NoC by exploiting memory level parallelism	MNIT Jaipur	Jaipur	11 Dec 2015
Dr. John Jose	Advances in Superscalar Pipelining	Government Engineering College, Barton Hill	Trivandrum	25 Feb 2016
Dr. John Jose	Advanced cache optimization techniques	Government Engineering College, Barton Hill	Trivandrum	29 Feb 2016
Dr. John Jose	Emerging NoC architecture for multicore designs	Government Engineering College, Barton Hill	Trivandrum	1 Mar 2016



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

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Parasara Sridhar Duggirala	University of Connecticut, Storrs, Connecticut, USA	Dynamic Analysis of Cyber-Physical Systems	5 Jan 2016
Dr. Akshat Kumar	Singapore Management University	Automated Planning and Decision Making Using Probabilistic Inference	5 Jan 2016
Prof. Bhargab Bhattacharya	ISI Kolkata	Visiting Faculty	1-31 Jul 2015

**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
Samit Bhattacharya and T. Venkatesh	User-centric Mobile Computing	KIC TEQIP	16-18 Nov 2015	National	15

**AWARDS AND HONOURS**

Dr. T. Venkatesh is appointed as an Adjunct Graduate Faculty of Telecommunications Engineering at the University of Missouri at Kansas City (UMKC), Kansas City, USA since March 2016.

**STUDENTS' ACHIEVEMENTS**

- i. Piyooosh P and Tushar Semwal received TCS Ph.D Fellowship in Jan 2016.
- ii. Young Scientist Award for paper by Biswajit Bhowmick at IEEE TENCON

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Anand, Ashish	Nanyang Technological University, Singapore	Assistant Professor	Machine Learning and applications in Computational Biology, Systems Biology, Evolutionary Algorithms
2.	Awekar Amit C.	North Carolina State University, Raleigh	Assistant Professor	Data Mining
3.	Barua, Gautam	University of California, Santa Barbara	Professor	Distributed Systems, Networks, Operating Systems, Database Management Systems
4.	Baruah, Rashmi Dutta	Lancaster University, United Kingdom	Assistant Professor	Evolving Intelligent Systems, Computational Intelligence, Online Machine Learning, Learning from Data streams
5.	Bhaduri, Purandar	Washington State University, Pullman	Professor	Formal Modeling, Synthesis and Verification of Embedded Systems
6.	Bhattacharya, Samit	IIT Kharagpur	Assistant Professor	Human Computer Interaction, User Modeling, Model Based Evaluation of Interactive Systems, Rehabilitation Engineering
7.	Biswas, Santosh	IIT Kharagpur	Associate Professor	Networking, Fault Tolerance, VLSI Testing, Embedded Systems
8.	Das, Pradip Kr.	Delhi University	Professor	Speech Recognition, Pattern Recognition, Man-Machine Interaction Systems
9.	Deka, Jatindra Kr.	IIT Kharagpur	Professor	Formal Verification, VLSI System Design
10.	Goswami, Diganta (Head of the Department)	IIT Kharagpur	Professor	Software Engineering, Distributed Systems

Sl. No.	Name	PhD	Designation	Areas of Interest
11.	Inkulu, Rajasekhar	IIT-Chicago	Associate Professor	Algorithms, Computational Geometry
12.	Jose, John (Joined on 15.07.2015)	IIT Madras	Assistant Professor	Computer Architecture
13.	K., Benny George	TIFR Mumbai	Assistant Professor	Word Combinatorics, Algorithms and Combinatorics
14.	Kapoor, Heman-gee Kalpesh	London South Bank University, UK	Associate Professor	Formal Verification of Circuits
15.	Karmakar, Su-shanta	IIT Kharagpur	Assistant Professor	Distributed algorithms, fault-tolerance, distributed algorithms for ad hoc and sensor networks
16.	Kesh, Deepanjan	IIT Kanpur	Assistant Professor	Computational Commutative Algebra, Data Streaming
17.	Mitra, Pinaki	Simon Fraser University, Canada	Associate Professor	Computational Geometry, Parallel Algorithms, Randomized Algorithms, Optimization
18.	Nair, Shivashankar B.	Amravati University	Professor	Bio-Inspired Robotics, Intelligent Mobile Agents and Systems and Internet of Thing
19.	Nandi, Sukumar	IIT Kharagpur	Professor	Networks (QoS, Wireless networks), Computer and Network Security
20.	Rao, S. V.	IIT Kanpur	Professor	Computational Geometry, Pattern Recognition, Image Processing
21.	Sahu, Aryabartta	IIT Delhi	Assistant Professor	Advanced Computer Architecture, Multicore Parallel Programming and Compiling, Embedded Systems, VLSI and FPGA Design
22.	Sajith, G.	IIT Kanpur	Professor	Parallel and Distributed Computing
23.	Saradhi, V. Vijaya	IIT Kanpur	Associate Professor	Machine Learning, Kernel Methods and their applications
24.	Sarkar, Arnab	IIT Kharagpur	Assistant Professor	Real-Time and Embedded Systems, Computer Architecture, Algorithms
25.	Shannigrahi, Saswata	TIFR Mumbai	Assistant Professor	Data Structures and Algorithms, Combinatorial Geometry, Analysis of Social networks
26.	Singh, Sanasam Ranbir	IIT Madras	Assistant Professor	Web Search, Machine Learning, Information Retrieval, Data Mining especially in the area of Web Search Engine
27.	Sur, Arijit	IIT Kharagpur	Assistant Professor	Information Hiding: Steganography and Steganalysis. Multimedia Security: Image and Video Watermarking. Network Security: Intrusion Detection System and Network Steganography
28.	Venkatesh, T.	IIT Madras	Assistant Professor	WDM Optical Networks, IP over WDM Networks, Broadband Access Networks, Performance Evaluation of Computer Networks, Network Tomography
<b>Visiting Faculty</b>				
29.	Malhotra, Vishv Mohan (Released on 10.07.2015)		Professor	Modelling and Performance measurements, Robust Environmental Sensor Networks, Operating Systems.

# DEPARTMENT OF DESIGN

The Department at a Glance
<b>Year of Establishment:</b> 1998
<b>Academic Programmes Offered:</b> Bachelor of Design (BDes) Master of Design (MDes) Doctor of Philosophy (PhD)
<b>Total Faculty Strength: 25</b> <ul style="list-style-type: none"> <li>• Professor: 5</li> <li>• Assistant Professor: 19</li> <li>• Visiting Assistant Professor: 1</li> </ul>
<b>Total Student Strength: 295</b> BDes: 172 MDes: 53 PhD: 70
<b>New Students Joined in 2015-2016: 96</b> BDes: 46 MDes: 27 PhD: 23

**LABORATORY FACILITIES**

1. Ergonomics Lab: A well-equipped laboratory with various basic and applied research facilities for both physical and cognitive ergonomics. Facilities available 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.).
2. Photographic Lab
3. Computer Lab
4. Workshop/Design lab
5. Media Lab
6. Material lab

7. Embedded Interaction lab
8. E-Kalpa lab
9. Usability Engineering and HCI Lab
10. Product Design & Development Studio
11. Animation research lab
12. Visualisation lab
13. Sustainability and social Innovation Lab
14. Visual Communication studio

**MAJOR EQUIPMENT AND FACILITIES ACQUIRED:**

Human Vibration Analysis Kit (Hand Arm and Whole Body) [Make: MMF-GERMANY, Model: VM31-H],

Load Cell with its adapter (Make: Delsys-USA; Model No. Trigno S-type)

Mobile respiratory gas analyser, K4b2 INT TX (under DIC project)

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

Name of Author	Name of Conf./Workshop	Place	Date	National/International
Dr. Sougata Karmakar	International conference "MED BY"- Mechanical Engineering & Design	Beer-Sheva, Israel	5-9 Jul 2015.	International
Dr. Sougata Karmakar	International Conference on Humanizing Work and Work Environment 2015 (HWWE 2015)	Mumbai	6-9 Dec 2015.	International
Dr. Pratul Ch. Kalita	TED MINT SCE , Conference and Createam Workshop	Beer Sheva, Israel	7-15 Jan 2016	International
Dr. Charu Monga	India HCI 2015	IIT Guwahati	17-19 Dec 2015	National
Dr. Charu Monga	Academic Research Summit, Innovate for Digital India	Infosys, India	29-30 Jan 2016	National
Dr. Swati Pal	International Conference on Humanizing Work and Work Environment 2015 (HWWE 2015)	IIT Bombay, Mumbai	7-9 Dec 2015	International Conference
Dr. Swati Pal	XXVIIth Annual Conference of the Physiological Society of India (PSI) & VIth Congress of the Federation of Indian Physiological Societies (FIPS) (FIPSPHYSICON-2015)	University of Calcutta, Kolkata	18-20 Dec 2015	National Conference
Dr. Urmi Ravindra Salve	International Conference on HWWE 2015	IIT Mumbai	7-9 Dec 2015	International
Dr. Urmi Ravindra Salve	FIPS PHYSICON 2015	University of Calcutta, Kolkata	18-20 Dec 2015	National
Prof. Pradeep Yammiyavar	E-Assam Challenge- ICT & digital Innovations in Education Learning; April 10, 2015, Guwahati	Guwahati	10 Apr 2015	National
Prof. Pradeep Yammiyavar	UX Now- Annual Design Conference	New Delhi	21 Oct 2015	National

Name of Author	Name of Conf./Workshop	Place	Date	National/International
Prof. Utpal Barua	8th International Painting and Sculpture Symposium	Penza, Russia	3-20 May 2015	International
Prof. Utpal Barua	International Group exhibition at contemporary art gallery	Penza, Russia	18-25 Jun 2015	International
Prof. Utpal Barua	International Symposium at Orta lake	Italy	21-30 Jun 2015	International
Prof. Utpal Barua	International Art exhibition at san Rocco, Milan	Italy	28 Jun-5 Jul 2015	International
Prof. Utpal Barua	International group exhibition at Com-mude di Milano, Milano expo by Palazzi no liberty	Italy	8-25 Aug 2015	International
Prof. Utpal Barua	Silk Journey to Art International Exhibition at Millennium Museum	Beijing, China	1-10 Sep 2015	International

**INVITED LECTURES OF FACULTY: IN INDIA, ABROAD**

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Nanki Nath	Contemporary Graphic Design for M.Des. I year students as part of 'Design: An Introduction'	IIT Guwahati	Guwahati	9 Sep 2015
Dr. Nanki Nath	'Design: a third culture' for B.Des. III year students as part of 'Art Design and Society' lecture series	IIT Guwahati	Guwahati	1 Feb 2016
Dr. Nanki Nath	'Colour Principles in Visual Display Designs' for KIC-TEQIP 3-day national workshop, namely 'Visual Display Design: Scientific Way of Representation'	IIT Guwahati	Guwahati	14-16 Mar 2016
Dr. Sougata Karmakar	Keynote: Ergonomics in Mechanical Engineering & Product Design	Shamoon College of Engineering	Beer-Sheva, Israel	6 Jul 2015.
Dr. Sougata Karmakar	Lead Lecture: Establishing an Ergonomics Research Facility- Indian Context	IIT Bombay	Mumbai	8 Dec 2015
Dr. Sougata Karmakar	Invited talk: Research in Ergonomics in IIT Guwahati	Vishwakarma Institute of Technology	Pune.	3 Feb 2016
Dr. Pratul Ch. Kalita	3D Printing: Crowdsourcing with Online Design Ideation Tool	Shamoon College of Engineering	Beer-Sheva, Israel	14 Jan 2016
Dr. Charu Monga	"Shunaya Toolbox"	Shamoon College of Engineering	Beer Sheva, Israel	10-14 Jan 2016
Dr. Swati Pal	Lecture on 'Ergo-Design and innovation' in TEQIP-II sponsored short-term training program on "Product Development and Value Engineering"	Lukhdhirji Engineering College	Morbi, Gujarat	15-19 Jun 2015
Dr. Swati Pal	Lecture on 'Cognitive Aspects in Visual Display' in KIC-TEQIP workshop on "Visual Display Design: Scientific Way of Representation"	IIT Guwahati	Guwahati	14-16 Mar 2016
Dr. Urmi Ravindra Salve	Fundamentals of Ergonomics	PEC University	Chandi-garh	10 Mar 2016

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Urmi Ravindra Salve	Indian Female Workers: Occupational Health and Design	University College of Science and Technology	Kolkata	19 Dec 2016
Prof. Pradeep Yammiyavar	Augmented reality applications for School textbooks; Invited Presentation	E-Assam	Guwahati	10 Apr 2015
Prof. Pradeep Yammiyavar	Role of Culture in design; Inaugural Address	UX Now-UX Now- Annual Design Conference ,	New Delhi	21 Oct 2015
Prof. Ravi Mokashi Punekar	Cross Cultural Infusion on Product Form – A study of Changsha Pottery and Indian Pottery and Metal ware along the Silk Trade Route from 6th -12th Century	Hunan University	Changsha	29 Jun-2 Jul 2015
Dr. Avinash Shende	Workshop on Form studies	IIT Kanpur	Kanpur	Sep 2015

#### VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANISATIONS / INVITED LECTURES

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Pramod Khambete	5 day workshop on 'Design Research'	Design consultant and Adjunct faculty at IITB	29 Oct-8 Dec 2015
Prof. Pramod Khambete	What is experience design	Design consultant and Adjunct faculty at IITB	21 Mar 2016

#### 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
Co-ordinator: Dr. Urmi Salve Co-ordinator: Dr. Nanki Nath	Visual Display Design: a Scientific way of Representation	KIC-TEQIP, Centre for Educational Technology (CET), IIT Guwahati (an MHRD initiative for IITs)	14-16 Mar 2016	National	14
Udaya Kumar, Pratul Ch. Kalita, Pankaj Upadhyaya, Supradip Das, Abhishek Shrivastava, Charu Monga, Jagdish Kumar	ABHILASHA- Design Education and Career Guidance	Design Innovation Centre, IIT Guwahati	2 Feb 2016	National	Over 500 school children and teachers
Charu Monga	Animation and Game Design (short term course)	NID, Ahmadabad	24 Jul-2 Aug 2015	National	20
Charu Monga	Design of self Assistance robots for healthcare (workshop)	TED MINT 2016, Shamoon College of Engineering, Beer Sheva, Israel	10 Jan-14 Jan 2016	International	10
Dr. Urmi Ravindra Salve	Visual Display Design: Scientific way of Representation	CET TEQIP	14-16 Mar 2016	National	15
Ravi Mokashi Punekar and Pankaj Upadhyay	Creative Learning Methods in Technical Education	TEQIP , CET	10-15 Nov 2014	National	26

**AWARDS AND HONOURS**

1. Dr. Sougata Karmakar received membership from International Commission on Occupational Health (ICOH).
2. Ms. Charu Monga received Microsoft Faculty Research Grant Award 2015.
3. Ms. Swati Pal chaired the session of 'Biomechanics' at the International Conference on Humanizing Work and Work Environment 2015 (HWWE 2015), IIT Bombay, in December 2015.
4. Ms. Swati Pal chaired the 'Oral Presentation V' session at the XXVIIth Annual Conference of the Physiological Society of India (PSI) & VIth Congress of the Federation of Indian Physiological Societies

(FIPS) (FIPSPHYSICON-2015), University of Calcutta in December 2015.

**STUDENTS' ACHIEVEMENTS**

1. Mr. Anirban Chowdhury, PhD scholar, received 'Springer Young Researcher Award (Doctoral)' from Indian Society of Ergonomics (ISE) during international conference HWWE2015.
2. Gunjan Sobhani, Anmol Srivastava, Himanshu Bansal, Mannu Amrit (guided by Prof. Pradeep Yammiyavar) won the SAMSUNG Innovation Finalist Award, 2015.
3. Eight students from the Department were selected for the prestigious TED MINT 2016 conference at SCE Israel from 10-14 January 2016.

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Banarjee, Sharmistha	-	Assistant Professor	Design for sustainability, Bio-inspired design, Medical product Design
2.	Barua, Utpal (Head of the Department)	IIT Guwahati	Professor	Graphic Design, Design drawing and Visualisation, Visual design Principles and applications, Indian Symbology
3.	Bokil, Prasad	IIT Bombay	Assistant Professor	Visual Language, Design Semiotics, Graphic Design, Type Design, Design Research, Design ontology
4.	Chakrabarti, Deb Kumar	Calcutta University	Professor	Ergonomics Research, Human Compatibility Factor, Design ergonomics, product Environment Interface Design, Occupational Health
5.	Das, Amarendra Kumar	IIT Guwahati	Professor	Industrial Design, Rapid Prototyping and tooling, space Design, Environment Graphics, Design for Disabled
6.	Das, Supradip	-	Assistant Professor	Origami Inspired Product Development, Toy for tomorrow, Paper Craft, Transformable furniture, Structural packaging design.
7.	Kumar, D. Udaya	IIT Bombay	Assistant Professor	Topography, Type Design, Information Graphics, Motion Graphics, design Research, Exhibition Design, architecture
8.	Gokhale, Sheetal M.	-	Assistant Professor	Film & Video story, telling & visual scripting, Animation, Graphic Design
9.	Iqbal, Shareka	-	Assistant Professor	Adaptive Reuse, Solar Passive Architecture
10.	Kalita, Pratul Chandra	IIT Guwahati	Visiting Assistant Professor	Design Management, Design Method, Design for Development
11.	Karmakar, Sougata	Bharathiar University, Coimbatore	Assistant Professor	Ergonomics, Human Factor, Design and work Environment, Design and Occupational health
12.	Kumar, Jagadish (Released on 15.03.2016)	-	Assistant Professor	Visual arts-Painting & sculpture, Print making Lithography, Woodcut, New media art, Video art sound art, Folk art tribal art studios.
13.	Madhukailya, Mriganka	-	Assistant Professor	Short Film, New Media theory, Video Art, Documentary Film, Participatory Theory

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



# DEPARTMENT OF ELECTRONICS AND ELECTRICAL ENGINEERING

## The Department at a Glance

**Year of Establishment:** 1995

**Academic Programmes Offered:**

**Bachelor of Technology (BTech)** in

- o Electronics and Communication Engineering,
- o Electronics and Electrical Engineering

**Master of Technology (MTech)** in

- (1) Signal Processing,
- (2) VLSI,
- (3) Power and Control,
- (4) Communication Engineering,
- (5) RF and Photonics

**Dual Degree [MS (Eng) + PhD]**

**Doctor of Philosophy (PhD)**

**Total Faculty Strength: 42**

- Professor: 11
- Associate Professor: 7
- Assistant Professor: 22
- Visiting Professor: 1
- Visiting Assistant Professor: 1

**New Faculty Members Joined: 4**

- Assistant Professor: 4

**Total Student Strength: 505**

BTech: 185

MTech: 109

PhD: 199

MS+PhD: 12

**New Students Joined in 2015-2016: 151**

BTech: 42

MTech: 66

PhD: 31

MS+PhD: 12

## LABORATORY FACILITIES

The Department of EEE has 22 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):** The Power Systems Laboratory is well-equipped with several experimental setups and several software packages for real time experiments. The facilities include overcurrent, under voltage and differential relays. The major equipments in the Power Systems Laboratory include—Relay Demonstration Setup: IDMT over current relay, Instantaneous over current relay, IDMT under voltage relay, Current transformer, Negative sequence relay, Differential relay. The lab has softwares like PSS/E, PSCAD, DigSilent, etc.
2. **Electrical Machine Lab (Instructional):** The machine lab is equipped with all kinds of AC and DC motors and generators required for undergraduate lab session (EE380) and research activities in the field. For the better understanding of control of various motors lab also has braking and drive modules for some motors.
3. **Electronic Circuit Lab- I (Instructional)**
4. **Electronic Circuit Lab-II (Instructional):** The Electronic Circuits Lab – I & II mainly hold basic electronics lab for first year undergraduate students of all the departments. The labs are equipped with large number of set ups each containing cathode ray oscilloscope, function generator, digital multimeter, and multioutput DC power supply. The labs are well-stocked with electronic components like resistors, capacitors, diodes, transistors, analog and digital ICs. Experiments performed in the lab cover hardware design and implementation of basic circuits which include rectifiers, transistor characteristics, comparators, combinational logic circuits, synchronous and asynchronous counters, latches, and opamp circuits.
5. **Control & Instrumentation Lab-I (R&D):** The Control and Instrumentation Laboratory I focus on the research and development activities related to Control Theory and Applications, Stochastic Systems, Robotics, Ultrasonic Instrumentation, Underwater Acoustics etc. Some of the current areas of interest include Robust and Adaptive Control theory, Relay Control Theory and Applications, Mobile Robotics and Multi-Agent Systems, MEMS and SAW Devices, Fractional Order Systems. Discrete Event Systems. Laboratory infrastructure includes personal computers for research scholars and a number of experimental set-ups, namely, Mobile Robot Platforms, Multi DOF manipulator, Twin Rotor MIMO System, Inverted Pendulum Systems, Level Control System.
6. **Control & Instrumentation Lab-II (Instructional):** The Control and Instrumentation Lab II is the instructional laboratory used for lab courses such as control and instrumentation lab (UG), and applied control lab (PG). The laboratory has work benches equipped with advanced test and measurement instruments like 200 MHz DSO, DDS function generator, 5½ digit DMM, multioutput DC power supply, and PC. The lab is equipped with large number of transducers for measurement of physical quantities like temperature, displacement, level, force and strain, in addition to PLC, process calibrator, hot chamber, coupled tank system, motor speed control system and other facilities for instructional laboratory. The students instruction is focused to learn the design and implementation of signal conditioning circuits and controllers like PID.
7. **System Simulation Lab (Instructional):** The System Simulation Laboratory is a fully computerized laboratory equipped with highly configured PCs and various computational and simulation software like Matlab 7.3, Borland C++, FPGA Advantage from Mentor Graphics, Xilinx's ISE foundation, Zeland's IE3D EM simulation SW, Altera's Quartus webpack, Electronics Workbench, MicroSim Design Lab (EDA software), Cadstar PCB Design, Elanix's Systemview, HP-Eesof, Hypersignal and Operating System such as HP Unix, Sun Solaris, Redhat Enterprise Linux, Microsoft windows 2003 and windows 2000/XP.
8. **Embedded System Lab (Instructional):** Microprocessors and Embedded Systems Laboratory provides students with hands-on experience with building, programming, testing, and debugging processor based systems. For example, systems that students build may incorporate audio and various input devices. It is an instructional laboratory. Lab courses like Digital Signal Processors Lab, Digital Circuits and Microprocessors Lab and Embedded Systems Lab are held here.
9. **High Frequency Lab (Instructional + R&D):** High Frequency Laboratory at EEE, IIT Guwahati is research cum teaching laboratory. Research works are carried out in the area of antennas, computational electromagnetics and microwave engineering. Lab courses like Microwave Engineering Lab, Communication Lab, Design Lab, etc. are held in HF Lab.
10. **Power & Control Lab (R&D):** Research and Development Activities related to Power & Control areas are conducted in this lab. The Research Scholars, MTech/ Btech and Project Engineers working in these areas use this laboratory.
11. **Communication and Networking Lab (R&D):** Research and Development Activities related to Communication & Networking areas are conducted. The Research Scholars, Mtech/ Btech and Project Engineers working in these areas use this laboratory.
12. **Multimedia Analytics Lab (R&D):** This Laboratory was set up in the department of Electronics

and Electrical Engineering (EEE), Indian Institute of Technology (IIT) Guwahati during July, 2013. The lab focuses on the research and development activities related to multi-modal (video, speech and text) analytics and applications of machine learning in vision and robotics.

**13. Communication Lab-I (R&D):**

**14. Communication Lab-II (R&D):** Research Scholars working in different communication related areas use this lab.

**15. Image & Signal Processing Lab (R&D):** Image Processing is one of the prominent fields in signal processing area. Digital data in the form of an image is most common in mundane life and hence image processing is inevitable in everyone's life. The major areas of image processing which are of great interest in research in our laboratory are image compression, medical image processing, video processing, pattern recognition etc.

**16. VLSI Lab-I (R&D):** VLSI design lab was setup in the year 2004 as an integral part of the department of Electronics and Electrical Engineering (EEE). Followed by commencement of PG(M.Tech) and Ph.D. programme in the field of VLSI design subsequently. Ever since its inscription the VLSI lab has constantly been upgraded to match with the technologies of the modern era. The VLSI library integrated with the lab helps the students, researchers and all enthusiasts to acquire all the much needed concepts to deal with different practical experiments. The focus of this lab is widely spread towards different pros and cons of the entire upgrading VLSI domain. Development works at different levels like semiconductor device simulation, circuits & system design and research in some recent trends like Biomedical signal processing has extensively been carried out.

**17. VLSI-ADSP & Communication Lab (R&D):** The Department has set up a sophisticated DSP & Communication Laboratory with the state-of-the-art equipment from Analog Devices and Texas Instruments, and Real Time DSP Software from Hyperception Inc. The Department has also received a donation from Analog Devices Inc. consisting of hardware kits and Visual DSP software.

**18. Signal Informatics Lab (R&D):** Research and Development Activities related to Security & Document Processing areas are conducted here. The Research Scholars, Mtech/ Btech and Project Engineers working in these areas use this laboratory.

**19. Electro-Medical & Speech Lab (R&D):** The Lab was set up during 2004. The laboratory focuses on the research and development activities related to biomedical signal and image processing, speech signal processing, coding and technology areas. Some of the current topics of interest include speech enhancement,

speaker recognition, children speech recognition, speech synthesis, stressed speech processing, fundus image processing, ECG signal processing, biometrics and handwriting data processing.

**20. Image Processing and Computer Vision Lab (R&D):**

The ongoing major activities in the Image Processing and Computer Vision (IPC) Laboratory include music signal processing, histopathology image processing, denoising, video processing, image superresolution, image forensic, computer vision, image hashing, Gesture Recognition and HCI

**21. Power Electronics Lab (Instructional):** The lab has started functioning from August 2015. It contains the major facilities required to perform undergraduate and postgraduate experiments related to power electronics. In addition, design of power electronic hardware, implementation of prototype and testing can be performed in the lab. DSP and FPGA controllers for power electronics applications also can be tested.

**22. HPC and FPGA Design Lab (R&D):** High Performance Computing and FPGA Lab (HPC and FPGA Lab) was established in 2012 at Department of Electronics and Electrical Engineering, IIT Guwahati with initial support from IIT Guwahati and Nvidia. The work at HPC & FPGA Lab is focused towards exploring possibilities of high performance computing and FPGA based system design in various fields related to Electrical Engineering and Scientific Computing in non-electrical engineering disciplines. The mission of the group is to carry out multidisciplinary research in reconfigurable, parallel and distributed computing as a basis for long-term partnership and collaboration amongst industry, academia, and government; focus on research in advanced computer architectures, algorithms, networks and systems, both theoretical and applied; to carry out state-of-the-art research and development with collaborators with maximized synergy and pooled, leveraged resources. Being an educational institute, to enrich the education of high-quality students, has been the first priority. In turn, focus is to contribute knowledge and technologies in this field.

**MAJOR EQUIPMENT AND FACILITIES ACQUIRED:**

- 1 NI Multisim Software
- 2 Arbitrary Function Generator (NVIS, NVIS1025DGT)
- 3 a) 20KVA Online UPS, Make: Eaton, Model: EDX20K4E  
b) 15KVA Online UPS, Make: Eaton, Model: E-Series DX  
c) 10KVA Online UPS, Make: Orion, Model: Astra Series  
d) 20KVA Three Phase Isolation Transformer, Make: Orion  
e) 150KVA Three Phase Isolation Transformer, Make: Orion
- 4 Monochrome Multifunction Unit for Copy, Print and Scan
- 5 Triple Output DC Power Supply (Sairush, MOPS04)
- 6 Oscilloscope, Make: Tektronix, Model: TDS2014C

- 7 a) Setup of 3 HP/415V – Delta Connected Slip Ring Induction Motor coupled with 3 HP/220V/1500 RPM/ DC Shunt Motor along with Encoder
- b) 3 PH Diode Rectifier + 3PH 4 Leg IGBT Based Inverter Stack
- c) High Voltage PFC Developer's Kit
- 8 Rotary Inverted Pendulum
- 9 Coupled Tank System
- 10 Variable Output Liner DC Power Supply along with standard accessories as per OEM catalog (Aplab, L12825)
- 11 CarSim Software

#### 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, Relay Based Identification and Auto tuning, Control Systems, Control Theory Applications, Electrical machine design, contactless charging system for EVs, Pattern Recognition, Machine Learning, Multimedia Analytics

#### MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT

##### Major initiatives:

- i. A prototype for contactless charging system for EVs.
- ii. Development of a smart urban transportation system

#### CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/ International
Dr. Prithwijit Guha	The 5th National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG 2015)	IIT Patna	16–19 Dec 2015	National
Dr. Sonali Chouhan	21st Asia-Pacific Conference on Communications (APCC)	Kyoto Japan	13-16 Oct 2015	International
Dr. R. S. Kshetrimayum	22nd National Conference on Communications	IIT Guwahati	4-6 Mar 2016	National
Dr. R. S. Kshetrimayum	5th IEEE Applied Electromagnetics Conference	IIT Guwahati	Dec 2015	International
Dr. R. S. Kshetrimayum	IEEE International Conference on Digital Signal Processing	Singapore	Jul 2015	International
Dr. R. S. Kshetrimayum	IEEE International Conference on Electronics, Computing and Communication Technologies	Bangalore	Jul 2015	International
Dr. R. K. Sonkar	IEEE Workshop on Recent Trends in photonics 2015	IISc Bangalore	Dec 2015	International
Dr. Kalpana Dhaka	22nd National Conference on Communications	IIT Guwahati	4-6 Mar 2016	National
Dr. M. K. Bhuyan	IEEE International Conference on Wireless Communications Signal Processing and Networking (WiSPNET 2016)	Chennai	23-25 Mar 2016	International
Dr. Praveen Kumar	IEEE PESGM 2015	Denver, Colorado, USA	26-30 July 2015	International
Dr. Praveen Kumar	IECON 2015	Yokohama, Japan	9-12 Nov 2015	International

**INVITED LECTURES OF FACULTY: IN INDIA, ABROAD**

<b>Name of Faculty</b>	<b>Name of Lecture</b>	<b>Name of Inst./Org.</b>	<b>Place</b>	<b>Date</b>
Dr. Gaurav Trivedi	Make in India and Rural North-East: The Challenges	NIRD&PR-NERC	Guwahati	25-26 Feb 2016
Prof. Roy Paily	Introduction to Silicon nanometer Technologies	College of Engineering Vadakara	Vadakara, Kerala	14 Dec 2015
Prof. Roy Paily	Introduction to Junctionless Transistors	IIT Guwahati	Guwahati	11 Dec 2015
Prof. Roy Paily	The Opportunities and Challenges of Silicon based Field Effect Transistors	Government Engineering College Kozhikode	Kozhikode	31 Oct 2015
Prof. Roy Paily	Analog Circuits Design	NIT Arunachal Pradesh	Arunachal Pradesh	21-22 Sep 2015
Prof. S. Majhi	a) Identification of Dynamic Models of Plants, b) KIC-TEQIP Short Term Course on Advanced Process Control	IIT Guwahati	Guwahati	10-12 Feb 2016
Prof. R. Bhattacharjee	Communication System Simulation using Simulink	IIT Guwahati	Guwahati	12 Apr 2015
Prof. R. Bhattacharjee	a) Offset Reflector Antennas and matched feed Design b) Antennas for wireless communication: Handset Antennas	NIT Silchar	Silchar	18-22 May 2015
Prof. R. Bhattacharjee	Technology in aid of Policing	East India Regional Workshop on Smart Policing	Police HQ Guwahati	7 May 2015
Prof. R. Bhattacharjee	Antenna Design Considerations for Next Generation Wireless Communication System	Government Engineering College, Ajmer, Rajasthan	Rajasthan	2 Jun 2015
Prof. R. Bhattacharjee	Trends in Wireless Communication and Networks	Tripura University	Tripura	2 Aug 2015
Prof. R. Bhattacharjee	Next Generation Wireless Communication Systems: Prospects and challenges	NIT Meghalaya	Meghalaya	7-8 Aug 2015
Dr. R. K. Sonkar	KIC-TEQIP Short Term Course on Advances in Photonics	IIT Guwahati	Guwahati	25-26 Feb 2016
Dr. Amitabh Chatterjee	High Current Physics in Smart Power Devices and GaN structures	IISc Bangalore	Bangalore	4-7 Dec 2015
Dr. Shabari Nath	Power Electronics for Solar PV Applications	IIT Guwahati	Guwahati	23-27 Nov 2015
Dr. Shabari Nath	Power Electronics for Renewable energy	IIT Guwahati	Guwahati	2-6 Mar 2015
Dr. Praveen Kumar	Trends in EVs and HEVs	Osmania University	Hyderabad	23-28 Nov 2015
Dr. Praveen Kumar	Smart transportation system	Delhi Technical University	Delhi	6-7 Nov 2015

**VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANISATIONS / INVITED LECTURES**

<b>Name</b>	<b>Name of Inst./Univ./Org.</b>	<b>Purpose/ Name of Lecture</b>	<b>Date</b>
Mr. Amit Rajee	Aartech Solonics Limited, Bhopal	Talk on Entrepreneurial Opportunities in the Power Sector	7 Jul 2015

<b>Name</b>	<b>Name of Inst./Univ./Org.</b>	<b>Purpose/ Name of Lecture</b>	<b>Date</b>
Dr. Kailash Srivastava	ABB Corporate Research Lab, Vasteras, Sweden	Deliver Talk	17 Sep 2015
Mr. V. V. Pathy	Keysight Technologies Pvt. Ltd., Bangalore	In connection with E&ICT Academy Collaboration	15-16 Sep 2015
Ms. Sadiya Arshad and Mr. Balachander	Coreel Technologies Pvt. Ltd., Bangalore	In connection with E&ICT Academy Collaboration	16-18 Sep 2015
Dr. Amit Mishra	University of Capetown, USA	Interaction with Faculty and Students of EEE Dept.	29 Sep-4.Oct 2015
WG CDR Prince Dedaraj SG CDR Umang Kumar	Indian Air Force	Discussion Regarding Air Force Projects Based on IOT/AR	14-15 Oct 2015
Tom Murakami	Inspeclnc, Japan	In connection with Research Collaboration	18-20 Nov 2015
Mr. Samik Basu	Coreel Technologies Pvt. Ltd., Bangalore	In connection with E&ICT Academy Collaboration	23-24 Nov 2015
Prof. Raj Mittra	University of Central Florida, USA and King Abdulaziz University, Saudi Arabia	Plenary Talks in connection with AEMC-2015	18-21 Dec 2015
Dr. Goutam Chattopadhyay	Jet Propulsion Laboratory, Pasadena, CA, USA	Plenary Talks in connection with AEMC-2015	18-21 Dec 2015
Dr. D. V. Giri	Pro-Tech, and Univ. of New Mexico, USA	Plenary Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. T. K. Sarkar	Syracuse University, USA	Plenary Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. Magdalena Salazar Palma	CarlesIII University, Madrid, Spain	Plenary & Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Eric L. Mokole	Consultant, Burke, VA, USA	Plenary Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. Ramakrishna Janaswamy	University of Massachusetts, Amherst, USA	Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. K. T. Selvan	SSN College of Engineering, India	Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. Debatosh Guha	IIT Kharagpur	Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. Mohanan	Cochin University of Science and Technology, Kerala	Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Dr. Rajib Kumar Mitra	S.N. Bose National Centre for Basic Sciences, Kolkata	Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Prof. Deb Chatterjee	University of Missouri at Kansas City (UMKC), KC, MO, USA	Invited Talks in connection with AEMC-2015	18-21 Dec 2015
Dr. P. H. Rao	SAMEER, Chennai	Conference Tutorial in connection with AEMC-2015	18-21 Dec 2015
Prof. R. Janaswamy	University of Massachussetts, Amherst, USA	Conference Tutorials in connection with AEMC-2015	18-21 Dec 2015
Dr. Sumantra Dutta Roy and Dr. Chetan Arora	IIT Delhi	In connection with TEQIP Workshop	4-8 Feb 2016

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Samar Saha	IEEE, EDS	Deliver Talks	22-25 Feb 2016
Mr. Sanjay Deshmane	Small Scale Industry Organization, Maharashtra	In connection with collaboration with IIT Guwahati	25-28 Feb 2016
Prof. Emeritus A. J. Paulraj	Stanford University, USA	Plenary Talks in connection with NCC-2016	1-5 Mar 2016
Prof. B. Mukharjee	University of California, Davis	Plenary Talks in connection with NCC-2016	1-5 Mar 2016
Prof. P. Vijay Kumar	IISc Bangalore	Plenary Talks in connection with NCC-2016	1-5 Mar 2016
Prof. R. K. Mallik	IIT Delhi	Invited Talks in connection with NCC-2016	1-5 Mar 2016
Prof. S. Chaudhuri	IIT Bombay	Invited Talks in connection with NCC-2016	1-5 Mar 2016
Prof. B. Sundar Rajan, Prof. C. Sekhar	IISc Bangalore	Conference Tutorials in connection with NCC-2016	1-5 Mar 2016
Dr. S. Shailendra	TCS Bangalore	Conference Tutorials in connection with NCC-2016	1-5 Mar 2016

**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
General Chairs: Ratnajit Bhattacharjee, Goutam Chattopadhyay (Jet Propulsion Laboratory, California Institute of Technology)	5th IEEE Applied Electromagnetics Conference (AEMC-2015) <a href="http://www.iitg.ernet.in/aemc2015/index.html">url:http://www.iitg.ernet.in/aemc2015/index.html</a>	CST ANSYS ENTUPLES DRDO	18-21 Dec 2015	International	250
General Chair: Ratnajit Bhattacharjee; General Co-chair: Rohit Sinha	Twenty Second National Conference on Communications : NCC 2016 ( <a href="http://www.iitg.ernet.in/ncc2016/index.html">http://www.iitg.ernet.in/ncc2016/index.html</a> )	NI MATHWORKS & MELMAX ALTAIR & FEKO CAPTRONIC SYSTEMS	4-6 Mar 2016	National	250
Coordinator: Ratnajit Bhattacharjee	Institute Lecture: A Brief History of Three Ideas in Signal Estimation, Localization and Transmission Speaker: Arogyaswami Paulraj, Professor Emeritus (Research), Department of Electrical Engineering Stanford University Stanford Ca 94305 USA	IIT Guwahati	3 Mar 2016		300
Coordinator: R. K. Sonkar	TEQIP Short Tem Course on Advances in Photonics	MHRD	25-26 Feb 2016	National	15

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
Co-Convener: R. K. Sonkar	South Asian Workshop on Optics and Photonics - SAWOP2015	UNESCO	17-18 Nov 2015	International	250(approx)

### PATENTS

Sl. No.	Name of Faculty and Co-Researcher	Name	Date Applied/ Granted	Application No.	Remarks
1	Sai Krishna Santosh G. and Harshal B. Nemade,	Edge reflection type surface acoustic wave devices on silicon substrate	5 June 2015	633/KOL/2015	Published and awaiting examination.

### AWARDS AND HONOURS

#### Dr. Chandan Kumar

- Awarded the Alexander von Humboldt Research Fellowship.
- Received "POSOCO Power Systems Award" for Doctoral Work in the year 2016.
- Received top reviewer for the journal Sustainable Energy, Grids and Networks (SEGAN) published by Elsevier group for year 2015.

#### Dr. Gaurav Trivedi

Paper (Satyabrata Dash, Krishna Lal Baishnab and Gaurav Trivedi, "Applying River Formation Dynamics to Analyze VLSI Power Grid Networks", 29th International Conference on VLSI Design and 15th International Conference on Embedded Systems (VLSID), Jan. 2016, Kolkata, pp. 258-263) had got honorable mentioned award in VLSI Design 2016 at Kolkata.

#### Dr. R. S. Kshetrimayum

- IETE M. Rathore Memorial Award 2015
- Associate Editor: IET Journal of Engineering, 2016
- Editor: Transactions on Internet and Information Systems (Korean Society for Internet Information), 2016.
- Area Editor: AEU International Journal of Electronics and Communications (Elsevier), 2016.

- Editorial board member, International Journal of RF and Microwave Computer-Aided Engineering (Wiley), 2015.

### STUDENTS' ACHIEVEMENTS:

- Received student best oral paper award by Deepak Joshi (co-authors Satyabrata Dash, R. Bhattacharjee, Gaurav Trivedi), for the paper "A method of analog circuit optimization using adjoint sensitivity analysis", Radioelectronika 2015 April 21-22, 2015 Pardubice.
- Received best paper award by Ankit Dalal, Mohammed Ansari and Praveen Kumar, Minoru Kikuchi, Kohei Yamaguchi and Hideki Iwanaga, "Analytical Method for Accurate Determination of Nonlinear Magnetization Curve of Induction Motor", INDICON 2015.

### SPECIAL MENTION

#### a) S. Majhi

- Member, Research Committee, National Institute of Technology Meghalaya, Shillong, Meghalaya, March 2016-continuing.
- Member, Board of Governing, Central Institute of Technology, Kokrajhar, Assam, July 2015-continuing

#### b) S.K. Bose

- Appointed Guest Professor, Soochow University, China, Jan 1, 2016 to Jan 1, 2019

### FACULTY MEMBERS

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Adda, Ravindranath	IIT Kanpur	Assistant Professor	Power Electronics, Distributed Generation, and Power Quality
2.	Ahamed, Shaik Rafi	IIT Kharagpur	Associate Professor	Adaptive Signal Processing, Mobile Communications, VLSI Signal Processing, Biomedical Signal Processing
3.	Bhattacharjee, Ratnajit	Jadavpur University	Professor	Electromagnetics, Microstrip Antennas, Microwave Engineering, Wireless Communication



Sl. No.	Name	PhD	Designation	Areas of Interest
4.	Bhuyan, Manas Kamal	IIT Guwahati	Associate Professor	Image and Video Processing, Computer Vision, Pattern Recognition and Human Computer Interactions (HCI)
5.	Bora, Prabin Kumar	IISc Bangalore	Professor	Image Processing and Computer Vision
6.	Bose Sanjay Kumar	Stony Brook, USA	Professor	Modeling, Simulation and Analysis of Communication Networks
7.	Chatterjee, Amitabh	University of California	Visiting Assistant Professor	Devices
8.	Chouhan, Sonali	IIT Delhi	Assistant Professor	Wireless Sensor Networks, Coding Theory, Wireless Communications
9.	Dandapat, Samarendra	IIT Kanpur	Professor	Signal Processing, Speech Processing, Biomedical Signal & Image Processing, Biomedical Instrumentation
10.	Das, Samarjit	IISc Bangalore	Assistant Professor	Information theory, Error correcting codes
11.	Dhaka, Kalpana	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.	Ganguly, Sanjib (Joined on 10.06.2015)	IIT Kharagpur	Assistant Professor	Power distribution system planning and optimization, Distributed generation, Custom power devices, Evolutionary algorithms, Multi-objective optimization
13.	Gogoi, Anup Kumar	IIT Kanpur	Professor	Electro Magnetics, Microwave Engineering, RF circuits, System Design
14.	Guha, Prithwijit	IIT Kanpur	Assistant Professor	Computer Vision, Machine Learning, Robotics
15.	Jacob, Tony	IIT Kanpur	Assistant Professor	Statistical Signal Processing and Information Theory
16.	Kar, Indrani	IIT Kanpur	Associate 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
17.	Karthik, Kannan	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
18.	Krishnaswamy, Srinivasan	IIT Bombay	Assistant Professor	Control Systems, Cryptography
19.	Kumar, Chandan (Join on 27.07.2015)	IIT Madras	Assistant Professor	Smart Transformer Application in Power System, Grid Connected Converters and Microgrid, Power Quality Improvement using STATCOM, DVR, UPQC, Predictive Control of Power Converters, Parallel Operation of Voltage Source Converters

Sl. No.	Name	PhD	Designation	Areas of Interest
20.	Kumar, Praveen	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
21.	Mahanta, Anil (Joined on 21.09.2015)	IIT Delhi	Assistant Professor	Digital Signal Processing, High-speed VLSI structures for Signal Processing & Communication
22.	Mahanta, Chitrlekha <b>(Head of the Department)</b>	IIT Delhi	Professor	Control System Theory and Applications, Control of Nonlinear Uncertain Systems, Artificial Intelligence based Control, Identification and Control of Nonlinear Systems
23.	Majhi, Somanath	University of Sussex, Brighton, UK	Professor	Relay Based Identification and Auto tuning, Control Systems, Control Theory Applications
24.	Mallajosyula, Arun Tej (Joined on 14.09.2015)	IIT Kanpur	Assistant Professor	Photovoltaics, Large Area Electronics, Organic and Organic-Inorganic Hybrid Semiconductor Devices and Layered 2D Materials
25.	Nallam, Nagarjuna	IIT Delhi	Assistant Professor	Analog and RF integrated circuits
26.	Nath, Shabari	University of Minnesota	Assistant Professor	Power Electronics, Application of Power Electronics to Power Systems
27.	Nayak, Sisir Kumar	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
28.	Nemade, Harshal B.	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
29.	Palathinkal, Roy Paily	IIT Madras	Professor	VLSI and MEMS
30.	Prasanna, S. R. Mahadeva	IIT Madras	Professor	Speech and Signal Processing
31.	Rai, Brijesh Kumar	IIT Bombay	Assistant Professor	Communication Systems, Coding Theory
32.	Rajesh, A.	IIT Kanpur	Associate Professor	Coding and Modulation Techniques
33.	Rather, Zakir Hussain (Released on 28.12.2015)		Assistant Professor	
34.	Sahambi, J. S. (On lien)	IIT Delhi	Associate Professor	Digital Signal Processing, Wavelets, Microprocessors
35.	Sethi, Amit	Illinois, UIUC	Assistant Professor	Computer Vision, Image Processing, Pattern Recognition, Image Processing, Visual Perception
36.	Shekhawat, Hanumant Singh	University of Twente, The Netherlands	Assistant Professor	System Theory, Applied Mathematics & Signal Processing

<b>Sl. No.</b>	<b>Name</b>	<b>PhD</b>	<b>Designation</b>	<b>Areas of Interest</b>
37.	Shrestha, Govinda Bol	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
38.	Singh, Kshetrimayum Rakesh	NTU Singapore	Associate Professor	Electromagnetic Band Gap, Filters, Metamaterials, Computational Electromagnetics and Periodic Structures
39.	Sinha, Rohit	IIT Kanpur	Professor	Speech and Audio Processing, Speech Recognition, Signal Processing
40.	Sonkar, Ramesh Kumar	IIT Kanpur	Assistant Professor	Optoelectronics Device Characterization and fabrication, Microelectronics and III-V Compound Semiconductors, Photonics Integrated Circuits, Integrated Optics Fiber Optics Communication
41.	Sundaram, Suresh	IISc Bangalore	Assistant Professor	Pattern Recognition, Image / Video Processing and Computer Vision
42.	Tripathy, Praveen	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
43.	Trivedi, Gaurav	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

## The Department at a Glance

**Year of Establishment:** 1998

**Academic Programmes Offered:**

**Master of Arts (MA)** in

- o Development Studies

**Doctor of Philosophy (PhD)**

**Total Faculty Strength: 27**

- Professor: 7
- Associate Professor: 11
- Assistant Professor: 9

**New Faculty Members Joined: 3**

- Assistant Professor: 3

**Total Student Strength: 125**

MA: 49

PhD: 76

**New Students Joined in 2015-2016: 48**

MA: 27

PhD: 21

**LABORATORY FACILITIES**

**Language-Cognition Lab:** The lab is engaged in research in language from a cognitive science perspective. We explore the relationship of human language with cognition, with culture as a possible third angle through studies of language processing in various domains.

**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 lab would like to start a modern academic research lab which is focused on the way speech is produced and comprehended. 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.

**The Sleep and 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:**

- i. E-views 9.0 Enterprise Edition
- ii. Trinocular Ore Microscope
- iii. Stata SE 11 Upgrade
- iv. Photocopier Konica Minolta bizhub 363
- v. Mini Laptop HP 5 noes
- vi. GSR module
- vii. HP Workstation
- viii. 2 Led Displays 55"
- ix. HP Desktop 12 noes

**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. Faculties and doctoral students pursuing research within these disciplines have been engaged in teaching and research. Major areas of research include Dalit literature, Marathi literature, North-Eastern Archeology and Heritage Management, Common Wealth Literature, Aesthetics, Cultural Studies, Ecocriticism and Translations, Development Economics, Industrial Economics, Labour Economics, Phenomenology and Cognitive Science, Phenomenology and Religion, Ethical Issues related to Science and Technology, Organizational Behaviour, Human Resource Management, Social/Environmental Psychology, I-O Psychology, Literary and Cultural Theory, Microeconomics, Agricultural Economics, Environmental Economics, Econometrics, Philosophy of Technology, Applied Philosophy, Peace Studies, Critical Thinking, Applied Ethics, Philosophy of Education, Phonological theory with special interest in Optimality Theory, vowel harmony, Experimental approaches to Phonology and its acquisition, Social & Environmental History of Assam, Sociology of Science, Historical Sociology, Cognitive linguistics, Endangered and lesser known languages, Language typology, Sociolinguistics, Sleep and Information Processing, Macroeconomics, Applied Game Theory, Sociology of Gender, Sociology of Law, Sociology of Communication, Socio-economic understanding of climate risk and resilience, Urban Living and Sustainable cities, Development Economics, Informal Sector, Issues in Food Security and Social Security, Economics of Education, Identity issues of ethnic minorities, local governance, development policies, social movements, ethnic violence and conflict prevention, Health and Clinical Psychology, Phonetics, Phonology, Acoustic Phonetics, Tibeto-Burman tones, Psychoacoustics, Perception, Public Economics, Dynamic Economic Theory, Christianity, conversion, ethnic violence, kinship and family, urban issues, Socio-economic history.

**MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT****Initiative:**

**HSS Graduate Research Meet 2015 during 30.10.2015-01.11.2015:** 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 field work.

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

<b>Name of Faculty</b>	<b>Name of Conf./Workshop</b>	<b>Place</b>	<b>Date</b>	<b>National/International</b>
Dr. Amarjyoti Mahanta	2nd International Conference on South Asian Economic Development	New Delhi	18-19 Feb 2016	International
Dr. Amarjyoti Mahanta	Public Economics Theory and Policy	IIT Guwahati	8-9 Jan 2016	National
Prof. Archana Barua	Annual conference of the International Society for Environmental Ethics (ISEE)	Christian-Albrechts-University, Kiel, Germany	22-25 Jul 2015.	International
Prof. Archana Barua	Bargeet : The Existential Link between the Profane and the Sacred	AITT(Arunachal Institute of Tribal Study)	28-30 Mar 2016	National
Prof. Arupjyoti Saikia	Reframing the Environment: Resources, Risk & Resistance in Neoliberal India	University of Mumbai	21-22 Jan 2016	National
Prof. Arupjyoti Saikia	IHOPE Annual Meeting	Uppsala University	Oct 2015	International
Prof. Arupjyoti Saikia	Writing Assamese Literary History	Dibrugarh University	Mar 2016	National
Dr. Avishek Parui	ICPR Teachers' Meet on "The Crisis of Multiple Identities in the Contemporary World"	IIT Guwahati	15-17 Feb 2016	National
Dr. Bodhisattva Sengupta	Workshop in Economics (Invited Lecture)	Limerick, Ireland	17-19 Aug 2016	International
Dr. Bodhisattva Sengupta	IIPF	Dublin	20-23 Aug 2016	International
Dr. John Thomas	Gender and Politics: Rhetoric and Applicability	ICFAI University, Dima-pur	11-12 Feb 2016	National
Prof. M. K. Dutta	17th Annual Conference of International Network for Economic Research (INFER), UK	University of Bedfordshire, Luton, UK	21-23 May 2015	International
Prof. M. K. Dutta	International Conference on Water Resource Management	St. Anthony's College, Shillong, Meghalaya	4-5 Nov 2015	International
Prof. M. K. Dutta	17th Annual Conference of North Eastern Economic Association (NEEA)	Rajiv Gandhi University, Itanagar Arunachal Pradesh	30-31 Oct 2015	National
Dr. Mithilesh Kumar Jha	Reconsidering Cultural Ideologies and Identities in India and Beyond	Delhi	17-18 Mar 2016	International
Dr. Mithilesh Kumar Jha	Ways of Seeing: Critical Questions on Indian Political Thought	ZHDC, Delhi	8 Mar 2016	National
Dr. N. Kipgen	Second International Conference on Contemporary Debates in public Policy and Management	IIM Calcutta, Kolkata	15-17 Jan 2016	International
Dr. N. Kipgen	Dialogues Across Fault lines of Territory & Peoples: Bridging State, Nation, Ethnicity in North East	IIC Annexe, New Delhi	11-12 Dec 2015	National
Dr. Pahi Saikia	Paper presented at the New Zealand Political Science Association	Wellington, New Zealand	30 Nov-2 Dec 2015	International
Dr. Priyankoo Sarmah	ICPhS18	Glasgow	10-14 Aug 2015	International
Dr. Priyankoo Sarmah	INTERSPEECH2015	Dresden	6-10 Sep 2015	International

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Dr. Priyankoo Sarmah	LAMAS5	Semarang	2-3 Sep 2015	International
Dr. Priyankoo Sarmah	ICOLSI37	New Delhi	15-17 Oct 2015	International
Dr. Priyankoo Sarmah	NEILS9	Tezpur	5-8 Feb 2016	International
Dr. Priyankoo Sarmah	WISP2015	Hyderabad	12 Dec 2015	National
Dr. Priyankoo Sarmah	WISSAP2016	Chennai	8-11 Jan 2016	International
Dr. Rajshree Bedamatta	National Seminar on Climate Change, Agriculture and Food Security: Issues and Challenge	Berhampur, Odisha	19-20 Oct 2015	National
Dr. Rajshree Bedamatta	Food Security and Nutrition: Linkages with Agriculture in India	Institute for Human Development, New Delhi	23 Dec 2015	National
Dr. Rajshree Bedamatta	National Seminar on Poverty, Inequality and Health in India with Special Reference to North-East India	North Eastern Hill University, Shillong	8-10 Oct 2015	National
Prof. Rohini Mokashi-Punekar	Language as Contestation: Jotiba Phule's Interventions in the Bilingual Public Sphere of 19th century Maharashtra	University of Harvard	17-20 Mar 2016	International
Dr. S. Mallick	40th Annual Meeting of the Society for Social Studies of Science (4S)	Denver, Colorado, USA	11-14 Nov 2015	International
Dr. S. Mallick	41st ISS All India Sociological Conference	KIIT University, Bhubaneswar	27-29 Dec 2015	National
R. Shukla and Dr. S. Mallick	Biofuels and Bioenergy: International Conference and Exhibition	MANIT, Bhopal	23-25 Feb 2016	International
M. Kumari and Dr. S. Mallick	Governance, Development and the State in Contemporary Times	Tezpur University	10-12 Mar 2016	National
Prof. S. Borbora	the 4th International Interdisciplinary Business-Economics Advancement Conference (IIBA)	Las Vegas, Nevada, USA	26-29 May, 2015	International
Prof. S. Borbora	Conference on Look (Act) East Policy and North east India	Guwahati	25 Sep 2015	National
Prof. S. Borbora	17th Annual conference of NEEA	Rajiv Gandhi University, Itanagar	30-31 Oct 2015	National
Dr. Sukanya Sharma	Oral Tradition: Continuity and Transformation	Shillong	1-4 Feb 2016	International

**INVITED LECTURES OF FACULTY: IN INDIA, ABROAD**

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Archana Barua	An attempt at re-defining Caste, Tribe and Gender in 15th century Assam from the Neo-Vaishnavite Bhakti perspective of Mahapurush Srimanta Sankaradeva and its emphasis on democratisation of Bhakti	Gauhati University	Guwahati	23-25 Apr 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Archana Barua	Philosophy as Art, Metaphor and Poetry: Some Glimpses From the Upanishads	Pandu College	Guwahati	11 Nov 2015
Prof. Archana Barua	Some Thoughts on International Women's Day-2016	Nowgong Girls' College	Nowgong	8 Mar 2016
Prof. Archana Barua	East–West Perspectives on Environmental Issues: Some Philosophical Reflections	Dispur college	Guwahati	14 Dec 2015
Prof. Arupjyoti Saikia	Boats on the Brahmaputra: Nature and Human Imagination Before Steamers (Srikant Dutta Memorial Lecture)	Nehru Memorial Museum and Library	New Delhi	16 Apr 2016
Prof. Arupjyoti Saikia	The River, the Floodplains, and Modern Assam: An Environmental History of the Brahmaputra, First Srutidev Goswami Memorial Lecture	Dibrugarh University	Dibrugarh	14 Mar 2016.
Prof. Arupjyoti Saikia	Commodities, Border and Citizens: Assam, 1947-50	Indian Institute of Advanced Studies	Shimla	Jul 2015
Prof. Arupjyoti Saikia	Wild Plants, Mosquito and Malaria: An Environmental Essay on Assam Tea Plantations	IIT Madras	Chennai	Aug 2015
Dr. Avishek Parui	Literature, Storytelling and Memory Studies: Research Possibilities	EFLU Hyderabad	Hyderabad	11 Sep 2015
Dr. Avishek Parui	Literary Studies, Memory Studies and Cognitive Psychology: A Methodical Approach to Interdisciplinary Research	Hyderabad Central University	Hyderabad	8 Sep 2015
Dr. Avishek Parui	Narrating the Memory Machine: Remembrance and Storytelling in Haruki Murakami's Norwegian Wood and Jennifer Egan's A Visit from the Goon Squad	IIT Hyderabad	Hyderabad	12 Sep 2015
Dr. Avishek Parui	Literature, Storytelling and the Remembering Mind	Presidency University	Kolkata	4 Mar 2016
Dr. Debarshi Das	Profitability in India's Organized Manufacturing Sector: The Role of Technology, Distribution and Demand	University of Massachusetts, Amherst	Amherst, USA	Apr 2015
Dr. Dilwar Hussain	Coping with the stress	North Eastern Police Academy	Umsaw, Meghalaya	1 Oct 2015
Prof. M. K. Dutta	Social Dynamics of Poverty and Conflict: Issues of Land Reform and Livelihood	Gauhati University	Guwahati	28 Dec 2015
Prof. M. K. Dutta	Rural Conflict: Issues of Development and Challenges	Gauhati University	Guwahati	28 Dec 2015
Prof. M. K. Dutta	Project Proposal, Funding and Documentation	Gauhati University	Guwahati	15 Feb 2016
Prof. M. K. Dutta	Indicators of Sustainable Development	IIT Guwahati	Guwahati	11 Mar 2016
Prof. M. K. Dutta	Survey Research	IIT Guwahati	Guwahati	15 Mar 2016
Dr. Mithilesh Kumar Jha	Hermeneutics in the Research Method Course for PhD Scholars in Social Science	IIT Guwahati	Guwahati	22 Mar 2016
Dr. Priyankoo Sarmah	Language Maintenance and Shift: The Assam Sora Perspective	University of Diponegoro	Semarang, Indonesia	2 Sep 2015
Dr. Priyankoo Sarmah	Analyzing Tonal Features of Tibeto-Burman Languages	SSN College of Engineering	Chennai	9 Jan 2016



Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Priyankoo Sarmah	Phonetics of Northeastern Languages: New Challenges for Speech Technology	IIT Hyderabad	Hyderabad	12 Dec 2015
Dr. S. Mallick	Epistemology	NIT Rourkela	Rourkela	20 Feb 2016
Prof. S. Bor-bora	Recent trends in Social Science Research	OKDSCR	Guwahati	20 Jul 2015
Prof. S. Bor-bora	Women in Development	HPB Girls' College	Golaghat	25 Aug 2015
Prof. S. Bor-bora	Governance and Intuitional Reforms	17th Annual Conference of NEEA	Itanagar	30 Oct 2015

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

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Mahesh Rangarajan	Ashoka University	Nature and Nation (Suryya Kumar Bhuyan Memorial Lecture)	6 Apr 2015
Rana P. Behal	Delhi University	ONE HUNDRED YEARS OF SERVITUDE: Political Economy of Tea Plantations in Colonial Assam	15 May 2015
Amit R. Baishya	University of Oklahoma	Looking East: Melodramatic Narrative, Ecotheater and the Representation of the "Forgotten Long March" in Jangam	3 Jun 2015
Prof. Sharad Deshpande	Tagore Fellow at the Indian Institute of Advanced Study, Shimla.	Enjoying Life	12 Jun 2015
Dr. Indranil Dutta	EFLU Hyderabad	Static and dynamic models of formant transitions towards coronal place categorization in Malayalam	28 Jul 2015
Dr. Yahia Mahmoud	Lund University, Sweden	Modernization, Development Studies and Modernity	6 Aug 2015
Paul Wallace	University of Missouri	The 2014 Elections A Year Later: Modi the Modernizer or Hindu Extremist?	20 Sep 2015
Diana Archangeli	University of Hong Kong & University of Arizona	Ultrasound Technology in Language Research	13 Oct 2015
Prof. Stephen Stich	Rutgers University, USA	The Geography of Philosophy: Exploring Cultural Differences; and Cultural Universals in Philosophical Intuitions & Concepts	11 Feb 2016
Indranil Das Gupta	Software programmer and activist, founder-member of the Ankur Bangla Group (Linux Localization BN_IN)	Free/Libre Software - The story of the wandering minstrel, turned pariah, turned the ultimate come-back rockstar of the history of computing	21 Mar 2016
Prof. M. Asaduddin	Jamia Millia Islamia University, New Delhi	Conjectures on World Literature and Comparative Literature	26 Feb 2016

**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
Mrinal Kanti Dutta, Convener	National Workshop on 'Time Series Econometrics'	Indian Econometric Society and ICSSR, NE Region	6-10 Jul 2015	National	56

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National	No. of participants
Avishek Parui	Language, Literature and Cognition	KIC, CET, IIT Guwahati	25-27 Nov 2015	National	30
Bodhisattva Sengupta (Co-convener) with M K Dutta	Workshop on Time Series Econometrics	ICSSR/TIES	5-8 Jul 2016	National	55
Bodhisattva Sengupta	Workshop in Public Economics: Theory and Policy	ICSSR	8-9 Jan 2016	National	12
Bodhisattva Sengupta (with Dilwar Hussain)	TEQIP workshop in Basic Statistical Methods using SPSS	TEQIO	30 Mar-1 Apr 2016	National	10
Debarshi Das (co-organiser)	Workshop in Public Economics: Theory and Policy-2016	ICSSR	8-9 Jan 2016	National	12 (presenters)
Dilwar Hussain and B. Sengupta	KIC-TEQIP workshop on Basic statistical tests and data analysis using SPSS	MHRD	30 Mar-1 Apr 2016	National	10
Rajshree Bedamatta	KIC-TEQIP Workshop on "Sustainability Issues in the Human Development Framework"	MHRD	10-11 Mar 2016	National	20
N. Kipgen and S. Mallick	Ten-Day Research Methodology Programme for PhD Students in Social Sciences	ICSSR, New Delhi	14-23 Mar 2016	National	65
Sukanya Sharma (co-organiser)	The Crisis of Multiple Identities in Contemporary World"	Indian Council of Philosophical Research	15-17 Feb 2016	National	50
N. Kipgen (Course Director)	Ten-Day Research Methodology Programme for PhD Students in Social Sciences	ICSSR, New Delhi	14-23 Mar 2016	National	65
V.Prabhu (Co-convener)	Teacher's Meet	Indian Council of Philosophical Research, New Delhi	17-19 Feb 2016	National	25
Arupjyoti Saikia	Graduate Research Meet, 2015	ICSSR, NRL, OIL	Oct 2015	National	70

#### AWARDS AND HONOURS

1. Archana Barua, The Heinrich Böll Foundation ([www.boell.de/en](http://www.boell.de/en)) partial travel grants, to join the ISEE conference in Kiel, Germany, July 23 to Aug 5 2015 at Keil, Germany on the International Society for Environmental Ethics (ISEE) in Environmental Ethics: Between Action and Reflection .
2. Arupjyoti Saikia, Srikant Dutta Book Award, Nehru Memorial Museum and Library, New Delhi, 2015 for *A Century of Protests: Peasant Politics of Assam since 1900* (Routledge, 2014).
3. Arupjyoti Saikia, Member, Scientific Steering Committee, Integrated History and future of People on Earth, Uppsala University (IHOPE) [[ihopenet.org](http://ihopenet.org)].
4. M. K. Dutta, Best Joint Research Paper Prize, 17th Annual Conference of International Network for Economic Research (INFER), University of Bedfordshire, Luton, UK, May 21-23, 2015
5. S. Mallick, Visiting Scholar, Centre for Studies in Science Policy, Jawaharlal Nehru University, New Delhi, 28 March – 27 April 2016

#### STUDENTS' ACHIEVEMENT

- Ms. Violeena Deka, research scholar, visited the University of Kiel (Christian-Albrechts-Universität zu Kiel, CAU), Germany, in July 2015 to deliver an invited lecture at the department of Philosophy.

**SPECIAL MENTION**

- S. Mallick, External Examiner, PhD Thesis, Department of Sociology, University of Hyderabad, Hyderabad, November 2015.
- S. Mallick, External Member, Committee on Courses for PG Programme in Social Work, Krishna Kanta Handiqui State Open University, Guwahati, 16 February 2016.
- S. Mallick, Referee, Technology in Society (Elsevier), March 2016.
- S. Mallick, External Examiner, Upgradation from UGC-JRF to SRF, Department of Sociology, University of Hyderabad, Hyderabad, March 2016.
- V.Prabhu, Visiting fellow, Centre for studies in philosophy, Dibrugarh University, 6-12 March 2016
- V.Prabhu, Member, Institutional Animal Ethics Committee (IAEC), Cotton College State University (CCSU), March 2016

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
	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 (Retired on 29.02.2016)	Gauhati University	Professor	Commonwealth Literature, Aesthetics,Cultural Studies, Ecocritism and Translation
4.	Basu, Devapriya (Joined on 30.10.2015)	Jadavpur University	Assistant Professor	Literature and culture of sixteenth century England, early modern women's writing, feminist literary theory, early modern English manuscript studies, textual and bibliographical studies, book history, physical and digital archives, digital humanities, TEI-XML, web technologies
5.	Borbora, Saundarjya	Gauhati University	Professor	Development Economics, Industrial Economics, Labour Economics
6.	Bedamatta, Rajshree	University of Calcutta	Associate Professor	Development Economics, Informal Sector, Issues in Food Security and Social Security, Economics of Education
7.	Chatterji, Basudev (Released on 31.12.2015)	Cambridge University	Visiting Professor	Economic history, Intellectual history of India – late 19th and 20thcenturies, Focus on Ramakrishna, Aurobindo, Tagore and Gandhi.
8.	Das, Debarshi	Jawaharlal Nehru University	Associate Professor	Development Economics, Macroeconomics, Applied Game Theory
9.	Das, Liza	Dibrugarh University	Professor	Literary and Cultural Theory
10.	Dutta, Mrinal Kanti	Gauhati University	Professor	Agricultural Economics, Environmental Economics, Development Economics
11.	Hussain, Dilwar	IIT Kanpur	Assistant Professor	Health and Clinical psychology
12.	Jha, Mithilesh Kumar (Joined on 22.09.2015)	University of Delhi	Assistant Professor	Political Thought in Comparative Perspective particularly Indian and Western Political Thought, PoliticalTheory, Indian Politics especially Language and related Issues of state formations in Modern India.
13.	Kashyap, Naveen	IIT Bombay	Associate Professor	Sleep and Information Processing
14.	Mahanta, Amarjyoti (Joined on 16.12.2015)	Jawaharlal Nehru University	Assistant Professor	Industrial Organization, Auction Theory, Dynamics Economics (adjustment processes)
15.	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.

Sl. No.	Name	PhD	Designation	Areas of Interest
16.	Mallick, Sambit	University of Hyderabad	Associate Professor	Sociology of Science, Historical Sociology
17.	Punekar, Rohini Mokashi	Gujarat University	Professor	Research Interests: Culture and Translation Studies, Modern British Literature, Indian Writing in English
18.	Kipgen, Ngamjahao	IIT Delhi	Assistant Professor	Environmental Sociology, Cultural Politics, Traditional Governance, Oral History
19.	Parui, Avishek	Durham University, UK	Assistant Professor	Critical Theory; Masculinity Studies; Literature, Cognitive Psychology and Philosophy of Mind
20.	Ray, Sawmya	University of Hyderabad	Associate Professor	Sociology of Gender, Sociology of Law, Sociology of Communication
21.	Saikia, Arupjyoti <b>(Head of the Department)</b>	University of Delhi	Professor	Social & Environmental History of 19th and 20th century Assam.
22.	Saikia, Pahi	McGill University, Canada	Assistant Professor	Identity issues of ethnic minorities, local governance, development policies, social movements, ethnic violence and conflict prevention.
23.	Sarmah, Priyankoo	University of Florida, Gainesville	Associate Professor	Phonetics, Phonology, Acoustic Phonetics, Tibeto-Burman tones, psychoacoustics, perception
24.	Sharma, Sukanya	Deccan College PG and Research Institute	Associate Professor	Archaeology of Northeast India, Colonial history of Assam, Cultural Policy
25.	Sengupta, Bodhisattva	McGill University	Assistant Professor	Public Economics, Dynamic Economic Theory
26.	Som, Bidisha	Jawaharlal Nehru University	Associate Professor	Cognitive linguistics, Endangered and lesser known languages, Language typology, sociolinguistics.
27.	Thomas, John	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
28.	Tripathi, Nachiketa	IIT Kanpur	Professor	Organizational Behaviour, Human Resource Management, Social/Environmental Psychology, I-O Psychology.
29.	Venkataraman, Prabhu	Pondicherry University	Associate Professor	Philosophy of Technology, Applied Philosophy, Peace Studies, Critical Thinking, Applied Ethics, Philosophy of Education.
30.	Vijaykrishnan, K. G. (Released on 08.01.2016)		Visiting Professor	

# DEPARTMENT OF MATHEMATICS

The Department at a Glance
<b>Year of Establishment:</b> 1995
Academic Programmes Offered: Bachelor of Technology (BTech) in <ul style="list-style-type: none"> <li>o Mathematics and Computing</li> </ul> Master of Science (MSc) in <ul style="list-style-type: none"> <li>o Mathematics and Computing</li> </ul> Doctor of Philosophy (PhD) in <ul style="list-style-type: none"> <li>o Mathematics and Computing</li> </ul>
Total Faculty Strength: 33 <ul style="list-style-type: none"> <li>• Professor: 11</li> <li>• Associate Professor: 7</li> <li>• Assistant Professor: 15</li> </ul> New Faculty Members Joined: 1 <ul style="list-style-type: none"> <li>• Assistant Professor: 1</li> </ul>
Total Student Strength: 359 BTech: 199 MSc: 84 PhD: 76
New Students Joined in 2015-2016: 106 BTech: 43 MSc: 42 PhD: 21

**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:**

- (a) 16:1 CCTV set
- (b) Konika-Minolta high end printer

- (c) 30 KVA UPS system
- (d) 2 nos. of Workstations
- (e) Heavy duty ADF scanner
- (f) Upgradation of 25 nos. of desktop to Lenovo AIO desktop

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT:**

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

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

Name of Faculty	Name of Conf./Workshop	Name of Inst./Org.	Date
Dr. Arup Chattopadhyay	Complex Geometry and Operator Theory	Indian Statistical Institute, Bangalore Centre	1-3 Dec 2015
Dr. Bikash Bhattacharjya	International Conference on Graph Theory and its Applications	Amrita College of Engineering, Coimbatore	16-19 Dec 2015
Prof. Natesan Srinivasan	International Conference on Computational Heat and Mass Transfer (ICCHMT 2015)	NIT, Warangal	30 Nov-2 Dec 2015
Prof. Natesan Srinivasan	Recent Trends of Mathematics and its Applications	Rajiv Gandhi University, Itanagar	6-7 Nov 2015
Prof. Rafikul Alam	Numerical linear algebra, Matrix theory, Differential-algebraic equations, and Control theory	Technical University, Berlin	5-9 May-2015
Prof. Rajen Kumar Sinha	International Conference on Vibration Problems	IIT Guwahati	14-17 Dec 2015
Prof. Rajen Kumar Sinha	Post Graduate Level Training Programme on Differential Equations	IIT Kanpur	13 May-4 Jun 2015
Prof. Rajen Kumar Sinha	Summer School on Current Research in Finite Element Methods	IIT Bombay	24 Jun-17 Jul 2015
Prof. Rajen Kumar Sinha	Teachers Enrichment Workshop	IIT Guwahati	14-19 Dec 2015
Dr. Shreemayee Bora	Numerical Algebra, Matrix Theory, Differential-Algebraic Equations and Control Theory	Berlin, Germany	6-9 May 2015
Dr. Siddhartha P. Chakrabarty	National Seminar on Recent Developments in Mathematics and Its Applications	University of Kalyani	21-22 Jan 2016
Dr. Siddhartha P. Chakrabarty	STC in Recent Advances in Financial Economics and Computational Techniques	Gauhati University	3-9 Mar-2016
Dr. Siddhartha P. Chakrabarty	The Indo-French Centre for Applied Mathematics (IFCAM) Summer School on Applied Mathematics	Indian Institute of Science, Bangalore	29 Jun-15 Jul 2015
Prof. Sukanta Pati	Teachers Training Camp	IIT Guwahati	4-9 Jan 2016
Prof. Sukanta Pati	Training Programme in Mathematics 2015	NISER, Bhubaneswar	25 May-8 Jun 2015
Prof. Swaroop Nandan Bora	60th Annual Congress of Indian Society of Theoretical and Applied Mechanics	MNIT Jaipur	16-19 Dec 2015
Prof. Swaroop Nandan Bora	8th International Congress on Industrial and Applied Mathematics	Beijing, China	10-14 Aug 2016

Name of Faculty	Name of Conf./Workshop	Name of Inst./Org.	Date
Prof. Swaroop Nandan Bora	International Conference on Vibration Problems	IIT Guwahati, Guwahati	14-17 Dec 2015
Prof. Swaroop Nandan Bora	National Seminar on Recent Trends of Mathematics and its Applications	Rono Hills, Arunachal Pradesh	6-7 Nov-2015
Dr. Vinay Wagh	COCOA 2016	IIT Gandhinagar	22-26 Feb 2016

**INVITED LECTURES OF FACULTY: IN INDIA, ABROAD**

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Bikash Bhat-tacharjya	Perfect State Transfer on Graphs	Amrita College of Engineering	Coimbatore	18 Dec 2015
Prof. Jiten Chandra Kalita	Symmetry, the Mathematical Way!	Darrang College	Tezpur	4 Jul 2015
Prof. Jiten Chandra Kalita	Spiral growth in nature	Darrang College	Tezpur	4 Jul 2015
Prof. Jiten Chandra Kalita	Mathematical modelling of love	Gauhati University	Guwahati	19 Nov 2015
Prof. Jiten Chandra Kalita	Critical points and vortical structures in 3D separated flow	IIT Guwahati	Guwahati	17 Dec 2015
Prof. Jiten Chandra Kalita	Critical points and vortical structures in 3D lid driven cavity flow	TIFR Bangalore	Bangalore	21 Dec 2015
Prof. Jiten Chandra Kalita	Critical points and vortical structures in 3D lid driven cavity flow	Technical University Delft	Delft, Netherlands	12 Feb 2016
Prof. Jiten Chandra Kalita	Critical points and vortical structures in 3D lid driven cavity flow	Technical University Delft	Delft, Netherlands	15 Feb 2016
Prof. Jiten Chandra Kalita	Unsteady separation leading to secondary and tertiary vortex dynamics: sub-alpha and sub-beta phenomena	Technical University Delft	Delft, Netherlands	19 Feb 2016
Prof. Jiten Chandra Kalita	Moffatt vortices in the lid-driven cavity flow	Technical University Delft	Delft, Netherlands	19 Feb 2016
Prof. Jiten Chandra Kalita	Critical points and vortical structures in 3D lid driven cavity flow	KTH Royal Institute of Technology	Stockholm, Sweden	23 Feb 2016
Dr. P.A.S. Sree Krishna	Short Term Course on Recent Advances in Financial Economics and Computational Techniques	Gauhati University	Guwahati	5 Mar 2016
Dr. P.A.S. Sree Krishna	Advanced Instructional School in Differential Topology (2015)	North-East Hill University	Shillong, Meghalaya	15-19 Jun-2015
Prof. Rajen Kumar Sinha	Variational Methods	IIT Kanpur	Kanpur	18 May-4 Jun 2015
Prof. Rajen Kumar Sinha	Finite Element Methods for Heat Equations	IIT Bombay	Mumbai	24 Jun-17 Jul 2015
Prof. Rajen Kumar Sinha	Approximation of functions, Numerical Differentiation and Integration	IIT Guwahati	Guwahati	14-19 Dec 2015
Prof. Rajen Kumar Sinha	A Posteriori Error Analysis of Finite Element Method for Parabolic Interface Problems	IIT Guwahati	Guwahati	14-17 Dec 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Rajen Kumar Sinha	FEM for Parabolic Interface Problems	Defence Institute of Advanced Technology	Pune	15 Jan 2016
Dr. Shreemayee Bora	Structured Perturbations & Distance Problems	Institute for Mathematics: Technical University of Berlin	Berlin, Germany	6-May 2015
Dr. Shreemayee Bora	5 lectures on Fundamentals of Linear Algebra in the NBHM Teacher Enrichment Workshop	IIT Guwahati	Guwahati	15-19 Dec 2015
Dr. Siddhartha P. Chakrabarty	Portfolio Optimization and Capital Asset Pricing	Indian Institute of Science	Bengaluru	29 Jun-15 Jul 2015
Dr. Siddhartha P. Chakrabarty	Jump-Diffusion Model and Best Fit for SENSEX and NIFTY for the Period 2003-2012	University of Kalyani	Kalyani	21-22 Jan 2016
Dr. Siddhartha P. Chakrabarty	Monte Carlo Simulation in Option Pricing	Gauhati University	Guwahati	3-9 Mar 2016
Dr. Siddhartha P. Chakrabarty	Portfolio Optimization	Gauhati University	Guwahati	3-9 Mar 2016
Prof. Swaroop Nandan Bora	Differential Equations: Occurrence and Understanding	North East Regional Institute of Science and Technology	Nirjuli, Arunachal Pradesh	21-22 Nov 2015
Prof. Swaroop Nandan Bora	Differential Equations: Understanding the Geometry and Physics	IIT Guwahati	Guwahati	14-19 Dec 2015
Prof. Swaroop Nandan Bora	Research (and Career) Opportunities in Mathematics	IIT Guwahati	Guwahati	19-20 Feb 2016
Prof. Swaroop Nandan Bora	Breakwaters and wave absorbers in scattering and damping of water waves	Rajiv Gandhi University	Rono Hills, Arunachal Pradesh	6-7 Nov 2015
Prof. Swaroop Nandan Bora	Some insight into scattering and trapping of waves in two-layer fluids	IIT Guwahati	Guwahati	14-17 Dec 2015
Prof. Swaroop Nandan Bora	Water wave damping by porous structures	MNIT Jaipur	Jaipur	16-19 Dec 2015

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

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Shamik Ghosh	Jadavpur University	Interval Graphs and its variations	23 Apr 2015
Prof. Geetha Venkataraman	Ambedkar University, Delhi	Quantifying finite Groups: From Holder to open questions	8 May 2015
Prof. Ayon Ganguly	IIIT Allahabad	Some contributions to step-stress life testing models	23 Jun 2015
Prof. Anant Shastri	IIT Bombay	Introduction to Lie Groups	6-7 Jul 2015
Prof. Parvati Shastri	University of Mumbai	On the fifteen theorem of Conway-Schneeberger-Bhargava	7 Jul 2015
Dr. Subhamay Saha	Technion-Israel Institute of Technology, Haifa	Construction of Asymptotically Optimal Control for a Stochastic Network from a Free Boundary Problem.	27 Aug 2015
Dr. Nishant Chandgotia		Finite diameter of the path space in Graphs	31 Aug 2015



Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Mohd. Arshad	Aligarh Muslim University	Selection and related estimation problems involving gamma populations	1 Oct 2015
Prof. Michael Hanke	KTH Royal Institute of Technology Stockholm, Sweden.	Towards multiscale modelling in neuroscience: Experiences with coupling cellular and subcellular levels of neuronal organisation	29 Oct 2015
Prof. K. B. Sinha	Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore	(1) Evolution in a Hilbert space and the self-adjointness problem and (2) Fundamental Theorem of Integral Calculus, its connection with topology and Physics	2 Nov 2015
Dr. A. Raghuram	Indian Institute of Science Education and Research (IISER), Pune.	From Calculus to Number Theory.	9 Nov 2015
Prof. Inder K. Rana	IIT Bombay	Integration from Antiquity to Lebesgue	23 Dec 2015
Prof. Mario Ahues	Universite Jean Monnet de Saint-Etienne France	An Extension of the Product Integration Method to L1 with an Application to Astrophysics	7 Jan 2016
Prof. Lorenzo Robbiano	Department of Mathematics, University of Genova	Solving Systems of Polynomial Equations	15 Feb 2016
Prof. Rajendra Bhatia	Indian Statistical Institute, Delhi centre	Perturbation Bounds for Eigenvalues	18 Feb 2016
Dr. Diganta Borah	IISER, Pune	Hartogs' extension phenomenon	15 Mar 2016

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

Name of Faculty (Convenor/Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	No. of participants
Dr. Gautam K. Das (Co-ordinator)	Algorithms In Engineering	CET, IITG under TEQIP	15-19 Feb 2016	21
Dr. Shreemayee Bora (Co-ordinator)	Indian Women and Mathematics: Regional Workshop on Research and Opportunities	The National Board for Higher Mathematics	19-20 Feb 2016	65
Dr. Bikash Bhattacharjya (Co-ordinator)	Mathematical Analysis and its Applications to Engineering	CET, IITG	2-4 Jan 2016	22
Prof. Bhaba Kumar Sarma (Co-ordinator)	Teachers Enrichment Workshop (TEW)	National Center for Mathematics, Mumbai	14-19 Dec 2015	19
Prof. Rafikul Alam (Co-ordinator, Committee-member)	Teachers' Enrichment Workshop	National Centre for Mathematics, IIT Bombay	14-19 Dec 2015	19

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Alam, Rafikul	IIT Bombay	Professor	Linear and Numerical Linear Algebra
2.	Bandopadhyay, Sriparna	ISI Delhi	Assistant Professor	Operations Research
3.	Bhattacharjya, Bikash	IIT Kanpur	Assistant Professor	Graph Theory
4.	Bora, Shreemayee	IIT Guwahati	Associate Professor	Perturbation Theory, Numerical Linear Algebra

Sl. No.	Name	PhD	Designation	Areas of Interest
5.	Bora, Swaroop Nandan <b>(Head of the Department)</b>	Dalhousie University, Canada	Professor	Water Wave Dynamics, Ocean Engineering, Flow through Porous Media
6.	Chakrabarty, Siddhartha P.	University of Illinois, Chicago, USA	Associate Professor	Mathematical Biology, Optimal Control Theory, Mathematical Finance
7.	Chakrabarty, Anjan K.	IIT Kanpur	Assistant Professor	Functional Analysis
8.	Chattopadhyay, Arup (Joined on 08.06.2015)	JNCASR Bangalore	Assistant Professor	Functional Analysis and Operator Theory
9.	Dalal, Durga Charan	IIT Kharagpur	Professor	Fluid Dynamics
10.	Das, Gautam Kumar	ISI Kolkata	Associate Professor	Computational Geometry, Approximation Algorithms, Wireless Networks
11.	Deka, Bhupen	IIT Guwahati	Associate Professor	Numerical Analysis, Finite Element Methods, Interface Problems, Numerical Solutions to Integro Differential Equations
12.	Dey, Arabin Kumar	IIT Kanpur	Assistant Professor	Distributions models and its applications, Survival Analysis
13.	Dutta, Sagarmoy	IIT Kanpur	Assistant Professor	Quantum Computing, Complexity Theory
14.	Kalita, Jiten Chandra	IIT Guwahati	Professor	Computational Fluid Dynamics, Numerical methods for PDEs
15.	Kamal, Sameer	TIFR, Mumbai	Assistant Professor	Probability, Random graphs
16.	Kapoor, Kalpesh	London South Bank University, UK	Associate Professor	Programming Languages, Concurrency, Software Testing
17.	Krishna, P. A. S. Sree	SUNY, Buffalo	Assistant Professor	Hyperbolic 3-manifolds, Low-dimensional topology
18.	Krishna, Kanduru Venkata	IIT Delhi	Associate Professor	General Algebra, Theoretical Computer Science
19.	Kumar, Pratyosh	IIT Kanpur	Assistant Professor	Harmonic Analysis
20.	Mandal, Partha Sarathi	Jadavpur University	Associate Professor	Wireless Sensor Networks, Distributed Computing
21.	Srinivasan, Natesan	Bharathidasan University, Thiruchirappalli	Professor	Differential Equations, Homogenization, Numerical Analysis
22.	Pati, Sukanta	ISI Delhi	Professor	Spectral Graph Theory
23.	Prasad, M. Guru Prem	IIT Kanpur	Professor	Complex Dynamics and Fractals
24.	Ramesh, H.	IIT Madras	Assistant Professor	Formal Languages and Automata Theory, Membrane Computing
25.	Saikia, Anupam	University of Cambridge, U.K.	Professor	Algebraic Number Theory
26.	Sarma, Bhaba Kumar	Delhi University	Professor	Spectral Graph Theory, Combinatorial Matrix Theory

<b>Sl. No.</b>	<b>Name</b>	<b>PhD</b>	<b>Designation</b>	<b>Areas of Interest</b>
27.	Selvaraju, N.	IIT Madras	Professor	Stochastic Modelling, Queueing Theory, Stochastic Modelling, Operations Research
28.	Sinha, Rajen Kumar	IIT Bombay	Professor	Numerical Analysis
29.	Srikanth, K. V.	SUNY, Buffalo	Assistant Professor	Low Dimensional Topology
30.	Srivastava, Rajesh	IIT Kanpur	Assistant Professor	Harmonic Analysis
31.	Swain, Jitendriya	IIT Madras	Assistant Professor	Harmonic Analysis
32.	Upadhyay, Shyamashree	CMI, Chennai	Assistant Professor	Algebraic Combinatorics
33.	Wagh, Vinay	University of Pune	Assistant Professor	Algebraic Geometry

# DEPARTMENT OF MECHANICAL ENGINEERING

## The Department at a Glance

**Year of Establishment:** 1995

**Academic Programmes Offered:**

Bachelor of Technology (BTech) in  
o Mechanical Engineering

Master of Technology (MTech) in

- (1) Machine Design,
- (2) Fluid and Thermal Engineering,
- (3) Computer Assisted Manufacturing,
- (4) Computational Mechanics,
- (5) Aerodynamics and Propulsion

Doctor of Philosophy (PhD)

**Total Faculty Strength: 46**

- Professor: 15
- Associate Professor: 13
- Assistant Professor: 18

**New Faculty Members Joined: 3**

- Assistant Professor: 3

**Total Student Strength: 745**

BTech: 331

MTech: 208

PhD: 206

**New Students Joined in 2015-2016: 239**

BTech: 77

MTech: 120

PhD: 42

**Laboratory Facilities**

- **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 glori-fic 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.

In addition, 14 new labs (partially developed and occupied) have been built namely,

- Micro-machining lab
- Aerodynamics lab
- Electromechanics lab
- Composite and Fracture lab
- Welding lab
- Dynamics and Vibration lab
- Advance Mechatronics and Bio-materials lab
- Computation MD Lab
- Microfluidics Lab-1
- Microfluidics Lab-2
- Smart materials and structures lab
- CFD lab
- Gasification and Thermal Lab
- Hydraulic lab

**Major Equipment and Facilities acquired:**

- Critical Speed Investigation Apparatus: 8,12,462.00 INR
- Gyroscope: 6,30,213.00 INR

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
S. Arun and Dr. S. Kanagaraj	International Conference on Recent Advances in Nano-Science and Technology (RAINSAT-2015)	Sathyabama University, Chennai	8-10 Jul 2015	International
Prof. P. Muthukumar	National Conference on Solar Thermal Energy Technologies (NCSTET)	IIT Jodhpur	26-28 Feb 2016.	National

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Prof. P. Muthukumar	23rd National and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, Trivandrum, Kerala	Trivandrum, Kerala	17-20 Dec. 2015	International
Prof. P. Muthukumar	ICAME 2015	TKM College of Engineering, Kerala	14-16 Dec 2015	International
Prof. P. Muthukumar	6th World Hydrogen Technologies Convention, Sydney, Australia, 11 – 14th Oct. 2015.	Sydney, Australia	11-14 Oct. 2015.	International
Dr. Amaresh Dalal	ASME 2016 5th Micro/Nanoscale Heat and Mass Transfer International Conference	Biopolis, Singapore	4-6 Jan 2016	International
Dr. Amaresh Dalal	1st ISHMT-ASTFE and 23rd National Heat and Mass Transfer Conference	ISRO, Trivandrum	17-20 Dec 2015	International
Dr. Amaresh Dalal	42nd National Conference on Fluid Mechanics and Fluid Power	NITK, Surathkal	14-16 Dec 2015	National
Dr. Amaresh Dalal	17th ISME Conference	IIT Delhi	3-4 Oct 2015	National
Dr. Amaresh Dalal	ICHMT International Symposium on Advances in Computational Heat Transfer	Rutgers University, Piscataway, USA	25-29 May 2015	International
Dr. Deepak Sharma	12th International Conference on Vibration Problems	IIT Guwahati	14-17 Dec 2015	International

#### INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Gautam Biswas	Dynamics of Bubble Formation and Detachment in Film Boiling	National Taiwan University	Taiwan	29 Dec 2015
Prof. Gautam Biswas	Dynamics of Falling Drops	Institute of Physics of "Academia Sinica"	Taiwan	31 Dec 2015
Prof. U. S. Dixit	Shape Optimization of rotating cantilever beams and manipulators	IIT Guwahati	Guwahati	14-17 Dec 2015
Prof. U. S. Dixit	Expert lecture in Computational Modeling and Analysis using ANSYS and Creo (Co-MAAC)			3-7 June 2015
Prof. U. S. Dixit	Expert Lecture on Gear Manufacturing in TEQIP course on Gear Engineering			21-22 Nov 2015
Prof. U. S. Dixit	Expert Lecture on practical tips for FEM in TEQIP course on Practical Aspects of FEM			25-29 Jan 2016
Prof. U. S. Dixit	Expert lecture on Challenges in the Modeling of Metal Forming Processes	IIT Kanpur	Kanpur	12-14 Feb 2016
Prof. U. S. Dixit	Expert lecture on microforming in a UGC sponsored workshop on "Micromanufacturing"	Jadavpur University	Jadavpur, West bengal	17-19 Mar 2016
Dr. S. Kanagaraj	Nanocomposites for total joint replacements	IIT Bombay	Bombay	1-4 Dec 2015
Dr. S. Kanagaraj	Design, development and testing of user friendly, light weight and inexpensive polymer composite based artificial limb for trans-femoral amputees	Anna University	Vellore	15-16 Oct 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Sachin D. Kore	Lecture on Electromagnetic Manufacturing in AICTE Sponsored One Week QIP On "High Voltage & Partial Discharge"	VJTI	Mumbai	19 Mar 2016
Dr. Pankaj Biswas	Principle and physics of welding	NITTTR	Kolkata	29 Oct 2015
Dr. Pankaj Biswas	Welding Design and Symbols	NITTTR	Kolkata	29 Oct 2015
Dr. Pankaj Biswas	Present trend in welding research	NITTTR	Kolkata	29 Oct 2015
Prof. P. Muthukumar	Thermal Energy storage systems for solar thermal power plant applications	National Engineering college,	Kovilpatti, Tamil Nadu	11 Mar 2016
Prof. P. Muthukumar	Thermal Energy Storage Systems: Concepts and Applications	Assam Engineering College	Guwahati	2 Mar 2016
Prof. P. Muthukumar	Metal Hydride based thermal machines	TKM College of Engineering	Kollam, Kerala	14 Dec 2015
Prof. P. Muthukumar	Introduction to Green Energy	Govt College of Engineering	Adoor, Kerala	16 Dec 2015
Prof. P. Muthukumar	Development of fast reaction metal hydride reactors for thermal management applications		Sydney, Australia	13 Oct 2015
Dr. Amaresh Dalal	Numerical Study of Droplet Hydrodynamics on Mixed Wettability Surface	School of Mechanical and Aerospace Engineering, Nanyang Technological University	Singapore	6 Jan 2016
Dr. Amaresh Dalal	Development of a General Purpose CFD Solver	NITK	Surathkal	14 Dec 2015
Dr. Amaresh Dalal	Basics of CFD, FDM and FVM	BHEL	Bhopal	17 Aug 2015
Dr. Sukhomay Pal	Deterministic Inventory Models	Arya Vidyapeeth College	Guwahati	6 Oct 2015
Prof. Niranjan Sahoo	High frequency sensors for force and heat transfer measurements during short duration experiments	IIT Guwahati	Guwahati	16 Dec 2015
Prof. Niranjan Sahoo	Engine modifications for experiments with alternative fuels with effective utilization	MNNIT	Allahabad	12 Oct 2015
Prof. Niranjan Sahoo	Fluid Mechanics, Internal Combustion Engines and Gas Turbines - Lecture series for Undergraduate (B. Tech- Third and Fifth Semester) Students	KIIT University	Bhubaneswar	22-23 Sep 2015

**VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANISATIONS / INVITED LECTURES:**

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Amitabh Narain	Michigan Technological University, USA	Experimental and Modeling Results for Flow-Boilers (and Flow Condensers) that Operate in Wavy Annular Thin Film Flow Regimes and at High Heat-Flux Values	15 Jan 2016
Prof. Partha P Mukherjee	Texas A&M University, College Station, USA	Mesoscale Perspective of Electrode Physics in Energy Storage	18 Sep 2015

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

<b>Name of Faculty (Convener/ Co-ordinator, etc.)</b>	<b>Name of Sem./Wor./Con.</b>	<b>Funded By</b>	<b>Date</b>	<b>International/ National</b>	<b>No. of participants</b>
Deepak Sharma, S. Pal, Sachin D. Kore	Skill Development and Training Programme for Executives and Employees of State Level Public Enterprises on Production Planning, Inventory Control and Supply Chain Management, Phase I	Department of Public Enterprises	9-11 Sep 2015	National	25
Deepak Sharma, S. Pal, Sachin D. Kore	Skill Development and Training Programme for Executives and Employees of State Level Public Enterprises on Production Planning, Inventory Control and Supply Chain Management, Phase II	Department of Public Enterprises	18-20 Nov 2015	National	32
U. S. Dixit, Pankaj Biswas (members, organising committee), Satyajit Panda (Treasurer)	12th International Conference on Vibration Problems (ICOVP-2015), Indian Institute of Technology Guwahati		14-17 Dec 2015	International	240
P. Muthukumar	National Workshop on Recent Advancements in Refrigeration and Air-conditioning	ISHRAE	13 Feb 2016	National	100

**PATENTS**

<b>Sl. No.</b>	<b>Name of Faculty and co researcher</b>	<b>Name</b>	<b>Date Applied/ Granted</b>	<b>Application No.</b>	<b>Remarks</b>
1	Subhash C. Mishra, P. Muthukumar, Niraj Kumar Mishra	Self-Aspirated LPG Domestic Cooking Stove with a Two-Layer Porous Radiant Burner	Applied	Indian Patent No: 543/KOL/2015	
2	Subhash C. Mishra, P. Muthukumar, Niraj Kumar Mishra and Snehasish Panigrahi	Medium-Scale Self-Aspirated Improved Air Entrainment LPG Cooking Stove with a Two-Layer Porous Radiant Burner	Applied		

**AWARDS AND HONOURS****Prof. U. S. Dixit**

- (i) Executive Council Member of Assam Science and Technology University from July 2014.
- (ii) Officiating Director CIT, Kokrajhar since 15th February 2014 to May 2015.
- (iii) Editorial board member of Mechanics of Advanced Materials and Modern Processes (Springer Journal).
- (iv) Technical Committee Chairman in National Convention of Production Engineers and National Seminar on Sustainable Manufacturing, July 18-19, 2015, The Institution of Engineers (India), Tripura State Center, Agartala.
- (v) Member of GATE Academic Standing Committee from 2015

**Dr. S. Kanagaraj**

- (i) The prosthetic knee joint was displayed in Indian Medical Devices Exhibition during 08-10th April'2016 at College of Engineering, Pune jointly organized by IITB, VNIT Nagpur and COEP
- (ii) The prosthetic and orthotic products developed were displayed in Make in India exhibition during 13-18th Feb'2016 at BKC, Mumbai.
- (iii) Received Silver Award for Best Innovator at 7th India Innovation Initiative - i3 National Fair 2015 (Recognizing India's top innovator& potential entrepreneurs) organized by DST, AICTE and CII
- (iv) The project entitled "Improving hip and spine stability of trans-femoral amputees by deep squat using the inexpensive polymer/composite based polycentric knee joint" was one



of the top 7 finalists in Samsung Innovation Awards-2015

(v) The paper on Development of Copper (Cu) – Carbon Nanomaterial (CN) based nanocomposite was awarded second prize in Best poster award in Techniche 2015, IIT Guwahati

**Dr. P. Muthukumar**

(i) President, Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), Guwahati sub-chapter from March 2016 onwards

(ii) P.Muthukumar: Fellow, Institute of Engineers (India), September 2015 onwards.

(iii) P.Muthukumar: Er. M.P. Baya National Award 2015 for outstanding Mechanical Engineer from Instituted by the Institution of Engineers (India), Udaipur

**STUDENTS’ ACHIEVEMENTS**

(i) Mr. Piyush Singh, PhD student, under the supervision of Dr. Sachin D. Kore, received First Runner Up Prize for Poster Presentation Competition held during Research Conclave 2016 held at IIT Guwahati during March 17-20, 2016.

(ii) Mr. Bipul das has received the best technical paper award for the paper, Neurofractal modeling of weld quality in friction stir welding (Co-authored by B. Das, S. Pal and S. Bag) at the International Conference on Cutting, Welding and Surfacing (CWS 2015), 5-7 August 2015, Coimbatore.

**SPECIAL MENTION**

(i) Dr. Deepak Sharma was a visiting Assistant Professor, Industrial System Engineering, Asian Institute of Technology Bangkok, Thailand during September–November 2015, funded by MHRD.

(ii) Dr. Pranjol Paul, Technical Officer, qualified the technical paper in Six-Sigma and bagged Green Belt Certification from KPMG in April 2015 conducted in IIT Guwahati.

**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	Complaint Mechanism, Shape memory alloy, Bio-memetic 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-fnishing Processes, Magnetorheological Finishing (MRF) Process, Advanced / Non-traditional Machining Processes, Machining of Advanced Engineering Materials, Micromanufacturing

Sl. No.	Name	PhD	Designation	Areas of Interest
10.	Dass, Anoop Kumar (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 Shankar	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 Singh	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
16.	Joshi, Shrikrishna Nandkishor	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 Kr.	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.	Khanikar, Prosenjit (Joined on 30.04.2015)	North Carolina State University	Assistant Professor	Microstructural Materials Modeling, Micro-mechanics, Dislocation Density Based Crystal Plasticity, Deformation and Failure Mechanisms of Metallic Materials, Finite Element Method, Dynamic Behavior of Materials, Fracture Mechanics, Aluminum Alloys, Microstructural Characterization
21.	Kore, Sachin Dnyandeo	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
22.	Kulkarni, Vinayak N.	IISc Bangalore	Associate Professor	High enthalpy flows, scramjet engine, experimental, aerodynamics, measurement science, CFD simulations
23.	Kumari, Poonam	IIT Delhi	Assistant Professor	Theory of plates and shells, Computational mechanics, Smart structures
24.	Kumar, Bhaskar	-	Assistant Professor	Hydrodynamic Stability, Bluff Body Flows, Computational Fluid Dynamics
25.	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

Sl. No.	Name	PhD	Designation	Areas of Interest
26.	Mahanta, Pinakeswar	IIT Guwahati	Professor	Thermal Radiation with Participating Media, Fluidization, Energy Conservation and Renewable Energy
27.	Mehta, Balkrishna (Joined on 15.07.2015)	IIT Kanpur	Assistant Professor	Experimental investigation of heat transfer in two-phase flow in mini/micro systems, Heat pipes, Thermosyphons, Heat transfer investigation of ferrofluids in presence of magnetic field, InfraRed thermography for temperature measurements
28.	Mishra, Subhash C.	IIT Kanpur	Professor	Analysis of Heat Transfer Problems involving Thermal Radiation
29.	Mondal, Pranab Kr. (Joined on 21.05.2015)	IIT Kharagpur	Assistant Professor)	Microfluidics, Electrokinetics, Two Phase Transport, Microscale Transport of Heat, Flow Through Porous Media
30.	Murthy, K. S. R. Krishna	IIT Kharagpur	Associate Professor	Finite Element Methods, Error Estimation and Fracture Mechanics
31.	Muthukumar, P.	IIT Madras	Professor	Coupled heat and mass transfer analysis; Metal hydride based thermal machines, Conventional and Non-conventional refrigeration systems
32.	Narayanan, Ganesh R.	IIT Bombay	Associate Professor	Metal Forming: Sheet forming & Cold forging, Computer applications in Metal Forming
33.	Natarajan, Ganesh	IISc Bangalore	Assistant Professor	Computational Fluid dynamics, Grid Adaptation, Error Estimation, Immersed Boundary methods, Parallel computing, Biofluid dynamics
34.	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
35.	Panda, Satyajit	IIT Kharagpur	Associate Professor	Composite materials, Nonlinear vibrations, Smart materials and structures, FEM, Functionally Graded materials and structures, Micromechanics.
36.	Pandey, Manmohan	IIT Kanpur	Professor	Two-phase flow instabilities, Nuclear reactor thermal hydraulics, Heat transfer in microchannels, Heat transfer in fluidized beds
37.	Rajendraswamy, Sangamesh Deepak	IISc Bangalore	Assistant Professor	Kinematics and Dynamics of rigid multi-body systems, Compliant Mechanisms, Topology Optimization, Static Balancing
38.	Reddy, Narayana	IISc Bangalore	Assistant Professor	Inverse Problems, Biomechanics, Compliant Mechanisms, Topology Optimization, Nonlinear FEM, MEMS and Design of Materials
39.	Robi, P. S.	IIT Bombay	Professor	Coating, Fracture Mechanics, Materials Processing, Metal Matrix composite, Metal Casting, P/M Processing
40.	Saha, Ujjwal Kr.	IIT Bombay	Professor	Propulsion, Turbomachinery, Wind Energy Conversion, Internal Combustion Engines
41.	Sahasrabudhe, Anil D. (On deputation w.e.f. 16.08.2006)	IISc Bangalore	Professor	Vibration and Noise, Condition Monitoring, CAD/CAM

Sl. No.	Name	PhD	Designation	Areas of Interest
42.	Sahoo, Niranjan	IISc Bangalore	Professor	Fluid and Thermal Engineering, Aerodynamics, Gas Dynamics, Instrumentation, Measurements and Experiments in Fluid
43.	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
44.	Senthilvelan, Selvaraj	IIT Madras	Associate Professor	Composites, Fatigue, Wear and Failure Analysis
45.	Sharma, Deepak	IIT Kanpur	Assistant Professor	Optimal Design: Modeling and Computation, Engineering Design and Optimization, Genetic Algorithms, Multi-objective Optimization
46.	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
47.	Saxena, Anupam (Released on 05.05.2015)	University of Pennsylvania, Philadelphia, PA, USA	Visiting Associate Professor	Compliant Mechanisms, Topology Design, CAD, Robotics, MEMs, Optimization, Large Deformation Systems
48.	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
49.	Unal, Aynur (Released on 29.02.2016)	-	Visiting Professor	Smart Systems and Services

## DEPARTMENT OF PHYSICS

<b>The Department at a Glance</b>
<b>Year of Establishment:</b> 1995
<b>Academic Programmes Offered:</b> <b>Bachelor of Technology (BTech)</b> in <ul style="list-style-type: none"> <li>o Engineering Physics</li> </ul> <b>Master of Science (MSc)</b> in <ul style="list-style-type: none"> <li>o Physics</li> </ul> <b>Doctor of Philosophy (PhD)</b>
<b>Total Faculty Strength: 39</b> <ul style="list-style-type: none"> <li>• Professor: 10</li> <li>• Associate Professor: 14</li> <li>• Assistant Professor: 15</li> </ul> <b>New Faculty Members Joined: 6</b> <ul style="list-style-type: none"> <li>• Assistant Professor: 6</li> </ul>
<b>Total Student Strength: 371</b> BTech: 152 MSc: 89 PhD: 130
<b>New Students Joined in 2015-2016: 107</b> BTech: 42 MSc: 43 PhD: 22

## LABORATORY FACILITIES

The Department has 21 laboratories for teaching and research labs —

### (a) Teaching Labs: (5 teaching laboratories)

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

### (b) Research labs: (16 research labs)

- i. Computational lab
- ii. Electro-ceramics lab
- iii. Fiber optics lab
- iv. Furnace lab
- v. High Energy Physics lab
- vi. Holography and Optical imaging lab
- vii. Laser and Photonics lab
- viii. Low temperature lab
- ix. Magnetism lab
- x. Material Science lab
- xi. Nonlinear optics lab
- xii. Semiconductor labs (02)
- xiii. Solid State lab, Spectroscopy lab
- xiv. Terahertz Photonics and Plasmonics lab
- xv. Thin film lab
- xvi. XRD labs (02)

## MAJOR EQUIPMENT AND FACILITIES ACQUIRED

- i. Electrical resistivity set up with and without magnetic field conditions (sponsored by DST)
- ii. Tunable wavelength Ar ion laser (Model no.35LAP431-230, Make Melles Griot)
- iii. High Performance Computing Cluster (12 nodes of 2xOctacore, 2GB RAM; QDR/InfiniBand) (DST/FIST)

## 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. Condensed Matter Physics (Theory and Experiments)

- Amorphous and nanocrystalline magnetic materials
- Amorphous and nanocrystalline semiconductor thin films for solar cells and other devices. Thin film and Hetero-junction solar cells.
- Atomistic Modeling of Materials for Energy and Environmental Applications
- Biophysics and Biomaterials
- Hybrid nanomaterials for energy and environmental applications
- Microwave and piezoelectric bulk and thin films
- Multilayer structured thin films
- Nanostructured and Nanogranular magnetic materials

- Transition Metal oxide system

### ii. Laser and Photonics (Theory and Experiments)

- 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
- Laser cooling and trapping of atoms,
- Laser Physics and Spectroscopy, Laser produced plasmas,
- Nonlinear optics
- Programmable Diffractive Optics, Confocal Microscopy
- Quantum Optics
- Ultrafast optics, Terahertz Plasmonics and metamaterials

### iii. High Energy Physics (Theory and Experiment)

- Collider Phenomenology: Darkmatter studies, Supersymmetric models, Higgs Physics and Top quark physics, Higher order QCD corrections, Flavour Physics and CP violation
- Cosmology and Astroparticle Physics: Inflationary models, Leptogenesis and Baryogenesis, Darkmatter studies, Supernovae neutrinos
- Experimental High Energy Physics: B-physics, Neutrino Physics, ILC R&D
- Low energy QCD, Effective Field Theory

### iv. Cosmology and Gravitation

- Astrophysical flows around compact objects, Ultra high energy cosmic rays, Black hole perturbations, Gravitational waves Cosmology, Ads/CMT
- General theory of relativity, Field theory on curved spacetimes, Black holes

## MAJOR INITIATIVES AND BREAKTHROUGH IN RESEARCH AND DEVELOPMENT

- A method and device for zonal wavefront sensing via sequential spatially shifted grating array patterns
- The Department signed an MOU with Joint Institute for Nuclear Research (JINR), Dubna, Russia in June 2015 for promoting cooperation in scientific and technological exchanges in neutrino physics, detector technology and related fields.
- Indigenous development of FeSiAl based alloy powders for collinear load of industrial travelling wave linear accelerator.
- Nanocomposites based on bioactive glass/glass ceramics for specific biomedical applications
- Nanocrystalline FeCoAlSi alloys with enhanced soft magnetic properties for transformer cores.
- System, apparatus and method for monitoring of surface profile and thickness measurement in thin films.

## CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Dr. Arunansu Sil	Frontiers in High Energy Physics (FHEP) III	IMSc, Chennai	22-25 Mar 2016	National
Dr. Sovan Chakraborty	NuHoRizon 2016	Harishchandra Research Institute (HRI)	17-19 Mar 2016	International
Dr. Debasish Borah	Workshop on Recent Trends and Developments in General Relativity and Cosmology	Cotton College State University	11-12 Mar 2016	National
Dr. Bipul Bhuyan	CALICE 2016	Kyushu University, Japan	7-9 Mar 2016	International
Dr. M. C. Kumar	Saha Theory Workshop: Multi-loop and Multi-leg processes for precision physics at the LHC	Saha Institute of Nuclear Physics, Kolkata	22-27 Feb 2016	National
Prof. P. K. Giri	National workshop on Advanced probing techniques in TEM	IIT Guwahati	15-16 Feb 2016	National
Dr. B. R. Boruah	Photonics West	Sanfrancisco, USA	1 Feb 2016	International
Dr. Debaprasad Maity	National workshop on mathematical methods in physical science	NIT Silchar	29-31 Jan 2016	National
Dr. Santabrata Das	Jet Triggering Mechanisms in Black Hole Sources	TIFR, Mumbai	20-22 Dec 2015	International
Prof. Sunil K. Khijwania	12th International Conference on Vibration Problems (ICOVP – 2015)	IIT Guwahati	13-17 Dec 2015	International
Dr. D. Pamu	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	IIT Guwahati	8-11 Dec 2015	International
Dr. Debasish Borah	Workshop in High Energy Physics Phenomenology	IIT Kanpur	4-13 Dec 2015	National
Prof. Poullose Poullose	SCALARS2016	University of Warsaw, Poland	3-7 Dec 2015	International
Dr. Santabrata Das	TMT-India Science and Instrumentation	Tezpur University	3 Dec 2015	National
Dr. Swati Bhattacharya	XXVII IUPAP Conference on Computational Physics	IIT Guwahati	2-5 Dec. 2015	International
Dr. Bipul Bhuyan	XXVII IUPAP Conference on Computational Physics	IIT Guwahati	2-5 Dec 2015	International
Prof. A. Perumal	International Conference on Magnetic Materials and Applications (IC-MAG-MA-2015)	VIT, Vellore	2-4 Dec 2015	International
Prof. Saurabh Basu	Computational Physics (CCP 2015)	IIT Guwahati	2-5 Dec 2015	International
Prof. Subhradip Ghosh	Electronic Structure Theory for the Accelerated Design of Structural Materials	Moscow, Russia	26-30 Oct. 2015	International
Dr. Santabrata Das	North East Meet of Astronomers (NEMA-2015)	Tezpur University	26-28 Oct 2015	National
Dr. Debaprasad Maity	AAPCOS 2015	Saha Institute, Kolkata	14-17 Oct 2015	National

Name of Faculty	Name of Conf./Workshop	Place	Date	National/International
Prof. Sunil K. Khijwania	"OFS 24" - 24th International Conference on Optical Fiber Sensors	Curitiba (Paraná), Brazil	28 Sep-2 Oct 2015	International
Dr. Amarendra Kumar Sarma	Metamaterial Congress 2015	Oxford University	7-11 Sep. 2015	International
Prof. P. K. Giri	Microscopy Conference (MC 2015)	Gottingen University, Germany	6-11 Sept 2015	International
Dr. P. K. Padmanabhan	Advanced Materials World Congress	Stockholm, Sweden	23-26 Aug 2015	International
Prof. P. K. Giri	6th International conference on Advanced Nanomaterials (ANM 2015)	Aveiro, Portugal	20-22 Jul 2015	International
Dr. Santabrata Das	Summer School on 'Astronomy and Astrophysics'	Cotton College State University	22-23 Jun 2015	National
Dr. Swati Bhat-tacharya	Mainz Materials Simulation Days	Max Planck Institute for Polymer Research, Mainz, Germany	10-12 Jun 2015	International
Prof. Subhradip Ghosh	Nu-Mathimo school and workshop on Magnetism in materials-from fundamentals to applications	Uppsala, Sweden	1 Jun 2015	International
Dr. Santabrata Das	Recent Trends in the Study of Compact Objects: Theory and Observation (RETCO-II)	ARIES, Nainital	6-8 May 2015	National

#### INVITED LECTURES OF FACULTY: IN INDIA, ABROAD

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Arunansu Sil	Spontaneous CP-violation, nonzero theta-13 and Leptogenesis in Type-II seesaw	IMSc, Chennai	Chennai	24 Mar 2016
Dr. Sovan Chakraborty	NuHoRizon 2016	Harishchandra Research Institute	Allahabad	17-19 Mar 2016
Dr. Debasish Borah	TeV Scale Radiative Seesaw: From Colliders to Cosmology	Cotton College	Guwahati	16 Mar 2016
Dr. Debasish Borah	Cosmology: Standard Theory, Unsolved Mysteries and Recent Developments	Cotton College State University	Guwahati	12 Mar 2016
Prof. Alika Khare	Atto Second Laser: Towards Ultrafast Physics at New Frontiers.	Saint Mary's College	Shillong	12 Mar 2016
Dr. Debaprasad Maity	Introduction to General Relativity	Cotton College State University	Guwahati	11-12 Mar 2016
Dr. Debasish Borah	Gravitational Waves: A new window to the Universe	Cotton College State University	Guwahati	28 Feb 2016
Prof. S. Ravi	Negative Magnetization and Exchange Bias Behavior in Perovskite and Spinel chromites	B. S. Abdur Rahman University	Chennai	24-25 Feb 2016
Prof. Alika Khare	Atto Second Laser: Towards Ultrafast Physics at New Frontiers.	Cotton College and IIT Guwahati	Guwahati	6 Feb 2016



Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. Amarendra K. Sarma	Quantum Mechanics in Nano-optical Systems	Indian Statistical Institute, Kolkata and NIT Silchar	Silchar	29 Jan 2016
Dr. Amarendra K. Sarma	The Nonlinear Schrodinger equation	Indian Statistical Institute, Kolkata and NIT Silchar	Silchar	29 Jan 2016
Dr. Debaprasad Maity	Introduction to General Relativity	NIT Silchar	Silchar	29-31 Jan 2016
Dr. Santabrata Das	Mass loss from accretion disk	TIFR	-	Jan 2016
Prof. Poulouse Poulouse	Multi-Higgs Scenarios at LHC	Harish-Chandra Research Institute	Allahabad	2016
Prof. Poulouse Poulouse	Automatic Computations: Top Quark Physics	Physical Research Laboratory	Ahmedabad	2016
Dr. Uday Narayan Maiti	Applications of FESEM as an advanced microscopic tool in current nanomaterials research	Panjab Univeristy	Chandigarh, Panjab	2016
Prof. Pratima Agarwal	Current Research activities and future research interests (at 1st GU-NAST International Joint Meeting)	Gifu University	Japan	10-11 Dec 2015
Dr. D. Pamu	Optical and Dielectric studies on Sn substituted nanocrystalline Mg <sub>2</sub> TiO <sub>4</sub> thin films for optical and integrated electronic applications	IIT Guwahati	Guwahati	10 Dec 2015
Prof. Saurabh Basu	Three body interaction effects on the phase diagram of spinor bosons	IIT Guwahati	Guwahati	3 Dec 2015
Prof. A. Perumal	Fine tuning of magnetic properties of NiO nanoparticles	IIT Guwahati	Guwahati	3 Dec 2015
Dr. Santabrata Das	Estimation of mass loss from advective accretion disk around black hole	Tezpur University	Tezpur	Dec 2015
Prof. Pratima Agarwal	Solar cells: Materials & Technology, c-Si and a-Si:H solar cells (at TEQIP-STC on Solar energy Conversion and Management)	IIT Guwahati	Guwahati	23 Nov 2015
Prof. Pratima Agarwal	Solar cells: Materials & Technology, CdTe, CIGS, CZTS, Organic and Hybrid Solar cells (at TEQIP-STC on Solar energy Conversion and Management)	IIT Guwahati	Guwahati	24 Nov 2015
Dr. Bipul Bhuyan	Belle II experiment: Physics and Current Status	Dibrugarh University	Dibrugarh	2-5 Nov 2015
Dr. Bosanta R. Boruah	Cylindrical vector beams and their generation	IIT Guwahati	Guwahati	Nov 2015
Dr. Amarendra K. Sarma	Quantum Optomechanics: mechanics and light mixed in the same cauldron	Birla Institute of Technology, Mesra	Mesra	8 Oct 2015
Dr. Santabrata Das	Outflowing matter from an advective accretion disc around a spinning black hole	Tezpur University	Tezpur	Oct 2015

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Dr. P. K. Padmanabhan	Factors Influencing Fast ion Transport in Solids: Insights from Recent MD Simulations	KTH Royan Institute of Technology	Stockholm, Sweden	21 Aug 2015
Dr. P. K. Padmanabhan	Factors Influencing Fast ion Transport in Solids: Insights from Recent MD Simulations	SUBATECH, Ecole des Mines de Nantes	Nantes, France	28 Aug 2015
Dr. Subhash Thota	Reentrant Magnetic properties of few Inverse Spinels.	Max Planck Institute for Chemical Physics of Solids	Dresden, Germany	27 Jul 2015
Dr. Subhash Thota	Magneto-structural Quantum Phases of few complex Spinels.	The Leibniz Institute for Solid State and Materials Research (IFW)	Dresden, Germany	16 Jul 2015
Prof. P. K. Giri	Efficient Physical Functionalization of Graphene and Graphene Oxide for Photocatalytic and Photoconductive Applications	University of Aveiro	Aveiro	21 Jul 2015
Prof. Subhradip Ghosh	Impact of magnetic interactions on functional properties in Mn <sub>2</sub> NiZ alloys	Uppsala University	Fagerudd, Sweden	Jun 2015
Dr. Santabrata Das	Sun and formation of Sun like Star	Cotton College State University	Guwahati	Jun 2015
Prof. S. B. Santra	Computational Physics	University of Gour Banga	Malda, West Bengal	17 May 2015
Dr. Bipul Bhuyan	Electromagnetic Calorimeter for DUNE-ND	BARC	Mumbai	6 May 2015
Dr. Santabrata Das	Time dependent accretion solutions around black holes	Aryabhata Research Institute of Observational Sciences (ARIES)	Uttarakhand	May 2015
Dr. Bosanta R. Boruah	Dynamic control of the amplitude and phase of laser beam in the laboratory	DBT Star College Scheme organized by Mangaldai College	Mangaldai College	Mar 2015
Dr. Uday Narayan Maiti	Novel graphene gelation technology for energy storage and beyond	SRM University	Chennai	2015
Prof. Sunil Khijwania	Optical Fiber Sensors for Structural Health Monitoring	IIT Guwahati	Guwahati	2015

#### VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANISATIONS / INVITED LECTURES

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. S. Anantha Ramakrishna	IIT Kanpur	Anisotropic metamaterials for unique applications	5 May 2015
Dr. Sovan Chakraborty	Max Planck Institute for Physics; Föhringer Ring 6, 80805 München, Germany	Neutrino Astrophysics: What we have learned and the way forward	10 Aug 2015
Prof. Sanjib Sabhapandit	RRI, Bangalore	Fluctuations and large deviations in nonequilibrium systems	31 Aug 2015
Dr. Abhishek Iyer	Tata Institute of Fundamental Research (TIFR)	Bulk RS models, electroweak precision tests and 125 GeV Higgs	9 Sep 2015
Dr. Moon Moon Devi	Weizmann Institute of Science, P.O.B. 26, Rehovot 7610001, ISRAEL	Direct Detection of Dark Matter	22 Sep 2015

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Moitri Maiti	Joint Institute for Nuclear Research (JINR), Dubna, Russia	Superconducting junctions as detectors of Dirac and Majorana fermions	15 Oct 2015
Dr. Ashim Chakravarty	Michigan Technological University	Magneto-Optic Enhancement In Nano-Scale Iron Garnet Films	3 Nov 2015
Dr. Saurabh D. Rindani	Physical Research Laboratory, Ahmedabad, Gujrat	Looking for new physics with the top quark	22 Dec 2015
Dr. Subhasish Mandal	Yale University	From high temperature superconductivity to nanoscale electronics: A first principles investigation	5 Jan 2016
Dr. Sudipta Kanungo	Max Planck Institute For Chemical Physics of Solids, Dresden, Germany	Interplay of spin, lattice and orbitals in the 5d oxides: microscopic insight from first principles approach	12 Jan 2016
Dr. Gauhar Abbas	IFIC, Universitat de València – CSIC, Apt. Correus 22085, E-46071 València, Spain	Top FCNC decays in the aligned two-Higgs doublet model	8 Mar 2016
Dr. Ashok Mohapatra	NISER Bhubaneswar	Study of Rydberg blockade in thermal vapor	24 Mar 2016

**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. Perumal, P. K. Giri	National workshop on Advanced Probing Techniques in TEM	Electron Microscopy Society of India	15-16 Feb 2016	National	115
Santabrata Das	100 years of General Relativity: Where do we stand?	IIT Guwahati	13 Feb 2016	National	150
P. K. Padmanabhan	TEQIP-National Workshop on Atomistic Simulation Techniques	IIT Guwahati	21-24 Dec 2015	National	24
S. B. Santra, B. Bhuyan, R. Adhikarai	XXVII IUPAP Conference on Computational Physics CCP2015	IUPAP, APS, EPS, IMSc, NVIDIA, INTEL, FUJITSU, Netweb	2-5 Dec. 2015	International	300
Sunil K. Khijwania	South Asian Workshop on Optics & Photonics, "SAWOP-2015"	UNESCO, OSA, Amil, IITG	17-18 Nov 2015	International	150
B. R. Boruah	TEQIP symposium to celebrate the international year of light 2015	KIC-TEQIP	31 Oct 2015	National	56

**PATENTS**

Name of Faculty and co-researcher	Name	Date Applied/ Granted	Application No.
Biswajit Pathak, Rahul Kesarwani, Alika Khare and B. R. Boruah	System, apparatus and method for monitoring of surface profile and thickness measurement in thin films	12 Dec 2015	doi: 4088/DEL/2015
Santanu Konwar and B. R. Boruah	Free space optical communication system apparatus and a method thereof	15 Jul 2015	doi: 2153/DEL/2015

## AWARDS AND HONOURS

- Dr. Amarendra K. Sarma has been Awarded with International Travel Support by DST-SERB to present research work in 9th Metamaterial Congress held at Oxford University, UK during 7th-10th September 2015
- Dr. S. Thota has been awarded the German Academic Exchange Service (DAAD) - IIT Faculty Bilateral Exchange Fellowship Award-2015.
- Dr. S. Thota has been awarded Young Scientist Research Award (YSRA) from Department of Atomic Energy of India.
- Dr. Sayan Kumar Chakrabarti has been nominated as the council member of Indian Association for General Relativity and Gravitation for a period of 4 years from March, 2016
- Prof. A. Perumal has been honored as Executive Committee Member of Magnetic Society of India
- Prof. A. Perumal has been honored as Research Advisor, at Magnetic Materials Unit, National Institute for Materials Science, 2015, Tsukuba, JAPAN.
- Prof. P.K. Giri has been awarded with International Travel Support by DST-SERB to present an invited talk at the 1st International Conference on Graphene Technology, University of Aveiro, Portugal, July 20-22, 2015.
- Prof. P. K. Giri has been awarded with Nanoscience Research Leader Award, by Cognizure Corporation, India.
- Prof. P. K. Giri has been awarded with Nanoscience Research Leader Award, by Cognizure Corporation, India.
- Prof. P. K. Giri has been elected as the Executive Council Member for Electron Microscope Society of India.
- Prof. Sunil K. Khijwania has been Awarded with International Travel Support by DST-SERB for presenting research work in "OFS 24" - 24th International Conference on Optical Fiber Sensors at Curitiba (Paraná), Brazil during 28 Sept - 02 Oct, 2015.

## STUDENTS' ACHIEVEMENTS

- Camelia Das and A. Perumal, "Magnetic Properties of single and multilayered CoFeB thin films", received one of the best poster awards in the international conference on Magnetic Materials and Applications, Vellore, December 02 – 04, 2015
- Gone Rajender, won the BEST POSTER AWARD at the Fourth International Conference on Frontiers in Nanoscience and Technology (Cochin Nano-2016), Feb 20-23, 2016, Cochin, India, for his paper entitled "Graphene Quantum Dots and TiO<sub>2</sub> Nanoparticle Hybrid: An Efficient Photocatalyst for Environmental Applications".
- Kamal Paul, won the BEST POSTER AWARD at the International conference on Nanoscience, Nanotechnology and Advanced Materials (NANOS 2015), Dec 14-17, 2015, Visakhapatnam, India for his poster

- entitled "Enhanced Visible Light Photocatalytic Activity of Ag<sub>2</sub>O Decorated TiO<sub>2</sub> Nanorods Heterostructure".
- Nitin Yadav (Supervisor: Bipul Bhuyan) – Talk on "Cosmic Muon Removal Technique for Nova Experiment" at the APS April Meeting 2015, Baltimore, Maryland, April 11 – 14, 2015.
- Nitin Yadav (Supervisor: Bipul Bhuyan)- Poster on "Message Service Analyzer and Error Handling in Nova detector" was presented at the 21st International Conference on Computing in High Energy and Nuclear Physics (CHEP), Okinawa, Japan, April 13 -17. 2015.
- Ramesh Ghosh, won the BEST POSTER AWARD at the National workshop on Advanced Probing Techniques in TEM (APTTEM-2016), IIT Guwahati, Feb 15-16, 2016, for his poster entitled "Electron Microscopy and Spectroscopic Studies of Arbitrary Shaped Si Nanocrystals Decorated on Vertical Si Nanowires Array".
- Sk. Md. Obaidulla, won the BEST POSTER AWARD at the Research Conclave, IIT Guwahati, March 18-20, 2016, for this poster entitled "Effect of Contact Metals on the Electrical Performances and the Bias Stress in SnCl<sub>2</sub>Pc Based n-channel Organic Field-effect Transistors".
- Biswajit Pathak has won third prize in the "GBP's Talent Search Contest on Innovative Research Ideas Leading to Entrepreneurial Venture in Biotechnology and Allied Areas"; organized by Guwahati Biotech Park.
- Biswajit Pathak has won the Officer Travel Grant Award from SPIE to attend the SPIE Photonics West conference in USA in February 2016

## SPECIAL MENTION

- Bipul Bhuyan, Member of the National Organizing Committee of the Belle Analysis Workshop 2015, IIT Bhubaneswar, December 13 -21, 2015.
- Prof. A. Srinivasan served as a member in International Advisory Committee "International Conference on Magnetic Materials and Applications (IC MagMA-2015)", to be held at VIT University, Vellore - 632 014, INDIA during December 02 - 04, 2015.
- Prof. A. Perumal served as a member in National Advisory Committee "International Conference on Magnetic Materials and Applications (IC MagMA-2015)", to be held at VIT University, Vellore - 632 014, INDIA during December 02 - 04, 2015.
- Bipul Bhuyan, Member of the National Organizing Committee of the conference on "Current Issues in Cosmology, Astrophysics and High Energy Physics, Dibrugarh University, November 2 -5, 2015.
- Bipul Bhuyan, On the panel of DST-SERB, India; The Netherlands Organization for Scientific Research (NWO), Netherlands and The Austrian Science Fund (FWF), Austria experts to review projects in Particle Physics for funding.

**FACULTY MEMBERS**

Sl. No.	Name	PhD	Designation	Areas of Interest
1.	Agarwal, Pratima	IIT Kanpur	Professor	Thin films and heterojunction solar cells, nanocrystalline semiconductors, nanomaterials, optoelectronic properties.
2.	Basu, Saurabh	IIT Kanpur	Professor	Condensed Matter Physics (Theory); High T C superconductors, Optical lattices, Transport in Magnetic semiconductors.
3.	Boruah, Bosanta Ranjan	Imperial College London	Associate Professor	Lasers and Optics (Experiment & Theory); Programmable Diffractive Optics, Confocal Microscopy, Phase Stepping Interferometry, Vectorial Diffraction Theory.
4.	Bhuyan, Bipul	Delhi University	Associate Professor	High Energy Physics (Experiment); CP violation, Rare K and B meson decays, ILC R & D.
5.	Bhattacharya, Swati	MPIP, Mainz, Germany	Assistant Professor	Soft Condensed Matter Theory and Simulation, Computational Biophysics, Bio-Nano Interface
6.	Bhattacharya, Subhaditya	HRI, Allahabad	Assistant Professor	High Energy Physics (Theory), Phenomenology of Standard Model and Beyond, Supersymmetry, Dark Matter, LHC.
7.	Borah, Debasish (Joined on 17.11.2015)	IIT Bombay	Assistant Professor	Research: Particle Physics Model Building, Astroparticle Physics and Cosmology.
8.	Chakrabarti, Sayan Kumar	SINP, Kolkata	Assistant Professor	: High Energy Physics (Theory), General relativity, Black hole perturbations, Gravitational waves, Cosmology.
9.	Chakraborty, Sovam (Joined on 01.03.2016)	SINP, Kolkata	Assistant Professor	Astroparticle Physics, High Energy Astrophysics, Neutrino Oscillations, Supernovae Neutrinos, Ultra High Energy Neutrinos & Dark Matter.
10.	Das, Santabrata	SNBNCBS, Kolkata	Associate Professor	Astrophysics (Theory); Astrophysical flows around compact objects, Ultra high energy cosmic rays.
11.	Dey, Tarak Nath	PRL, Ahmedabad	Associate Professor	Quantum Optics (Theory); Coherent control of pulse propagation, Nonlinear optics, Optical solitons, Negative index media, Bose-Einstein condensates.
12.	Ghosh, Subhradip	SNBNCBS, Kolkata	Professor	Condensed Matter Physics (Theory); Electronic Structure theory, Ordering and Phase stability of disordered alloys, Vibrational properties of metallic alloys.
13.	Giri, Pravat Kumar	IIT Kanpur	Professor	Condensed Matter Physics (Experimental); Semiconductor nanostructures, Ion-solid interactions, Optoelectronic materials & devices, Nanotechnology.
14.	Kadolkar, Charudatt Y.	IIT Bombay	Associate Professor	Condensed Matter Physics (Theory); Magnetism, Defects in Ionic Materials, Group Theoretical approaches to Molecular Problems.
15.	Khare, Alikea	IIT Kanpur	Professor	Laser and Photonics ( Experiment and Theory)
16.	Khijwania, Sunil K.	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.
17.	Kumar, Gagan	IIT, Delhi	Assistant Professor	Terahertz Plasmonics and metamaterials, Guided Wave Devices, Ultrafast Spectroscopy.
18.	Kumar, Meduri Chakravartula (Joined on 21.01.2016)	Univ. of Hyderabad	Assistant Professor	High Energy Physics (Theory), Particle Physics, Higher order QCD corrections for LHC and Tevatron, Standard Model and beyond.

Sl. No.	Name	PhD	Designation	Areas of Interest
19.	Maity, Debaprasad	IACS, Kolkata	Assistant Professor	High Energy (Theory); Cosmology, Ads/CMT.
20.	Maiti, Uday Narayan	Jadavpur University, Kolkata	Assistant Professor	Graphene, carbon nanotube, Inorganic nanostructures, Energy storage and conversion, Nanomaterials based electronic devices.
21.	Majhi, Bibhas Ranjan	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.
22.	Mishra, Pankaj Kumar (Joined on 03.02.2016)	IIT Kanpur	Assistant Professor	Nonlinear Physics (Theory and Simulation): Quantum turbulence, Instabilities and turbulence in thermal convection and MHD, Supercooled liquid and glasses.
23.	Mishra, Tapan (Joined on 17.12.2015)	IIA, Bangalore	Assistant Professor	Condensed Matter Physics (Theory); Quantum Phase Transitions, Many-body physics with strongly correlated quantum gases in optical lattice.
24.	Nandy, Malay Kumar	IIT Kanpur	Associate Professor	Theoretical Physics; Statistical Physics, Condensed Matter Physics, Turbulence Field Theory, Plasma Physics, Quantum Computation.
25.	Nandi, Soumitra	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.
26.	Padmanabhan, Padma Kumar	IISc, Bangalore	Associate Professor	Condensed matter (Theory); Atomistic Modeling and Simulation of Condensed States of Matter.
27.	Pal, Dilip	TIFR, Mumbai	Associate Professor	Low Temperature Physics and Material Science (Experimental); Strongly Correlated Electron Systems, Vortex states in superconductors, Superconductivity and Magnetism.
28.	Pamu, Dobbidi	Univ. of Hyderabad	Associate Professor	Condensed Matter Physics; High-k and low loss materials, Ferroelectrics Ceramics, Oxide thin films Nanomaterials.
29.	Pandey, Kanhaiya (Joined on 23.12.2015)	IISc, Bangalore	Assistant Professor	Atomic, molecular and optical physics (Experiment); Laser cooling and trapping of atoms, BEC, Many body physics, artificial gauge field; Atomic coherence, EIT, magnetometry; Spectroscopy and frequency metrology of optical-atomic transitions.
30.	Alagarsamy, Perumal	IIT Kharagpur	Professor	Condensed Matter Physics (Experimental); Magnetism, Nanostructured Materials, Nanocrystalline Materials, Magnetic Thin Films, Metallic Glasses.
31.	Poulose, Poulose <b>(Head of the Department)</b>	PRL, Ahmedabad	Associate Professor	Theoretical Physics; High energy physics phenomenology, CP violation, Mass Generation mechanism, Low energy Gravity.
32.	Raha, Udit	University of Bonn, Germany	Assistant Professor	Quantum Chromodynamics and Nuclear Effective Field Theories.
33.	Ravi, Seenipandian	Univ. of Hyderabad	Professor	Condensed Matter Physics (Experimental); Magnetism, Superconductivity, Low temperature Physics.
34.	Santra, Sitangshu Bikas	Bose Institute, Kolkata	Professor	Condensed Matter Physics (Theory); Condensed Matter Physics, Statistical Physics.

Sl. No.	Name	PhD	Designation	Areas of Interest
35.	Sarma, Amarendra Kumar	IIT Delhi	Associate Professor	Photonics (Theory) and Theoretical Physics; Solitons, Metamaterials and Plasmonics, Ultrafast optics, Nonlinear Fiber Optics, Nonlinear Optics.
36.	Sharma, Ashwini Kumar	IIT Kanpur	Associate Professor	Laser ablation, characterization, deposition and applications of nanostructures
37.	Setlur, Girish Sampath	Univ. of Illinois	Professor	Theoretical Physics; Optoelectronic properties of graphene, Nonchiralbosonization of fermions in one and higher dimensions.
38.	Sil, Arunansu	Univ. of Calcutta	Associate 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.
39.	Srinivasan, Ananthkrishnan	IISc, Bangalore	Professor	Condensed Matter Physics (Experimental); Glasses and Disordered Materials, Thin Films, Metallic Alloys, Nanophase materials, Shape Memory Alloys.
40.	Thota, Subhash	IIT Kanpur	Associate Professor	Material Science and Engineering; Magnetic Nanostructures, Oxide Heterostructures, superlattices, Magnetocaloric effects Semimagnetic semiconductors Bandgap Engineering.

# CENTRE FOR ENERGY

## The Centre at a Glance

**Year of Establishment:** 2004

Academic Programmes Offered:

Doctor of Philosophy (PhD)

Master of Science by research [MS (R)]

**Total Faculty Strength: 3**

- Assistant Professor: 1
- Visiting Faculty: 2

**New Faculty Members Joined: 3**

- Assistant Professor: 1
- Visiting Faculty: 2

**Faculty Members Associated: 18**

**Total Student Strength: 59**

PhD: 49

MS(R): 10

**New Students Joined in 2015-2016: 24**

PhD: 14

MS (R): 10



**LABORATORY FACILITIES**

The centre has the following laboratories—

1. [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.
2. [ii] Bio-energy Laboratory: Micro propagation facility for energy and bio-fuel crops, autoradiogram development facility, genetic engineering facility, biotransformation and cloning
3. [iii] Solar Energy Laboratory: The Solar energy laboratory has the facilities for the transport and spectral response measurement of solar cells and other materials and device in the presence of light. The transport measurements are also possible as a function of temperature in the temperature range 250-450K. Further, the laboratory has a thermal evaporation unit for the preparation of thin films by physical vapour deposition technique. The facility for the fabrication of thin film and heterojunction solar cells based amorphous and microcrystalline silicon is also available in collaboration with Physics department.
4. [iv] Fuel Cells Laboratory: Fabrication and characterization of bioelectrodes for biofuel cell and biosensors applications, etc. Facility for development and characterization of composite proton exchange membranes for fuel cell applications.
5. [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.

6. [vi] Biofuel Laboratory: Facility for production and analysis of biofuels process.
7. [vii] Analytical Laboratory: Houses facility for analysis of gas, oil, volatile materials, gravimetric analysis, thermo gravimetric analysis of samples, microbial incubation, sterilization.
8. [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.
9. [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:**

1. Microplate Nanodrop Spectrophotometer
2. Exhaust Gas Emission Analyser
3. Lyophilizer
4. Kjeldahi Nitrogen Analyzer

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT:**

Biosensor, Biofuel cells, Amorphous and nano-crystalline semiconductor thin films for solar cells, perovskite solar cells, heterojunction solar cells and other devices, Biomass(microorganism/waste/plant materials) to biofuel/ bio-oil/biodiesel/biogas/power through physical/chemical/ biological means, Clean coal technology, Combustion and energy efficiency of systems, Sustainable biofuel, Bio-energy and Green Engineering, Bio-mass gasification, Wind Energy Conversion, Energy Conservation and Renewable Energy, Solar energy conversion.

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

Name of Faculty	Name of Conf./Workshop	Place	Date	National / International
Prof. V. S. Moholkar	NHBT-2015	Trivandrum, Kerela	22-25 Nov 2015	International
	Chemcon-2015	I.I.T. Guwahati	27-30 Dec 2015	International
	Recent Advances in Bio-energy Research, ICRABR-2016	S.S.S.N.I.R.E, Kapurthala, Punjab	25-27 Feb 2016	International
Sanjeev Mishra (RS)	IGCS (Indo-German Centre for Sustainability) Winter School 2016 on Sustainable Application of Liquid Biofuels	IIT Madras	22 Feb-5 Mar 2016	International
Dr. P. Kalita	Rashtriya Avishkar Abhiyan organized by the ministry of HRD, Government of India	India Habitat Centre, New Delhi	16-17 Nov 2015	National

Name of Faculty	Name of Conf./Workshop	Place	Date	National / International
Dr. P. Kalita	Unnat Bharat Abhiyan (UBA) coordinators meeting	IIT Delhi	17 Sep 2015	National
Dr. Harsh Chaturvedi	DST PAC Review Meeting	IIT Guwahati	Feb 2016	National
Dr. Harsh Chaturvedi	Conf- Prog Co-ordinator, invited lecture and Co-chair in ICMST , DST-AAAS	University of Delhi	Mar 2016	International

**INVITED LECTURES: IN INDIA, ABROAD**

Name	Name of Lecture	Name of Inst./Univ./Org.	Place	Date
Prof. P. Agarwal	Current Research activities and future research interests (at 1st GU-NAST International Joint Meeting)	Gifu University, Japan	Japan	10-11 Dec 2015
Dr. H. Chaturvedi	Exhibition of fabricated devices to Industries	Global R&D Meet Vigyan Bhawan	New Delhi	7-8 Dec 2015
Prof. P. Agarwal	Solar cells: Materials & Technology, c-Si and a-Si:H solar cells (at TEQIP-STC on Solar energy Conversion and Management)	IIT Guwahati	Guwahati	23 Nov 2015
Prof. P. Agarwal	Solar cells: Materials & Technology, CdTe, CIGS, CZTS, Organic and Hybrid Solar cells (at TEQIP-STC on Solar energy Conversion and Management)	IIT Guwahati	Guwahati	24 Nov 2015
Prof. P. Goswami	Biofuel cell	Assam Engineering College	Guwahati	10 Mar 2016.
Dr. P. Kalita	Energy Management and Energy Efficiency	One day awareness programme on energy efficient technology organized by MSME-development institute	Guwahati	11 Mar 2016
Dr. P. Kalita	Wind Energy and Ocean Thermal Energy Conversion and Geothermal Energy Conversion	Assam Engineering College	Guwahati	11 Mar 2016
Dr. P. Kalita	Biofuels Applications as Fuels for IC Engine	IIT Guwahati	Guwahati	7 Mar 2016
Dr. P. Kalita	Fuel Cell Power Plant	IIT Guwahati	Guwahati	29 Dec 2015
Dr. P. Kalita	Fundamentals of Solar Energy (Part-I And Part-II)	IIT Guwahati	Guwahati	27 Nov 2015
Dr. H. Chaturvedi	Solar Technology	IIT Guwahati	Guwahati	27 Nov 2015
Dr. H. Chaturvedi	Separation of SWNT by Light	IIT Guwahati	Guwahati	8-11 Dec 2015
Dr. H. Chaturvedi	Advances in Biofuel Cells	IIT Guwahati	Guwahati	29 Dec 2015
Dr. L. Barbora	Solar Powered Fuel Cell as a Progressive Biomimetic Technology for Waste Water Treatment and Electricity Generation	IIT Guwahati	Guwahati	29 Nov 2015
Dr. L. Barbora	Biofuel Cells: Applications, Challenges and Prospects	IIT Guwahati	Guwahati	28 Dec 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
Prof. P. Goswami	KIC-TEQIP Short-Term Course On Recent Trends in Fuel Cell Technology	World bank assisted national level project of MHRD	28-29 Dec 2015	National	27
Dr. P. Kalita, Prof. P. Agarwal, Dr. Anandakshmi R.	KIC-TEQIP Short-Term Course On Solar Energy Conversion and Management	World bank assisted national level project of MHRD	23-27 Nov 2015	National	28

**PATENTS**

Name of Faculty and co researcher	Name	Date Applied/Granted	Application No.	Remarks
Gordon R, Gorodnitsky I, Moholkar VS	Processes for extracting carbohydrates from biomass and converting carbohydrates into biofuels	-	US Patent Application, Publi. No. US 2014/099687 A1 Appl. No. 14/100,562	Assignee: Cavitation Technologies Inc., Chatsworth, CA, USA
Gordon R, Gorodnitsky I, Promtov MA, Moholkar VS	Processes for increasing bioalcohol yield from biomass	-	US Patent Application, Publi. No. US 2014/0363855 A1, Appl. No. 14/466,841	Assignee: Cavitation Technologies Inc., Chatsworth, CA, USA

**AWARDS AND HONOURS**

- Prof. Pranab Goswami has received Certificate of Outstanding Contribution in Reviewing for the quality of the journal Biosensors and Bioelectronics (Elsevier, Amsterdam, The Netherlands) awarded in June 2015.
  - Prof. Pranab Goswami has been awarded full sponsorship by Elsevier, UK to participate Editor's conference held at Beijing, China during 22-25th October 2015.
  - Prof. Pranab Goswami has been appointed as Co-Chairman of the screening committee of the NER Twinning R&D programmes for the year 2015-2016 by Department of Biotechnology, Government of India.
  - Prof. Pranab Goswami has been Selected as editorial board member of the international journal, Biocatalysis and Agricultural Biotechnology.
  - Prof. V.S. Moholkar has received Outstanding Reviewer Award for Elsevier Journals: 1. Renewable Energy; 2. Biomass and Bioenergy; 3. Energy; 4. Fuel Processing Technology; 5. Journal of the Taiwan Institute of Chemical Engineers; 6. Energy Conversion and Management; 7. Applied Energy; 8. Chemical Engineering & Processing: Process Intensification.
  - Prof. V.S. Moholkar has received 3 Year membership of ACS: Chemistry of life.
- organized by SAB, IIT Guwahati.
- Devendra Kumar Maravi got selected for the UGSAS-GU 6-month Sandwich Program 2015, from October 1st 2015 to 31st March 2016: The United Graduate School of Agricultural Science, Gifu University (UGSAS-GU), Japan.
  - Ms Shuchi Singh won the best poster award for "Intensification of ethanol production from Parthenium hysterophorus by sonication: A mechanistic investigation at 7th ISEES International Workshop on Sustainable Energy, Environment & Safety with Railway Centric Theme, December 21-23, 2015, Research Designs & Standards Organization, Ministry of Railways, RITES, Ministry of Railways, Lucknow, India
  - Arupjyoti Borah, Neha Singh, Amit Batghare, Shyamli Sarma, Ritesh Malani and Pritam Kumar Dikshit received 1st Runner-up award in 'Departmental Level' (Centre for Energy) at Research Conclave 2016 held at Indian Institute of Technology Guwahati (17th – 20th March, 2016)
  - Chitta Ranjan Barik got selected for the UGSAS-GU 6-month Sandwich Program 2015, from October 1st 2015 to 31st March 2016: The United Graduate School of Agricultural Science, Gifu University (UGSAS-GU), Japan.

**SPECIAL MENTION**

ABB's Scholarships- Industry Sponsored Scholarship for M.S(R) and Ph.D. Students at Centre for Energy, IIT Guwahati. Investigators: Dr. S. Senthilmurugan, and Prof R. Uppaluri

**STUDENTS' ACHIEVEMENTS**

- Asha Yadav and Pilik Basumatary won the Best Poster award of the Center for Energy in Research Conclave'16,

**CORE FACULTY**

Sl. No.	Name	PhD	Designation	Areas of Interest
<b>Core Faculty</b>				
1	Kalita P. (Joined on 24.07.2015)	IIT Guwahati	Assistant Professor	Clean coal technology, energy storage, biomass energy thermal
<b>Visiting Faculty</b>				
2	Chaturvedi H. (Joined on 28.09.2015)	University of North Carolina (UNCC) at Charlotte, USA	Visiting Faculty	Directed assembly of hybrid functional nanomaterials, lithography fabrication, prototype development of electro optic wearable devices, biosensors, Flexible electronics, solar cells
3	Srinivasan K. (Joined on 20.01.2016)	Australian National University, Canberra	Visiting Faculty	Diffusion in liquids

**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.	De Mahuya	Associate Professor, Department of Chemical Engineering
4.	Das D.	Associate Professor, Department of Biosciences and Bioengineering
5.	Dubey Vikash K.	Professor, Department of Biosciences and Bioengineering
6.	Goswami P. <b>(Head of the Centre)</b>	Professor, Department of Biosciences and Bioengineering
7.	Goud V. V.	Associate Professor, Department of Chemical Engineering
8.	Kalita K.	Associate Professor, Department of Mechanical Engineering
9.	Kulkarni V.	Associate Professor, Department of Mechanical Engineering
10.	Mahanta P.	Professor, Department of Mechanical Engineering
11.	Mohanty K.	Professor, Department of Chemical Engineering
12.	Moholkar Vijay S.	Professor, 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 N.	Professor, Department of Mechanical Engineering
17.	Sahoo L.	Professor, Department of Biosciences and Bioengineering
18.	Uppaluri Ramgopal V.S.	Professor, Department of Chemical Engineering

# CENTRE FOR THE ENVIRONMENT

<b>The Centre at a Glance</b>
<b>Year of Establishment:</b> 2004
<b>Academic Programmes Offered:</b> Doctor of Philosophy (PhD)
<b>Faculty Members Associated:</b> 37
<b>Total Student Strength:</b> 33 PhD: 33
<b>New Students Joined in 2015-2016:</b> 11 PhD: 11

**LABORATORY FACILITIES**

- Research laboratory – I: (Location: first floor, I block) It is used as workplace by research students to carry out routine laboratory experiments which can accommodate 10 students.
- Research Laboratory – II: (Location: second floor, I block) It is used as workplace by research students to carry out routine laboratory experiments which can accommodate 28 students.
- Analytical laboratory: (Location: Research lab-II, second floor, I block) It is equipped with sophisticated equipment essential for environmental research.
- Computational laboratory- (Location: Research lab-II, second floor, I block). This facility is accessible to the students for their computer related work. At present 20 computers are available for the users.
- Institutional Biotech Hub Laboratories
- Mammalian Cell Culture Laboratory: (Location: Research lab-1, first floor, Centre for the Environment, I block)
- Computational Biology and Bioinformatics Laboratory, (Location: Second Floor, Centre for the Environment, I- Block)
- Cell Culture Laboratory (Location: First Floor, Centre for the Environment, I-Block)

**MAJOR EQUIPMENT AND FACILITIES ACQUIRED:**

- GPU Server, make: Dell, Model: Poweredge R730
- Portable personal Noise Dosimeter, Make: M/S 3M Quest Technologies, USA, model: NP-DLX-CBL
- Portable VOC Monitor, Make: M/S Ion Science , UK, Model: Phocheck Tiger
- Spinix Orbital Shaker, Make: Tarsons
- Canon Printer Make: canon, Model: LBP 6030B
- 5 KVA Servo Stabilizer, Make: Orion, Model: Orion 11 series

- High Vacuum pump , Make: M/S Spac –N-service, Model: DC-102
- Students Biometric Attendance System, Make: ESSL Model: ESSL X990
- -20°C Refrigerator
- -80°C Refrigerator
- Still camera with telescopic and macro lens
- Thermocycler

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT:**

- Water and Wastewater Treatment
- Solid Waste Management and Recycling
- Environmental Bioremediation/ Environmental Biotechnology
- Bio-sorption& Bioremediation of heavy metals
- Bio-filtration 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

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

Name of Faculty/ Student	Name of Conf./Workshop	Place	Date	International/ National
Dr. Ranjan Tamuli	National Conference on Challenges in Environmental Research (NCOCER 2015)	IIT Guwahati (Chaired a session on 5.06.2015)	4-6 Jun 2015	National
VisvaBharatiBarua	Short Term Course on Biological Treatment of Solid Waste	IIT Guwahati	8-10 Feb 2016	National
NiharikaKashyap	Association of Microbiologists of India (AMI)	JNU, New Delhi	7-10 Dec 2015	International
Prof. Utpal Bora	Fogarty Annual Symposium 2016 organised by Department of Psychiatry, Guwahati Medical College Hospital, Guwahati	Guwahati	25-28 Jan 2016	International

Name of Faculty/ Student	Name of Conf./Workshop	Place	Date	International/ National
Prof. Utpal Bora	National Seminar on Problems & Prospects of Muga and Eri Silk Sectors organised by CMER&TI, Lahdoigarh, Jorhat, Assam	IIE, Guwahati	25-26 Feb 2016	National

**INVITED LECTURES OF FACULTY: IN INDIA, ABROAD**

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Utpal Bora	Genomics in Mental Health at "Fogarty Annual Symposium 2016"	Guwahati Medical College Hospital	Guwahati	25-28 Jan 2016
Prof. Utpal Bora	Silk in Biomedical Applications at "National Seminar on Problems & Prospects of Muga and Eri Silk Sectors"	CMER&TI, Jorhat, Assam	IIE, Guwahati	25-26 Feb 2016
Prof. Utpal Bora	Science and Technology Entrepreneurship Development	Guwahati College	Guwahati	22 Sep 2015
Prof. Utpal Bora	Scope and Challenges in Entrepreneurship	Research Conclave	IIT Guwahati	19-20 Mar 2016

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

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Dr. Bob Wasson	National University of Singapore	Catastrophic floods in the Himalaya: Causes, knowledge, requirements and solutions	2 Dec 2015
Dr. Bibhash Nath	Columbia University, USA	Sediment logical controls on distribution and heterogeneity of arsenic aquifers	16 Nov 2015
Dr. Lex van Geen	Columbia University, USA	Processes regulating groundwater arsenic levels in Bangladesh that might be relevant to Assam	16 Nov 2015
Prof. Subhas Chandra Kundu	IIT Kharagpur	Prospects of silk materials for regenerative medicine	18 Mar 2016
Dr. Kari Tami	Aalto University, Finland	Mechatronics for Biomedical Engineering	13 Jan 2016

**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, Chairman; Dr. Deepmoni Deka, Convener	National Conference on Challenges in Environmental Research	External source	4-6 Jun 2015	National	120
Prof. Mihir Purkait	TEQIP Short term course on Surfactant mediated pollutant removal techniques	TEQIP	19-23 Jan 2016	National	-
Dr. Ajay Kalamdhad	TEQIP Short term course on Biological Treatment of Solid Waste	TEQIP	8-10 Feb 2016	National	-
Prof. Utpal Bora, Chairman; Dr. Ranjan Tamuli, Co-Chairman	Symposium on Biomedical Engineering	IITG Bio-tech Hub	23 Dec 2015	National	28

**Patents**

Sl. No.	Name of Faculty and co researcher	Name	Date Applied/ Granted	Application No.
1.	Bora U and Das S	Silk based electrically conductive nerve conduit and the method for preparing the same	2 Jul 2015	721/Kol/2015

**AWARDS AND HONOURS:**

- Prof. Vikash Kumar Dubey: Dr. P.N. Raju Oration Award by Indian Council for Medical Research, Government of India (Award received during January 2016).
- Dr. Vikash Kumar Dubey: Appointed as Member, Institutional Biosafety Committee, Pig Research Institute, Rani, Guwahati (2015 onwards)
- Prof. Utpal Bora, appointed as Member, Programme Advisory Committee, National Science and Technology Management Information System (NSTMIS), Department of Science and Technology, Government of India (2015-2018)
- Prof. Utpal Bora, appointed as Member, Institutional Biosafety Committee, College of Veterinary Sciences, Khanapara, Assam Agricultural University (2015 onwards)
- Prof. Utpal Bora, appointed as Member, Scientific Advisory Committee meeting of Muga Silkworm Seed Organization, Central Silk Board, Ministry of Textiles, Government of India (2014-2016)
- Prof. Utpal Bora, appointed as Expert Member, Board of Studies in Biotechnology, Mizoram University (2015)

**STUDENTS' ACHIEVEMENTS**

- M. Gopikiran received award for presenting the paper entitled "Sulfate reducing bacteria from a lab scale up flow anaerobic packed bed reactor for heavy metal removal and its characterization" at the National Conference on Challenges in Environmental research (NCOCER 2015), held during June 4-6, 2015 at IIT Guwahati, Assam India.
- Mr. Lalit Goswami and Mr. Jayakrishnan U received award as winners and 1st runner-up respectively in the poster competition in Research Conclave 2016 held on March 17-20.
- Ms. Visva Bharati Barua received the ISWA-SWIS Winter School full scholarship 2016 to attend Winter School at University of Texas, Arlington, Texas, USA on Landfill Design and Operations, from 18-29 January 2016. The Scholarship included free air tickets (round trip), free lodging, free fooding, free registration for the winter school and free transportation during the stay.

**FACULTY MEMBERS ASSOCIATED WITH THE CENTRE**

Name	Designation and Department
Bag, S. S.	Associate Professor, Department of Chemistry
Banerjee, T.	Assistant Professor, Department of Chemical Engineering
Barua, A.	Associate Professor, Department of Humanities and Social Sciences
Bora, U.	Professor, Department of Biosciences and Bioengineering
Chakraborty, S.	Professor, Department of Civil Engineering
Chaturvedi, R.	Professor, Department of Biosciences and Bioengineering
Das, C.	Assistant Professor, Department of Chemical Engineering
Das, G. (Head of the Centre)	Professor, Department of Chemistry
Dasu, V. V.	Professor, Department of Biosciences and Bioengineering
Dubey, V. K.	Professor, Department of Biosciences and Bioengineering
Dutta, M.K.	Professor, Department of Humanities and Social Sciences
Ghosh, P. K.	Associate Professor, Department of Civil Engineering
Ghosal, A. K.	Professor, Department of Chemical Engineering
Gokhale, S.	Professor, Department of Civil Engineering



<b>Name</b>	<b>Designation and Department</b>
Golder, A. K.	Associate Professor, Department of Chemical Engineering
Goud, V. V.	Assistant Professor, Department of Chemical Engineering
Goyal, A.	Professor, Department of Biosciences and Bioengineering
Jawed, M.	Professor, Department of Civil Engineering
Kalamdhad, A.	Assistant Professor, Department of Civil Engineering
Kundu, L. M.	Assistant Professor, Department of Chemistry
Mahanta, C.	Professor, Department of Civil Engineering
Mandal, B.	Professor, Department of Chemical Engineering
Mandal, T. K.	Assistant Professor, Department of Chemical Engineering
Mohanty, K.	Associate Professor, Department of Chemical Engineering
Mukherjee, C.	Assistant Professor, Department of Chemistry
Pakshirajan, K.	Associate Professor, Department of Biosciences and Bioengineering
Pandey, L. M.	Assistant Professor, Department of Biosciences and Bioengineering
Patel, B. K.	Professor, Department of Chemistry
Patra, S.	Assistant Professor, Department of Biosciences and Bioengineering
Purkait, M.K.	Associate Professor, Department of Chemical Engineering
Patra, S.	Associate Professor, Department of Biosciences and Bioengineering
Ray, M.	Professor, Department of Chemistry
Sarma, A. K.	Professor, Department of Civil Engineering
Sastri, C. V.	Associate Professor, Department of Chemistry
Senthilkumar, S.	Assistant Professor, Department of Biosciences and Bioengineering
Senthilmurugan, S.	Assistant Professor, Department of Chemical Engineering
Tamuli, R.	Assistant Professor, Department of Biosciences and Bioengineering

# CENTRE FOR LINGUISTIC SCIENCE AND TECHNOLOGY

## The Centre at a Glance

**Year of Establishment:** 2014

**Academic Programmes Offered:**

Doctor of Philosophy (PhD)

**Faculty Members Associated:** 16

**Total Student Strength**

PhD: Academic Session will start from July 2016

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT**

Speech and Language Technology, Text Analytics, Digital Heritage

**VISITORS FROM OTHER INSTITUTES / UNIVERSITIES / ORGANISATIONS / INVITED LECTURES**

<b>Name</b>	<b>Name of Inst./Univ./Org.</b>	<b>Purpose/ Name of Lecture</b>	<b>Date</b>
Prof. Manjari Ohala	San Jose State University, Linguistics and Language Development	Lecture	24-25 Feb 2016
Prof. John J. Ohala	University of California, Berkeley and International Computer Science Institute, Berkeley	Lecture	24-25 Feb 2016
Prof. T. V. Sreenivas	Dept. of Electrical Communication Engineering, IISc Bangalore	Adjunct Professor	1 May -17 Jul 2015
Prof. Amitabha Mukherjee	Dept. of CSE, IIT Kanpur	Lecture	10-16 May 2015
Prof. Bidyut B. Chaudhuri	Indian Statistical Institute	Lecture	9-12 Aug 2015
Prof. Santanu Chaudhuri	Dept. of Electrical Engineering, IIT Delhi	Lecture	5 May 2015
Prof. B Yegnanaraya	IIIT, Hyderabad	Lecture	25 Sep 2015
Dr. T Samudravijaya	TIFR	Lecture	26 Sep 2015
Prof. Jayanta Mukhopadhyaya	IIT Kharagpur	Interaction	14 Nov 2015

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

<b>Name of Faculty (Convener/ Co-ordinator, etc.)</b>	<b>Name of Sem./Wor./Con.</b>	<b>Funded By</b>	<b>Date</b>	<b>International/ National</b>	<b>No. of participants</b>
Dr. Shakuntala Mahanta	Workshop on Tone and Intonation-3	Microsoft Research	7-8 Jan 2016	International	50
Prof. Sukumar Nandi	Brainstorming : A national Research Framework development meeting on Indian Digital Heritage	DST	15-16 Jan 2016	National	30
Prof. SRM Prasanna	Third Brain Storming session on Researches for Linguistics and Technology Development of North-eastern Languages	DST	23-24 Nov 2015	National	30
Prof. SRM Prasanna	Second Brain Storming session on Reserches for Liguistics and Technology Development of North-eastern Languages	DST	26-27 Oct 2015	National	30
Prof. SRM Prasanna	First Brain Storming session on Reserches for Liguistics and Technology Development of North-eastern Languages	DST	21 Sep 2015	National	30

**FACULTY MEMBERS ASSOCIATED WITH THE CENTRE**

<b>Sl. No.</b>	<b>Name</b>	<b>Designation and Department</b>
1.	Bhattacharya, S.	Associate Professor CSE
2.	Bokil, P.	Assistant Professor Design
3.	Dandapat, S.	Professor EEE
4.	Das, P. K.	Professor CSE
5.	Guha, P.	Assistant Professor EEE
6.	Mahanta, S.	Associate Professor HSS
7.	Nandi, S. ( <b>Head of the Centre</b> )	Professor CSE and Head CLST
8.	Prasanna, S. R. M.	Professor EEE
9.	Saikia, A.	Professor HSS
10.	Sarmah, P.	Associate Professor HSS
11.	Sharma, S.	Associate Professor HSS
12.	Shrivastava, A.	Assistant Professor Design
13.	Sinha, R.	Professor EEE
14.	Som, B.	Associate Professor HSS
15.	Sundaram, S.	Assistant Professor EEE
16.	Udaya Kumar, D	Assistant Professor Design

# CENTRE FOR NANOTECHNOLOGY

<b>The Centre at a Glance</b>
<b>Year of Establishment:</b> 2004
<b>Academic Programmes Offered:</b> Doctor of Philosophy (PhD)
<b>Faculty Members Associated:</b> 11
<b>Total Student Strength:</b> 34 PhD: 34
<b>New Students Joined in 2015-2016:</b> 4 PhD: 4

**LABORATORY FACILITIES**

1. Name of the lab
2. Material Res. Lab
3. XRD Lab
4. TEM Lab
5. Optoelectronic Device Fabrication Lab
6. Nanobiotech Lab
7. Cell culture Lab
8. Synthesis Lab
9. Nano Fabrication Lab
10. MEMS & NEMS Lab
11. SPM Lab
12. Thin Film and Micro Fluidics Lab
13. Lithography Fabrication Lab
14. Micro-Nano Characterization Lab
15. Micro-Nanoelectronic Characterization Lab
16. Wet Lab

**MAJOR EQUIPMENT AND FACILITIES ACQUIRED**

**Equipment:** 1) Materials Printing System, 2) AFM - TERS, 3) EBL- FESEM, 4) High End Confocal Microscope, 5) Thermal and E-beam Evaporator, 6) Oxidation Diffusion Furnace, 7) RF-Magnetron Sputtering, 8) DC Probe Station, 9) Mask Writer, 10) HPCC, 11) Refrigerated High Speed Centrifuge, 12) Spectroradiometer, 13) Muffle Furnace, 14) Horiba Fluoromax spectrofluorometer.

**Facilities:** 1) 1.5 TR Split AC, 2) Desktop PC, 3) Nitrogen Regulator, 4) Argon Gas Cylinder, 5) 450nm Filter for Elisa Plate Reader, 6) X-ray tube KFL-Cu-2K etc. from Bruker, 7) OPTO INTERRUPTER MODULE, CONN. FEM TRNS, OPTO INTERRUPTOR I.R. REFLECTIVE SENSOR, GEAR MODIFIED WORM WHEEL for Fluorolog-3.

**MAJOR AREAS OF RESEARCH AND DEVELOPMENT:**

The centre is pursuing research in the multi-disciplinary area of Nanotechnology required to meet the future challenges and to augment academic partnerships with industry. A sponsored research project of Rs. 57.75 Crore sanctioned from DeitY is implementing at the Centre with experts from multi-disciplinary areas of science and engineering for establishing a 'Centre for Excellence in Research and

Development of Nanoelectronic Theranostic Devices'. Nano-Electronics group focuses on Micro-Nano fabrication, Optical and Electronic Characterization of Micro-Nano Devices, development of SAW sensors, ECG amplifier and blind assisted walker. Nanoscale science and technology group have recently developed a device for visual detection of bilirubin and another device with Integrated Methods For Reverse Transcription Polymerase Chain Reaction (Rt-Pcr) And/Or Dna/Protein Array Based Analyses . 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. Combination therapy involving various cytokines, cell signaling molecules and nanomaterials is another area of our interest. 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 are working on Organic light emitting diode (OLEDs), Conjugated oligomer and polymer synthesis, Organic Field Effect Transistors (OFETs), Organic Solar Cells (OSCs), Memory devices, Theranostic devices, Sensors. 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:**

- Development of Class 100 and Class 1000 Clean Room facilities at IITG.
- Development of a device for visual detection of bilirubin.
- Development of a device with Integrated Methods For Reverse Transcription Polymerase Chain Reaction (Rt-Pcr) And/Or DNA/Protein Array Based Analyses
- Design Development of an amylase detection device.
- Design Development of a microfluidic electrolyzer for hydrogen production
- Design and Development of a microdroplet energy harvester.

**CONFERENCES/WORKSHOPS/SEMINARS/SYMPOSIA ATTENDED**

Name of Faculty / Student	Name of Conf./Workshop	Place	Date	International/ National
Ashok Kumar Dasmahapatra	IUPAP CCP – 2015	IIT Guwahati	2-5 Dec 2015	International
Ashok Kumar Dasmahapatra	Chemcon 2015	IIT Guwahati	27-30 Dec 2015	International

<b>Name of Faculty / Student</b>	<b>Name of Conf./Workshop</b>	<b>Place</b>	<b>Date</b>	<b>International/ National</b>
Ashok Kumar Dasmahapatra	3rd Indo-German Workshop on Advances in Materials, Reaction and Separation processes	IIT Guwahati	23-26 Feb 2016	International
Abir Ghosh, DipankarBandyopadhyay and Ashutosh Sharma	3rd Indo-German workshop: Advances in Materials, Reactions & Separation Processes	IIT Guwahati	2016	International
Amit Kumar Singh, Tapas Kumar Mandal, DipankarBandyopadhyay	Nanoparticle Assembly: From Fundamentals to Applications, Faraday Discussion	IIT Bombay	2016	International
SurjenduMaity, Shreya Mukherjee, ShirsenduMitra and DipankarBandyopadhyay	CHEMCON 2016	IIT Guwahati,	2016	International
Joydip Chaudhuri, SeimTimung, Tapas Kumar Mandal and DipankarBandyopadhyay	REFLUX 2015,	IIT Guwahati	2015	National
Joydip Chaudhuri, SeimTimung, Tapas Kumar Mandal and DipankarBandyopadhyay	CHEMCON 2015	IIT Guwahati	2015	International
Bolleddu Ravi, DipankarBandyopadhyay	ICANN – 2015	IIT Guwahati	2015	International
Bolleddu Ravi, DipankarBandyopadhyay	CHEMCON – 2015	IIT Guwahati	2015	International
Joydip Chaudhuri, Tapas Kumar Mandal and DipankarBandyopadhyay	COSSE Workshop, 2015	Nuremberg, Germany	2015	International
ShirsenduMitra, Abir Ghosh, SurjenduMaity and DipankarBandyopadhyay	ICANN – 2015	IIT Guwahati	2015	International
ShirsenduMitra, Abir Ghosh, SurjenduMaity and DipankarBandyopadhyay	CHEMCON – 2015	IIT Guwahati	2015	International
Mitradip Bhattacharjee, HarshalNemade and DipankarBandyopadhyay, ,	ICANN-2015	IIT Guwahati	2015	International
MitradipBhattacharjee, SaptakRarotra and DipankarBandyopadhyay, ,	India International Science Festival-2015	IIT Delhi	2015.	International
MitradipBhattacharjee, HarshalNemade and DipankarBandyopadhyay, ,	XXVII IUPAP Conference on Computational Physics, , 2015.	IIT Guwahati	2015	International
MitradipBhattacharjee, SeimTimung, Nilanjan Mandal, HarshalNemade and DipankarBandyopadhyay,	Reflux -2015,	IIT Guwahati	2015	International
Archita Ghoshal and Siddhartha Sankar Ghosh	8th Euro Biotechnology congress	Frankfurt, Germany	18-20 Aug 2015	International
Archita Ghoshal, Upashi Goswami, Arun Chattopadhyay and Siddhartha Sankar Ghosh	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	Guwahati	8-11 Dec 2015	International

Name of Faculty / Student	Name of Conf./Workshop	Place	Date	International/ National
Sharmila Narayanan, Lingaraj Sahoo and Siddhartha Sankar Ghosh	International Conference on Cancer. Research: New Horizons	Pune	19-21 Nov 2015	International
Sharmila Narayanan, Lingaraj Sahoo and Siddhartha Sankar Ghosh	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	Guwahati	8-11 Dec 2015	International
Md Asif Raza and Siddhartha Sankar Ghosh	Global Cancer Summit	Bangalore	18-20 Nov 2015	International
Archita Ghoshal, Upashi Goswami, and Siddhartha Sankar Ghosh	3rd International Conference on Biotechnology and Bioinformatics (ICBB-2016)	Pune	5-7 Feb 2016	International
Deepanjalee Dutta, Amaresh kumar Sahoo, Arun Chattopadhyay and Siddhartha Sankar Ghosh	8th India Bangalore Nano	Bangalore	3-4 Mar 2016	International
Sunil kumar Sailapu, Deepanjalee Dutta, Amaresh kumar Sahoo, Siddhartha Sankar Ghosh, and Arun Chattopadhyay	Reflux 2016	Guwahati	25-27 Mar 2016	National
T. Bhimraju, Anamika Kalita, Sameer Hussain, Akhtar H. Malik, Parameswar K. Iyer	27th MRSI Symposium	NEIST, Jorhat	18-21 Feb 2016	National
Anamika Kalita, Parameswar K. Iyer	INUP Workshop	Tezpur University	25-26 Feb 2016	National
Sameer Hussain, Akhtar H. Malik, Parameswar K. Iyer	MACRO 2015	IACS, Kolkata	23-26 Jan 2015	International
Parameswar K. Iyer	IJEGMBE 2016	KIT, Wakamatsu, Japan	23-25 Dec 2015	International
Akhtar H. Malik, Parameswar K. Iyer	Global Mind Seminar	KIT, Tobata, Japan	19-20 Jan 2016	International
Parameswar K. Iyer	RECENT ADVANCES IN CHEMICAL SCIENCES	AMU, Aligarh	29-30 Mar 2016	International
Sameer Hussain, Parameswar K. Iyer	APME 2015	Yokohama, Japan	18-22 Oct 2015	International
Sameer Hussain, Akhtar H. Malik, Parameswar K. Iyer	CHEMCON 2015	IIT Guwahati	27-30 Dec 2015	National
Anamika Dey, Dipjyoti Das, Ashish Singh, Parameswar K. Iyer	NWNTD-2016	IIT Guwahati	21-22 Mar 2015	National
Sameer Hussain, Akhtar H. Malik, Parameswar K. Iyer	APTEM	IIT Guwahati	15-16 Feb 2015	National
Anamika Dey, Parameswar K. Iyer	250th ACS Meeting	Massachusetts, Boston, USA	16-20 Aug 2015	International
Rahul Narasimhan, Anamika Dey, Dipjyoti Das, Ashish Singh, Parameswar K. Iyer	Indo-German workshop on renewable energy (organic solar cells) and curriculum innovation in science education	IISc Bangalore	1 Dec 2015	International



Name of Faculty / Student	Name of Conf./Workshop	Place	Date	International/ National
Ashish Singh, Parameswar K. Iyer	ICAER 2015	IIT Bombay	15-17 Dec 2015	International
Larionette P L Mawlong, Ravi K Biroju, P K Giri	ICANN 2015	IIT Guwahati	8-11 Dec 2015	International

**INVITED LECTURES OF FACULTY: IN INDIA, ABROAD**

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Arun Chat-topadhyay	Indo-Finland joint Workshop on Novel Bioactive Materials	Turku, Finland	Turku, Finland	28 Oct 2015
Prof. Arun Chat-topadhyay	MRS Trilateral Symposium	Institute of Nanoscience and Technology, Mohali	Mohali	23-25 Nov 2015
Prof. Arun Chat-topadhyay	Supramolecules and Forensic Nanotechnology	Gujarat Forensic Science University	Gujarat	8-9 Jan 2016
Prof. Arun Chat-topadhyay	International Workshop On Role Of Technological Advances, Incubation Themes, And Engineering Skills	Central Institute of Technology, Kokrajhar	Kokrajhar, Assam	21-23 Jan 2016
Prof. Arun Chat-topadhyay	National Conference on Emerging Trends in Chemical Sciences-2016	Kirori Mal College, New Delhi	New Delhi	4-5 Feb 2016
Prof. Arun Chat-topadhyay	International workshop on Nanobiotechniques	Indian Institute of Technology Roorkee	Roorkee, India	9-14 Feb 2016
Prof. Arun Chat-topadhyay	Frontiers in Chemistry-2016	North Bengal University	Darjeeling, West Bengal	7-8 Mar 2016
Prof. Siddhartha S. Ghosh	MALDI-TOF /TOF For Potential Therapeutic Nanomaterials	SCIEX Seminar On Mass spectrometry By AB SCIEX	Guwahati	22 Sep 2015
Prof. Siddhartha S. Ghosh	Nanotheranostics for imaging and targeted drug delivery	BioX-Academia Industry Conclave -2015	IIT Mandi	6-7 Nov 2015
Prof. Siddhartha S. Ghosh	Strategies for Recombinant Protein Therapy using Nanocarriers	IIT Guwahati	Guwahati	8-11 Dec 2015
Prof. Siddhartha S. Ghosh	Session Chair at ICANN-2015	IIT Guwahati	Guwahati	8-11 Dec 2015
Prof. Siddhartha S. Ghosh	Cloning, Purification and MALDI-TOF Analysis of Recombinant Proteins to Explore Therapeutic Potentials at Advances in Proteomics workshop	Institute of Advance Study in Science and Technology (IASST), Guwahati	Guwahati	21 Jan 2016
Prof. Siddhartha S. Ghosh	Recombinant Proteins in Nanotheranostics at International Winter School and Hands on Training programme on "Nano-Biotechniques" (I WiSH NanoBio: 2016)	IIT Roorkee	Roorkee	13 Feb 2016
Prof. Siddhartha S. Ghosh	Applications of TEM in Nanotheranostics at National workshop on "Advanced Probing Techniques in TEM"	IIT Guwahati	Guwahati	16 Feb 2016
Prof. Siddhartha S. Ghosh	Cancer Nanomedicine Smartens up at Second National workshop on NEMS/MEMS and Theranostic Devices	IIT Guwahati	Guwahati	21 Mar 2016

Name of Faculty	Name of Lecture	Name of Inst./Org.	Place	Date
Prof. Siddhartha S. Ghosh	Theranostic Cancer Nanomedicine Hands on Training Workshop on "Synthesis and characterization of nanomaterials for Biotechnological application"	School of Technology at North Eastern Hill University, Shillong	Shillong	28 Mar 2016
Prof. Parameswar K. Iyer	Emerging Trends in Chemistry NEHU, Shillong	North Eastern Hill University, Shillong	Shillong	28-29 Mar 2015
Prof. Parameswar K. Iyer	Invited	University of Delhi	New Delhi	1-4 Mar 2015
Prof. Parameswar K. Iyer	Plenary	University of Tripura	Agartala	6-7 Aug 2015
Prof. Parameswar K. Iyer	Invited	JNCASR, Bengaluru and IITB	Goa	15-17 Aug 2015
Prof. Parameswar K. Iyer	Plenary	IIT Madras	Chennai	3-4 Oct 2015
Prof. Parameswar K. Iyer	Plenary	Kyushu Institute of Technology, Tobata Campus	Fukuoka, Japan	23-25 Dec 2015
Prof. Parameswar K. Iyer	Plenary	Kyushu Institute of Technology, Wakamatsu Campus	Fukuoka, Japan	19-20 Jan 2016
Prof. Parameswar K. Iyer	Plenary (Recent Advances In Chemical Sciences)	Aligarh Muslim University	Aligarh	29-30 Mar 2016
Dr. Ashok Kumar Dasmahapatra	Molecular Simulation in Polymeric Systems at National Workshop on Atomistic Simulation Technique	IIT Guwahati	Guwahati	21-24 Dec 2015
Dr. Ashok Kumar Dasmahapatra	Fullerene Transport across a Cell Membrane: A Coarse grain Molecular Dynamics Study at COMPFLU – 2016	IISER Pune	Pune	2-4 Jan 2016
Prof. Pravat K. Giri	Microscopy Conference (MC 2015)	Gottingen, Germany	Germany	6-11 Sep 2015
Prof. Pravat K. Giri	6th International conference on Advanced Nanomaterials (ANM 2015)	Aveiro, Portugal	Portugal	22-22 July 2015
Dr. Dipankar Bandyopadhyay	"Nano-enriched Digital Microfluidics Form Still life, Portraits, Landscapes to Impressionism", ChEmference 2015, IIT Hyderabad	IIT Hyderabad	Hyderabad	2015
Dr. Dipankar Bandyopadhyay	"Nano-enriched Digital Microfluidics Form Still life, Portraits, Landscapes to Impressionism", ICANN 2015,	IIT Guwahati.	Guwahati.	8-11 Dec 2015
Dr. Dipankar Bandyopadhyay	"Fabrication of Nanodroplets Employing the Dewetting of Liquid Films", EMN Meeting on Droplets Phuket – Thailand, 2015.	Thailand	Thailand	2015
Dr. Dipankar Bandyopadhyay	"Self-Motile Systems", International Conference on NanoTechnology, Haldia Institute of Technology, 2015.	Haldia Institute of Technology, Kolkata	Kolkata	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
Prof. P. K. Iyer (Convener)	ICANN-2015	DST, RSC, SRL, Jaco-mex, Tektronix, etc.	8-11 Dec 2015	International	400
Prof. R. P. Palathinkal (Chairman), Dr. A. K. Dasmahapatra (Convener)	NWNTD-2016	DeitY	21-22 Mar 2016	National	200

**PATENTS**

Sl. No.	Name of Faculty and co-researcher	Name	Date Applied/Granted	Application No.
1	A. Chattopadhyay, A. Paul, S. Basu, A. K. Sahoo	A device for visual detection of bilirubin	Indian patent application submitted and published on 26 June 2015	631/ KOL/2015
2	A. Chattopadhyay, S. K. Sailapu, D. Dutta, A. K. Sahoo, S. S. Ghosh	A Device with Integrated Methods For Reverse Transcription Polymerase Chain Reaction (Rt-Pcr) And/Or Dna/Protein Array Based Analyses	Indian patent application submitted and published on 18 March 2016	1259/ KOL/2015 A

**AWARDS AND HONOURS**

- Prof. Arun Chattopadhyay has been elected as a Fellow of the Indian Academy of Sciences (2016).
- Prof. P. K. Giri has been awarded Nanoscience Research Leader Award 2015, Cognizure Corporation, India.
- Dr. Dipankar Bandyopadhyay has been awarded NCL's Prof K Venkataraman Chemcon Distinguished Speaker Award, CHEMCON 2015
- Prof. Parameswar K. Iyer has been awarded International Association of Advanced Material Science & Technology (IAAM) Scientist Award 2016.

**STUDENTS' ACHIEVEMENTS**

- Mitradip Bhattacharjee has been awarded Gandhian Young Technology Innovation Award, 2016.
- Satyapriya Bhandari has been awarded the Materials Research Society of India young scientist oral award 2015.
- Namami Goswami has been awarded The Google Anita Borg Memorial Scholarship (Asia-Pacific), 2015-16 and she also attended the Scholars' Retreat from September 8-11, 2015 at the Google Shanghai Office.
- Best poster Award Reflux-2016 for the paper "Droplet based organic vapor sensor", Authors: M. Bhattacharjee, V. Pasumarthi, J. Chaudhuri, A. K. Singh, H. Nemade and D. Bandyopadhyay.

**FACULTY MEMBERS ASSOCIATED WITH THE CENTRE**

Sl. No.	Name	Designation and Department
1.	Bandyopadhyay, Dipankar	Assistant Professor, Department of Chemical Engineering
2.	Bose, Biplab	Assistant Professor, Department of Biosciences and Bioengineering
3.	Chattopadhyay, Arun	Professor, Department of Chemistry
4.	Ghosh, Siddhartha Sankar	Professor, Department of Biotechnology
5.	Giri, Pravat Kumar	Professor, Department of Physics
6.	Iyer, Parameswar Krishnan	Professor, Department of Chemistry
7.	Mandal, Tapas K.	Assistant Professor, Department of Chemical Engineering
8.	Nemade, Harshal B.	Associate Professor, Department of Electronics and Electrical Engineering
9.	Palathinkal, Roy Paily	Head, Centre for Nanotechnology, Professor, Department of Electronics and Electrical Engineering
10.	Paul, Anumita	Associate Professor, Department of Chemistry
11.	Sahoo, Lingaraj	Professor, Department of Biosciences and Bioengineering

# LAKSHMINATH BEZBAROA CENTRAL LIBRARY

Lakshminath Bezbaroa Central Library is a major service centre of the Institute, provides library and information services to support the teaching, learning, research activities by creating state-of-the-art facilities and offering innovative services. The library is a window to the world of latest information in sciences, engineering, technology, humanities & social sciences. The library has a fast growing collection of books, journals, magazines both in print and digital format. It is housed on a four stored building having a floor area of about 7500 sq. meter and can accommodate nearly 300 readers at a time. The in-house services of the library 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 has increased substantially and stands around 1.63 lakhs. Total 359 visitors from other academic Institutions have also availed the reference and reading facility of the Library. Library remains open from 8.00 am to 12.00 midnight throughout the year, to provide the reading facility to the Institute's academic community.

## 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 2015-16. The total collection strength of the Library now stands as follows:

ITEMS	Collection Size (2015-16)
Printed Books and bound volume journals	1,57,955
E- books	1,47,463
Back file electronic journals	2,060
Theses, standards, Reports etc.	2,803
<b>Non-Book material (CD, DVD, etc.)</b>	<b>5,242</b>
Print Journal Subscription	90
Current electronic journals (including journals subscribed and access provided by Consortia)	24,012

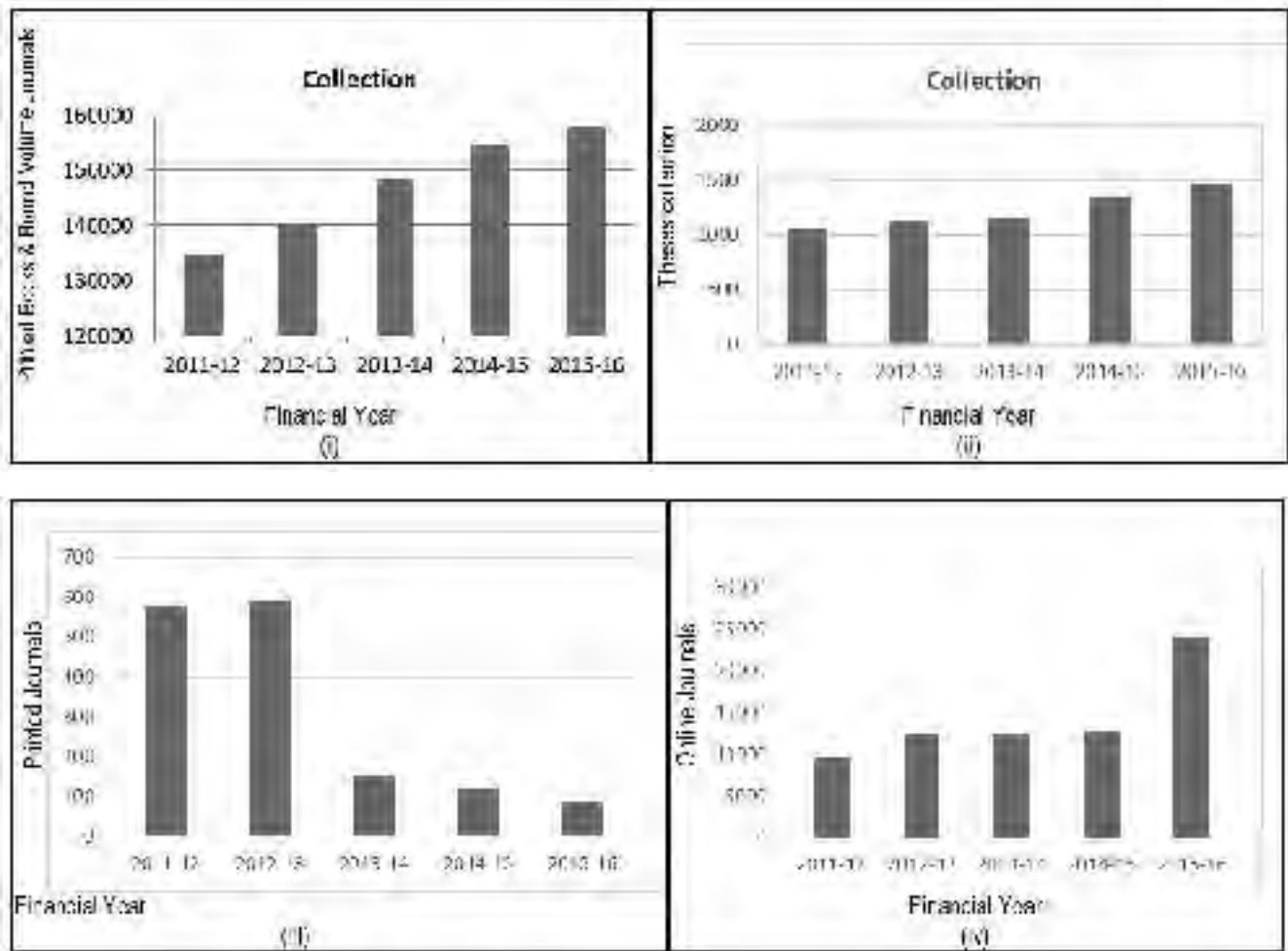
b) The growth of the collections during last five years stands as follows:

Sl. No.	Collection	F.Y.				
		2011-12	2012-13	2013-14	2014-15	2015-16
(i)	Printed Books and Bound Volume Journals	1,34,687	1,40,434	1,48,181	1,54,564	1,57,955
(ii)	Theses collection	1,048	1,119	1,169	1,343	1,471
(iii)	Printed Journals	578	591	151	120	90
(iv)	Online Journals	9,795	12,630	12,656	12,835	24,012

c) As most of the research activities are heavily dependent on the journal publications, Library has emphasized on enhancing the subscription current journals and expanded the collection significantly over last couple of years. 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 2,296 titles across all academic areas of which 2,206 are online journals.

In addition to that, Institute is having access to 20,052 online journals through 'e-ShodhSindhu Consortium' and 'DeLCON:DBT- Electronic Library Consortium'.

d) Apart from the above, Library has procured some of the world's most renowned abstract/full-text database like Scopus, INSPEC, IEC Standards, ACSESS archive and some national level database i.e. CMIEProwees, BIS Standards, EPWRF Time Series, etc during the reporting period.



e) During the reporting period the Library has added about 1693 nos. of e-books 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.

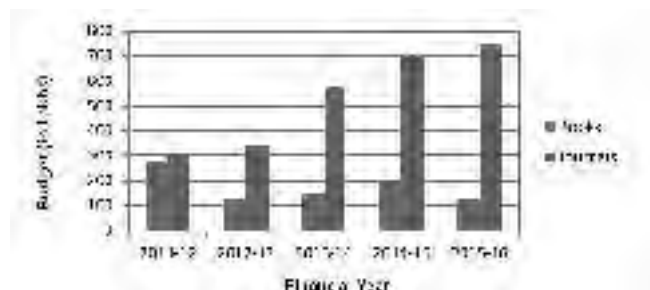
**2. Budget:**

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:

Financial Year	Books Budget (Rs. in Lakhs)	Research Journal Budget (Rs. in Lakhs)
2011-12	275.00	301.90
2012-13	125.00	350.00
2013-14	150.00	573.00
2014-15	200.00	690.00
2015-16	125.00	750.00

**3. Services and Facilities:**

- a) To facilitate the users, a digital repository of theses, submitted by the Ph. D. scholars of the Institute, has been created and made accessible to the academic community. By the end of the reporting period, total 599 full-text theses has been uploaded in the stated repository.
- b) To provide sufficient reading facility, the Central Library has added 51 seating capacity during the reporting period. With this the total seating capacity now stands 301.
- c) To extend better searching of huge electronic resources of the Library a world renowned Discovery Service has



been made available to the academic community of 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) Online catalogue kiosks have been installed for the users to browse the library collection.
- d) Separate computer terminals have been provided for the visitors to access internet and library facilities.

#### **5. Recent Events**

- a) A workshop-cum-training programme on Institutional Digital Repository and Metadata Engineering was organized by Lakshminath Bezbaroa Central Library & Centre for Career Development, IIT Guwahati and National Digital Library (NME-ICT Project), IIT Kharagpur on 4th & 5th July 2015. The event was attended by 42 participants from different academic Institutes and Universities of the North-Eastern region.
- b) To guide and motivate the young researchers and authors of the Institute, a workshop on "Book Publishing at IIT Guwahati" was conducted with the help of Elsevier South Asia on 17th August, 2015.

#### **LIBRARIAN**

Dr. Tamal Kumar Guha

# CENTRE FOR EDUCATIONAL TECHNOLOGY

**YEAR OF ESTABLISHMENT OF THE CENTRE:** 2004

**ACADEMIC PROGRAMMES OFFERED:**

Sl. No.	Academic Programme Offered	Scheme
1	Interdisciplinary/Industry oriented/Research oriented academic courses jointly developed by an international faculty of repute and an IITG faculty	GIAN
2	Masters & PhD (All Engineering Departments)	QIP
3	Teachers Training Camp	IITG MoU with RMSA, Assam
4	MITACS - Canadian Student Exchange Program	TEQIP
5	Short Term courses for Teachers of Technical Institutes under QIP	Curriculum Development Cell
6	Short term courses; Training Programs under TEQIP	Knowledge Incubation Cell (KIC): Quality Circles-TEQIP

**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
- **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 facilities 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.
- **E Kalpa Lab:** The e-kalpa lab located at 2nd floor of Design department has facilities for Video recording and editing, Product Photography and computers required to generate content for Design Education and e-learning
- **Virtual Labs:** Under Virtual lab project there are total 18 nos. of Labs which are physically located in 6 departments at IITG.
  - Virtual Mass Transfer Lab:** This is a chemical engineering lab developed using labview software. A total of 12 experiments have been developed under this lab.
  - System, Communication and Control Lab:** This lab is under electrical and electronics engineering department. Ten experiments are developed out of which 4 experiments are real time experiments. Labview software is used to develop the experiments.
  - Virtual Labs for Mechanical Vibrations:** This lab is under mechanical engineering department. Ten experiments are developed using Labview software.
  - Speech Signal Processing Lab:** This lab is under electrical and electronics engineering department. Nine experiments are developed using Scilab software.
  - Digital VLSI Design Lab:** This lab is under electrical and electronics engineering department. Seven experiments are developed using NGSpice software. Currently the lab is integrated and hosted in the cloud.

vi) Signals and Systems Lab: This lab is under electrical and electronics engineering department. Five experiments are developed using Labview software. Currently the lab is integrated and hosted in the cloud.

vii) Electrical Machines Lab: This lab is under electrical and electronics engineering department. Nine experiments are developed using adobe flash software. Currently the lab is integrated and hosted in the cloud.

viii) Electronic Instrumentation Lab: This lab is under electrical and electronics engineering department. Nine experiments are developed using Labview software. Currently the lab is integrated and hosted in the cloud.

ix) Virtual Laboratory Experience in Fluid and Thermal Sciences: This lab is under mechanical engineering department. Twelve experiments are developed using Labview software.

x) Digital North East: This lab which is actually a repository of rare periodical archives, ethnographic reports etc is under humanities department.

xi) Virtual English and Communication: This is a laboratory under humanities department. This laboratory is about English comprehension, grammatical errors, passage making etc. Eight experiments are developed using html, adobe flash software. Currently the lab is integrated and hosted in the cloud.

xii) Virtual Anthropology Lab: This laboratory is under humanities department. A total of nine experiments are developed using adobe flash software. Currently the lab is integrated and hosted in the cloud.

xiii) Ergonomics Lab for accessing physical aspect of design: This lab is under design department. Ten experiments are developed using adobe flash software. Currently the lab is integrated and hosted in the cloud.

xiv) Creative design, prototyping and experimental simulation in human computer interaction: This lab is under design department. Sixteen experiments are developed using html5 and php.

xv) Remote triggered fiber optic communication lab: This is a real time lab under electrical and electronics engineering department. Six experiments are developed

using Labview software.

xvi) Remote triggered digital system design lab: This is a real time lab under Computer Science and Engineering dept. Ten experiments are developed under this lab.

xvii) Virtual robotics lab: This is a real time lab under mechanical engineering lab. Eight experiments are developed under this lab.

xviii) Remote triggered electromechanical conversion lab: This is a real time lab under electrical and electronics engineering lab.

#### MAJOR EQUIPMENT AND FACILITIES ACQUIRED:

Sl. No.	Equipment	Qty
1	Laptop HP Pavilion x360 13-S102TU	01
2	Nikon DSLR Camera	02
3	Convertible Laptop	01
4	Chroma screen	02
05	21" Mac Computers (Under E Kalpa)	10

#### MAJOR AREAS OF RESEARCH AND DEVELOPMENT:

Pedagogy Training, Teachers training, MOOCS content creation, Course Content Creation with a foreign expert under GIAN,

Generation of design education courseware, Indian Craft resources, Case studies and video lectures for e-learning.

Development, Integration and Hosting of the virtual labs on cloud.

#### MAJOR INITIATIVES

- Teachers Training Camp was held for Rashtriya Madhyamik Shiksha Abhijan (RMSA)
- A course entitled "Optimization Methods to Groundwater Resources Management" was organized under Global Initiative of Academic Networks (GIAN)
- E-learning Course Contents launched and available at ([www.dsource.in](http://www.dsource.in))
- 08 nos. of web and video courses completed under NPTEL

#### CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED: INTERNATIONAL, NATIONAL

Name of Faculty (Convener/ Co-ordinator, etc.)	Name of Sem./Wor./Con.	Funded By	Date	International/ National
Prof. Sunil Khijwania	International Seminar on Teaching-Learning and New Technologies in Higher Education	British Council	25-26 Feb 2016	International

#### VISITORS FROM OTHER INSTITUTES/UNIVERSITIES/ORGANISATIONS / INVITED LECTURES

Name	Name of Inst./Univ./Org.	Purpose/ Name of Lecture	Date
Prof. Prathap Haridoss	IIT Madras	Lecture on NPTEL Online Certification Initiatives and CSS-MOOCs.	16-03-2016



**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
<b>Under TEQIP</b>						
1	Dr. Pankaj Kalita, Dr. R. Anandalakshmi, Dr. P. Agarwal	Solar Energy Conversion and Management	MHRD	23-27.11.15	National	21
2	Prof. P. Goswami	Recent trends in fuel cell technology	MHRD	28-29.12.15	National	11
3	Dr. Ajay Kalamdhad	Biological Treatment of Solid waste	MHRD	08-10.02.16	National	27
4	Prof. M. K. Purkait	Surfactant Mediated pollutant removal techniques	MHRD	19-23.01.16	National	33
5	Prof. G. Krishnamoorthy	Modern Instruments in Research	MHRD	29.03.16 to 01.04.16	National	3
6	Prof. Prabirkumar Saha	Advanced Process Control	MHRD	10-12.02.16	National	8
7	Dr. V. Prabu, Dr. R. Anandalakshmi, Dr. R. Prasanna Venkatesh, Dr. Nageswara Rao Peela	Advanced Clean Fuel Technologies and Alternative Energy Systems	MHRD	07-11.03.16	National	4
8	Dr. Rajesh Upadhyay, Dr. Pankaj Tiwari, Dr. Raghendra Gupta	Multiphase Flow in Oil and Gas Industry	MHRD	7-11.03.16	National	7
9	Dr. Samit Bhattacharya, Dr. T. Venkatesh	User Centric Mobile Computing	MHRD	16-18.11.15	National	15
10	Dr. Urmi R. Salve, Ms. Nanki Nath	Visual Display Design: Scientific way of Representation	MHRD	14-16.03.16	National	14
11	Dr. Brijesh Kumar Rai, Dr. Ramesh Kr. Sonkar	Advances in Photonics	MHRD	25-26.02.16	National	6
12	Dr. Dilwar Hussain, Dr. B. Sengupta	Basic Statistical Tests and Data Analysis Using SPSS	MHRD	30.03.16 to 01.04.16	National	10
13	Dr. R. Bedamatta	Sustainability Issues in the Human Development Framework: Measurements and Accounting	MHRD	10-11.03.16	National	10
14	Dr. Shakuntala Mahanta, Dr. Avishek Parui	Language, Literature and Cognition	MHRD	25-27.11.15	National	8
15	Dr. Gautam K. Das	Algorithms in Engineering	MHRD	15-19.02.16	National	21
16	Dr. Bikash Bhattacharya, Dr. Jitendriya Swain	Mathematical analysis and its applications to engineering	MHRD	2-4.01.16	National	21
17	Dr. S. Senthilvelan	Advanced Gear Engineering	MHRD	21-22.11.15	National	20
18	Dr. Pranab Kr. Modal, Dr. Balkrishna Mehta	Fundamentals of Microfluidics and its application in Bio-Medical Engineering	MHRD	22-23.01.16	National	11
19	Prof. S. K. Dwivedy	A short Term Course on Advances in Vibration Engineering	MHRD	13-15.12.15	National	19
20	Dr. R. Tiwari	A Short Term Course on Rotor Dynamics: Theory & Practice	MHRD	16-18.12.15	National	14

21	Dr. Sachin Singh Gautam	Practicle Aspects of Finite Elements Analysis	MHRD	25-29.01.16	National	14
22	Dr. P.K Padmanabhan, Dr. S. Ghosh	National Workshop on Atomistic Simulation Techniques for Materials Science, Nanotechnology and Biosciences	MHRD	21-24.12.15	National	9
23	Dr. Bosanta R Boruah	Celebrating the 2015 International year of Light and Light based Technologies	MHRD	31.10.15	National	56
<b>Under the Project "Creating Digital Learning Environment for Design in India - E-kalpa"</b>						
24	Prof. Udaya Kumar, Prof. Pankaj Upadhyay, Prof. Pratul Kalita, Prof. Ravi Mokashi Punekar, Prof. Charu Monga	One day Exposure program "Introduction to Careers in Design"	IIT Bombay	02.02.16	National	600 school students and 30 School teachers
<b>Under the Project " Electronics and ICT Academy"</b>						
25	Dr. Gaurav Trivedi, Prof. Rohit Sinha, Prof. RatnajitBhattacharjee	Foundation of C Programming	E&ICT Academy and NITS Mirza	23-31.12.15 and 25-27.3.16	National	35
<b>Under Virtual Lab Project</b>						
26	Prof. RatnajitBhattacharjee, Prof. SantoshBiswas	Virtual lab workshop at Assam Don Bosco University	Virtual Lab	18.3.2015	National	31
27	Prof. RatnajitBhattacharjee, Prof. SantoshBiswas	Virtual lab workshop at IIIT Guwahati	Virtual Lab	19.3.2015	National	160
28	Prof. Sukanya Sharma	Virtual lab workshop at Madhya Kamrup College	Virtual Lab	28.3.2015	National	23
29	Prof. RatnajitBhattacharjee, Prof. SantoshBiswas	Virtual lab workshop at VC Meet, IIT Guwahati	Virtual Lab	21.9.2015	National	40
30	Prof. SantoshBiswas	Virtual lab workshop at Kalyani Government Engineering College	Virtual Lab	9-10.1.2016	National	155
31	Prof. SantoshBiswas	Virtual lab workshop at Tripura University	Virtual Lab	14.1.2016	National	47
32	Prof. SantoshBiswas	Virtual lab workshop at Central Institute Technology	Virtual Lab	21.1.2016	National	63
33	Prof. SantoshBiswas	Virtual lab workshop at Royal Group of Institutions	Virtual Lab	26.2.2016	National	91
34	Prof. SantoshBiswas	Virtual lab workshop at NIT Arunachal	Virtual Lab	2.4.2016	National	87

**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.	Professor, Department of Computer Science and Engineering
3	Khijwania, S. ( <b>Head of the Centre</b> )	Professor, Department of Physics
4	Punekar, R. M.	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: Edinburg Instruments, Model: Lifespec II (Time resolved Instrument), FSP920 (Steady State Instrument)
- 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 for Small Molecules, Make: Agilent, Model: Single source supernova E (Mo source)
- Surface Area and Pore Size Analyzer and High Pressure Analyzer Make: Quantachrome Instruments, Model: Isorb HP1 (Surface Area and pore size analyzer), Model: Autosorb, IQ MP (High Pressure analyzer)
- Impedance and Material Analyzer (IMA), Make: Quantachrome Instruments, Model: Autosorb, IQ MP
- 600 MHz Nuclear Magnetic Resonance (NMR) Spectrometer, Make: Bruker, Model: Ascend 600
- Single Crystal X-ray Diffractometer for Large Molecules, Make: Rigaku, Model: Micromax-007HF
- 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
- MALDI Toff -Toff Mass spectrophotometer, Make: Bruker, Model: Autoflex speed

**MAJOR EQUIPMENT ON THE PROCESS OF INSTALLATION**

- Universal Testing Machine (UTM), Make: Biss, Model: Median 250
- Field Emission Gun Transmission Electron Microscope

**SPECIAL MENTION:**

- External Sample Collection: An amount equals to Rs. 2 lakhs approximately has been collected as charges of external samples analysis for the period from 1st April 2015 to 31st March 2016.
- Short Term course: For the second time a short term course on "Modern Instruments in Interdisciplinary Research" was organized by the center from 29th March to 1st April 2016.

**VISITORS**

A Team from Gifu University, Japan  
Prof. Shipad Revankar, University of Purdue, USA

**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
21. Assam Down Town University, Guwahati

**FACULTY MEMBER ASSOCIATED WITH THE CENTRE**

Krishnamoorthy, G. (**Head of the Centre**)  
Associate Professor, Department of Chemistry

# 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**

**RESEARCH PUBLICATIONS**

**Journal Papers**

**Conference Papers**

**Books**

**Book Chapters**

**DETAILS OF RESEARCH AND DEVELOPMENT PROJECTS**

## Journal Papers

### Biosciences and Bioengineering

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
A. Daverey, K. Pakshirajan	Treatment of dairy wastewater containing high amount of fats and oils using a yeast bioreactor system under batch, fed-batch and continuous operation	Desalination and Water Treatment	2016	57	12	5473	5479
A. Gogoi, S. Mukherjee, A. Ramesh, G. Das	Nanomolar Zn(II) sensing and subsequent PPI detection in physiological medium and live cells with a benzothiazole functionalized chemosensor	RSC Advances	2015	5	78	63634	63640
A. Kakoti, F. Siddiqui, P. Goswami	Low cost design and fabrication method for developing a leak proof paper based microfluidic device with customized test zone	Biomicrofluidics	2015	9	26502	1	11
A. Kumar, H. Chetia, S. Sharma, D. Kabiraj, N. C. Talukdar, U. Bora	Curcumin Resource Database	Database: The Journal of Biological Databases and Curation	2015				
A. M. Gromadzka, A. L. Steckelberg, K. K. Singh, K. Hofmann, N. H. Gehring	A short conserved motif in ALYREF directs cap-and EJC-dependent assembly of export complexes on spliced mRNAs	Nucleic Acid Res.	2016	44	5	2348	2361
A. Makhija, S. Kumar	Analysis of synonymous codon usage in spike protein gene of infectious bronchitis virus	Can J Microbiol	2015	61	12	983	989
A. Mehra, Gaurav Jerath, Vibin Ramakrishnan, Vishal Trivedi	Characterization of ICAM-1 biophore to design cytoadherence blocking peptides	Journal of Molecular Graphics and Modelling	2015	57		27	35
A. Raza, V. Kohila, S. S. Ghosh	Redesigned E.coli cytosine deaminase: a new facet of suicide gene therapy	The Journal of Gene Medicine	2015	17	7/6/2016	132	139
A. S. Roy, N. A. Manikandan, J. Hazarika, K. Pakshirajan, M. B. Syiem	Heavy metal removal from multicomponent system by the cyanobacteria Nostocmuscorum: kinetics and interaction study	Applied Biochemistry and Biotechnology	2015	175	8	3863	3874
A. Sett, M. Gadewar, P. Sharma, M. Deka, U. Bora	Green synthesis of gold nanoparticles using aqueous extract of Dillenia indica	Advances in Natural Sciences: Nanoscience and Nanotechnology	2016	7	2		
A. Sinharoy, N. A. Manikandan, K. Pakshirajan	A novel biological sulfate reduction method using hydrogenogenic carboxydotrophic mesophilic bacteria	Bioresource Technology	2015	192	-	494	500



## Journal Papers

## Biosciences and Bioengineering

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Abshar Hasan, Lalit M. Pandey	Review: Polymers, Surface-Modified Polymers, and Self Assembled Monolayers as Surface-Modifying Agents for Biomaterials	Polymer-Plastics Technology and Engineering	2015	54	13	1358	1378
Anil K. Saikia, Sabera Sultana, Ngangbam Renubala Devi, Manash J. Deka, Kartikeya Tiwari, Vikash K. Dubey	Diastereoselective Synthesis of Substituted Hexahydrobenzo[de]isochromans and their Evaluation as Antileishmanial activity	Organic and Biomolecular Chemistry	2016	14	3	970	976
Anjan Barman, Lingaraj Sahoo, Subhendra Kumar Ray	Some conspicuous traits in domesticated rice <i>Oryza sativa</i> , due to recessive alleles	Journal of Plant Science and Research	2016	3	1	143	149
Arun Dhillon, Fernando M. V. Dias, Jose A. M. Prates, Luis M. A. Ferreira, Carlos M. G. A. Fontes, Maria S. J. Centeno, Arun Goyal	A new member of family 11 polysaccharide lyase, rhamnogalacturonan lyase (CtRGLf) from <i>Clostridium thermocellum</i>	Molecular Biotechnology	2016	58	4	232	240
Arup Jyoti Borah, Mayank Agarwal, Manisha Poudyal, Arun Goyal, Vijayanand Moholkar	Mechanistic investigation in ultrasound induced enhancement of enzymatic hydrolysis of invasive biomass species	Bioresource Technology	2016	DOI: 10.1016/j.biortech.2016.02.024			
Ashutosh Gupta, Saprativ P. Das, Arabinda Ghosh, Anil Verma, Debasish Das, Arun Goyal	Optimization of enzyme saccharification and fermentation process parameters for bioethanol production from <i>Populus nigra</i> using recombinant enzymes from <i>Clostridium thermocellum</i>	Research Journal of Recent Sciences	2015	4		144	156
Atul Kumar, Anshuman Bhanja, Jina Bhattacharyya, Bithiah Grace Jaganathan	Multiple roles of CD90 in cancer	Tumor Biology	2016				
B. Choudhary, R. Kandimalla, R. Bharali, J. Monisha, A. B. Kunnumakkara, K. Kalita, J. Kotoky	Anticancer activity of <i>Garcinia Morella</i> on T-cell murine lymphoma via apoptotic induction	Front Pharmacol	2016	DOI: 10.33 89-fp har. 2016. 00003			
B. K. Datta, D. Thiyagarajan, A. Ramesh, G. Das	A sole multi-analyte receptor responds with three distinct fluorescence signals: Traffic signal like sensing of Al <sup>3+</sup> , Zn <sup>2+</sup> and F <sup>-</sup>	Dalton Transactions	2015	44	29	13093	13099

## Journal Papers

## Biosciences and Bioengineering

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
B. K. Datta, D. Thiyagarajan, C. Kar, A. Ramesh, G. Das	A near-infrared emissive Al <sup>3+</sup> -sensing platform for specific detection in solution, cells and probing DNase activity	Analytica Chimica Acta	2015	882		76	82
B. Muenst, M. C. Thier, D. Winnemoeller, M. Helfen, R. P. Thummer, F. Edenhofer	Nanog induces suppression of senescence through downregulation of p27KIP1 expression	J Cell Sci.	2016	129	5	912	920
B. Nath, N. N. Barman, S. Kumar	Molecular characterization of Newcastle disease virus strains isolated from different outbreaks in Northeast India during 2014-15	Micro Pathog	2016	91		85	91
Bhuvan Dixit, Karukriti Kaushik Ghosh, Gary Fernandes, Pankaj Kumar, Pre-rana Gogoi, Manish Kumar	Dual Nuclease activity of a Cas2 protein in CRISPR-Cas subtype I-B of <i>Leptospira interrogans</i>	FEBS Letters	2016				
C. S. Kumar, N. M. J. Hazarika, S. Kumar	Analysis of synonymous codon usage in VP2 protein gene of infectious bursal disease virus	Arch Virol	2015	160	9	2359	2366
C. Somaiah, A. Kumar, D. Mawrie, A. Sharma, S. D. Patil, J. Bhattacharya, R. Swaminathan, B. G. Jaganathan	Collagen promotes higher adhesion, survival and proliferation of mesenchymal stem cells	PLoS One	2015	10	12	e0145068	
D. Bordoloi, N. K. Roy, J. Monisha, G. Padmavathi, A. B. Kunnumakkara	Multi-Targeted Agents in Cancer Cell Chemosensitization: What We Learnt from Curcumin Thus Far	Recent Pat Anticancer Drug Discov	2016	11	1	67	97
D. J. Klionsky, K. Abdelmohsen, A. Abe, M. J. Abedin, H. Abeliovich, A. Acevedo Arzena, Vikash Kumar Dubey, S. M. Zughaier	Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition)	Autophagy	2016	12	1	1	222
D. K. Villa-Gomez, K. Pakshirajan, R. Maestro, S. Mushi, P. N. L. Lens	Effect of process variables on the sulfate reduction process in bioreactors treating metal-containing wastewaters: factorial design and response surface analyses	Biodegradation	2015	26	4	299	311
D. Thomas, S. Govindhan, E. C. Baiju, G. Padmavathi, A. B. Kunnumakkara, J. Padikkala	<i>Cyperus rotundus</i> L. prevents non-steroidal anti-inflammatory drug-induced gastric mucosal damage by inhibiting oxidative stress	J Basic Clin Physiol Pharmacol	2015	26	5	485	490

## Journal Papers

## Biosciences and Bioengineering

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Damini Kothari, Arun Goyal	Enzyme resistant isomalto-oligosaccharides produced from <i>Leuconostoc mesenteroides</i> NRRL B-1426 dextran for functional food applications	Biotechnology and Applied Biochemistry	2016	DOI: 10.1002/bab.1391			
Damini Kothari, Cédric Delatre, Arun Goyal	Bioactive isomalto-oligosaccharides synthesized from <i>Leuconostoc mesenteroides</i> NRRL B-1426 dextransucrase with colon cancer cells inhibiting and functional food additive properties	International Journal of Food and Nutritional Sciences	2016	4	4	37	46
Damini Kothari, Jagan Mohan Rao Tingirikari, Arun Goyal	In vitro analysis of dextran from <i>Leuconostoc mesenteroides</i> NRRL B-1426 for functional food application	Bioactive Carbohydrates and Dietary Fibre	2015	15		55	61
E. J. Espinosa-Ortiz, E. R. Rene, K. Pakshirajan, E. D. van Hullebusch, P. N. L. Lens	Fungal pelleted reactors in wastewater treatment: Applications and perspectives	Chemical Engineering Journal	2016	283	-	553	571
E. R. Rene, S. Kar, J. Krishnan, K. Pakshirajan, M. E. Lopez, D. V. Murthy, T. Swaminathan	Start-up, performance and optimization of a compost biofilter treating gas-phase mixture of benzene and toluene	Bioresource Technology	2015	190	-	529	535
G. Deb, S. Batra, A. M. Limaye	Data in support of the negative influence of divalent cations on (-)-epigallocatechin-3-gallate (EGCG)-mediated inhibition of matrix metalloproteinase-2 (MMP-2)	Data Brief	2015	6	-	461	465
G. K. Mothe, K. Pakshirajan, G. Das	Heavy metal removal from multicomponent system by sulfate reducing bacteria: mechanism and cell surface characterization	Journal of Hazardous Materials	2016				
G. K. Prashanth, P. A. Prashanth, U. Bora, M. Gadewar, B. M. Nagabhushana, S. Ananda, G. M. Krishnaiah, H. M. Sathy-ananda	In vitro antibacterial and cytotoxicity studies of ZnO nanopowders prepared by combustion assisted facile green synthesis	International Journal of Modern Science	2015	1	2	67	77
G. Padmavathi, S. R. Rathnakaram, J. Monisha, D. Bordoloi, N. K. Roy, A. B. Kunnumakara	Potential of butein, a tetrahydrochalcone to obliterate cancer	Phytomedicine	2015	22	13	1163	1171

**Journal Papers**
**Biosciences and Bioengineering**

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Ilakka Kajala, Jari Mäkelä, Ros-sana Coda, Shradda Shukla, Qiao Shi, Ndegwa Henry Maina, Riikka Juvonen, Päivi Ekholm, Arun Goyal, Maija Tenkanen, Kati Katina	Rye bran as fermentation matrix boosts in sitopro-duction by Weissella confusacomparedtowheat bran	Applied Microbiology and Biotechnology	2016	DOI: 10.1007/s00253-015-7189-6			
J. Bhasarkar, A. J. Borah, P. Goswami, V. S. Moholkar	Mechanistic analysis of ultrasound assisted enzymatic desulfurization of liquid fuels using horseradish peroxidase	Bioresource Technology	2015	196		88	98
J. Hazarika, K. Pakshirajan, A. Sinharoy, M. B. Syiem	Bioremoval of Cu (II), Zn (II), Pb (II) and Cd (II) by Nostoc muscorumisolated from a coal mining site	Journal of Applied Phycology	2015	27	4	1525	1534
J. Monisha, N. K. Roy, D. Bordoloi, A. Kumar, R. Golla, J. Kotoky, G. Padmavathi, A. B. Kunnumakkara	Nuclear Factor Kappa B: A Potential Target to Persecute Head and Neck Cancer	Curr Drug Targets	2016	Epub ahead of print- PMID: 26844566			
K. Pakshirajan, E. R. Rene, A. Ramesh	Biotechnology in environmental monitoring and pollution abatement 2015	BioMed Research International	2015	2015			
M. C. Manjegowda, G. Deb, N. Kumar, A. M. Limaye	Expression profiling of genes modulated by estrogen, EGCG or both in MCF-7 breast cancer cells	Genom Data.	2015	5		210	212
M. Das, S. Kumar	Recombinant phosphoprotein based single serum dilution ELISA for rapid serological detection of Newcastle disease virus	J Virol Methods	2015	225		64	69
M. Gopi Kiran, K. Pakshirajan, G. Das	Heavy Metal Removal Using Sulfate-Reducing Biomass Obtained from a Lab-Scale Upflow Anaerobic-Packed Bed Reactor	Journal of Environmental Engineering	2015	C4015010			
M. H. A. Mohamed, A. M. Abdelaziz, S. Kumar, M. A. Al-Habib, M. M. Megahed	Effect of phylogenetic diversity of velogenic Newcastle disease virus challenge on virus shedding post homologues and heterologues DNA vaccination in chickens	Avian Pathol	2016	45	2	228	234
Mohitosh Dey, Sanjib Kumar Panda, Lingaraj Sahoo	Establishment of an Efficient Regeneration System Amenable to AgrobacteriumMediated Transformation of Two Elite Indica Rice Varieties of North East India	International Journal of Applied Sciences and Biotechnology	2016	3	4	680	686

## Journal Papers

## Biosciences and Bioengineering

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Mousumi Das, Gundappa Saha, Vikash Kumar Dubey	Novel leads against miltefosine unresponsive <i>Leishmania donovani</i>	Antimicrobial Agents and Chemotherapy	2015	59	12	7826	7829
Mousumi Das, Ritesh Kumar, Vikash Kumar Dubey	Ornithine decarboxylase of <i>Leishmania donovani</i> : Biochemical properties and possible role of N-terminal extension.	Protein and Peptide Letters	2015	22	2	130	136
Mousumi Das, Shalini Singh, Vikash Kumar Dubey	Novel inhibitors of ornithine decarboxylase of <i>Leishmania</i> parasite (LdODC): The parasite resists LdODC inhibition by over-expression of spermidine synthase	Chem Biol Drug Design	2016	87	3	352	360
N. K. Roy, D. Bordoloi, J. Monisha, G. Padmavathi, D. Bordoloi, J. Monisha, G. Padmavathi, J. Kotoky, R. Golla, A. B. Kunnumakkara	Specific Targeting of Akt Kinase Isoforms: Taking the Precise Path for Prevention and Treatment of Cancer	Curr Drug Targets	2016	Epub ahead of print PMID: 26953242			
Nadana Bhardwaj, Dipali Devi, Biman B. Mandal	Tissue engineered cartilage: the crossroads of biomaterials, cells and stimulating factors	Macromolecular Bioscience	2015	15		153	182
Nadeem Akhtar, Dinesh Goyal, Arun Goyal	Biodegradation of leaf litter biomass by combination of <i>Bacillus</i> sp. and <i>Trichoderma reesei</i> MTCC164	Minerva Biotechnology	2015	27	4	191	199
Nadeem Akhtar, Kanika Gupta, Dinesh Goyal, Arun Goyal	Physico-chemical characteristics of leaf litter biomass to delineate the chemistries involved in biofuel production	Journal of the Taiwan Institute of Chemical Engineers	2016	DOI: 10.1016/j.jtice.2016.02.011			
Nadeem Akhtar, Kanika Gupta, Dinesh Goyal, Arun Goyal	Recent advances in pre-treatment technologies for efficient hydrolysis of lignocellulosic biomass	Environmental Progress and Sustainable Energy	2016	35	2	489	511
Nandana Bhardwaj, Wan Ting Sow, Diplai Devi, Kee Woei Ng, Biman B. Mandal, Nam-Joon Cho	Silk fibroin-keratin based 3D scaffolds as a dermal substitute for skin repair and regeneration	Integrative Biology	2015	7		53	63
Naresh Mohan, Rengesh Balakrishnan, Senthilkumar Sivaprakasam	Optimization and effect of dairy industrial waste as media components in the production of hyaluronic acid by <i>Streptococcus thermophilus</i>	Preparative Biochemistry and Biotechnology	2015	DOI: 10.1080/10826068.2015.1128446			

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
P. Gogoi, A. Srivastava, P. Jayaprakash, J. Jeyakanthan, S. P. Kanaujia	In silico analysis suggests that PH702 and PH0208 encode for methylthioribose-1-phosphate isomerase and ribose-1,5-bisphosphate isomerase, respectively, rather than $\alpha$ F2B $\beta$ and $\alpha$ F2B $\delta$	Gene	2016	575		118	126
P. Gogoi, K. Ganar, S. Kumar	Avian paramyxovirus: A brief review	Transboundary and Emerging Diseases	2015	DOI: 10.1111/tbed.12355			
P. Gogoi, M. Chandravanshi, S. K. Mandal, A. Srivastava, S. P. Kanaujia	Heterogeneous behavior of metalloproteins towards metal ion binding and selectivity: insights from molecular dynamics studies	J. Biomol. Struct. Dyn	2015			1	16
P. J. Sarma, R. Kumar, N. Arul Manikandan, K. Pakshirajan	Cr(III) and Cr(VI) removal from aqueous solution by biosorption using agricultural waste materials: batch and continuous reactor study	Asian Journal of Chemistry	2015	27	9	3520	3430
P. Vatsyayan, P. Goswami	Highly Active and Stable Large Catalase Isolated from a Hydrocarbon Degrading <i>Aspergillus terreus</i> MTCC 6324	Enzyme Research	2016	2016	4379403	1	8
Pawan Kumar Maurya, Prabhanshu Kumar, Pranjal Chandra	Age dependent detection of erythrocytes glucose-6-phosphate dehydrogenase and its correlation with oxidative stress	Archives of Physiology and Biochemistry	2016		27	1	6
Pawan Kumar Maurya, Prabhanshu Kumar, Pranjal Chandra	Biomarkers of oxidative stress as a function of human age	World Journal of Methodology	2015	26	5	216	222
Prabhanshu Kumar, Subhash Chand, Pranjal Chandra, Pawan Kumar Maurya	Influence of Dietary Capsaicin on Redox Status in Red Blood Cells During Human Aging	Advanced Pharmaceutical Bulletin	2015	5	4	583	586
R. Ahirwar, S. Tanwar, U. Bora, P. Nahar	Microwave non-thermal effect reduces ELISA timing to less than 5 minutes	RSC Advances	2016	6	25	20850	20857
R. Kumar, N. N. Barman, E. Khatoon, G. Rajbongshi, N. Deka, S. Morla, S. Kumar	Molecular characterization of E2 glycoprotein of classical swine fever virus: adaptation and propagation in porcine kidney cells	In Vitro Cell Dev Biol Anim	2015	51	5	441	446
R. Kumar, N. N. Barman, E. Khatoon, S. Kumar	Development of single dilution immunoassay to detect E2 protein specific classical swine fever virus antibody	Vet Immunol Immunopathol	2016	172		50	54

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Ranjan Tamuli, Rekha Deka, Katherine A. Borkovich	Calcineurin Subunits A and B Interact to Regulate Growth and Asexual and Sexual Development in <i>Neurospora crassa</i>	PLOS ONE	2016	11	3	e0151867	
Ruchika Bhardwaj, Ritesh Kumar, Sanjeev Kumar Singh, Chandrabose Selvaraj, Vikash Kumar Dubey	Understanding the importance of conservative hypothetical protein LdBPK_070020 in <i>Leishmania donovani</i> and its role in subsistence of the parasite	Archives of Biochemistry and Biophysics	2016	596		10	21
Rwivoo Baruah, Deeplina Das, Arun Goyal	Heteropolysaccharides from Lactic acid bacteria: Current trends and applications	Journal of Probiotics and Health	2016	4	2	1	6
S. Das, M. Sharma, D. Saharia, K. K. Sarma, M. G. Sarma, B. B. Borthakur, U. Bora	Data in support of in vivo studies of silk based gold nano-composite conduits for functional peripheral nerve regeneration	Data in Brief	2015	4		315	321
S. Das, M. Sharma, D. Saharia, K. K. Sarma, M. G. Sarma, B. B. Borthakur, U. Bora	In vivo studies of silk based gold nano-composite conduits for functional peripheral nerve regeneration	Biomaterials	2015	62		66	75
S. Goswami, M. B. Syiem, 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	2015	20	1	41	50
S. Kumar	Newcastle disease virus outbreaks in India: Time to revisit the vaccine type and strategies	Vaccine	2015	33	29	3268	3269
S. Kumar, M. Koul	Newcastle disease virus: A constant threat to the poultry industry in India	Vaccine	2016	34	5	597	598
S. Kumar, N. Gupta, K. Pakshirajan	Simultaneous lipid production and dairy wastewater treatment using <i>Rhodococcus opacus</i> in a batch bioreactor for potential biodiesel application	Journal of Environmental Chemical Engineering	2015	3	3	1630	1636
S. Mitra, P. Singh, S. Manzoor, P. Bhattacharyya, T. Bera, A. K. Patra, L. Rangan, P. Boraha	Can rice and wheat biochar amendment protect the carbon loss from tropical soils-an experimental study	Environmental Progress and Sustainable Energy	2016	35		183	188
S. Morla, A. Makhija, S. Kumar	Synonymous codon usage pattern in glycoprotein gene of rabies virus	Gene	2016	584	1	1	6
S. Morla, P. Deka, S. Kumar	Isolation of novel variants of infectious bursal disease virus from different outbreaks in Northeast India	Microb Pathog	2016	93		131	136

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S. Mukherjee, A. Ramesh	Bacteriocin-producing strains of <i>Lactobacillus plantarum</i> inhibit adhesion of <i>Staphylococcus aureus</i> to extracellular matrix: Quantitative insight and implications in antibacterial therapy	Journal of Medical Microbiology	2015	64	12	1514	1526
S. N. Balaji, A. M. Jawed, S. J. Singh, V. Trivedi	Synthesis and antimalarial potentials of curcumin analogues containing heterocyclic rings	Arabian Journal of chemistry	2015				
S. R. Chinnadayyala, M. Santhosh, N. K. Singh, P. Goswami	Alcohol oxidase protein mediated in-situ synthesized and stabilized gold nanoparticles for developing amperometric alcohol biosensor	Biosensors and Bioelectronics	2015	69	15	155	161
S. R. Reddy Tadi, E. V. R. A., A. M. Limaye, S. Sivaprakasam	Enhanced production of optically pure D (-) lactic acid from nutritionally rich <i>Borassus flabellifer</i> sugar and whey protein hydrolysate based fermentation medium	Biotechnol Appl Biochem	2015	Epub ahead of print PMID: 26671214			
S. Rani, S. Kumar	Evaluation of infectious bursal disease virus stability at different conditions of temperature and pH	Biologicals	2015	43	6	515	518
S. S. Dahiya, S. Kumar, S. C. Mehta, S. D. Narnaware, R. Singh, F. C. Tuteja	Camelpox: A brief review on its epidemiology, current status and challenges	Acta Trop	2016	158		32	38
Samit K. Nandi, Biswanath Kundu, Arnab Mahato, Narsinh L. Thakur, Siddhartha Joardar, Biman B. Mandal	In Vitro and in vivo evaluation of natural marine sponge skeleton as a bone mimicking biomaterial	Integrative Biology	2015	7		250	262
Saprativ P. Das, Ashutosh Gupta, Debasish Das, Arun Goyal	Enhanced bioethanol production from water hyacinth ( <i>Eichhornia crassipes</i> ) by statistical optimization of fermentation process parameters using Taguchi orthogonal array design	Biodeterioration and Biodegradation	2016	109		174	184
Satyabrat Gogoi, Manishekar Kumar, Biman B. Mandal, Niranjana Karak	High performance luminescent thermosetting waterborne hyperbranched polyurethane/carbon quantum dot nanocomposite with in vitro cytocompatibility	Composites Science and Technology	2015	118		39	46
Satyabrat Gogoi, Manishekar Kumar, Biman B. Mandal, Niranjana Karak	Renewable resource based carbon dot decorated hydroxyapatite nanohybrid and its fabrication with waterborne hyperbranched polyurethane for bone tissue engineering	RSC Advances	2016	6		26066	26076



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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	2015	59	1	15	24
Shalini Singh, Sitrasaru Vijaya Prabhu, Venkatesan Suryanarayanan, Ruchika Bhardwaj, Sanjeev Kumar Singh, Vikash Kumar Dubey	Molecular docking and structure based virtual screening studies of CAAX prenyl protease I & II	Journal of Molecular Structure and Dynamics	2016	38718		1	20
Shraddha Shukla, Anil Verma, Ilkka Kajala, Antti Nyssölä, Rwivoo Baruah, Kati Katina, Riikka Juvonen, Maija Tenkanen, Arun Goyal	Structure modelling and functional analysis of recombinant dextransucrase from Weissella confusaCab3 expressed in Lactococcus lactis	Preparative Biochemistry and Biotechnology	2016	DOI: 10.1080/10826068.2016.1141299			
Shuchi Singh, Mayank Agarwal, Aditya Bhat, Arun Goyal, Vijayanand S. Moholkar	Ultrasound enhanced enzymatic hydrolysis of Parthenium hysterophorus: A mechanistic investigation	Bioresource Technology	2015	192		636	645
Soumyadeep Chakraborty, Kedar Sharma, Joyita Mukherjee, Munishwar N. Gupta, Arun Goyal	Structural modelling, substrate binding and stability studies of endo-pectate lyase (PL1B) of family 1 polysaccharide lyase from Clostridium thermocellum	Protein and Peptide Letters	2015	22	6	557	568
Subbi Rami Reddy Tadi, Arun E. V. R., Anil Mukund Limaye, Senthilkumar Sivaprakasam	Enhanced production of optically pure D (-) lactic acid from nutritionally rich Borassus flabellifer sugar and whey protein hydrolysate based fermentation medium	Biotechnology and Applied Biochemistry	2016	DOI: 10.1002/bab.1470			
Sudipta Shekhar Das Bhowmik, Adrija Basu, Lingaraj Sahoo	Direct Shoot Organogenesis from Rhizomes of Medicinal Zingiber Alpinia calcarata Rosc., and Evaluation of Genetic Stability by RAPD and ISSR Markers	Journal of Crop Science and Biotechnology	2016				

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Supansa Yodmuang, Stephanie L. McNamara, Adam B. Nover, Biman B. Mandal, Monica Agarwal, Terri-Ann N. Kelly, Pen-hsiu Grace Chao, Clark Hung, David L. Kaplan, Gordana Vunjak-Novakovic	Silk microfiber-reinforced silk hydrogel composite for functional cartilage tissue repair	Acta Biomaterialia	2015	11		27	36
Sushant Singh, Vikash Kumar Dubey	Multiwalled carbon nanotube-Superoxide dismutase conjugate towards alleviating induced oxidative stress	International Journal of Peptide Research and Therapeutics	2016	DOI: 10.1007/s10989-015-9495-3			
U. Kumar, S. Kumar	Molecular characterization of an apoptotic strain of Newcastle disease virus isolated from an outbreak in India	Cancer Gene Therapy	2015	22	8	402	409
V. Sinha, K. Pakshirajan, R. Chaturvedi	Evaluation of Cr (VI) Exposed and Unexposed Plant Parts of Tradescantia pallida(Rose) DR Hunt. for Cr Removal from Wastewater by Biosorption	International Journal of Phytoremediation	2015	17	2	1204	1211
Vijya Laxmi, Ranjan Tamuli	The Neurospora crassa cmd, trm-9, and nca-2 Genes Play a Role in Growth, Development, and Survival in Stress conditions	Genomics and Applied Biology	2015	6	7	1	8
Yuriko Kobayashi, Ayan Sadhukhan, Tanveer Tazib, Yuki Nakano, Kazutaka Kusunoki, Kamara Mohamed, Radhouane Chaffai, Satoshi Iuchi, Lingaraj Sahoo, Masatomo Kobayashi, Owen A. Hoekenga, Hiroyuki Koyama	Joint genetic and network analyses identify loci associated with root growth under NaCl stress in Arabidopsis thaliana	Plant Cell Environment	2016	39	4	918	934

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A. Das, A. K. Golder, C. Das	Enhanced extraction of Rebaudioside-A: Experimental, response surface optimization and prediction using artificial neural network	Ind. Crops and Prod.	2015	65		415	421
A. Das, A. K. Golder, 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.	2015	144		8	15
A. Difusa, K. Mohanty, V. V. Goud	Effect of light intensity and pH condition on the growth, biomass and lipid content of microalgae <i>Scenedesmus</i> species	Biofuels	2015	6		37	44
A. Difusa, K. Mohanty, V. V. Goud	The chemometrics approach applied to FTIR spectral data for the analysis of lipid content in microalgae cultivated in different nitrogen sources	Biomass Conversion and Biorefinery	2016			1	7
A. J. Borah, M. Agrawal, M. Poudyal, A. Goyal, V. S. Moholkar	Mechanistic investigation in ultrasound induced enhancement of enzymatic hydrolysis of invasive biomass species.	Bioresource Technology	2016		DOI: 10.1016/j.biortech.2016.02.024		
A. K. Behera, Ch. V. Rao, R. K. Das, A. S. Giri, A. K. Golder	Fabrication and characterization of ag-doped titania: Impact of dye-sensitization, phenol decomposition kinetics and biodegradability index	Desalin. Water Treat.	2016	57		9488	9497
A. K. Singh, G. Harinadha, N. Kishore, P. Barua, T. Jain, P. Joshi	Mixed convective heat transfer phenomena of circular cylinders to non-Newtonian nanofluids flowing upward	JoshiProcedia Eng.	2015	127		118	125
A. M. Verma, N. Kishore	DFT study on hydrogenation reaction of acetaldehyde to ethyl alcohol in gas and water phase	Int. J. Res. Eng. Technol.	2016	5		53	57
A. R. K. Gollakota, M. D. Subramanyam, N. Kishore, S. Gu	CFD simulations on effect of catalysts on hydrodeoxygenation of bio-oil	RSC Adv	2015	5		41855	41866
A. R. K. Gollakota, M. Reddy, M. D. Subramanyam, N. Kishore	A review on the upgradation techniques of pyrolysis bio-oil	Renew. Sus. Energy Rev.	2016	58		1543	1568
A. R. K. Gollakota, N. Kishore	A numerical study on flow and drag phenomena of spheroid bubbles in Newtonian and shear-thinning power-law fluids	Int. J. Modeling and Simulation	2016		DOI: 10.1080/02286203.2016.1142287		

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A. S. Giri, 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	2015	127		254	261
Akhilesh Kumar Pal, Ananya Das, Vimal Katiyar	Extraction and Characterization of Chitin and Chitosan from Muga Silkworms ( <i>Antheraea assamensis</i> )	JAPS	2016				
Akhilesh Kumar Pal, Vimal Katiyar	Chitosan dispersed PLA films for high gas barrier applications: An industrially viable approach	J. Material Sci. Eng.	2015	4	4	119	
Akhilesh Kumar Pal, Vimal Katiyar	Non-isothermal degradation kinetics of PLA-Chitosan films prepared by solution casting method	Asian Chitin J.	2015	11	1	37	44
Ali S. Reshad, Pankaj Tiwari, Vaibhav V. Goud	Extraction of Oil from Rubber Seeds for Biodiesel Application: Process Optimization Study	Fuel	2015	150		636	644
Ali S. Reshad, Vaibhav V. Goud, Sahoo Niranjana, Pankaj Tiwari, Vinayak Kulkarni	Rubber Seed Oil Methyl Ester Synthesis, Engine Performance, and Emission Characteristics of Blends	Energy Fuels	2015	29	8	5136	5144
Amit Kumar Singh, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Magnetically Guided Chemical Locomotion of Self-Propelling Paperbots	RSC Advances	2015	5	79	64444	64449
Anand Bharti, Prerna, Tamal Banerjee	Applicability of Cuckoo Search Algorithm for the Prediction of Multicomponent Liquid-Liquid Equilibria for Imidazolium and Phosphonium Based Ionic Liquids	Industrial Engineering Chemistry Research	2015	54		12393	12407
Anand Bharti, Tamal Banerjee	Enhancement of Bio-Oil Derived Chemicals in Aqueous Phase using Ionic Liquids: Experimental and COSMO-SAC Predictions using a Modified Hydrogen Bonding Expression	Fluid Phase Equilibria	2015	400		27	37
Anand Bharti, Tamal Banerjee	Solubility prediction of bio-oil derived chemicals in aqueous media by Localized Molecular Orbital-Energy Decomposition Analysis (LMO-EDA) and COSMO-RS predictions	Computational and Theoretical Chemistry	2015	1067		48	59
Anil Kumar Thandlam, Ajay Tyouharia, Subrata Kumar Majumder	Frictional Pressure Drop of Gas-liquid-solid three-phase flow in Helical Coil	Elixir Chemical Engineering	2016	92		38927	38932

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Anil Kumar Thandlam, Tapas Kumar Mandal, Subrata Kumar Majumder	Flow pattern transition, frictional pressure drop, and holdup of gas non-Newtonian fluid flow in helical tube	Asia-Pacific Journal of Chemical Engineering	2015	10	3	422	437
Arijit Mondal, Mridusmita Barooah, Bishnupada Mandal	Effect of single and blended amine carriers on CO <sub>2</sub> separation from CO <sub>2</sub> /N <sub>2</sub> mixtures using crosslinked thin-film poly(vinyl alcohol) composite membrane	International Journal of Greenhouse Gas Control	2015	39		27	38
Ashim Kumar Basumatary, R. Vinoth Kumar, Alope Kumar Ghoshal, G. Pugazhenth	Cross Flow Ultrafiltration of Cr (VI) using MCM-41, MCM-48 and Faujasite (FAU) Zeolite-Ceramic Composite Membranes	Chemosphere	2016	153		436	446
Ashis Kumar Thokchom, Subrata Kumar Majumder, Anugrah Singh	Internal fluid motion and particle transport in externally heated sessile droplets	AIChE Journal	2016	62	4	1308	1321
Ashok Kumar Dasmahapatra	Phase Separation and Crystallization in Double Crystalline Symmetric Binary Polymer Blends	Journal of Polymer Research	2016	23	3	56-1	56-13
Ashok Kumar Dasmahapatra, G. Diwakar Reddy, Venkata Mahanth Sanka	Collapse Transition of Branched Polymers in Dilute Solutions: Telechelic Star vs. H-Polymer	Macromolecular Symposia	2015	354		207	220
Basudhrity Banerjee, Debashis Kundu, G. Pugazhenth, Tamal Banerjee	Quantum chemical and experimental insights for the ionic liquid facilitated thermal dehydrogenation of ethylene diamine bisborane	RSC Advances	2015	5		85280	85290
Bolleddu Ravi, Rabibrata Mukherjee, Dipankar Bandyopadhyay	Solvent Vapor Mediated Spontaneous Healing of Self-Organized Defects of Liquid Crystal Films	Soft Matter	2015	11		139	
C. Das, V. Singh, N. K. Meena, A. K. Golder	Fabrication of cost effective iron ore slime ceramic membrane for the recovery of organic solvent used in coke production	Inter. J. Coal Sci. Tech.	2016				
Ch. V. Rao, A. S. Giri, V. V. Goud, A. K. Golder	Studies on pH dependent color variation and decomposition mechanism of Brilliant Green dye in Fenton reaction	Internat. J. Ind. Chem.	2016	7		71	80
Chitrita Kundu, Ashok Kumar Dasmahapatra	Crystallization of Double Crystalline Diblock Copolymer by Dynamic Monte Carlo Simulation	Macromolecular Symposia	2015	354		314	323

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E. A. Dil, M. Ghaedi, A. Ghaedi, A. Asfaram, M. Jamshidi, M. K. Purkait	Application of artificial neural network and response surface methodology for the removal of crystal violet by zinc oxide nanorods loaded on activate carbon: Kinetics and equilibrium study	J. Taiwan Inst. Chem. Eng	2016	59		210	220
H. Mazaheri, M. Ghaedi, S. Hajati, K. Dashtian, M. K. Purkait	Simultaneous removal of Methylene blue and Pb <sup>2+</sup> ion using Ruthenium nanoparticle-loaded activated carbon: Response surface methodology	RSC Advance	2015	101	5	83427	83435
H. Sahu, K. Mohanty	Al grafted natural hydroxyapatite for Neem oil Transesterification: Kinetic study at optimal point	Chemical Engineering Journal	2015	280		564	574
H. Sahu, Kaustubha Mohanty	Pseudo-first order reaction kinetics and thermodynamic properties study of neem oil esterification using MgO grafted natural hydroxyapatite	RSC Advances	2016	6		8892	8890
J. B. Bhasarkar, M. Singh, V. S. Moholkar	Mechanistic insight in phase transfer agent assisted ultrasonic desulfurization.	RSC Advances	2015	5	125	102953	102964
J. B. Bhasarkar, P. K. Dikshit, V. S. Moholkar	Ultrasound Assisted Biodesulfurization of Liquid Fuel using Free and Immobilized Cells of Rhodococcus rhodochrous MTCC 3552: A Mechanistic Investigation.	Bioresource Technology	2015	187		369	378
Jayashree Biswal, Sunil Goswami, Rajesh Kumar Upadhyay, Harish Pant, Ashutosh Das	Synthesis, Characterization, Neutron Activation, and Application of Scandium Oxide Microsphere in Radioactive Particle Tracking Experiments	Industrial & Engineering Chemistry Research	2015	55	1	3	12
K. Samal, C. Das, K. Mohanty	Development of Hybrid Membrane Process for Pb bearing Wastewater Treatment	Journal of Water Process Engineering	2016	10		30	38
Kanchapogu Suresh, Tekula Srinu, Alope Kumar Ghoshal, G. Pugazhenti	Preparation and characterization of TiO <sub>2</sub> and $\gamma$ -Al <sub>2</sub> O <sub>3</sub> composite membranes for the separation of oil-in-water emulsions	RSC Advances	2016	6		4877	4888
M Dash, V. V. Dasu, K. Mohanty	Physico-chemical characterization of Miscanthus, Castor and Jatropha towards Biofuel production	Journal of Renewable and Sustainable Energy	2015	7		0431 241-1	0431 241-13
M. Agrawal, P. K. Dikshit, J. B. Bhasarkar, A. J. Borah, V. S. Moholkar	Physical Insight into Ultrasound-Assisted Biodesulfurization using Free and Immobilized Cells of Rhodococcus rhodochrous MTCC 3552.	Chemical Engineering Journal	2016	295		254	267
M. D. Subramanyam, A. R. K. Gollakota, N. Kishore	CFD simulations of catalytic hydrodeoxygenation of bio-oil using Pt/Al <sub>2</sub> O <sub>3</sub> in a fixed bed reactor	RSC Adv	2015	5		90354	90366

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M. Ghaedi, H. R. Moazzen, M. K. Purkait	Kinetic and isotherm study of Sudan black B removal	Toxicology and Industrial Health	2016	DOI: 10.1177/0748233715592293			
M. Ghaedi, M. Yousefinejad, M. Safarpour, H. Zare Khafri, M. K. Purkait	Rosmarinus officinalis leaf extract mediated green synthesis of silver nanoparticles, and antimicrobial properties	J. Ind. and Eng. Chem	2015	31		167	172
M. Ghaedi, R. Hassani, K. Dashtian, G. Shafie, M. K. Purkait, H. Dehghan	Adsorption of methyl red on to palladium nanoparticles loaded on activated carbon: experimental design optimization	Desalination and Water Treatment	2016	DOI: 10.1080/19443994.2015.1136963			
M. Ghaedi, S. Hajati, M. Zaree, Y. Shajaripour, A. Asfaram, M. K. Purkait	Removal of methyl orange by multiwalled carbon nanotube accelerated by ultrasound device: Optimized experimental design	Adv. Powder Technol	2015	26	4	1087	1093
M. K. Sinha, M. K. Purkait	Use of CS-PAA nanoparticle as alternative of metal oxide nanoparticle and its effect on fouling mitigation of PSF ultrafiltration membrane	RSC Advances	2015	5		66109	66121
M. Malika, Ch. V. Rao, R. K. Das, A. S. Giri, A. K. Golder	Evaluation of bimetal doped TiO <sub>2</sub> in dye fragmentation and its comparison to mono-metal doped and bare catalyst	Appl. Surf. Sci.	2016	368		316	324
M. Mohan, C. Balaji, V. V. Goud, T. Banerjee	Thermodynamic Insights in the Separation of Cellulose/Hemicellulose components from Lignocellulosic Biomass Using Ionic Liquids	Journal of Solution Chemistry	2015	44		538	557
M. Mohan, R. Timung, N. Naik Deshavath, T. Banerjee, V. V. Goud, V. V. Dasu	Optimization and hydrolysis of cellulose under subcritical watertreatment for the production of total reducing sugars	RSC Advances	2015	5		103265	103275
M. Mohan, T. Banerjee, V. V. Goud	Hydrolysis of Bamboo Biomass by Subcritical Water Treatment	Bioresource Technology	2015	191		244	525
M. Mohan, V. V. Goud, T. Banerjee	Solubility of Glucose, Xylose, Fructose and Galactose in Ionic Liquids: Experimental and Theoretical studies using a Continuum Solvation Model	Fluid Phase Equilibria	2015	395		33	43
M. Roosta, M. Ghaedi, R. Sahraei, M. K. Purkait	Ultrasonic assisted removal of sunset yellow from aqueous solution by zinc hydroxide nanoparticle loaded activated carbon: Optimized experimental design	Mat. Sci. and Eng.: C	2015	52	1	82	89

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Manish Kumar, S. Arun, Pradeep Upadhyaya, G. Pugazhenti	Properties of PMMA/Clay Nanocomposites Prepared using Various Compatibilizers	International Journal of Mechanical and Materials Engineering	2015	10		7	
Manish Kumar, Vivek Chaudhary, Suresh Kelothu, G. Pugazhenti	Synthesis and Characterization of Exfoliated PMMA/Co-Al LDH Nanocomposites via Solvent Blending Technique	RSC Advances	2015	5		39810	39820
Melakuu Tesfaye, Vimal Katiyar	Microwave assisted synthesis of biodiesel from soybean oil: Effect of poly (lactic acid)-oligomer on cold flow properties, IC engine performance and emission characteristics	Fuel	2016	170		107	114
N. Kishore, R. R. Ramteke	Forced convective heat transfer from spheres to Newtonian fluids in steady axisymmetric flow regime with velocity slip at fluid-solid interface	Int. J Thermal Sci.	2016	105		206	217
N. Kishore, R. R. Ramteke	Slip in flow through assemblages of spherical particles at low to moderate Reynolds numbers	Chem. Eng. Technol.	2016		DOI: 10.1002/ceat.201500004		
N. Kishore, V. S. Nalajala	Momentum and Mass Transfer Phenomena of Contaminated Bubble Swarms in Surfactant-laden Power-law Liquids	Int. J. Fluid Mech. Res.	2015				
Neelima Tripathi, Vimal Katiyar	PLA/Functionalized-Gum Arabic Based Bionanocomposite Films for High Gas Barrier Applications	Journal of Applied Polymer Science	2016	133	21	-	-
Nilay Sharma, M. K. Purkait	Enantiomeric and Racemic effect of Tartaric acid on Brilliant Green dye Removal on Polysulfone based Membrane by MEUF process	Research Journal of Recent Sciences	2016	5		27	32
Nilay Sharma, M. K. Purkait	Enantiomeric and racemic effect of tartaric acid on polysulfone membrane during crystal violet dye removal by MEUF process	J. Water Proc. Engg.	2016	10		104	112
Nupur Gupta, Bisweswar Das, Binay Deogam, Sanjib Barma, Bishnupada Mandal	Modeling and simulation for post-combustion carbon dioxide capture from power plant flue gas with economic analysis	Separation Science and Technology	2015	50	13	1952	1963
Nurshakirin Hazim Chan, Hanee Farzana Hizaddin, Ramalingam Anantharaj, Tamal Banerjee	Ethylsulphate-Based Ionic Liquids in the Liquid-Liquid Extraction of Pyrrole and Pyridine from Isododecane at 298.15 K	Chemical Product and Process Modeling.	2015	10	3	161	171



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P. K. Dikshit, V. S. Moholkar	Optimization of 1,3 Dihydroxyacetone Production from Crude Glycerol by Immobilized Gluconobacter oxydans MTCC 904.	Bioresource Technology	2016	DOI: 10.1016/j.biortech.2016.01.100			
P. Mokhtari, M. Ghaedi, K. Dashtian, M. R. Rahimi, M. K. Purkait	Removal of methyl orange by copper sulfide nanoparticles loaded activated carbon: Kinetic and isotherm investigation	J. Mol. Liquids	2016	216		299	305
Pankaj Tiwari, Sanjeev Garg	Study of reversible kinetic models for alkali-catalyzed Jatropha curcas transesterification	Biomass Conversion and Biorefinery	2016	6	1	61	70
Prabu Vairakannu	Integration of in-situ CO <sub>2</sub> -oxy coal gasification with advanced power generating systems performing in a chemical looping approach of clean combustion	Applied Energy	2015	140		1	13
Prabu Vairakannu, Ankan Shrivastava	Thermodynamic analysis of solar energy integrated underground coal gasification in the context of cleaner fossil power generation	Energy conversion and management	2016	110		67	77
Prabu Vairakannu, Geeta Kumari	CO <sub>2</sub> enhanced in-situ oxy-coal gasification based carbon-neutral conventional power generating systems	Energy	2015	84		672	683
Prabu Vairakannu, Nirmal Mallick	Coalbed methane with CO <sub>2</sub> sequestration: An emerging clean coal technology in India	Renewable and Sustainable Energy Reviews	2015	50		229	244
Prodyut Dhar, Amit Kumar, Vimal Katiyar	Fabrication of cellulose nanocrystal supported stable Fe(0) nanoparticles: a sustainable catalyst for dye reduction, organic conversion and chemomagnetic propulsion	Cellulose	2015	22	6	3755	3771
Prodyut Dhar, Debashis Tarafder, Amit Kumar, Vimal Katiyar	Effect of cellulose nanocrystal polymorphs on mechanical, barrier and thermal properties of poly(lactic acid) based bionanocomposites	RSC Advances	2015	5	74	60426	60440
Prodyut Dhar, Debashis Tarafder, Amit Kumar, Vimal Katiyar	Thermally recyclable polylactic acid/cellulose nanocrystal films through reactive extrusion process	Polymer	2016	87		268	282
Prodyut Dhar, Umesh Bhardwaj, Amit Kumar, Vimal Katiyar	Improved structural properties of polyhydroxybutyrate composites	Plastics Research online, SPE	2016				

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Prodyut Dhar, Umesh Bhardwaj, Amit Kumar, Vimal Katiyar	Investigations on rheological and mechanical behavior of poly(3-Hydroxybutyrate)/cellulose nanocrystal based nanobiocomposites	Polymer Composites	2015				
Prodyut Dhar, Umesh Bhardwaj, Amit Kumar, Vimal Katiyar	Poly (3-hydroxybutyrate)/cellulose nanocrystal films for food packaging applications: Barrier and migration studies	Polymer Engineering & Science	2015	55	10	2388	2395
R. Anandalakshmi, Tanmay Basak	Natural convection in rhombic enclosures with isothermally heated side or bottom wall: Entropy generation analysis	European Journal of Mechanics-B/Fluids	2015	54		27	44
R. R. Ramtek, N. Kishore	Heat transfer from slip spheres to a shear-thickening fluid: effects of slip velocity and particle volume fraction	Procedia Eng.	2015	127		354	361
R. R. Ramteke, N. Kishore	Heat transfer phenomena of assemblages of smooth slip spheres in Newtonian fluids	Heat Transfer - Asian Research	2015	DOI: 10.1002/htj.21204			
R. Timung, M. Mohan, B. Chilukoti, S. Sasmal, T. Banerjee, V. V. Goud	Optimization of dilute acid and hot water pre-treatment of different lignocellulosic biomass: A comparative study	Biomass and Bioenergy	2015	81		9	18
R. Vinoth Kumar, Alope Kumar Ghoshal, G. Pugazhenth	Elaboration of Novel Tubular Ceramic Membrane from Inexpensive Raw Materials by Extrusion Method and its Performance in Microfiltration of Synthetic Oily Wastewater Treatment	Journal of Membrane Science	2015	490		92	102
R. Vinoth Kumar, Alope Kumar Ghoshal, G. Pugazhenth	Fabrication of Zirconia Composite Membrane by in-situ Hydrothermal Technique and Its Application in Separation of Methyl Orange	Ecotoxicology and Environmental Safety	2015	121		73	79
R. Vinoth Kumar, I. Ganesh Moorthy, G. Pugazhenth	Modelling and optimization of critical parameters by hybrid RSM-GA for the separation of BSA using a tubular configured MFI-type zeolite microfiltration membrane	RSC Advances	2015	5		87645	87659
Raghvendra Gupta	Oil-water core-annular flow in vertical pipes: A CFD study	The Canadian Journal of Chemical Engineering	2016	94	5	980	987
Rajeev Parmar, Subrata Kumar Majumder	Dispersion characteristics of ionic microbubble suspension in continuous plant prototype developed for mineral beneficiation	Chemical Engineering and Processing: Process Intensification	2015	95		43	53

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Rajeev Parmar, Subrata Kumar Majumder	Lifetime of microbubble-an interpretation	Chemexpress	2015	9	1	46	54
Rajeev Parmar, Subrata Kumar Majumder	Mineral beneficiation by ionic microbubble in continuous plant prototype: Efficiency and its analysis by kinetic model	Chemical Engineering Science	2016	142		42	54
Rajeev Parmar, Subrata Kumar Majumder	Terminal rise velocity, size distribution and stability of microbubble suspension	Asia-Pacific Journal of Chemical Engineering	2015	10	3	450	465
Rajeev Parmar, Subrata Kumar Majumder, Pallab Ghosh	Flotation of fine particles from binary mixture by ionic microbubbles	Chemexpress	2015	8	2	133	137
Rajesh Yennam, Ramagopal Uppaluri	Effect of surfactant and sonication on Pd(II) adsorption from synthetic electroless plating solutions using commercial activated charcoal adsorbent	Desalination and Water Treatment	2016	DOI: 10.1080/19443994.2016.1159251		1	16
Rajesh Yennam, Ramagopal Uppaluri	Ni(II) adsorption characteristics of commercial activated carbon from synthetic electroless plating solutions	Desalination and Water Treatment	2016	57	29	13807	13817
Rambhupal Naidu, Tapas Kumar Mandal, Subrata Kumar Majumder	Analysis of Frictional Pressure Drop based on Flow Regimes of Oil-water Flow in Pipeline	Journal of Scientific & Industrial Research	2015	74		180	184
Rashmi R. Devi, Prodyut Dhar, Ajay Kalamdadh, Vimal Katiyar	Fabrication of Cellulose Nanocrystals from Agricultural Compost	Compost Science and Utilization	2015	23	2	104	116
Ravi Babu Valapa, G. Pugazhenthhi, Vimal Katiyar	Effect of graphene content on the properties of poly(lactic acid) nanocomposites	RSC Advances	2015	5	36	28410	28423
Ravi Babu Valapa, G. Pugazhenthhi, Vimal Katiyar	Fabrication and characterization of sucrose palmite reinforced poly(lactic acid) bionanocomposite films	Journal of Applied Polymer Science	2015	132	3	-	-
S. Bhoi, T. Banerjee, K. Mohanty	Insights of the Combustion and Pyrolysis behavior of Three Coals using Reactive Molecular Dynamic Simulation	RSC Advances	2016	6		2559	2570
S. Chakma, L. Das, V. S. Moholkar	Dye Decolorization with hybrid advanced oxidation processes comprising sonolysis/ Fenton like/ photo Ferrioxalate systems: A mechanistic investigation	Separation and Purification Technology	2015	156	2	596	607

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S. Chakma, V. S. Moholkar	Intensification of wastewater treatment using sono-hybrid processes: An overview of mechanistic synergism	Indian Chemical Engineer	2015	57	42463	359	381
S. Chakma, V. S. Moholkar	Investigations in Sono-Enzymatic Degradation of Ibuprofen	Ultrasonics Sonochemistry	2015	29		485	494
S. Chakma, V. S. Moholkar	Mechanistic Analysis of Hybrid Sono-Photo-Ferrioxalate System for Decolorization of Azo Dye	Journal of Taiwan Institute of Chemical Engineers	2015	60		469	478
S. Chakma, V. S. Moholkar	Mechanistic Analysis of Sono-Photolysis Degradation of Carmoisine	Journal of Industrial and Engineering Chemistry	2015	33		276	287
S. Chakma, V. S. Moholkar	Sonochemical synthesis of mesoporous ZrFe <sub>2</sub> O <sub>5</sub> and its application for degradation of recalcitrant pollutants	RSC Advances	2015	5		53529	53542
S. Chakma, V. S. Moholkar	Synthesis of Bi-Metallic Oxides Nanotubes for Fast Removal of Dye Using Adsorption and Sonocatalysis Process.	Journal of Industrial and Engineering Chemistry	2016		DOI: 10.1016/j.jiec.2016.03.009		
S. J. Hosseini, H. Aghaie, M. Ghaedi, K. Dashtian, M. K. Purkait	Lead (II) adsorption from aqueous solutions onto modified Ag nanoparticles: Modeling and optimization	Environmental Progress & Sustainable Energy	2016				
S. R. Dasari, V. Bouragadda, V. V. Goud	Reactive extraction of castor seeds and storage stability characteristics of produced biodiesel	Process Safety and Environmental Protection	2016			252	263
S. Singh, S. Sarma, M. Agrawal, A. Goyal, V. S. Moholkar	Mechanistic insight into ultrasound induced enhancement of simultaneous saccharification and fermentation of <i>Parthenium hysterophorus</i> for ethanol production	Ultrasonics Sonochemistry	2015	26		245	256
S. Yadav, Mallikarjuna Reddy, Anugrah S.	Shear induced particle migration of concentrated suspension in 3D bifurcating channels	International Journal of Multiphase Flow	2015	76		1	12
S. Yadav, Mallikarjuna Reddy, Anugrah Singh	Shear induced migration of concentrated suspensions through Y-shaped bifurcation channels	Particulate Science and Technology	2016	34		83	95
Sanjib Barma, Bishnupada Mandal	Synthesis and characterization of ordered mesoporous silica membrane: Role of porous support and gas permeation study	Microporous and Mesoporous Materials	2015	210		10	19

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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	The Canadian Journal of Chemical Engineering	2015	93	10	1	8
Snigdha Khuntia, Subrata Kumar Majumder, Pallab Ghosh	A Pilot Plant Study of the Degradation of Brilliant Green Dye using Ozone Microbubbles: Mechanism and Kinetics of Reaction	Environmental Technology	2015	36	3	336	347
Snigdha Khuntia, Subrata Kumar Majumder, Pallab Ghosh	Adsorption of As (V) on zirconium based adsorbents	Desalination and Water Treatment	2016	57		1766	1778
Snigdha Khuntia, Subrata Kumar Majumder, Pallab Ghosh	Quantitative Prediction of Hydroxyl Radical Generation from Ozone Microbubbles	Chemical Engineering Research and Design	2015	98		231	239
Sridhar Akshay, Bharath Srikanth, Amit Kumar, Ashok Kumar Dasmahapatra	Coarse-grain Molecular Dynamics Study of Fullerene Transport across a Cell Membrane	Journal of Chemical Physics	2015	143	2	024 907-1	024 907-9
Suman Mahato, Amit Kumar, Tamal Banerjee	PC-SAFT predictions on mixtures of 1-alkyl-3-methylimidazolium-bis(trifluoromethanesulphonyl) amide with hydrocarbons, alcohols and aqueous systems using a correlative based binary interaction parameter	Journal of the Taiwan Institute of Chemical Engineers	2016	59		69	78
Sunny Kumar Singh, Amit Kumar, Ashok Kumar Dasmahapatra, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Graphene based multifunctional superbots	Carbon	2015	89		31	40
Sunny Kumar Singh, Amit Kumar, Ashok Kumar Dasmahapatra, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Graphene based multifunctional superbots	Carbon	2015	89	31		
Suresh Kanchapogu, G. Pugazhenti	Development of Ceramic Membranes from Low Cost Clays for the Separation of Oil-Water Emulsion	Desalination and Water Treatment	2016	57		1927	1939
V. B. Borugadda, V. V. Goud	Improved low temperature properties of chemically modified high free fatty acid castor oil methyl esters: blending and optimization study	Journal of Energy Engineering	2015	4015020		1	10

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V. B. Borugadda, V. V. Goud	Improved thermo-oxidative stability of structurally modified waste cooking oil methyl esters for bio-lubricant application	Journal of Cleaner Production	2015			1	10
V. B. Borugadda, V. V. Goud	In-Situ epoxidation of castor oil using heterogeneous acidic ion-exchange resin catalyst (IR-120) for bio-lubricant application	Tribology online	2015	10	5	354	359
V. B. Borugadda, V. V. Goud	Physico-chemical and rheological characterization of waste cooking oil epoxide and their blends	Waste and Biomass Valorization	2016	7	1	23	30
V. B. Borugadda, V. V. Goud	Response surface methodology for optimization of bio-lubricant base stock synthesis from high free fatty acids castor oil	Energy Science & Engineering	2015	3		371	383
V. S. K. Yadav, M. K. Purkait	Electrochemical reduction of CO <sub>2</sub> to HCOOH on a synthesized Sn electrocatalyst using Co <sub>3</sub> O <sub>4</sub> anode	RSC Advances	2015	5		68557	68557
V. S. K. Yadav, M. K. Purkait	Electrochemical reduction of CO <sub>2</sub> to single product using zinc and cobalt oxide as electrocatalysts	New Journal of Chemistry	2015	39		7348	7354
V. S. K. Yadav, M. K. Purkait	Electrochemical studies for CO <sub>2</sub> reduction using synthesized Co <sub>3</sub> O <sub>4</sub> (anode) and Cu <sub>2</sub> O (Cathode) as electrocatalysts	Energy & fuels	2015	29	10	6670	6677
V. S. K. Yadav, M. K. Purkait	Simultaneous CO <sub>2</sub> reduction and dye (Crystal violet) removal electrochemically on Sn and Zn electrocatalysts using Co <sub>3</sub> O <sub>4</sub> anode	Energy & Fuels	2016		DOI: 10.1021/acs.energyfuels.6b00047		
V. S. K. Yadav, M. K. Purkait	Solar cell driven electrochemical process for the reduction of CO <sub>2</sub> to HCOOH on Zn and Sn electrocatalysts	Solar Energy	2016	124		177	183
V. S. K. Yadav, M. K. Purkait	Synthesis of Pb <sub>2</sub> O electrocatalyst and its application towards the reduction of CO <sub>2</sub> electrochemically to HCOOH using various electrolytes	RSC Advances	2015	5		40414	40421
V. V. Kulkarni, P. K. Ghosh, A. K. Golder	Synthesis of a functionalized fibrous adsorbent of high uptake capacity: a study on Pb(II) uptake and simple acidic site model development	RSC Advances	2016	6	7	5341	5349
V. Volli, M. K. Purkait	Preparation and Characterization of Hydrotalcite like Materials from Flyash for Transesterification	Clean Technol. and Environ. Policy	2016	18	2	529	540

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V. Volli, M. K. Purkait	Selective Preparation of Zeolite X and A from Fly-ash and its use as Catalyst for Biodiesel production	J Hazard. Matter	2015	297		101	111
Vimal Katiyar, Prodyut Dhar, Amit Kumar	Cellulose nanocrystals: Potential nanofiller for food packaging and catalytic applications	J. Material Sci. Eng.	2015	4	4	-	-

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A. A. Dar, N. Enjamuri, Md. Shadab, N. Ali, A. T. Khan	Synthesis of Unsymmetrical Sulfides and Their Oxidation to Sulfones to Discover Potent Antileishmanial Agents	ACS Combinatorial Science	2015	17	11	671	681
A. A. Dar, S. Hussain, D. Dutta, P. K. Iyer, A. T. Khan	One-pot synthesis of functionalized 4-hydroxy-3-thiomethylcoumarins: Detection and discrimination of Co <sup>2+</sup> and Ni <sup>2+</sup> ions	RSC Advances	2015	5	71	57749	57756
A. Banerjee, S. K. Santra, N. Khatun, W. Ali, B. K. Patel	Oxidant controlled regioselective mono- and difunctionalization reactions of coumarins	Chemical Communications	2015	50		15422	15425
A. Banerjee, S. K. Santra, P. R. Mohanta, B. K. Patel	Ruthenium(II) Catalyzed Regiospecific C-H/O-H Annulations of Directing Arenes via Weak Coordination	Organic Letters	2015	17	22	5678	5681
A. Behera, W. Ali, S. Guin, N. Khatun, P. R. Mohanta, B. K. Patel	Benzyl bromides as aroyl surrogates in substrate directed Pd catalysed o-arylation	RSC Advances	2015	5		33334	33338
A. Buragohain, M. Yousufuddin, M. Sarma, S. Biswas	3D Luminescent Amide-Functionalized Cadmium Tetrazolate Framework for Selective Detection of 2,4,6-Trinitrophenol	Crystal Growth and Design	2016	16	2	842	851
A. Buragohain, P. Van Der Voort, S. Biswas	Facile Synthesis and Gas Adsorption Behavior of New Functionalized Al-MIL-101-X (X = -CH <sub>3</sub> , -NO <sub>2</sub> , -OCH <sub>3</sub> , -C <sub>6</sub> H <sub>4</sub> , -F <sub>2</sub> , -(CH <sub>3</sub> ) <sub>2</sub> , -(OCH <sub>3</sub> ) <sub>2</sub> ) Materials	Microporous and Mesoporous Materials	2015	215		91	97
A. Buragohain, S. Biswas	Improved Synthesis of Zirconium(IV) Muconate Metal-Organic Framework: Characterization, Stability and Gas Sorption Properties	European Journal of Inorganic Chemistry	2015	2015	14	2463	2468

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A. Buragohain, S. Couck, P. Van Der Voort, J. F. M. Denayer, S. Biswas	Synthesis, Characterization and Sorption Properties of Functionalized Cr-MIL-101-X (X = -F, -Cl, -Br, -CH <sub>3</sub> , -C <sub>6</sub> H <sub>4</sub> , -F <sub>2</sub> , -(CH <sub>3</sub> ) <sub>2</sub> ) Materials	Journal Solid State Chemistry	2016	238		195	202
A. Choudhury, S. Ali, A. T. Khan	Hydrated ferric sulfate [Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> ·xH <sub>2</sub> O]: An Efficient and reusable catalyst for one-pot synthesis of 2H-Indazolo[2,1-b]phthalazine-triones	Journal of the Korean Chemical Society	2015	59	4	280	283
A. Dutta, S. Das, A. Paul, A. Chattopadhyay	Kinetics of reaction of gold nanoparticles following partial removal of stabilizers	Journal of Nanoparticle Research	2015	17	16	260	260
A. Gogoi, P. Sau, W. Ali, S. Guin, B. K. Patel	Copper(II)-Catalyzed Synthesis of Indoloquinoxalin-6-ones through Oxidative Mannich Reaction	European Journal of Organic Chemistry	2016	2016	7	1449	1453
A. Gogoi, S. Guin, S. Rajamanickam, S. K. Rout, B. K. Patel	Synthesis of 1,2,4-Triazoles via Oxidative Heterocyclization: Selective C-N Bond over C-S Bond Formation	Journal of Organic Chemistry	2015	80	18	9016	9027
A. Gogoi, S. Mukherjee, A. Ramesh, G. Das	Aggregation-Induced Emission Active Metal-Free Chemosensing Platform for Highly Selective Turn-On Sensing and Bioimaging of Pyrophosphate Anion	Analytical Chemistry	2015	87	13	6974	6979
A. H. Malik, S. Hussain, A. S. Tanwar, S. Layek, V. Trivedi, P. K. Iyer	An anionic conjugated polymer as a multi-action sensor for the sensitive detection of Cu <sup>2+</sup> and PPI, real-time ALP assaying and cell imaging	Analyst	2015	140	13	4388	4392
A. Kalita, S. Ghosh, B. Mondal	Nitric oxide reactivity of a manganese(II) complex leading to nitrosation of the ligand	Inorganica Chimica Acta	2015	429		183	188
A. Kalita, V. Kumar, B. Mondal	Nitric oxide reactivity of copper(II) complexes of bidentate amine ligands	Inorganica Chimica Acta	2015	430		55	60
A. Malakar, G. Krishnamoorthy	Dual emission from 2-(4'-N,N-dimethylaminophenyl)pyridoimidazole-nanoparticle composite: Effect of β-cyclodextrin	Journal of Colloid and Interface Science	2015	443		23	29
A. Mishra, A. Malakar, H. T. Biswal, M. K. Barman, G. Krishnamoorthy	Interactions of a fewazole derivatives with a transport protein: Role of heteroatoms	Journal of Molecular Recognition	2015	28	5	299	305
A. Modi, W. Ali, P. R. Mohanta, N. Khatun, B. K. Patel	CuO Nanoparticle catalyzed synthesis of 2,3-disubstituted quinazolinones via sequential N-arylation and oxidative C-H amidation	ACS Sustainable Chemistry & Engineering	2015		3	2582	



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A. Mukherjee, D. Srimani, S. Chakraborty, Y. Ben-David, D. Milstein	Selective Hydrogenation of Nitriles to Primary Amines Catalyzed by a Cobalt Pincer Complex	Journal of the American Chemical Society	2015	137	28	8888	8891
A. Paul, B. Sharma, T. Mondal, K. Thalluri, S. Paul, B. Mandal	Amyloid $\beta$ Derived Switch-Peptides as a Tool for Investigation of Early Events of Aggregation: A Combined Experimental and Theoretical Approach	Medicinal Chemical Communications	2016	7		311	316
A. Paul, K. C. Nadimpally, T. Mondal, K. Thalluri, B. Mandal	Inhibition of Alzheimer's Amyloid- $\beta$ Peptide Aggregation and its Disruption by a Conformationally Restricted $\alpha/\beta$ Hybrid Peptide	Chemical Communications	2015	51		2245	2248
A. Phukon, K. Sahu	The strikingly different miscibility of n-octanol in highly-confined and quasi-confined water	Chemical Communications	2015	51	74	14103	14106
A. Phukon, N. Barman, K. Sahu,	Wet Interface of Benzylhexadecyl dimethyl ammonium Chloride Reverse Micelle Revealed by Excited State Proton Transfer of a Localized Probe	Langmuir	2015	31	46	12587	12596
A. S. Munn, R. S. Pillai, S. Biswas, N. Stock, G. Maurin, R. I. Walton	The Flexibility of Modified-Linker MIL-53 Materials	Dalton Transactions	2016	45	10	4162	4168
A. Tarai, J. B. Baruah	Dimethylsulphoxide solvate of N,N'-dinaphthylthiourea and its selective interactions with fluoride and copper(II) ions	Journal of Molecular Structure	2015	1091		147	151
A. Tarai, J. B. Baruah	Oxime synthons in the salts and cocrystals of quinoline-4-carbaldoxime for non-covalent synthesis	CrystEngComm	2015	18	2	298	308
A. Tarai, J. B. Baruah	Solution and Solid State Study on the Recognition of Hydroxyaromatic Aldoximes by Nitrogen Containing Compounds	Crystal Growth and Design	2016	16	1	126	135
A. Tarai, J. B. Baruah	Study on divalent copper, nickel and zinc model complexes for fluoride ion detection	RSC Advances	2015	5	100	82144	82152
B. Laxminarayana, L. M. Kundu	Direct Chemoselective Synthesis of N-3-Substituted Pyrimidinones in a Microwave-Assisted Method	Synthetic Communications	2015	45	11	1342	1353
B. Mandal	Novel and innovative strategies for peptide based drug design against Alzheimer's disease	Journal of Pharmaceutical Care & Health Systems	2015	2	5	34	34

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B. Mondal, S. C. Sahoo, S. C. Pan	n-Bu <sub>4</sub> NI catalyzed $\alpha$ -benzoylation of ketones with terminal aryl alkenes	European Journal of Organic Chemistry	2015	2015	14	3135	3140
B. Muthuraj, S. Layek, S. N. Balaji, V. Trivedi, P. K. Iyer	Multiple Function Fluorescein Probe Performs Metal Chelation, Disaggregation, and Modulation of Aggregated A $\beta$ and A $\beta$ -Cu Complex	ACS Chemical Neuroscience	2015	6	11	1880	1891
B. Muthuraj, S. R. Chowdhury, P. K. Iyer	Modulation of Amyloid- $\beta$ Fibrils into Mature Microrod-Shaped Structure by Histidine Functionalized Water-Soluble Perylene Diimide	ACS Applied Materials and Interfaces	2015	7	38	21233	21234
B. Muthuraj, S. R. Chowdhury, S. Mukherjee, C. R. Patra, P. K. Iyer	Aggregation deaggregation influenced selective and sensitive detection of Cu <sup>2+</sup> and ATP by histidine functionalized water-soluble fluorescent perylene diimide under physiological conditions and in living cells	RSC Advances	2015	5	36	28211	28218
B. Paul, B. Bhuyan, D. D. Purkayastha, S. S. Dhar, B. K. Patel	Hexamethonium bis(tribromide) (HMBTB) a recyclable and high bromine containing reagent	Tetrahedron Letters	2015	56	41	5646	5650
B. Phukan, A. B. Patel, C. Mukherjee	A Water-Soluble and Water-Coordinated Mn(II) Complex: Synthesis, Characterization and Phantom MRI Image Study	Dalton Transactions	2015	44		12990	12994
B. Sharma, S. Paul	Understanding the Role of Temperature Change and the Presence of NaCl salts on Caffeine Aggregation in Aqueous Solution: From Structural and Thermodynamics Point of View	Journal of Physical Chemistry B	2015	119	21	6421	6432
D. Barpuzary, A. Banik, G. Gogoi, M. Qureshi	Noble metal-free counter electrodes utilizing Cu <sub>2</sub> ZnSnS <sub>4</sub> loaded with MoS <sub>2</sub> for efficient solar cells based on ZnO nanowires co-sensitized with CuInS <sub>2</sub> -CdSe quantum dots	Journal of Materials Chemistry A	2015	3	27	14378	14388
D. Bhattacharjee, K. P. Bhabak	Atom Based 3D-QSAR Studies on 2,4-Dioxypyrimidine-1-carboxamide Analogues: Validation of Experimental Inhibitory Potencies towards Acid Ceramidase	European Journal of Pharmaceutical Sciences	2016	83		8	18
D. Koner, L. Barrios, T. González-Lezana, A. N. Panda	Quantum, Statistical, and Quasiclassical Trajectory Studies for the Ne + HeH <sup>+</sup> $\rightarrow$ NeH <sup>+</sup> + He Reaction on the Ground Electronic State	Journal of Physical Chemistry A	2015	119	50	12052	12061

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D. Koner, L. Barrios, T. González-Lezana, A. N. Panda	Scattering study of the Ne + NeH+( $v=0, j=0$ ) $\rightarrow$ NeH+ + Ne reaction on an ab initio based analytical potential energy surface	Journal of Chemical Physics	2016	144	3		
D. Sar, R. Bag, A. Yashmeen, S. S. Bag, T. Punniyamurthy	Synthesis of Functionalized Pyrazoles via Vanadium-Catalyzed C-N Dehydrogenative Cross-Coupling and Fluorescence Switch-On Sensing of BSA Protein	Organic Letters	2015	17	21	5308	5311
D. Sar, R. Bag, D. Bhattacharjee, R. C. Deka, T. Punniyamurthy	Iron(III)-Mediated Radical Nitration of Bisarylsulfonyl Hydrazones: Synthesis of Bisarylnitromethyl Sulfones	Journal of Organic Chemistry	2015	80	13	6776	6783
D. Srimani, A. Mukherjee, A. F. G. Goldberg, G. Leitun, Y. Diskin-Posner, L. J. W. Shimon, Y. Ben David, D. Milstein	CobaltCatalyzed Hydrogenation of Esters to Alcohols: Unexpected Reactivity Trend Indicates Ester Enolate Intermediacy	Angewandte Chemie International Edition	2015	54	42	12357	12360
E. Balaraman, D. Srimani, Y. Diskin-Posner, D. Milstein	Direct Synthesis of Secondary Amines from Alcohols and Ammonia Catalyzed by a Ruthenium Pincer Complex	Catalysis Letters	2015	145	1	139	144
G. Bharathiraja, G. Sathishkannan, T. Punniyamurthy	Domino Synthesis of Tetrasubstituted Thiophenes from 1,3-Enynes with Mercaptoacetaldehyde	Journal of Organic Chemistry	2016	81	7	2670	2674
G. Borgohain, S. Paul	Model Dependency of TMAO's Counteracting Effect Against Action of Urea: Kast Model versus Osmotic Model of TMAO	Journal of Physical Chemistry B	2016	120	9	2352	2361
G. Gogoi, S. Arora, N. Vinothkumar, M. De, M. Qureshi	Quaternary semiconductor Cu <sub>2</sub> ZnSn <sub>4</sub> loaded with MoS <sub>2</sub> as a co-catalyst for enhanced photocatalytic activity	RSC Advances	2015	5	51	40475	40483
G. Hegde, Y. A. Rajkumar, G. S. Mei, S. Mahmood, U. K. Mandal, A. S. Achalkumar	Photoisomerization behavior of Photochromic Amide based Azobenzene Dyes Exhibiting H-bonding Effect: Synthesis and Characterization	Korean Journal of Chemical Engineering	2016	33	4	1480	1488
G. Majji, S. Rajamanickam, N. Khatun, S. K. Santra, B. K. Patel	Generation of bis-Acyl ketals from esters and benzyl amines under oxidative conditions	Journal of Organic Chemistry	2015	80	7	3440	3446
G. Murugavel, T. Punniyamurthy	Microwave-Assisted Copper-Catalyzed Four-Component Tandem Synthesis of 3- N -Sulfonylamidine Coumarins	Journal of Organic Chemistry	2015	80	12	6291	6299

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H. Sahu, A. N. Panda	Helical and Nonhelical Structures of Vinylene- and Azomethine-Linked Heterocyclic Oligomers: A Computational Study of Conformation-Dependent Optoelectronic Properties	Journal of Physical Chemistry C	2015	119	40	22855	22865
H. Sahu, S. Gupta, P. Gaur, A. N. Panda	Structure and optoelectronic properties of helical pyridine-furan, pyridine-pyrrole and pyridine-thiophene oligomers	Physical Chemistry Chemical Physics	2015	17	32	20647	20657
J. H. Mondal, S. Ahmed, T. Ghosh, D. Das	Reversible deformation-formation of a multistimuli responsive vesicle by a supramolecular peptide amphiphile	Soft Matter	2015	11	24	4912	4920
K. B. Jadhav, R. J. Lichtenecker, A. Bullach, B. Mandal, H. D. Arndt	Dynamic combinatorial enrichment of polyconformational D-/L-peptide dimers	Chemistry - A European Journal	2015	21	15	5898	5908
K. C. Rout, B. Mondal	Copper(II) complex as selective turn-on fluorescent probe for nitrite ion	Inorganica Chimica Acta	2015	437		54	58
K. C. Rout, S. K. Chaturvedi, R. H. Khan, B. Mondal	A copper(II) complex as selective turn-on fluorosensor for nitric oxide and its intracellular application	Inorganica Chimica Acta	2015	437		201	206
K. Gogoi, H. Deka, V. Kumar, B. Mondal	Oxo Transfer from Nitrogen Dioxide to Nitrito Group in a Copper(II) Complex	Inorganic Chemistry	2015	54	10	4799	4805
K. Islam, D. K. Das, E. Akram, A. T. Khan	Exploration of C5-C6-Unsubstituted 1,4-Dihydropyridines for the Construction of exo-Hexahydro-1 H -chromeno[3,4- h ][1,6] naphthyridine-3-carboxylates Using a Stereoselective Povarov Reaction	Synthesis (Germany)	2015	47	18	2745	2755
K. Islam, R. Sidick Basha, A. A. Dar, D. K. Das, A. T. Khan	A direct approach for the expedient synthesis of unsymmetrical ethers by employing bromodimethylsulfonium bromide (BDMS) mediated C-S bond cleavage of naphthalene-2-ol sulfides	RSC Advances	2015	5	97	79759	79764
K. Mahato, P. R. Bagdi, A. T. Khan	Yb(OTf) <sub>3</sub> catalysed regioselective synthesis of unusual di- and tri- substituted 3,4-dihydrothiochromeno[3,2-e][1,3]thiazin-5(2H)-one derivatives through a pseudo four-component hetero-Diels-Alder reaction	RSC Advances	2015	5	59	48104	48111

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K. Mondal, S. C. Pan	Copper(I) Catalyzed (Z)-( $\beta$ -Tosyloxy) Alkenyl Iodide Synthesis from (E)-[ $\beta$ -(Tosyloxy)-Alkenyl](Aryl) Iodonium Tosylates: Diversity Oriented Synthesis of Trisubstituted Alkenes	European Journal of Organic Chemistry	2015	2015	14	2129	2132
K. Shankar, A. M. Kirillov, J. B. Baruah	A modular approach for molecular recognition by zinc dipicolinate complexes	Dalton Transactions	2015	44	32	14411	14423
K. Shankar, A. M. Kirillov, J. B. Baruah	Bottom up synthesis for homo- and heterometallic 2,3-pyridinedicarboxylate coordination compounds	Polyhedron	2015	102		521	529
K. Shankar, J. B. Baruah	Different Types of Nickel, Cobalt, and Manganese Complexes originating from 2-Imidazolecarboxal-diimine of Triethylene tetraamine	Zeitschrift fur Anorganische und Allgemeine Chemie	2015	641	15	2558	2564
M. Belal, A. T. Khan	Oxidative cross coupling reaction mediated by I <sub>2</sub> /H <sub>2</sub> O <sub>2</sub> : A novel approach for the construction of fused thiazole containing coumarin derivatives	RSC Advances	2015	5	126	104155	104163
M. Belal, A. T. Khan	Synthesis of fused oxazole-containing coumarin derivatives via oxidative cross coupling reaction using a combination of CuCl <sub>2</sub> and TBHP	RSC Advances	2016	6	23	18891	18894
M. Belal, D. K. Das, A. T. Khan	Synthesis of pyrido[2,3-c]coumarin derivatives by an intramolecular Povarov reaction	Synthesis (Germany)	2015	47	8	1109	1116
M. C. Das, S. Paul, P. Gupta, P. Tribedi, S. Sarkar, D. Manna, S. Bhattacharjee	3-Amino-4-Aminoximidofurazan derivatives: small molecules possessing antimicrobial and anti-biofilm activity against Staphylococcus aureus and Pseudomonas aeruginosa	Journal of applied microbiology	2016	120	4	842	859
M. Ganesh, S. K. Sahoo, N. Khatun, B. K. Patel	Copper-Catalysed Cascade Synthesis of Imidazolidine-Benzothiazole and Imidazolidine-Tetrazole Hybrid Heterocycles from Bis-thioureas by a Desulfurisation Strategy	European Journal of Organic Chemistry	2015	2015	34	7534	7543
M. J. Deka, K. Indukuri, S. Sultana, M. Borah, A. K. Saikia	Synthesis of 5,6 and 7-Membered 1,3 and 1,4-Heterocyclic Compounds via Intramolecular Hydroalkoxylation /Hydrothioalkoxylation of Alkenols/Thioalkenols	The Journal of Organic Chemistry	2015	80		4349	4359

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M. K. Mondal, A. K. Biswas, B. Ganguly, C. Mukherjee	Unprecedented iminobenzosemiquinone and iminobenzoquinone coordinated mononuclear Cu(ii) complex formation under air	Dalton Transactions	2015	44	20	9375	9381
M. N. Hoque, G. Das	Implications of hydrogen/halogen-bond in the stabilization of confined water and anion-water clusters by a cationic receptor	Journal of Molecular Structure	2016	1108		298	306
M. Sk, S. Bhowal, S. Biswas	Synthesis, Characterization, Stability and Gas Adsorption Characteristics of Highly Stable Zirconium Mesaconate Framework Material	European Journal of Inorganic Chemistry	2015	2015	20	3317	3322
Md. N. Hoque, A. Gogoi, G. Das	Anion complexation with cyanobenzoyl substituted first and second generation tripodal amide receptors: Crystal structure and solution studies	Dalton Transactions	2015	44	34	15220	15231
N. Barman, T. Hossen, K. Mondal, K. Sahu	Modulation of ultrafast photoinduced electron transfer in H-bonding environment: PET from aniline to coumarin 153 in the presence of an inert co-solvent cyclohexane	Physical Chemistry Chemical Physics	2015	17	48	32556	32563
N. Borah, A. Gogoi, G. Das	Competitive anion binding aptitude of benzimidazole and amide functionality of a non-symmetrical receptor in solid state and solution phase	Supramolecular Chemistry	2016	28		275	283
N. Khatun, A. Banerjee, S. K. Santra, W. Ali, B. K. Patel	Benzylic ethers as arylcarboxy surrogates in substrate directed ortho C-H functionalisation catalysed by copper	RSC Advances	2015	5		36461	36466
N. Khatun, A. Modi, W. Ali, B. K. Patel	Palladium-Catalyzed Synthesis of 2-Aryl-2H-Benzotriazoles from Azoarenes and TMSN <sub>3</sub>	Journal of Organic Chemistry	2015	80	19	9662	9670
N. Phukan, A. Goswami, J. B. Baruah	Distinctions of positional isomers of N-(methylthiazol-2-yl)nitrobenzamide by copper and iron ions	Inorganica Chimica Acta	2015	435		239	243
N. Phukan, J. B. Baruah	Polymorphs of thiazole-derived imines connected to hydroxyaromatics	Crystal Growth and Design	2015	15	4	1843	1851
P. Ghosh, M. J. Deka, A. K. Saikia	Lewis Acid Mediated Intramolecular C-O Bond Formation of Alkanol-Epoxyde Leading to Substituted Morpholine and 1,4-Oxazepane Derivatives: Total Synthesis of (+) – Viloxazine	Tetrahedron	2016	72		690	698

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P. Gopikrishna, D. Das, P. K. Iyer	Synthesis and characterization of color tunable, highly electroluminescent copolymers of polyfluorene by incorporating the N-phenyl-1,8-naphthalimide moiety into the main chain	Journal of Materials Chemistry C	2015	3	36	9318	9326
P. J. Goutam, P. K. Iyer	Selective detection of resorcinol using a bis(benzothiazol-2-yl)pyridine based ditopic receptor	Sensors and Actuators, B: Chemical	2015	211		263	267
P. Khakhlary, J. B. Baruah	Synthesis and characterization of tri-quinoline based receptors and study interactions with Zn <sup>2+</sup> and Cu <sup>2+</sup> ions	Inorganica Chimica Acta	2016	440		53	61
P. L. Madhuri, D. S. S. Rao, C. V. Yelamaggad, A. S. Achalkumar, S. K. Prasad	Fast photoluminescence switching in the nematic phase of calamitic-discotic composites	Advanced Optical Materials	2015	3	8	1116	1124
P. R. Bagdi, R. S. Basha, A. T. Khan	Synthesis of 2-triazolyl-imidazo[1,2-a]pyridine through a one-pot three-component reaction using a nano copper oxide assisted click-catalyst	RSC Advances	2015	5	75	61337	61344
P. Sadhu, S. K. Alla, T. Punniyamurthy	Room-Temperature Cu(II)-Catalyzed Chemo- and Regioselective Ortho-Nitration of Arenes via C-H Functionalization	Journal of Organic Chemistry	2015	80	16	8245	8253
P. Sadhu, T. Punniyamurthy	Copper(II)-mediated regioselective N-arylation of pyrroles, indoles, pyrazoles and carbazole via dehydrogenative coupling	Chemical Communications	2016	52	13	2803	2806
R. Bag, D. Sar, T. Punniyamurthy	Copper(II)-catalyzed direct dioxygenation of alkenes with air and n-hydroxyphthalimide: Synthesis of $\beta$ -keto- N -alkoxyphthalimides	Organic Letters	2015	17	8	2010	2013
R. Bag, D. Sar, T. Punniyamurthy	Iron(III)-catalyzed aerobic dioxygenation of styrenes using N-hydroxyphthalimide and N-hydroxybenzotriazole	Organic and Biomolecular Chemistry	2016	14	12	3246	3255
R. Bhaskaran, M. Sarma	Low-Energy Electron Interaction with the Phosphate Group in DNA Molecule and the Characteristics of Single-Strand Break Pathways	The Journal of Physical Chemistry A	2015	119	40	10130	10136
R. Bhaskaran, M. Sarma	The Role of the Shape Resonance State in Low Energy Electron Induced Single Strand Break in 2'-deoxyCytidine-5'-MonoPhosphate	Physical Chemistry Chemical Physics	2015	17	23	15250	15257

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R. Borah, N. Mamidi, S. Panda, S. Gorai, S. K. Pathak, D. Manna	Elucidating the interaction of $\gamma$ -hydroxymethyl- $\gamma$ -butyrolactone substituents with model membranes and protein kinase C-C1 domains	Molecular BioSystems	2015	11	5	1389	1399
R. Gattu, R. S. Basha, P. R. Bagdi, A. T. Khan	One-pot three-component regioselective synthesis of C1-functionalised 3-arylbenzo[f]quinoline	RSC Advances	2016	6	14	11675	11682
R. K. Debnath, A. Kalita, S. Sinha, P. Kr. Bhattacharyya, B. Mondal, J. N. Ganguli	Solvent dependent disproportionation of Cu(II) complexes of N2O2-type ligands: Direct evidence of formation of phenoxyl radical: An experimental and computational study	Asian Journal of Chemistry	2015	27	12	4490	4500
R. K. Gupta, B. Pradhan, S. K. Pathak, M. Gupta, S. K. Pal, A. S. Achalkumar	Effect of bay-annulation on the Photophysical and Thermal behaviors of Perylene Tetraesters	ChemPhysChem	2016	17		859	872
R. K. Gupta, B. Pradhan, S. K. Pathak, M. Gupta, S. K. Pal, A. S. Achalkumar	Perylo[1,12-b,c,d] Thiophene Tetraesters: A New Class of Luminescent Columnar Liquid Crystals	Langmuir	2015	31		8092	8100
R. K. Gupta, S. K. Pathak, B. Pradhan, D. S. Shankar Rao, S. Krishna Prasad, A. S. Achalkumar	Self-assembly of luminescent N-annulated perylene tetraesters into fluid columnar phases	Soft Matter	2015	11		3629	3636
R. Maity, S. C. Pan	Organocatalytic asymmetric intramolecular aza-Henry reaction: Facile synthesis of trans-2,3-disubstituted tetrahydroquinolines	Organic & Biomolecular Chemistry	2015	13	24	6825	6831
R. Rakshit, S. Ghorai, A. Sarma, A. Tiwari, R. K. Roy, C. Mukherjee	Inter-ligand azo (NN) 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 Transactions	2015	44	8	3724	3727
R. Sahu, P. Chaliha, V. Manivannan	Iron(III) Chloride mediated reduction of Bis(1-isoquinolylcarbonyl)amide to an Amide†	Journal of Chemical Sciences	2016	128	1	37	42
R. Valapa, S. Hussain, P. K. Iyer, G. Pugazhenthii, V. Katiyar	Influence of graphene on thermal degradation and crystallization kinetics behaviour of poly(lactic acid)	Journal of Polymer Research	2015	22	9		
R. Valapa, S. Hussain, P. K. Iyer, G. Pugazhenthii, V. Katiyar	Non-isothermal crystallization kinetics of sucrose palmitate reinforced poly(lactic acid) bio-nanocomposites	Polymer Bulletin	2016	73	1	21	38



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S. Basu, A. Paul, A. Chattopadhyay	Zinc Mediated Crystalline Assembly of Gold Nanocluster for Expedient Hydrogen Storage and Sensing	Journal of Materials Chemistry A	2016	4	4	1218	1223
S. Bhattacharjee, A. T. Khan	Synthesis of 3-substituted carboxylate/ carboxamide flavone derivatives from 4-hydroxycoumarin, $\beta$ -nitrostyrene and alcohol/amine using multicomponent reaction	Tetrahedron Letters	2016	57	17	1831	1834
S. Bhattacharjee, D. K. Das, A. T. Khan	Bromodimethylsulfonium bromide: An efficient catalyst for one-pot synthesis of 4-phenacylidene flavene derivatives	Tetrahedron Letters	2015	56	19	2412	2415
S. Das, S. Paul	Mechanism of Hydrotropic Action of Hydrotrope Sodium Cumene Sulfonate on the Solubility of Di- <i>t</i> -Butyl-Methane: A Molecular Dynamics Simulation Study	Journal of Physical Chemistry B	2016	120	1	173	183
S. Ghorai, A. Sarmah, R. K. Roy, A. Tiwari, C. Mukherjee	Effect of Geometrical Distortion on the Electronic Structure: Synthesis and Characterization of Monoradical-Coordinated Mononuclear Cu(II) Complexes	Inorganic Chemistry	2016	55	4	1370	1380
S. Gorai, D. Paul, N. Haloi, R. Borah, M. K. Santra, D. Manna	Mechanistic insights into the phosphatidylinositol binding properties of the pleckstrin homology domain of lamellipodin	Molecular BioSystems	2016	12	3	747	757
S. Gorai, P. R. Bagdi, R. Borah, D. Paul, M. K. Santra, A. T. Khan, D. Manna	Insights into the inhibitory mechanism of triazole-based small molecules on phosphatidylinositol-4,5-bisphosphate binding pleckstrin homology domain	Biochemistry and Biophysics Reports	2015	2		75	86
S. Gorai, S. Paul, G. Sankaran, R. Borah, M. K. Santra, D. Manna	Inhibition of phosphatidylinositol-3,4,5-trisphosphate binding to the AKT pleckstrin homology domain by 4-amino-1,2,5-oxadiazole derivatives	MedChemComm	2015	6	10	1798	1808
S. Goswami, D. Thiyagarajan, S. Samanta, G. Das, A. Ramesh	A zinc complex of a neutral pyridine-based amphiphile: A highly efficient and potentially therapeutic bactericidal material	Journal of Materials Chemistry B	2015	3	35	7068	7078
S. Haldar, S. K. Roy, B. Maity, D. Koley, C. K. Jana	Regio- and Diastereoselective and Enantiospecific Metal-Free C(sp <sup>3</sup> )-H Arylation: Facile Access to Optically Active 5-Aryl 2,5-Disubstituted Pyrrolidines	Chemistry A European Journal	2015	21		15290	15298

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S. Hussain, A. H. Malik, M. A. Afroz, P. K. Iyer	Ultrasensitive detection of nitroexplosive-picric acid via a conjugated polyelectrolyte in aqueous media and solid support	Chemical Communications	2015	51	33	7207	7210
S. Hussain, A. H. Malik, P. K. Iyer	Highly precise detection, discrimination, and removal of anionic surfactants over the full ph range via cationic conjugated polymer: An efficient strategy to facilitate illicit-drug analysis	ACS Applied Materials and Interfaces	2015	7	5	3189	3198
S. J. Singh, S. Rajamanickam, A. Gogoi, B. K. Patel	Synthesis of 2-amino-substituted-1,3,4-thiadiazoles via 2,3-dichloro-5,6-dicyano-1,4-benzoquinone (DDQ) mediated intramolecular C-S bond formation in thiosemicarbazones	Tetrahedron Letters	2016	57	9	1044	1047
S. K. Mostakim, M. Grzywa, D. Volkmer, S. Biswas	Gas Sorption and Transition-Metal Cation Separation with a Thienothiophene Based Zirconium Metal-Organic Framework	Journal Solid State Chemistry	2015	232		221	227
S. K. Pathak, R. K. Gupta, S. Nath, D. S. S. Rao, S. K. Prasad, A. S. Achalkumar	Columnar Self-assembly of Star-shaped Luminescent Oxadiazole and Thiadiazole derivatives	Journal of Materials Chemistry C	2015	3		2940	2952
S. K. Pathak, S. Nath, R. K. Gupta, D. S. S. Rao, S. K. Prasad, A. S. Achalkumar	Effect of regioisomerism on the self-assembly and photophysical behavior of 1,3,4- thiadiazole based polycatenars	Journal of Materials Chemistry C	2015	3		8166	8182
S. K. Santra, A. Banerjee, S. Rajamanickam, N. Khatun, B. K. Patel	PdII/CuBr <sub>2</sub> catalysed keto $\alpha$ -Csp <sup>3</sup> -H benzylation of N,N-dialkylamides directed by o-hydroxy groups	Chemical Communications	2016	52	24	4501	4504
S. Mandal, S. Mahato, C. K. Jana	Direct $\beta$ -C(sp <sup>3</sup> )-H Functionalization of Aliphatic Amines to $\alpha,\beta$ -Unsaturated Imines, Aldehydes, and Chromenes	Organic Letters	2015	17		3762	3765
S. Paul, S. Paul	Exploring the Counteracting Mechanism of Trehalose on Urea Conferred Protein Denaturation: A Molecular Dynamics Simulation Study	Journal of Physical Chemistry B	2015	119	30	9820	9834
S. Paul, S. Paul	Influence of Temperature on the Solvation of N-methylacetamide in Aqueous Trehalose Solution: A Molecular Dynamics Simulation Study	Journal of Molecular Liquids	2015	211		986	999

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S. Paul, S. Paul	Investigating the Counteracting Effect of Trehalose on Urea Induced Protein Denaturation Using Molecular Dynamics Simulation	Journal of Physical Chemistry B	2015	119	34	10975	10988
S. R. Chowdhury, A. Jha, U. Manna, K. S. S. Sarma	Designing a single superabsorbent for separating oil from both layered as well as micro/submicron size emulsified oil/water mixtures by gamma radiation assisted grafting	RSC Advances	2016	6		26086	26091
S. R. Manne, K. Thalluri, R. S. Giri, A. Paul, B. Mandal	Racemization free longer N-terminal peptide hydroxamate synthesis on solid support using ethyl 2-(tert-butoxycarbonyloxyimino)-2-cyanoacetate	Tetrahedron Letters	2015	56	44	6108	6111
S. Rajamanickam, G. Majji, S. K. Santra, B. K. Patel	Bu <sub>4</sub> NI Catalyzed C-N Bond Formation via Cross-Dehydrogenative Coupling of Aryl Ethers (Csp <sup>3</sup> -H) and Tetrazoles (N-H)	Organic Letters	2015	17	22	5586	5589
S. Roy, S. Bhandari, A. Chattopadhyay	Quantum Dot Surface Mediated Unprecedented Reaction of Zn <sup>2+</sup> and Copper Quinolate Complex	The Journal of Physical Chemistry C	2015	119	36	21191	21197
S. Sabera Sultana, N. R. Devi, M. J. Deka, K. Tiwari, V. K. Dubey, A. K. Saikia	Diastereoselective Synthesis of Substituted Hexahydrobenzo[de]isochromans and their Evaluation as Antileishmanial activity	Organic & Biomolecular Chemistry	2016	14		970	979
S. Sahu, T. B. Sil, M. Das, G. Krishnamoorthy	A single fluorophore to address multiple logic gates	Analyst	2015	140	17	6114	6123
S. Samanta, C. Kar, G. Das	Colorimetric and Fluorometric Discrimination of Geometrical Isomers (Maleic Acid vs Fumaric Acid) with Real-Time Detection of Maleic Acid in Solution and Food Additives	Analytical Chemistry	2015	87	17	9002	9008
S. Samanta, S. Goswami, A. Ramesh, G. Das	A new chemodosimetric probe for the selective detection of trivalent cations in aqueous medium and live cells	Journal of Photochemistry and Photobiology A: Chemistry	2015	310		45	51
S. Samanta, T. Ray, F. Haque, G. Das	A turn-on Rhodamine B-indole based fluorogenic probe for selective sensing of trivalent ions	Journal of Luminescence	2016	171		13	18
S. Sarkar, A. T. Khan	Beyond conventional routes, an unprecedented metal-free chemoselective synthesis of anthranilate esters via a multicomponent reaction (MCR) strategy	Chemical Communications	2015	51	63	12673	12676

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S. Sultana, N. R. Devi, A. K. Saikia	Synthesis of substituted tetrahydro- pyran and -furan via intramolecular hydroalkoxylation of alkenols	Asian Journal of Organic Chemistry	2015	14		1281	1288
T. R. Chetia, M. S. Ansari, M. Qureshi	Ethyl Cellulose and Cetrimonium Bromide Assisted Synthesis of Mesoporous, Hexagon Shaped ZnO Nanodisks with Exposed $\pm\{0001\}$ Polar Facets for Enhanced Photovoltaic Performance in Quantum Dot Sensitized Solar Cells	ACS Applied Materials and Interfaces	2015	7	24	13266	13279
T. R. Chetia, M. S. Ansari, M. Qureshi	Rational design of hierarchical ZnO superstructures for efficient charge transfer: Mechanistic and photovoltaic studies of hollow, mesoporous, cage-like nanostructures with compacted 1D building blocks	Physical Chemistry Chemical Physics	2016	18	7	5344	5357
U. Nath, A. Banerjee, B. Ghosh, S. C. Pan	Organocatalytic asymmetric Michael addition of 1-acetylcyclohexene and 1-acetylcyclopentene to nitroolefins	Organic & Biomolecular Chemistry	2015	13	25	7076	7083
V. K. Fulwa, R. Sahu, V. Manivannan	Syntheses and Molecular Structures of Mononuclear Copper(II) Complex with Pyridine-4-Amidoxime and Manganese(II) Complex with 4-(2-Pyridyl)-2,2':6',2''-terpyridine	Journal of the Indian Chemical Society	2015	92		1817	1822
W. Ali, A. Behera, S. Guin, B. K. Patel	Regiospecific benzylation of electron-deficient n-heterocycles with methylbenzenes via a minisci-type reaction	Journal of Organic Chemistry	2015	80	11	5625	5632
X. Guo, U. Manna, N. L. Abbott, D. M. Lynn	Covalent Immobilization of 'Caged' Liquid Crystal Microdroplets on Surfaces	ACS Applied Materials & Interfaces	2015	7		26892	26903

## Journal Papers

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
A. Bhattacharjee, A. M. Krishna	Strain Behavior of Backfill Soil in Rigid Faced Reinforced Soil Walls Subjected to Seismic Excitation	Int. Journal of Geosynthetics and Ground Engineering	2015	1	2	1	14
A. Biswas, A. M. Krishna, S. K. Dash	Behavior of Geosynthetic Reinforced Soil Foundation Systems Supported on Stiff Clay Subgrade	ASCE International Journal of Geomechanics	2016		-	-	-
A. Biswas, Md. A. Ansari, S. K. Dash, A. M. Krishna	Behavior of Geogrid Reinforced Foundation Systems Supported on Clay Subgrades of Different Strengths	Int. Journal of Geosynthetics and Ground Engineering	2015	1	3	1	20
A. Choudhary, S. Gokhale	Urban real-world driving traffic emissions during interruption and congestion.	Transportation Research, Part D Transport and Environment	2016	43	-	59	70
A. Das, S. K. Deb, A. Dutta	Shake table testing of unreinforced brick masonry building test model isolated by U-FREI	Earthquake Engineering and Structural Dynamics	2016	45	2	253	272
A. Garg, A. K. Leung, C. W. W. Ng	Comparisons of suction induced by evapotranspiration and transpiration of <i>S. heptaphylla</i> .	Canadian Geotechnical Journal	2015	52	-	1	7
A. Garg, A. K. Leung, C. W. W. Ng	Transpiration reduction and root distribution functions for a non-crop species <i>Schefflera heptaphylla</i>	Catena	2015	135	-	78	82
A. K. Choudhary, A. M. Krishna	Experimental Investigation of Interface Behaviour of Different Types of Granular Soil/Geosynthetics	Int. Journal of Geosynthetics and Ground Engineering	2016	2	1	-	-
A. K. Dubey, P. Gupta, S. Dutta, R. P. Singh	Water Level Retrieval Using SARAL/Altika Observations In The Braided Brahmaputra River, Eastern India	Marine Geodesy	2015	38	1	549	567
A. K. Dubey, P. K. Gupta, S. Dutta, R. P. Singh	An Improved Methodology to Estimate River Stage and Discharge Using Jason-2 Satellite Data	Journal of Hydrology	2015	529	3	1776	1787
A. K. Mishra, V. Ravindra	On the utilization of mixtures of fly ash and cement as a landfill liner material	International Journal of Geosynthetics and Ground Engineering	2015	1	2	1	7
A. K. Nayak, A. S. Kalamdhad	Sewage sludge composting in a rotary drum reactor: Stability and kinetic analysis	International Journal of Recycling of Organic Waste in Agriculture	2015	4	-	249	259

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A. K. Rathi, A. Chakraborty	Reliability Based Performance Optimization of TMD for Vibration Control of Structures with Uncertainty in Parameters and Excitation	Journal of Structural Control & Health Monitoring	2016	-	-	-	-
A. M. Krishna, A. Bhattacharjee	Behavior of Rigid Faced Reinforced Soil Retaining Walls Subjected to Different Earthquake Ground Motions	ASCE International Journal of Geomechanics	2016		-	-	-
A. Sayed, R. K. Singh, A. S. Kalamdhad	Water quality analysis of Disposal site and its adjacent area of Guwahati Assam, India	International Research Journal of Environment Sciences	2015	4	5	12	17
A. Shelke, S. Banerjee, T. Zhenhua, Lingyu Yu	Predictive design of a spiral lamb waveguide for spatial filtration of frequencies in a confined space	Experimental Mechanics	2015	55	7	1199	1209
Abhishek Kumar, Harinarayan N. H., Olympa Baro	High Amplification factor for Low Amplitude Ground Motion: Assessment for Delhi	Disaster Advances	2015	8	12	1	11
Abhishek Kumar, Olympa Baro, Harinarayan N. H.	High Amplification factor for Low Amplitude Ground Motion: Assessment for Delhi	Natural Hazards	2016	81	-	543	572
Anil Kumar Mishra, J. Dutta, R. Chingtham	A study on the behaviour of the compacted bentonite in the presence of salt solutions	International Journal of Geotechnical Engineering	2015	9	4	354	362
Anurag Sharma, Bimlesh Kumar	Probability Distribution of Turbulence in Curvilinear Cross Section Mobile bed channel	Water Science and Technology	2016	73	6	1472	1482
Anurag Sharma, Mahesh Patel, Bimlesh Kumar	Turbulent Parameters and Corresponding Sediment Transport in Curved Cross-Section Channel	ISH Journal of Hydraulic Engineering	2015	21	3	333	342
B. Hazra, A. Sadhu, S. Narasimhan	Fault Detection of Gearboxes using Synchrosqueezing Transform	Journal of Vibration and Control	2016	DOI: 10.1177/ 10775463 1562 7242		1	20
Banasri Sarma, Arup Kumar Sarma, Chandan Mahanta, Vijay P. Singh	Optimal Ecological Management Practices for Controlling Sediment Yield and Peak Discharge from Hilly Urban Areas	Journal of Hydrologic Engineering, ASCE	2015	20	10	4015 005	4015 014
C. Malaya, S. Sreedeeep	Effect of fertilizer and fly ash addition on the soil-water characteristic curve	Indian Geotechnical Journal, Springer, Special Issue on Unsaturated Soils	2015		-	-	-

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
C. Malaya, S. Sreedeeep	Evaluation of different laboratory procedures for determining suction-water content relationship of cohesionless geomaterials	Journal of Materials in Civil Engineering, ASCE	2016	28	2	1	11
C. W. W. Ng, A. Garg, A. K. Leung, B. C. H. Hau	Relationships between leaf and root area indices and soil suction induced during drying-wetting cycles	Ecological Engineering	2016	91	-	113	118
F. Shaheen, B. Pradhan	Effect of chloride and conjoint chloride-sulfate ions on corrosion of reinforcing steel in electrolytic concrete powder solution (ECPS)	Construction and Building Materials	2015	101	-	99	112
G. Barua, M. K. Patidar	An iterative method for estimating solute travel times to ditch drains under steady recharge and ponded conditions	Applied Water Science, Springer	2015	-	-	-	-
G. Barua, R. Sarmah	An analytical solution for predicting transient seepage into partially penetrating ditch drains receiving water from a ponded field	Acta Geophysica, De Gruyter	2016	64	1	149	205
H. Anowarul, A. Shelke, M. Vogel, S. Brand, X. Jiang, U. Pietsch, T. Kundu	Quantitative ultrasonic characterization of c-axis oriented polycrystalline AlN thin film for smart device application	Acta Acustica united with Acustica	2015	101	4	675	683
H. M. Kalita, Arup K. Sarma	An Implicit Scheme for Shallow Water Flow with Wet Dry Interface	Water Resources	2016	-	-	-	-
H. Sharma, P. Gardoni, S. Hurlebaus	Performance based probabilistic capacity models and fragility estimates for RC columns subject to vehicle collision	Computer Aided Civil Infrastructure and Engineering	2015	30	7	555	569
J. Dutta, A. K. Mishra	A study on the influence of inorganic salts on the behaviour of compacted bentonites	Applied Clay Science	2015	116-117	-	85	92
J. Dutta, A. K. Mishra	Consolidation behaviour of bentonites in the presence of salt solutions	Applied Clay Science	2016	120	-	61	69
J. Singh, A. S. Kalamdhad	Assessment of compost quality in agitated pile composting of water hyacinth collected from different sources	International Journal of Recycling of Organic Waste in Agriculture	2015	4	-	175	183
J. Singh, A. S. Kalamdhad	Effect of lime on speciation of heavy metals during agitated pile composting of water hyacinth	Frontiers of Environmental Science and Engineering	2016	10	1	93	102

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
J. Singh, A. S. Kalamdhad, B. K. Lee	Reduction of eco-toxicity risk of heavy metals in the rotary drum composting of water hyacinth: Waste lime application and mechanisms	Environmental Engineering Research	2015	20	3	212	222
K. Ranganathan, Manish Kumar Goyal	Clean development mechanism—an opportunity to mitigate carbon footprint from the energy sector of India	CURRENT SCIENCE	2015	109	4	672	672
K. Sachidananda, K. D. Singh	Numerical study of fixed ended Lean Duplex Stainless Steel (LDSS) flat oval hollow stub column under pure axial compression	Thin-Walled Structures	2015	96	-	105	119
Krishanu Mukherjee, A. K. Mishra	Behaviour of sand bentonite mixture by application of fiber and Geo-synthetic clay liner (GCL)	Discovery	2015	40	184	267	273
Mahesh Patel, Vishal Deshpande, Bimlesh Kumar	Turbulent characteristics and evolution of sheet flow in an alluvial channel with downward seepage	Geomorphology	2015	248	1	161	171
Manish Kumar Goyal, V. Singh, A. H. Meena	Geospatial and hydrological modeling to assess hydropower potential zones and site location over rainfall dependent Inland catchment	Water Resources Management	2015	29	8	2875	2894
N. P. Singh, S. Gokhale	A method to estimate spatiotemporal air quality in an urban traffic corridor	Science of the Total Environment	2015	538	-	458	467
Olympa Baro, Abhishek Kumar	A review on the tectonic setting and the seismic activity of the Shillong plateau in the light of past studies	Disaster Advances	2015	8	7	34	45
P. Dey, S. Talukdar	A hybrid approach to detect crack parameters using measured natural frequencies in thin walled angle section beam	International Journal of Steel Structure	2016	16	1	163	175
P. Dey, S. Talukdar, D. J. Bordoloi	Multiple crack identification in a channel section steel beam using a combined response surface methodology and genetic algorithm	Structural Control Health Monitoring	2016	23	6	938	959
P. P. Sarkar, C. Mallikarjuna	Quantification and Analysis of land use effects on Travel Behavior in Smaller Indian cities: A case study of Agartala	Journal of Urban Planning and Development	2016				
P. Paul, Arun Ch. Borsaikia	Evaluation of cement quantity in hardened concrete using chemical analysis procedure	Indian Concrete Journal	2016	90	2	12	18



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P. Thaker, S. Gokhale	The impact of traffic-flow-patterns on air quality in urban street canyons	Environmental Pollution	2016	208	-	161	169
Pranab Jyoti Barman, Suresh A. Kartha, Bulu Pradhan	Empirical approach to predict leached nutrients from landfill site	Environmental Science and Pollution Research	2015	22	9	6619	6633
Qi Ying, Jingyi Li, Sri Harsha Kota	Significant Contributions of Isoprene to Summer-time Secondary Organic Aerosol in Eastern United States	Environmental Science and Technology	2015	49	13	7834	7842
R. Sarkar, S. Dutta	Parametric Study of A Physically-Based, Plot-Scale Hillslope Hydrological Model Through Virtual Experiments	Hydrological Sciences Journal	2015	60	3	448	467
R. Sarkar, S. Dutta, A. K. Dubey	An Insight Into The Runoff Generation Processes In Wet Sub-Tropics: Field Evidences From A Vegetated Hillslope Plot	CATENA	2015	128	-	31	43
R. Sarmah, G. Barua	Hydraulics of a partially penetrating ditch drainage system in a layered soil receiving water from a ponded field	Journal of Irrigation and Drainage Engineering, ASCE	2015	141	8	401 5001	401 5013
S. B. Reddy, A. M. Krishna	Recycled Tire chips Mixed with Sand as Lightweight Backfill Material in Retaining wall Applications: An Experimental investigation	Int. Journal of Geosynthetics and Ground Engineering	2015	1	4	1	31
S. B. Reddy, D. P. Kumar, A. M. Krishna	Evaluation of the Optimum Mixing Ratio of a Sand- Tire Chips Mixture for Geoenvironmental Applications	ASCE Journal of Materials in Civil Engineering	2016	28	2	06015 007-1	06015 007-7
S. Bordoloi, S. Yasmani, A. Garg, S. Sreedeeep, S. Borah	Study on the efficacy of harmful weed species Eichornia crassipes for soil reinforcement	Ecological Engineering	2015	85	-	218	222
S. Deb, A. S. Kalamdhad	Use of algae as a bio-indicator to determine water quality (A case study)	South Asian Journal of Experimental Biology	2016	5	6	235	243
S. Gokhale	Effects of engineered nanomaterials released into the atmosphere	J. Hazard. Toxic Radioact. Waste	2016	20	1	1	12
S. H. Basha, H. B. Kaushik	Behavior and Failure Mechanisms of Masonry-Infilled RC Frames (in Low-Rise Buildings) subject to Lateral Loading	Engineering Structures	2016	111	-	233	245
S. H. Basha, H. B. Kaushik	Evaluation of Non-linear Material Properties of Fly Ash Brick Masonry under Compression and Shear	Journal of Materials in Civil Engineering	2015	27	8	4014227	-

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S. K. Patel, B. Singh	Review of predictive models for shear strength behaviour of fiber-reinforced soils	Journal of Environmental Research and Development	2015	10	1	161	172
S. K. Patel, B. Singh	Strength and stiffness development of fibre-reinforced lateratic soil	Journal of Environmental Research and Development	2015	9	3A	995	1002
S. N. Sahoo, P. Sreeja	Determination of Effective Impervious Area for an Urban Indian Catchment	Journal of Hydrologic Engineering, ASCE	2016	21	4	1	10
S. N. Sahoo, P. Sreeja	Development of Flood Inundation Maps and Quantification of Flood Risk in an Urban Catchment of Brahmaputra River	ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civ. Eng.	2015	-	-	1	11
S. Padhi, S. Gokhale	Benzene control from waste gas streams with a sponge-medium based rotating biological contactor.	Int. Biodeterioration and Biodegradation	2016	109	-	96	103
S. Talukdar, R. Lalthlamuana	Identification of flexible vehicle parameters on bridge using particle filter method	Structural Engineering and Mechanics	2016	57	1	21	43
Shivam, Arup K. Sarma, Manish K. Goyal	Analysis of the Change in Temperature Trends in Subansiri River Basin for RCP Scenarios using CMIP5 datasets. Theoretical and Applied climatology	Theoretical and Applied Climatology, Springer	2016	-	-	-	-
Sri Harsha Kota, Gunnar W. Schade, Mark Estes, Doug Boyer, Qi Ying	Evaluation of MEGAN Predicted Biogenic Isoprene Emissions at Urban Locations in Southeast Texas	Atmospheric Environment	2015	110	-	54	64
Suresh A. Kartha, Gunjan Dalvi, Anith Prasad	Solution of non-linear pressure head based Richards' equation for vertical unsaturated flow using Gardner's soil-water characteristics	International Journal of Applied Mathematics and Engineering Sciences	2015	9	1	7	19
Surya Prasanna K. B., Naveen Chandra I., Regulus D. K. S., C. Mallikarjuna	Speed Profile based road segmentation for accident occurrence modeling for hilly terrains	International Journal of Injury Control and Safety Promotion	2016				
Swarup Mahato, M. Teja, A. Chakraborty	Adaptive HHT Based Parameter Estimation using Limited Measurements of a RC Framed Building Under Multi-component Earthquake Excitations	Journal of Structural Control & Health Monitoring	2015	22	7	984	1001

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T. Ajmera, Manish Kumar Goyal	Evaluation of soft computing algorithms for estimation of spatial transmissivity	International Journal of Water	2015	9	2	168	177
T. Apurv, R. Mehrotra, A. Sharma, M. K. Goyal, S. Dutta	Impact of climate change on floods in the Brahmaputra basin using CMIP5 decadal predictions	Journal of Hydrology	2015	527	-	281	291
T. Choudhury, G. Milani, H. B. Kaushik	Comprehensive numerical approaches for the design and safety assessment of masonry buildings retrofitted with steel bands in developing countries: The case of India	Construction and Building Materials	2015	85	-	227	246
T. Choudhury, H. B. Kaushik	Vulnerability Analysis of Buildings for Seismic Risk Assessment: A Review	The Bridge and Structural Engineer	2016	45	1	63	76
T. Das, B. Singh	Experimental study on influence of waste tyre fibres on strength of compacted clayey soil-fly ash mixes	Journal of Environmental Research and Development	2015	9	3A	986	994
T. Karmaker, S. Dutta	Stochastic Erosion of Composite Banks in Alluvial River Bends	Hydrological Processes	2015	29	6	1324	1339
T. V. Bharat, A. Sridharan	A Critical Appraisal of Debye Length in Clay-Electrolyte Systems	Clays and Clay Minerals	2015	63	1	43	50
T. V. Bharat, A. Sridharan	Prediction of Compressibility Data for Highly Plastic Clays Using Diffuse Double-Layer Theory	Clays and Clay Minerals	2015	63	1	30	42
Thiyam Tamphasana Devi, Bimlesh Kumar	Design of Gas-liquid Stirred tank with Curved Blade Impeller	Journal of Engineering Physics and Thermophysics	2015	88	1	76	85
Thiyam Tamphasana Devi, Bimlesh Kumar	Detached eddy simulation of turbulent flow in stirred tank reactor	Procedia Engineering	2015	127	-	87	94
Thiyam Tamphasana Devi, Bimlesh Kumar	Large Eddy Simulation of Turbulent Flow in Stirred tank with Curved Blade Impeller	Journal of Engineering Thermophysics	2015	24	2	152	168
Thokchom Bebina Devi, Bimlesh Kumar	Experimentation on submerged flow over flexible vegetation patches with downward seepage	Ecological Engineering	2016	91	-	158	168
Thokchom Bebina Devi, Bimlesh Kumar	Turbulent flow statistics of Vegetative channel with seepage	Journal of Applied Geophysics	2015	123	-	267	276
Thokchom Bebina Devi, Rishabh Daga, Sumit Kumar Mahto, Bimlesh Kumar	Drag and Turbulent characteristics of Mobile bed Channel with mixed vegetation densities under downward seepage	ASME Journal of Fluid Engineering	2016	138	7	071104-1	071104-13

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V. Deshpande, Bimlesh Kumar	Does Downward Seepage Initiate Lateral Channel Shifts?	National Academy Science Letters	2015	38	6	479	482
V. S. Varma, A. S. Kalamdhad	Carbon decomposition by inoculating Phanerochaete chrysosporium during drum composting of agricultural waste	Environmental Science and Pollution Research	2015	22	-	7851	7858
V. S. Varma, A. S. Kalamdhad	Evolution of chemical and biological characterization during thermophilic composting of vegetable waste using rotary drum composter	International Journal of Environmental Science and Technology	2015	12	-	2015	2024
V. S. Varma, J. Yadav, S. Das, A. S. Kalamdhad	Potential of waste carbide sludge addition on earthworm growth and organic matter degradation during vermicomposting of agricultural wastes	Ecological Engineering	2015	83	-	90	95
V. Singh, Manish Kumar Goyal, X.Chu	Multicriteria Evaluation Approach for Assessing Parametric Uncertainty during Extreme Peak and Low Flow Conditions over Snow Glaciated and Inland Catchments	ASCE-Journal of Hydrologic Engineering	2015	21	1	4015 044-1	4015 044-17
V. Srikanth, A. K. Mishra	A laboratory study on the geotechnical characteristics of sand-bentonite mixtures and the role of particle size of sand	International Journal of Geosynthetics and Ground Engineering	2016	2	3	1	10
Varhsa Shivpure, Thokchom Bebina Devi, Bimlesh Kumar	Analysing Turbulence Characteristics of Flow over Submerged Flexible Vegetated Channel	ISH Journal of Hydraulic Engineering	2015	21	3	265	275
Vishal Deshpande, Bimlesh Kumar	Advent of Sheet flow in Suction affected alluvial Channels	Environmental Fluid Mechanics	2016	16	1	25	44
W. R. Singh, S. K. Pankaj, A. S. Kalamdhad	Reduction of bioavailability and leachability of heavy metals during agitated pile composting of Salvinia natans weed of Loktak lake	International Journal of Recycling of Organic Waste in Agriculture	2015	4	-	143	156
X. Qiao, W. Xiao, D. Jaffe, Sri Harsha Kota, Q. Ying, Y. Tang	Atmospheric wet deposition of sulfur and nitrogen in Jiuzhaigou National Nature Reserve, Sichuan Province, China	Science of the Total Environment	2015	511	-	28	36
Xue Qiao, Ya Tang, Jianlin Hu, Shuai Zhang, Jingyi Li, Sri Harsha Kota, Li Wu, Huilin Gao, Hongliang Zhang, Qi Ying	Modeling Dry and Wet Deposition of Sulfate, Nitrate, and Ammonium Ions in Jiuzhaigou National Nature Reserve, China using a Source-Oriented CMAQ Model: Part I. Base Case Model	Science of the Total Environment	2015	532	-	831	839

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Xue Qiao, Ya Tang, Sri Harsha Kota, Jingyi Li, Li Wu, Jianlin Hu, Hongliang Zhang, Qi Ying	Modeling Dry and Wet Deposition of Sulfate, Nitrate, and Ammonium Ions in Jiuzhaigou National Nature Reserve, China using a Source-Oriented CMAQ Model: Part II. Emission Sector and Source Region Contributions	Science of the Total Environment	2015	532	-	840	848

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## Computer Science and Engineering

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
A. Sarma, S. Chakraborty, S. Nandi	Deciding Handover Points based on Context Aware Load Balancing in a WiFi-WiMAX Heterogeneous Network Environment	IEEE Transactions on Vehicular Technology	2016	65	1	348	357
Alka Bhushan, Sajith Gopalan	I/O efficient algorithms for the minimum cut problem on unweighted undirected graphs	Theor. Comput. Sci.	2015		575	33	41
B. K. Patra, R. Launonen, V. Ollikainen and S. Nandi	A new similarity measure using Bhattacharyya coefficient for collaborative filtering in sparse data	Knowledge Based Systems	2015	82	7	163	177
F. A. Barbhuiya, M. Agarwal, S. Purwar, S. Biswas, S. Nandi	Application of stochastic discrete event system framework for detection of induced low rate TCP attack	ISA Transactions	2015	58		474	492
H. Gupta, S. V. Rao, A. Yadav, T. Dutta	Geographic routing in clustered wireless sensor networks among obstacles	IEEE Sensors Journal	2015	15	5	2984	2992
H. P. Gupta, S. V. Rao, T. Venkatesh	Analysis of Stochastic K-coverage and Connectivity in Sensor Networks with Boundary Deployment	IEEE Transactions on Intelligent Transportation Systems	2015	16	4	1861	1871
M. Agarwal, S. Biswas, S. Nandi	Advanced Stealth Man in The Middle Attack in WPA2 Encrypted Wi-Fi Networks	IEEE Communication Letters	2015	19	4	581	584
Manoj Bode, Shashi S. Jha, S. B. Nair	On Movement of Emergency Services amidst Urban Traffic	EAI Endorsed Transactions on Ambient Systems	2015	15	8	1	10
Niladri Sett, Sanasam Ranbir Singh, Sukumar Nandi	Influence of edge weight on node proximity based link prediction methods	Neurocomputing	2016	172	1	71	83

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P. Juluri, T. Venkatesh, D. Medhi	Measurement of Quality of Experience of Video on Demand Services: A Survey	IEEE Communications Surveys and Tutorials	2016	18	1	401	418
P. Kr. Biswal, S. Biswas	A Binary Decision Diagram based Online Testing of Digital VLSI Circuits for Feedback Bridging Faults	Microelectronics Journal	2015	46	7	598	616
P. Kr. Biswal, S. Biswas	A polynomial algorithm for diagnosability of fair discrete event systems	Systems Science & Control Engineering	2015	3	1	307	319
Pravati Swain, Sandip Chakraborty, Sukumar Nandi, Purandar Bhaduri	Performance Modeling and Analysis of IEEE 802.11 IBSS PSM in Different Traffic Conditions	IEEE Transactions on Mobile Computing	2015	14	8	1644	1658
Rajesh Devaraj, Arnab Sarkar, Santosh Biswas	A design fix to supervisory control for fault-tolerant scheduling of real-time multiprocessor systems with aperiodic tasks	International Journal of Control	2015	88	11	2211	2216
S. Chakraborty, S. Nandi	Data rate, path length and network contention trade-off in IEEE 802.11 s mesh networks: A dynamic data rate selection approach	Computer Networks	2015	91	11	225	243
S. Chakraborty, S. Nandi	Distributed Service Level Flow Control and Fairness in Wireless Mesh Network	IEEE Transactions on Mobile Computing	2015	14	11	2229	2243
S. Chakraborty, S. Nandi, S. Chattopadhyay	Alleviating Hidden and Exposed Nodes in High-Throughput Wireless Mesh Networks	IEEE Transactions on Wireless Communications	2016	15	2	928	937
S. Shah, J. N. Teja, S. Bhattacharya	Towards Affective Touch Interaction. Predicting Mobile User Emotion from Finger Strokes	Journal of Interaction Science	2015	3	1	1	15
Satish Kumar, Arnab Sarkar, Santhosh Sriram, Arijit Sur	A three level LTE downlink scheduling framework for RT VBR traffic	Computer Networks	2015	91	11	654	674
Shashi Shekhar Jha, Shivashankar B. Nair	On a Multi-Agent Distributed Asynchronous Intelligence-Sharing and Learning Framework	LNCS Transactions on Computational Collective Intelligence XVIII	2015	9240	9	166	200

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Arivindan Basu, Neeraj Talukdar, Ravi Mokashi Punekar	Behind the DOTS: Ethnographic study on the factors affecting adherence to DOTS in Typical Indian Setting	Journal of Tuberculosis Research	2015				
Arnita Saini, S. Nikhil Siva, Pradeep Yammiyavar	Features Essential in a Music Tutoring System for Learning South Indian Classical Music; International Journal of Recent Development in Engineering and Technology	International Journal of Recent development in Engineering & Technology	2015	4	11	9	17
D. Dhar, P. Yammiyavar	A Cross-cultural Study of Navigational Mechanisms in Computer Based Assessment Environment	Procedia Computer Science	2015		45	862	871
J. Sanjog, B. Patnaik, T. Patel, S. Karmakar	Context specific design interventions in blending workstation: An ergonomics perspective	Journal of Industrial and Production Engineering,	2016	33	1	32	50
J. Sanjog, S. Karmakar, T. Patel, A. Chowdhury	Towards virtual ergonomics: aviation and aerospace	Aircraft Engineering and Aerospace Technology: An International Journal	2015	87	3	266	273
J. Sanjog, T. Patel, A. Chowdhury S. Karmakar	Musculoskeletal ailments in Indian injection-molded plastic furniture manufacturing shop-floor: Mediating role of work shift duration	International Journal of Industrial Ergonomics	2015	48		89	98
K. K. Balakrishnan, Ravi Mokashi Punekar	Learning values in Sustainable Design Practices	IADIS International Journal on WWW/Internet	2015	11	2	1	12
Keyur Sorathia, Minla Jain, Mannu Amrit, Saurabh Srivastava, Nitendra Rajput	Gesture Selection Study for a Maternal Healthcare Information System in Rural Assam, India	Journal of Usability Studies	2015	11	1	7	20
Nanki Nath	Indigenous Identities: Hand-painted Letterforms in India	Design For All Institute of India	2014	9	8	27	33
Nanki Nath, Ravi Poovaiah	Investigation of the most preferred Bilingual Combination of Words: An Experiment with a selected Place Identification Signboard	DESIGN THOUGHTS	2010			47	58
Nanki Nath, Ravi Poovaiah	The influence of movie poster themes on the colour trends used in the shop signs of cities in India	The International Journal of Visual Design	2015	9	3	23	53

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Ravi Mokashi Punekar, Abhinav Kishore, Niyati Gupta	A Card game based on Participatory Learning Approach (PLA) for Health Education	Design for Sustainable well-being and Empowerment	2014				
Shruti Hemani, Ravi Mokashi Punekar	Design Education for Sustainability:a case study for an inclusive approach to design in India	World Review of Science, Technology and Sustainable Development	2015	12	1	29	48
Urmi R. Salve	Prevalance of musculoskeletal discomfort among the workers engaged in jewellery manufacturing	Indian Journal of Occupational and Environmental Medicine	2015	19	1	44	55
Urmi R. Salve	Vision related problems among the workers engaged in jewellery manufacturing	Indian Journal of Occupational and Environmental Medicine	2015	19	1	30	35
Urmi Ravindra Salve, Amitabha De	Determination of optimal duration of work exposure while sitting in a squatting position to avoid low back pain - A simulation study	Journal of Human Ergology	2016	45	1		

**Journal Papers****Electronics and Electrical Engineering**

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
A. Agrawal, R. S. Kshetrimayum	Analysis of UWB communication over IEEE802.15.3a channel by superseding lognormal shadowing by mixture of Gamma distributions	AEU International Journal of Electronics and Communications	2015	69	12	1795	1799
A. Dalal, P. Kumar	Analytical Model for Permanent Magnet Motor with Slotting Effect, Armature Reaction, and Ferromagnetic Material Property	IEEE Transactions on magnetics	2015	51	12		
A. G. Ramakrishnan, B. Abhiram, S. R. M. Prasanna	Voice source characterization using pitch synchronous discrete cosine transform for speaker identification	J. Acoust. Soc. Am.	2015	137	6	EL469	EL475
B. C. Haris, Rohit Sinha	Low-Complexity Speaker Verification With Decimated Supervector Representations	Speech Communication	2015	68		11	22



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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
B. C. Haris, Rohit Sinha	Robust Speaker Verification With Joint Sparse Coding Over Learned Dictionaries	IEEE Transactions On Information Forensics And Security	2015	10	10	2143	2157
B. D. Sarma, M. Sarma, S. R. M. Prasanna	Semi-automatic Segmentation and Marking of Pitch Contours for Prosodic Analysis	Advances in Communication and Computing, Springer India	2015			127	137
B. D. Sarma, M. Sarma, S. R. M. Prasanna	Semi-Automatic Syllable Labelling for Assamese Language Using HMM and Vowel Onset-offset Points	Advances in Communication and Computing, Springer India	2015			139	147
B. Kumbhani, R. S. Kshetrimayum	Performance Analysis of MIMO systems with Antenna Selection over Generalized $k - \mu$ Fading Channels	IETE Journal of Research	2016	62	1	45	54
B. Kumbhaniand, R. S. Kshetrimayum	Analysis of TAS/MRC based MIMO systems over $\eta - \mu$ Fading Channels	IETE Technical Review	2015	32	4	252	259
Bajarangbali, S. Majhi	Identification of Integrating and CriticallyDamped Systems with Time Delay	Control Theory and Technology	2015	13	1	29	36
Bajarangbali, S. Majhi	Identification of Non-minimum Phase Processes with Time Delay in the Presence of Measurement Noise	ISA Transactions	2015	57	4	245	253
Banriskhem K. Khonglah, S. R. Mahadeva Prasanna	Speech / music classification using speech specific features	Digital Signal Processing	2016	48		71	83
Brajesh Rawat, Roy Paily	Analysis of Graphene Tunnel Field-Effect Transistors for Analog/RF Applications	IEEE Transactions on Electron Devices	2015	62	8	2663	2669
C. Wang , G. Shen, S. K. Bose	Distance Adaptive Dynamic Routing and Spectrum Allocation in Elastic Optical Networks with Shared Backup Path Protection	IEEE/OSA Journal of Lightwave Technology	2015	33	14	2955	2964
D. Paul, Wen-De Zhong, S. K. Bose	Energy efficiency aware load distribution and electricity cost volatility control for cloud service providers	Journal of Network and Computer Applications (Elsevier)	2015	59		185	197
Debdeep Paul, Wen-De Zhong, Sanjay K. Bose	Energy Efficient Cloud Service Pricing: A Two-Timescale Optimization Approach	Journal of Network and Computer Applications	2015	64		98	112
G. Saxena, Roy Paily	Analysis of nanowire transistor based nitrogen dioxide gas sensor – a simulation study	Sensing and Bio-Sensing Research, Elsevier	2015	4		57	60

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
G. Saxena, Roy Paily	Performance improvement of square microhot-plate with insulation layer and heater geometry	Microsystem Technologies, Springer	2015	21	11	2331	2338
G. Shen, H. Guo, S. K. Bose	Survivable elastic optical networks: survey and perspective	Photonic Network Communications	2015	31	1	71	87
Hong Guo, Hua Dai, Chao Wang, Yongcheng Li, Sanjay K. Bose, Gangxiang Shen	Benefit of adaptive FEC in shared backup path protected elastic optical network	Opt. Express 23	2015			20158	20175
K. T. Deepak, S. R. M. Prasanna	Epoch Extraction using Zero Band Filtering from Speech Signal	Circuits, Systems & Signal Processing, Springer	2015	34		2309	2333
L. N. Sharma, R. K. Tripathy, S. Dandapat	Multiscale Energy and Eigenspace Approach to Detection and Localization of Myocardial	IEEE Transactions on Biomedical Engineering	2015	62	7	1827	1837
M. K. Bhuyan, Karl F. MacDorman, Mithun Kumar Kar, Debanga Raj Neog, Brian C. Lovell, Prathik Gadde	Hand Pose Recognition from Monocular Images by Geometrical and Texture Analysis	Journal of Visual Languages and Computing, Elsevier	2015	28		39	55
M. Singh, K. Thirugnanam, P. Kumar, I. Kar	Real-time coordination of electric vehicles to support the grid at the distribution substation level	IEEE Systems Journal	2015	9	3	1000	1010
M. Surya Prakash, Rafi Ahamed Shaik, Sagar Koora-pati	An Efficient Distributed Arithmetic based Realization of the Decision Feedback Equalizer	Circuits, Systems & Signal Processing (Springer)	2016	35		603	618
Nagaraj Adiga, S. R. M. Prasanna	Detection of Glottal Activity Using Different Attributes of Source Information	IEEE Signal Processing Letters	2015	22	11	2107	2111
P. Kumar, K. Dhaka	Performance Analysis of a Decode-and-Forward Relay System in $\kappa$ - $\mu$ and $\eta$ - $\mu$ Fading Channels	IEEE Transactions on Vehicular Technology	2015				
R. Jana, R. Bhattacharjee	A Novel Matched Feed Structure for Achieving Wide Cross-polar Bandwidth for an Offset Parabolic Reflector Antenna System	IEEE Antenna and Wireless Propagation Letters	2015	14		1590	1593
R. Jana, R. Bhattacharjee	Matched feed design employing TE <sub>01</sub> and TM <sub>11</sub> modes in a smooth walled rectangular waveguide for cross-polar reduction in offset reflector antenna systems	International Journal of Electronics and Communications	2015	69	6	873	877

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
R. K. Das, S. R. M. Prasanna	Speaker Verification for Variable Duration Segments and the Effect of Session Variability	Advances in Communication and Computing, Springer India	2015	347		193	200
R. Uikey, R. S. Sangam, P. Kakumanu, R. S. Kshetrimayum	Stepped impedance stub loaded UWB bandpass filter with notch band	International Journal of Microwave Science and Technology	2015	2015	2015	1	5
Rahul Shrestha, Roy Paily	Memory-Reduced Maximum-A-Posteriori-Probability Decoding for High-Throughput Parallel-Turbo Decoders	Circuits, Systems & Signal Processing, Springer	2015			1	23
Rahul Shrestha, Roy Paily	VLSI Design and Hardware Implementation of High-Speed Energy-Efficient Logarithmic-MAP Decoder	Journal of Low Power Electronics	2015	11	3	406	412
Ramesh K. Sonkar, Utpal Das	F-ion implanted quantum well intermixed waveguide grating	Optical and Quantum Electronics	2016	48	1		
Ratul Kr. Baruah, Roy Paily	A surface-potential based drain current model for short-channel Symmetric Double-Gate Junctionless Transistor	Journal of Computational Electronics	2016	15		45	52
Ratul Kr. Baruah, Roy Paily	The Effect of High-k Gate Dielectrics on Device and Circuit Performances of a Junctionless Transistor	Journal of Computational Electronics, Springer	2015	14	2	492	499
S. Bhattacharjee, R. S. Kshetrimayum, R. Bhattacharjee	Derivation of potential Green functions for ungrounded dielectric slab and its application in full wave analysis of PMAs	Journal of Electromagnetic Waves and Applications	2015	29	16	2242	2256
S. Bhattacharjee, R. S. Kshetrimayum, R. Bhattacharjee	On the equivalent circuit, input impedance, reflection coefficient and bandwidth of printed monopole antenna	Microwave and Optical Technology Letters	2015	57	7	1535	1538
S. K. Yadav, R. Sinha, P. K. Bora	An Efficient SVD Shrinkage for Rank Estimation	Signal Processing Letters, IEEE	2015	22	12	2406	2410
S. Padhy, S. Dandapat	Exploiting multi-lead electrocardiogram correlations using robust third-order tensor decomposition	Healthcare technology letters, 2015 - IET	2015	2	5	112	117
S. Pandey, S. Majhi	Limit Cycle based Exact Estimation of FOPDT Process Parameters under Input / Output Disturbances	Published online in the International Journal of Systems Science	2015				

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
S. S. Karthikeyan, R. S. Kshetrimayum	Compact and Wide Stopband Lowpass Filter Using Open Complementary Split Ring Resonator and Defected Ground Structure	Radioengineering	2015	24	3	708	711
S. Shahnawazuddin, K. T. Deepak , B. D. Sarma, A. Deka, S. R. M. Prasanna, Rohit Sinha	Low Complexity On-Line Adaptation Techniques in Context of Assamese Spoken Query System	Journal Of Signal Processing Systems For Signal Image And Video Technology	2015	81	1	83	97
S. Shailendra, R. Bhattacharjee, S. K. Bose	A multipath variant of SCTP with optimized flow division extension	Computer Communications	2015	67		56	65
Sachin Kumawat, Rahul Shrestha, Nikunj Daga, Roy Paily	High-Throughput LDPC-Decoder Architecture Using Efficient Comparison Techniques & Dynamic Multi-Frame Processing Schedule	IEEE Transactions on Circuits and Systems I	2015	62	5	1421	1430
Sam Darshi, R. Bhattacharjee	BER Analysis of Asynchronised Wireless Network in Presence of Non-Identically Distributed Interferers	Wireless Personal Communications	2015	82	4	2583	2600
Santosh Kumar Yadav, Rohit Sinha, Prabin Kumar Bora	Electrocardiogram signal denoising using non-local wavelet transform domain filtering	IET Signal Processing	2015	9	1	88	96
Saroj Mondal, Roy Paily	An Efficient On-Chip Switched-Capacitor Based Power Converter for Micro Scale Energy Transducer	IEEE Transactions on Circuits and Systems II	2016	63	3	254	258
Seiya Tsuda, Yuji Iwahori, M. K. Bhuyan, Robert J. Woodham, Kunio Kasugai	Recovering 3D Shape with Absolute Size from Endoscope Images Using RBF Neural Network	International Journal of Biomedical Imaging	2015	2015		1	15
Shinji Fukui, Ryuji Nishiyama, Yuji Iwahori, M. K. Bhuyan, Robert J. Woodham	Object Tracking with Improved Detector of Objects Similar to Target	Journal of Computer Science, Elsevier	2015	60		740	749
Shweta Ghai, Rohit Sinha	Pitch adaptive MFCC features for improving children's mismatched ASR	International Journal of Speech Technology	2015	18	3	489	503
So Hayakawa, Shinji Fukui, Yuji Iwahori, M. K. Bhuyan, Robert J. Woodham	Object Tracking Method Using PTAMM and Estimated Foreground Regions	Software Engineering Research, Management and Applications, Studies in Computational Intelligence, Springer	2015	578		205	218
Sonu K. Mishra, Soumya Indela, S. K. Bose, Wen-De Zhong	Message Forwarding in a Sparsely Connected Wireless Network using Rateless Codes	Wireless Communications Letters, IEEE	2015	4	2	137	140

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Sunil Kumar, M. K. Bhuyan, Biplab Chakraborty	Extraction of Informative Regions of a Face for Facial Expression Recognition	IET Computer Vision	2015				
T. Malathi, M. K. Bhuyan	Estimation of Disparity Map of Stereo Image Pairs using Spatial Domain Local Gabor Wavelet	IET Computer Vision	2015	9	4	595	602
T. Malathi, M. K. Bhuyan	Performance analysis of Gabor wavelet for extracting most informative and efficient features	Multimedia Tools and Applications, Springer	2016			1	21
Vijaya Kumar Kanchetla, Rahul Shrestha, Roy Paily	Multi-Standard High-Throughput and Low-Power QC-LDPC Decoder for WiMAX and WiFi Standards	IET Circuits, Devices & Systems	2016	10	2	111	120
Vinay M. M., Roy Paily, Anil Mahanta	A New PVT compensation technique based on current comparison for low-voltage, near sub-threshold LNA	IEEE Transactions on Circuits and Systems I	2015	62	12	2908	2015
Yuji Iwahori, Akira Hattori, Yoshinori Adachi, M. K. Bhuyan, Robert J. Woodham, Kunio Kasugai	Automatic Detection of Polyp Using Hessian Filter and HOG Features	Journal of Computer Science, Elsevier	2015	60		730	739

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
A. J. Borah, M. Agarwal, M. Poudyal, A. Goyal, V. S. Moholkar	Mechanistic investigation in ultrasound induced enhancement of enzymatic hydrolysis of invasive biomass species	Bioresource Technology	2016			-	
A. Sharma, E. Senthil, H. Chaturvedi	Photon Induced Separation of Bio Nano Hybrid complex	Opt. Mater. Express	2016	6	4	986	992
D. K. Maravi, A. K. Sahoo, U. Goswami, D. S. Prasad, L. Sahoo, S. S. Ghosh	Phylogenetic "Green synthesis" of silver nano particles with enhanced antibacterial and anti-cancer activity	International Journal of Pharmaceutical and Biological Sciences	2015	6	4	482	493
D. Yadav, L. Barbora, L. Rangan, P. Mahanta	Tea waste and food waste as a potential feedstock for biogas production	Environmental Progress & Sustainable Energy	2016			-	
J. R. Pati, S. Dutta, P. Eliaers, P. Mahanta, P. Chatterjee, J. De Wilde	Experimental study of paddy drying in a vortex chamber	Drying Technology	2015			-	

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
J. R. Pati, S. K. Hotta, P. Mahanta	Effect of Waste Heat Recovery on Drying characteristics of Sliced Ginger in a Natural Convection Dryer	Procedia Engineering	2015	105		145	152
M. Poddar, S. Sharma, V. S. Moholkar	Sonochemical synthesis of PMMA/ Cloisite 30B nanocomposites: A mechanistic investigation	Macromolecular Symp.	2016	361		82	100
N. K. Mund, D. Das, C. R. Barik, V. V. Goud, L. Sahoo, P. Mishra, N. R. Nayak	Chemical composition, pretreatments and saccharification of Senna siamea (Lam.) H.S. Irwin & Barneby: An efficient biomass producing tree legume	Bioresource Technology	2016	207		205	212
P. Das, M. Das, S. R. Chinnadayyala, I. M. Singha, P. Goswami	Recent advances on developing 3rd generation enzyme electrode for biosensor applications	Biosensors and Bioelectronics	2016	79	15	386	397
P. Kalita, A. Dewan, S. Borah	A Review on Recent Developments in Solar Distillation	Sadhana – Indian Academy of Science	2016	-		-	
P. Kalita, P. Mahanta, U. K. Saha, Sai Gu	A review on the influence of operating parameters on the design and performance of loop-seal in circulating fluidized beds	NTPC Energy Technical Journal	2016	1		33	48
S. Chakma, A. Ranjan, H. A. Choudhury, P. K. Dikshit, V. S. Moholkar	Bioenergy from rice crop residues: role in developing economies	Clean Technologies and Environmental Policy	2015	18	2	373	394
S. Singh, S. Sarma, M. Agrawal, A. Goyal, V. S. Moholkar	Ultrasound enhanced ethanol production from Parthenium hysterophorus: A mechanistic investigation	Bioresource Technology	2015	188		287	294
S. T. P. Bharadwaja, S. Singh, 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	2015	51		71	78

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Aditi Banerjee, Alope K. Ghoshal	Biodegradation of phenol by calcium-alginate immobilized <i>Bacillus cereus</i> in a packed bed reactor and determination of the mass transfer correlation	J. of Environmental Chemical Engineering	2016	4	2	1523	1529
Anil Kumar, Hasnahana Chetia, Swagata Sharma, Debajyoti Kabiraj, Narayan Chandra Talukdar, Utpal Bora	Curcumin Resource Database Article ID: bav070	Database (Oxford). 2015	2015			1	6
Banasri Sarma, Arup K. Sarma, Chandan Mahanta, V. P. Singh	Optimal ecological management practices for controlling sediment yield and peak discharge from hilly urban areas	J. of Hydrologic Engineering	2015	20	10	0401 5005-1	04015 005-14
Bedabrata Saha, Jiban Saikia, Gopal Das	Correlating enzyme density, conformation and activity on nanoparticle surfaces in highly functional bio-nanocomposites	Analyst	2015	140	2	532	542
Bharati Brahmacharimayum, Pranab Kumar Ghosh	Effects of different environmental and operating conditions on sulfate bioreduction in shake flasks by mixed bacterial culture predominantly <i>Pseudomonas aeruginosa</i>	Desalination & Water Treatment	2015			1	11
Bhaskar Das, Tapas K. Mandal, Sanjukta Patra	A comprehensive study on <i>Chlorella pyrenoidosa</i> for phenol degradation and its potential applicability as biodiesel feedstock and animal feed	Applied Biochemistry and Biotechnology	2015	176	5	1382	1401
Bhaskar Das, Tapas K. Mandal, Sanjukta Patra	Biodegradation of phenol by a novel diatom BD1IITG-kinetics and biochemical studies	International journal of Environmental Science and Technology	2016	13	2	529	542
Biju Prava Sahariah, J. Anandkumar, Saswati Chakraborty	Treatment of coke oven wastewater in an anaerobic–anoxic–aerobic moving bed bioreactor system	Desalination & Water Treatment.	2016	57	31	14396	14402
Biju Prava Sahariah, Saswati Chakraborty	Comparative study on response of thiocyanate shock load on continuous and fed batch anaerobic-anoxic-aerobic sequential moving bed reactors	Environmental Engineering Research	2015	20	1	65	72
Isha Vishan, Ajay Kalamdhad	Heavy metal removal through bacterial biomass isolated from various contaminated sites	International Journal of Environmental Sciences	2015	6	42431		
M. Gopikiran, Kannan Pakshirajan, Gopal Das	Heavy metal removal from multicomponent system by sulfate reducing bacteria: mechanism and cell surface characterization	J. of Hazardous Materials	2016				

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Mood Mohan, Robinson Timung, Narendra Naik Deshavath, Tamal Banerjee, Vaibhav V.Goud, Venkata V. Dasu	Optimization and hydrolysis of cellulose under subcritical water treatment for the production of total reducing sugars	RSC Advances	2015	5	125	103265	103275
Mothe Gopi Kiran, K. Pakshirajan, Gopal Das	Heavy metal removal using sulfate reducing biomass obtained from a lab scale upflow anaerobic packed bed reactor	J. Environmental Engineering	2015	DOI: 10.1061/(ASCE)EE		C401 5010-1	C401 50-8
Naresh K. Sahoo, Pranab K. Ghosh, Kanan Pakshirajan	Treatment of refinery wastewater using <i>Arthro-bacterchlorophenolicus</i> A6 in an upflow packed bed reactor	Desalination & Water Treatment	2015	55		1762	1770
Pranab Jyoti Sarma, Rajneesh Kumar, Kanan Pakshirajan	Batch and continuous removal of copper and lead from aqueous solution using cheaply available agricultural waste materials	Journal of Environmental Research	2015	9	2	635	648
Pranab Jyoti Sarma, Rajneesh Kumar, N. Arul Manikandan, Kanan Pakshirajan	Removal of Cr(III) and Cr(VI) from aqueous solution by biosorption using agricultural waste materials: Batch and continuous reactor study	Asian J. of Chemistry	2015	27	9	3420	3430
Samarpita Basu, Abhijit Sarma Roy, Alope K. Ghoshal, Kaushtubha Mohanty	Operational strategies for maximizing CO <sub>2</sub> utilization efficiency by the novel microalga <i>Scenedesmusobliquus</i> SA1 cultivated in lab scale photobioreactor	Algal Research	2015	12		249	257
Smita Goswami, Omega L. Diengdoh, Mayashree B. Syiem, Kannan Pakshirajan, Mothe Gopi Kiran	Zn(II) and Cu(II) removal by <i>Nostocmuscorum</i> : A cyanobacterium isolated from a coal mining pit in Chiehruphi, Meghalaya, India	Canadian Journal of Microbiology	2015	61	3	209	215
Surya Singh, Bedika Phukan, Chandan Mukherjee, Anil Verma	Salen ligand complexes as electrocatalysts for direct electrochemical reduction of gaseous carbon dioxide to value added products	RSC Advances	2015	5	5	3581	3589
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	2015	17	2	533	540
Sushant Singh, Vikash Kumar Dubey	Multiwalled carbon nanotube-superoxide dismutase conjugate towards alleviating induced oxidative stress	Int. J. of Peptide Research & Therapeutics	2016	DOI: 10.1007/s10989-015-9495-3			



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## Humanities and Social Sciences

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A. Kumar, S. Mallick	Plant Biotechnology Representation and Resistance: A Study of Plant Breeding Community in Bihar, India	Perspectives on Global Development and Technology	2015	14	5	544	566
Amarjyoti Mahanta	Contemporaneous Most-Favoured-Customer Pricing Policy vs. Price Discrimination in a Differentiated Product Duopoly Market	Economics Bulletin	2016	36		75	83
Archana Barua	Ankia Nat: one act traditional plays of Sri Sankaradeva	SANDHAN : Journal of Centre for Studies in Civilizations	2015	XII	1	39	46
Archana Barua	Elements of Magic, Esotericism and Religion in Shaktism and Tantrism in Light of the Shakti PithaKāmākhya	Pomegranate The International Journal of Pagan Studies	2015	17	42401	14	50
Archana Barua	Gandhi, Ambedkar and some Unresolved Questions on Caste and Untouchability in Hinduism	Gandhi Marg: Quarterly Journal of The Gandhi Peace Foundation	2015	37	1	130	135
Archana Barua	Philosophical Quest for Meaning of Life and its Wisdom	Civilizations VISION	2015	1	2	20	37
Archana Barua	Toward a Feminist Critic of Science	Janus Head	2016	15	1	87	99
Archana Barua	Understanding the essence of Mahapurisism: from philosophy to Phenomenology	SANDHAN : Journal of Centre for Studies in Civilizations	2015	XII	1	25	38
Arupjyoti Saikia	AmalenduGuha (1924–2015): Distinguished Historian, Public Intellectual	Economic and Political Weekly	2015	23		20	23
Arupjyoti Saikia	Assam, Nehru and Creation of India's Eastern Frontier, 1946–1950s	Occasional Paper Series, Nehru Memorial Museum and Library, New Delhi,	2015	78		1	29
Arupjyoti Saikia	Border, Commodities and Citizens: Assam, 1946-50s	Studies in History	2016		1	72	96
Arupjyoti Saikia	Jute in the Brahmaputra valley: The making of flood control in 20th century Assam	Modern Asian Studies	2015	49	5	1405	1441

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Avishek Parui	"Do you see the story?" Consciousness, Cognition and Crisis of Narration in Joseph Conrad's Heart of Darkness	Janus Head, Pittsburg, USA	2016	15	1	117	136
D. Hussain	Meta-cognition in Mindfulness: A Conceptual Analysis	Psychological Thought	2015	8	2	132	141
Debarshi Das, Deepankar Basu	Employment Elasticity in India and the U.S., 1977-2011: A Sectoral Decomposition Analysis	Economic and Political Weekly	2016	51	10	51	59
Debarshi Das, Deepankar Basu	Social Hierarchies and Public Distribution of Food in Rural India	Journal of Development Studies	2015	51	12	1653	1666
G. K. Sarma, S. Borbora	ESTIMATION OF MICROFINANCE DEMAND AND SUPPLY: WITH SPECIAL REFERENCE TO ASSAM	International Journal of Social Sciences and Management	2015	2	4	308	314
J. Tamuli, M. K. Dutta	What Determines Farmers' Decision to Buy Irrigation Water in Water Abundant Regions? A Study of Water Markets in Assam in Eastern India	INFER Working Paper Series, Germany	2015				
Luke Horo, Priyankoo Sarmah	Acoustic analysis of vowels in Assam Sora	North East Indian Linguistics	2015	7		69	86
M. K. Dutta, Parag Dutta	Revenue Mobilisation Effort of Special Category States: The Case of Assam in North East India	South Asian Journal of Macroeconomics and Public Finance	2015	4	2	178	204
N. Kipgen	Dissenting Voices from the Margins: Mapithel Dam in Manipur	Economic and Political Weekly	2015	50	39		
Pahi Saikia, J. S. Chima, Aniruddha Baro	Limits of ethnofederalism and local political autonomy arrangements: Continuing violence in the Bodoland Territorial Area Districts of Assam	India Review	2016	15	1	136	162
Pankaj Singh, Sukanya Sharma	Thermal and spectroscopic characterization of archeological pottery from Ambari, Assam	Journal of Archaeological Science: Reports	2016	5		553	563
Papori Rani Barooah, Liza Das	The Merging of the Real and the Virtual Worlds	Journal of Social Science Research	2015	1	1	42	56
Priyankoo Sarmah, Leena Dihingia, Dimple Choudhury	An Acoustic Study of Bodo Vowels	Himalayan Linguistics	2015	14	1	20	33
R. L. Deka, C. Mahanta, K. K. Nath, M. K. Dutta	Spatio-temporal Variability of Rainfall Regime in the Brahmaputra Valley of North East India	Theoretical and Applied Climatology	2015	DOI: 10.1007/s00704-015-1452-8			

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R. Shukla, S. Mallick	Mechanization of Agriculture: Implications for the Farming Community in India	Perspectives on Global Development and Technology	2015	14	4	430	447
Sawmya Ray	'Of Vulnerability and Coercion': A Study of Sex Trafficking in Assam	Sociological Bulletin: Journal of the Indian Sociological Society	2015	65	3	305	324
Sohail Ahmed, Liza Das	Names and Naming as Signs in Jhumpa Lahiri's The Namesake	International Journal of English Language, Literature and Humanities	2015	10	3	244	252
Sukanya Sharma	Memories of a Forgotten Cosmos	Economic and Political Weekly	2015	24		30	33
V. Prabhu, Tanuja Kalita	Is Peter Singer inconsistent in his ethics?	Cadernos do pet Filosofia	2014	5	10	44	52

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## Mathematics

Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
V. Prabhu, Tanuja Kalita	Reason in Peter Singer's ethics	Rabindra Bharati University Journal of philosophy	2015	XVI	-	130	139
A. Das, S. Natesan	Uniformly Convergent Hybrid Numerical Scheme for Singularly Perturbed Delay Parabolic Convection-Diffusion Problems on Shishkin Mesh	Applied Mathematics and Computation	2015	271		168	186
B. Adhikari, R. Alam	Structured Procrustes problem	Linear Algebra and its Applications	2016	490		145	161
Barun Gorain, Partha Sarathi Mandal	Approximation Algorithm for Sweep Coverage on Graph	Information Processing Letters	2015	115	9	712	718
Bhaba K. Sarma, Kalyan Sinha	The $P_0^+$ -matrix completion problem	Electronic Journal of Linear Algebra	2015	29		120	143

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
Bhaba K. Sarma, Kalyan Sinha	The positive Q-matrix completion problem	Discrete Mathematics, Algorithms and Applications	2015	7	4		
Cosmika Goswami, N. Selvaraju	Phase-Type Arrivals and Impatient Customers in Multiserver Queue with Multiple Working Vacations	Advances in Operations Research	2016	2016		17	
Dinesh Kumar, Siddhartha P. Chakrabarty	A comparative study of bioeconomic ratio-dependent predator-prey model with and without additional food to predators	Nonlinear Dynamics	2015	80	42401	23	38
Ewa Damek, Pratyosh Kumar	Eigenfunctions of the Laplace-Beltrami Operator on Harmonic NA Groups	The Journal of Geometric Analysis	2015			1	12
G. K. Das, M. De, S. Kolay, S. C. Nandy, S. Sur-Kolay	Approximation Algorithms for Computing Maximum Independent Set of a Unit Disk Graph	Information Processing Letters	2015	115		439	446
G. M. M. Reddy, R. K. Sinha	Ritz-Volterra reconstructions and a posteriori error analysis of finite element method for parabolic integro-differential equations	IMA Journal of Numerical Analysis	2015	35	1	341	371
Hiranmoy Pal, Bikash Bhattacharjya	Perfect state transfer on NEPS of the path on three vertices	Discrete Mathematics	2016	339	2	831	838
Jitender Kumar, K. V. Krishna	Syntactic Semigroup Problem for the Semigroup Reducts of Affine Near-semirings over Brandt Semigroups	Asian-European Journal of Mathematics	2016	9	1	1650-021-1	1650-021-10
Kalyan Manna, Siddhartha P. Chakrabarty	Chronic hepatitis B infection and HBV DNA-containing capsids Modeling and Analysis	Communications in Nonlinear Science and Numerical Simulation	2015	22	42430	383	395
Kalyan Manna, Siddhartha P. Chakrabarty	Global stability and a non-standard finite difference scheme for a diffusion driven HBV model with capsids	Journal of Difference Equations and Applications	2015	21	10	918	933
Kaushik Mondal, Partha Sarathi Mandal, Bhabani P. Sinha	Analysis of Multiple-bound Signals towards Localization A Theoretical Approach	Wireless Personal Communications	2015	83	1	49	67
M. Basappa, R. Acharyya, G. K. Das	Unit Disk Cover Problem in 2D	Journal of Discrete Algorithms	2015	33		193	201
Manideepa Saha, Sriparna Bandopadhyay	Combinatorial properties of generalized M-matrices	Electronic Journal of Linear Algebra	2015	30		550	576

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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
P. Carmi, G. K. Das, R. K. Jallu, S. C. Nandy, P. R. Prasad, Y. Stein	Minimum Dominating Set Problem for Unit Disks Revisited	International Journal of Computational Geometry and Applications	2015	25		227	244
P. Das, S. Natesan	Adaptive Mesh Generation for Singularly Perturbed Fourth-Order Ordinary Differential Equations	International Journal of Computer Mathematics	2015	93	3	562	578
Pratyooosh Kumar	Simplicity of Poisson transform on harmonic NAgrouP	Journal of Ramanujan Mathematical Society	2016	31	1	1	15
R. Alam	On the sensitivity analysis of eigenvalues	Electronic Journal of Linear Algebra	2015	29		223	235
R. B. Bapat, S. Barik, S. Pati	On the Laplacian spectra of product graphs	Applicable Analysis and Discrete Mathematics	2015	9		39	58
S. K. Panda, S. Pati	On The Inverse Of A Class Of Bipartite Graphs With Unique Perfect Matchings	Electronic Journal of Linear Algebra	2015	29		89	101
S. S. Ahmad, R. Alam	On Wilkinson's problem for matrix pencils	Electronic Journal of Linear Algebra	2015	30		632	648
S. Saha, S. N. Bora	Effects of surface tension on trapped modes in a two-layer fluid	The ANZIAM Journal	2015	57		189	203
S. Saha, S. N. Bora	Elastic bottom effect on trapped waves in a two-layer fluid	International Journal of Applied Mechanics	2015	7	2	150028	
Shreemayee Bora, Ravi Srivastava	Distance problems for Hermitian matrix pencils with eigenvalues of definite type	SIAM Journal on Matrix Analysis and Applications	2016	1	37	53	85
Shuvam Sen, Jiten C. Kalita	A 4OEC scheme for the biharmonic steady Navier-Stokes equations in non-rectangular domains	Computer Physics Communications	2015	196		113	133

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A. Hens, K. Mondal, G. Biswas, D. Bandyopadhyay	Pathways from disordered to ordered nanostructures from defect guided dewetting of ultrathin bilayers	Journal of Colloid and Interface Science	2016	465		128	139
A. Hens, G. Biswas, S. De	Evaporation of water droplets on Pt-surface in presence of external electric field – A molecular dynamics study	The Journal of Chemical Physics	2015	143		094702-1	094702-11
A. J. Chaudhari, V. Kulkarni, N. Sahoo	Effect of variable compression ratio and intake charge dilution on fuel efficiency and emission for a spark ignition engine	Society of Automotive Engineers	2015				
A. J. Mertens, S. Senthilvelan	Effect of Mating Metal Gear Surface Texture on the Polymer Gear Surface Temperature	Materials Today: Proceedings	2015	2	4	1763	1769
A. Kumar D., Arun Kumar Kadian, Pankaj Biswas	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)	2015	10	1	64	86
A. Kumar M. S., S. Panda, D. Chakraborty	Harmonically excited nonlinear vibration of heated functionally graded plates integrated with piezoelectric composite actuator	Journal of Intelligent Material Systems and Structures	2015	26	8	931	951
A. Mondal, P. Biswas, S. Bag	Influence of tacking sequence on residual stress and distortion of single sided fillet submerged arc welded joint	Journal of Marine Science and Applications	2015	14	3	250	260
A. Muthuraja, S. Senthilvelan	Adhesive wear performance of tungsten carbide based self-lubricant cutting tool material	International Journal of Refractory Metals and Hard Materials	2015	52		235	244
A. Muthuraja, S. Senthilvelan	Development of tungsten carbide based self lubricant cutting tool material: Preliminary investigation	International Journal of Refractory Metals and Hard Materials	2015	48		89	96
A. S. Pavan Kumar, S. Panda, N. H. Reddy	Smart damping of vibration of annular plates by the design of a cylindrically orthotropic piezoelectric fiber-reinforced composite actuator	Acta Mechanica	2015	226	9	3151	3136
Arun Kadian, Biswas Pankaj	A Comparative Study of Material Flow Behavior in Friction Stir Welding using Laminar and Turbulent Models	Journal of Materials Engineering and Performance	2015	24	10	4119	4127

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B. Das, S. Bag, S. Pal	Defect detection in friction stir welding process through characterization of signals by fractal dimension	Manufacturing Letters	2016	7		6	10
B. Das, S. Pal, S. Bag	Monitoring of friction stir welding process using weld image information	Science and Technology of Welding and Joining	2016				
B. J. Bora , U. K. Saha	Experimental evaluation of a rice bran oil methyl ester-biogas run dual fuel diesel engine at varying compression ratios	Renewable Energy	2016	87		782	790
B. J. Bora, U. K. Saha	Comparative assessment of a biogas run dual fuel diesel engine with rice bran oil methyl ester, pongamia oil methyl ester and palm oil methyl ester as pilot fuels	Renewable Energy	2015	81		490	498
B. J. Bora, U. K. Saha	Optimisation of injection timing and compression ratio of a raw biogas powered dual-fuel diesel engine	Applied Thermal Engineering	2016	92		111	121
B. J. Bora, U. K. Saha	Theoretical performance limits of a biogas–diesel powered dual fuel diesel engine for different combinations of compression ratio and injection timing	ASCE Journal of Energy Engineering	2015			E401 5001-1	E4015 001-9
B. K. Debnath, U. K. Sahoo, N. Sahoo	A comprehensive review on the application of emulsions as an alternative fuel for diesel engines	Renewable and Sustainable Energy Reviews	2015	42		196	211
B. Ray, G. Biswas, A. Sharma	Regimes during liquid drop impact on a liquid pool	Journal of Fluid Mechanics	2015	768		492	523
Bora BJ, U. K. Saha	Estimating the theoretical performance limits of a biogas powered dual fuel diesel engine using emulsified rice bran biodiesel as pilot fuel	ASME Journal of Energy Resources Technology	2016	138		021801- 1	021801- 10
C. Patel, S. D. Kore	Effect of Frequency on Electromagnetic Expansion of Thin Tubes	Journal of Machining and Forming Technologies	2015	7	1/2/2016	91	101
D. Yaduwanshi, S. Bag, S. Pal	Heat transfer analyses in friction stir welding of aluminum alloy	Proceedings of IMechE, Part B: Journal of Engineering Manufacture	2015	229	10	1722	1733

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D. Yaduwanshi, S. Bag, S. Pal	Numerical modeling and experimental investigation on plasma assisted hybrid friction stir welding for dissimilar materials	Materials & Design	2016	92		166	183
Das Biplab, Biswas Pankaj	Effect of operating parameters on plate bending by laser line heating	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	2015			1	8
H. Gurung, A. Banerjee	Development of an extended Kalman filter for the self-sensing application of a spring biased shape memory alloy wire actuator	Smart Materials and Structures	2016	25	2	25012	13
H. M. Sathisha, A. Dalal	2-D Unsteady Simulation of All-Vanadium Redox Flow Battery	ASME Journal of Thermal Science and Engineering Applications	2015	8	1	11019	
I.Chakraborty, G. Biswas, S. Polepalle, P. S. Ghoshdastidar	Bubble Formation and Dynamics in a Quiescent High-Density Liquid	AIChE Journal	2015	61		3996	4012
J. Kalivarapu, S. Jain, S. Bag	An improved harmony search algorithm with dynamically varying bandwidth	Engineering Optimization,	2016				
Kumar AMS, S. Panda, S. Kumar, D. Chakraborty	A design of laminated composite plates using graded orthotropic fiber-reinforced composite plies	Composites Part B: Engineering	2015	79		476	493
M. Baruah, S. Bag	Influence of heat input in microwelding of titanium alloy by micro plasma arc	Journal of Materials Processing Technology	2016	231		100	112
M. S. A. Kumar, S. Panda, D. Chakraborty	Design and analysis of a smart graded fiber-reinforced composite laminated plate	Composite Structures	2015	124		176	195
M. V. Lototsky, B. S. Sekhar, P. Muthukumar, B. G. Pollet, V. Linkov	Niche applications of metal hydrides and related thermal management issues.	J. Alloys and Compounds	2015	645		117	122
Mondal Arpan Kumar, Biswas Pankaj, Swarup Bag	Influence of tacking sequence on residual stress and distortion of single sided fillet submerged arc welded joint	J. Marine Sci. Appl.	2015	14		1	11
N. K. Mishra, S. C. Mishra, P. Muthukumar	Performance characterization of a medium-scale liquefied petroleum gas cooking stove with a two-layer porous radiant burner	Applied Thermal Engineering	2015	89		44	50



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N. Sahoo, R. Kumar	Performance assessment of thermal sensors during short-duration convective surface heating measurements	Heat Mass Transfer	2015			1	9
N. Shanmuga Priya, Chandramohan Somayaji, S. Kanagaraj	Synthesis and characterization of Nd <sup>3+</sup> -doped Ce <sub>0.6</sub> Zr <sub>0.4</sub> O <sub>2</sub> and its doping significance on oxygen storage capacity	Rare Metals	2016	DOI: 10.1007/s12598-016-0698-3			
N. Varma, J. P. Dulhani, A. Dalal, S. Sarkar, S. Ganguly	Effect of Channel Confinement on Mixed Convective Flow Past an Equilateral Triangular Cylinder	ASME Journal of Heat Transfer	2015	137	12	121013	
N. Yadaiah, S. Bag, C. P. Paul, L. M. Kukreja	Influence of self-protective atmosphere in fiber laser welding of austenitic stainless steel	International Journal of Advanced Manufacturing Technology	2016				
P. Kalita, A. K. Dass, A. Sarma	Effects of Numerical Diffusion on the Computation of Viscous Supersonic Flow over a Flat Plate	International Journal of Applied and Computational Mathematics	2015				
P. Khanikar, Q. Wu, M. Zikry	Dynamic Fracture Of Aluminum Bonded Composites	Journal of Engineering Materials and Technology	2016				
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	Composite Structures	2016	140		491	505
P. Meshram, S. Bhardwaj, A. Dalal	Numerical Investigation of Two Dimensional Natural Convection and Entropy Generation inside a Porous Square Enclosure with Sinusoidally Heated Wall	Progress in Computational Fluid Dynamics	2016	16	2	88	101
P. Muthukumar, Manojkumar S. Patil, Nithin Narmada R., Mohd. Imran	Parametric Investigations on Compressor-Driven Metal Hydride Based Cooling System, Article in press	Applied Thermal Engineering	2016				
P. Randive, A. Dalal	Influence of Geometry on Mobilization of Trapped Blob	European Journal of Mechanics – B/Fluids	2015	53		1	10
P. Randive, A. Dalal, K. C. Sahu, G. Biswas, P. P. Mukherjee	Wettability Effects on Contact Line Dynamics of Droplet Motion in an Inclined Channel	Physical Review E	2015	91		53006	

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P. S. Rama Sreekanth, S. Kanagaraj	Effect of multi walled carbon nanotubes reinforcement and gamma irradiation on viscoelastic properties of Ultra high molecular weight polyethylene	Materials Research Innovations	2015	DOI: 10.1 179/ 14 33075X 15Y. 00000 00050			
P. S. Rama Sreekanth, S. Kanagaraj	Influence of multi walled carbon nanotubes reinforcement and gamma irradiation on the wear behaviour of UHMWPE	Wear	2015	334-335		82	90
R. Kant, S. N. Joshi, U. S. Dixit	An integrated FEM-ANN model for laser bending process with inverse Estimation of absorptivity	Mechanics of Advanced Materials and Modern Processes	2015	1		1	12
R. Kore, A. Waychal, S. Agarwal, P. Yadav, A. Uddin, N. Sahoo, A. Shelke	Impact induced solitary wave propagation through woodpile structure	Smart Materials and Structures	2016	25	2	25027	25037
S. Arun, S. Kanagaraj	Mechanical characterization and validation of Poly (methyl methacrylate)/Multi walled carbon nanotube composite prepared by melt mixing technique	Journal of the Mechanical Behavior of Biomedical Materials	2015	50		33	42
S. Arun, S. Kanagaraj	Performance enhancement of epoxy based sandwich composites using multiwalled carbon nanotubes for the application of sockets in transfemoral amputees	Journal of Mechanical Behavior of Biomedical Materials	2016	59		1	10
S. Biswas, P. Sharma, B. Mondal, G. Biswas	Analysis of Mixed Convective Heat Transfer in a Ribbed Channel using The Lattice Boltzmann Method	Numerical Heat Transfer Part A	2015	68		75	98
S. M. Kamal, A. Ch. Borsaikia, U. S. Dixit	Experimental assessment of residual stresses induced by the thermal autofrettage of thick-walled cylinders	Journal of Strain Analysis for Engineering Design	2016	51	2	144	160
S. M. Kamal, U. S. Dixit	A comparative study of thermal and hydraulic autofrettage	Journal of Mechanical Science and Technology	2016	30	6		
S. M. Kamal, U. S. Dixit	Feasibility study of thermal autofrettage of thick-walled cylinders	ASME Journal of Pressure Vessel Technology	2015	137	6		
S. P. Panda, S. Panda	Micromechanical finite element analysis of effective properties of a unidirectional short piezoelectric fiber reinforced composite	International Journal of Mechanics and Materials in Design	2015	11	1	41	57

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S. Panda, N. H. Reddy, A. S. Pavan Kumar	Design and finite element analysis of a short piezoelectric fiber-reinforced composite actuator	Archive of Applied Mechanics	2015	85	5	691	711
S. Panigrahy, N. K. Mishra, S. C. Mishra, P. Muthukumar	Numerical and experimental Analyses of LPG combustion in a domestic cooking stove with a porous radiant burner	Energy	2016	95		404	414
S. Sarkar, S. Ganguly, G. Biswas, P. Saha	Effect of cylinder rotation during mixed convective flow of nanofluids past a circular cylinder	Computers and Fluids	2016	127		47	64
U. S. Dixit, S. N. Joshi, R. Kant	Laser forming systems: a review	Int. J. Mechatronics and Manufacturing Systems	2015	8		160	205
V. Yadav, A. K. Singh, U. S. Dixit	Inverse estimation of thermal parameters and friction coefficient during warm flat rolling process	International Journal of Mechanical Sciences	2015	96-97		182	198
W. G. Jiru, M. Ravi Sankar, U. S. Dixit	Laser surface alloying of copper, manganese and magnesium with pure aluminum substrate	Journal of Materials Engineering and Performance	2016	25	3	1172	1181

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Abhinav Sharma, Vineet Kumar, Joydip Chaudhuri, Seim-Timung, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Digitization of two-phase flow patterns in a micro-channel induced by an external AC field	RSC Advances	2015	5	-	29545	-
Abhiram Hens, Kartick Mondal, Gautam Biswas, Dipankar Bandyopadhyay	Pathways from Disordered to Ordered Nanostructures from Defect Guided Dewetting of Ultrathin Bilayers	Journal of Colloid and Interface Science	2015	DOI: 10.1016/j.jcis.2015.11.046		-	-
Akhtar Hussain Malik, Sameer Hussain, Anamika Kalita, Parameswar K. Iyer	Conjugated Polymer Nanoparticles for the Amplified Detection of Nitro-explosive Picric Acid on Multiple Platforms	ACS Applied Materials and Interfaces	2015	7	48	26968	26976
Anamika Dey, Ashish Singh, Anamika Kalita, Dipjyoti Das, Parameswar K. Iyer	High Performance, Low Operating Voltage n-Type Organic Field Effect Transistor Based on Inorganic-Organic Bilayer Dielectric System	Journal of Physics	2016	-	-	-	-

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Anamika Kalita, Anamika Dey, Parameswar K. Iyer	Effect of inorganic/organic dual dielectric layer on the morphology and performance of n-channel OFETs	Physical Chemistry Chemical Physics	2016	18	-	-	-
Anamika Kalita, N. V. V. Subbarao, Parameswar K. Iyer	Large-Scale Molecular Packing and Morphology-Dependent High Performance Organic Field-Effect Transistor by Symmetrical Naphthalene Diimide Appended with Methyl Cyclohexane	The Journal of Physical Chemistry C	2015	119	22	12772	12779
Anamika Kalita, Sameer Hussain, Akhtar H. Malik, N. V. V. Subbarao, Parameswar K. Iyer	Vapor phase sensing of ammonia at the sub-ppm level using a perylene diimide thin film device	Journal of Materials Chemistry C	2015	3	41	10767	10774
Anand B. Desamala, Ashok Kumar Dasmahapatra, Tapas K. Mandal	An Appraisal of Viscous Oil-Water Two-phase Flow through an Undulated Pipeline in Peak Configuration	Experimental Thermal and Fluid Science	2015	68	-	177	186
Archita Ghoshal, Upashi Goswami, Amaresh Kumar Sahoo, Arun Chattopadhyay, Siddhartha Sankar Ghosh	Targeting Wnt Canonical Signaling by Recombinant sFRP1 Bound Luminescent Au-Nanocluster Embedded Nanoparticles in Cancer Theranostics	ACS Biomaterials Science & Engineering	2015	1	12	1256	1266
Ayan Pal, Md. Palashuddin Sk, Arun Chattopadhyay	Conducting Carbon Dot - Polypyrrole Nanocomposite for Sensitive Detection of Picric acid	ACS Applied Materials and Interfaces	2016	8	9	5758	5762
B. Ravi, Rabibrata Mukherjee, Dipankar Bandyopadhyay	Solvent Vapor Mediated Spontaneous Healing of Self-Organized Defects of Liquid Crystal Films	Soft Matter	2015	11	-	139	-
Deepanjalee Dutta, Amaresh Kumar Sahoo, Arun Chattopadhyay, Siddhartha Sankar Ghosh	Bimetallic silver nanoparticle-gold nanocluster embedded composite nanoparticles for cancer theranostics	Journal of Materials Chemistry B	2016	4	4	793	800
Dipjyoti Das, P. Gopikrishna, Ashish Singh, Anamika Dey, Parameswar K. Iyer	Influence of emissive layer thickness on electrical characteristics of polyfluorene copolymer based polymer light emitting diodes	Journal of Physics	2016	-	-	-	-
Dipjyoti Das, Peddaboodi Gopikrishna, Ashish Singh, Anamika Dey, Parameswar K. Iyer	Efficient blue and white polymer light emitting diodes based on a well charge balanced, core modified polyfluorene derivative	Physical Chemistry Chemical Physics	2016	18	10	7389	7394

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Md. Palashuddin Sk, Sunil Kumar Sailapu, Arun Chattopadhyay	Luminescent Carbon Dots for Logic Operations in Two Phases	ChemPhysChem	2015	16	4	723	727
Md. Palashuddin Sk, Upashi Goswami, Siddhartha Sankar Ghosh, Arun Chattopadhyay	Cu <sup>2+</sup> -embedded carbon nanoparticles as anticancer agents	Journal of Materials Chemistry B	2015	3	28	5673	5677
Mitradip Bhattacharjee, Viswanath Pasumarthi, Joydip Choudhuri, Amit Kumar Singh, Harshal B. Nemade, Dipankar Bandyopadhyay	Self-spinning Nanoparticle Laden Microdroplets for Sensing and Energy Harvesting	Nanoscale	2016	8	11	6118	6128
N. V. V. Subbarao, M. Gedda, Parameswar K. Iyer, D. K. Goswami	Organic field-effect transistors as high performance humidity sensors with rapid response, recovery time and remarkable ambient stability	Organic Electronics	2016	32	-	169	178
Nimmakayala V. V. Subbarao, Murali Gedda, Parameswar K. Iyer, Dipak 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 Applied Materials and Interfaces	2015	7	3	1915	1924
Pallab Sanpui, Anumita Paul, Arun Chattopadhyay	Theranostic potential of gold nanoparticle-protein agglomerates	Nanoscale	2015	7	44	18411	18423
Rama Ghosh, Upashi Goswami, Siddhartha Sankar Ghosh, Anumita Paul, Arun Chattopadhyay	Synergistic Anticancer Activity of Fluorescent Copper Nanoclusters and Cisplatin Delivered through a Hydrogel Nanocarrier	ACS Applied Materials and Interfaces	2015	7	1	209	222
Ravi K. Biroju, Gone Rajender, P. K. Giri	On the Origin and Tunability of Blue and Green Photoluminescence from Chemically Derived Graphene: Hydrogenation and Oxygenation Studies	Carbon	2015	95	-	228	238
Rumi Khandelia, Satyapriya Bhandari, Uday Narayan Pan, Siddhartha Sankar Ghosh, Arun Chattopadhyay	Gold Nanocluster Embedded Albumin Nanoparticles for Two-Photon Imaging of Cancer Cells Accompanying Drug Delivery	Small	2015	11	33	4075	4081
S. Vanitha, U. Goswami, N. Chaubey, S. S. Ghosh, P. Sanpui	Functional Characterization of Recombinant Human Granulocyte Colony Stimulating Factor (hGM-CSF) Immobilized onto Silica Nanoparticles	Biotechnology Letters	2016	38	2	243	249

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Sabyasachi Pramanik, Satyapriya Bhandari, Shilaj Roy, Arun Chattopadhyay	Synchronous Tricolor Emission-Based White Light from Quantum Dot Complex	The Journal of Physical Chemistry Letters	2015	6	7	1270	1274
Sadhucharan Mallick, Pallab Sanpui, Siddhartha Sankar Ghosh, Arun Chattopadhyay, Anumita Paul	Synthesis, characterization and enhanced bactericidal action of a chitosan supported core-shell copper-silver nanoparticle composite	RSC Advances	2015	5	16	12268	12276
Satarupa Dutta, Nilanjan Mandal, Dipankar Bandyopadhyay	Paper-Based $\alpha$ -Amylase Detector for Point-of-Care Diagnostics	Biosensors and Bioelectronics	2016	78		447	
Satyapriya Bhandari, Rumi Khandelia, Uday Narayan Pan, Arun Chattopadhyay	Surface Complexation-Based Biocompatible Magnetofluorescent Nanoprobe for Targeted Cellular Imaging	ACS Applied Materials and Interfaces	2015	7	32	17552	17557
Satyapriya Bhandari, Sabyasachi Pramanik, Rumi Khandia, Arun Chattopadhyay	Gold Nanocluster and Quantum Dot Complex in Protein for Biofriendly White-Light-Emitting Material	ACS Applied Materials and Interfaces	2016	8	3	1600	1605
Satyapriya Bhandari, Shilaj Roy, Sabyasachi Pramanik, Arun Chattopadhyay	Double Channel Emission from a Redox Active Single Component Quantum Dot Complex	Langmuir	2015	31	1	551	561
Saurabh S Soni, Kishan B Fadadu, Jayraj V Vaghasiya, Bharat G. Solanki, Keval K. Sonigara, Ashish Singh, Dipjyoti Das, Parameswar K. Iyer	Improved molecular architecture of D- $\pi$ -A carbazole dyes: 9% PCE with a cobalt redox shuttle in dye sensitized solar cells	Journal of Materials Chemistry A	2015	3	43	21664	21671
SeimTimung, 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	93	-	1736	-
Shyam Trivedi, Harshal B. Nemade	Finite element simulation of Love wave resonator for DNA detection	International Journal of Advances in Engineering Sciences and Applied Mathematics	2015	7	4	210	218

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Sunny Kumar, Amit Kumar Singh, Ashok Kumar Dasmahapatra, Tapas Kumar Mandal, Dipankar Bandyopadhyay	Graphene based multifunctional superbots	Carbon	2015	89	31	-	-
Abhijit Chatterjee and Swati Bhattacharya	Uncertainty in a Markov state model with missing states and rates: Application to a room temperature kinetic model obtained using high temperature molecular dynamics	Journal of Chemical Physics	2015	143	-	114109	-

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Abhijit Kumar Saha, Arunansu Sil	A Dynamic Modification to Sneutrino Chaotic Inflation	JHEP	2015	1511	-	118	-
Akhilesh Kr. Singh, Perumal Alagarsamy	Effect of heat treatment and spacer layer driven interlayer coupling in laminated type FeTaC thin films	Journal of Magnetism and Magnetic Materials	2016	401	-	1015	-
Akhilesh Kr. Singh, Perumal Alagarsamy	Interlayer coupling dependent magnetic properties in amorphous and nanocrystalline FeTaC based multilayer thin films	Journal of Physics D: Applied Physics	2016	49	-	85001	-
Amarendra K. Sarma	Parity-time symmetry in negative index optical metamaterials with parametric amplifier settings	IEEE Xplore	2015	-	-	277	-
Amarendra K. Sarma, Pawan Kumar	High and uniform coherence creation in Doppler broadened double lambda-like atomic system by a train of femtosecond optical pulses	Laser Physics	2015	25	5	56001	-
Arindam Pal, Ramesh Ghosh, P. K. Giri	Early Stages of Growth of Si Nanowires by Metal Assisted Chemical Etching: A Scaling Study	Appl. Phys. Lett.	2015	107	-	72104	-
Asha Yadav, Pratima Agarwal	Persistent photoconductivity studies in a-Si:H/nc-Si:H thin film superlattices	Superlattices and Microstructures	2015	85	-	776	-
B. B. Dash, S. Ravi	Sign reversal of magnetization in Mn substituted SmCrO <sub>3</sub>	Journal of Magnetism and Magnetic Materials	2016	405	-	209	213

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B. Bhuyan et al. (BaBar Collaboration)	Observation of $B^- d^* (\pi^+ \pi^- \nu^-)$ Decays in $e^+e^-$ Collisions at the $\Upsilon (4S)$ Resonance	Physical Review Letters	2016	116	4	-	-
B. Bhuyan et al. (BaBar Collaboration)	Search for mixing-induced CP violation using partial reconstruction of $B^- \rightarrow d^* X^- \nu^-$ and kaon tagging search for mixing-induced CP violation	Physical Review D	2016	93	3	-	-
B. Bhuyan et al. (Belle Collaboration)	First observation of the decay $B_0 \rightarrow \psi (2S) \pi_0$	Physical Review D	2016	93	3	-	-
B. Bhuyan et al. (Belle Collaboration)	Measurement of the decay $B \rightarrow d \ell \nu \ell$ in fully reconstructed events and determination of the Cabibbo-Kobayashi-Maskawa matrix element $[V_{cb}]$	Physical Review D	2016	93	3	-	-
B. Bhuyan et al. (Belle Collaboration)	Measurement of the lepton forward-backward asymmetry in $B \rightarrow X s^+ \nu^-$ decays with a sum of exclusive modes	Physical Review D	2016	93	3	-	-
B. Bhuyan et al. (Belle Collaboration)	Search for $B_0 \rightarrow \pi^+ \tau^- \nu \tau$ with hadronic tagging at Belle	Physical Review D	2016	93	3	-	-
B. Bhuyan et al. (Belle Collaboration)	Study of $B_0 \rightarrow \rho^+ \rho^-$ Decays and implications for the CKM angle $\phi_2$	Physical Review D	2016	93	3	32010	-
B. Bhuyan et al. (Belle Collaboration)	Study of $\pi_0$ pair production in single-tag two-photon collisions,	Physical Review D	2016	93	3	-	-
B. Bhuyan et al. (Nova Collaboration)	First measurement of Electron Neutrino appearance in Nova	Physical Review Letters	2016	116	151806	-	-
B. Bhuyan et al. (Nova Collaboration)	First measurement of muon-neutrino disappearance in Nova	Physical Review D	2015	93	5	-	-
B. Bhuyan et al.	First Observation of CP Violation in $B^- \rightarrow DCP^* (\pi^+) h_0$ Decays by a Combined Time-Dependent Analysis of BABAR and Belle Data	Physical Review Letters	2015	115	12	-	-
B. Bhuyan et al. (BaBar Collaboration)	Measurement of initial-state-final-state radiation interference in the processes $e^+e^- \rightarrow \mu^+\mu^-\gamma$ and $e^+e^- \rightarrow \pi^+\pi^-\gamma$	Physical Review D	2015	92	7	-	-
B. Bhuyan et al. (BaBar Collaboration)	Search for a light Higgs resonance in radiative decays of the $\Upsilon(1S)$ with a charm tag	Physical Review D	2015	91	7	-	-
B. Bhuyan et al. (BaBar Collaboration)	Study of the $e^+e^- \rightarrow k^+K^-$ reaction in the energy range from 2.6 to 8.0 GeV	Physical Review D	2015	92	7	-	-



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Authors	Paper Title	Journal Name	Year	Volume	Issue Number	Starting Page	Ending Page
B. Bhuyan et. al. (Belle Collaboration)	First Observation of the Hadronic Transition $\Gamma(4S) \eta_{cb}(1P)$ and New Measurement of the $hb(1P)$ and $\eta_{cb}(1S)$ Parameters	Physical Review Letters	2015	115	14	-	-
B. Bhuyan et. al. (Belle Collaboration)	Inclusive cross sections for pairs of identified light charged hadrons and for single protons in $e^+e^-$ at $s=10.58$ GeV	Physical Review D	2015	92	9	-	-
B. Bhuyan et. al. (Belle Collaboration)	Measurement of the branching ratio of $B^- d^{(*)} \tau^- \nu^-$ relative to $B^- d^{(*)} \nu^-$ decays with hadronic tagging at Belle	Physical Review D	2015	92	7	-	-
B. Bhuyan et. al. (Belle Collaboration)	Observation of $B_0 p \Lambda^- D^{(*)-}$	Physical Review Letters	2015	115	22	-	-
B. Bhuyan et. al. (Belle Collaboration)	Search for $B+\ell+\nu\ell\gamma$ decays with hadronic tagging using the full Belle data sample	Phys. Rev. D	2015	91	112009	-	-
B. Samantaray, Akhilesh K. Singh, A. Perumal, R. Ranganathan, P. Mandal	Spin dynamics and frequency dependence of magnetic damping study in soft ferromagnetic FeTaC film with a stripe domain structure	AIP Advances	2015	5		67157	-
B. Samantaray, N. Khan, A. Midya, S. Ravi, P. Mandal	Giant magnetothermal conductivity and magnetostriction effect in the charge ordered $Nd_{0.8}Na_{0.2}MnO_3$ Compound	Euro Physics Letter	2016	113		17003-P1	17003-P5
Bappaditya Pal, D. Sarkar, P. K. Giri	Structural, optical and magnetic properties of Ni doped ZnO Nanoparticles: Correlation of Magnetic Moment with Defect Density	Applied Surf. Sci.	2015	356	-	804	-
Bappaditya Pal, Soumen Dhara, P. K. Giri, D. Sarkar	Evolution of room temperature ferromagnetism with increasing 1D growth in Ni-doped ZnO nanostructures	J. Alloys. Comp.	2015	647	-	558	-
Batakrushna Santara, Kenji Imakita, Minoru Fujii, P. K. Giri	Mechanism of Defects Induced Ferromagnetism in Undoped and Cr Doped $TiO_2$ Nanorods/Nanoribbons	J. Alloys Comp.	2015	661	-	331	-
Bhargab Deka, Ashis Kundu, Subhradip Ghosh, A. Srinivasan	Experimental and <i>ab initio</i> studies of sub-lattice ordering and magnetism in $Co_{1-x}Fe_xSi_x$ alloys	Journal of Applied Physics	2015	118	-	133906	-
Bibhas Ranjan Majhi	Entropy function from the gravitational surface action for an extremal near horizon black hole	Eur.Phys.J. C	2015	75	11	521	

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Bibhas Ranjan Majhi	Gravitational anomalies and one-dimensional behavior of black holes	Eur.Phys.J. C	2015	75	12	578	-
Bibhas Ranjan Majhi	Near horizon hidden symmetry and entropy of Sultana-Dyer black hole: A time dependent case	Phys. Rev. D	2015	92	6	64026	-
Bijita Sarma, Amarendra K. Sarma	Ground-state cooling of micromechanical oscillators in the unresolved sideband regime induced by a quantum well	Physical Review A	2016	93	-	33845	-
Biswajit Choudhury, P. K. Giri	Isotype Heterostructure of Bulk and Nanosheets of Graphitic Carbon Nitride for Efficient Visible Light Photodegradation of Methylene Blue	RSC Advances	2016	6	-	24976	24984
Biswajit Karmakar, Arunansu Sil	Spontaneous CP violation in lepton-sector: A common origin for $\Theta_{13}$ , the Dirac CP phase, and leptogenesis	Phys.Rev. D	2016	93	1	13006	-
Biswajit Pathak, Bosanta R. Boruah	Binary hologram based high speed zonal wavefront sensing with reduced estimation time	Proceedings of SPIE	2016	97410T	97410T-8	-	-
Biswajit Pathak, Bosanta R. Boruah	Investigation of algorithm discretization error in a zonal wavefront estimation process	Proceedings of SPIE	2016			973916	973916-7
Biswajit Pathak, Suraj Kumar, Bosanta R. Boruah	Zonal wavefront sensing using a grating array printed on a polyester film	Review of Scientific Instruments	2015	86	12	125002	-
C. Anil Kumar, D. Pamu	Dielectric and Electrical Properties of BaWO <sub>4</sub> Film Capacitors Deposited by RF Magnetron Sputtering	Ceramics International	2015	41	1	S296	S302
C. Anil Kumar, D. Pamu	Dielectric and Optical Characterization of RF Sputtered Ba <sub>5</sub> Nb <sub>4</sub> O <sub>15</sub> -BaWO <sub>4</sub> Composite Films for Electronic and Smart Window Applications	Journal of Electronic Materials	2016	-	-	1	12
C. Anil Kumar, D. Pamu	Dielectric, Optical and Electric Studies on Nanocrystalline Ba <sub>5</sub> Nb <sub>4</sub> O <sub>15</sub> Thin Films Deposited by RF Magnetron Sputtering	Applied Surface Science	2015	340	-	56	63
C. Anil Kumar, T. Santhosh Kumar, D. Pamu	Irreversible thermochromic response of RF sputtered nanocrystalline BaWO <sub>4</sub> films for smart window applications	AIP Advances	2015	5	10	107232	
Chikkala Anil Kumar, Dobbidi Pamu, Sylvester Josephine	Impedance Spectroscopy, Broadband, and Microwave Dielectric Properties of Mechanically Alloyed Ba <sub>5</sub> Nb <sub>4</sub> O <sub>15</sub> Ceramics	International Journal of Applied Ceramic Technology.	2015	-	-	1	10

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D. C. Joshi, K. Dasari, S. Nayak, R. Palai, P. Suresh, S. Thota	Localized charge carrier transport properties of Zn <sub>1-x</sub> Ni <sub>x</sub> O /NiO two-phase composites	Journal of Electronic Materials	2016	45	4	2059	2065
D. C. Joshi, S. Nayak, A. Kumar, A. Mohanta, D. Pamu, S. Thota	Peculiarities of the temperature dependence of electron spin resonance and Raman studies of Zn <sub>1-x</sub> Ni <sub>x</sub> O/NiO two-phase nanocomposites substituted cobalt-orthotitanate	Journal of Applied Physics	2016	119	7	74303	-
D. C. Joshi, S. Nayak, P. Suresh, K. S. Suresh, B. V. M. Kumar, S. Thota	The X-ray photoelectron spectroscopy and high-temperature structural studies of Zn <sub>1-x</sub> Ni <sub>x</sub> O/NiO two-phase composites	Physica Status Solidi (b)	2015	67	10	2323	2329
Debashish Das, Subhradip Ghosh	Density functional theory based comparative study of electronic structures and magnetic properties of spinel ACr <sub>2</sub> O <sub>4</sub> (A = Mn, Fe, Co, Ni) compounds	J. Phys. D: Appl. Phys.	2015	48	-	425001	-
Indrajeet Kumar, Alike Khare	Modified Z-scan set-up using CCD for measurement of optical nonlinearity in PLD deposited carbon thin film	Optics and Laser Technology	2016	77	--	51	54
Junmoni Barman, S. Ravi	Study of exchange bias behavior in Ni(Cr <sub>1-x</sub> Fe <sub>x</sub> ) <sub>2</sub> O <sub>4</sub>	Solid State Communications	2015	201	-	59	63
Junmoni Barman, Tribedi Bora, S. Ravi	Study of exchange bias and training effect in NiCr <sub>2</sub> O <sub>4</sub>	Journal of Magnetism and Magnetic Materials	2015	385	-	93	98
K. Sau, P. P. Kumar	Role of Ion-Ion Correlations on Fast Ion Transport: Molecular Dynamics Simulation of Na <sub>2</sub> Ni <sub>2</sub> TeO <sub>6</sub>	The Journal of Physical Chemistry C.	2015	119	32	18030	18037
Kamlesh Alti, S. Dwivedi, S. Chidangil, D. Mathur, Alike Khare	Micro patterning of Indium thin film for generation of micron and submicron particles using femto second laser induced forward transfer	Laser and Particle Beams	2015	33	3	449	454
Kh. Shantakumar Singh, A. K. Sharma	Multi-structured temporal behavior of neutral copper transitions in laser-produced plasma in the presence of variable transverse static magnetic field	Physics of Plasmas	2016	23	1	13304	-
Koushik Paul, Amarendra K. Sarma	Shortcut to adiabatic passage in a waveguide coupler with complex hyperbolic sectant scheme	Physical Review A	2015	91		53406	-
Lalhriatuala, Pratima Agarwal	Effect of Se concentration on mixed phonon modes and spin orbit splitting in thermally evaporated Cd <sub>Sx</sub> Se <sub>1-x</sub> (0 ≤ x ≤ 1) films using CdS-CdSe nano-composites	Materials Chemistry and Physics	2015	162	-	813	821

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Lalhriatzuala, Pratima Agarwal	Studies on Spin Orbit Splitting and Dual Mode Phonon Vibrations in ZnSxSe1-x Ternary Alloys Films with Varying Se Concentration	Journal of Electronic materials	2015	44	-	3341	3353
M. Abbas, Shaaban Khalil, Ahmed Rashid, Arunansu Sil	Neutrino masses and deviation from tri-bimaximal mixing in Delta(27) model with inverse seesaw mechanism	Phys.Rev. D	2016	93	1	13018	-
M. Sowjanya, D. Pamu, R. Chowdharuy, R. Jayaganthan	Optical Properties of Y2O3-Doped ZnO Thin Films Sputtered in an Ar:O2Gas RF Magnetron Sputtering Technique	Journal of Basic and Applied Engineering Research	2015	2	13	1142	1148
Mahesh Peddigari, Pamu Dobbidi	Raman, dielectric and variable range hopping nature of Gd2O3-doped K0.5Na0.5NbO3piezoelectric ceramics	AIP Advances	2015	5	10	107129	
Nisha Shankhwar, A. Srinivasan	Evaluation of sol-gel based magnetic 45S5 bioglass and bioglass-ceramics containing iron oxide	Mater. Sci. Eng. C.	2016	-	-	-	-
Nisha Shankhwar, Manishekar Kumar, Biman B. Mandal, P. S. Robi, A. Srinivasan	Electrospun Polyvinyl alcohol-Polyvinyl pyrrolidone Nanofibrous Membranes for Interactive Wound Dressing Application	Journal of Biomaterials Science: Polymer Edition	2015	-	-	-	-
P. C. Shyn, Alagarsamy Perumal	Structural and magnetic properties of nanocrystalline Fe-Co-Si alloy powders produced by mechanical alloying	Journal of Alloys and Compounds	2015	648		658	-
P. Mahesh, S. Thota, D. Pamu	Dielectric Response and AC-conductivity Studies of Gd2O3-Contained K0.5Na0.5NbO3Piezoelectric Ceramics	IEEE Transactions on Dielectrics and Electrical Insulation	2015	22	6	3668	3675
P. Munendhar, Sunil Khijwania	Effective refractive index modulation based optical fiber humidity sensor employing etched fiber Bragg grating	SPIE	2015	9634	-	96343V-1	96343V-4
P. Saravanan, J. Hsu, C. Tsai, A. K. Singh, A. Perumal	Effect of underlayer on thickness dependent magnetic properties of Ni-Fe films	IEEE Trans Magn.	2015	51	11	2006604	-
Pallabi Gogoi, P. Srinivas, Pramod Sharma, D. Pamu	Optical, Dielectric Characterization and Impedance Spectroscopy of Ni-Substituted MgTiO3Thin Films	Journal of Electronic Materials	2016	45	2	899	909
Patta Ravikumar, Bhagaban Kisan, A. Perumal	Enhanced room temperature ferromagnetism in antiferromagnetic NiO nanoparticles	AIP Advances	2015	5	-	87116	-

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R. Modak, B. Deka, A. K. Singh, A. Gayen, A. Perumal, M. Manivel Raja, A. Srinivasan	Structural and magnetic properties of Ni-Mn-Sn thin films	AIP Conference Proceedings	2015	1665	-	80072	-
Rabin Banerjee, Shirsendu Dey, Bibhas Ranjan Majhi	Entropy current in two dimensional anomalous hydrodynamics and a bound on the sum of the response parameters	Phys. Rev. D	2015	92	4	44019	
Rajitha, K. V., Tarak N. Dey, Jorg Evers, Martin Kiffner	Pulse splitting in light propagation through N-type atomic media due to an interplay of Kerr nonlinearity & GVD	Physical Review A	2015	92	-	23840	-
Rajitha, K. V., Tarak N. Dey, Sumanta K. Das, Pankaj K. Jha	Microwave controlled efficient Raman sub-harmonic generation	Optics Letters	2015	40	-	2229	-
Ramesh Ghosh, Arindam Pal, P. K. Giri	Quantitative Analysis of the Phonon Confinement Effect in Arbitrary Shaped Si Nanocrystals Decorated on Si Nanowires and Its Correlation with the Photoluminescence Spectrum	J. Raman. Spec.	2015	46	-	624	-
Ramesh Ghosh, K. Imakita, M. Fujii, P. K. Giri	Effect of Ag/Au Bilayer Assisted Etching on the Strongly Enhanced Photoluminescence and Efficient Visible Light Photocatalysis from Si Nanocrystal Decorated Si Nanowires Array	Phys. Chem. Chem. Phys.	2016	18	-	7715	-
Ramesh Ghosh, P. K. Giri	Silicon Nanowire Heterostructures: Growth Strategies, Novel Properties and Emerging Applications	Science Advances Today	2016	2	2455-2321	25230	-
Ramesh Ghosh, P. K. Giri, Kenji Imakita, Minoru Fujii	Photoluminescence Signature of Resonant Energy Transfer in ZnO Coated Si Nanocrystals Decorated On Vertical Si Nanowires Array	J. Alloys. Comp.	2015	638	-	419	-
Ramiz Aktar, Santabrata Das, Anuj Nandi	Mass-loss from advective accretion disc around rotating black holes	Monthly Notices of the Royal Astronomical Society	2015	453	3414	14	-
Ranjan Kalita, Bosanta R. Boruah	Confocal imaging with orthogonally polarized illumination beams	Proceedings of SPIE	2016	971316	971316-7	-	-
Rathin Adhikari, Debasish Borah, Ernest Ma	New U(1) gauge model of radiative lepton masses with sterile neutrino and dark matter	Physics Letters B	2016	755	-	414	417
Ravi K. Biroju, Nikhil Tilak, Gone Rajender, S. Dhara, P. K. Giri	Catalyst Free Growth of ZnO Nanowires on Graphene and Graphene Oxide and Its Enhanced Photoluminescence and Photoresponse	Nanotechnology	2015	26	-	145601	-

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S Kumari, Alike Khare	Pulsed laser deposited barium titanate thin film for tunable optical delay application	Applied Surface Science	2015	347	-	619	623
S. Bhattacharya, S. Nandi and S. K. Patra	Optimal-observable analysis of possible new physics in $B D^{(*)} \tau \nu \tau$	Phys. Rev. D	2016	93	3	34011	-
S. Nayak, D. C. Joshi, M. Krautz, A. Waske, J. Eckert, S. Thota	Reentrant spin-glass behavior and bipolar exchange-bias effect in "Sn" substituted cobalt-orthotitanate	Journal of Applied Physics	2016	119	-	43901	-
S. Nayak, S. Thota, D. C. Joshi, M. Krautz, A. Waske, A. Behler, J. Eckert, T. Sarkar, M. S. Andersson, R. Mathieu, et. al.	Magnetic compensation, field-dependent magnetization reversal, and complex magnetic ordering in $Co_2TiO_4$	Physical Review B	2015	92	-	214434	-
S. Thota, V. Narang, S. Nayak, S. Mathieu, M. S. Seehra	On the nature of magnetic state in the spinel $Co_2SnO_4$	Journal of Physics.: Condensed Matter	2015	27	16	166001	166009
Samit Kumar Gupta, Amarendra K. Sarma	Parity-time symmetric closed-form quadrimer waveguides with focusing and defocusing nonlinearity	Proc. SPIE	2015	9654	-	96541Y	-
Samit Kumar Gupta, Amarendra K. Sarma	Peregrine Rogue Wave dynamics in the continuous nonlinear Schrodinger system with parity-time symmetric Kerr nonlinearity	Communications in Nonlinear Science and Numerical Simulation	2016	36	-	141	-
Samit Kumar Gupta, Jyoti P. Deka, Amarendra K. Sarma	Nonlinear Parity-Time (PT) symmetric closed-form optical quadrimer waveguides: Attractor perspective	European Physical Journal D	2015	69	-	199	-
Sandeep Sharma, Bimalendu Deb, Tarak N. Dey	Subluminal light propagation through an ultracold atom-molecule coupled resonant medium	Journal of Physics B: Atomic, Molecular and Optical Physics	2015	48	-	175502	-
Santanu Konwar, Bosanta R. Boruah	Observation of thermally induced movement of a beam deflected by a liquid crystal spatial light modulator	Proceedings of SPIE	2016	976915	976915-9	-	-
Satendra Kumar, P. Poulose	Probing $WW\gamma WW\gamma$ coupling through $e^+e^- \rightarrow W^+W^-$ at ILC	Inter. Journal of Modern Physics A	2015	30	36	1550215	-
Satendra Kumar, P. Poulose, Shibananda Sahoo	Study of Higgs-gauge boson anomalous couplings through $e^+e^- \rightarrow W^+W^-H$ at ILC	Physical Review D.	2015	91	7	73016	-

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Shreyasi Pal, Soumen Maiti, Uday Narayan Maiti, Kalyan Kumar Chattopadhyay	Spontaneous hyper-branching in ZnO nanostructures: morphology dependent electron emission and light detection	RSC Advances	2015	5	99	81176	81187
Shung-Ichi Ando, Udit Raha, Yongseok Oh	Investigation of the nnLambda bound state in pionless effective theory	Physical Review C	2015	92	24325	8	31
Sk. Md. Obaidulla, P. K. Giri	Low Operating Voltage and Low Bias Stress in Top-Contact SnCl <sub>2</sub> Pc/ CuPc Heterostructure based Bilayer Ambipolar Organic Field-effect Transistors	J. Mater. Chem. C.	2015	3	-	7718	-
Sk. Md. Obaidulla, P. K. Giri	Surface roughening and scaling behavior of vacuum-deposited SnCl <sub>2</sub> Pc organic thin film on different substrates	Phys. Chem. Chem. Phys.	2015	107	-	221910	-
Sunayana Dutta, Aprurba Barman, Anat Siddharth, Saurabh Basu	Tunneling dynamics of correlated bosons in a double well potential	European Journal of Physics B	2015	88	-	139	-
T. R. Gopalarao, S. Ravi, D. Pamu	Effect of post annealing process on electrical and magnetic properties of Nd <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> .	Journal of Superconductivity and Novel magnetism	2015	28	-	1571	1576
T. R. Gopalarao, S. Ravi, D. Pamu	Electrical transport and magnetic properties of epitaxial Nd <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> thin films on (001)-oriented LaAlO <sub>3</sub> substrate	Journal of Magnetism and Magnetic Materials	2016	409	-	148	154
Toru Okuda, Santabrata Das	Unstable mass-outflows in geometrically thick accretion flows around black holes	Monthly Notices of the Royal Astronomical Society	2015	453	-	147	-
Tribedi Bora, S. Ravi	Sign reversal of magnetization and ferromagnetism in NdCr <sub>1-x</sub> Mn <sub>x</sub> O <sub>3</sub> (x = 0 – 0.50)	Journal of Superconductivity and Novel magnetism	2015	28	-	869	872
Tribedi Bora, S. Ravi	Sign reversal of magnetization and tunable exchange bias field in NdCr <sub>1-x</sub> Fe <sub>x</sub> O <sub>3</sub> (x = 0.05 – 0.2)	Journal of Magnetism and Magnetic Materials	2015	386	-	85	91
Uday Narayan Maiti, Ranjit Thapa, J. Lim, Dong Jun Li, Kwang Ho Kim, Sang Ouk Kim	Self-Size-Limiting Nanoscale Perforation of Graphene for Dense Heteroatom Doping	ACS Applied Materials and Interfaces	2015	7	46	25898	25905

## Conference Papers

### Biosciences and Bioengineering

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
A. Barman, M. Nagar, A. Kumar, R. Tamuli	Calcium signaling and regulation of cell function in <i>Neurospora crassa</i>	Research Conclave'16, IIT Guwahati	2016	-	-
A. Kumar, R. Tamuli	A novel approach to identify critical amino acid residues for calcinurin A of <i>Neurospora crassa</i>	9th International conference on Yeast Biology	2015	57	57
A. Roy, R. Tamuli	Studies on the role of calcium signaling genes in regulating cytosolic free calcium concentration in <i>Neurospora crassa</i>	9th International conference on Yeast Biology	2015	66	66
A. Sinha Roy, N. A. Manikandan, K. Pakshirajan	Effect of headspace biogas composition and sulphate on biological sulphate reduction using CO as the sole carbon source	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
A. Sinharoy, N. A. Manikandan, K. Pakshirajan	Screening of indigeneous anaerobic microbial consortia for hydrogenogenic carbon monoxide conversion	TEQIP National Workshop, Department of Chemical Engineering	2015	-	-
A. Tiwari, R. Tamuli	Immortal fungal biomass for eco-friendly and scalable nanofactories	Research Conclave'16, IIT Guwahati	2016	-	-
Abshar Hasan, Ajeet Singh, Sakshi Tiwari, Lalit M. Pandey	Kinetics of formation of self-assembled monolayers of octyltriethoxysilane (OTS) on silica substrates	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN) 2015	2015	-	-
Aditi Makhija, S. Kumar	Synonymous codon usage pattern in glycoprotein gene of rabies virus	XXIX Annual Convention, IAVMI & Global Conference: 2015-16	2016	147	147
Ajay Kumar, Mohan C. Manjgowda, Dixcy Jaba Sheeba J. M., Sachin Kumar, Anil M. Limaye	Homeobox transcription factor HOXB2 mRNA is an estrogen target in MCF-7 breast cancer cells	International conference on molecular signalling: Recent trends in biosciences	2015	61	61
Ajay Kumar, Mohan C. Manjgowda, Dixcy Jaba Sheeba J. M., Sachin Kumar, Anil M. Limaye	Regulation of HOXB2 by estrogen in breast cancer	Recent development in medical biotechnology and structure based drug designing	2015	2	2
Ajeet Singh, Abshar Hasan, Sakshi Tiwari, Lalit M. Pandey	Thermodynamic and kinetic insight of Bovine serum albumin (BSA) aggregation	Recent Developments in Medical Biotechnology and Structure-Based Drug Designing (RDMBSBDD) 2015	2015	-	-



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Aman Prakash, Sourabh Mandal, Manish Kumar	Cloning and Expression of novel Lon Protease of <i>Leptospira interrogans</i> Copenhageni Strain Fiocruz L1-130	Global Symposium on Animal Health: Newer Technologies and their Applications	2016	201	202
Amrita D. Khwairakpam, H. Choudhary, N. Roy, D. Bordoloi, Ajaikumar B. Kunnumakara	Anticancer properties of <i>Persicaria odorata</i> on oral cancer cells	6th International Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	132	132
Anil K. Verma, Arun Goyal, F. Freire, C. M. G. A. Fontes, Shabir Najmudin	Insights into the mechanism of glucuronoxylan hydrolysis revealed by the 3-dimensional crystal structures of glucuronoxylan-xylanohydrolase (CtXyn30A) from <i>Clostridium thermocellum</i>	11th Carbohydrate Bioengineering Meeting	2015	-	-
Anil K. Verma, P. Bule, T. Ribeiro, J. L. A. Brás, J. Mukherjee, M. N. Gupta, C. M. G. A. Fontes, A. Goyal	Insight into structural, biochemical and in silico determinants of ligand binding specificity of family 6 carbohydrate binding module (CtCBM6) from <i>Clostridium thermocellum</i>	11th Carbohydrate Bioengineering Meeting	2015	-	-
Anil M. Limaye	Mechanistic insights into the anticancer properties of the major green tea polyphenol (-)-epigallocatechin-3-gallate	3rd International Conference on Herbal and Synthetic Drug Studies (HSDS)-2016	2016	12	12
Anindita Deka, N. Roy, G. Padmavathi, Javadi Monisha, R. C. Rajkhowa, A. B. Kunnumakara	An investigation on the anticancer activities of "Indian trumpet flower" on colorectal cancer	6th International Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	65	65
Anusua Dhara, Y. Baid, A. Prakash, Manish Kumar	Leptospirosis: An underrated disease	Research Conclave'16, IIT Guwahati	2016	-	-
Arabinda Ghosh, V. Cardoso, V. Rajulapatty, K. Sharma, A. Gupta, K. Kumar, V. M. R. Pires, C. M. G. A. Fontes, A. Goyal	Elucidation of multi-substrate specificity and in silico 3-dimensional structure of a recombinant family 81 glycoside hydrolase from <i>Clostridium thermocellum</i>	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Archita Ghoshal, Siddhartha Sankar Ghosh	Recombinant sFRP1 in Cancer Theranostics	8th Euro Biotechnology congress	2015	-	-
Archita Ghoshal, Upashi Goswami, Arun Chattopadhyay, Siddhartha Sankar Ghosh	Recombinant sFRP1 loaded Composite Nanoparticles for WNT signalling-targeted Cancer Therapy	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	2015	-	-

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Archita Ghoshal, Upashi Goswami, Siddhartha Sankar Ghosh	Recombinant sFRP1 loaded Composite Nanoparticles for WNT signalling-targeted Cancer Therapy	3rd International Conference on Biotechnology and Bioinformatics (ICBB-2016)	2016	-	-
Arun Dhillon, Kedar Sharma, Vania O. Fernandes, Fernando M. V. Dias, José A. M. Prates, Luis M. A. Ferreira, Carlos M. G. A. Fontes, M. S. J. Centeno, Arun Goyal	Biochemical characterization and deciphering the cleavage pattern of recombinant rhamnogalacturan lyase (CtRGL), a family 11 Polysaccharide Lyase (PL11) from <i>Clostridium thermocellum</i>	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Aruna Rani, Joyeeta Mukherjee, Munishwar N. Gupta, Arun Goyal	Structural and biochemical characterization of endo-acting chondroitin AC lyase of a family 8 polysaccharide lyase (PsPL8a) from <i>Pedobacter saltans</i> DSM 12145	11th Carbohydrate Bioengineering Meeting	2015	-	-
Arup Jyoti Borah, Mayank Agarwal, Manisha Poudyal, Arun Goyal, Vijayanand S. Moholkar	Mechanistic investigation in ultrasound induced enhancement of enzymatic hydrolysis of invasive biomass species	New Horizons in Biotechnology	2015	-	-
Arup Jyoti Borah, Shyamali Sarmah, Mayank Agarwal, Arun Goyal, Vijayanand S. Moholkar	An evaluation of mixed feedstock of invasive and noxious weeds for bioethanol production	New Horizons in Biotechnology	2015	-	-
Ashutosh Gupta, Debasish Das, Arun Goyal	Enhanced saccharification and effective pretreatment of corn cob by utilizing recombinant cellulase and hemicellulase from <i>Clostridium thermocellum</i> for bioethanol production	11th Carbohydrate Bioengineering Meeting	2015	-	-
Ashutosh Gupta, Debasish Das, Arun Goyal	Utilization of sugarcane leaves for production of bioethanol involving saccharification by mixed recombinant <i>Clostridium thermocellum</i> enzymes	New Horizons in Biotechnology	2015	-	-
Ashutosh Gupta, J. Sumitha Banu, Vijay S. Moholkar, Arun Goyal	Bioethanol production from Kans grass ( <i>Saccharum spontaneum</i> ) by simultaneous saccharification and fermentation process	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Ashutosh Gupta, Shweta Singh, Debasish Das, Arun Goyal	Saccharification of pretreated napier grass by recombinant cellulase and hemicellulase from <i>Clostridium thermocellum</i> for bioethanol production	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-

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Atul Kumar, Jina Bhattacharyya, Bithiah Grace Jaganathan	Role of bone marrow microenvironment in myeloid leukemia progression	Experimental Hematology	2015	S74	S74
Barnali Nath, S. Kumar	Molecular characterization of Newcastle disease virus strains isolated from different outbreaks in Northeast India during 2014-15	XXIX Annual Convention, IAVMI & Global Conference: 2015-16	2016	182	182
Bethsebie Laldusaki Sailo, Anindita Deka, Devivasha Bordoloi, Ajaikumar B. Kunnumakkara	Bitter Vine: A promising agent for the prevention and treatment of colorectal cancer	6th International Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	154	154
Bhuvan Dixit, Manish Kumar	Characterization of Cas1 protein of CRISPR Cas subtype I-B <i>Leptospira interrogans</i> Copenhagen strain Fiocruz L1-130	Global Symposium on Animal Health: Newer Technologies and their Applications	2016	148	149
Bhuvan Dixit, Manish Kumar	Characterization of one of core Cas protein of CRISPR Cas subtype I-B in <i>Leptospira interrogans</i> Copenhagen strain Fiocruz L1-130	Innovative Research in Biotechnology, Biomedical Sciences, Bioinformatics and Stem Cell application	2016	68	68
Bithiah Grace Jaganathan, Atul Kumar, Jina Bhattacharyya	CD90 expression in mesenchymal stem cells of the malignant niche	Experimental Hematology	2015	S69	S69
D. Gohain, A. Roy, R. Tamuli	<i>Neurospora crassa</i> as a model organism for the functional investigation of neuronal calcium sensor-1 (NCS-1) from higher eukaryotes	Research Conclave'16, IIT Guwahati	2016	-	-
D. Gohain, R. Tamuli	Involvement of rat NCS-1 in ultraviolet light induced DNA damage repair process	9th International conference on Yeast Biology	2015	70	70
Damaris Magdalene, Darilang Mawrie, Atul Kumar, Jina Bhattacharyya, Bithiah Grace Jaganathan	Extraocular muscles and stem cells	Journal of the American Association for Pediatric Ophthalmology and Strabismus	2015	e14	e15
Darilang Mawrie, Atul Kumar, Damaris Magdalene, Chinnapaka Somaiah, Jina Bhattacharyya, Bithiah Grace Jaganathan	Human Extra Ocular Muscle derived Mesenchymal Stem Cell possess multi-lineage differentiation potential	Proceedings of International conference on molecular signaling: Recent Trends in Biosciences	2015	-	-

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Deepanjalee Dutta, Amaresh Kumar Sahoo, Arun Chattopadhyay, Siddhartha Sankar Ghosh	Chitosan templated bimetallic silver nanoparticle-gold nanocluster theranostic nanocomposite for anticancer application	8th India Bangalore Nano	2016	-	-
Deepika Singh, Azizur Rahman Khan, Utpal Bora	Genetic manipulation in silkworms	Proceedings of the National Seminar on Modern Techniques in Sericulture	2015	11	17
Deepika Singh, Debajyoti Kabiraj, Hasnahana Chetia, Utpal Bora	SeriPort	National Seminar on Problems and Prospects of Muga and Eri Silk Sectors	2016	100	100
Devivasha Bordoloi, Javadi Monisha, Ganesan Padmavathi, Mayengbam Shyamananda Singh, Ajaikumar B. Kunnumakkara	Therapeutic potential of Butein I head and neck cancer	6thInternational Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	118	118
Dixcy Jaba Sheeba J. M., Mohan C. Manjegowda, Ajay Kumar, Anil M. Limaye	Regulation of Cystatin A by estrogen in breast cancer cells	International Conference of Cancer Research: New Horizons 2015	2015	77	77
Ganesan Padmavathi, P. Simona Simon, Nandkishor Roy, Devivasha Bordoloi, Javadi Monisha Jos Padikkala, Ajaikumar B. Kunnumakkara	Prevention of Azoxymethane induced colon carcinogenesis by the spice Carum copticum (Ajwain)	6thInternational Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	140	140
Harsha Choudhary, Kishore Banik, Nandkishor Roy, Amrita Khwairakpam, Devivasha Bordoloi, Ajaikumar B. Kunnumakkara	Green synthesis and characterization of gold nanoparticles (GNPs) from the leaf of Dillinenia indica	6thInternational Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	122	122
Inês Lobo Antunes, Vikky Rajulapati, Kedar Sharma, Arun Goyal	Cloning, expression and characterization of a xylanase from family 10 glycoside hydrolase (GH10) from Pedobacter SaltansDSM12145	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
J. Muthuvel, R. Srivastava, S. Kumar, L. Sahoo	Overexpression of Arabidopsis PYL9 in indian mustard enhances drought and salinity tolerance by modulating ABA signalling	National seminar on plant genomics and biotechnology, challenges and opportunities in 21stcentury	2016	-	-

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Javadi Monisha, K. Sajin Francis, Nandkishor Roy, Ganesan Padmavathi, Mangalam Nair, Ajaikumar B. Kunnumakkara	Anticancer potential of Azadiradione, isolated from neem, against triple negative breast cancer	6thInternational Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	128	128
Karukriti Kaushik Ghosh, Manish Kumar	Characterization of Hypothesized Outer Membrane Protein of Leptospira interrogansCopenhageni	6thIndo Global Summit and Expo on Vaccines and Vaccination	2015	105	105
Karukriti Kaushik Ghosh, Prateek Shrivastav, Manish Kumar	In vitro expression analysis of selected outer membrane proteins of Leptospira interrogansCopenhageni strain Fiocruz L1-130 for diagnostics and vaccination	Global Symposium on Animal Health: Newer Technologies and their Applications	2016	12	12
Kedar Sharma, Arun Goyal	In silico structural characterization of a family 10 glycoside hydrolase from Pedobacter saltans DSM12145	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Kedar Sharma, Arun Goyal	Molecular cloning, expression and characterization of novel endo- $\beta$ -1,4-mannanase of family 10 glycoside hydrolase from Pedobacter saltansDSM 12145	11thCarbohydrate Bioengineering Meeting	2015	-	-
Kedar Sharma, Bibari Boro, Arun Goyal	In silico structure analysis of a family 12 polysaccharide lyase from Pedobacter saltans DSM12145	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Ketan Ganar, S. Kumar	Partial sequence of PPMV-I isolate from India	XXIV National Conference Virocon 2015 Transboundary viral diseases under one health: Perspectives and challenges	2015	-	-
Kishore Banik, Harsha Choudhary, Devivasha Bordoloi, Ajaikumar B. Kunnumakkara	Investigation on the anticancer activity of Dillinenia indicaon head and neck cancer	6thInternational Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	117	117
L. Goswami, R. V. Kumar, K. Pakshirajan, G. Pugazhenthii	Anthracene biodegradation by oleaginous Rhodococcus opacusfor potential biodiesel production	New Horizons in Biotechnology NHBT 2015	2015	-	-
L. M. Naresh, S. Senthilkumar	Development of heat flux biocalorimeter as a PAT (Process analytical technology) tool to investigate rapid metabolic changes in a bioprocess system	Bioprocessing India 2015	2015	-	-
L. Rangan, A. Singh, R. G. Shelke, R. Das, A. M. Ramesh, V. Kesari, P. Scott, P. Gresshoff	New positives of biotech research in renewable energy resources- Success story of Pongamia	Proceedings National Seminar on Biofuel A Search for New Fire SIBBR&D	2015	22	25

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M. Gopikiran, K. Pakshirajan, G. Das	Kinetics and mechanism of heavy metal removal by sulfate reducing bacteria obtained from a laboratory scale upflow anaerobic packed bed reactor	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
M. Gopikiran, K. Pakshirajan, G. Das	Sulfate reducing bacteria from a lab scale up flow anaerobic packed bed reactor for heavy metal removal and its characterization	National Conference on Challenges in Environmental Research NCOCER-2015	2015	-	-
M. M. Tejas Namboodiri, K. Pakshirajan	Chitosan production from domestic wastewater using <i>Aspergillus niger</i>	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
M. Nagar, R. Tamuli	Phospholipase C genes play an important role in carotenoid accumulation and ultraviolet survival in <i>Neurospora crassa</i>	9th International conference on Yeast Biology	2015	80	80
M. V. S. Kumar, A. Iyer, R. Swaminathan	Crowding by specific size of dextran switches the substrate specificity of Acetylcholinesterase enzyme	10th European Biophysics Congress	2015	-	-
Mallesh Santhosh, Pranab Goswami	Dual fluorometric/colorimetric assay based on human serum albumin stabilized gold nanoclusters for the sensitive detection of bilirubin	South Asian workshop on Optics and Photonics (SAWOP 15)	2015	-	-
Md. Asif Raza, Siddhartha Sankar Ghosh	Redesigned E. coli cytosine deaminase: changing perspective of cancer therapeutics	Global Cancer Summit, Bangalore, Karnataka	2015	-	-
Milind Singh, Moushume Das, S. Kumar	A new way of classifying newcastle disease virus: an insight on the requirement of minimum nucleotide length	Research Conclave'16, IIT Guwahati	2016	-	-
Mohan C. Manjegowda, Paridhi Singhal, Anil Mukund Limaye	Epigenetic component in expression of G-protein coupled estrogen receptor (GPR30) in breast cancer	Recent development in medical biotechnology and structure based drug designing	2015	32	32
Monika Chandravanshi, Shankar Prasad Kanaujia	Heterogeneous behaviour of metalloproteins toward metal ion binding and selectivity: insights from molecular dynamics studies	National Conference on Recent Developments in Medical Biotechnology and Structure-Based Drug Designing [RDMB-SBDD-2015]	2015	-	-
Moushume Das, S. Kumar	Recombinant phosphoprotein based single serum dilution elisa for rapid serological detection of newcastle disease virus	XXIX Annual Convention, IAVMI & Global Conference: 2015-16	2016	155	155

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Mrinal Kumar Sarma, M. G. Abdul Quadir, Pranab Goswami	Synechococcus pevalaki BDU140432 as potential anodic biocatalyst for biofuel cell applications	Indo-US Workshop on Cell Factories	2015	-	-
Mrinal Sharma, Anuma Singh, Latha Rangan, Anil M. Limaye	Estrogenic effect of karanjin on MCF-7 breast cancer cells	3rd International congress of the society for ethnopharmacology	2016	195	195
N. Arul Manikandan, G. Pugazhenti, K. Pakshirajan	Polyhydroxybutyrate production from waste lignocellulosic biomass as the cheap feedstock	4th Annual Chemical Engineering Symposium Reflux 2016	2016	-	-
Nakul Yadav, S. Kumar	Characterization of classical swine fever virus stability at extreme conditions of temperature, pH and salt concentrations	XXIX Annual Convention, IAVMI & Global Conference: 2015-16	2016	193	193
Nandkishor Roy, Javadi Monisha, Ganesan Padmavathi, Devivasha Bordoloi, Ajaikumar B. Kunnumakkara	Isoform specific action of Akt kinase inhibitors for better efficacy: An in silico approach	6th International Translational Cancer Research Conference on Prevention and Treatment of Cancer: Hypes and Hopes	2016	151	151
Niharika Kashyap, Rwivoo Baruah, Vijay S. Moholkar, Arun Goyal	Production of dextran from sucrose containing industrial by-product using Weissella cibaria RBA12	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
P. Kumar, Rakhi Chaturvedi, D. Sundar, V. S. Bisaria	Piriformospora indica enhances the production of pentacyclic triterpenoids in Lantana camara L. suspension cultures	Plant Cell Tissue and Organ Culture	2016	23	29
Pandey Sushma, Chaturvedi Rakhi	Strategies for the production of bioactive secondary metabolites from Camellia sinensis L.O. Kuntze	A Bioprocessing India 2015: Innovative Bioprocesses with Engineered Cell Factories	2015	121	121
Polakshree Gogoi, S. Kumar	Apoptotic potential of a newly isolated Newcastle disease virus in oral cancer cells	XXIV National Conference Virocon 2015 Transboundary viral diseases under one health: Perspectives and challenges	2015	-	-
Poulami Datta, Sakshi Tiwari, Niteesh Kumar, Lalit Pandey	Enzymatic hydrolysis of waste bread by Aspergillus niger to produce glucose and subsequent production of bioethanol using Saccharomyces cerevisiae	International Conference on waste management, Recycle-2016	2016	153	153
Prerana Gogoi, Shankar Prasad Kanaujia	In silico analysis suggests that PH0702 and PH0208 encode for methylthioribose-1-phosphate isomerase and ribose-1,5-bisphosphate isomerase, respectively, rather than $\alpha$ F2B $\beta$ and $\alpha$ F2B $\delta$	National Conference on Recent Developments in Medical Biotechnology and Structure-Based Drug Designing [RDMB-SBDD-2015]	2015	-	-

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Priyanka Nath, Anil Kumar Verma, Arun Dhillon, Kedar Sharma, Arun Goyal	Identification of promising functional residues capable of introducing endo-xylanase activity into an exo-acting arabinofuranosidase (Ct43Araf) with enhanced activity: Anin silicoapproach	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Rohit P. James, K. Pakshirajan	Screening of fungal strains for chitosan production using paper and pulp mill wastewater as feedstock	4thAnnual Chemical Engineering Symposium Reflux 2016	2016	-	-
Rwivoo Baruah, Arun Goyal	Characterization of glucan from Weissella cibariaR-BA12 as a potential food additive and hydrocolloid	New Horizons in Biotechnology	2015	-	-
Rwivoo Baruah, Barsha Deka, Arun Goyal	Purification and characterization of dextranase from WeissellacibariaRBA12 and production of isomaltooligosaccharides	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
S. Arun, K. Pakshirajan	Algae based photo-activated sludge system for simultaneous CO <sub>2</sub> sequestration and nitrogen removal from ammonium rich wastewater	4thAnnual Chemical Engineering Symposium Reflux 2016	2016	-	-
S. Kumar, B. Tanti, S. K. Mukharjee, L. Sahoo	Molecular characterization and infectivity of a cowpea isolate of Begomoviruses severely infecting cowpea and mungbean in India	IVS-XXIV National conference – VIROCON	2015	-	-
S. Kumar, B. Tanti, S. K. Mukharjee, L. Sahoo	RNAi – mediated geminivirus resistance in genetically engineered cowpea (Vigna unguiculata)	National seminar on plant genomics and biotechnology, challenges and opportunities in 21stcentury	2016	-	-
S. Prasad, I. Mondal, A. Paul, B. Mandal, R. Venkatramani, R. Swaminathan	Investigation of novel spectroscopic features in the near ultraviolet region arising from non-aromatic amino acids in peptides and proteins	60thAnnual Meeting of the Biophysical Societypublished inBIOPHYSICAL JOURNAL	2016	489a	-
Sakshi Tiwari, Abshar Hasan, Ajeet Singh, Lalit Pandey	Remediation of Soils contaminated with heavy metals	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	193	193
Sambhavi, Utpal Bora	Animal cell culture and its applications	Proceedings of the National Seminar on Insect-Plant interaction	2015	70	77
Sharbani Kaushik, Pranab Goswami	Development of cyanobacterial biofilm using chitosan as biofilm inducing material for biofuel cell applications	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Sharmila Narayanan, Lingaraj Sahoo, Siddhartha Sankar Ghosh	Recombinant Plant Phytaspase Ensemble-Composite Nanoparticles for Potentiating Caspase-like Activity in Cancer Therapy	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	2015	-	-



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Sharmila Narayanan, Lingaraj Sahoo, Siddhartha Sankar Ghosh	Unveiling the importance of functionally active Caspase like protease recombinant Phytaspase in cancer therapeutics	International Conference on Cancer Research: New Horizons	2015	-	-
Shuchi Singh, Arun Goyal, V. S. Moholkar	Intensification of ethanol production from Parthenium hysterophorus by sonication: A mechanistic investigation	7th ISEES International Workshop on Sustainable Energy, Environment and Safety with Railway Centric Theme	2015	-	-
Shweta Singh, Arun Goyal	Isolation of bacterial strain efficiently hydrolyzing the cellulosic substrates	56th International Annual Conference of Association of Microbiologists of India (AMI)	2015	-	-
Smita Das, Priyamvada Jain, Babina Chakma, Pranab Goswami	Paper Based Electrochemical Sensor for Species Specific Detection of Malaria	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	2015	-	-
Soumyadeep Chakraborty, Arun Goyal	From waste to health care product: Pectic oligosaccharides produced from citrus peels by treatment of endo-pectate lyase (PL1B) inhibiting colon cancer cells	11th Carbohydrate Bioengineering Meeting	2015	-	-
Srivastava Vartika, Chaturvedi Rakhi	Establishment of in vitro callus cultures for the analysis of essential phytochemical constituents from <i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. F. Thoms against challenging diseases	International Seminar on Prevention, Promotion, and Pacification: Ayurvedic Landscape	2016	85	85
Srivastava Vartika, Chaturvedi Rakhi	Screening of two important alkaloids from cell suspension cultures of <i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. F. & Thoms using high-throughput screening methods	22nd ISCB International Conference-2016-Recent trends in Affordable and Sustainable Drug Discovery and Developments	2016	87	87
Sunil Kumar Sailapu, Deepanjalee Dutta, Amaresh Kumar Sahoo, Siddhartha Sankar Ghosh, Arun Chattopadhyay	Bench top device for genomics and proteomics	Reflux 2016, The Annual Chemical Engineering Symposium, IIT Guwahati	2016	-	-
Suradip Das, Swagata Sharma, Manoj Gadewar, Utpal Bora	Silk in biomedical applications	National Seminar on Problems and Prospects of Muga and Eri Silk Sectors	2016	117	117
Umesh Kumar, S. Kumar	Molecular characterization of an apoptotic strain of Newcastle disease virus isolated from an outbreak in India	14th FAOBMB congress and 84th annual meeting of SBC(I)	2015	402	409

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Umesh Kumar, S. Kumar	Molecular characterization of an apoptotic strain of Newcastle disease virus isolated from an outbreak in India	6th International Symposium entitled Current Trends in Drug Discovery Research "CTDDR-2016"	2016	402	409
V. Sinha, K. Pakshirajan, R. Chaturvedi	Chromium removal from aqueous solution by <i>Tridescantia pallida</i> : uptake mechanism	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-

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Verma Peeyushi, Chaturvedi Rakhi	Establishment of in vitro callus cultures for the enhancement of secondary metabolites from <i>Lantana camara</i> L. using high through-put screening methods	A Bioprocessing India 2015: Innovative Bioprocesses with Engineered Cell Factories	2015	121	121
Vikky Rajulapati, Arun Goyal	Cloning, expression and purification of recombinant pectin methyl esterase (CtPME) a family 8 Carbohydrate Esterase (CE8) from <i>Clostridium thermocellum</i>	14th FAOBMB Congress 84th Annual Meeting of SBC(I) on Current Excitements in Biochemistry and Molecular Biology for Agriculture and Medicine	2015	-	-
A. Gupta, V. Katiyar	Synthesis, Characterization and Property Evaluation of Stereocomplex Poly-(Lactic Acid) (Sc-PLA)/Cellulose Based Nanobiocomposites	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
A. S. Giri, A. K. Golder	Decomposition of drug mixture in UV-photolysis process: Evolution of inorganic ions and toxicity assay	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Akhilesh Kumar Pal, Vimal Katiyar	Poly Lactic Acid/Chitosan Biocomposite Films: Fabrication, Characterization & Non-Isothermal Degradation Kinetics	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Amit Kumar Pandey, Vimal Katiyar	Molecular Dynamics Simulation Study of Biodegradable Polymer/Cellulose Nanocrystals Based Bionanocomposites	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Anirban Dey, K. Bhatt, S. K. Dash, Bishnupada Mandal	Density, viscosity and surface tension of aqueous solution of 2 - methyl Piperazine from 303 K to 343 K	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-

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Arbind Prasad, M. Ravi Sankar, Vimal Katiyar	State of Art on Solvent Casting Particulate Leaching Method for Orthopedic Scaffolds Fabrication	5th International Conference of Materials Processing and Characterization (ICMPC 2016) Materials Today: Proceedings (2016)	2016	-	-
Arbind Prasad, Siddharth M. Bhasney, M. Ravi Sankar, Vimal Katiyar	Biowastes Processed Hydroxyapatite filled Poly (Lactic acid) Bio-composite for open reduction internal-fixation of small bones	International Conference on Recent Trends in Engineering & Material Sciences, ICEMS-2016, Jaipur National University	2016	-	-
Arbind Prasad, Siddharth M. Bhasney, M. Ravi Sankar, Vimal Katiyar	Fish Scale Derived Hydroxyapatite reinforced Po(lactic acid) Polymeric Bio-films: Possibilities for Sealing/locking the Internal Fixation Devices	5th international conference on materials processing and characterization (ICMPC 2016) Materials Today: Proceedings (2016)	2016	-	-
Arbind Prasad, Vimal Katiyar, M. Ravi Sankar	Nano Hydroxyapatite fabrication through fish scales bio wastes	MRSI Symposium-2016, Advanced Materials for Sustainable Applications	2016	-	-
Arbind Prasad, Vimal Katiyar, M. Ravi Sankar	Studies on Fabrication and Characterization of Poly (Lactic Acid)/Hydroxyapatite Composites for Orthopaedic Applications	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Arun Kumar, Gopal Das, Bishnupada Mandal	Synthesis of Mixed Metal Oxides and its Characterization for the Adsorption on Different Gases	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-
Ashim Kumar Basumatary, R. Vinoth Kumar, Partha Pratim Adhikari, Alope Kumar Ghoshal, G. Pugazhenth	Ultrafiltration of FeCl <sub>3</sub> from aqueous solution using MCM-41 ceramic composite membrane	International Conference on Environment 2015 (ICENV-2015)	2015	-	-
Babul Prasad, H. Kalita, Bishnupada Mandal	Synthesis and Characterization of Thermally Stable Bio-Polymer Membrane For CO <sub>2</sub> Separation	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-
Bharath Kumar Goshika, Subrata Kumar Majumder	Gas-liquid-liquid flow hold up in an ejector induced down flow bubble column	International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE), Warangal, Telangana	2015	-	-
Bharath Kumar Goshika, Subrata Kumar Majumder	Studies on gas holdup in a modified gas-aided extraction column	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Binay Deogam, Bisweswar Das, Bishnupada Mandal	Density Of Aqueous Blended Alkanolamine Systems Of 1-(2-Aminoethyl) Piperazine With Monoethanolamine And 2-Amino 2-Methyl 1-Propanol From (298 To 323) K	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-
Ch. V. Rao, A. K. Golder	Nerium Oleander leaf extract mediated synthesis of nickel nanoparticles and its potential application	International Conference on Bioscience and Biotechnology- 2016	2016	-	-

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Ch. V. Rao, A. K. Golder	Spectral sensitization of TiO <sub>2</sub> by copper doping: A biological approach	National Conference on New Frontiers in Civil Engineering: Challenges and Opportunities in North-East India	2015	-	-
Ch. V. Rao, A. K. Golder	Studies on bio-mediated fabrication of AgNPs	Reflux 2016, The Annual Chemical Engineering Symposium, IIT Guwahati	2016	-	-
Gourhari Chakraborty, Ravibabu Valapa, G. Pugazhenth, Vimal Katiyar	Properties of PLA/Graphene Nanocomposite Prepared by Melt Processing Technique	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Gulsan Kumar, Subrata Kumar Majumder	Process Intensification of Oily Wastewater Treatment by Ionic Microbubble in a Plant Prototype	Conference on Environment, Agricultural and Civil Engineering (ICEACE-2016)	2016	-	-
Joydip Chaudhuri, Seim Timung, Tapas K. Mandal, Dipankar Bandyopadhyay	Linearly increasing Electric field induced spatiotemporal deformation and braking of water microdroplet dispersed in continuous oil phase	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Lipika Kalo, Deepak Kumar, Rajesh Kumar Upadhyay	Hydrodynamic Characteristics of Liquid Solids Binary Fluidized Bed through Radiotracer Techniques and Euler-Lagrangian Simulations	Gas-Liquid and Gas-Liquid Solids (GLS)-12	2015	-	-
Lipika Kalo, Rajesh Kumar Upadhyay	Advanced CFD Modelling of Liquid-Solids Mono and Binary Conical Fluidized Bed with Experimental Validation Using Radiotracer Technique	Gas-Liquid and Gas-Liquid Solids (GLS)-12	2015	-	-
Manish Kumar, Samarshi Chakraborty, Suresh Kelothu, G. Pugazhenth	Influence of Cu-Cr layered double hydroxide (LDH) on the rheological properties and thermal degradation kinetics of PMMA nanocomposites	American Institute of Chemical Engineers (AIChE) Annual Meeting	2015	-	-
Medha Mili, Prakash Kotecha, Vimal Katiyar	Synthesis and Characterization of Poly(Lactide)-Drug Conjugate Systems	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Mridusmita Barooah, Bishnu-pada Mandal	Synthesis and Characterization of Mixed Matrix Composite Membranes for CO <sub>2</sub> /N <sub>2</sub> Separation	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-
Naba Kumar Kalita, Vimal Katiyar	Biodegradation of Poly(lactic acid) extruded films under soil condition	MRSI Symposium-2016, Advanced Materials for Sustainable Applications	2016	-	-
Neelima Tripathi, Vimal Katiyar	Preparation, Characterization and Non-Isothermal Degradation Kinetics of PLA/OLLA-G-GA Bionanocomposite Films	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-

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Neelima Tripathi, VimalKatiyar	Poly Lactic Acid-g-Polysaccharide Gum based Conjugates: A Bio-based Pressure Sensitive Adhesive	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Payel Sen, Suresh Kelothu, G. Pugazhenth	Effect of modified Muti-walled Carbon Nanotubes (MWCNT) on the properties of Polystyrene/MWCNT nanocomposites	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Premkumar Kamalanathan, Trilok Tribedi, Rajesh Kumar Upadhyay	Experimental Study of Circulating Fluidized Bed Using Radioactive Particle Tracking Technique	Gas-Liquid and Gas-Liquid Solids (GLS)-12	2015	-	-
Prince Kumar Baranwal, Prasanna Venkatesh Rajaraman	Eis Measurements Of Naphthenic Acid Corrosion On Carbon Steel	17th Asian pacific corrosion control conference (APCCC)	2016	-	-
Prodyut Dhar, Amit Kumar, Vimal Katiyar	Catalytically Powered Magnetic Cellulose Nanocrystals with Self-Propulsion Behavior, 4th International Conference on Advanced Nanomaterial and Nanotechnology	ICANN-2015	2015	-	-
Prodyut Dhar, Amit Kumar, Vimal Katiyar	Tuning Mechanical, Barrier and Thermal Properties of Biopolymers Using Polymorphic Cellulose Nanocrystal	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
R. K. Das, A. K. Golder	H <sub>2</sub> O <sub>2</sub> electro-generation at graphene embedded graphite	Reflux 2016, The Annual Chemical Engineering Symposium, IIT Guwahati	2016	-	-
R. K. Das, A. K. Golder	Synergistic effect of supporting electrolytes on H <sub>2</sub> O <sub>2</sub> formation using graphite both as working and counter electrodes with Ag/AgCl reference	National Conference on New Frontiers in Civil Engineering: Challenges and Opportunities in North-East India	2015	-	-
R. K. Das, V. Rani, A. K. Golder	Hydrogen peroxide electro-generation at different supporting electrolytes using graphite both as working and counter electrodes with Ag/AgCl reference	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
R. Patwa, A. Kumar, V. Katiyar	Mechanical, Barrier and Thermal Properties of Silk Nanoparticles Reinforced Poly (Lactic Acid) Biocomposites	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
R. Vinoth Kumar, G. Pugazhenth	Hydrothermal synthesis of MFI type zeolite membrane on low cost tubular ceramic substrate for removal of hexavalent chromium	International Conference on Environment 2015 (ICENV-2015)	2015	-	-

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R. Vinoth Kumar, G. Pugazhenth	Manufacturing of Analcime-C, MCM-41 and $\text{I}^3\text{-Al}_2\text{O}_3$ composite membranes on low cost porous ceramic support and their performance in removal of anionic dye	6th Annual Research Symposium in Chemical Engineering ChEmference-2015	2015	-	-
R. Vinoth Kumar, P. Monash, G. Pugazhenth	Treatment of oil-in-water emulsion using tubular ceramic membrane acquired from locally available low cost inorganic precursors	International Conference on Renewable Energy and Sustainable Environment (RESE-2015)	2015	-	-
R. Vinoth Kumar, Srijon Guha, M. Mohankumar, G. Pugazhenth	Adsorption kinetics & equilibrium studies on removal of Cr(VI) from aqueous solutions using analcim-C zeolite	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Rajashree Borgohain, Babul Prasad, Sanjib Barma, Bishnupada Mandal	Synthesis of Novel Polymer Membrane Containing Multiwalled Carbon Nanotube for Improving Thermal Stability	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-
Rajeev Parmar, Subrata Kumar Majumder	Recovery of fine particle by using ionic microbubble flotation	NECMICO-2014	2015	-	-
Ravula Rajasekhar, Tapas K. Mandal	Low energy transportation of liquid in microfluidic devices	Reflux 2016, The Annual Chemical Engineering Symposium, IIT Guwahati	2016	-	-
Richa Sharma, Amit Kumar, Rajesh Kumar Upadhyay	Performance Comparison of a Pd Membrane Separator with a Reaction Integrated Pd Membrane Reformer	4th International Hydrogen and Fuel Cell Conference	2015	-	-
Rupesh Varma, Avinash Bombarde, Harish Pant, Rajesh Kumar Upadhyay	Insights of Liquid Cooled Pebble Bed Reactor through Experiments and CFD Simulations	Gas-Liquid and Gas-Liquid Solids (GLS)-12	2015	-	-
S. Chakraborty, A. K. Golder	Fruit extract of Thevetia Peruviana for fabrication of silver nanoparticles and prevention of agglomeration	National Conference on New Frontiers in Civil Engineering: Challenges and Opportunities in North-East India	2015	-	-
S. Nagireddi, A. K. Golder, R. Uppaluri	Role of functionalized adsorbents for selective Pd(II) uptake: A mini review	National Conference on Challenges in Environmental Research (NCO CER 2015)	2015	-	-
S. Nagireddi, A. K. Golder, V. Katiyar, R. Uppaluri	Pd (II) adsorption from synthetic electroless plating solutions using chitosan and its derivative glutaraldehyde cross-linked chitosan copolymer resin	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Sanjib Barma, P. Sharma, Bishnupada Mandal	Acidic medium synthesis and characterization of ordered mesoporous silica materials	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-

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Shasanka Sekhar Borkotoky, Prakash Kotecha, Vimal Katiyar	Fabrication of Tuneable Biodegradable Polymeric Foams	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Siddharth M. Bhasney, Amit Kumar, Vimal Katiyar	Plasticization Effect of Coconut Oil on Mechanical, Barrier and Morphological Properties of Poly (Lactic Acid) Based Blends	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Smruti R. Dash, S. S. Bag, Animesh Golder	Pre-treatment of lignocellulosic biomass towards production of value added chemicals- A short review	National Conference on Challenges in Environmental Research (NCOCER 2015)	2015	-	-
Smruti R. Dash, S. S. Bag, Animesh Golder	Synthesis and antimicrobial effects of nanoparticles - A mini review	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Snigdha Khuntia, Subrata Kumar Majumder, Pallab Ghosh	Calculation of hydroxyl radical concentration-An indirect method	International Conference on Advances in Chemical Engineering (ICACE), December 20 - 22, 2015	2015	-	-
Surendra Singh Gaur, Prodyut Dhar, Amit Kumar, Vimal Katiyar	Study of PVA/ PSSA/ Chitosan/ Closite-30B Clay Based Polyelectrolyte Composite Membrane for Direct Methanol Fuel Cell Application	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Suresh Kelothu, Manish Kumar, R. Vinoth Kumar, M. Jeyapriya, G. Pugazhenthii	Sonication assisted synthesis of polystyrene/organo-clay nanocomposites: influence of clay content	International Conference on Nanomaterials and Nanotechnology (NANO-2015)	2015	-	-
T. Ramesh, Bishnupada Mandal, Prabirkumar Saha, Sasidhar Gumma	Development and modelling of amine based absorption process for CO <sub>2</sub> capture	The Indian Chemical Engineering Congress (CHEMCON 2015)	2015	-	-
V. Ch. Rao, S. Chakraborty, A. K. Golder	Biomediated synthesis of spherical silver nanoparticles using s. eduleextract and its activity	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
V. Rani, R. K. Das, A. K. Golder	Ti-TiO <sub>2</sub> /graphite as anode/ cathode electrodes for electro-generation of H <sub>2</sub> O <sub>2</sub> in an undivided electrolyzer	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
V. V. Kulkarni, A. K. Golder, P. K. Ghosh	Characterization and heavy metals speciation of battery wastewater sludge	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
V. V. Kulkarni, A. K. Golder, P. K. Ghosh	Effect of co-occurring ions on removal of Pb(II) by ion exchange resin	National Conference on New Frontiers in Civil Engineering: Challenges and Opportunities in North-East India	2015	-	-
Y. Santosh, N. R. Peela, A. K. Golder	Studied on the production of value-added chemicals from cellulose via solid supported acid catalysts	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Bhubaneswar Mandal	Peptide based pro-drug design against Alzheimer's disease	5th Indian Peptide Symposium - 2015, Bangalore	2015	11	11

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Dharm Dev, Nani Babu Palakurthy, Bhubaneswar Mandal	Synthesis of O-BenzylHydroxamates from Carboxylic Acids by using the N-Hydroxy Benzotriazole Esters of Sulfonic Acids	ChemConvence-2015, IIT Guwahati	2015	10	10
Srinivasa Rao Manne, Kishore Thalluri, Rajat Subhra Giri, Bhubaneswar Mandal	Microwave assisted Chemoselective and Stereoselective Synthesis of Peptide Alcohols from Amides via Transamidation	ChemConvence-2015, IIT Guwahati	2015	29	29
Tanmay Mondal, Ashim Paul, Bhubaneswar Mandal	A Novel $\beta$ -Sheet Breaker Strategy Against Amyloid Aggregation and Fibrillogenesis	ChemConvence-2015, IIT Guwahati	2015	34	34
A. A. Jee, B. Pradhan	Performance of pozzolana blended cement vis-à-vis ordinary Portland cement against chloride ingress in concrete.	UKIERI Concrete Congress	2015	108	118
A. Borah, K. M. Chaudhury, A. S. Kalamdhad	A study of groundwater and drinking water characteristics of Jyanagar, Sixmile, Beltola, Guwahati, Assam	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
A. Choudhary, S. Gokhale	Using traffic volume and speed to quantify urban traffic congestion	3rd Conference of Transportation Research Group of India (CRTG), Kolkata	2015	-	-
A. Jana, A. Dey	Conflicting behavior of geotextiles in reinforced clay wall	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	42	51



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A. Jose, S. K. Patel, B. Singh	Laboratry investigation on strength characteristics of fibre reinforced cohesive soil	50th Indian Geotechnical Conference, IGC-2015, Pune	2015	1037	1043
A. Joseph, A. M. Krishna	Construction Practices of Deep Basements	Indian Geotechnical Conference: IGC 2015, Pune	2015	-	-
A. Kumar, R. Choudhary, A. Julaganti	Field Performance Of Warm Mix Asphalt Containing Evotherm: A Review	National Seminar Cum Workshop in Advances in Civil and Infrastructure Engineering, Tezpur University	2015	287	-
A. Patowari, D. Phukan, C. Mayengbam, A. S. Kalamdhad	Assessment of water purification systems installed in Guwahati metropolitan area	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
A. Sharma, Manish Kumar Goyal	Bayesian network model for monthly rainfall forecast	Proceeding of 2015 IEEE International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN)	2015	241	246
A. Singhvi, D. Tiwari, A. S. Kalamdhad	Eutrofication of lake: A case study of Dhighali Pukhari lake	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
B. Chand, J. Thomas, H. B. Kaushik	Influence of Collector Beams on Lateral Load Response of RC Frames with Masonry Infills	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
B. Hazra, S. Narasimhan	Gearbox Fault Detection using Synchro-squeezing Transform	Proceedings of 12th International Conference on Vibration Problems (ICOVP)	2016	-	-
B. Madhulatha, A. Dey	Numerical investigation of failure of reinforced segmental retaining wall	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	178	187
Babloo Chaudhary, Hemanta Hazarika, Babita Sah, A. Murali Krishna	Effects of reinforcement on the geo-structure for mitigation of the earthquake effects	The 15th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering	2015	2319	2323
Barbie Hazarika, Sharad Gokhale	Secondary pollutants from VOCs in urban indoor air	National Conference on De-polluting Indian Cities, New Delhi	2015	-	-
C. P. Sarma, A. Murali Krishna, A. Dey	Landslide early warning based on geotechnical slope stability model for the Guwahati region	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	10

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C. P. Sarma, A. Murali Krishna, A. Dey	Landslide hazard assessment of Guwahati region using physically based models	6th Annual Conference of the International Society for Integrated Disaster Risk Management (IDRIM-TIFAC 2015)	2015	1	13
Ch. Chinamani, T. V. Bharat	Collapse behavior of clay soil under one-dimensional (1D) Compression condition	Indian Geotechnical Conference: IGC 2015, Pune	2015	-	-
D. Baglari, S. Biswas, J. Taipodia, A. Dey	Aspects of dispersion imaging scheme of passive MASW survey for subsurface characterization	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	8
D. Basu, A. Dey	Comparative 1D ground response analysis of homogeneous sandy stratum using Linear, Equivalent Linear and Nonlinear Masing approaches	National Seminar on Geotechnics for Infrastructure Development, Indian Geotechnical Society, Kolkata Chapter	2016	1	7
D. Basu, A. Dey	Nonlinear ground response analysis for parametric study of sandy deposit incorporating Non-Masing criteria	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	131	141
D. Chattopadhyay, R. Choudhary, A. Kumar	Effect of Filler Type and Characteristics on Design of Open Graded Friction Course Mixes	15th Annual International Conference on Pavement Engineering & Infrastructure, Liverpool John Moores University	2016	-	-
D. P. Kumar, A. M. Krishna, S. Bhattacharya	Cyclic Threshold Shear Strains in Cohesionless Soils based on Stiffness Degradation	Indian Geotechnical Conference: IGC 2015, Pune	2015	-	-
F. Shaheen, B. Pradhan	Effect of Sodium Sulfate on Chloride-induced Corrosion Behaviour of Reinforcing Steel in Concrete Powder Solution	Eighteenth National Congress on Corrosion Control	2016	-	-
F. Shaheen, B. Pradhan	Performance of steel in Portland cement and fly ash added concrete admixed with chloride and sulfate ions	UKIERI Concrete Congress	2015	119	127
F. Shaheen, B. Pradhan	Behaviour of steel reinforcement in chloride and combined chloride-sulfate contaminated concrete powder solution extracts	2nd R. N. Raikar Memorial International Conference & Banthia - Basheer International Symposium on Advances in Science & Technology of Concrete	2015	547	552
I. Vishan, A. Laha, S. Senthil Kumar, A. S. Kalamdhad	Biosorption of Lead (Pb) by Bacillus badius AK strain (KP 216715) during rotary drum composting of Water Hyacinth	International Conference on Solid Waste (ICSWHK-2015), Hong kong	2015	-	-
Indu Siva Ranjani, R. Vallavan	Modelling of sorptivity and compressive strength of PC-GGBS concrete using Response Surface Methodology	5th Structural world congress (SEWC 2015) Singapore	2015	-	-

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Isha Vishan, Ajay S. Kalamdhad	Interaction of Bacillus badius AK strain with Lead (Pb) isolated during rotary drum composting of water hyacinth	National Conference on Challenges in Environmental Research (NCOCER 2015)	2015	-	-
J. Dutta, A. K. Mishra	Consolidation characteristics of bentonite in the presence of heavy metals	Recycle-2016, International Conference on Waste Management	2016	-	-
J. K. Das, B. Pradhan	Effectiveness of corrosion inhibitors in chloride contaminated simulated concrete pore solution.	Eighteenth National Congress on Corrosion Control	2016	-	-
J. Taipodia, D. Baglari, S. Biswas, A. Dey	Dispersion analysis using active MASW survey data	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	9
Jayshree Hazarika, Arup Kumar Sarma	Identification of homogeneous climatic regions of North-east India to study impact of climate change in the region-A comparative study	Presented in the Regional Forum on Climate Change (RFCC), Bangkok	2015	-	-
Joy Kumar Mondal, Abhishek Kumar	Impact of Frequency Content of input motion upon local site effect	Proceedings of Indian Geotechnical Conference, COEP Pune	2015	-	-
K. Bora, B. Singh	Comparative study of the load responses and interaction effects of piled rafts in sands using finite element analysis	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	160	167
K. Dhamodharan, A. S. Kalamdhad	Effect of different pretreatment techniques in anaerobic digestion of food waste	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
K. Dhamodharan, A. S. Kalamdhad	Anaerobic digestion of food waste with different animal dung as inoculum	International Seminar on Renewable Energy and Sustainable Development	2015	-	-
K. M. Chaudhury, A. Borah, A. S. Kalamdhad	Performance analysis of sewage treatment plant of IIT Guwahati	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
L. N. V. Satish, Subashisa Dutta	Environmental Flow Computation in the Ganga River Basin Using SWAT Modelling and Time Series Analysis	20th International Conference on Hydraulics, Water Resources and River Engineering (Hydro-2015)	2015	168	-
L. Zote, S. Jain, B. Pradhan	Effect of cement type on fresh and hardened properties of self-compacting concrete	UKIERI Concrete Congress	2015	342	353
M. G. Bereket, B. Kiran Kumar, A. Dey	Effect of strain rate on the shear strength parameter of sand	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	8

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M. L. Pattanaik, R. Choudhary	Reduction In Road Noise Levels Through The Use Of Open Graded Friction Course: A Review	National Seminar Cum Workshop in Advances in Civil and Infrastructure Engineering, Tezpur University	2015	293	-
M. L. Pattanaik, R. Choudhary, N. G. Sorum, A. Julaganti	Volumetric Properties of Warm Mix Asphalt Mixes with Virgin Binder	3rd International Conference of the Transportation Research Group of India (CTRG 2015), Kolkata	2015	-	-
M. Ubaid, T. V. Bharat	A Numerical Approach for Consolidation Settlement of Soft Sediments Under Different loading Conditions	Indian Geotechnical Conference: IGC 2015, Pune	2015	-	-
Mukherjee, Mishra	Hydro-mechanical behaviour of sand-bentonite mixture reinforced with scrap tyre	Recycle-2016, International Conference on Waste Management	2016	-	-
Mukherjee, Mishra, Mudaliyar	A review on consolidation and strength behaviour of fiber reinforced expansive soil	Indian Geotechnical Conference: IGC 2015, Pune	2015	-	-
N. Debnath, A. Dutta, S. K. Deb	Multi-Modal Passive-Vibration Control of Bridges Under General Loading-Condition	ICOVP 2015, IIT Guwahati	2015	-	-
N. P. Singh, S. Gokhale	Estimation of emission source reduction using best-fit statistical distribution of measured pollutants within an urban traffic corridor	National Conference on Challenges in Environmental Research, Guwahati	2015	-	-
Olympa Baro, Abhishek Kumar	An insight into the Shillong Plateau seismicity, A Review	Proceedings of Indian Geotechnical Conference, COEP Pune	2015	-	-
P. Anbazhagan, A. Murali Krishna	Forensic investigation of earthquake induced failures during Sikkim 2011 earthquake, India	The 15th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering	2015	201	206
P. Dey, S. Talukdar	Influence of Warping on Modal Parameters of Thin-Walled Channel Section Steel Beam	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
P. Dey, S. Talukdar, D. J. Bordoloi	Crack identification in thin walled channel section beam using combined three level factorial design response surface and genetic algorithm	8th International Conference on Advances in Steel Structures, University of Lisbon	2015	-	-
P. Halder, B. Singh	Numerical modelling of pile-supported embankment and performance evaluation	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	205	213
Prodip K. Paul, Anjan Dutta, Sajal K. Deb	System identification and damage detection of r.c. structure	Int. Conf. on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete Island	2015	-	-

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R. Acharyya, A. Dey	Site characterization and bearing capacity estimation for a school building located on hillslope	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	10
R. Acharyya, A. Dey	Square footings on unreinforced sandy slopes: Numerical modeling using PLAXIS 3D	National Seminar on Geotechnics for Infrastructure Development, Indian Geotechnical Society, Kolkata Chapter	2016	1	8
R. Acharyya, N. Sharma, A. Dey, K. Dasgupta	3D finite element modeling of a large-sized pile group	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	219	231
R. Chakraborty, A. Dey	Numerical investigation of slope instability induced by hydraulic and seismic actions	North-East Students Geo-Congress on Advances in Geotechnical Engineering, NES GEO-CONGRESS 2016, Agartala	2016	237	244
R. Choudhary, A. Julaganti	Moisture Susceptibility of Modified Binder Mixes with Evotherm	3rd International Conference of the Transportation Research Group of India (CTRG 2015), Kolkata	2015	-	-
R. Lalthlamuana, S. Talukdar	Conditions of visibility of bridge natural frequency in vehicle vertical acceleration	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
R. Someswaran, Suresh A. Kartha	Non-equilibrium reactive transport modeling of acid mine drainage in subsurface water	36th IAHR World Congress	2015	-	-
R. Talukdar, S. Talukdar	Dynamic Analysis of High Speed Maglev Vehicle-Guideway System using SIMULINK	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
Rajya Lakshmi Garaga, Shovan Kumar Sahu, Sri Harsha Kota	Studying Air Quality during Fireworks in a college campus	IICAQM 2016	2016	-	-
S. B. Reddy, A. M. Krishna, S. M. Dasaka	Seismic resilience of retaining walls backfilled with sand-tire chips mixtures	Second Japan-India Workshop in Geotechnical Engineering	2015	-	-
S. Chakraborty, R. Bisht, B. Singh, A. Juneja	Effect of pile geometry on behaviour of piled rafts	Young Geotechnical Engineers' Symposium on Finite Element Methods, YGESFEM, Mumbai	2015	21	22
S. Deori, D. Tiwari, R. Choudhary, S. Gangopadhyay	Field Performance Study on Modified Bituminous Road Sections of National Highway Corridors	3rd International Conference of the Transportation Research Group of India (CTRG 2015), Kolkata	2015	-	-
S. H. Basha, H. B. Kaushik	Influence of Collector Beams on Lateral Load Response of RC Frames with Masonry Infills	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-

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S. K. Padhee, Subashisa Dutta	Estimation of Evapotranspiration based on an extended Three – Temperature Model and MODIS Products in Ecosystems of Northeast India	20th International Conference on Hydraulics, Water Resources and River Engineering (Hydro-2015)	2015	168	-
S. K. Padhi, S. Gokhale	Optimization and modelling of growth kinetics during benzene biodegradation in batch reactors.	Int. Conf. on New Horizons in Biotechnology, Trivandrum	2015	-	-
S. K. Padhi, S. Gokhale	A hybrid rotating biological filters to control VOC from waste gas streams	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
S. K. Patel, B. Singh	CBR behaviour of randomly distributed glass fibre reinforced soil	International conference on Geo-Engineering and Climate Change Technologies for Sustainable Environmental Management, GCCT-2015, Allahabad	2015	85	90
S. K. Patel, B. Singh	Effect of fire reinforcement on strength and stiffness improvement of cohesive soil	International Conference on Infrastructure Development for Environmental Conservation and Sustenance, INDECS-15, Hosur	2015	167	173
S. M. Kamal, A. C. Borsaikia, U. S. Dixit	Measurement of Residual Stresses in the Thermal Autofrettage of Thick-walled Cylinder	Proceedings of Thirtieth National Convention of Production Engineers and National Seminar on Sustainable Manufacturing	2015	-	-
S. Mukherjee, A. Dey	Analysis of Laterally Loaded Fixed Headed Single Floating Pile in Multilayered Soil using BEF Approach	National Seminar on Geotechnics for Infrastructure Development, Indian Geotechnical Society, Kolkata Chapter	2016	1	12
S. S. Kumar, A. Dey, A. M. Krishna	Dynamic response of river bed sands using cyclic triaxial tests	Proc. of 5th Indian Young Geotechnical Engineers Conference	2015	175	176
S. S. Kumar, A. M. Krishna, A. Dey	Cyclic response of sands using stress-controlled cyclic triaxial tests	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	9
S. S. Kumar, D. T. Tamang, R. Timsina, A. Dey	Laboratory investigations to assess the geotechnical characteristics of soils from Sikkim hill slopes	Indian Geotechnical Conference: IGC 2015, Pune	2015	1	10
S. Vignesh, A. J. Albino, A. S. Kalamdhad,	Treatment of effluent sewage for recreational purpose	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Shivam, Arup K. Sarma, Manish K. Goyal	Climate change impact assessment on water availability in a North-eastern river of India for sustainable water management	SUSCON-V 2016, International Conference on Sustainability, IIM Shillong	2016	-	-

## Conference Papers

## Civil Engineering

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Shivam, Arup K. Sarma, Manish K. Goyal	Regionalization of Northeast India on Precipitation Indices Basis using Fuzzy Clustering Approach	HYDRO 2015 20th International Conference on Hydraulics, Water Resources and River Engineering, IIT Roorkee	2015	-	-
Shreedevi Moharana, Subashisa Dutta	Application of hyperspectral data in spatial variability distribution of paddy field	National Symposium on Geomatics for Digital India, ISG & ISRS Conference	2015	-	-
Shreedevi Moharana, Subashisa Dutta	Field Variation Mapping of Paddy Crop from Space Borne Hyperspectral Data Using Clustering Technique	20th International Conference on Hydraulics, Water Resources and River Engineering (Hydro-2015)	2015	168	169
Snehal Kaushik, Kaustubh Dasgupta	Seismic Behavior of Shear Wall-Slab Junction in RC Building	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
Soham Banerjee, Abhishek Kumar	Attenuation of P and S wave for Chamba region,	Proceedings of Indian Geotechnical Conference, COEP Pune	2015	-	-
Subashisa Dutta	Impact of Climate Change on Floods in Brahmaputra Basin	1st International Conference on Climate Science	2016	72	73
Subrat Kumar Mallick, S. Chakraborty	Anoxic treatment of refinery wastewater: A Review	International Conference on Waste Management, IIT Guwahati	2016	-	-
Subrat Kumar Mallick, S. Chakraborty	Treatment of petroleum refinery wastewater in anoxic moving bed reactor	National Conference on Challenges in Environmental Research	2015	-	-
Subrat Kumar Mallick, S. Chakraborty	Treatment of synthetic oil refinery wastewater in anoxic reactors at varied feed sulphide concentration	New Horizons in Biotechnology, CSIR Thiruvananthapuram	2015	-	-
Subrat Kumar Mallick, S. Chakraborty	Treatment of synthetic petroleum refinery wastewater at varied feed phenol concentration	International Conference on Water, Environment, Energy & Society, Bhopal	2016	-	-
Suresh A. Kartha, Sinchan R. Chowdhury	Modelling of heap leaching of caliche minerals using non-equilibrium transport	Heap Leach Solutions 2015 (3rd International Conference on Heap Leaching)	2015	371	383
T. Choudhury, H. B. Kaushik	Influence of Collector Beams on Lateral Load Response of RC Frames with Masonry Infills	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
T. K. Deb, B. Singh	Horizontal load capacity of bucket foundation installed in sandy soils	50th Indian Geotechnical Conference, IGC-2015, Pune	2015	1135	1141
T. K. Deb, B. Singh	Lateral load-deformation behaviour of bucket foundations in sandy soil	International conference on Geo-Engineering and Climate Change Technologies for Sustainable Environmental Management, GCCT-2015, Allahabad	2015	103	108

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U. D. Arjun, R. Choudhary, A. Kumar, A. Julaganti	Laboratory Evaluation of Sasobit® Modified Warm Mix Asphalt for Bituminous Base Course	15th Annual International Conference on Pavement Engineering & Infrastructure, Liverpool John Moores University	2016	-	-
U. D. Arjun, R. Choudhary, A. Kumar, A. Julaganti	Evaluation of Volumetrics of Dense Bituminous Macadam with Warm Mix Additive – Evotherm	3rd National Conference on Energy Sustainability in Engineering System, MAIET Jaipur	2016	-	-
V. Gupta, Manish Kumar Goyal	Impact of Climate Change on Regionalization Using Fuzzy Clustering	Proceedings of Fourth International Conference on Soft Computing for Problem Solving	2015	451	458
V. S. Varma, A. S. Kalamdhad	Reduction of pathogens and heavy metal contamination during thermophilic composting of agricultural wastes	Emerging Micropollutants in the Environment: Occurrence, Transportation, Monitoring and Treatment	2015	-	-
V. Srikanth, A. K. Mishra	Strength characteristics of sand-bentonite mixtures and the influence of sand type	Recycle-2016, International Conference on Waste Management	2016	-	-
V. Yadav, A. K. Singh, U. S. Dixit	Determination of friction in cold and warm rolling processes	Proceedings of the 30th National Convention of Production Engineer's "Sustainable Manufacturing"	2015	-	-
Vinay Chembolu, Subashisa Dutta	Entropy and Energy Dissipation of a Braided River System	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-

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**Computer Science and Engineering**

<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
Y. Gopak, T. V. Bharat	Laboratory Determination Of Volumetric Shrinkage Behaviour Of Plastic Clay	Indian Geotechnical Conference: IGC 2015, Pune	2015	-	-
Y. Khalil, R. Choudhary, A. Kumar	Evaluation of Permeability Characteristics of Laboratory and Field Compacted Bituminous Concrete Mixes	2nd National Conference on Challenges in Construction Industry: Vision 2020, MAIET Jaipur	2016	-	-
A. B. Paul, S. Chakraborty, S. De, S. Nandi, S. Biswas	Adaptive Path Selection for High Throughput Heterogeneous Wireless Mesh Networks	IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)	2015	-	-
A. M. Tripathi, D. Baruah, R. Dutta Baruah	Acoustic Event Classification Using Ensemble of One-Class Classifiers for Monitoring Application	IEEE Symposium Series on Computational Intelligence (SSCI)	2015	1681	1686



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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
A. M. Tripathi, D. Baruah, R. Dutta Baruah	Acoustic sensor based activity recognition using ensemble of one-class classifiers	IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS)	2015	1	7
A. Sahu	Thermal Aware Scheduling and Mapping of Multiphase Applications onto Chip Multiprocessor	IEEE/ACM Design, Automation and Test in Europe (DATE)	2016	-	-
Akash Anil, D. Kumar, S. Sharma, R. Singha, R. Sarmah, N. Bhattacharya, S. Ranbir Singh	Link Prediction using Social Network Analysis over Heterogeneous Terrorist network	The 8th IEEE International Conference on Social Computing and Networking	2015	-	-
Alka Bhushan, Sajith Gopalan	An I/O Efficient Algorithm for Minimum Spanning Trees	COCOA	2015	499	509
Ansuman Banerjee, Arijit Mondal, Arnab Sarkar, Santosh Biswas	Tutorial: Real-time embedded systems analysis - From theory to practice	19th International Symposium on VLSI Design and Test (VDATE)	2015	1	2
Arnab Sarkar, Arijit Mondal	Partitioned Fair Round Robin: A Fast and Accurate QoS Aware Scheduler for Embedded Systems	29th International Conference on VLSI Design (VLSID), Kolkata	2016	403	408
B. Bhowmik, J. K. Deka, S. Biswas	A matrix model for redefining and testing NoC interconnect shorts	IEEE TENCON	2015	1	6
B. Bhowmik, J. K. Deka, S. Biswas	An optimal diagnosis of noc interconnects on activation of diagonal routers	IEEE International Conference on Systems, Man and Cybernetics (SMC)	2015	755	760
B. Bhowmik, J. K. Deka, S. Biswas	Directed Symbolic Execution for VLSI Circuits	IEEE International Conference on Systems, Man and Cybernetics (SMC)	2015	50	55
B. Bhowmik, J. K. Deka, S. Biswas	Reliability on Top of Best Effort Delivery: Maximal Connectivity Test on NoC Interconnects	8th Annual ACM India Conference	2015	19	28
B. Subba, S. Biswas, S. Karmakar	Intrusion Detection Systems using Linear Discriminant Analysis and Logistic Regression	12th Annual IEEE India Conference (INDICON 2015)	2015	-	-
Bhowmik, S. Biswas, J. K. Deka	A packet address driven test strategy for stuck-at faults in networks-on-chip interconnects	23th Mediterranean Conference on Control and Automation (MED)	2015	176	183
Diptesh Majumdar, Licong Zhang, Purandar Bhaduri, Samarjit Chakraborty	Reconfigurable Communication Middleware for Flex Ray-Based Distributed Embedded Systems	21st IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, RTCSA	2015	159	166
H. K. Kapoor, S. Das, S. Chakraborty	Static energy reduction by performance linked cache capacity management in Tiled CMP	30th ACM/SIGAPP Symposium On Applied Computing (SAC)	2015	1913	1918

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<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
Hema Kumar Yaranagula, S. Luhadia, S. Dutta, T. Venkatesh	Quality of Experience Assessment of Rate Adaptation Algorithms in DASH: An Experimental Study	8th International Conference on Communication Systems and Networks (COMSNETS)	2016	1	8
John Jose, Joe Augustine, Sijin Sebastian	Dynamic Migratory Selection Strategy for Adaptive Routing In Mesh NoCs	IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC)	2015	343	348
K. Vanapalli, H. K. Kapoor, S. Das	An Efficient Searching Mechanism for Dynamic NUCA in Chip Multiprocessors	19th International Symposium on VLSI Design and Test (VDATE)	2015	-	-
M. Agarwal, S. Biswas, S. Nandi	Detection of De-Authentication DoS Attacks in Wi-Fi Networks: A Machine Learning Approach	IEEE International Conference on Systems, Man and Cybernetics (SMC)	2015	246	251
M. Agarwal, S. Biswas, S. Nandi	I <sup>2</sup> -diagnosability framework for detection of Advanced Stealth Man in the Middle attack in Wi-Fi networks	23th Mediterranean Conference on Control and Automation (MED)	2015	349	356
N. Choudhury, S. Sharma, T. Venkatesh, S. Bhattacharya	Avabodhaka: A System to analyse and facilitate Interactive Learning in an ICT based system for Large Classroom	7th International Conference on Intelligent Human Computer Interaction (IHCI)	2015	-	-
N. Choudhury, T. Venkatesh, S. Bhattacharya	An ICT-based system to improve the learning experience in a large classroom	7th IEEE International Conference on Technology for Education (T4E)	2015	27	30
P. Juluri, T. Venkatesh, D. Medhi	SARA: Segment-aware Rate Adaptation Algorithm for Dynamic Adaptive Streaming over HTTP	IEEE International Conference on Communications Workshop on Quality of Experience for Future Internet	2015	1	6
P. K. Biswal, S. Biswas	Timed Discrete event system approach to online testing of asynchronous circuits	23th Mediterranean Conference on Control and Automation (MED)	2015	341	348
R. Maity, A. Uttav, G. Verma, S. Bhattacharya	A Non-Linear Regression Model to Predict Aesthetic Rating of On-Screen Images	27th Australian Conference on Human-Computer Interaction (OzCHI)	2015	44	52
Rakesh Tripathi, S. Vignesh, T. Venkatesh	Cost-aware Capacity Provisioning for Fault-tolerant Geo-distributed Data Centers	8th International Conference on Communication Systems and Networks (COMSNETS)	2016	1	8
S. Bhattacharya	A Linear Regression Model to Detect User Emotion for Touch Input Interactive Systems	6th International Conference on Affective Computing and Intelligent Interaction (ACII)	2015	970	975
S. Chakraborty, S. Das, 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	-	-
S. Chakraborty, S. Das, H. K. Kapoor	Power Aware Cache Miss Reduction by Energy Efficient Victim Retention	19th International Symposium on VLSI Design and Test (VDATE)	2015	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
S. Das, H. K. Kapoor	Dynamic Associativity Management using Utility Based Way-Sharing	30th ACM/SIGAPP Symposium On Applied Computing (SAC)	2015	1919	1924
S. Karmakar	Adaptive Broadcast by Fault-Local Self-Stabilizing Spanning Tree Switching	29th International Symposium on Distributed Computing (DISC)	2015	-	-
Samir Borgohain, Shivashankar B. Nair	An Immuno-inspired approach towards Sentence Generation	Genetic and Evolutionary Computation Conference (GECCO)	2015	97	104
Shashi Shekhar Jha, Shivashankar B. Nair	An Idiomatic Solution Sieve for Selecting the Best Performing Solutions in Real-World Distributed Intelligence	Third International Conference on Artificial Intelligence, Modelling and Simulation	2015	-	-
Simi Zerine Sreeba, John Jose, M. G. Mini	HiPAD : High Performance Adaptive Deflection Router for On Chip Mesh Networks	IEEE 5th International Conference on Advances in Computing and Communications (ICACC)	2015	16	19
Sonia, Achyut Mani Tripathi, Rashmi Dutta Baruah, Shivashankar B. Nair	Ultrasonic Sensor-based Human Detector using One-class Classifiers	2015 IEEE International Conference on Evolving and Adaptive Intelligent Systems (EAIS)	2015	-	-
Subhrendu Chattopadhyay, Sandip Chakraborty, Sukumar Nandi	Leveraging the Trade-off Between Spatial Reuse and Channel Contention in Wireless Mesh Networks	8th International Conference on Communication Systems and Networks (COMSNETS)	2016	-	-

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## Design

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Tushar Semwal, Manoj Bode, Vivek Singh, Shashi Shekhar Jha, Shivashankar B. Nair	Tartarus: A Multi-Agent Platform for Integrating Cyber-Physical Systems and Robots	ADVANCES IN ROBOTICS – 2nd International Conference of Robotics Society of India	2015	-	-
Tushar Semwal, S. Nikhil, Shashi Shekhar Jha, Shivashankar B. Nair	TARTARUS: A Multi Agent Platform for Bridging the gap between Cyber and Physical Systems	Autonomous Agents and Multi Agent Systems Conference (AAMAS)	2016	-	-
A. Chowdhury, S. M. Reddy, D. Chakrabarti, S. Karmakar	Cognitive Theories of Product Emotion and Their Applications in Emotional Product Design	Chakrabarti (ed.), ICoRD'15 – Research into Design Across Boundaries	2015	329	340

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<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
Abdul Sameer Ashraf, Aditi Padhi, Ravi Mokashi Punekar	Investigation of key principles of game-play and their abstraction to enhance Learning in rural children	ICoRD'15 – International Conference on Research into Design, IISc. Bangalore	2015	-	-
Abhirup Chatterjee, K. Ray, U. Panjwani, J. P. Anand, L. Thakur, S. Kumar, Debkumar Chakrabarti	Meditation as a countermeasure to reduce cognitive decline after total sleep deprivation	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Abhirup Chatterjee, Sougata Karmakar, Debkumar Chakrabarti	Ergonomic Design Aspects of a Yoga Practice Hall	FIPSPHYSICON 2015	2015	-	-
Amitabh Bordoloi, Abhirup Chatterjee, Debkumar Chakrabarti	Need for ergonomic intervention on academic environment of Assam: A district level analysis of primary and middle schools	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Anmol Srivastava, Pradeep Yammiyavar	Augmenting Tutoring of Students using Tangible Smart Learning Objects: An IOT based approach to assist student learning in laboratories	International Conference on Internet of Things and Application 2016 (IOAT)	2016	-	-
Anmol Srivastava, Pradeep Yammiyavar	Exploring Embedded Intelligence as a means of Minimizing Extraneous Cognitive Load of Students in Laboratory Instructional Sessions	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
D. Chakrabarti	Some ethical issues in ergonomic design practice, Plenary lecture paper	Annual Conference of the Physiological Society of India (PSI) and the VIth Congress of the Federation of Indian Physiological Societies (FIPS): FIPSPHYSICON-2015	2015	-	-
J. Sanjog, T. Dash, T. Patel, S. Karmakar	Redesign of small and medium scale injection molded plastic furniture manufacturing shop floor: Physical and environmental ergonomics aspects	Proceedings of 8th International Conference on Planning and Design (ICPD 2015), National Cheng Kung University, Taiwan	2015	276	286
Jatin Baja, Akash Harlalka, Ankit Kumar, Ravi Mokashi Punekar, Keyur Sorathia, Om Deshmukh, Kuldeep Yadav	Audio Cues: Can Sound Be Worth a Hundred Words?	Learning and Collaboration technologies, HCII International	2015	14	23
Kasturi Kalwar, Abhirup Chatterjee, Pubali Kumar, Shyamalima Buragohain, Debkumar Chakrabarti	Ergonomic and Architectural Facilitation to Boost Buddhist Circuit Tourism in Assam	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-

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Nanki Nath, Ravi Poovaiah	Simulating the Appearance of Painted and Digital Display Type on Shop Signs in India	Web proceedings of Typography Day 2015	2015	-	-
Prateen Dhara, Abhirup Chatterjee, Debkumar Chakrabarti	An all-terrain portable temperature regulating water recycling filter-cum-treatment assembly	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Pratul Ch. Kalita, Amarendra Kumar Das	Online design management tool for design ideation with Marketing-Research-Finding Sensitive Visualisation method	IASDR: Proceedings of Interplay 2015, International Conference of International Association for Societies for Design Research, Brisbane	2015	2663	2677
Pubali Kumar, Abhirup Chatterjee, Shyamalima Buragohain, Kasturi Kalwar, Debkumar Chakrabarti	Buddhist Architecture manifestations in Eco-leisure Gardens	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Ravi Mokashi Punekar	Convergence-Divergence paradigm in Design Education curriculum	ICoRD'15 – International Conference on Research into Design, IISc. Bangalore	2015	-	-
S. Goyal, R. S. Vijay, C. Monga, Pratul Kalita	Code Bits: An Inexpensive Tangible Computational Thinking Toolkit For K-12 Curriculum	TEI'16: Tenth International Conference on Tangible, Embedded and Embodied Interaction	2016	441	447
S. M. Reddy, A. Chowdhury, D. Chakrabarti, S. Karmakar	Role of Colour and Form in Product Choice and Variation of Preferences Across Product Categories: A Review	Biennial ICoRD'15 – Research into Design Across Boundaries	2015	631	640
S. Pandit, D. Chakrabarti	Ergonomic Risk Assessment on Women Handloom Weavers in Assam with the Introduction of Jacquard	CORD'15	2015	-	-
Sai Prasad Ojha, Pradeep G. Yammiyavar	Role of language in transfer of tacit knowledge: Case study of bamboo crafts making industries in North East India	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Sai Prasad Ojha, Ravi Lingannavar, Pradeep Yammiyavar	Scheme to Implement the Tacit Knowledge of the Craftsman into Rapid Prototypes	5th International conference on PLMSS, Product lifecycle modeling, simulation and synthesis, BITS-Pilani Hyderabad Campus	2015	-	-
Sanjog Kumar Panda, Abhirup Chatterjee, Debkumar Chakrabarti	Designing a continuously variable transmission mechanism for economy cars in India	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-

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Sanjog Kumar Panda, Abhirup Chatterjee, Minerva Panda, Debkumar Chakrabarti	Continuously variable transmission for Indian Bicycles	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Shilpi Bora, Abhirup Chatterjee, Debkumar Chakrabarti	Workspace Amenities for Assam Policewomen: Ergonomic Interventions	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Shilpi Bora, Abhirup Chatterjee, Wanrisa Bok Kharkongor, Arunita Paul, Pallavi Rani, Debkumar Chakrabarti	Ergonomic Enrichment of the Working Condition of Assam Policewomen	FIPSPHYSICON 2015	2015	-	-
Shrikant Salve, Pradeep Yammiyavar	Quantitative Probabilistic Widgets': Method to Improve Usability Performance of Data Entry Task	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Shyamalima Buragohain, Abhirup Chatterjee, Kasturikalwar, Pubali Kumar, Debkumar Chakrabarti	A Multi-Facility Tourist and Spiritual Recreation Centre Promoting Buddhism in Assam	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Sukanya Bor Saikia, Abhirup Chatterjee, Debkumar Chakrabarti	Ergonomics in facilitation of product design by North-eastern local people: Influence on tourism	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
Surbhit Verma, Himanshu Bansal, Keyur Sorathia	A Study for Investigating Suitable Gesture Based Selection for Gestural User Interfaces	7th International Conference on HCI, India HCI 2015	2015	47	55
Surbhit Verma, Himanshu Bansal, Keyur Sorathia	Extraction of Gestures for Presentation: A Human Centered Approach	ICoRD'15 – International Conference on Research into Design, IISc. Bangalore	2015	421	431
Urmi R. Salve, Amitabha De	Duration of exposure (working hours) and musculoskeletal discomfort / pain	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	189	-
Urmi R. Salve, Arunita Paul	Indian Female Workers: Occupational Health and Design	FIPS PHYSICON 2015	2015	90	-
Venkatesh Varala, Pradeep G. Yammiyavar	Product user Interface: a study for the meaning and usability of graphical user interfaces in Indian context	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-

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## Electronics and Electrical Engineering

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Vikas Goel, Utkarsh Mishra, Saumya Tiwari, Ravi Mokashi Punekar, Keyur Sorathia, Om Deshmukh, Kuldeep Yadav	Technology-assisted Collaborative and Experiential Learning for School Students	HCII International	2015	482	491
Vipul Nair, Abhishek Gahatraj, Abhirup Chatterjee, Debku-mar Chakrabarti	Trust-building of Patients' Relatives through an An-droid App-based Patient Information Tool	International Conference on Humanizing Work and Work Environment (HWWE 2015), IIT Bombay	2015	-	-
A. Agrawal, R. S. Kshetrim-ayum	Transmit Antenna Selection for UWB Communica-tion System over IEEE 802.15.3a Channel Model	IEEE Conecct, Bangalore	2015	1	6
A. Dalal, T. P. E. R. Joy, P. Kumar	Mutual inductance computation method for coils of different geometries and misalignments	Source of the Document IEEE Power and Energy Society General Meeting 2015-Sep-tember	2015	-	-
A. Das, A. Konwar, A. Dalal, P. Kumar	Investigation of PMSM motor performance with different magnet configurations and rotor surface profiling	IEEE International Transportation Electrifica-tion Conference (ITEC), 2015	2015	-	-
A. K. Maddirala, R. A. Shaik	Removal of EMG artifacts from single channel EEG signal using singular spectrum analysis	2015 IEEE International Circuits and Systems Symposium (ICyS 2015)	2015	-	-
A. K. Namdeo, H. B. Nemade	Extraction of electrical equivalent circuit of one port SAW resonator using FEM-based simulation	COMSOL Conference 2015, Pune	2015	-	-
A. K. Saxena, S. Goyal, R. S. Kshetrimayum	Approximate Analysis of MIMO based Cooperative Communication in $\alpha$ - $\mu$ ChannelDistribution	COMSNETS, Bangalore	2016	1	2
A. K. Singh, C. U. Reddy, K. K. Prabhakar, P. Kumar	FPGA implementation of direct torque control of induction motor with reduced ripples in torque and flux	IEEE International Transportation Electrifica-tion Conference (ITEC), 2015	2015	-	-
A. K. Singh, P. Kumar, C. U. Reddy, K. Prabhakar	Simulation of direct torque control of induction mo-tor using Simulink, simplorer and maxwell software	IEEE International Transportation Electrifica-tion Conference (ITEC), 2015	2015	-	-
A. Kumar, B. Sah, Yan Deng, Xiangning He, R. C. Bansal, P. Kumar	Autonomous hybrid renewable energy system opti-mization for minimum cost	International Conference on Renewable Power Generation (RPG 2015)	2015	-	-
A. Pal, B. K. Khonglah, S. Mandal, H. Choudhury, S. R. M. Prasanna, H. L. Rufiner, V. N. Balasubramanian	Online Bengali Handwritten Numerals Recognition using Deep Autoencoder	Proc. NCC	2016	-	-

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A. Roy, H. B. Nemade, R. Bhat-tacharjee	BER Performance of Communication Systems using SAW Correlators Encoded with Walsh and Gold Codes	NCC 2016, IIT Guwahati	2016	-	-
A. Singh, S. Dandapat	Two-Dimensional Processing of Multichannel ECG Signals for Efficient Exploitation of Inter and Intra-Channel Correlation	Advances in Communication and Computing	2015	201	209
Akhilesh Kumar Dubey, S. R. M. Prasanna, S. Dandapat	Zero Time Windowing Analysis of Hypernasality in Speech of Cleft Lip and Palate Children	Proc. NCC	2016	-	-
Aniruddha Mazumdar, Perla Ramakrishna, Prabin Kumar Bora	Blind Forensics Method for GOP Period Detection in Motion Compensated Video	Proceedings of National conference on Communications (NCC-2016), Guwahati	2016	-	-
Ankit Dalal, Mohammed Ansari, Praveen Kumar, Minoru Kikuchi, Kohei Yamaguchi, Hideki Iwanaga	Analytical Method for Accurate Determination of Nonlinear Magnetization Curve of Induction Motor	INDICON 2015, New Delhi	2015	-	-
Ashutosh Pandey, Rohan Kumar Das, Nagaraj Adiga, Naresh Gupta, S. R. M. Prasanna	Significance of Glottal Activity Detection for Speaker Verification in Degraded and Limited Data Condition	Proc. TENCON	2015	-	-
B. Jajodia, R. A. Shaik, A. Mahanta	Demodulation Techniques for IEEE 802.15.6 IR-UWB DBPSK WBAN Transceivers	IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2015)	2015	-	-
B. K. Chakraborty, M. K. Bhuyan	Automatic Skin Segmentation using Possibilistic Fuzzy C-Means under Background Similarity	Pro. of IEEE Recent Advances in Intelligent Computational Systems, Kerala	2015	32	37
B. K. Khonglah, S. R. M. Prasanna	Speech/ Music Classification using Vocal Tract Constriction aspect of speech	Proc. INDICON	2015	-	-
B. K. Kushwaha, G. Rituraj, P. Kumar	Mathematical model of series-series compensation for contactless power transfer system	41st Annual Conference of the IEEE Industrial Electronics Society, IECON 2015	2015	-	-
B. K. Kushwaha, G. Rituraj, P. Kumar	Modelling and analysis of inductively coupled power transfer system	IEEE International Transportation Electrification Conference (ITEC), 2015	2015	-	-
B. Kiran, Roy Paily	Eight-Path Harmonic Rejection Mixer for Full Band Mobile TV	18th International Symposium on Wireless Personal Multimedia Communications (WPMC'15), Hyderabad	2015	-	-



## Conference Papers

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
B. Kumbhani, N. Kumar, R. S. Kshetrimayum	Performance analysis of MIMO based Cooperative Communication in $k$ - $\mu$ Fading Channels	2nd IEEE International Conference on Recent Trends in Information Systems, Kolkata	2015	520	525
B. Kumbhani, R. S. Kshetrimayum	Relay Transmit Antenna Selection in Two Hop Cooperative Communication Systems over $k$ - $\mu$ Fading Channels	National Conference on Communications, Guwahati	2016	1	5
B. Kumbhani, V. K. Mohandas, R. P. Singh, S. Kabra, R. S. Kshetrimayum	Analysis of Space-Time Block Coded Spatial Modulation in Correlated Rayleigh and Rician Fading Channels	IEEE International Conference on Digital Signal Processing, Singapore	2015	516	520
B. Priya, S. dandapat	Linear transformation on speech subspace for analysis of speech under stress condition	IEEE Twentieth National Conference on Communications	2015	-	-
B. Priya, S. Dandapat	Stressed Speech Recognition Using Similarity Measurement on Inner Product Space	Advances in Communication and Computing	2015	261	270
B. R. Gangadari, R. A. Shaik	Analysis and Algebraic Construction of S-Box for AES Algorithm using Irreducible Polynomials	8th International Conference on Contemporary Computing (IC3 2015)	2015	-	-
B. R. Gangadari, R. A. Shaik	FPGA implementation of compact S-Box for AES algorithm using composite field arithmetic	12th Annual IEEE India Conference (INDICON 2015)	2015	-	-
Basudeba Behera, Harshal B. Nemade, Shyam Trivedi	Finite element simulation of a surface acoustic wave driven linear motor using COMSOL Multiphysics	COMSOL Conference 2015, Pune	2015	-	-
Bidisha Sharma, S. R. M. Prasanna	Improvement of Syllable based TTS System in Assamese using Prosody Modification	Proc. INDICON	2015	-	-
Biplab Ketan Chakraborty, M. K. Bhuyan, Sunil Kumar	A Weighted Skin Probability Map for Skin Color Segmentation	Proce. of IEEE International Conference on Wireless Communications Signal Processing and Networking, Chennai	2016	2188	2191
Biplab Ketan Chakraborty, M. K. Bhuyan, Sunil Kumar	Adaptive Propagation-based Skin Segmentation Method for Color Images	Pro. of Twenty Second National Conference on Communications	2016	94	99
Biswajit Dev Sarma, Bidisha Sharma, S. Aswin Shanmugam, S. R. M. Prasanna, Hema A. Murthy	Development of Assamese Text-to-speech synthesis system	Proc. TENCON	2015	-	-
Biswajit Dev Sarma, Priyankoo Sarmah, Wendy Lalhminghlui, S. R. M. Prasanna	Detection of Mizo Tones	Proc. Interspeech	2015	-	-

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D. K. Sinha, A. Chatterjee, V. Abhinav, G. Trivedi, V. Koldyaev	A Novel Capacitorless DRAM Cell Design Using Band-Gap Engineered Junctionless Double-Gate FET	29th International Conference on VLSI Design and 15th International Conference on Embedded Systems(VLSID), Kolkata	2015	312	317
D. K. Sinha, Amitabh Chatterjee, G. Trivedi	Two Dimensional Numerical Simulator for Modeling NDC Region in SNDC Devices	17th IUPAP Conference on Computational Physics (CCP), Guwahati	2015	-	-
D. K. Sinha, Amitabh Chatterjee, G. Trivedi, V. Koldyaev	Analysis and Design of ZRAM Cell for Low Voltage Operations	18th International Workshop on Physics of Semiconductor Devices (IWPSD), Bangalore	2015	-	-
D. K. Sinha, Amitabh Chatterjee, G. Trivedi, V. Koldyaev	Design of Band-gap Engineered Silicon-Germanium Junctionless Double-gate FET for ZRAM Application	6th International Conference on Computers and Device for Communication (CODEC), Kolkata	2015	-	-
D. K. Sinha, Amitabh Chatterjee, V. Abhinav, G. Trivedi, V. Koldyaev	A Novel Capacitorless DRAM cell Design using Band-gap Engineered Silicon-Germanium Junctionless Double-gate FET	29th International Conference on VLSI Design (VLSID), Kolkata	2016	-	-
Debasish Deb, R. Bhattacharjee, A. Vengadarajan	High range resolution with stepped FM in subaper-tured MIMO	2015 IEEE Radar Conference, South Africa	2015	-	-
Debasish Deb, R. Bhattacharjee, A. Vengadarajan	Scheduler for MIMO Radar	2015 IEEE Radar Conference, South Africa	2015	-	-
Debdeep Paul, Wen-De Zhong	Energy-aware Pricing for Cloud Services	ICICS, Singapore	2015	-	-
Debdeep Paul, Wen-De Zhong, Sanjay K. Bose	Energy efficient scheduling in data centers	In Communications(ICC), 2015 IEEE International Conference	2016	5948	5953
Deepak Joshi, Satyabrata Dash, Ratnajit Bhattacharjee, Gaurav Trivedi	A method of analog circuit optimization using ad-joint sensitivity analysis	Proceedings of Radioelektronika, RADIOEL-EKTRONIKA 2015	2015	75	80
Deepak Joshi, Satyabrata Dash, Ujjawal Agarwal, Ratnajit Bhattacharjee, Gaurav Trivedi	Analog Circuit Optimization Based on Hybrid Particle Swarm Optimization	International Conference on Computational Science and Computational Intelligence (CSCI 2015), Las Vegas	2015	-	-
Deepshikha Mahanta, Anupama Paul, Ramesh K. Bhukya, Rohan Kumar Das, Rohit Sinha, S. R. M. Prasanna	Warping Path and Gross Spectrum Information for Speaker Verification under Degraded Condition	Proc. NCC	2016	-	-

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Dibyayjoiti Das, Prabin Kumar Bora, Ratnajit Bhattacharjee	Cumulant Based Automatic Modulation Classification of QPSK, OQPSK, 8-PSK and 16-PSK	COMSNETS 2016, Bangalore	2016	-	-
E. R. Joy, B. K. Kushwaha, G. Rituraj, P. Kumar	Analysis and comparison of four compensation topologies of contactless power transfer system	Electric Power and Energy Conversion Systems (EPECS)	2015	-	-
E. R. Joy, K. Thirugnanam, M. Singh, P. Kumar	Distributed active and reactive power transfer for voltage regulation using V2G system	Electric Power and Energy Conversion Systems (EPECS)	2015	-	-
E. R. Joy, K. Thirugnanam, P. Kumar	AC bus distributed bidirectional contactless charging station	Source of the Document IEEE Power and Energy Society General Meeting 2015-September	2015	-	-
G. Barath Shankar, Gagandeep Singh, Sanjay K. Bose, Wen-De Zhong	Multicasting in Wireless Networks using Rateless Codes and Opportunistic Routing	ICICS, Singapore	2015	-	-
G. Baruah, S. Majhi, C. Mahanta	Fractional Order PID Controller Design For an FOPDT Model by Online Tuning Method	IEEE Conf. Industrial Instrumentation & Control	2015	-	-
G. Baruah, S. Majhi, C. Mahanta	On-Line Tuning of Fractional Order Pi Controller for an FOPDT System	IEEE 1st Indian Control Conf	2015	-	-
Ganji Sreeram, B. C. Haris, Rohit Sinha	Improved Speaker Verification using Block Sparse Coding over Joint Speaker-Channel Learned Dictionary	Proceedings of IEEE Region 10 Annual International Conference (TENCON)	2015	-	-
Gayatri Nayak, Shabari Nath	Effect of Power Electronic protections of Inverters on Protection of Micro-grids	IEEE International Conference on Power Systems	2016	-	-
H. Chel, D. Nandi, P.K. Bora	Image registration in presence of multiplicative noise by Particle Swarm Optimization	Third International Conference on Image Information Processing (ICIIP)	2015	135	140
H. Choudhury, S. Mandal, S. Devnath, S. R. M. Prasanna, S. Sundaram	Combining HMM and SVM based Stroke Classifiers for Online Assamese Handwritten Character Recognition	Proc. INDICON	2015	-	-
Hidenobu Inoue, Yuji Iwahori, Boonserm Kijirikul, M. K. Bhuyan	SVM Based Defect Classification of Electronic Board Using Bag of Keypoints	Pro. of 30th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2015), Seoul	2015	5	11
Hidenobu Inoue, Yuji Iwahori, Boonserm Kijirikul, M. K. Bhuyan	SVM Based Defect Classification of Electronic Board Using Bag of Keypoints	Proceedings of 30th International Technical Conference on Circuits/ Systems, Computers and Communications (ITC-CSCC 2015), Seoul	2015	5	11

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Himangshu Jyoti Das, Ratnajit Bhattacharjee	A Printed Meander Loop Antenna For USB Dongle Applications	IEEE Applied Electromagnetics Conference AEMC 2015, IIT Guwahati	2015	-	-
Hong Guo, Gangxiang Shen, Sanjay K. Bose	Routing and Spectrum Assignment for 1+1:1 Light-path Services in Elastic Optical Networks	International Conference on Computing, Networking and Communications - Optical and Grid Networking	2016	-	-
J. J. Nalikuzy, S. Dandapat	DCT-Based Linear Regression Approach for 12-Lead ECG Synthesis	Advances in Communication and Computing	2015	211	220
J. J. Nallikuzhy, S. Dandapat	Enhancement of the spatial resolution of ECG using multi-scale Linear Regression	IEEE Twentieth National Conference on Communications	2015	1	6
Jitendra Prajapati, Mrinmoy Bharadwaj, Amitabh Chatterjee, Ratnajit Bhattacharjee	Parametric Study of Photo Carrier Generation in Photoconductive Antenna	Conference on Computers and Devices for Communication (CODEC-2015), Kolkata	2015	-	-
Jitendra Prajapati, Mrinmoy Bharadwaj, Amitabh Chatterjee, Ratnajit Bhattacharjee	Time Dependent Capacitance in Photoconductive Antenna	IEEE Applied Electromagnetics Conference AEMC 2015, IIT Guwahati	2015	-	-
K. Karthik	Key Search and Adaptation based on Association Rules for Backward Secrecy	Pro of IEEE Workshop on Information Forensics and Security (WIFS 2015), Rome	2015	-	-
K. Karthik, H. Balaraman	Relative frequency maps for face recognition	Pro. of National conference on Communications (NCC-2016), Guwahati	2016	-	-
K. T. Deepak, K. Ramesh, Nagaraj Adiga, S. R. M. Prasanna	Speech and EGG Polarity Detection using Hilbert Envelope	Proc. TENCON	2015	-	-
K. T. Deepak, S. R. M. Prasanna	Analysis of Foreground and Distant Speech	Proc. TENCON	2015	-	-
K. Thirugnanam, P. Kumar	Fuzzy based active and reactive power support to the distribution network using electric vehicles	IEEE International Transportation Electrification Conference (ITEC), 2015	2015	-	-
Karam Singh, R. A. Shaik	A New Motion Estimation Algorithm for High Efficient Video Coding Standard	12th Annual IEEE India Conference (INDICON 2015)	2015	-	-
Kukil Khanikar, Rohit Sinha, Ratnajit Bhattacharjee	Sparse coding based spectrum sensing in presence of multiple frequency hopping primary users	Proceedings of 21st National conference on Communications (NCC 2015)	2015	-	-
M. B. Naik, S. Gonzalo, P. Kumar, S. Majhi	Analysis of sustainable public transportation system and its interaction with the grid	Source of the Document IEEE Power and Energy Society General Meeting 2015-September	2015	-	-

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M. Dhruva Kartik, Siva Teja Kakileti, Sanjay K. Bose, Gangxiang Shen	Link State Routing Protocol for Flow Optimization in Delay-Constrained Queueing Networks	ICICS, Singapore	2015	-	-
M. Francis, R. Ratnakaram, P. Guha	PD-Shift: Patch Detector Shift Based Tracker	The 5th National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG 2015)	2015	-	-
M. K. Bhuyan, 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	2015	79	92
M. M. Vinay, Roy Paily, Anil Mahanta	Power Optimization of LNA For LTE Receiver	29th International Conference on VLSI Design (VLSID), Kolkata	2015	-	-
M. M. Vinay, Roy Paily, Anil Mahanta	A Low-Power Subthreshold LNA for Mobile Applications	19th International Symposium on VLSI Design and Test Symposium, Ahmedabad	2015	-	-
Madhulika Das, Chitralkha Mahanta	Disturbance observer based optimal second order sliding mode controller for nonlinear systems with mismatched uncertainty	IEEE First International Conference on Control, Measurement and Instrumentation (CMI 2016), Kolkata	2016	-	-
N. C. Resmi, S. Chouhan	An Interdependent Source-Channel Coding for Energy Efficient Communication in WSNs	The 18th International Symposium on Wireless Personal Multimedia Communication, Hyderabad	2015	-	-
N. N. Arora, A. Jindal, M. Singh, N. Kumar, P. Kumar	A novel smart meter for better control over devices including electric vehicles and to enable smart use of power in smart home	IEEE International Transportation Electrification Conference (ITEC), 2015	2015	-	-
Nabanita Adhikary, Chitralkha Mahanta	Adaptive Backstepping Sliding Mode Controller with PID Sliding Surface for a Co-ordinated Links (COOL) Robot Arm	International Conference on Advances in Robotics (AIR), Goa	2015	-	-
Nagaraj Adiga, S. R. M. Prasanna	Source Modeling for HMM based speech synthesis using integrated LP residual	Proc. ICASSP	2016	-	-
Nagendra Kumar, Rohit Sinha	Class Specificity and Commonality based Discriminative Dictionary for Speaker Verification	22nd National Conference on Communications, Guwahati	2016	1	5
P. Anoop, Ratnajit Bhattacharjee	Design of Dual Band Triangular DRA For WLAN Application	IEEE Applied Electromagnetics Conference AEMC 2015, IIT Guwahati	2015	-	-

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P. Anoop, Ratnajit Bhattacharjee	Investigation on Dielectric Loaded Monopole Antennas for Dual Band Application	NCC 2016, IIT Guwahati	2016	-	-
P. K. Bora, S. R. M. Prasanna, K. K. Sarma, N. Saikia	Advances in Communication and Computing	Lecture Notes in Electrical Engineering	2015	-	-
P. Malik, K. Karthik	Detection of Purple Fringing Aberration Patterns and its Application to Forensic Analysis of Spliced Images	Proof International Conference on Advances in Computing, Communications and Informatics (ICACCI 2015), Kochi	2015	-	-
P. Sodhani, A. Bordia, K. Karthik	Blind Content Independent Noise Estimation for Multimedia Applications	Proceedings of International Multi-conference on Information Processing (IMCI), Bangalore	2015	-	-
Pavan Kumar Manchi, Roy Paily, Anup Kumar Gogoi	Design and Implementation of Low-Power Digital Baseband Transceivers for IEEE802.15.6 Standard	29th International Conference on VLSI Design (VLSID), Kolkata	2015	-	-
R. K. Tripathy, S. Dandapat	Quantifying Clinical Information in MCG Using Sample and Channel Convolution Matrices	Advances in Communication and Computing	2015	73	80
R. Kannao, P. Guha	Overlay Text Extraction From TV News Broadcast	The 12thIEEE India International Conference (INDICON 2015)	2015	-	-
R. Kannao, P. Guha	TV Advertisement Detection For News Channels Using Local Success Weighted SVM Ensemble	The 12thIEEE India International Conference (INDICON 2015)	2015	-	-
R. Kannao, P. Guha	TV Commercial Detection using Success based Locally Weighted Kernel Combination	The 22ndInternational Conference on Multi Media Modeling (MMM 2016)	2016	793	805
R. Kannao, P. Guha	A Novel Local Success Weighted Ensemble Classifier	The 3rdAsian Conference on Pattern Recognition (ACPR 2015)	2015	-	-
R. Rana, K. Kaur, M. Singh, N. Kumar, P. Kumar	Integrated fleet of electric vehicles as a frequency regulation agent in the grid	IEEE International Transportation Electrification Conference (ITEC), 2015	2015	-	-
R. Ratnakaram, M. Francis, P. Guha,	Tracking Under Scaling And Rotations Using Stochastic Mean Shift	The 12thIEEE India International Conference (INDICON 2015)	2015	-	-
R. Sandeep, S. Sharma, M. Thakur, P. K. Bora	Perceptual video hashing based on Tucker decomposition with application to indexing and retrieval of near-identical videos	Multimedia Tools and Applications	2015	1	19
R. Singh, S. Chouhan	A cross-layer MAC protocol for contention reduction and pipelined flow optimization in wireless sensor networks	IEEE 2nd International Conference on Recent Trends in Information Systems(ReTIS)	2015	58	63

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Rajib Jana, Ratnajit Bhat-tacharjee	A Hybrid Numerical Technique To Investigate The Performances Of Offset Reflector and Matched Feed	IEEE Applied Electromagnetics Conference AEMC 2015, IIT Guwahati	2015	-	-
Ratul Kumar Baruah, Roy Paily	Effects of Substrate-Bias on the Reliability and Process-Induced Parameters of a Short-Channel Junctionless Transistor	XVIII International Workshop on the Physics of Semiconductor Devices, December 2015, Indian Institute of Science, Bangalore	2015	-	-
Ratul Kumar Baruah, Roy Paily	Reliability of Silicon Carbide based Double-gate Junctionless Transistor for High Temperature Ap-plications	7th IEEE International Workshop on Reliabil-ity Aware System Design and Test (RASDAT), Kolkata	2016	-	-
Ravi Shankar, Arpit Jain, K. T. Deepak, C. M. Vikram, A. Deka, S. R. M. Prasanna	Spoken Term Detection from Continuous Speech Using ANN Posteriors and Image Processing Tech-niques	Proc. NCC	2016	-	-
S. A. Prashanth, S. Nekkalamu, A. Dalal, P. Kumar	Analytical determination of slot harmonics content of air-gap magnetic field for an induction machine	Source of the Document IEEE Power and Energy Society General Meeting 2015-Sep-tember	2015	-	-
S. Affijulla, P. Tripathy	Estimation of phasor under dynamic conditions us-ing convolution	IEEE PES General meeting	2015	-	-
S. Bhattacharjee, R. S. Kshetri-mayum, R. Bhattacharjee	Bandwidth enhancement of Printed Monopole An-tennas using Magnetodielectric cover	AEMC, Guwahati	2015	1	2
S. Borah, R. S. Kshetrimayum	UPML-FDTD Analysis of Printed Monopole Antennas	AEMC, Guwahati	2015	1	2
S. Dandapat, L. N. Sharma, R. K. Tripathy	Quantification of Diagnostic Information from Elec-trocardiogram Signal: A Review	Advances in Communication and Comput-ing	2015	17	39
S. Deb, S. Dandapat	A novel breathiness feature for analysis and classifi-cation of speech under stress	IEEE Twentieth National Conference on Communications	2015	1	6
S. Dutt, H. Patel, S. Nandi, G. Trivedi	Exploring Approximate Computing for Yield Im-provement via Re-design of Adders for Error-resilient Applications	29th International Conference on VLSI De-sign (VLSID), Kolkata	2015	134	139
S. Garg, E. Hassan, S. Kumar, P. Guha	A Hierarchical Frame-by-Frame Association Method based on Graph Matching for Multi-Object Tracking	The 11thInternational Symposium on Visual Computing (ISVC 2015)	2015	138	150
S. Garg, R. Ratnakaram, S. Kumar, P. Guha	An Occlusion Reasoning Scheme for Monocular Pedestrian Tracking in Dynamic Scenes	The 12thIEEE International Conference on Advanced Video and Signal-based Surveil-lance (AVSS 2015)	2015	-	-
S. Gupta, J. Yadav, R. S. Kshet-rimayum	Low complexity detection algorithm for Alamouti like STBC for Large MIMO systems	IEEE Conecct, Bangalore	2015	1	5

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S. Josephine, S. Chouhan	Estimation of Integration Interval of Energy Detector in UWB using CS	8th International Conference on Communication Systems and Networks (COMSNETS), Bengaluru	2015	-	-
S. Kumar, S. Chouhan	Outage Probability Analysis of Cognitive Decode-and-Forward Relay Networks Over Kappa-Mu Shadowed Channels	21st Asia Pacific Conference on Communication Kyoto, Japan	2015	-	-
S. Padhy, S. Dandapat	SVD Analysis on Reduced 3-Lead ECG Data	Advances in Communication and Computing	2015	253	260
S. Pandey, S. Majhi	Frequency Domain based Identification of Processes Using Limit Cycle Information	IEEE Conf. Industrial Instrumentation & Control	2015	-	-
S. Pandey, S. Majhi	Limit Cycle Based Identification of Second Order Processes with Time Delay	Proc. of IEEE 2nd Indian Control Conference, IIT Hyderabad	2016	-	-
S. Ranjani, K. Karthik, P. K. Bora, V. Abdulkareem	Multi-band sum of spectrogram based audio fingerprinting of Indian film songs for multi-lingual song retrieval	Pro. of International Conference on Advances in Computing, Communications and Informatics (ICACCI)	2015	1414	1420
S. S. Ranjani, V. Abdulkareem, K. Karthik, P. K. Bora	Application of SHAZAM-Based Audio Fingerprinting for Multilingual Indian Song Retrieval	Advances in Communication and Computing	2015	81	92
S. Shahnawazuddin, Abhishek Dey, K. T. Deepak, Siddika Imani, S. R. M. Prasanna, R. Sinha	Enhancements in Assamese Spoken Query System: Enabling Background Noise Suppression and Flexible Queries	Proc. NCC	2016	-	-
S. Shrivastava, A. Rajesh, P. K. Bora	A simplified counter approach to primary user emulation attacks from secondary user perspective	IEEE 26th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)	2015	2149	2154
Sameer Pawanekar, Gaurav Trivedi	Net Weighing Based Timing Driven Standard Cell Placer	Proceeding of VLSI Design and Test 2015	2015	1	6
Sameer Pawanekar, Gaurav Trivedi	TSV Aware Standard Cell Placement Tool for 3D ICs	Proceeding of VLSI Design and Test 2015	2015	1	6
Sameer Pawanekar, Kalpesh Kapoor, Gaurav Trivedi	A Nonlinear Analytical Optimization Method for Standard Cell Placement of VLSI Circuits	Proceedings of VLSI Design 2015	2015	423	428
Sanjoy Mondal, Jawhar Ghommam, Maarouf Saad, Chitralekha Mahanta	A step by step adaptive super twisting controller for mismatched uncertain system	European Control Conference Linz, Austria	2015	-	-



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Sarfaraz Jelil, Rohan Kumar Das, K. Amitab, F. Pyrtuh, L. J. Singh, S. R. M. Prasanna	Exploring Speaker Modeling Techniques for Short Pass-Phrase Based Person Authentication System	Proc. International Conference on Computing and Communication Systems	2015	-	-
Saroj Mondal, Roy Paily	An Efficient On Chip Power Management Architecture for Solar Energy harvesting Systems	29th International Conference on VLSI Design (VLSID), Kolkata	2015	-	-
Saroj Mondal, Roy Paily	An Efficient On-chip Energy Processing Circuit for Micro-Scale Energy Harvesting Systems	19th International Symposium on VLSI Design and Test Symposium, Ahmedabad	2015	-	-
Satyabrata Dash, Krishna Lal Baishnab, Gaurav Trivedi	Applying River Formation Dynamics to Analyze VLSI Power Grid Networks	29th International Conference on VLSI Design and 15th International Conference on Embedded Systems (VLSID), Kolkata	2015	258	263
Satyabrata Dash, Vivek Bangera, Vinay B. Y. Kumar, Gaurav Trivedi, Sachin B. Patkar	Parallel Two Step Random Walk Algorithm to Analyze VLSI Power Grid Networks	Proceeding of VLSI Design and Test 2015	2015	1	2
Satyabrata Dash, Vivek Bangera, Vinay B. Y. Kumar, Sachin B. Patkar, Gaurav Trivedi	Power grid analysis on parallel computing platforms	Proceedings of Radioelektronika, RADIOELEKTRONIKA 2015	2015	89	93
Seiya Tsuda, Yuji Iwahori, Yuki Hanai, Robert J. Woodham, M. K. Bhuyan, Kunio Kasugai	Recovering Size and Shape of Polyp from Endoscope Image by RBF-NN Modification	Proceedings of IEEE ICIP 2015	2015	1	5
Shashi Kumar, Yuji Iwahori, M. K. Bhuyan	PCB Defect Classification Using Logical Combination of Segmented Copper and Non-Copper Part	Proce. of International Conference on Computer Vision & Image Processing, IIT Roorkee	2016	1	9
Shreyasee Debnath, Manashwi Tamuli, Ashok Kumar Ray, Gaurav Trivedi	A Review on accelerating scientific computations using the Conjugate Gradient Method	Proceedings of IEEE International Conference on Electronic Design, Computer Networks & Automated Verification	2015	150	153
Sibaji Gaj, Arijit Sur, Prabin Bora	A Robust Watermarking Scheme against Re-Compression Attack for H.265/HEVC	IEEE National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG)	2015	-	-
Sishir Kalita, S. R. M. Prasanna, S. Dandapat	Analysis of glottal stops using pitch synchronous integrated linear prediction residual	Proc. NCC	2016	-	-
Sunil Dutt, Anshu Chauhan, Rahul Bhadoriya, Sukumar Nandi, Gaurav Trivedi	A High-performance Energy-efficient Hybrid Redundant MAC for Error-resilient Applications	Proceedings of VLSI Design 2015	2015	351	356

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Sunil Dutt, Anshu Chauhan, Sukumar Nandi, Gaurav Trivedi	Variability-aware Parametric Yield Enhancement via Post-silicon Tuning of Hybrid Redundant Radix-2 MAC Units	Proceedings of International Symposium on VLSI Design, Automation and Test (2015 VLSI-DAT)	2015	1	4
Sunil Kumar, M. K. Bhuyan	Neutral Expression Modeling in Feature Domain for Facial Expression Recognition	Pro. of IEEE Recent Advances in Intelligent Computational Systems, Kerala	2015	4	9
Sunil Kumar, M. K. Bhuyan, Biplab Ketan Chakraborty	An Efficient Face Model for Facial Expression Recognition	Pro. of Twenty Second National Conference on Communications	2016	711	716
Sushanta Kundu, Harshal B. Nemade	Piezoelectric vibration energy harvester based on thickness-tapered cantilever	COMSOL Conference 2015, Pune	2015	-	-
T. Malathi, M. K. Bhuyan	Local Gabor Wavelet-based Feature Extraction and Evaluation	Pro. of 3rd International Conference on Advanced Computing, Networking, and Informatics (ICACNI – 2015), Orissa	2015	-	-
T. Malathi, M. K. Bhuyan	Local Gabor Wavelet-based Feature Extraction and Evaluation	Proceedings of 3rd International Conference on Advanced Computing, Networking, and Informatics (ICACNI – 2015), Orissa	2015	-	-
T. Malathi, M. K. Bhuyan, C. Asokan, Y. Iwahori, Bhuyan	Disparity Map Estimation using Local Gabor Wavelet under Radiometric Changes	Pro. of international conference on Digital Information Processing, Data Mining, and Wireless Communications, Dubai	2015	148	156
Thallapally Pradeep Kumar, M. Veera Prasad Reddy, Prabin Kumar Bora	Leaf Identification using Shape and Texture Features	Pro. of the International Conference on Computer Vision & Image ProcessingCVIP2016, Roorkee	2016	-	-
Tomoya Suda, Yuji Iwahori, Kenji Funahashi, Boonserm Kijirikul, M. K. Bhuyan	Proposal of Shape Recovery of Polyp Using Blood Vessel Information in Endoscope Image	Tokai-Fuzzy Research Meeting,P2-03	2015	1	8
Tousif Khan Nizami, Arghya Chakravarty, Chitralkha Mahanta	Finite Time Current Observer based Adaptive Backstepping Control of Buck Converters	INDICON 2015, New Delhi	2015	-	-
Tousif Khan Nizami, Chitralkha Mahanta	Experimental Investigations into a Hybrid Control Algorithm for DC-DC Buck Converters	NSC, New Delhi	2015	-	-
V. Hari Krishna, R. A. Shaik	A 0.3 V Pseudo Differential Bulk input Two stage OTA for Low Frequency Applications	3rdInternational Conference on Electronics and Communication Systems (ICECS-2016)	2016	-	-

## Conference Papers

## Electronics and Electrical Engineering

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
V. Abhinav, D. K. Sinha, Am- itabh Chatterjee, G. Trivedi, V. Koldyaev	A Novel Co-Design Methodology for Optimizing ESD protection Device using Layout Level Approach	29th International Conference on VLSI De- sign (VLSID), Kolkata	2016	-	-
V. Hari Krishna, R. A. Shaik	A 0.5 V, 80-nW Pseudo-Differential Two-stage OTA in 0.18µm CMOS Technology	12th Annual IEEE India Conference (INDI- CON 2015)	2015	-	-
V. K. Pandey, I. Kar, C. Mahanta	Control of Twin-Rotor Mimo System Using Multiple Models with Second Level Adaptation	ACODS 2016, NIT Trichy	2016	-	-
Vaddi C. Sekhar, Satyajit Bora, Monalisa Das, Pavan K. Man- chi, S. Josephine, Roy Paily	Design and Implementation of blind Assistance Sys- tem using Real Time Stereo Vision Algorithms	29th International Conference on VLSI De- sign (VLSID), Kolkata	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	2015	1	4
Yuji Iwahori, Daiki Yamaguchi, Tsuyoshi Nakamura, Boon- serm Kijirikul, M. K. Bhuyan, Kunio Kasugai	Estimating Reflectance Parameter of Polyp Using Medical Suture Information in Endoscope Image	ICPRAM 2016	2016	1	7
Yuji Iwahori, Seiya Tsuda, Aili Wang, Robert J. Woodham, M. K. Bhuyan, Kunio Kasugai	Shape Modification from Endoscope Images by Regression Analysis	IJMUE-2016	2015	199	210

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## Centre for Energy

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Yuji Iwahori, Seiya Tsuda, Rob- ert J. Woodham, M. K. Bhuyan, 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	2015	62	70
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	2015	1	4

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
A. Yadav, P. Agarwal	Persistent photoconductivity studies in a-Si:H/nc-Si:H thin film super lattices	ICANS26, Aachen	2015	-	-
A. Yadav, P. Basumatary, P. Agarwal	Research Activities in Solar Energy Lab	Research Conclave'16, IIT Guwahati	2016	-	-
C. R. Barik, S. Purohit, L. Sahoo, V. V. Goud	Physico-chemical Characterization of Pulp and Seed Oils of Sea Buckthorn ( <i>Hippophae salicifolia</i> D. Don) from Tawang District of Arunachal Pradesh, North Eastern India	7th International conference, International Sea Buckthorn Association, New Delhi	2015	-	-
D. Yadav, P. Ghosh, L. Rangan, P. Mahanta	Isolation and Characterization of Residual Lignin	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
H. Jha, A. Yadav, M. Singh, S. Kumar, P. Agarwal	X-ray Photoelectron Spectroscopy studies on cubic silicon carbide thin films prepared by HWCVD	International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS26), Aachen	2015	-	-
J. R. Pati, P. Mahanta, S. Dutta	Experimental Study and Comparison of Paddy Drying in Natural Convection and Rotating Fluidized Bed in a Static Geometry dryer (RFB-SG)	ICAER-2015, IIT Bombay	2015	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
S. K. Hotta, R. Singh, N. Sahoo, K. Mohanty, P. Mahanta	Design of a venturi type biogas mixer for a four stroke spark ignition engine	Proceedings of 5th International Conference on Advances in Energy Research (ICAER), IIT Bombay	2015	-	-
S. Kaushik, P. Goswami	Development of cyanobacterial biofilm using chitosan as biofilm inducing material for biofuel cell applications	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
S. Mishra, V. V. Dasu, K. Mohanty	Nutrient removal by <i>Chlorella pyrenoidosa</i> from artificial wastewater with simultaneous biomass production	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
Barbie Hazarika, Sharad Gokhale	Secondary pollutants from VOCs in urban indoor air	National Conference on De-polluting Indian Cities, New Delhi	2015	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Bhaskar Das, Tapas K. Mandal, Sanjukta Patra	Kinetics and enzymatic mechanism of microalgal phenol degradation	NCOCER, IIT Guwahati	2015	-	-
Isha Vishan, A. Laha, S. Senthil Kumar, Ajay Kalamdhad	Biosorption of Lead (Pb) by Bacillus badiusAK strain (KP 216715) during rotary drum composting of water hyacinth.	International Conference on Solid Waste (ICSWHK-2015), Hong kong	2015	-	-
Isha Vishan, Ajay S. Kalamdhad	Interaction of Bacillus badiusAK strain with Lead (Pb) isolated during rotary drum composting of water hyacinth	National Conference on Challenges in Environmental Research (NCOCER 2015)	2015	-	-
M. Gopikiran, Kannan Pakshirajan, Gopal Das	Sulfate reducing bacteria from a lab scale up flow anaerobic packed bed reactor for heavy metal removal and its characterization	NCOCER, IIT Guwahati	2015	-	-
Mothe Gopi Kiran, K. Pakshirajan, G. Das	Kinetic and mechanism of heavy metal removal by sulfate reducing bacteria obtained from a laboratory scale upflow anaerobic packed bed reactor	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2016	-	-
Niva Rana Mahanta, Pooja Priyam Ravi, Sherlyn Daniel	Adaption of Vernacular Architecture as a Sustainable Identity for the Contemporary Built Environment	South Asian Vernacular Architecture conference, Bhopal	2015	-	-

## Conference Papers

## Humanities and Social Sciences

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Partha Pratim Sarmah, Hirakjyoti Mahanta, Deepmoni Deka	Study of biomasses abundantly available in Assam, India for production of biofuels	NCOCER, IIT Guwahati	2015	-	-
Smruti R. Dash, S. S. Bag, Animesh Golder	Pre-treatment of lignocellulosic biomass towards production of value added chemicals- A short review	National Conference on Challenges in Environmental Research (NCOCER 2015)	2015	-	-
Smruti R. Dash, S. S. Bag, Animesh Golder	Synthesis and Antimicrobial effects of Nanoparticles - A mini Review	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2016	-	-
Visva Bharati Barua, Ajay S. Kalamdhad	Water Hyacinth: A potential biomass for biogas production	NCOCER, IIT Guwahati	2015	-	-

**Conference Papers**
**Humanities and Social Sciences**

<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
Archana Barua	Borgeet: the Connecting Link Between the Profane and the Sacred	Oral and Textual traditions of North east India	2016	9	10
Biswajit Deb Sarma, Priyankoo Sarmah, Wendy Lalhminghlui, S. R. M. Prasanna	Detection of Mizo Tones	INTERSPEECH 2015	2015	934	937
G. Kumar, S. Borbora	Institutions, Institutional Environment and Entrepreneurship	International conference on Transnational Entrepreneur and International SMEs in Emerging Economies: Drivers and Strategies	2015	695	705
Priyankoo Sarmah, Leena Dihingia, Wendy Lalhminghlui	Contextual Variation of Tones in Mizo	INTERSPEECH 2015	2015	983	986
Priyankoo Sarmah, Luke Horo	Language Maintenance and Shift: The Assam Sora Perspective	LAMAS 5	2015	8	18

**Conference Papers**
**Mathematics**

<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
Priyankoo Sarmah, Phunuma Mazumdar	Aspiration in Alveolar Fricatives in Bodo	ICPhS18	2015	-	-
S. Borbora, A. Majumdar	Social Security in the Urban Informal Manufacturing Sector: An Empirical Study in Assam, India	4th International Interdisciplinary Business-Economics Advancement Conference (IIBA)	2015	224	235
S. Borbora, D. Das, R. Mahanta	Determinants of Adoption of Clean Energy Source: The Case of Biogas in India	4th International Interdisciplinary Business-Economics Advancement Conference (IIBA)	2015	5	13
V. Prabhu, Dewartha Morang	Moral Pluralism in Environmental Ethics	Asian Conference on Ethics, Religion and Philosophy	2015	89	95
Arup Chattopadhyay, Kalyan B. Sinha	Trace formulae in operator theory	24th International Workshop in Operator Theory and its Applications, Bangalore	2015	1	36
B. Manjanna, Ramesh K. Jallu, Gautam K. Das	Constrained k-Center Problem on a Convex Polygon	15th International Conference on Computational Science and its Application (ICCSA 2015)	2015	209	222
Barun Gorain, Partha Sarathi Mandal, Krishnendu Mukhopadhyaya	Approximation Algorithms for Generalized Bounded Tree Cover	10th International Workshop on Algorithms and Computation (WALCOM 2016), Lecture Notes in Computer Science	2016	263	273

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## Mechanical Engineering

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Hiranmoy Pal, Bikash Bhat-tacharjya	A class of gcd-graphs having Perfect State Transfer	International Conference on Graph Theory and its Applications	2016	-	-
Jitender Kumar, K. V. Krishna	Radicals and ideals of affine near-semirings over brandt semigroups	Semigroups, Algebras and Operator Theory (Springer Proceedings in Mathematics and Statistics)	2015	123	133
Ramesh K. Jallu, Gautam K. Das	Improved Algorithm for Maximum Independent Set on Unit Disk Graph	International Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2016)	2016	212	223
A. Guglani, A. Dalal, S. Basu	Three-dimensional Electrochemical Thermal Model for Li-ion Pouch Cells	1st ISHMT-ASTFE and 23rd National Heat and Mass Transfer Conference, ISRO, Trivandrum	2015	-	-
A. Mazumder, A. Dalal, S. Sethi, A. Atta	Numerical Studies on Axisymmetric Phase Change Problem Under Concentrated Energy Beam	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
A. Singh, P. Kumari, S. Behera	Free vibration analysis of Levy-type composite plate using efficient zig-zag theory	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
Ashish Rajak, Sachin D. Kore	Effect Of Process Parameters On Electromagnetic Hemming Of AA 1050 Alloy	IUPAP Conference on Computational Physics: CCP2015	2015	-	-
B. Das, S. Pal, S. Bag	Defect detection in friction stir welding process using signal information and fractal theory	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
B. Das, S. Pal, S. Bag	Machine vision system based monitoring approach for friction stir welding process	IEEE First International Conference on Control, Measurement and Instrumentation (CMI 2016), Jadavpur University, Kolkata	2016	-	-
B. Das, S. Pal, S. Bag	Neurofractal modeling of weld quality in friction stir welding (Best technical paper award)	International Conference on Cutting, Welding and Surfacing (CWS 2015), Coimbatore	2015	-	-
B. Kiran Naik, Amit Kumar, Ankit Soni, P. Muthukumar, C. Somayaji	Coupled Heat and Mass Transfer analysis of an Adiabatic Regenerator – Unique Approach	ICAME 2015, TKM College of Engineering, Kerala	2015	-	-
B. Kiran Naika, A. Varshney, P. Muthukumar, C. Somayaji	Modelling and Performance Analysis of U Type Evacuated Tube Solar Collector Using Different Working Fluids	5th International Conference on Advances in Energy Research, IIT Bombay	2015	-	-

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<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
B. Kiran Naika, Ankit Sonia, Amit kumar, P. Muthukumar, C. Somayaji	Coupled Heat and Mass Transfer Analysis of an Adiabatic Dehumidifier – Unique Approach	5th International Conference on Advances in Energy Research, IIT Bombay	2015	-	-
B. Kiran Naika, P. Muthukumar, C. Somayaji	Thermodynamic Analysis of Liquid Desiccant Dehumidification System- A Novel Approach	23rd National and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, Trivandrum	2015	-	-
B. Kiran Naika, V. K. Choudhary, P. Muthukumar, C. Somayaji	Performance Assessment Of A Cross Flow Cooling Tower – A Simplified Approach	4th National Conference on Refrigeration and Air Conditioning (NCRAC-2015), Chennai	2015	-	-
B. N. Fetene, U. S. Dixit	A finite element analysis of laser assisted mechanical bending of aluminium alloy sheets along with inverse determination of input parameters	National Conference on Emerging Technologies' Contributions in Promoting Defense and Industry Capabilities (NCETCPDIC), Bishoftu	2015	-	-
C. R. C. Rao, L. Prasad, P. Muthukumar, C. M. Somayaji	Performance Investigation of Lab scale Sensible Heat Storage System	National Conference on Solar Thermal Energy Technologies (NCSTET), IIT Jodhpur	2016	-	-
D. K. Rabha, P. Muthukumar, C. Somayaji	Design and Analytical Study of a Solar Dryer Integrated with Shell and Tube Paraffin Based Latent Heat Storage for Drying Green Chilli	23rd National and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, Trivandrum	2015	-	-
Devang Agarwal, Deepak Sharma	Experimental Study on Bound Handling Techniques for Multi-objective Particle Swarm Optimization	Innovations in Bio-Inspired Computing and Applications	2015	-	-
H. Gurung, A. Banerjee	Self-sensing SMA Actuator using Extended Kalman Filter and Artificial Neural Network	Proceedings of ICOVP 2015 12th International conference on vibration problems	2015	-	-
H. Gurung, S. Karmakar, A. Banerjee	Development of an extended Kalman filter for self-sensing application of shape memory alloy wire actuator	ASME 2015 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Colorado	2015	-	-
H. M. Sathisha, A. Dalal	A Lumped Thermal Model for the All-vanadium Redox Flow Batteries	1st ISHMT-ASTFE and 23rd National Heat and Mass Transfer Conference, ISRO, Trivandrum	2015	-	-
H. Niyas, P. Muthukumar	Comparison of Thermal Storage Characteristics of Phase Change Materials Encapsulated in Different Capsule Configurations	23rd National and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, Trivandrum	2015	-	-
H. Niyas, P. Muthukumar	Novel Encapsulation Technique to Upscale Latent Heat Storage Capacity in Steam Accumulators	ISES Solar World Congress 2015, Daegu	2015	-	-



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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
H. Niyas, P. Muthukumar	Novel Fin for Effective Heat Transfer in Shell-And-Tube Latent Heat Storage System	ISES Solar World Congress 2015, Daegu	2015	-	-
Kalpajyoti Borah, Ganesh Natarajan, Anoop K. Dass	Optimally-dissipative wave-particle splitting scheme for ideal magnetohydrodynamics	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	-	-
Kalpajyoti Borah, Ganesh Natarajan, Anoop K. Dass	A conservative meshfree framework for one-dimensional ideal magnetohydrodynamics	17th Annual CFD Symposium, Bangalore	2015	-	-
M. Dabi, U. K. Saha	Experimental analysis of a dual-fuel engine fueled by producer gas derived from pine leaves and cattle dung briquettes	ASME Gas Turbine India Conference, Hyderabad	2015	-	-
P. Borgohain, A. Dalal, H. Gadgil, G. Natarajan	Numerical Simulation of Laminar Non-reacting Variable Density Flows Using Low Mach Number Approach on Unstructured Grids	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
P. K. Talukdar, S. Kumar, V. Kulkarni, A. K. Das, U. K. Saha	On-site testing of a zero head vertical axis helical water turbine for power generation	ASME Gas Turbine India Conference, Hyderabad	2015	-	-
P. Kalita, A. K. Dass	Effect of limiter on the computation of viscous supersonic flow over a flat plate	Proceedings of the International Conference on Frontiers in Mathematics, 2015, Gauhati University	2015	-	-
P. Kumar, S. K. Dwivedy, P. Kumari	Dynamic analysis of piezoelectric based energy harvester under periodic excitation	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
P. Kumari, S. Behera	Natural frequency of orthotropic laminated plate using extended Kantorovich method	60th Congress International Conference of Indian Society of Theoretical and Applied Mechanics (ISTAM 2015)	2015	-	-
P. Mukherjee, U. K. Saha	Performance prediction of Darrieus rotor through numerical analysis	ASME Gas Turbine India Conference, Hyderabad	2015	-	-
P. Muthukumar, S. Anbarasu	Development of Fast Reaction Metal Hydride Reactors for Hydrogen Storage and Thermal Management Applications	6th World Hydrogen Technologies Convention, Sydney	2015	-	-
P. Pandey, A. Dalal, G. Biswas	Bubble Formation in Film Boiling including Electrohydrodynamic Forces	ICHMT International Symposium on Advances in Computational Heat Transfer, Rutgers University, Piscataway	2015	-	-
Piyush Singh, Pankaj Biswas, Sachin D. Kore	A three-dimensional fully coupled thermo-mechanical model for Self-reacting Friction Stir Welding in Aluminium alloy AA6061	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	-	-

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Piyush Singh, Sachin D. Kore, Pankaj Biswas	A Three-Dimensional Fully Coupled Thermo-Mechanical Model For Self-Reacting Friction Stir Welding In Aluminium Alloy AA6061	IUPAP Conference on Computational Physics: CCP2015	2015	-	-
Ramesh Kumar, Sachin D. Kore	Finite Element Modelling And Analysis Of The Effect Of Frequency On The Electromagnetic Compression Of Tubes	IUPAP Conference on Computational Physics: CCP2015	2015	-	-
S. Agarwal, N. Sahoo	A coaxial surface junction thermocouple – fabrication and testing in internal combustion engine	Workshop on Frontier Energy Research with Industry Academia Partnership (FERIAP)	2015	-	-
S. Agarwal, N. Sahoo	Coaxial surface junction thermocouple for transient measurements in the combustion chamber of an internal combustion engine	Proceedings of 5th International Conference on Advances in Energy Research (ICAER), IIT Bombay	2015	-	-
S. Agarwal, N. Sahoo	Comparative analysis of stagnation point heat flux over a hemispherical model using different types of thermal sensors in the shock tube	Proceedings of 4th National Symposium on Shock Waves (NSSW), Coimbatore, February 25-26	2016	-	-
S. Agarwal, N. Sahoo	Stagnation point heat flux measurement in the shock tube using coaxial surface junction thermocouple	Proceedings of 23rd National Heat and Mass Transfer Conference and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, ISRO (VSSC) Thiruvananthapuram	2015	-	-
S. Behera, P. Kumari	Three-dimensional free vibration of levy-type composite plate using extended Kantorovich method	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
S. Bhardwaj, A. Dalal	Mesoscopic Analysis of Droplet Spreading Behaviour on Wetted Surface for Low Viscosity Ratio	ASME 2016 5th Micro/Nanoscale Heat and Mass Transfer International Conference, Biopolis, Singapore	2016	-	-
S. Bhardwaj, A. Dalal, G. Biswas	Natural Convection Flows in a Porous Nanofluid-filled Triangular Enclosure With Wavy Left Wall	ICHMT International Symposium on Advances in Computational Heat Transfer, Rutgers University, Piscataway	2015	-	-
S. Brahmachary, V. Kulkarni, G. Natarajan, N. Sahoo	Active and passive wave drag reduction technique for hypersonic flow	Proceedings of 23rd National Heat and Mass Transfer Conference and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, ISRO (VSSC) Thiruvananthapuram	2015	-	-
S. Brahmachary, V. Kulkarni, G. Natarajan, N. Sahoo, S. Agarwal	Numerical Investigation of optimum power-effectiveness for wave drag reduction	Proceedings of 4th National Symposium on Shock Waves (NSSW), Coimbatore, February 25-26	2016	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
S. K. Barik, N. Sahoo, R. G. Narayanan	High strain rate deformation studies on sheets and composites	Proceedings of 4th National Symposium on Shock Waves (NSSW)	2016	-	-
S. K. Hotta, R. Singh, N. Sahoo, K. Mohanty, P. Mahanta	Design of a venturi type biogas mixer for a four stroke spark ignition engine	Proceedings of 5th International Conference on Advances in Energy Research (ICAER), IIT Bombay	2015	-	-
S. Kotoky, A. Dalal, G. Natara-jan	Numerical Simulation of Laminar Gas Particle Flow through a Vertical Channel and Over a Backward Facing Step	68th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati	2015	-	-
S. M. Kamal, A. C. Borsaikia, U. S. Dixit	Measurement of Residual Stresses in the Thermal Autofrettage of Thick-walled Cylinder	Proceedings of Thirtieth National Convention of Production Engineers and National Seminar on Sustainable Manufacturing	2015	-	-
S. Mahto, A. K. Gogoi, U. S. Dixit	A Comparative Study of Improved Dynamics of Single Link Flexible Revolute-Jointed Robotic Manipulator	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
S. Panda	Design and Effective Properties of a Functionally Graded Unidirectional Fiber-Reinforced Composite	ASME 2015 Conference on Smart Materials, Adaptive Structures and Intelligent Systems	2015	-	-
S. Panigrahy, G. S. Sinha, P. Muthukumar, S. C. Mishra	Analysis of Combustion of Premixed Kerosene-air Mixture in a Cooking Stove with a Porous Matrix.	23rd National and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, Trivandrum	2015	-	-
S. Panigrahy, N. K. Mishra, P. Muthukumar, S. C. Mishra	Analysis of LPG Combustion in a Domestic Cooking Stove with a Porous Radiant Burner	23rd National and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, Trivandrum	2015	-	-
S. R. Nanda, S. K. Barik, N. Sahoo, V. Kulkarni	Drag measurement in shock tube using stress wave force balance	Proceedings of 4th National Symposium on Shock Waves (NSSW), Coimbatore, February 25-26	2016	-	-
S. R. Nanda, V. Kulkarni, N. Sahoo	A new technique for prediction of heat flux using soft computing technique	Proceedings of 23rd National Heat and Mass Transfer Conference and 1st International ISHMT-ASTFE Heat and Mass Transfer Conference, ISRO (VSSC) Thiruvananthapuram	2015	-	-
S. R. Nanda, V. Kulkarni, N. Sahoo	Design of artificial neuro-fuzzy based methodology for six component force balance	Proceedings of 12th International Conference on Vibration Problems (ICOVP), IIT Guwahati	2015	-	-
S. Roy, A. Ducoin, U. K. Saha	Flow physics around a Savonius-style wind turbine considering the influence of shaft	ASME-ATI-UIT Conference on Thermal and Environmental Issues in Energy Systems	2015	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Sujoy Tikader, Uday S. Dixit	Recycling of slag and flux dust in submerged arc welding: a review, RECYCLE 2016	International Conference on Waste Management, IIT Guwahati	2016	-	-
Surendra Singh, A. Narayana Reddy, Deepak Sharma	Topology Optimization of Low Frequency Structure with Application to Vibration Energy Harvester	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
U. S. Dixit	Achieving green manufacturing through improved technology (GC Sen memorial lecture)	Thirtieth National Convention of Production Engineers and National Seminar on Sustainable Manufacturing, Tripura	2015	-	-

**Conference Papers**
**Centre for Nanotechnology**

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
V. Yadav, A. K. Singh, U. S. Dixit	Determination of friction during cold and warm flat rolling processes	Proceedings of Thirtieth National Convention of Production Engineers and National Seminar on Sustainable Manufacturing, Tripura	2015	-	-
Woldetinsay G. Jiru, Mamilla Ravi Sankar, Uday S. Dixit	Investigation of microstructure and microhardness in laser surface alloyed aluminium with TiO <sub>2</sub> and SiC powders	5th International Conference of Materials Processing and Characterization (ICMPC 2016), GRIET, Hyderabad	2016	-	-
Basudeba Behera, H. B. Nemade, Shyam Trivedi	Finite Element Simulation Of A Surface Acoustic Wave Driven Linear Motor Using COMSOL Multiphysics	COMSOL Conference 2015, Pune	2015	-	-
Jitendra Kumar, Harshal B. Nemade, P. K. Giri	Electronic Properties of Armchair Graphene Nanoribbon Doped with Two Boron Atoms per Unit Cell	4th International Conference on Advanced Nanomaterials and Nanotechnology ICANN 2015	2015	-	-
Jitendra Kumar, Harshal B. Nemade, P. K. Giri	Electronic Properties of Armchair Graphene Nanoribbon with Oxygen atom at the surface	International Conference on Materials Science and Technology-2016 (ICMTech-2016), University of Delhi	2016	-	-
Jitendra Kumar, Harshal B. Nemade, P. K. Giri	Electronic Properties of Oxygen doped Armchair Graphene Nanoribbon	International Conference on Recent Trends in Engineering & Material Sciences, ICEMS-2016, Jaipur National University	2016	-	-
Mandar Maitra, Harshal B. Nemade, Jitendra Kumar	Investigation of mass sensitivity of piezoelectric monolayer MoS <sub>2</sub> using finite element simulation	International Conference on Recent Trends in Engineering & Material Sciences, ICEMS-2016, Jaipur National University	2016	-	-

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## Centre for Nanotechnology

Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Mitradip Bhattacharjee, Harshal B. Nemade, Dipankar Bandyopadhyay	Effect of Oxide Barrier Height in Spin Dependent Tunneling in M-TJ of FeO-MgO Multilayer Structure	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	-	-
Mitradip Bhattacharjee, Harshal Nemade, Dipankar Bandyopadhyay	Effect of Electrode Temperature on Tunneling Current in Fe/Mg-O/Fe Multilayer Structure	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015), IIT Guwahati	2015	-	-
Mitradip Bhattacharjee, S. Rarotra, D. Bandyopadhyay	Change in optical absorption of CdS nanoparticles due to microwa-ve assisted annealing	India International Science Festival (IISF-2015), IIT Delhi	2015	-	-
Mitradip Bhattacharjee, V. Pasumarthi, J. Chaudhuri, A. K. Singh, H. B. Nemade, D. Bandyopadhyay	Droplet based organic vapor sensor	Reflux 2016, The Annual Chemical Engineering Symposium, IIT Guwahati	2016	-	-
Ravi K. Biroju, P. K. Giri	Efficient Physical Functionalization of Graphene and Graphene Oxide for Photocatalytic and Photoconductive Applications	6th International conference on Advanced Nanomaterials (ANM 2015)	2015	-	-
Ravi K. Biroju, P. K. Giri	High Resolution Electron Microscopy and Raman Imaging of Graphene-Plasmonic Interfaces	Microscopy Conference (MC 2015)	2015	-	-

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Authors	Paper Title	Name of Conference/ Workshop/ Seminar/ Symposia Proceedings	Year	Starting Page	Ending Page
Shyam Trivedi, H. B. Nemade	Finite Element Simulation of a Highly Sensitive SH-SAW Delay Line Biosensor with SiO <sub>2</sub> Trenches	International Conference on Recent Trends in Engineering and Material Sciences, ICEMS-2016	2016	-	-
Shyam Trivedi, H. B. Nemade	Finite Element Simulation of a Sensitive SAW Biosensor using ZnONanorods	4th International Conference on Advanced Nanomaterials and Nanotechnology ICANN 2015, IIT Guwahati	2015	-	-
Shyam Trivedi, H. B. Nemade	Finite Element Simulation of Love Wave based SAW Delay Line using COMSOL Multiphysics	COMSOL Conference 2015, Pune	2015	-	-

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<b>Authors</b>	<b>Paper Title</b>	<b>Name of Conference/ Workshop/ Seminar/ Symposia Proceedings</b>	<b>Year</b>	<b>Starting Page</b>	<b>Ending Page</b>
A. K. Singh, J. H. Hsu, Perumal Alagarsamy	Temperature dependent magnetic coupling between ferromagnetic FeTaC layers in multilayer thin films	International Conference on Magnetic Materials and Application (IC-MagMA-2015), VIT Vellore	2015	174	175
A. Yadav, Pratima Agarwal	Persistent photoconductivity studies in a-Si:H/nc-Si:H thin film superlattices	International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS26), Aachen	2015	-	-
Aneeta Manjari Padhan, P. Ravikumar, P. Saravanan, Perumal Alagarsamy	Enhanced magnetic properties of NiO nanoparticles by mechanical activation of aluminothermic reduction of NiO prepared by high energy ball milling process	International Conference on Magnetic Materials and Application (IC-MagMA-2015), VIT Vellore	2015	209	210
Anuj Nandi, S. Mandal, Santabrata Das, I. Chattopadhyay	Q' factors in Galactic Black Hole Sources -- A case study of 1999 outburst of XTE J1859+226	Astronomical Society of India Conference Series	2015	69	-
Bappaditya Roy, S. B. Santra	Continuous Percolation Transition in Suppressed Random Cluster Growth Model	ICC 2015	2015	-	-
Bappaditya Roy, S. B. Santra	Explosive percolation in growing cluster model from randomly added growth centers	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	307	-
Bibhuti B. Dash, S. Ravi	Sign reversal of magnetization in Mn substituted SmCrO <sub>3</sub>	International Conference of Magnetism and Magnetic Materials (ICMAGMA-2015), VIT, Vellore	2015	-	-
Bijita Sarma, Amarendra K. Sarma	Hybrid cavity optomechanical cooling of a micromechanical resonator by two-level atomic system	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	-	-
Biplob Sarkar, Santabrata Das	Shocks in magnetically supported accretion flow around black holes	Astronomical Society of India Conference Series	2015	91	-
Bipul Deka, A. Perumal, S. Ravi	Spin Reorientation in Mn doped YFeO <sub>3</sub>	International Conference of Magnetism and Magnetic Materials (ICMAGMA-2015), VIT, Vellore	2015	-	-
Biswajit Karmakar, Arunansu Sil	Neutrino Masses, Mixing and Leptogenesis in Type-I Seesaw with A4 Symmetry	Springer Proc. Phys.	2016	255	260
C. Anil Kumar, P. Mahesh, P. Srinivas, D. Pamu	Impedance Spectroscopy, Broadband, and Microwave Dielectric Properties of Ba <sub>5</sub> Nb <sub>4</sub> O <sub>15</sub> Ceramics	Research Conclave'16, IIT Guwahati	2016	-	-
Camelia Das, Sambit Mohapatra, A. Gangshettiwar, Perumal Alagarsamy	Magnetic properties of single layer and multilayer structured CoFeB based thin films	International Conference on Magnetic Materials and Application (IC-MagMA-2015), VIT Vellore	2015	97	98

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D. C. Joshi, K. Dasari, S. Nayak, P. Pramanik, P. Suresh, S. Pittala, S. Thota	Effect of 'Na' Doping on the Structural, Dielectric and Electronic Characteristics of Wide Band-Gap NiO	9th Workshop on Frontier in Electronics 2nd Workshop on Multifunctional Nanomaterials, San Juan	2015	-	-
D. C. Joshi, K. Dasari, S. Pittala, S. Nayak, S. Thota	The localized charge carrier transport properties of Zn <sub>1-x</sub> Ni <sub>x</sub> O/NiO (0.3 ≤ x ≤ 1) two-phase composites	57th Electronic Materials Conference, The Ohio State University, Columbus	2015	-	-
D. Dutta, B. Bhuyan	Exclusive b → s gamma decays at Belle	4th Symposium on Prospects in the Physics of Discrete Symmetries	2015	-	-
Deepanjali Goswami, P. Poulose	Identification of Type-III Seesaw Fermionic Triplet at the International Linear Collider	Springer Proceedings in Physics: XXI DAE-BRNS High Energy Physics Symposium, IIT Guwahati	2015	611	-
Eshita Mal, Alike Khare	Characterization Of Laser-Induced Plasma Of Tungsten	30th National Symposium on Plasma Science and Technology (Plasma-2015) Saha Institute of Nuclear Physics (SINP), Kolkata	2015	261	-
Eshita Mal, Kh. Shantakumar Singh, Prahlad K. Baruah, Arjun Biswas, Ashwini K. Sharma, Alike Khare	Characterization of Copper Plasma using Laser Induced Breakdown Spectroscopy in air	4th PSSI-PLASMA SCHOLARS COLLOQUIUM (PSC-2015), Jadavpur University	2015	-	-
Gobinda Pradhan, Sasmita Behera, Ashwini K. Sharma, Alike Khare	Study of surface morphology and optical properties of thin films grown via PLD	Research Conclave'16, IIT Guwahati	2016	-	-
Gone Rajender, P. K. Giri	Graphene Quantum Dots and TiO <sub>2</sub> Nanoparticle Hybrid: An Efficient Photocatalyst for Environmental Applications	4th International Conference on Frontiers in Nanoscience and Technology (Cochin Nano-2016)	2016	-	-
Gyan Prakash Bharti, Alike Khare	Frequency tripled Nd:YAG laser pumped Random lasing in ZnO and Al doped ZnO thin films fabricated via Pulsed Laser Deposition technique	National Laser Symposium (NLS-24), Raja Ramanna Center for Advanced Technology (RRCAT), Indore	2015	-	-
H. Jha, A. Yadav, M. Singh, S. Kumar, Pratima Agarwal	X-ray Photoelectron Spectroscopy studies on cubic silicon carbide thin films prepared by HWCVD	International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS26), Aachen	2015	-	-
Himangsu Bhaumik, S. B. Santra	Sandpile dynamics on percolation backbone	CMDAYS 2015	2015	-	-
Himangsu Bhaumik, S. B. Santra	Study of stochastic dissipative sandpile on small world networks	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	310	-

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Indrajeet Kumar, Partha Pratim Dey, Gyan Prakash Bharti, Alika Khare	Versatility of Pulsed Laser Deposition technique for fabrication of thin films	Research Conclave'16, IIT Guwahati	2016	-	-
Indu Kalpa Dihingia, Santabrata Das	Shocks in two-temperature advective accretion flow around black holes	Astronomical Society of India Conference Series	2015	139	-
Junmoni Barman, P. D. Babu, S. Ravi	Exchange bias and magnetization reversal in Ni(Cr <sub>1-x</sub> Fe <sub>x</sub> ) <sub>2</sub> O <sub>4</sub> (x=0–0.20)	International Conference of Magnetism and Magnetic Materials (ICMAGMA-2015), VIT, Vellore	2015	-	-
K. J. Nath, B. Bhuyan	Search for the decay $B_0 \rightarrow \eta \pi$ at $\gamma(5S)$ resonance	Springer Proceedings in Physics: XXI DAE-BRNS High Energy Physics Symposium, IIT Guwahati	2016	203	207
Kamal Paul, P. K. Giri	Enhanced Visible Light Photocatalytic Activity of Ag <sub>2</sub> O Decorated TiO <sub>2</sub> Nanoarods Heterostructure	International conference on nanoscience, nanotechnology and advanced materials (NANOS 2015)	2015	-	-
Kh. Shantakumar Singh, A. K. Sharma	Effect of laser focusing distance on laser-produced copper plasma in the absence and presence of uniform transverse magnetic field	30th National Symposium on Plasma Science & Technology (PLASMA 2015), Saha Institute for Nuclear Physics (SINP), Kolkata	2015	326	-
Kh. Shantakumar Singh, A. K. Sharma	Effect of magnetic field on laser ablation during plasma formation: Experimental and finite element model study	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	62	-
Kh. Shantakumar Singh, A. K. Sharma	Laser ablation depth enhancement of copper in the presence of external magnetic field	Proc. National Laser Symposium, RRCAT, Indore	2015	143	-
Kh. Shantakumar Singh, A. K. Sharma	Nanostructuring on copper target surface via pulsed laser ablation in the presence and absence of magnetic field in air	4th International Conference on Advanced Nanomaterials & Nanotechnology (ICANN-2015), IIT Guwahati	2015	-	-
Kh. Shantakumar Singh, Eshita Mal, Alika Khare, A. K. Sharma	Laser-induced breakdown spectroscopy (LIBS): principle, instrumentation and applications	TEQIP symposium to celebrate the 2015 International Year of Light, Department of Physics, IIT Guwahati	2015	-	-
Koijam Monica Devi, Amarendra K. Sarma, Gagan Kumar	Enhanced terahertz transmission through a periodic array of tapered rectangular apertures	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	-	-
Koushik Paul, Amarendra K. Sarma	Efficient shortcut techniques in evanescently coupled waveguides	IUPAP Conference on Computational Physics: CCP2015	2015	-	-



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Lalhriatzuala, Pratima Agarwal	Thermal and Structural Studies of CdSe nanorods synthesized by solvothermal process	International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS26), Aachen	2015	-	-
M. Singh, Pratima Agarwal	Variable range Hopping conduction in thermally reduced graphen oxide thin films	International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS26), Aachen	2015	-	-
N. Yadav, H. Duyang, S. Mishra, B. Bhuyan, P. Shana-han	Cosmic muon induced EM showers in NovA	Springer Proceedings in Physics: XXI DAE-BRNS High Energy Physics Symposium, IIT Guwahati	2016	353	361
P. Mahesh, D. Pamu	Dielectric and AC-conductivity Behavior of Dy <sub>2</sub> O <sub>3</sub> Contained K <sub>0.5</sub> Na <sub>0.5</sub> NbO <sub>3</sub> Ceramics	60th DAE Solid State Physics Symposium (DAE-SSPS-2015)	2015	-	-
P. Mahesh, D. Pamu	Raman and Dielectric Studies on Lead free (K <sub>0.5</sub> Na <sub>0.5</sub> ) NbO <sub>3</sub> Piezoelectric Ceramics	International Conference on Materials science and Technology (ICMST)/ IOP Conf. Series: Materials Science and Engineering	2015	12141	-
P. Munendhar, Sunil K. Khijwania	Effective refractive index modulation based optical fiber humidity sensor employing etched fiber Bragg grating	OFS 24 - 24th International Conference on Optical Fiber Sensors	2015	-	-
Pallabi Gogoi, P. K. Acharya, L. Robindra Singh, D. Pamu	Optical and Dielectric studies on Sn substituted nanocrystalline Mg <sub>2</sub> TiO <sub>4</sub> thin films for optical and integrated electronic applications	4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015)	2015	-	-
Patta Ravikumar, Perumal Alagarsamy	Thickness dependent ferromagnetism in thermally decomposed NiO thin film	International Conference on Magnetic Materials and Application (IC-MagMA-2015), VIT Vellore	2015	113	114
Prahlad K. Baruah, Ashwini K. Sharma, Alike Khare	Basics and applications of the process of Laser induced breakdown	TEQIP symposium to celebrate the 2015 International Year of Light, Department of Physics, IIT Guwahati	2015	-	-
Prahlad K. Baruah, Ashwini K. Sharma, Alike Khare	Dependence of Laser Energy on the Size of Copper Nanoparticles Synthesized by Pulsed Laser Ablation in Liquid	International Conference on Materials Science and Technology-2016 (ICMTech-2016), University of Delhi	2016	-	-
Prahlad K. Baruah, Ashwini K. Sharma, Alike Khare	Preliminary investigation on the expansion dynamics of laser produced graphite plasma in air	30th National Symposium on Plasma Science and Technology (Plasma-2015) Saha Institute of Nuclear Physics (SINP), Kolkata	2015	204	-

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Prahlad K. Baruah, Eshita Mal, Kh. Shantakumar Singh, Ashwini K. Sharma, Alike Khare	Laser produced plasma and its applications	Research Conclave'16, IIT Guwahati	2016	-	-
Rajender Gone, Ravi K. Biroju, P. K. Giri	On the Origin of Strong Blue and Green Emission From Edge Functionalized Graphene Quantum Dots	6th International conference on Advanced Nanomaterials (ANM 2015)	2015	-	-
Ramakrishna Madaka, V. Kanneboina, Pratima Agarwal	Hydrogenated amorphous and nanocrystalline silicon thin films deposited on paper substrate by rf-PECVD technique	4th International Conference on Advanced nanomaterials and Nanotechnology (ICANN), IIT Guwahati	2015	-	-
Ramakrishna Madaka, V. Kanneboina, Pratima Agarwal	Hydrogenated amorphous silicon based thin film solar cells on flexible solar cells	Research Conclave'16, IIT Guwahati	2016	-	-
Ramesh Ghosh, P. K. Giri	Electron Microscopy and Spectroscopic Studies of Arbitrary Shaped Si Nanocrystals Decorated on Vertical Si Nanowires Array	Microscopy Conference (MC 2015)	2015	-	-
Ramesh Ghosh, P. K. Giri	Electron Microscopy and Spectroscopic Studies of Arbitrary Shaped Si Nanocrystals Decorated on Vertical Si Nanowires Array	National workshop on Advanced Probing Techniques in TEM	2016	-	-
Ramesh Ghosh, P. K. Giri	Enhanced Visible Light Photocatalytic Activity of Si/ZnO and Si/TiO <sub>2</sub> Nanowire Heterostructure	6th International conference on Advanced Nanomaterials (ANM 2015)	2015	-	-
Ramiz Aktar, Santabrata Das	Estimation of the mass outflow rates around rotating black holes	Astronomical Society of India Conference Series	2015	89	-
Ravi K. Biroju, P. K. Giri	Efficient Physical Functionalization of Graphene and Graphene Oxide for Photocatalytic and Photoconductive Applications	6th International conference on Advanced Nanomaterials (ANM 2015)	2015	-	-
Ravi K. Biroju, P. K. Giri	High Resolution Electron Microscopy and Raman Imaging of Graphene-Plasmonic Interfaces	Microscopy Conference (MC 2015)	2015	-	-
S. Nayak, D. C. Joshi, S. Thota	Micro-Raman and Electron Spin Resonance studies of Co <sub>3-x</sub> Ti <sub>x</sub> O <sub>4</sub>	2nd International Conference on Nanotechnology ICNT-2015 & Indo-USA joint symposium	2015	-	-
Santabrata Das, Ramiz Aktar	Dynamically induced shock oscillation in the accretion disc around black holes	Astronomical Society of India Conference Series	2015	47	-
Santabrata Das, Toru Okuda	Unstable mass-loss from a geometrically thick accretion disc around black holes	Astronomical Society of India Conference Series	2015	35	-

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Satendra Kumar, P. Poulose	Influence of Anomalous VVh and VVhh on Determination of Higgs Self-coupling	Springer Proceedings in Physics: XXI DAE-BRNS High Energy Physics Symposium, IIT Guwahati	2015	645	-
Sourav Chattopadhyay, S. B. Santra	Hysteresis Loop Analysis To Study Dynamic Phase Transition	DAE 2015	2015	-	-
Sourav Chattopadhyay, S. B. Santra	Study of Dynamic Phase Transition in Diluted Magnetic System: Hysteresis Loop Analysis	XXVII IUPAP Conference on Computational Physics CCP2015, IIT Guwahati	2015	303	-
Srinivas Pattipaka, P. Mahesh, D. Pamu	Structural and Dielectric Properties of Lead Free Bi <sub>0.5</sub> Na <sub>0.5</sub> TiO <sub>3</sub> Ceramics	International Conference on Condensed Matter & Applied Physics (ICC-2015)	2015	-	-
Sunil K. Khijwania	Optical Fiber Sensors for Structural Health Monitoring	12th International Conference on Vibration Problems (ICOVP 2015), Guwahati	2015	-	-
T. Joseph, D. Pamu	Structural and Magnetic Properties of Zinc Substituted Co <sub>0.8</sub> Mn <sub>0.2</sub> Fe <sub>2</sub> O <sub>4</sub> Nanoparticles	59th DAE Solid State Physics Symposium 2014/ AIP Conference Proceedings	2015	50186	-
T. R. Gopalarao, S. Ravi, D. Pamu	Thickness dependent Electrical and Magnetic Properties of Nd <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> Thin Films	International Conference of Magnetism and Magnetic Materials (ICMAGMA-2015), VIT, Vellore	2015	-	-
V. Kanneboina, Ramakrishna Madaka, Lalhriatzuala, Pratima Agarwal	Spectroscopic ellipsometry studies on a-Si:H thin films deposited with electrode distance variation	International workshop on Physics of Semiconductor Devices (IWPSD), IISc Bangalore	2015	-	-
V. Kanneboina, Ramakrishna Madaka, Mukesh Singh, Pratima Agarwal	Effect of substrate temperature on structural and optical properties of RF sputtered ITO thin films for solar cell applications	4th International Conference on Advanced nanomaterials and Nanotechnology (ICANN), IIT Guwahati	2015	-	-
V. Kanneboina, Ramakrishna Madaka, Mukesh Singh, Pratima Agarwal	Spectroscopic ellipsometry investigation of optical and structural properties of a-Si:H thin films	International Conference on Nanoscience, Nanotechnology and Advanced Materials, GITAM University, Visakhapatnam	2015	-	-
V. Kanneboina, Ramakrishna Madaka, Pratima Agarwal	Low temperature rf sputtered ITO thin films as TCO for solar cells	Research Conclave'16, IIT Guwahati	2016	-	-

## Book

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<b>Chemical Engineering</b>						
Snigdha Khuntia, Pallab Ghosh, Subrata Kumar Majumder	Removal of Ammonia, Arsenic and Dyes from Water by Ozone Microbubbles	Lambert Academic Publishing, GmbH & Co. KG, Germany	-	196	9783659778773	2015
<b>Civil Engineering</b>						
Manish Kumar Goyal	Fluid Mechanics and Hydraulic Machines	PHI Learning Pvt. Ltd., New Delhi, India	-	792	9788120351172	2015
<b>Computer Science and Engineering</b>						
Samit Bhattacharya	Computer Graphics	Oxford University Press	-	304	9780198096191	2015
<b>Humanities and Social Sciences</b>						
John Thomas	Evangelising the Nation: Religion and the Formation of Naga Political Identity	Routledge India	-	242	9781138639928	2015
Sukanya Sharma	A source book of Archaeology of the Himalayan Region: Arunachal Pradesh	Centre for Archeological Studies and Training Eastern India	-	132	9788193042205	2015
<b>Mechanical Engineering</b>						
R. G. Narayanan and U. S. Dixit (Eds)	Advances in Material Forming and Joining (5th International and 26th All India Manufacturing Technology, Design and Research Conference, AIMTDR 2014)	Springer, New Delhi	-	-	-	2015
S. N. Joshi and U. S. Dixit (Eds)	Lasers Based Manufacturing (5th International and 26th All India Manufacturing Technology, Design and Research Conference, AIMTDR 2014)	Springer, New Delhi	-	-	-	2015
<b>Physice</b>						
Bipul Bhuyan (Ed.)	Springer Proceedings in Physics 174: XXI, DAE-BRNS High Energy Physics Symposium	Springer	174	682	9783319256191	2016
G. P. Kothiyal, A. Srinivasan	Trends in Biomaterials	Pan Stanford Publishing, Singapore	-	230	9789814613989	2016
Indranil Chattopadhyay, Anuj Nandi, Santabrata Das and Samir Mandal	Recent Trends in the Study of Compact Objects (RETCO-II): Theory and Observation (ASI Conference Series)	Astronomical Society of India Conference Series	12	-	-	2015
Jen-Hwa Hsu, Sangho Lim, Perumal Alagarsamy, S. Dong, L. Horng	Selected papers from The 3rd International Conference of Asian Union Magnetic Societies	Elsevier Physica B: Condensed Matter	476	73	-	2015

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<b>Biosciences and Bioengineering</b>						
A. Sinha Roy, A. Ching-kheihunba and K. Pakshirajan	An overview of production, properties and uses of biodiesel from vegetable oil	Green Fuels Technology	Springer	-	9783319302058	2016
C. S. Krishna Murthy and Biman B. Mandal	Biomaterials based on natural and synthetic polymer fibers	Trends in biomaterials	Pan Stanford Publishing, Singapore	121-157	9789814613989	2016
Kusum K. Singh	Regulation of alternative splice site selection	--	Scholars' Press	89	9783639514766	2015
N. Arul Manikandan, R. Vinoth Kumar, G. Pugazhenthhi and K. Pakshirajan	Biorefinery and possible deforestation	Platform Chemical Biorefinery: Future Green Industry	Elsevier	-	9780128029800	2016
R. Radhika and Rakhi Chaturvedi	Plant Cell Cultures: A Promising Biometabolite Reservoir	Biotechnology Trends and Applications	Studium Press LLC, USA	49-77	-	2016
R. Vinoth Kumar, K. Pakshirajan and G. Pugazhenthhi	Malic and succinic acid – potential C4 platform chemicals for polymer and biodegradable plastic production	Platform Chemical Biorefinery: Future Green Industry	Elsevier	-	9780128029800	2016
R. Vinoth Kumar, K. Pakshirajan and G. Pugazhenthhi	Petroleum versus biorefinery based platform chemicals	Platform Chemical Biorefinery: Future Green Industry	Elsevier	-	9780128029800	2016
Rekha Deka, Arit Ghosh, Ranjan Tamuli, Katherine A. Borkovich	Heterotrimeric G Proteins	The Mycota III Biochemistry and Molecular Biology, 3rd Edition	Springer International Publishing Switzerland	119-144	9783319277905	2016
Ritesh Kumar, Shalini Singh and Vikash Kumar Dubey	Bioinformatics Tools to Analyze Proteome and Genome Data, In: Advances in the Understanding of Biological Sciences Using Next Generation Sequencing (NGS) Approaches	Advances in the Understanding of Biological Sciences Using Next Generation Sequencing (NGS) Approaches	Springer	179-194	9783319171579	2015
Sagarika Mishra, Sanjeev Kumar, Bedabrata Saha, Jayprakash Awasthi, Mohitosh Dey, Sanjib Kumar Panda and Lingaraj Sahoo	Crosstalk between Salt, Drought, and Cold Stress in Plants: Toward Genetic Engineering for Stress Tolerance	Abiotic Stress Response in Plants	John Wiley & Sons	55-86	9783527694594	2016

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<b>Chemical Engineering</b>						
A. R. K. Gollakota, M. D. Subramanyam, N. Kishore and S. Gu	Upgradation of bio-oil derived from lignocellulose biomass – a numerical approach	Recent Advances in Bioenergy Research	Springer India		9788132227717	2016
H. A. Choudhury, S. Chakma, V. S. Moholkar	Biomass gasification integrated Fischer Tropsch synthesis: Perspectives, opportunities and challenges	Recent Advances in Thermochemical Conversion of Biomass	Elsevier BV, Amsterdam	383	978444632890	2015
N. Kishore, H. Biswanath and V. S. Nalajala	Drag on Partially Contaminated Bubble Swarms in Power-Law Fluids	Fluid Mechanics and Fluid Power – Contemporary Research	Springer India		9788132227410	2016
R. R. Ramteke and N. Kishore	Slip Flow of a Shear-Thinning Power-law Fluid Past an Assemblage of Spherical Particles	Fluid Mechanics and Fluid Power – Contemporary Research	Springer India		9788132227410	2016
Rajeev Parmar, Subrata Kumar Majumder	Chemical and Biochemical Engineering: Trends and Developments	Flow behavior of microbubble-liquid mixture in pipes	Apple Academic Press, Taylor & Francis Group, USA	91	9781771880770	2015
S. Mishra, K. Mohanty	Algal Biorefinery: an Integrated Approach	Growth Characteristics of Different Algal Species	Springer	59	9783319228136	2015
Tamal Banerjee and Ramalingam Anantharaj	Desulphurization and Denitrification of Diesel Oil using Ionic Liquids	--	Elsevier	340	9780128013472	2015
V. S. Moholkar	Mathematical models for sonochemical effects	Handbook of Ultrasonics and Sonochemistry	Springer Science Business Media, Singapore	1	9789812872791	2016
V. S. Moholkar, H. A. Choudhury and S. Singh	Production of Biofuels and Chemical with Ultrasound	Physical and chemical mechanisms of ultrasound in biofuel synthesis	Springer Science + Business Media, Dordrecht	35	9789401796248	2015
<b>Chemistry</b>						
Anamika Dey, Ashish Singh, Dipjyoti Das, Parameswar K. Iyer	Organic Semiconductors: A New Future of Nanodevices and Applications	Thin Film Structures in Energy Applications	Springer International Publishing	97-128	9783319147734	2015
M. Kannan, M. Sengoden, T. Punniyamurthy	Transition-Metal-Mediated Carbon-Heteroatom Cross-Coupling: An Overview	Arene Chemistry: Reaction Mechanisms and Methods for Aromatic Compounds	Wiley	547-586	9781118754887	2015

Name of Author/s	Name of Chapter/Paper	Name of Book	Publisher	Page	ISBN	Year
Manoj Mathews, A. S. Achalkumar, Quan Li	Self-assembled 1D semiconductors: Liquid Crystalline Columnar Phase	Anisotropic Nanomaterials	Springer	241-279	9783319182926	2015
Civil Engineering						
Manish Kumar Goyal, V. Singh and S. Eslamian	Impact of Climate Change on Drinking Water	Urban Water Reuse Handbook	Taylor and Francis, CRC Group	991-1016	9781482229141	2015
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	Advances in Material Forming and Joining	Springer	46753	-	2015
Z. Dongqing, Manish Kumar Goyal, V. Singh, Richard M. Gersberg	Constructed Wetlands: Case Studies	Urban Water Reuse Handbook	Taylor and Francis, CRC Group	723-741	9781482229141	2015
<b>Computer Science and Engineering</b>						
Pinaki Mitra	An Analysis of Data Link Control Protocols	Cutting Edge Research In Technologies	INTECH	85-92	9789535121862	2015
<b>Design</b>						
J. Sanjog, T. Patel, A. Chowdhury, S. Kumar and S. Karmakar	Ergonomics Investigations across Durable Goods Manufacturing Sector in India: an Insight	Ergonomics for Rural Development: A collection of articles presented at the International Conference on Ergonomics (HWWE 2013)	Vidyasagar University	-	9789351749059	2015
Ravi Mokashi Punekar, Abhinav Kishore, Niyati Gupta	A Card game based on Participatory Learning Approach (PLA) for Health Education	Design for Sustainable well-being and Empowerment: Selected Papers	IISc Press & TU Delft, The Netherlands	-	9788192570716	2015
T. Patel, J. Sanjog, P. Kumar and S. Karmakar	Analytical study of Isometric Muscular Strength of Agricultural Workers: Indian Perspective	Ergonomics for Rural Development: A collection of articles presented at the International Conference on Ergonomics (HWWE 2013)	Vidyasagar University	-	9789351749059	2015
<b>Electronics and Electrical Engineering</b>						
T. Malathi and M. K. Bhuyan	Local Gabor Wavelet-Based Feature Extraction and Evaluation	Smart Innovation, Systems and Technologies	Springer LNCS	181-189	-	2015
Yuji Iwahori, Seiya Tsuda, Robert J. Woodham, M. K. Bhuyan and K. Kasugai	Modification of Polyp Size and Shape from Two Endoscope Images Using RBF Neural Network	Pattern Recognition: Applications and Methods	Springer LNCS	229-246	-	2015

## Book Chapter

Name of Author/s	Name of Chapter/Paper	Name of Book	Publisher	Page	ISBN	Year
<b>Centre for Energy</b>						
S. Mishra, K. Mohanty	Growth Characteristics of Different Algal Species	Algal Biorefinery: An Integrated Approach	Springer	59-72	-	2015
V. S. Moholkar	Mathematical models for sonochemical effects	Handbook of Ultrasonics and Sonochemistry	Springer Science + Business Media, Singapore	17533	-	2015
H. A. Choudhury, S. Chakma, V. S. Moholkar	Biomass gasification integrated Fischer-Tropsch synthesis: Perspectives, opportunities and challenges	Recent Advances in Thermochemical Conversion of Biomass	Elsevier BV, Amsterdam	383-435	9780444632890	2015
V. S. Moholkar, H. A. Choudhury, S. Singh, S. Khanna, A. Ranjan, S. Chakma, J. B. Bhasarkar	Physical and chemical mechanisms of ultrasound in biofuel synthesis	Production of Biofuels and Chemical with Ultrasound Biofuels and Biorefineries series (Vol. 4)	Springer Science + Business Media, Dordrecht	35-86	-	2015
<b>Centre for the Environment</b>						
Bhaskar Das and Sanjukta Patra	Antimicrobials: Meeting challenges of antibiotic resistance through Nanotechnology	Therapeutic Nanostructures	Elsevier	-	-	2015
Surya Singh, Anil Verma and S. Basu	Oxygen reduction non-PGM electrocatalysts for PEM fuel cells- Recent Advances	Electrochemical Energy: Advanced Materials and Technologies	Taylor & Francis	-	9781482227277	2015
<b>Humanities and Social Sciences</b>						
Avishek Parui	Gothic Horror and Racial Infection in Bram Stoker's Dracula	Gothic and Racism	Universitas Press, Montreal, Canada	47088	9780993995149	2015
Avishek Parui	Introduction to The Picture of Dorian Gray	The Picture of Dorian Gray	Universitas Press, Montreal, Canada	vii-xvii	9780993995132	2015
Avishek Parui	Masculinity, Monstrosity and Sustainability in Mary Shelley's Frankenstein	Romantic Sustainability: Endurance and the Natural World, 1780-1830	Lexington Books, New York, USA	187-98	9781498518901	2015
Debapriya Basu, Purbasha Auddy, Sukanta Chaudhuri (ed.)	Data Management and Hyperbibliography	Bichitra: The Making of an Online Tagore Variorum (Quantitative Methods in the Humanities and Social Sciences series)	Springer	59-92	9783319236773	2015



Name of Author/s	Name of Chapter/Paper	Name of Book	Publisher	Page	ISBN	Year
Debapriya Basu, Sudha Shastri (ed.)	'All Things Done Unto Edifying': Anne Dowriche and the Play of History	Disnarration: The Unsaid Matters	Orient Blackswan	54-68	9788125062387	2016
Rajshree Bedamatta and Nirmala Devi	Public Expenditure on Healthcare in Assam: Posing Questions for the National Health Bill 2009	Social Sector in India: Issues and Challenges	Cambridge Scholars Publishing, UK	-	9781443877992	2015
<b>Mathematics</b>						
Arup Chattopadhyay and Kalyan B. Sinha	Trace formulae in operator theory	Operator Algebras and Mathematical Physics	Birkh�user Basel	1-36	9783319181813	2015
Gaurav Pachpute and Siddhartha P. Chakrabarty	Stochastic analysis and bounds on noise for a Holling type-II model	Springer Proceedings in Mathematics and Statistics	Springer	125-139	9788132225461	2015
Shreemayee Bora and Michael Karow	Structured Eigenvalue Perturbation Theory	Numerical Algebra, Matrix Theory, Differential-Algebraic Equations and Control Theory	Springer	199-222	9783319152592	2015
Siddhartha P. Chakrabarty	Pricing of path-dependent European-type options using Monte Carlo simulation	Mathematical Models, Methods and Applications (part of the series Industrial and Applied Mathematics)	Springer	99-106	9789812879714	2015
<b>Mechanical Engineering</b>						
A. Eideh, U. S. Dixit and Raghu Echempati	A Simple Analytical Model of Laser Bending Process	Lasers Based Manufacturing	Springer, New Delhi	-	-	2015
A. K. Mondal, P. Biswas, S. Bag and Manas M. Mohapatra	Prediction of weld induced angular distortion of single sided and double sided fillet joint by SAW process	Advances in Material Forming and Joining	Springer	203	9788132223542	2015
B. Bas, S. Pal and S. Bag	Monitoring of weld quality in friction stir welding based on spindle speed and motor current signals	Advances in Material Forming and Joining	Springer	233	9788132223542	2015
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	175-210	9789814613989	2015
B. N. Fetene and U. S. Dixit	Finite Element Simulations of Laser Bending of Small Sized Sheets	Lasers Based Manufacturing	Springer, New Delhi	-	-	2015
D. Yaduwanshi, S. Bag and S. Pal	Hybrid Friction Stir Welding of Similar and Dissimilar Materials	Advances in Material Forming and Joining	Springer	323	-	2015

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Name of Author/s	Name of Chapter/Paper	Name of Book	Publisher	Page	ISBN	Year
Devarshi Kashyap and S. Kanagaraj	Injectable Biomaterials for Endovascular applications	Advances in Polymer Materials and Technology	CRC press, USA	635-650	9781498718813	2015
Kumar Mondal Arpan, Biswas Pankaj, Bag Swarupand 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	203-220	-	2015
N. Yadaiah, S. Bag, C. P. Paul and L. M. Kukreja	Fiber laser welding in a controlled inert gas atmosphere: an experimental & numerical investigation	Laser Based Manufacturing Processes	Springer	399	9788132223511	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	201-255	9781118831281	2015
Ravi Kant, S. N. Joshi and U. S. Dixit	Research issues in the laser sheet bending process	Materials Forming and Machining: Research and Development	Woodhead Publishing	73-95	-	2015
S. Jain, J. Kalivarapu and S. Bag	Development of self-consistent multi-objective harmony search algorithm	Swarm, Evolutionary, and Memetic Computing	Springer	547	9783319202945	2015
S. M. Kamal and U. S. Dixit	Feasibility Study of Thermal Autofrettage Process	Advances in Material Forming and Joining	Springer, New Delhi	-	-	2015
S. S. Gautam, S. K. Singh and U. S. Dixit	Laser Forming of Mild Steel Sheets using Different Surface Coatings	Lasers Based Manufacturing	Springer, New Delhi	-	-	2015
U. S. Dixit, V. Yadav and A. K. Singh	Estimation of temperature in flat rolling	Rolling of Advanced High Strength Steels: Theory, Simulation and Practice	Jingwei Zhao and Zhengyi Jiang, CRC	-	-	2016
V. Yadav, A. K. Singh, U. S. Dixit	An efficient inverse method for determining the material parameters and coefficient of friction in warm rolling process	Advances in Material Forming and Joining	Springer, New Delhi	-	-	2015
<b>Centre for Nanotechnology</b>						
Anamika Dey, Ashish Singh, Dipjyoti Das, Parameswar K. Iyer	Organic Semiconductors: A New Future of Nanodevices and Applications	Thin Film Structures in Energy Applications	Springer International Publishing	97-128	9783319147734	2015

# DETAILS OF RESEARCH AND DEVELOPMENT PROJECTS

## NEW RESEARCH PROJECTS

New Research projects received during the year 2015-2016 are given below:

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
<b>Biosciences and Bioengineering</b>						
1.	Dr. Anand Tiwari	Functional characterisation and role of TSMF2, a NRAMP family member, in the life cycle of <i>Neurospora crassa</i>	SERB		31,50,000.00	3 years
2.	Dr. Anil Mukund Limaye	Investigation into estrogen regulation of cystatin a expression in Breast Cancer cells and its role in proliferation and migration (In collaboration with Dr. Vandana Raphael, Department of Pathology, NEIGRIHMS, Shillong)	DBT	Dr. Sachin Kumar	24,85,000.00	3 years
3.	Dr. B. Anand	Mechanistic Insights into the Adaption Stage of CRISPR-Cas Immune System	DBT		43,23,000.00	3 years
4.	Dr. B. Anand	Mechanistic Insights into the Functional Landscape of Sensory and Regulatory RNAs	SERB		29,96,000.00	3 years
5.	Dr. Biplab Bose	Design principles in the Molecular Network of an Oncofetal Protein	DBT		84,23,000.00	5 years
6.	Dr. Bithiah Grace Jagannathan	Study of cancer promoting role of CD90/THY1 in leukemia associated stroma	DBT	Dr. Anil M. Limaye	25,00,000.00	3 years
7.	Dr. Kusum Kumari Singh	Investigating the Interaction Partners of ASAP Complex	IITG		5,00,000.00	2 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
8.	Dr. L. Sahoo	Development of transgenic cowpea for insect resistance through RNA interference technology (In collaboration with Dr. M. V. Rajam, Department of Genetics, University of Delhi)	DBT		45,23,000.00	3 years
9.	Dr. L. Sahoo	Development of Abiotic Stress Resilient Tropical Pulses Through Tailoring of ABA Receptor genes	DBT	Dr. Biplab Bose	155,62,000.00	5 years
10.	Dr. Lalit Mohan Pandey	INSPIRE	DST		35,00,000.00	5 years
11.	Dr. Lingaraj Sahoo	Plants Probiotics to improve crop production in low nutrient soil (In collaboration with Dr. Hiroyuki Koyama, Department of Applied Biological Sciences, Gifu University, Japan and Dr. Sanjib Kumar Panda, Assam University Silchar)	DST	Dr. V. V. Goud	6,94,000.00	2 years
12.	Dr. Priyadarshi Satpati	Structural and thermodynamics basis of translational fidelity in prokaryotic cells-A Structure based computational study	SERB		20,43,000.00	3 years
13.	Dr. Priyadarshi Satpati	Thermodynamic basis of specificity in RNA splicing by Group II introns	IITG		5,00,000.00	2 years
14.	Dr. S. S. Ghosh	Fundamental Molecular Investigations in Biotechnology	DBT	Dr. P. Goswami	2,48,76,000.00	5 years
15.	Dr. Sachin Kumar	Adenoviral vector based diagnostics for Japanese Encephalitis Virus	ICMR		20,24,650.00	2 years
16.	Dr. Soumen Kumar Maiti	Process development for autotrophic algal growth and biofuel production in tabular photobioreactor	IITG		5,00,000.00	2 years
17.	Dr. V. K. Dubey	Investigation on Evaluation pressure for unique redox metabolism of Leishmania Parasite	BCIL	Dr. Manish Kumar	1,05,55,000.00	3 years
18.	Dr. Vibin Ramakrishnan	Design and Characterisation of Polypeptide Construct as Prototypes for Bio-Sensing and Imaging Applications	CSIR		10,60,000.00	3 years
19.	Dr. P. Goswami	Studies and application of redox enzymes for bioelectronics devices	DBT		1,45,34,000.00	5 years
20.	Dr. S. S. Ghosh	Investigations on the molecular mechanism of Nanomaterial-cellular interactions to develop Potential Therapeutics	DBT	Dr. A. Ramesh and Dr. B. Bose	89,09,000.00	5 years
21.	Dr. V. K. Dubey	Optimisation of Novel antileishmania scaffold 4-(4,4,8-Trimethyl-7-oxo-3-oxabicyclo[3.3.1] non-2-yl)-benzoic acid methyl ester, a oxabicyclo [3.3.1] nonanones: Amechanistic study	DBT	Dr. Anil K Saikia	25,65,600.00	2 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
<b>Chemical Engineering</b>						
22.	Dr. M. K. Purkait	Treatment of contaminated drinking water using a hybrid low-cost process (In collaboration with Dr. Barun Kumar Nandi, Indian School of Mines, Dhanbad, Jharkhand and Dr. Mehabub Rahaman, Jadavpur University, Kolkata)	DBT		42,17,200.00	3 years
23.	Dr. M. K. Purkait	Development of portable water purification system for pathogen and other contaminants free drinking water (In collaboration with Sri P. K. Raul and Sri Bodhaditya Das, Scientist, Division of Water Chemistry, Defence Research Laboratory, Tezpur)	DRL, Tezpur		6,00,000.00	2 years
24.	Dr. Nageswara Rao Peela	Carbohydrates (Cellulose, Glucose and Fructose) conversion to 5-Hydroxymethylfurfural using ionic liquid encapsulated mesoporous zeolite catalysts	SERB		31,70,000.00	3 years
25.	Dr. Pankaj Tiwari	Pyrolysis and combustion studies of waste plastics to yield targeted value added chemicals	SERB		22,80,982.00	-
26.	Dr. R. Anandalakshmi	Experimental investigations on thermo syphon flow and heat transfer achieved by supercritical fluid	IITG		5,00,000.00	2 years
27.	Dr. Raghvendra Gupta	Transport Processes in slug-annular flow regimes in microchannels	SERB		22,89,000.00	-
28.	Dr. Rajesh Kumar Upadhyah	Dense palladium membrane preparation using porous SS and ceramic supports for an in-house membrane test rig	DRDO	-	9,84,000.00	1 year
29.	Dr. S. Senthilmurugan	ABB-CoE Scholarship for PhD, MS, ME/M.Tech associated with Centre for Energy	ABB-CoE		30,72,000.00	4 years
30.	Dr. Vimal Katiyar	Biodegradable polymer based thermally conductive packaging films 'Thermo-Pack'	SERB	Dr. Amit Kumar	38,50,000.00	2 years
<b>Chemistry</b>						
31.	Dr. Akshai Kumar Alape Seetharam	Chiral and Achiral Hydrofunctionalisation of Olefins via iron and Cobalt Catalysed X-H (X:C and O) Activation Reactions: Access to High value Fuels, Organic Materials and Commodity Chemicals	SERB		23,10,000.00	3 years
32.	Dr. Akshal Kumar Alape Seetharam	Organic Materials Via Catalyst: Heteroatom Doped pi-conjugated molecules via Transition Metal Catalysed C-H Activation Reactions	IITG		5,00,000.00	2 years
33.	Dr. Animesh Das	Terminal Oxo and Imido Transition-Metal Complexes of Group 11 (Cu, Ag, Au): Strategies for Sequential C-H Bond Activation, Functionalisation, Carbon-Heteroatom (C-N and C-O) Bond-Forming Reactions and Group-transfer catalysis	DST		83,00,000.00	5 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
34.	Dr. Animesh Das	New opportunities with a New Calcium Based Lewis Acid Catalysts	IITG		5,00,000.00	2 years
35.	Dr. Biplab Mondal	Copper-peroxynitrite complexes and phenol ring nitration	SERB		41,90,000.00	3 years
36.	Dr. C. V. Sastri	Structure-Reactivity Correlations of High Valent Metal Intermediates Bearing Structurally Tunable Co-ordination Spheres	SERB		46,90,000.00	3 years
37.	Dr. Chandan K.Jana	Metal and Oxidant Free Stereoselective sp <sup>3</sup> C-H Arylation: Facile Access to Optically Active Disubstituted N-heterocycles and Their Applications in Synthesis	SERB		30,90,000.00	3 years
38.	Dr. Dipankar Srimani	Integration of photoredox catalysis with chiral bronsted acids: towards enantioselective synthetic routes of versatile structural motifs	DST		35,00,000.00	5 years
39.	Dr. Dipankar Srimani	Design and Synthesis of Pincer Complexes with First Row Transition Metals: Exploring Potential Catalytic Application	IITG		5,00,000.00	2 years
40.	Dr. Kalyan Raidongia	Application of nanofluidic Channels of Reconstructed Two-Dimensional nanometrials for Chiral Resolution	SERB		30,31,000.00	
41.	Dr. Kalyan Raidongia	Ionic Analogues of Semiconductor p-n junction: Ion Transport Through Heterojunctions of Cation-Anion Selective Nanofluidic Channel Networks	IITG		5,00,000.00	2 years
42.	Dr. Kalyanasis Sahu	Study of nanoparticle-fluorophore interaction inside surfactant assemblies	SERB		52,50,000.00	3 years
43.	Dr. Kalyanasis Sahu	Excited state hydrogen-bonding driven photo-physics in solvent mixtures-spectroscopic and theoretical approach	CSIR		6,00,000.00	3 years
44.	Dr. Krishna P. Bhabak	DST-INSPIRE Resaerch Grant	DST		35,00,000.00	5 years
45.	Dr. Krishna P. Bhabak	Design and Synthesis of Novel Fluorescent Substrate for Sphingolipid Metabolising Enzymes	SERB		22,80,000.00	3 years
46.	Dr. Krishna Pada Bhabak	Development of Synthetic Organoselenium compounds as Chemo-preventive Agents for the treatment of cancer	IITG		5,00,000.00	2 years
47.	Dr. Mrityunjaya Asthana	Post Doctoral Fellowship	SERB		19,20,000.00	2 years
48.	Dr. Pavan K. Kancharla	2-(Hydroxymethyl) benzonitrile: A novel participating protecting group for the synthesis of a-sialic acid glycosides	IITG		5,00,000.00	2 years
49.	Dr. S. Chandra Pan	Asymmetric Organocatalytic Benzylic C-H Activation: Application to the synthesis of SUGiol and its Derivatives with Biological Study	SERB	Dr. Biman Mandal	49,05,000.00	3 years
50.	Dr. Sunanda Chatterjee	Design, synthesis and conformational analysis of ay hybrid Peptides containing y <sub>3</sub> /y <sub>2</sub> amino acids with proteinogenic side chains	SERB		26,70,000.00	3 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
51.	Dr. T. Punniyamurthy	Development of chiral catalysts for asymmetric cycloaddition and oxidative coupling reactions (In collaboration with Dr. Ryo Lrie, Department of Chemistry, Kumamoto University, Japan)	DST		5,30,000.00	2 years
52.	Dr. T. Punniyamurthy	Studies Toward Regioselective C-H Activation for C-C and C-H Bonds Formation	SERB		38,78,000.00	3 years
53.	Dr. Uttam Manna	Stimuli Responsive Superhydrophobic Materials for Triggered Drug Release	IITG		5,00,000.00	2 years
<b>Civil Engineering</b>						
54.	Dr. Abhishek Kumar	INSPIRE	DST		35,00,000.00	-
55.	Dr. Abhishek Kumar	Seismic site classification of Guwahati city and development of design response spectra considering detailed in-situ geotechnical and geophysical studies	IITG		5,00,000.00	2 years
56.	Dr. Ajay Dashora	High Resolution mapping using low cost airborne photographic data acquisition methods	IITG		5,00,000.00	2 years
57.	Dr. Amit B. Shelke	Protective health and usage monitoring system using phononic crystal for aerospace	DST		22,00,000.00	3 years
58.	Dr. Ankit Garg	A study on vegetation root water uptake induced surface settlement	IITG		5,00,000.00	2 years
59.	Dr. Archana M. Nair	Formation Evaluation of Upper Assam Shelf Basin based on routine core Analysis for reassessment of petroleum reserves	IITG		5,00,000.00	2 years
60.	Dr. Budhaditya Hazra	Development of a real-time low cost structural health monitoring system	IITG		5,00,000.00	2 years
61.	Dr. Manish Kumar	Assessment of snowmelt and glacier melt runoff contribution in upstream part of Teesta river catchment using hydrological modeling and field based measurements	SERB		25,06,000.00	3 years
62.	Dr. Rishikesh Bharti	Duricrust Mapping in Paris of Western Rajasthan Using Advance Remote Sensing Techniques	IITG		5,00,000.00	2 years
63.	Dr. Sharad B. Gokhale	Urban Black Carbon Global Impacts and Local Mitigations	SERB		49,10,000.00	3 years
64.	Dr. Sharad B. Gokhale	Using Field and modelling studies to investigate noise propagation in Urban traffic corridor	MOES, GOI	Dr. Harsha Kota	55,98,299.00	3 years
65.	Dr. Sri Harsha Kota	Studying air quality during Common Wealth Games in 2010 at New Delhi	IITG		5,00,000.00	2 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
<b>Computer Science and Engineering</b>						
66.	Dr. Aryabartta Sahu	GPU based acceleration of X-ray image enhancement for cargo scanning	BRNS		3,90,000.00	1 year
67.	Dr. John Jose	Power Efficient fault tolerant techniques for deflection routers in large Mesh-on-Chips interconnection networks	IITG		4,92,000.00	2 years
<b>Design</b>						
68.	Abhishek Shrivastava	Design and evaluation of effective Interactive Voice Response System (IVRs)	IITG		4,95,000.00	2 years
69.	Charu Monga	A Documentary Film & Documentation of Craft Practise on the Banks of Brahmaputra in Assam	IITG		4,99,536.00	2 years
70.	Dr. Charu Monga	Design interventions using animation techniques in the fields of technology for Education and Entertainment	Microsoft		1,50,000.00	
71.	Dr. Ravi Mokashi Punekar	The International Learning Networks on Sustainability	ERASMUS+ Capacity Building in Higher Education		-	-
72.	Pankaj Upadhyay	Design of a Mechanical Trade Water Pump for the North East using a Frugal Design Approach	IITG		4,99,400.00	2 years
73.	Suradip Das	Product Analysis using Lifecycle approach considering user, designer and birds eye perspective	IITG		5,00,000.00	2 years
74.	Swati Pal	An ergonomic approach to improve daily living of Elderly with specific reference to product design in virtual environment	SG-IITG		5,00,000.00	2 years
75.	Urmi Ravindra Salve	Ergonomic Intervention in Traditional jewellery Manufacturing Workstation in Assam	IITG		5,00,000.00	2 years
<b>Centre for Educational Technology</b>						
76.	Dr. L. Boeing Singh	Infrastructure Projects Planning and Modelling (Under GIAN Programme (In collaboration with IIT Kharagpur)	MHRD		6,50,000.00	3 months
77.	Dr. Manish Kumar Goyal	Optimisation Methods to groundwater resources management (Under GIAN Programme)	MHRD		6,80,000.00	
78.	Dr. Pahi Saikia	Campaigns, Media & Influence (Under GIAN Programme) (In collaboration with IIT Kharagpur)	IITK, MHRD		7,50,000.00	3 months



Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
79.	Dr. Partha Sarathi Mandal	Distributed Network algorithms (Under GIAN Programme) (In collaboration with IIT Kharagpur)	IITK, MHRD		6,60,000.00	6 days
80.	Dr. R. Ganesh Narayanan	Green Material Forming and Joining (Under GIAN Programme)	MHRD		5,90,000.00	6 days
81.	Dr. Ratnajit Bhattacharjee	Scheme for Financial Assistance for Setting up of Electronics and ICT Academics	DEITY	Dr. Gaurav Trivedi	17,50,00,000.00	4 years
82.	Dr. Ravi Mokashi Punekar	E-Kalpa-2 creating Digital Environment for Design in India	MHRD		840,00,000.00	
83.	Dr. Sunil Khijwania	Unnat Shikshak-Unnat Bharat, Centre for Excellence in Science & Mathematics Education	MHRD	HODs, Chemistry, Mathematics and Physics	338,70,800.00	2 years
84.	Prof. Gautam Biswas	Boiling Heat Transfer (Under GIAN Programme)	MHRD		6,50,000.00	3 months
<b>Electronics and Electrical Engineering</b>						
85.	Dr. Chandan Kumar	Development of multifunctional grid connected inverter	IITG		5,00,000.00	2 years
86.	Dr. Nagarjuna Nallam	Design of CMOS integrated circuits for an in-band full-duplex radio	SERB		31,90,000.00	3 years
87.	Dr. Roy Paily Palathinkal	Visvesvaraya Phd Scheme for Electronics and IT	Media Lab Asia		237,24,000.00	5 years
88.	Dr. Sanjib Ganguly	Microgrids Part-I: Optimal Planning of smart-grid under uncertainty	IITG		5,00,000.00	2 years
<b>Centre for Energy</b>						
89.	Dr. Pankaj Kalita	Performance improvement and thermodynamic management of a combined solar photovoltaic and thermal system	IITG		5,00,000.00	2 years
90.	Dr. Pankaj Kalita	Design and development of a Fluidised Bed paddy dryer with waste heat recovery suitable for North-eastern of India	ASTEC		2,70,000.00	2 years
91.	Dr. Senthilmurugan	Development of comprehensive interactive well monitoring software tool for drilling supervisors	ONGC		151,34,000.00	2 years
92.	Prof. Pinakeswar Mahanta	Development and performance evaluation of a 3kWe biogas based power generation system utilising lignocellular biomass	MNRE	Dr. N. Sahoo and Dr. L. Barbora	29,27,400.00	2 years
<b>Humanities and Social Sciences</b>						
93.	Dr. Arupjyoti Saikia	The India-China Research Corridor (In collaboration with Dr. Gullen Cederlof, Swedish Research Council)	KTH Royal Institute Sweden		-	4 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
94.	Dr. Sawmya Ray	In Search of Gender Justice: Violence Against Women and Law in Assam	ICSSR		12,00,000.00	2 years
95.	Dr.Mithilesh Kumar Jha	Social and Political Imaginaries in the Vernacular: Notions of Desha and Samaj in Early Twentieth Century Mithila (1905-1940)	IITG		5,00,000.00	2 years
<b>Mechanical Engineering</b>						
96.	Dr. Chandramohan Somayaji	Performance and emission studies on biofuel blended with high oxygen storage capacity nanoparticles using an indirect injection engine (In collaboration with Dr. Panagiota Pimenidou, University of Ulster, Shore Road Newtownabbey Co., UK)	DBT	Dr. S. Kanagaraj	21,73,600.00	2 years
97.	Dr. K. S. R. Krishna Murthy	3D finite element simulations of fatigue crack growth in gas turbine disk	Gas Turbine Research Establishment		16,40,220.00	1.5 years
98.	Dr. Mamilla Ravi Shankar	Nano Finishing of High Aspect ratio Micro holes using Abrasive Flow Finishing Process	BRNS		22,62,500.00	3 years
99.	Dr. N. Sahoo	Calibration method of High Frequency Thermal Sensors for localised temperature and heat flux measurements in Gas Turbine and internal Combustion Engine Application	ARDB	Dr. V. Kulkarni	34,98,000.00	2 years
100.	Dr. Pranab Kumar Mondal	Combined influences of Electromagnetic effect and surface wettability on the contact line dynamics of immiscible fluids in a Microfluids	IITG		5,00,000.00	2 years
101.	Dr. Prasenjit Khanikar	Study of Deformation Behavior and Multiple Fracture Mechanisms of Metallic Alloys Under High Strain Rate Loading Conditions	IITG		5,00,000.00	2 years
102.	Dr. S. Kanagaraj	Thermal insulation material in lieu of ceramic wool	NIRDESH		8,96,720.00	1 year
103.	Dr. S. Senthilvelan	Studies on Premature Failure of Thordon Bearings	NIRDESH		8,17,520.00	1 year
104.	Dr. Sachin D. Kore	Design and Development of manually Operated Equipments for bamboo Stripes Manufacturing	DST	Dr. Sangamesh Deepak	12,10,750.00	1.5 years
105.	Dr. Sachin Singh Gautam	Numeric Methods for dynamic analysis of adhesive contact problems	SERB		32,26,000.00	3 years
<b>Physics</b>						
106.	Dr. A. Perumal	Preparation and Characterisation of Nano-Sized NiO Powders and Thin Films for Spintronic Applications	CSIR		18,96,000.00	3 years
107.	Dr. A. Perumal	Laminated magnetic thin films for soft magnetic applications	BRNS		28,64,750.00	3 years

Sl. No.	Principal Investigator	Project Title	Funding Agency	Co-investigators	Amount Sanctioned (in ₹)	Duration
108.	Dr. Bipul Bhuyan	B-Physics at Belle and Belle II experiments at KEK Japan	SERB		45,99,200.00	3 years
109.	Dr. D. Pamu	Development of (K, Na)NbO <sub>3</sub> ceramics modified with LiTaO <sub>3</sub> and LiNbO <sub>3</sub> for piezo and pyroelectric sensor applications	BRNS	Dr. S. Ravi	34,03,500.00	3 years
110.	Dr. Gagan Kumar	THz active and passive waveguide components using engineered plasmonic metamaterials on s/c surface	BRNS		21,58,520.00	3 years
111.	Dr. Gagan Kumar	Plasmonic metamaterials based terahertz guided wave devices	SERB		26,65,200.00	3 years
112.	Dr. Subhash Thota	Investigation of the relaxor-like dielectric behavior and the role extrinsic in Zn <sub>1</sub> NiO/NiO two phase composite	SERB		25,20,000.00	3 years
113.	Dr. Subhash Thota	Investigation of the dielectric response and ac-conductivity studies of KNbO <sub>3</sub> and NaNbO-NiO for piezoelectric applications	BRNS		22,85,000.00	3 years
114.	Dr. Swati Bhattacharya	Molecular Dynamics Study Electronics Sensing of DNA Translocating through Protein nanopores	DBT	Dr. Saurabh Basu	25,60,000.00	3 years
115.	Dr. Uday Narayan Maiti	Graphene gfor self-charging power source for wearbale electronics	IITG		5,00,000.00	2 years
<b>Institute (General)</b>						
116.	Dean, R&D	Make-in India Week (In collaboration with IIT Bombay)	GOI		36,00,000.00	-

**Major Consultancy Projects (above ₹ 5.00 lakhs) Received During 2015-2016**

<b>Title</b>	<b>Principal Investigator</b>	<b>Clients</b>
Vetting of Design & Drawing for CA No.: CE(AF)SZ/BOR/14 of 2013-14, Additional/Alteration to three Existing Technical buildings (PEB) at AFS Borjhar	Dr. Arun Chandra Borsaikia	Govind Khaitan, Partner, M.P. Khaitan, Ulubari, Ghy
Proof checking of design and drawing for RCC campus retaining wall at FCI sit Phesama, Kohima, Nagaland	Dr. Arun Chandra Borsaikia	Ankan-The Design Desk, Ghy
Mix Design of concrete M-25 for the work of permanent campus for regional centre of IIMC complex at Aizawl and investigation of cement	Dr. Arunasis Chakraborty	Tribeni Construction Ltd, Ghy
Test on Physical and Mechanical properties of SHYAM Fe 500 Bar	Dr. Arunasis Chakraborty	Office of the Chief Engineer, Ghy
Rebound Hammer Test on the Foundation of Tower loc. No. 10/0 of 400kV D/C BTPS Bongaigaon	Dr. Arunasis Chakraborty	Power Grid Corporation of Indian Ltd, Lower Nangarh Laplang Shillong
Vetting of Drawing and Design of Structure and Retaining Wall in CPP-IPR Assam	Dr. Arunasis Chakraborty	
Mix design of concrete M-25 for the work of Disability Studies in Aizawal, Mizoram and Investigation of cement	Dr. Arunasis Chakraborty	Central Public work Development, Aizwal, Mizoram
Test on Physical & Mechanical properties of SHYAM & TATA TMT Bar	Dr. Arunasis Chakraborty	N.F. Railway, Agartala
Mix Design of concrete M-25 for piles and other works for the construction of Academic & Admin Block at IIT Guwahati permanent campus near Mirza, under Kamrup Dist. Guwahati and Investigation of cement	Dr. Arunasis Chakraborty	Hindustan Prefab Limited, Ghy
Vetting of structural design of 33KV Substation, CPP-IPR Nazirakaht, Assam	Dr. Arunasis Chakraborty	centre of Plasma Physics IPR Nazirakaht, Tepesia, Assam
Quality Test on RCC Structure of Under Construction Jawahar Navodaya Vidyalaya at Mizoram	A. Chakraborty	M/S ZORAM Industries Development Corporation New Secretariat Complex, Aizwal, Mizoram.
Proof checking of Jubilee bridge across river Hooghly of Eastern Railway	Prof. Anjan Dutta	Eastern railway
Test on physical & mechanical properties of Jindal Panther Fe 500D	Prof. Anjan Dutta	M/s VNR Infrastructure Ltd., Hyderabad
Proof checking of the detailed design of approach roads o cable stayed road over bridge at Barddhaman in the state of West Bengal	Prof. Anjan Dutta	Rail Vikas Nigam Limited, Kolkata
Test on Physical & Mechanical properties of Jindal Panther Fe 500D	Prof. Anjan Dutta	Engineering Section, IITG
Proof checking of design and drawings of foundation, sub-structure, N.F. Railway, Mizoram	Prof. Anjan Dutta	STUP Consultants Pvt Ltd, Mumbai
Test on Physical properties of Dalmia cement OPC 53, OPC 43 & PPC	Prof. Anjan Dutta	Office of the Chief Engineer, PWD, Chandmari, Ghy
Test on Physical & Mechanical properties of Satyam TMT bar	Prof. Anjan Dutta	Satyam ISPAT (North-East) Ltd, Arunachal Pradesh
Investigation of soundness and stability of 120 Men Barrack at BSF campus, Mawpat Shillong	Prof. Anjan Dutta	CPWD, Office of the Executive Engineer, Meghalaya

<b>Title</b>	<b>Principal Investigator</b>	<b>Clients</b>
Repair and rehabilitation of damaged bridges no 46/3 and 73/3 on NH-31C	Prof. Anjan Dutta	National Highway Authority of India, Govt. of India Bongaigaon
Test on Physical & Mechanical properties of RASHMI 550 TMT Bar	Prof. Anjan Dutta	Simplex Infrastructures Ltd, Ghy
Test on Physical & Mechanical properties of Purlin and site Bracing with GI coating	Prof. Anjan Dutta	Airports Authority of India, LCBI, Ghy
proof checking of design and drawings of foundation & sub-structure for the proposed via-duct of rail bridge at Nabad-wip across river Hooghly	prof. Anjan Dutta	STUP Consultants pvt Ltd Kolkata
Test on physical & Mechanical properties of SAIL TMT Bar	Prof. Anjan Dutta	N.F. Railway, Agartala
Proof checking of design and drawings of superstructure, substructure and foundation of 323m flyover A and 429m flyover B across Kona Expressway at ingress and egress points of Santragachi bus terminus, Kolkata	Prof. Anjan Dutta	STUP Consultants Pvt Ltd Kolkata
Analysis of water sample for drinking purpose	Dr. Ajay Kalamdhad	Office of the Director Water & Sanitation Support Organization, Public Health Engineering Dept., Ghy:35
Evaluation of water sample for construction purposes	Dr. Ajay Kalamdhad	NTPC Limited, Bongaigaon
Testing of Bio-Tank effluent	Dr. Ajay Kalamdhad	N.F. Railway, Maligaon, Ghy
Evaluation of water sample for construction purpose	Dr. Ajay Kalamdhad	NTPC Limited Bongaigaon
Technical consultancy towards the development of a traffic sensor	Dr. A.K. Maura	PMT (NEP) ASIGHAT
Consultancy work for evaluation of quality of Binder and Bitumen Emulsion	Dr. A.K. Maura	87 Road Construction Coy
Conducting C-0 test for determination of angle friction for the soil sample received from NCC Limited	Dr. Anil Kumar Mishra	NCC Limited, Agartala, Tripura
Technical examination and recommendation of the river water intake structure	Prof. Arup Kr. Sarma	Assam Petro-Chemicals Ltd., Guwahati
Proof checking of Detailed Design of Overflow section adjacent to the sluice of Jakaichuk Drainage Development Scheme	Prof. Arup Kr. Sarma	Ministry of Water Resources, River Development & Ganga Rejuvenation, Office of Chief Engineer-I, Brahmaputra Board, Basistha, Ghy-29
Morphological studies of rivers Brahmaputra, Subansiri and Pagladia	Prof. Arup Kr. Sarma	Govt. of India, Central water Commission, Morphology Directorate, 906 (S), Sewa Bhawan, R.K. Puram, New Delhi-110066
Design study of Submerged Dike & Gablon weir in the river Champamati	Prof. Arup Kr. Sarma	NTPC Limited, Bongaigaon
Design of Soil-lime mixes for heavy rainfall roads	Dr. Anjan Kumar S	Border Roads Task Force-758, Sikkim, Pin-930758
Field performance evaluation of cement concrete roads	Dr. Anjan Kumar S	L&T IDPL, Chennai
Road Surface Condition Evaluation	Dr. Anjan Kumar S	Professional Civil Infra Pvt Ltd, Bangalore

Title	Principal Investigator	Clients
Design of Rigid Pavements on Low Volume Roads	Dr. Anjan Kumar S	Border Roads Task Force-758, Sikkim
Forensic Investigation of failures of link way at Air Force Station	Dr. Anjan Kumar S	
Design of Bituminous mixes for high altitude and heavy rainfall area	Dr. Anjan Kumar S	Border Roads Task Force-758, Sikkim, Pin-930758
Proof checking of designs for ground improvement using PVD for NF Railway project at Garjee, Agartala, Tripura	Dr. A. Murali Krishna	M/s S.C. Construction, Ghy
Proof checking of the design of sheet piling work at Udaipur station building	Dr. A. Murali Krishna	Geotechnical Solutions, Chennai
Proof checking of the structural design and drawings for strengthening of foundation system, platform supporting system etc for Udaipur station complex for Agartala-Sabroom, new BG Railway line project of N.F. Railway	Dr. A. Murali Krishna	Creative Design Consultants & Engineers Pvt. Ltd
Landslide study and evolution of mitigation method	Dr. Arindam Dey	PWD Arunachal Pradesh
Mix design of concrete M-25 for pile foundation & structural works CA cement	Dr. Amit Shelke	M.N. Rao, Project Manager (Rayang), Pasighat
Mix design of concrete M-25 for the work of C/o MP Building for NIT at Langol, Imphal, Manipur and Investigation of cement (Dalmia) content 410kg/cum of mix	Dr. Amit Shelke	CPWD, Imphal, Manipur
Mix design of concrete M-25 for the work of C/o M.P. Building for NIT at Langol, Imphal, Manipur and Investigation of cement (Dalmia) content 330kg/cum of mix	Dr. Amit Shelke	CPWD, Imphal, Manipur
Mix design of concrete M-25 for construction of office building and investigation of cement	Dr. B. Hazra	Power Grid Corporation of India Ltd., Ghy
Proof checking of the structural design & drawings of building of IIIT Guwahati	Dr. B. Hazra	IIIT Guwahati
Surge analysis of MUW line-graphite-NTPC kudgi super thermal power project	Dr. Bimlesh Kumar	Graphite India Ltd, Maharashtra
Surge Analysis of make up water line at NTPC super thermal power project LARA, Rajasthan	Dr. Bimlesh Kumar	
Transient analysis of about 170 kms of Nawa Rural Water supply network to 72 village with four pumping stations of Tehsil-nawa Dist. Nagaur-Rajasthan	Dr. Bimlesh Kumar	SHIPPL, Jaipur
Test on physical properties of Star Cement OPC 43 grade	Dr. Bulu Pradhan	Assistant Engineer, Manipur Project Sub-Division-II, CPWD, Imphal Manipur
Mix design of concrete M-35 & M-40 for construction of the super structure works investigation of cement	Dr. Bulu Pradhan	Kulajit Talukdar, Sr. Manager (Project) Numaligarh Refinery Ltd. (NRL), 122A, Christianbasti, G.S. Road, Guwahati-05
Test on Physical & Mechanical properties of Jindal Panther Fe 500 D	Dr. Bulu Pradhan	M/s Simplex Projects Ltd
Test on Physical & Mechanical properties of Jindal Panther Fe 500D for the construction of 300 boys hostel for NIT Manipur at Langol, Imphal	Dr. Bulu Pradhan	Asst. Engineer, Manipur Project Sub-Division-I, CPWD, Imohal, Manipur

<b>Title</b>	<b>Principal Investigator</b>	<b>Clients</b>
Mix Design of concrete M-30 & M-35 grade for the construction work of IWT RO RO Terminal at Dhubri and investigation of cement (Topcem)	Dr. Bulu Pradhan	Tribeni Construction , Ghy
Proof checking of design and drawing of 82.40 MRT PMT Bridge with RCC decking over steel beam bottom grinder superstructure on satluj at Hussainwala Barrange in Punjab State	Dr. B. Singh	M/s Shree Gautam Construction Company Ltd
Consultancy services for preparation of feasibility report for proposed 6-lane bridge over river Brahmaputra connecting Narengi (near Ghy ) with Kurua (at North Bank) with road link upto	Dr. D.N. Burago-hain	PWD, Ghy, Govt. of Assam
Consultancy services for rechecking/proof of the design of 8 nos of bridges on kaladan Multi Modal Transit Transport Project Route in Mizoram	Dr. D.N. Burago-hain	PWD, Lawngtlai, Govt of Mizoram
Test on physical and mechanical properties of Jindal Panther Fe 500D & SAIL Fe 500D	Dr. Hemant B. Kaushik	Assistant Engineer, Manipur Project Sub-Division-II, CPWD, Imphal, Manipur
Mix Design of concrete M-25 for the construction of strengthening and upgradation of general hospital at Naharlagun, Arunachal Pradesh and investigation of cement	Dr. H.B. Kaushik	HSCC (India) Ltd, Noida
Mix Design (Pumpable) and investigation of construction materials (Reinforcement & Cement)	Dr. H.B. Kaushik	ITES Limited, Gurgaon
Test on Physical & Mechanical properties of Jindal Panther Fe 500D	Dr. H.B. Kaushik	CPWD, Imphal, Manipur
Test of Admixture FOSROC	Dr. H.B. Kaushik	CPWD, Imphal, Manipur
Test on Physical properties of Star Cement OPC 43 grade	Dr. H.B. Kaushik	CPWD, Imphal, Manipur
NDT and Concrete Corecutting at Luxmi Market and New Market in Imphal	Dr. H.B. Kaushik	PWD, Govt of Manipur
Inspection of 5 nos. PEB Hangars at Air Force Station Jorhat	Dr. Hrishikesh Sharma	M/s. Modern Prefab Systems Pvt. Ltd., Plot No.- 273, 274 Sector-7, IMTManesar, Dist- Gurgaon -122050, Haryana
Consultancy for 50M tower measurements at AIR, Tripura	Dr. Hrishikesh Sharma	Kadevi Industries Ltd., Hyderabad-500062
Proof checking for the construction of proposed viral diagnostic building for RMRC Dibrugarh, Assam	Dr. Hrishikesh Sharma	CPWD, Borjhar, Ghy
Mix design of concrete M-25 for the construction of nurses hostel Tezpur, assam and investigation of cement	Dr. Hrishikesh Sharma	HSCC (India) Ltd. LGB Regional Institute of Mental Health, Tezpur, Assam
Test on Physical & Mechanical properties of TATA Tiscon 500D	Dr. Hrishikesh Sharma	Rajkumar Biswas, Hojai Assam
Mix Design of concrete M-25 for CA No. CCE (Army) No. 2/01 of 2015-16: Completion of incomplete work for provision of Pre Cast/Prefabricated RCC wall and Allied facilities in Misamari, Assam and Investigation of cement	Dr. Hrishikesh Sharma	A.K. Gupta, col, Project Manager 2, Pin:908471
Proof checking consultancy service of structural drawings and design of sikkim University	Dr. Hrishikesh Sharma	Sikkim University

<b>Title</b>	<b>Principal Investigator</b>	<b>Clients</b>
Proof checking consultancy service for proposed development at shalimar Station, West Bengal	Dr. Hrishikesh Sharma	JACOBS CES, Kolkata West Bengal
Mix Design of concrete	Dr. Hrishikesh Sharma	ITES LTD, Gurgaon
Test on Physical & Mechanical properties of Tata Tiscon TMT Bar	Dr. Hrishikesh Sharma	N.F. Railway, Agartala
3rd party quality assurance for IWT RORO Terminal at Dhubri	Dr. Hrishikesh Sharma	Govt. of Assam, Office of the Executive Engineer, Ghy Central Division, CPWD, Ghy78
Consultancy of Vertically and Twist Angle Test Report of 50 M FM Tower at Goalpara Site-Assam	Dr. Hrishikesh Sharma	Pragati Electrocom, Gurgaon
Proof checking for the construction of proposed extension of roof over galleries of Indira Gandhi Athletic Stadium, Sarusajai Sports Complex	Dr. Hrishikesh Sharma	United Design Studio, Dispur Hatigaon Road, Ghy-6
Investigation of PVC Door	Dr. K. Dasgupta	Mr. Rahul Kumar Tulsyan
Checking of strengthening work of Taj Vivanta at Guwahati	Dr. K. Dasgupta	Indian Hotels Company Limited, Mumbai
Test on physical properties of timber specimen	Dr. K. Dasgupta	Hema Pradhan, Aizal, Mizoram
Testing of HDGI perforated cable tray material made of MS sheet	Dr. K. Dasgupta	IOCL, Noonmati, Ghy
Mix design of concrete M-25 for proposed construction work of extension investigation of cement	Dr. K. Dasgupta	Engineering Cell, IITG
Test on Physical & Mechanical properties of Electro steel Fe 500 Bar	Dr. K. Dasgupta	NF Railway, Agartala
Mix Design of concrete M-25 for renovation, modernization and augmentation of hostels	Dr. K. Dasgupta	Power Grid Corporation of India Ltd
Mix Design of concrete M-25 for the work of C/o 300 boys hostels for NIT at Langgoi, Imphal, Manipur and investigation of cement (TAJ)	Dr. K. Dasgupta	CPWD, Imphal
Test on physical properties of Magic Cement PPC & OPC 43	Dr. K. Dasgupta	RNB Cements Ltd, Ghy
Test on Physical & Mechanical properties of Electrosteel Fe 500 Bar	Dr. K. Dasgupta	M.K. Engineering, West Maligaon, Ghy
Test on Physical & Mechanical properties of Jindal Panther Fe 500D	Dr. K.D. Singh	N.F. Railway
Mix design of concrete M-25 against CA No.: CESZ/NAR/09 of 2015-16 (Topcem OPC 43)	Dr. K.D. Singh	B.K. Batra, AE (Civil), AGE B/R-I narangi, Narangi Military Station, Ghy-27
Consultancy for proof checking for structural design of proposed construction of memorial pillar of anglo-manipuri war 1891 at Khebaching, Khongjom, Manipur	Dr. K.D. Singh	pwd Govt. of Manipur
Mix Design of concrete M-40 for constructing major bridge no 44 in J-I project and investigation of cement	Dr. K.D. Singh	N.F. Railway, Silchar
Test on Physical & Mechanical properties of TATA Tiscon Fe 600	Dr. K.D. Singh	IIT Guwahati
Mix Design of concrete M-20 & M-25 for construction of some buildings in NEPA Complex, Umiam, Meghalaya and Investigation of cement (Topcem OPC 43)	Dr. K. D. Singh	WAPCOS LIMITED, New Delhi



<b>Title</b>	<b>Principal Investigator</b>	<b>Clients</b>
Air purification using foams and grey water purification	Dr. Pallab Ghosh	Unilever Industries Pvt Ltd. Bangalore
Job Mix formula for WMM, DBM and BC as per MoRT & H specifications	Dr. Rajan Choudhary	Mr. Pankaj Kumar, EE Civil, Officer Commandin
Riding quality test on Jorabat-Shillong of NH-40	Dr. Rajan Choudhary	Jorabat-Shillong Expresshighway Ltd
Testing of stone spalls for use for highway construction	Dr. Rajan Choudhary	MBL-ABCI (JV), DN 23, 2nd Floor, SectorV, Salt Lake City, Kolkata
Job Mix formula for WMM, DBM and BC as per MoRT&H specifications	Dr. Rajan Choudhary	Mr. Pankaj Kumar, EE Civil, Officer Commanding
Mix design of concrete M-25 for the works C/o 300 boys hostel for NIT at Langol and investigation	Dr. Sandip Das	M/s P&C -AAS construction (JV), Manipur
Mix design of concrete M-25 for proposed construction work of boundary wall, building etc for SAIL dept. warehouse at Amingaon, Ghy and investigation of cement	Dr. Sandip Das	Dilip Kumar, Head Projects (ASME), HSCL, Kolkata
Test on Physical & Mechanical properties of SHYAM 500D	Dr. Sandip Das	S.S. Khongrymmmai, Dy. Chief Engineer/Con-2, N.F. Railway, Agartala
Mix Design of concrete M-25 for piles and other works for the construction of executive hostels cum guest house, security barrack and tennis cour for central Academy for state Forest Services at Burnihat, Assam	Dr. Sandip Das	CPWD, Ghy Central Sub-Division, Katabari, GPRA Colony, Ghy-35
Test on Physical properties of TATA TISCON SD TMT Bar	Dr. Sandip Das	Numaligarh Refinery Ltd
Dam Break Analysys of Karbi Langpo Hydro Electric Project, Karbi Anglong, Assam	Prof. Subashisa Dutta	
Non destructive evaluation at Down Town University, Assam	Dr. S.K. Deb	Down Town Charity Trust, Dispur, Guwahati
Mix design of concrete M-25 for pile foundation & structural works CA and investigation of cement (Ultratech PPC)	Dr. S.K. deb	M.N. Rao, Project Manager (Rayang), Pasighat
Test on Physical & Mechanical properties of Jindal & TATA TMT bar	Dr. S.K. Deb	M/s Engineering Projects (India) Ltd
Mix Design of concrete M-25 & M-30 at Jote, Itanagar and investigation of cement	Dr. S.K. deb	CPWD, NIT Arunachal Pradesh
Test on Physical and Mechanical properties of Tata Tiscon SD TMT Bar	Dr. S.K. Deb	NF Railway, Agartala
Mix design of concrete M-25 for the work of permanent infrastructure for 33rd Hqrs SSB Rangia under FTR Hqrs, Ghy and investigation of cement	Dr. S.K. Deb	CPWD, Ghy
Mix Design of concrete M-35 for the construction of 1500 capacity boys hostel at NIT Agartala, Tripura and investigation of cement	Dr. S.K. Deb	Power Grid Corporation of India Ltd. Ghy
Test on Physical & Mechanical properties of Jindal Panthers TMT Bar	Dr. S.K. Deb	N.F. Railwaay, Agartala
Test on physical properties of Topcem cement OPC 53	Dr. S. Talukdar	Office of the SSE/CS/MIRZA/NFRailway
Test on physical properties of Amrit Cement OPC 43	Dr. S. Talukdar	Sailendra Dutta, Asst. Manager, Amrit Cement, Meghalaya

Title	Principal Investigator	Clients
Design mix for pavement quality concrete (PQC-45 kg/cm) and investigation of materials: Hasimara	Dr. S. Talukdar	M/s MP Khaitan, Guwahati
Design mix cement	Dr. S. Talukdar	K.s. Sandhu, AE Civil, Hasimara
Test on physical properties of star cement PPC	Dr. S. Talukdar	CMC Ltd. Ghy
Proof checking of design of foundation, column, plinth BG line project	Dr. S. Talukdar	Rajkumar Biswas, Dangariabari Natun Bazar, Hojai
Mix Design of concrete M-30 Tezpur, Assam and investigation of cement	Dr. S. Talukdar	HSCC (India) Limited, Tezpur
Test on Physical and Mechanical properties of SAIL, Jindal Panther 500D & Shyam 500D	Dr. S. Talukdar	N.F. Railway, Agartala
Test on Physical & Mechanical properties of SHYAM Fe 500 Bar	Dr. S. Talukdar	N.F. Railwat Ghy
Mix Design of concrete M-20 and Investigation of cement	Dr. S. Talukdar	ATC India Tower Corporation
Proof checking of design & drawing of Railway span of Road Over Bridge at Chainage 769/585M at North Lakhimpur, Assam	Dr. S. Talukdar	Govt. of Assam, PWD, Office of the chief Engineers, Chandmari, Ghy
Testing of Paver Blocks M-40 grade	Dr. S. Talukdar	Indian Oil Corporation Ltd, Ghy
Investigation of existing Aditya Group Hospital Building at Kolkata for structural stability	Dr. S. Talukdar	GNRC Medical, North Ghy
Proof Checking of design of foundation & column for the work: Construction of station building at Manubazar in connection with Agartala - Sabroom new BG line project	Dr. S Talukder	Probir Kanti Roy, Ramendra Kuthi, Colonel Choumuhani, Agartala -1
Physical test of SAJI TMT bar 25mm dia	Dr. S Talukder	Authorized Signatory, M/s. Asclapius Hospitals & Healthcare Pvt. Ltd., Guwahati
Proof checking of design of Pile, Pile Cap & Grade Beam for the work: Construction of Station building Bishalgarh in connection with Agartala - Sabroom new BG line project	Dr. S Talukder	Authorized Signatory, M/s. Creative Consulatant & Builders, Vivekananda Road, Silchar, Assam
Evaluation on properties of PMB-70	Dr. T.L.Ryntathiang	J.P. & Sons, Ghy
Performance testing and certification of solar lanterns	Dr. Pankaj Kalita	M/s Regnant Energy Solutions, New Delhi
Performance Testing of Solar Lanterns	Dr. Pankaj Kalita	Assam Electronics Development Corporation Ltd, Ghy
Respond to inter-parties review of USPN 8911808	Dr. V.S. Mohalkar	Cavitation Technologies Inc., USA
Development of local language interface and pronunciation dictionary (LLIPD) for Hindi & English	Dr. Priyankoo Sarmah	SpeechWareNet (I) Pvt Ltd., Ghy
Consultancy assignment for conducting a study to assess the status of e-district implementation to scope out the areas of synergy with the ACCSDP for ustained e-enabled delivery in Assam	Prof. Diganta Goswami	Assam Rural Infrastructure and Agricultural Services Society, Ghy-22
Enhancing Quality of Care and Treatment of Children Living with HIV through Off-the-grid Telemedicine in North East India	Dr. P.K. Das	United Nations Children's Fund
Ecosystem-based livelihood promotion in Mizoram	Dr. Avinash Shende	UNIDO
Design of fruit and vegetable cart for GMC	Dr. D. Udaya Kumar	Guwahati Municipal Corporation, Guwahati

<b>Title</b>	<b>Principal Investigator</b>	<b>Clients</b>
Logo design for district disaster management	Dr. Udaya Kumar	Additional District Magistrate, Kamrup (M), Ghy
Design for flag for Assam police	Dr. Udaya Kumar	Additional Director General of police (A), Assam Police HQ, Ghy
Logo design for integrated Guwahati flood management programme	Dr. Udaya Kumar	Additional District Magistrate, Kamrup (M), Ghy
Logo design for IIT Hyderabad	Dr. Udaya Kumar	IIT Hyderabad
Badge and flag design for Assam Rajiv Gandhi University of Cooperative Management	Dr. Udaya Kumar	Assam Rajiv Gandhi University of Cooperative Management, Sivasagar, Assam
Development of system for digitized recording of DG set parameters	Dr. Harshal B. Nemade	14 BRD, Indian Air Force, AFS Borjhar, Ghy781015
Rural water supply & sanitation project for low income states	Dr. S.K. Kakoty	State Project Management Unit, Public Health Engineering Dept., Govt of Assam
Material characterization of BIS standard TMT bar	Dr. Pankaj Biswas	Pawan castings (Meghalaya) Pvt. Ltd Harlibagab, Byrnihat
Thermodynamic management of a PVT system	Prof. P. Mahanta	PVT Power AG, Zurich, Switzerland
Development of Metal Hydride based hydrogen purification system	Prof. P. Muthukumar	NTPC, ECE Noida office, EOC, Sector 24, Noida

## Research Projects Completed During 2015-2016

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
<b>Biosciences and Bioengineering</b>					
Anil M. Limaye	The SHBG-RSHBG pathway: insights from prostate cancer cell lines	DST	19.0	-	3
Anil M. Limaye	Modulation of estrogen regulated gene expression by the green tea polyphenol EGCG in ER positive breast cancer cells: A microarray study	ICMR	7.95	-	3
Anil M. Limaye	Real-time PCR based expression profiling of matrix metalloproteinases and their inhibitors in prostate cancer cell lines	DST	24.0	B. G. Jagannathan	2
Kannan Pakshirajan	Carbon monoxide conversion using native hydrogenogenic microorganisms for sulphate rich wastewater treatment	DBT	14.45	G. Pugazenthi	1
Kannan Pakshirajan	Strategy Development for the mitigation of heavy metals in surface waters around coal mining areas using native cyanobacterial strains	DBT	46.62	-	3
L. Rangan	Molecular and physico-chemical characterization of selected ginger species from North Eastern Region	DBT	52.75	-	3
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)	Utpal Bora	4
Manish Kumar	Purification and characterization of putative outer membrane protein of <i>Leptospira interrogans</i>	IITG	5	-	3
Manish Kumar	Purification and characterization of recombinant outer membrane proteins of <i>Leptospira interrogans</i> for vaccine and diagnostics	ICMR	10	-	3
Vikash Kumar Dubey	X-ray crystallographic structure elucidation of key drug target enzymes of <i>Leishmania donovani</i>	DBT	72.69	-	3
Vikash Kumar Dubey	Studies on trypanothione synthetase, a key enzyme of redox metabolism of <i>Leishmania donovani</i>	DBT	26.73	-	3
Vikash Kumar Dubey	DBT-Innovative Young Scientist Project Award Deciphering the molecular mechanism underlying the activity of antitumor agents as antileishmanial agents and their potential for therapy.	DST	60.52	-	3
Vikash Kumar Dubey	Variation in proteome profile of legume plants in response to heavy metal toxicity	DST	25.0	Anil Verma	3
Ranjan Tamuli	Molecular investigation of epigenetic modifications in exposure to environmental pollution using <i>Neurospora crassa</i> as a model system	DBT	55.00	Utpal Bora	3

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
Utpal Bora	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	Ranjan Tamuli	3
Utpal Bora	Development of aptamer based molecular diagnostics for breast cancer	DBT	154.85	Ranjan Tamuli	4
Utpal Bora	Development of silk protein derived artificial nerve growth conduits for neural tissue engineering	Central Silk Board (CSB), Ministry of Textiles	45.30	Ranjan Tamuli	3
Utpal Bora	Silk based scaffolds for neural tissue engineering	DBT	58.44	Ranjan Tamuli	3
Ranjan Tamuli	Studies on the cellular roles of calcium signaling proteins in <i>Neurospora crassa</i> (NE-Twining project)	DBT	72.88	Utpal Bora	3
Latha Rangan	DNAB (DNA Barcoding) based biodiversity inventory in Zingiberaceae of North-east India	DIT, MCIT	71.18	Utpal Bora, L. Sahoo	5
Utpal Bora	Electrospun nanofiber scaffolds for hepatic tissue engineering	DBT	52.55	Pranab Goswami	3
Utpal Bora	Nanoparticle mediated targeted siRNA delivery to cancer cell lines	DST	12.96	-	3
Pranab Goswami	Enzymatic biofuel cell for biomedical application	DBT	35.00	Utpal Bora	3
Pranab Goswami	Development of enzyme electrode for the construction of cholesterol biosensor	CSIR	2.25	Utpal Bora	3
Utpal Bora	Synthesis of biodegradable nanocarriers for targeted drug delivery	DBT	14.69	Pranab Goswami	3
S. K. Khijwania	Glucose sensor based on evanescent wave induced fluorescence spectroscopy	BRNS, DAE	9.35	Utpal Bora	3
Ranjan Tamuli	Molecular investigation of epigenetic modifications in exposure to environmental pollution using <i>Neurospora crassa</i> as a model system	DBT	55.00	Utpal Bora	3
S. S. Ghosh	DBT Programme Support on Fundamental Molecular Investigations in Biotechnology - Phase I	DBT		P. Goswami, L. Sahoo, B. Bose, A. Ramesh, S. Patra	7
S. S. Ghosh	Fundamental Molecular Investigations in Biotechnology	DBT	1133.68	P. Goswami, L. Sahoo, B. Bose, A. Ramesh, S. Patra	7

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
S. S. Ghosh	Core-I Grant	DBT	760.18	P. Goswami, L. Sahoo, B. Bose, A. Ramesh, S. Patra	7
P. Goswami	Studies and application of redox enzymes for bioelectornics devices	DBT	94.96	S. Patra	7
B. Bose	Combination therapy using suicide genes and recombinant antibody	DBT	97.32	S. S. Ghosh	7
S. S. Ghosh	Investigations on the molecular mechanism of nanomaterial-cellular interactions	DBT	102.82	B. Bose, A. Ramesh	7
L. Sahoo	Molecular cloning and functional characterization of heavy metal stress specific phytochelatin synthase gene from Eichhornia crassipes	DBT	78.40		7
S. S. Ghosh	Novel nanoscale materials targeted towards antimicrobial and anticancer activities	DBT	169	A. Chattopadhyay, Biplab Bose	4
B. Anand	Structural Basis for the Maturation of the Prokaryotic siRNA	DBT	40.44	-	3
B. Anand	Dynamical Aspects of Era GTPase - 16S rRNA Interactions and its Implication in Ribosome Assembly	DAE-BRNS	16.85	-	3
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	-	4
Vibin Ramakrishnan	Design, Synthesis and Characterization of Self-assembled Molecular Materials from Hetero-tactic Polypeptide Constructs; Applications in Drug Deleivery and Nano-Scale energy storage devices	DBT	4.05	Senthilkumar S.	3
Biman B Mandal	Stimulation of stem cell differentiation on silk fiber reinforced composite with tunable strength and degradation towards enhanced osteogenesis	DST-FAST TRACK	23.00	-	3
Biman B Mandal	Bioengineered silk vascular grafts for blood vessel engineering	DAE - BRNS	17.00	-	3
Biman B Mandal	Mechanically strong silk composite matrices for bone tissue engineering	ICMR	10.00	-	3
Nitin Chaudhary	Understanding the role of cation- $\pi$ interaction in the self-assembly of amyloidogenic and de novo designed peptides	DBT	31.03		3
R. Swaminathan	Single molecule fluorescence investigations on the mechanism of lysozyme aggregation and RNA helicase activity	DBT	94.75	B. Anand	4
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

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
L. Sahoo	Development of Transgenic Cowpea for Virus Resistance Using the Tool of RNA Interference (RNAi)	DBT	83.34		2
<b>Chemical Engineering</b>					
Ashok Kumar Das-mahapatra	Investigation of Diblock Copolymer Crystallization by Molecular Simulation	CSIR	12		3
Vimal Katiyar	BioThermosets	DST	22	Amit Kumar	3
Vimal Katiyar	GreenPACK	Ministry of Food Processing Industries	32	Amit Kumar	2
<b>Chemistry</b>					
B. K. Patel	Newer Approaches to Heterocycles: Mechanistic Investigations and Applications	CSIR	15.00	-	3
T. Punniyamurthy	Study of C-H Activation for the Synthesis of Benzofused Azoles	SERB	48.00	-	3
T. Punniyamurthy	Design and Development of Chiral Macromolecules for Chiral Recognition and Asymmetric Catalysis	CSIR	18.00	-	3
Parameswar K. Iyer	Design and development and fabrication of OLED, organic solar cells and organic TFTs based on molecular, polymeric and composite materials	DST	649.89	M. Qureshi, D. Goswami, A. Srinivasan	5
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	-	3
Debasis Manna	Mechanistic Insights into the Phosphatidyl Inositol (IP) Binding Properties of Human Protein Lamellipodin and its Pleckstrin Homology (PH) Domain	BRNS	17.00	-	3
Debasis Manna	Interaction of Phosphatidyl Inositol with Phox Homology (PX) Domain: Elucidation of Mechanistic Principal and Strategies for Therapeutic Intervention	DBT	14.85	-	3
Chandan Mukherjee	Radical-Containing Transition Metal-Complex Catalyzed Aerial Oxidation of Alcohols to Aldehydes	IITG	5.00	-	2
Chandan Mukherjee	Synthesis of Sensitizers for Dye Sensitized Solar Cell	BRNS	23.51	-	3
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	-	3
Subhas Chandra Pan	N-Vinyl and N-Alkynyl Pyridinium and –Ammonium Tetrafluoroborate Salts: New Electrophilic Reagents in Asymmetric Organocatalysis	DST (SERB)	26.90	-	3

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
A. S. Achalkumar	Luminescent Discotic Liquid Crystals for the Application in Organic Light Emitting Diodes	BRNS-DAE	25.00	-	3
Bhubaneswar Mandal	Beta breaker di-peptides: development of a novel approach for amyloid disruption	BRNS	17.00	-	3
Bhubaneswar Mandal	Synthesis and biological evaluation of a novel class of multi-target-directed ligands as potential leads against amyloid diseases	DST (FAST TRACK)	19.00	-	3
<b>Civil Engineering</b>					
Mallikarjuna C.	Vehicle gap maintaining behavior under varying traffic conditions and its effect on flow-occupancy relationships.	DST	14.00	-	3
Subashisa Dutta	Modelling River Level Variations using Satellite Altimetry and Applications in Water Resources Management	ISRO	9.60	-	2
Ajay Kalamdhad	Potential of aerobic digestion (composting) and anaerobic digestion of kitchen waste	Ministry of Drinking Water and Sanitation	21.00	-	3
Ajay Kalamdhad	Composting of water hyacinth using different composting technologies	DST (SERC)	18.50	-	3
Ajay Kalamdhad	Bio-processing of Phumdi weeds of Loktak Lake Manipur through composting	CSIR	16.70	-	3
Ajay Kalamdhad	High Rate Composting of Institutional Organic Waste	IIT Guwahati	5.00	-	2
<b>Computer Science and Engineering</b>					
Sanasam Ranbir Singh	Aakash application development Lab	MHRD	55	T. Venkatesh	3
T. Venkatesh	Architectures and Protocols for Highspeed Networks with Tiny or No Buffers	DST	11	-	3
Arijit Sur	Shot Based Video Watermarking For Very Low Bit Rate Video	DST	6.40	-	2
P. Yammiyavar	Standardisation of Virtual Keyboards in Indic Languages	DeiTY	20.00	Samit Bhattacharya	3
<b>Design</b>					
P. Yammiyavar	Virtual key Board for Assamese Language	DeiTY	10	Samit Bhattacharya	2
Ravi Mokashi Puneekar	Design and Development of Gear for Avalanche Survival	High Atitude Warfare School, Gulmarg, J&K	32	-	4



Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
<b>Electronics and Electrical Engineering</b>					
S. R. M. Prasanna	Development of speech based multilevel person authentication system	DEiTY	162.00	S. Nandi, R. Sinha and S. Dandapat	3
S. R. M. Prasanna	Development of prosodically guided phonetic engine in Assamese	DEiTY	40.00	S. Dandapat	2
R. Sinha	Virtual Laboratory on Signals and Systems	MHRD, under NME-ICT	30.00	S.R.M. Prasanna	3
Indrani Kar	Navigation and Path Planning of Mobile Robots and Extension to Multi-Agent Systems	DST	13.44		3
<b>Humanities and Social Sciences</b>					
Bidisha Som	An ethnolinguistic account of sensory perception among the Bodos in North East India.	ICSSR-NWO	4.21		1
Sukanya Sharma	Source Book of the Archaeology of the Himalayan Region: Arunachal Pradesh	Centre for Archaeological Studies and Training Eastern India	2.25		
Sukanya Sharma	Virtual Anthropology Laboratory	MHRD	65.00	S Nandi, S R M Prassanna	
<b>Mechanical Engineering</b>					
U.S. Dixit	Design and Development of Proper Bonding Mechanism for individual AAC block units in wall system of a structure	DST	4.30	Arun Borsakia	-
S. Kanagaraj	Development of Copper (Cu) – Carbon Nanomaterial (CN) based nanocomposite formulations for heat recovery in different processes in a steel plant	SDF and Tata Steel	336	-	3
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	-	3
Sachin D. Kore	Electromagnetic Shearing Of Tubes and Sheets	SERB	18.5	-	3
Pankaj Biswas	Numerical and Experimental Study on Residual Stress and Distortion Control of Welded Structures	IIT Guwahati	5.0	-	2
Pankaj Biswas	Preparation of Lab Manual for strength of material Lab of Mechanical Engineering Department	IIT Guwahati	0.15	KSRK Murthy	1

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
P. Muthukumar	Development of Thermal Energy Storage Systems for Solar Thermal Power Plant	DST	128	-	4
Sukhomay Pal	Development of monitoring system for friction stir welding	SERB	9.24	-	3
Niranjan Sahoo	Shock Tube Development and Verification of Capabilities of Existing Correlation for Stagnation Point Heat Transfer Rate	AR&DB	16.043	Vinayak Kulkarni	2
Vinayak Kulkarni	Development of a conjugate heat transfer solver for hypersonic applications	AR&DB	11.632	Niranjan Sahoo	2
Atanu Banerjee	Modelling and active control of SMA actuators	DST	17	-	3
<b>Physics</b>					
Head, Dept. of Physics (coordinator)	DST-FIST Project (Infrastructure project to the department)	DST (FIST)	229	-	5
P. K. Giri	Controlled growth and studies on semiconductor nanowire heterostructures for solar photovoltaic applications	BRNS	25	-	3
P. K. Padmanabhan	Factors Influencing fast ion conduction in solids: Atomistic modeling and computer simulation studies on NASICON-type solids.	DST	30.25	-	-
Subhradip Ghosh	Theory of phonon excitations in substitutionally disordered alloys	Swedish Research link, Sweden	51.44	-	3
B R Boruah	Design and implementation of confocal microscopes with spatial light modulator based beam scanning and programmable beam manipulation mechanism	DST-SERB	89.66	U Bora	3
B R Boruah	Design and implementation of a high speed wavefront sensor of light beams	DeitY	67.21	A Khare	4
S. Basu	Phases of the interacting Bose gas? simulating quantum phenomena at large length scales	CSIR	14.2	-	3
A. Srinivasan	Development of Ni-Mn based alloys exhibiting high magneto-caloric effect near room temperature	CSIR	18.6	-	3
A. Srinivasan	Development of Heusler alloys based thin films for magneto-caloric and spintronic application	DRDO	34.92	-	3
Tarak Nath Dey	Diffraction-less multidimensional light propagation in coherently controlled media	DST	18.81	-	3
<b>Energy</b>					
Pratima Agarwal	Optoelectronic and Transport studies on Thin silicon films (nc-Si and nc-Si/a-Si:H superlattice) and solar cells	CSIR	29	-	2

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
<b>Environment</b>					
V. K. Dubey	Variations in proteome profile of legume plants in response to heavy metal toxicity	DST	23.28	Anil Verma	3
Ranjan Tamuli	Molecular investigation of epigenetic modifications caused by environmental pollution using <i>Neurospora crassa</i> as a model system	DBT	55.00	Utpal Bora	-
M. K. Purkait	Treatment of contaminated drinking water using electrocoagulation technique	DRL, Tezpur (DRDO)	9.72	-	3
A. K Ghoshal	Petroleum Wastewater treatment in packed Bed reactor using suitable Microorganism(s)	CSIR	16.00	-	3
Gopal Das	Synthesis, Characterization of Metal Oxides and Their Application to Wastewater Treatment.	CSIR	16.88	-	3
<b>Nanotechnology</b>					
Arun Chattopadhyay	Newer Chemical and Physical Methods of Engineering Devices with Nanoscale Functional Components	DST	92	-	5
Arun Chattopadhyay	Engineering Nanoscale Materials and their Applications in nanotechnology	DST	202	-	3
Arun Chattopadhyay	Novel Nanoscale Materials: Generation, Characterization, and Device Applications	DST	190.60	-	3
Arun Chattopadhyay	Development of Nanoscale Materials for Bacteria Removal from Surface Water	DRL	9.98	S. S. Ghosh	2
Siddhartha S. Ghosh	Nanoscale materials with therapeutic implications	DBT	102.62	A. Chattopadhyay, A. Ramesh, B. Bose	3
Siddhartha S. Ghosh	Novel nanoscale materials targeted towards antimicrobial and anticancer activities.	DBT	169	A. Chattopadhyay, Biplab Bose	3
Pravat K. Giri	Controlled Growth and Studies on Semiconductor Nanowire Heterostructures for Solar Photovoltaic Applications	BRNS	25	--	3
Parameswar K. Iyer	Design and development and fabrication of OLED, organic solar cells and organic TFTs based on molecular, polymeric and composite materials	DST	649.89	Mohd Qureshi, Deepak Goswami, A. Srinivasan	5

Principal Investigator	Name of Project	Sponsoring Agency	Amount Sanctioned (₹ in Lakh)	Co-Investigator	Duration (In Years)
Dipankar Bando-padhyay	External Field Driven Flow Induced micro/nano scale Patterning, Mixing, Heat and Mass transfer in micro/nano Fluidic Devices	DST SERB	45	Tapas K. Mandal	3
Dipankar Bando-padhyay	A combined experimental and theoretical study on the instability and patterning of thin liquid crystal films	DST Fast Track	9.5	-	3
D. K. Goswami	Fabrication and Characterization of Organic thin film transistor	DST	34.60	-	3
A. Khan	Development of Stimuli Sensitive Nanogels/Nanoparticles for Controlled Release System	DST	10	-	3
<b>Centre for Educational Technology</b>					
Ratnajit Bhattacharjee	Virtual Lab-Pilot Phase	MHRD	200		6
	System, Communication and Control Lab				
	Virtual Mass Transfer Lab				
	Virtual Labs for Mechanical Vibration				
				R. Sinha, S. Majhi	
				R. Uppaluri, A. K. Verma	
				R. Tiwari, S. K. Dwivedy	

**PART III**

**APPENDICES**

**Faculty**

**Officers and Scientific Staff (Group A)**

**Degree Awardees**

**Progress in Construction Works**

**Summary of Institute Accounts**

**Appendix-I****FACULTY****Biosciences and Bioengineering  
Professor**

- 1 Bora, U.
- 2 Chaturvedi, R.
- 3 Dasu, V.V.
- 4 Dubey, V.K.
- 5 Ghosh, S.S.
- 6 Goswami, P.
- 7 Goyal, A.
- 8 Pakshirajan, K.
- 9 Ramesh, A.
- 10 Rangan, L.
- 11 Sahu, L.
- 12 Swaminathan, R.

**Associate Professor**

- 1 Bose, B.
- 2 Das, D.
- 3 Jaganathan, B.G.
- 4 Kunnumakkara, A.B.
- 5 Limaye, A.M.
- 6 Mandal, B.B.
- 7 Patra, S.
- 8 Ramakrishnan, V.
- 9 Saini, G.K.
- 10 Tamuli, R.
- 11 Trivedi, V.

**Assistant Professor**

- 1 Baskaran, A.
- 2 Chandra, P. (From 21.07.15)
- 3 Chaudhary, N.
- 4 Kanaujia, S.P.
- 5 Kobayashi, Y. (From 23.07.15)
- 6 Kumar, M.
- 7 Kumar, S.
- 8 Maiti, S.K.
- 9 Nagotu, S. (From 23.07.15)
- 10 Pandey, L.M.
- 11 Satpati, P. (From 01.06.15)
- 12 Singh, K.K. (From 13.07.15)
- 13 Sivaprakasam, S.

- 14 Sukumar, P.
- 15 Thummer, R.P. (From 23.07.15)

**Chemical Engineering  
Professor**

- 1 Ghosh, P.
- 2 Ghoshal, A.K.
- 3 Gumma, S.
- 4 Mandal, B.
- 5 Mohanty, K.
- 6 Moholkar, V.S.
- 7 Pugazhenthii, G.
- 8 Purkait, M.K.
- 9 Saha, P.K.
- 10 Singh, A.
- 11 Uppaluri, R.G.V.S.

**Associate Professor**

- 1 Bandyopadhyay, D.
- 2 Banerjee, T.
- 3 Das, C.
- 4 Dasmahapatra, A.K.
- 5 De, M.
- 6 Golder, A.K.
- 7 Goud, V.V.
- 8 Katiyar, V.
- 9 Kishore, N.
- 10 Majumder, S.K.
- 11 Mandal, T.K.

**Assistant Professor**

- 1 Anandalakshmi, R.
- 2 Dr.Prasanna, V.R.
- 3 Gupta, R.
- 4 Katha, A.R.
- 5 Kotecha, P.
- 6 Kumar, A.
- 7 Murugan, S.S.
- 8 Pattader, P.S.G.
- 9 Peela, N.R.
- 10 Tiwari, P.
- 11 Upadhyay, R.K.
- 12 Vairakannu, P.

**Chemistry****Professor**

- 1 Baruah, J.B.
- 2 Chattopadhyay, A.
- 3 Das, G.
- 4 Gupta, A.K.
- 5 Iyer, P.K.
- 6 Khan, A.T.
- 7 Krishnamoorthy, G.
- 8 Manivannan, V.
- 9 Mondal, B.
- 10 Patel, B.K.
- 11 Paul, A.
- 12 Punniyamurthy, T.
- 13 Ray, M.
- 14 Saikia, A.K.

**Associate Professor**

- 1 Bag, S.S.
- 2 Das, D.
- 3 Dutta, S.
- 4 Jana, C.K.
- 5 Kundu, L.M.
- 6 Mandal, B.
- 7 Manna, D.
- 8 Mukherjee, C.
- 9 Pan, S.C.
- 10 Panda, A.N.
- 11 Paul, S.
- 12 Qureshi, M.
- 13 Sahu, K.
- 14 Sarma, M.
- 15 Sastri, C.V.
- 16 Sudhakar, A.A.

**Assistant Professor**

- 1 Bhabak, K.P. (From 29.04.15)
- 2 Biswas, S.P.
- 3 Chatterjee, S.
- 4 Das, A. (From 01.05.15)
- 5 Kancharla, P.K. (From 23.10.15)
- 6 Mahata, K.
- 7 Manna, U. (From 08.06.15)
- 8 Raidongia, K.
- 9 Seetharam, A.K.A. (From 01.07.15)
- 10 Srimani, D.

**Civil Engineering****Professor**

- 1 Barua, G.
- 2 Bhattacharjya, R.K.
- 3 Chakraborty, S.
- 4 Deb, S.K.
- 5 Dutta, A.
- 6 Dutta, S.
- 7 Ghosh, P.K.

- 8 Gokhale, S.B.
- 9 Jawed, M.
- 10 Mahanta, C.
- 11 Sarma, A.K.
- 12 Singh, A.K.
- 13 Singh, B.
- 14 Talukdar, S.

**Associate Professor**

- 1 Chakraborty, A.
- 2 Choudhury, R.
- 3 Kalamdhad, A.
- 4 Kartha, S.A.
- 5 Kaushik, H.B.
- 6 Krishna, A.M.
- 7 Kumar, B.
- 8 Mallikarjuna, C.
- 9 Maurya, A.K.
- 10 Pekkatt, S.
- 11 Pradhan, B.
- 12 Rynthiang, T.L.
- 13 Sekharan, S.
- 14 Singh, K.D.
- 15 Singh, L.B.

**Assistant Professor**

- 1 Bharat, T.V.
- 2 Bharati, R. (From 08.09.15)
- 3 Das, S.
- 4 Dasgupta, K.
- 5 Dashora, A. (From 01.06.15)
- 6 Dey, A.
- 7 Garg, A. (From 27.04.15)
- 8 Goyal, M.K.
- 9 Hazra, B.
- 10 K., Ravi (From 27.07.15)
- 11 Kota, H.
- 12 Kumar, A.
- 13 Mishra, A.K.
- 14 Nair, A.M. (From 15.06.15)
- 15 Ranjani, G.I.S.
- 16 Sarma, H.
- 17 Shelke, A.
- 18 Siddagangaiah, A.K.

**Computer Science and Engineering****Professor**

- 1 Barua, G.
- 2 Bhaduri, P.
- 3 Das, P.K.
- 4 Deka, J.K.
- 5 Goswami, D.
- 6 Kapoor, H.K.
- 7 Nair, S.B.
- 8 Nandi, S.
- 9 Rao, S.V.
- 10 Sajith, G.

**Associate Professor**

- 1 Bhattacharya, S.
- 2 Biswas, S.
- 3 Inkulu, R.
- 4 Karmakar, S.
- 5 Mitra, P.
- 6 Sahu, A.
- 7 Saradhi, V.V.
- 8 Singh, S.R.
- 9 Sur, A.
- 10 Venkatesh, T.

**Assistant Professor**

- 1 Anand, A.
- 2 Awekar, A.C.
- 3 Baruah, R.D.
- 4 Jose, J. (From 15.07.15)
- 5 Joshi, S.B. (Upto 30.09.15)
- 6 Kenkireth, B.G.
- 7 Kesh, D.
- 8 Malhotra, V.M. (Upto 10.07.15)
- 9 Sarkar, A.
- 10 Shannigrahi, S.

**Design****Professor**

- 1 Barua, U.
- 2 Chakrabarti, D.
- 3 Das, A.K.
- 4 Punekar, R.M.
- 5 Yammiyavar, P.G.

**Assistant Professor**

- 1 Banerjee, S.
- 2 Bokil, P.
- 3 Das, S.
- 4 Gokhale, S.M.
- 5 Iqbal, S.
- 6 Kalita, P.C.
- 7 Karmakara, S.
- 8 Kumar, D.U.
- 9 Madhukaillya, M.
- 10 Majhi, M.
- 11 Monga, C.
- 12 Nath, N.
- 13 Pal, S.
- 14 Roy, S.
- 15 Salve, U.R.
- 16 Shende, A.
- 17 Singh, A.
- 18 Sorathia, K.B.
- 19 Srivastava, A.
- 20 Upadhyay, P.
- 21 V., Jagadish K. (Upto 15.03.16)

**Electronics and Electrical Engineering****Professor**

- 1 Bhattacharjee, R.
- 2 Bora, P.K.
- 3 Bose, S.K.
- 4 Dandapat, S.
- 5 Gogoi, A.K.
- 6 Mahanta, C.
- 7 Majhi, S.
- 8 Nemade, H.B.
- 9 Palathinkal, R.P.
- 10 Prasanna, S.R.M.
- 11 Sinha, R.

**Associate Professor**

- 1 Ahamed, S.R.
- 2 Bhuyan, M.K.
- 3 Kar, I.
- 4 Karthik, K.
- 5 Kumar, P.
- 6 Rajesh, A.
- 7 Singh, K.R.

**Assistant Professor**

- 1 Adda, R.
- 2 Chatterjee, A.
- 3 Chouhan, S.
- 4 Das, S.
- 5 Dhaka, K.
- 6 Ganguly, S. (From 10.06.15)
- 7 Guha, P.
- 8 Jacob, T.
- 9 Krishnaswamy, S.
- 10 Kumar, C. (From 27.07.15)
- 11 Mallajosyula, A.T. (From 14.09.15)
- 12 Nallam, N.
- 13 Nath, S.
- 14 Nayak, S.K.
- 15 Rai, B.K.
- 16 Rather, Z.H. (Upto 28.12.15)
- 17 Sekhawat, H.S.
- 18 Sethi, A.
- 19 Shrestha, G.B.
- 20 Sonkar, R.K.
- 21 Sundaram, S.
- 22 Tripathy, P.
- 23 Trivedi, G.

**Humanities and Social Sciences****Professor**

- 1 Barua, A.
- 2 Borbora, S.
- 3 Das, L.
- 4 Dutta, M.K.
- 5 Punekar, R.M.
- 6 Saikia, A.
- 7 Tripathi, N.



**Associate Professor**

- 1 Barua, A.
- 2 Bedamatta, R.
- 3 Das, D.
- 4 Kashyap, N.
- 5 Mahanta, S.
- 6 Mallick, S.
- 7 Ray, S.
- 8 Sarmah, P.
- 9 Sharma, S.
- 10 Som, B.
- 11 Venkataraman, P.

**Assistant Professor**

- 1 Barua, K. (Upto 29.02.16)
- 2 Basu, D. (From 30.10.15)
- 3 Chatterjee, B. (Upto 31.12.15)
- 4 Hussain, D.
- 5 Jha, M.K. (From 22.09.15)
- 6 Kipgen, N.
- 7 Mahanta, A. (From 16.12.15)
- 8 Parui, A.
- 9 Saikia, P.
- 10 Sengupta, B.
- 11 Thomas, J.
- 12 Vijaykrishnan, K.G. (Upto 08.01.16)

**Mathematics**

**Professor**

- 1 Alam, R.
- 2 Bora, S.N.
- 3 Dalal, D.C.
- 4 Kalita, J.C.
- 5 Pati, S.
- 6 Prasad, M.G.P.
- 7 Saikia, A.
- 8 Sarma, B.K.
- 9 Selvaraju, N.
- 10 Sinha, R.K.
- 11 Srinivasan, N.

**Associate Professor**

- 1 Bora, S.
- 2 Chakrabarty, S.P.
- 3 Das, G.K.
- 4 Deka, B.
- 5 Kapoor, K.
- 6 Krishna, K.V.
- 7 Mandal, P.S.

**Assistant Professor**

- 1 Bandyopadhyay, S.
- 2 Bhattacharjya, B.
- 3 Chakrabarty, A.K.
- 4 Chattopadhyay, A. (From 08.06.15)

- 5 Dey, A.K.
- 6 Dutta, S.
- 7 Kamal, S.
- 8 Kumar, P.
- 9 Palaparthi, A.S.S.K.
- 10 Ramesh, H.
- 11 Srikanth, K.V.
- 12 Srivastava, R.K.
- 13 Swain, J.
- 14 Tiwari, S.
- 15 Upadhyay, S.
- 16 Wagh, V.V.

**Mechanical Engineering  
Professor**

- 1 Biswas, G. (Director)
- 2 Chakraborty, D.
- 3 Dass, A.K.
- 4 Dixit, U.S.
- 5 Dwivedy, S.K.
- 6 Kakoty, S.K.
- 7 Mahanta, P.
- 8 Mishra, S.C.
- 9 Muthukumar, P.
- 10 Pandey, M.
- 11 Robi, P.S.
- 12 Saha, U.K.
- 13 Sahasrabudhe, A.D.
- 14 Sahoo, N.
- 15 Tiwari, R.

**Associate Professor**

- 1 Bandopadhyay, D.
- 2 Biswas, P.
- 3 Dalal, A.
- 4 Kalita, K.
- 5 Kanagaraj, S.
- 6 Kore, S.D.
- 7 Kulkarni, V.N.
- 8 Murthy, K.S.R.K.
- 9 Narayanan, R.G.
- 10 Pal, S.
- 11 Panda, S.
- 12 Saxena, A. (Upto 05.05.15)
- 13 Senthilvelan, S.
- 14 Somayaji, C.

**Assistant Professor**

- 1 Bag, S.
- 2 Banerjee, A.
- 3 Basu, D.N.
- 4 Das, M.
- 5 De, A.K.
- 6 Gadgil, H.P. (Upto 29.05.15)
- 7 Gautam, S.S.

- 8 Gavara, M.R.
- 9 Joshi, S.N.
- 10 Khanikar, P. (From 30.04.15)
- 11 Kumar, B.
- 12 Kumari, P.
- 13 Manadal, P.K. (From 21.05.15)
- 14 Mehta, B. (From 15.07.15)
- 15 Natarajan, G.
- 16 Rajendraswamy, S.D.
- 17 Reddy, A.N.
- 18 Shankar, M.R.
- 19 Sharma, D.
- 20 Unal, A. (Upto 29.02.16)

**Physics****Professor**

- 1 Agarwal, P.
- 2 Alagarsamy, P.
- 3 Basu, S.
- 4 Ghosh, S.
- 5 Giri, P.K.
- 6 Khare, A.
- 7 Khijwania, S.K.
- 8 Poullose, P.
- 9 Ravi, S.
- 10 Santra, S.B.
- 11 Setlur, G.S.
- 12 Srinivasan, A.

**Associate Professor**

- 1 Bhuyan, B.
- 2 Boruah, B.R.
- 3 Das, S.

- 4 Dey, T.N.
- 5 Kadolkar, C.Y.
- 6 Nandy, M.K.
- 7 Padmanabhan, P.K.
- 8 Pal, D.
- 9 Pamu, D.
- 10 Sarma, A.K.
- 11 Sharma, A.K.
- 12 Sil, A.
- 13 Thota, S.

**Assistant Professor**

- 1 Bhattacharya, S.
- 2 Bhattacharya, S.
- 3 Borah, D. (From 17.11.15)
- 4 Chakrabarti, S.K.
- 5 Chakraborty, S. (From 01.03.16)
- 6 Kumar, G. (From 21.01.16)
- 7 Kumar, M.C.
- 8 Maiti, U.N.
- 9 Maity, D.
- 10 Majhi, B.R.
- 11 Mishra, P.K. (From 03.02.16)
- 12 Mishra, T. (From 17.12.15)
- 13 Nandi, S.
- 14 Pandey, K. (From 23.12.15)
- 15 Raha, U.

**Centre for Energy****Assistant Professor**

- 1 Chaturvedi, H. (From 28.09.15)
- 2 Kalita, P. (From 24.07.15)
- 3 Sreenivasan, K. (From 19.05.16)

## Appendix-II

# OFFICERS AND SCIENTIFIC STAFF (GROUP A)

**Officers (Group A)**

<b>Name</b>	<b>Designation</b>	<b>Dept./Section</b>
Das, U. C.	Registrar	
Barua, S. K.	Academic Registrar	Academic Affairs
Bhuyan, K.	Deputy Registrar	Establishment and QIP
Boro, D.	Deputy Registrar	PIO & EO-cum-SRC
Goswami, D. J.	Deputy Registrar	Administration
Haokip, T. T.	Deputy Registrar	S&P
Hazarika, P.	Deputy Registrar	Finance and Accounts
Sharma, D.	Deputy Registrar	R&D
Boishya, L. D.	Assistant Registrar	Finance and Accounts
Borgohain, P.	Assistant Registrar	Faculty Affairs
Choudhury, S. (on lien)	Assistant Registrar	Establishment
Das, G.	Assistant Registrar	Medical and QIP
Das, K. C.	Assistant Registrar	Admn. (Rectt.)
Dutta, D.	Assistant Registrar	Internal Audit
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
Shynret, A. W.	Assistant Registrar	AA&ER
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
Barman, K.	Asst. Exe. Eng. (Elect.)	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. (Elect.)	Engineering Section
Guha, T. K.	Librarian	LNB Central Library
Saibaba, B.	Deputy Librarian	LNB Central Library
Deka, S.	Assistant Librarian	LNB Central Library
Rajbangshi, R. K.	Assistant Librarian	LNB Central Library

<b>Name</b>	<b>Designation</b>	<b>Dept./Section</b>
Borthakur, M.	Chief Medical Officer (NFSG)	Medical
Barua, L.	Chief Medical Officer (NFSG)	Medical
Baruah, A. K.	Chief Medical Officer (NFSG)	Medical
Gohain, B. B.	Sr. Security Officer	Security

**Scientific Staff (Group A)**

<b>Name</b>	<b>Designation</b>	<b>Department/Centre</b>
Das, S.	Sr. Technical Officer	Electronics and Electrical Engineering
Dutta, P. K.	Sr. Technical Officer	Computer and Communication Centre
Sharma, L. N.	Sr. Technical Officer	Electronics and Electrical Engineering
Kalita, R.	Technical Officer Gr. I	Chemical Engineering
Biswanath, H.	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. I	Civil Engineering
Kalita, K.	Technical Officer Gr. II	Civil Engineering
Kalita, S.	Technical Officer Gr. II	Civil Engineering
Borah, B.	Technical Officer Gr. I	Computer Science and Engineering
Kachari, N. A.	Technical Officer Gr. I	Computer Science and Engineering
Das, M. P.	Technical Officer Gr. I	Electronics and Electrical Engineering
S. Josephine	Technical Officer Gr. I	Electronics and Electrical Engineering
Paul, P.	Technical Officer Gr. I	Mechanical Engineering
Saikia, R.	Technical Officer Gr. I	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
Inam, I.	Technical Officer Gr. I	Computer and Communication Centre
Islam, J.	Technical Officer Gr. I	Computer and Communication Centre
Saikia, G. K.	Technical Officer Gr. I	Computer and Communication Centre
Ghosh, J. K.	Technical Officer Gr. II	Computer and Communication Centre
Pathak, D.	Technical Officer Gr. II	Computer and Communication Centre
Acharyya, K.	Technical Officer Gr. I	Nanotechnology
Das, P.	Technical Officer Gr. I	Nanotechnology

## Appendix–III

## DEGREE AWARDEES

In the 17<sup>th</sup> Convocation held on 8 June 2015, a total number of 1117 students received their BTech, BDes, MA, MSc, MTech, MDes and PhD degrees as given below:

Programme	Degree Awarded
<b>BTech/BDes</b>	
Biotechnology	38
Chemical Engineering	52
Chemical Science and Technology	31
Civil Engineering	63
Computer Science and Engineering	80
Design	35
Electronics and Communication Engineering	79
Electronics and Electrical Engineering	47
Engineering Physics	28
Mathematics and Computing	48
Mechanical Engineering	77
<b>Total</b>	<b>578</b>
<b>MSc</b>	
Chemistry	42
Mathematics and Computing	46
Physics	36
<b>Total</b>	<b>124</b>
<b>MA</b>	
Development Studies	24
<b>Total</b>	<b>24</b>

Programme	Degree Awarded
<b>MTech/MDes</b>	
Biotechnology	25
Chemical Engineering	27
Civil Engineering	58
Computer Science and Engineering	38
Design	26
Electronics and Electrical Engineering	35
Mechanical Engineering	58
<b>Total</b>	<b>267</b>
<b>PhD</b>	
Biosciences and Bioengineering	16
Chemistry	16
Chemical Engineering	19
Civil Engineering	8
Computer Science and Engineering	8
Design	2
Electronics and Electrical Engineering	10
Humanities and Social Sciences	3
Mechanical Engineering	12
Mathematics	9
Physics	15
Centre for Energy	2
Centre for the Environment	2
Centre for Nanotechnology	2
<b>Total</b>	<b>124</b>
<b>Grand Total</b>	<b>1117</b>

**Gold and Silver Medalists****President of India Gold Medal**

Shubham Luhadia  
BTech (Computer Science and Engineering)

**Silver Medals**

Kshitiz Gupta  
BTech (Electronics and Communication Engineering)

Narravula Harshavardhan Reddy  
BTech (Mechanical Engineering)

Bhaves Shrimali  
BTech (Civil Engineering)

Anshul Mittal  
BTech (Biotechnology)

Dandamudi Chola Bhargava  
BTech (Chemical Engineering)

Rajat Kulshreshtha  
BTech (Electronics and Electrical Engineering)

Anand Kumar  
BTech (Engineering Physics)

Shashwat Gupta  
BTech (Chemical Science and Technology)

Romel Baral  
BTech (Mathematics and Computing)

Soumya Tiwari  
BDes (Design)

Dibyashree Sengupta  
MSc (Physics)

Utsarga Adhikary  
MSc (Chemistry)

Biltu Dan  
MSc (Mathematics and Computing)

Santarpana Choudhury  
MA (Development Studies)

**Dr. Shankar Dayal Sharma Gold Medal**

Akshay Jajoo  
BTech (Computer Science and Engineering)

**List of students who have fulfilled requirements for award of B.Tech. degree in Computer Science and Engineering**

Sl. No.	Roll No	Name
1.	11010101	ABHISHEK SARKAR
2.	11010102	ADITYA KUMAR JHA
3.	11010103	AJAY KUMAR KILAKA
4.	11010104	AKSHAY JAJOO
5.	11010106	ARIHANT SETHIA
6.	11010107	ARPIT AGRAWAL
7.	11010108	ARUN BHATI
8.	11010109	B NITIN CHANDRA
9.	11010110	B SRIHARSHA
10.	11010111	BANKURU PRASANNA KUMAR
11.	11010112	BHANU TEJA GULLAPALLI
12.	11010113	BHAVYA MADAN
13.	11010114	BINGI NARASIMHA KARTHIK
14.	11010115	CHAITANYA AGARWAL
15.	11010117	CHETAN ANAND
16.	11010118	GAVVA AVANEESH REDDY
17.	11010119	GONUGUNTLA CHANDRIKA
18.	11010120	HARSHA SRIMATH TIRUMALA
19.	11010121	HARSHIL LODHI
20.	11010122	HITESH ARORA
21.	11010123	JILLELLA SURENDRANATH REDDY
22.	11010125	K YOSHITHA
23.	11010126	KANDREGULA S V A RAVI TEJA
24.	11010127	KARRA DINAKAR REDDY
25.	11010129	KURITI PRASANTH VERMA
26.	11010132	MADHU PRUDHVI RAJ
27.	11010133	MADHURI VITTHAL TIKHE
28.	11010134	MAINAK SETHI
29.	11010136	MASIH TAMSOY
30.	11010137	MATE ABHISHEK GAJANAN
31.	11010138	MD SIDDIQ
32.	11010139	MOHAMMED RIYAZ
33.	11010142	MOPURU SANKETH
34.	11010143	MS NEHA DAMADYA
35.	11010144	N M HARSHA
36.	11010145	NAGELLI KARTHEEK
37.	11010146	NAVEEN SAHU
38.	11010147	NISHANT YADAV
39.	11010149	PADIGELA HARSHITH REDDY
40.	11010152	PIYUSH DHORE
41.	11010153	PUSHRAJ YADAV
42.	11010154	RACHIT KUMAR
43.	11010155	RACHURI ANIRUDH
44.	11010156	RAHUL RAGHAVENDRA HUILGOL
45.	11010157	RAKSHITA JAIN
46.	11010158	ROHAN KUMAR KWATRA
47.	11010159	ROHIT KAMRA
48.	11010160	SACHIN AGLAVE
49.	11010161	SAGAR PATEL
50.	11010162	SHASHANK RAI
51.	11010164	SHIVAM KUMAR

52.	11010165	SIMRAT SINGH CHHABRA	22.	11010233	JATIN YADAV
53.	11010166	SPARSH KUMAR SINHA	23.	11010235	K VIJAY SAI
54.	11010167	TUPILI KISHORE	24.	11010237	KANDUKURI MANASA
55.	11010168	VEERA ANUDEEP	25.	11010238	KARAJADA RAMAKRISHNA BABU
56.	11010169	VENKATA ABHINAV BOMMIREDDI	26.	11010239	KASARLA ABHILASH
57.	11010170	VISHAL ANAND	27.	11010240	KSHITIZ JOSHI
58.	11010171	VISHAVDEEP MATTU	28.	11010241	KUMAR ABHISHEK
59.	11010172	VIVEK BHARGAV	29.	11010244	LOKESH SUTHAR
60.	11010173	VIVEK PODDAR	30.	11010245	MANGESH JOSHI
61.	11010174	SHYAMAL KEJRIWAL	31.	11010247	MAVILLA PARDHASARADHI
62.	11010175	ANCHA VENKATA SIDDHARTH	32.	11010248	MAYANK KUMAR
63.	11010176	SHUBHAM LUHADIA	33.	11010249	MAYANK SARDANA
64.	11010177	BASARGE SHREYAS NARENDRA	34.	11010250	MRINAL HALOI
65.	11010178	CHARANJIT SINGH GHAI	35.	11010251	NARESH GUPTA
66.	11010179	SHOBHIT CHAURASIA	36.	11010252	PACHA PARDHAKESWAR
67.	11010180	SOUMAK DATTA	37.	11010253	PARKI ALEKHYA MUTHYAM
68.	09010134	PRAVIN KUMAR CHATURVEDI	38.	11010254	PRAKASH HEMANI
69.	10010106	ADITYA SHARMA	39.	11010255	PRAKASH VADADA
70.	10010116	CHITTURI TARUN	40.	11010256	PRATYUSH KHATAIT
71.	10010123	HEMANT KUMAR MEENA	41.	11010257	PUSHPINDER GOYAL
72.	10010138	NISHANT SANKHALA	42.	11010258	RAHUL SONI
73.	10010146	PRATEEK RASTOGI	43.	11010260	S DIGVIJAY
74.	10010147	PRATEEK SAHU	44.	11010261	SAURABH GUPTA
75.	10010155	RONGALI SRAVAN KUMAR	45.	11010262	SHRI RAM BAIRWA
76.	10010156	SAMARTH TRIPATHI	46.	11010263	SOUMYA PATRO
77.	10010161	SHEFALI R KALYANI	47.	11010264	SOURABH BAGDI
78.	10010165	SRINIVAS YANAMADALA	48.	11010265	SUMEET SINGH
79.	10010171	VIVEK RAJWAR	49.	11010266	SUNKARI VENKATA ABHISHEK
80.	05010137	SHASHI KANT KUNAL	50.	11010267	TARUN KUMAR RAMCHANDANI

**List of students who have fulfilled requirements for award of B.Tech. degree in Electronics and Communication Engineering**

Sl. No.	Roll No	Name	Sl. No.	Roll No	Name
1.	11010201	AASHISH AMBER	51.	11010268	VADDI CHANDRA SEKHAR
2.	11010202	ABHISHEK BANDEJIA	52.	11010269	VANEET SINGH YADAV
3.	11010203	AKSHAY GULATI	53.	11010270	VISHAL VAIBHAV
4.	11010204	AMISH MITTAL	54.	11010271	VYSYARAJU KRISHNA PRAJEETH
5.	11010205	AMIT KUMAR	55.	11010272	YERRAPATI RAJESH
6.	11010206	AMODH KANT SAXENA	56.	11010273	GAGANDEEP SINGH
7.	11010209	ANAND JAISWAL	57.	11010274	RAJARSHI CHATTOPADHYAY
8.	11010212	ANUSHA KONDLE	58.	11010275	M DHRUVA KARTIK
9.	11010213	ARPIT JAIN	59.	11010276	GAUTAM SINGH
10.	11010216	BATHINI VENKATA SAI BHARGAV	60.	11010277	G BARATH SHANKAR
11.	11010217	BHARAT KAVALA	61.	11010278	ASHUTOSH PANDEY
12.	11010218	BOJJA VENKATA SATYA SAI NAVEEN	62.	11010279	VYSYARAJU KARUN RAJU
13.	11010219	CHANDRA PRABHAKER	63.	11010280	KSHITIZ GUPTA
14.	11010220	CHEENU KHURANA	64.	11010281	P HARSHAVARDHAN
15.	11010221	CHILAKALA VENU GOPAL REDDY	65.	11010282	SHASHANK GOYAL
16.	11010224	DIBBADA S V ASHOK	66.	11010283	KAKILETI SIVA TEJA
17.	11010227	GAURAV KUMAR SONWANI	67.	10010209	ANUJ PRATAP SINGH
18.	11010228	GONA PRATEEK	68.	10010214	BHUKYA NAVEEN
19.	11010229	HARSHA RANJAN KUMAR	69.	10010218	DHRUBA CHARAN MUDULI
20.	11010230	HARSHIT GUPTA	70.	10010224	KAMAL MADISHETTY
21.	11010232	HIMANSHU BANSAL	71.	10010227	KUMAR SAURABH
			72.	10010244	PRAVEEN KUMAR PANKAJ
			73.	10010246	PURUSHARTH CHANDRAYAN
			74.	10010250	RAJESH RANJAN
			75.	10010252	RITESH KUMAR
			76.	10010264	VINOD KUMAR BAIRWA
			77.	10010266	Y PRATHYUSHA

78.	09010210	DASARI SATEESH
79.	09010244	REDDI KALYANA CHAKRAVARTHI

**List of students who have fulfilled requirements for award of B.Tech. degree in Mechanical Engineering**

Sl. No.	Roll No	Name
1.	11010301	ABHIMANYU MAWATWAL
2.	11010302	ABHISHEK MEENA
3.	11010303	ABHISHEK TRIVEDI
4.	11010304	ADITYA VIKRAM SINGH
5.	11010306	ANDRU NIKHIL
6.	11010307	ANKIT DAYAL
7.	11010308	ANKIT JAIN
8.	11010309	ANKIT KUMAR GOENKA
9.	11010310	APOORV TOPPO
10.	11010311	AVINDER SINGH
11.	11010312	BODHE ANIKET SANJAY
12.	11010314	CHALLA PAVANKUMAR
13.	11010315	CHAUDHARI ASHISH MOTIRAM
14.	11010316	DANDU MURALI MOHANA KRISHNA
15.	11010317	DEBASISH NAYAK
16.	11010318	DUBBA SURENDRA REDDY
17.	11010319	GADDE SARATH CHANDRA
18.	11010321	GANDHI DHIRAJ PRAKASHCHAND
19.	11010322	GUNJAN JYOTI BHUYAN
20.	11010323	HARSH RANJAN
21.	11010324	HIMANSHU GUPTA
22.	11010325	HIMANSHU MISHRA
23.	11010326	JAGJEET SINGH
24.	11010327	JITENDRA KUMAR VERMA
25.	11010329	KARAN RAJWANSHI
26.	11010330	KIJAMERANG PONGENER
27.	11010331	KOLAPARTHI SATISH CHANDRA
28.	11010333	M MANOJ RAHUL
29.	11010334	MAMILLA SRINATH
30.	11010335	MAYANK GUPTA
31.	11010336	MAYANK RAJESH SANGHANI
32.	11010337	MUKESH VERMA
33.	11010339	MUNINDRA PEGU
34.	11010341	NATARAJ GULLIPALLI
35.	11010342	DEEPAK PARAMKUSAM
36.	11010343	PARTH PARITOSH
37.	11010344	PIYUSH RAJ
38.	11010345	PRASANTA MANDAL
39.	11010346	PRIYABRATA BEHERA
40.	11010347	PRIYANK SHARMA
41.	11010348	PURU RASTOGI
42.	11010349	PUSULURI VENKATA SRI CHALAM
43.	11010350	RAJAT KUMAR SAHA
44.	11010351	RAJAT TIWARI
45.	11010352	RAMNATH VIJAYKUMAR PILLAI
46.	11010354	RITESH KUMAR
47.	11010355	RUPESH KUMAR VERMA
48.	11010356	SANTOSH KUMAR
49.	11010358	SATYARTH SHANKAR

50.	11010359	SAURABH SINGH
51.	11010361	SHASHI KUMAR MEENA
52.	11010362	SHOHIN MUKHERJEE
53.	11010363	SIVAPURAM RAGHAVENDRA
54.	11010364	SOUMYA SEN
55.	11010365	SRIRAM KUMAR
56.	11010366	SUMIT BHARTI
57.	11010367	SUNIL KUMAR MATWA
58.	11010369	UMONG AGARWALLA
59.	11010370	VARUN DEV
60.	11010371	VIKAS SINGH
61.	11010372	ZAMBARE AJAY RAVINDRA
62.	11010373	N. HARSHAVARDHAN REDDY
63.	11010374	ARUN KRISHNAN
64.	11010375	KAUSHAL KAMAL JAIN
65.	11010376	ABHIMANYU BARUAH
66.	11010377	SIDDHARTH KHANDELWAL
67.	11010378	ASHUTOSH DUBEY
68.	11010379	ABHILASH AJMERA
69.	11010380	KAMLESH PUNASIYA
70.	11010382	KALPESH MOURYA
71.	11010383	PRABHA SHANKAR
72.	10010317	BOYAPATI PREM KUMAR
73.	10010327	JITENDRA KUMAR
74.	10010342	MURTUZA SHERGADWALA
75.	10010358	ROHAN RAJENDRA LONDHE
76.	09010319	HEMANT BHORA
77.	07010336	PRUDHVI RAM KONERU

**List of students who have fulfilled requirements for award of B.Tech. degree in Civil Engineering**

Sl. No.	Roll No	Name
1.	11010403	ADARSH DWIVEDI
2.	11010404	ADITAYA BANSAL ALIAS M. KUMAR
3.	11010405	AMAN ARUN
4.	11010406	ANKUR BANSAL
5.	11010407	ANUPREET CHOUDHARY
6.	11010408	ARJUNSINGH DANGI
7.	11010409	ASHISH KUMAR VERMA
8.	11010411	ATUL KUMAR
9.	11010413	AYUSH AGRAWAL
10.	11010414	BANOTH KIRAN KUMAR
11.	11010415	BEESETTY VARUN KUMAR
12.	11010416	BHAIRAVARASU RAMA CHANDRA
13.	11010417	BIVEK JOISHI
14.	11010418	DASMEET SINGH GANDHI
15.	11010419	DEEPAK KUMAR
16.	11010421	DISHANT CHECHI
17.	11010422	HARISH JAKHAR
18.	11010423	HIMATEJ AUKU
19.	11010424	JAIDEEP
20.	11010425	JAYANT KUMAR PANDEY
21.	11010426	JITENDRA SINGH MEENA
22.	11010429	KANDHADAI SRIRAMAN
23.	11010431	KARANAM BHAGIRATH ATHRESH



24.	11010432	KASIREDDY PRAMOD
25.	11010433	KORADA PADMA PRAKASHBABU
26.	11010435	M PRASANNA
27.	11010436	MAHAMMAD UBAID
28.	11010437	MANISH PURBIA
29.	11010438	MEDA VINAY TEJA
30.	11010439	MOHNISH KUMAR SINHA
31.	11010440	MUTHABATHULA RAHUL
32.	11010441	NAMIT JAIN
33.	11010442	NARAYAN LAL MEENA
34.	11010443	NIKIT JAIN
35.	11010444	PANKAJ KUMAR MEENA
36.	11010448	PREETY PRIYA
37.	11010450	PURUSHOTTAM SHARMA
38.	11010452	RAJESH BAJYA
39.	11010453	RAMANCHA MUKESH KUMAR
40.	11010455	REKULAPALLY SNEHITH REDDY
41.	11010456	ROHIT BANSAL
42.	11010457	SAHITHI REDDY BOMMA
43.	11010461	SUMIT DEWDA
44.	11010462	SUNIL KUMAR
45.	11010463	SUNKAVALI GOWTAM DORA
46.	11010464	TANMAY AGARWAL
47.	11010465	UTKARSH PAGARE
48.	11010468	VISHAL ROHITWAL
49.	11010469	VISHESH KHATRI
50.	11010470	YAMALA SRIKANTH
51.	11010472	YASIR KHALIL
52.	11010473	YERRAMSHETTY UDAY KIRAN
53.	11010474	BHAVESH SHRIMALI
54.	10010403	AKSHAY H MEENA
55.	10010408	ANKIT RAGHAV
56.	10010409	ANOOP SHARMA
57.	10010422	GIRRAJ PRASAD MEENA
58.	10010429	KOTA ANUROOP
59.	10010431	KUMAR MOHIT JHANJRIA
60.	10010434	MANISH KUMAR
61.	10010438	NAVWANT THAKUR
62.	09010406	ANIKET JAIN
63.	09010427	K. SHIVA SHANKARAVARAPRASAD

**List of students who have fulfilled requirements for award of B.Tech. degree in Biotechnology**

Sl. No.	Roll No	Name
1.	11010602	ADITYABARNA PAL
2.	11010603	AKESHWAR JHA
3.	11010604	AMIT SHARMA
4.	11010605	AMIT SINHMAR
5.	11010606	AMRISH YADAV
6.	11010607	ANSHUL MITTAL
7.	11010608	ARPITA DAS
8.	11010610	AVASARALA RAGHAVENDRA SHILPA
9.	11010612	BANOTH PRANEETHA
10.	11010615	CHIRANMOY BORUAH
11.	11010617	DIMPLE CHOUHAN

12.	11010618	DUGGIRALA BRAHMANANDAREDDY
13.	11010620	KATIPALLI TARUN REDDY
14.	11010621	KUNAL AGARWAL
15.	11010622	KUNAL KUMAR SOLANKI
16.	11010624	MANIK GARG
17.	11010625	MAYUR MODI
18.	11010626	NAVEEN KUMAR
19.	11010632	RUVVA RAHUL
20.	11010633	SAGAR SINGH
21.	11010634	SANNY CHAUHAN
22.	11010635	SAURABH SRIVASTAVA
23.	11010636	SHAKSHI GINODIA
24.	11010637	SHASHANK AGRAWAL
25.	11010638	SHEFALI GUPTA
26.	11010639	SHIVAM CHANDAK
27.	11010640	SOUMITRA SAXENA
28.	11010641	SOURABH MANDAL
29.	11010642	SURABHI RANI
30.	11010643	SWAPNIL CHAUHAN
31.	11010644	UTKARSH GUPTA
32.	11010645	VAISHALI BAKLIWAL
33.	11010646	VINEET BHAKHAR
34.	11010648	YOGESH BAID
35.	10010608	DAYALA PENTAIAH
36.	10010637	ROXY
37.	10010646	TEJAVATH SHIVA PRASAD NAIK
38.	08010618	MANJIT ARENG

**List of students who have fulfilled requirements for award of B.Tech. degree in Chemical Engineering**

Sl. No.	Roll No	Name
1.	11010701	AANCHAL GUPTA
2.	11010702	AASHISH KUMAR KRISHNATRE
3.	11010703	ABHISHEK JAIN
4.	11010705	ANANTHAGIRI GEETH L D N VENKAT
5.	11010706	ANKIT SINGH
6.	11010707	ANKUR JAIN
7.	11010708	ASHISH MANI
8.	11010709	ASHOK BARJATI
9.	11010712	CHILAKAPATI SRI RANGA SAKET
10.	11010713	CHINMAY PIRMIL SINGH
11.	11010714	DANDAMUDI CHOLA BHARGAVA
12.	11010715	DEEPAK KUMAR
13.	11010716	GAJANAND YADAV
14.	11010717	GUNTHAKANTI SHIVA REDDY
15.	11010719	JITENDRA MEENA
16.	11010720	JITENDRA MEENA
17.	11010721	KRISHNA KANTA CHOUDHURY
18.	11010722	KUMAR SANU MAHATO
19.	11010724	LAKSHMANJI VERMA
20.	11010726	MAHESH KUMAR GUPTA
21.	11010727	MANISH PRAJAPAT
22.	11010728	MIR AMIR ALI
23.	11010730	MUKESH KUMAR GAUTAM
24.	11010731	MUSKU UJWALA

25.	11010732	NAVJOT KAUR	23.	11010835	TALLURI RAVITEJA
26.	11010733	NAZEEBUL ANSARI M A	24.	11010836	VADISALA GAUTAM KUMAR
27.	11010734	OMPRAKASH KUMAWAT	25.	11010837	VIKASH KUMAR
28.	11010735	PARAMATA SRAVYA	26.	11010838	VIKASH KUMAR
29.	11010737	PRATIK KUMAR	27.	11010840	YOGI ASHOK SUNIL
30.	11010738	PRATIK SWAIN	28.	11010841	RAVI SHANKAR
31.	11010739	PRINCE KUMAR KESHARWANI	29.	11010842	SAYAK SAHA
32.	11010740	RACHA RAHUL RATAN KUMAR	30.	11010843	PRANAV SODHANI
33.	11010741	RAHUL DOHARE	31.	11010844	SHAMIEK MANGIPUDI
34.	11010742	RAJAN KUMAR	32.	11010845	SOHAM MUKHERJEE
35.	11010743	RITU RAJKUMAR SURIN	33.	11010846	RAJAT KULSHRESHTHA
36.	11010745	SANKALP BORTHAKUR	34.	11010847	GAURAV AGGARWAL
37.	11010749	SHASHANK KUMAR GUPTA	35.	11010848	AKSHAT BORDIA
38.	11010751	SHYAM NARAYAN PRASAD	36.	10010805	ARVIND SOLANKY
39.	11010754	UDEPURKAR ANIKET PRADIP	37.	10010807	BANDEEP RABHA
40.	11010755	UDIT SINGH	38.	10010811	GANGADARI VARAPRASAD
41.	11010756	VIJAY LAXMI MEENA	39.	10010812	GANIVADA NAVEEN
42.	11010758	VINEET KUMAR	40.	10010816	HARIDEV DADHICH
43.	11010759	VINEET KUMAR DOSHI	41.	10010828	PATCHIPALA PRAVEEN KUMAR
44.	11010760	VINOD GODARA	42.	10010834	SAMRAT ROY
45.	11010761	VIPIN AGRAWAL	43.	10010839	SHYAM KUMAR MEENA
46.	11010764	YEWLE DURVANK PURUSHOTTAM	44.	10010840	SUNIL KUMAR
47.	10010704	AJAY KUMAR TYOUHARIA	45.	10010842	TURIMELLA SUSHMA
48.	10010715	BANOTH SHANKAR	46.	10010843	VIVEK GUNAWAT
49.	10010718	CHALAVADI SRAVANA SOUMYA	47.	09010802	AJAY KUMAR YADAV
50.	10010721	DEVID DAS			
51.	10010764	YELLAPRAGADA V. SIVA HARISH			
52.	08010737	SANGISHETTY TARUN			

**List of students who have fulfilled requirements for award of B.Tech. degree in Engineering Physics**

**List of students who have fulfilled requirements for award of B.Tech. degree in Electronics and Electrical Engineering**

Sl. No.	Roll No	Name
1.	11010801	AAYUSH GARG
2.	11010803	AKANKSHA DOKANIA
3.	11010806	ANURAG AGARWAL
4.	11010808	BHANU PRAKASH YADAV
5.	11010809	DESE JEEVAN RATHOD
6.	11010810	DHIRAJ KUMAR NAVAL
7.	11010811	DODDI VENKATA JEEVAN KUMAR
8.	11010812	DOIPAYAN ROY
9.	11010816	KONGARA S N RAJKUMAR
10.	11010818	KUMAR ROHIT SINGH
11.	11010819	MALEY HARSHITHA
12.	11010820	MANISH ARORA
13.	11010821	MORISHETTI LALITESH
14.	11010823	NEKKALAPU SAMEER
15.	11010824	PARAG MAHESHWARI
16.	11010825	PARIJAT ROY
17.	11010826	PAWAN KATIYAR
18.	11010827	PAWAN KUMAR
19.	11010828	PRATEEK KUMAR KHEWARKER
20.	11010829	RAJAT KULSHRESHTHA
21.	11010831	S A PRASHANTH
22.	11010832	SAHIL LOOMBA

Sl. No.	Roll No	Name
1.	11012101	ABHILASH REDDY KALAM
2.	11012103	AMBER MADVARIYA
3.	11012105	ANAND KUMAR
4.	11012106	ANANYA PATRA
5.	11012107	APARAJITA SINHA
6.	11012109	A. BALA RAMANA BHARADWAJ
7.	11012111	B R KEERTHI
8.	11012112	CHAUDHARI NILESH LAXMAN
9.	11012114	GANGSHETTIWAR ASHISH VITTHAL
10.	11012116	GIRIDHAR VIDYADHAR KULKARNI
11.	11012117	ISHAAN RAJIV
12.	11012118	JATIN AHUJA
13.	11012119	KRTIN KUMAR
14.	11012120	MANOJ VITTHALRAO PAWAR
15.	11012122	MUKESH GOLCHHA
16.	11012123	MURALIDHARAN G
17.	11012124	NALAWADE DHANANJAY BHIKU
18.	11012127	PARTH SABHARWAL
19.	11012130	R HARIKESH
20.	11012132	RISHABH PRASAD
21.	11012133	RUPAVATH KRANTHI KUMAR
22.	11012134	SHREYAS JALNAPURKAR
23.	11012135	SUBHASH CHANDRA MEENA
24.	11012136	SUMITH K S
25.	11012137	VADDI RAMJEE
26.	11012139	VIKASH KUMAWAT

27. 11012140 VIVEK GHANGAS  
28. 10012136 VINEET PATIDAR

**List of students who have fulfilled requirements for award of B.Tech. degree in Chemical Science and Technology**

Sl. No	Roll No	Name
1.	11012201	A SURAJ DEV YADAV
2.	11012202	ABHINAV ANAND
3.	11012203	ABHISHEK JAIN
4.	11012204	ADAPA SHABARI NATH
5.	11012205	AMAN TOMAR
6.	11012206	ARVINDH SEKAR
7.	11012207	ASHOK MEENA
8.	11012208	AVINAY KUMAR SINGH
9.	11012209	AZEEM KHAN
10.	11012211	B VINAY
11.	11012212	BELAL TAUHEED
12.	11012213	BHAVESH KASANA
13.	11012217	HRADESH KUMAR GUPTA
14.	11012219	KM SUMAN LATA
15.	11012220	M JAYAVARDHAN SAGAR
16.	11012221	MOHIT GOPLANI
17.	11012222	NELLURI LOKESHWAR RAO
18.	11012223	NIKHIL SHARMA
19.	11012224	PRIYANK GAUR
20.	11012225	RAVINDRA PRATAP SINGH
21.	11012228	SAKSHI KHARE
22.	11012229	SAURABH SONI
23.	11012230	SHASHWAT GUPTA
24.	11012232	SIDDHARTH SUBRAMANI
25.	11012233	SINGH KANISHKA OMPRAKASH
26.	11012235	SUNIL KUMAR
27.	11012237	TEJASVINI SINHA
28.	11012239	VINAY KUMAR
29.	11012240	VINAY KUMAR NAYAK
30.	10012219	MANISH MEENA
31.	09012202	AMIT KUMAR BERI

**List of students who have fulfilled requirements for award of B.Tech. degree in Mathematics and Computing**

Sl. No.	Roll No	Name
1.	11012301	AMANDEEP SINGH
2.	11012303	AMIT KUMAR
3.	11012304	AMIT MITTAL
4.	11012306	ANISH KUMAR JAISWAL
5.	11012307	BEHALPADE TUSHAR ASHOKRAO
6.	11012308	BHUKYA GANESH
7.	11012309	DEVARSHI WAGHELA
8.	11012310	GAJJI MALLIKARJUN
9.	11012311	GAJULA JYOTHENDRANADH SAI
10.	11012312	GUDIPATI GOWTHAMI
11.	11012313	HANUMAN ACHOLIA
12.	11012314	HIMANSHU MANGLUNIA

13.	11012315	HIMANSHU UPRETI
14.	11012318	KUMAR HARSHA
15.	11012320	MANAN BHUTANI
16.	11012321	MITTAL ADITYA SANJAY
17.	11012322	NAVEEN CHAUDHARY
18.	11012323	NIKHIL AGARWAL
19.	11012324	PANCHASARA PAVAN KUMAR
20.	11012325	PIYUSH BENGANI
21.	11012326	PRANSHU ANAND
22.	11012327	PRASHANT SANKHLA
23.	11012328	PRERAK GUPTA
24.	11012330	RAJAT KAMRA
25.	11012331	RAVI SHANKAR LAKRA
26.	11012333	ROHIT R RANGAN
27.	11012335	SANKET GARG
28.	11012338	SOURAV BIKASH
29.	11012340	TANYA GOYAL
30.	11012341	VISHAL KESHAV
31.	11012342	WANKHEDE ISHANT VIRENDRA
32.	11012343	RAHUL RADHAKRISHNAN
33.	11012344	VISHAL JAIN
34.	11012345	VINITA CHAUDHARY
35.	11012346	ROMEL BARAL
36.	11012347	TUMATI KIRAN KUMAR
37.	11012348	RAJAT SINHA
38.	11012349	SRAVYA AMUDAPURAM
39.	10012301	AISHWARYA PRAKASH GUPTA
40.	10012302	AJAY PRATAP SINGH
41.	10012303	AJIT SINGH BHATI
42.	10012309	ANISH CHAND
43.	10012317	DIVYA PRAKASH
44.	10012318	GANGADHER MATTA
45.	10012321	LAVESH GUPTA
46.	10012330	SANKET D SOMKUWAR
47.	10012334	VENISHETTY BHARGAVA MOURYA
48.	10012337	VIVEK KUMAR

**List of students who have fulfilled requirements for award of B.Des. degree in Design**

Sl. No	Roll No	Name
1.	11020501	AAYUSH JAIN
2.	11020502	AKASH HARLALKA
3.	11020503	AMIT JAGLAN
4.	11020504	ANKIT KUMAR
5.	11020505	ARUN SINGH
6.	11020506	AVINANDAN BASU
7.	11020507	BAGEPALLY KRISHNA GAUTHAM
8.	11020508	BHAWNA AGARWAL
9.	11020509	CHIVUKULA SAI SHRUTHI
10.	11020510	DESPANDE SHAMBHAVI DATTATRAY
11.	11020511	DIVA SMRITI
12.	11020512	DORAI RAJ NATHA
13.	11020514	JATIN BAJAJ
14.	11020516	LINU GEORGE M
15.	11020517	NEERAJ TALUKDAR

16.	11020518	NEHA
17.	11020519	NISHANT KANDOI
18.	11020520	PANKAJ KUMAR MEENA
19.	11020521	POORVI VIJAY
20.	11020523	PRADEEP P
21.	11020524	PRAKASH CHANDRA SHUKLA
22.	11020525	PRINCE BHARALI
23.	11020528	RICHA TRIPATHI
24.	11020529	RUPAM DAS
25.	11020530	SAFINAH ALI
26.	11020531	SAI KIRAN MAGULURI
27.	11020535	SOUMYA TIWARI
28.	11020536	TUHINA DARGAN
29.	11020537	UTKARSH DWIVEDI
30.	11020538	UTKARSH MISHRA
31.	11020539	VIKAS GOEL
32.	11020540	VISHESH KUMAR
33.	10020505	ALLA PREETHI
34.	10020531	PALEPU SAIBABA NAVEEN
35.	10020533	RANJU K RAVINDRAN

**List of students who have fulfilled requirements for award of M.Sc. degree in Physics**

Sl. No.	Roll No	Name
1.	132121001	ABHINANDAN BHATTACHARJEE
2.	132121002	ADESH KUMAR
3.	132121004	AMIT KUMAR
4.	132121005	AMIT KUMAR PATEL
5.	132121006	ANIRBAN SIKDAR
6.	132121007	ARJUN BISWAS
7.	132121008	ARNAB BANERJEE
8.	132121009	BARUN HALDER
9.	132121010	BHOLU RAM SWAMI
10.	132121011	DEBARATI HAJRA
11.	132121012	DEEPAK
12.	132121013	DIBYASHREE SENGUPTA
13.	132121014	INDRANI NAYAK
14.	132121015	JUMAL DAS
15.	132121017	MADHURJYA LALUNG
16.	132121018	MIR ALIMUDDIN
17.	132121019	MRINMOY ROY
18.	132121021	NILANJAN KUNDU
19.	132121022	PARTHA KARAN
20.	132121023	POULASTYA RAY
21.	132121024	PRADIP KUMAR ACHARYA
22.	132121025	PRALAY PAUL
23.	132121026	PRITAM BANERJEE
24.	132121027	PRITHA BARI
25.	132121028	RAJ SHANKAR HAZRA
26.	132121029	RAJKAMAL KAKOTI
27.	132121031	RUMA DAS
28.	132121032	SAMBIT MOHAPATRA
29.	132121033	SANJEEV KUMAR PANDEY

30.	132121034	SANJUKTA KUNDU
31.	132121036	SHEFALI UTTAM
32.	132121037	SHEULY GHOSH
33.	132121038	SONGSHAPTA DE
34.	132121040	SUBHAJIT PAL
35.	132121042	SUDIP JANA
36.	122121040	SIJOY CHANDRA BORO

**List of students who have fulfilled requirements for award of M.Sc. degree in Chemistry**

Sl. No.	Roll No	Name
1.	132122001	ABHIJIT NANDAN
2.	132122002	AKHI SIRAJUDDIN
3.	132122003	AMIT KUMAR
4.	132122004	ANIRUDDHA DAS
5.	132122005	ARITRA SARKAR
6.	132122006	ASIM SAMANTA
7.	132122007	ASIT KUMAR DAS
8.	132122008	DEBASIS GHOSH
9.	132122009	DEEPTI VERMA
10.	132122010	DIBAKAR BISWAS
11.	132122012	KM USHA YADAV
12.	132122013	KOUSHIK MONDAL
13.	132122014	KUMARES SARKAR
14.	132122015	MADHURIMA BORAL
15.	132122016	MANISH JANA
16.	132122017	MANISHA TRIPATHY
17.	132122018	MD ATIUR RAHMAN
18.	132122019	MEENAKSHI PEGU
19.	132122020	MILAN MAJI
20.	132122022	PAYEL GHOSH
21.	132122023	PIYALI DAS
22.	132122024	POOJA SHARMA
23.	132122025	PRASENJIT SAU
24.	132122026	PURUSHOTTAM
25.	132122027	RITURAJ TAHU
26.	132122028	ROHAN DEY
27.	132122029	ROHIT HASDA
28.	132122030	RUPAM DUTTA
29.	132122031	SANKET PATHAK
30.	132122032	SHREYA TRIPATHI
31.	132122033	SOUMYA BHOWAL
32.	132122034	SOURAV SAMANTA
33.	132122035	SOUVIK MONDAL
34.	132122037	SUBRATA MONDAL
35.	132122038	SUDIPTA DEB
36.	132122039	SUMAN PAL
37.	132122040	SUNIT PAL
38.	132122041	SUPRIYA BORAL
39.	132122042	SWAGATAM BARMAN
40.	132122043	SWAPNA DEBNATH
41.	132122044	TOMOJIT CHOWDHURY
42.	132122045	UTSARGA ADHIKARY

**List of students who have fulfilled requirements for award of M.Sc. degree in Mathematics and Computing**

Sl. No.	Roll No	Name
1.	132123001	ABHIJIT GHOSH
2.	132123002	ABHIJIT SARKAR
3.	132123003	AJIT KUMAR
4.	132123004	AYAN CHANDA
5.	132123005	AYAN SENGUPTA
6.	132123006	BABAN HALDER
7.	132123007	BIKASH CHANDRA BARMAN
8.	132123008	BIKASH DEBNATH
9.	132123009	BILTU DAN
10.	132123010	DEEPAK
11.	132123011	DIKSHYA RATHA
12.	132123012	DIPAK BARMAN
13.	132123014	GAUTAM SINGH
14.	132123016	MANOJ KUMAR BARMAN
15.	132123017	MOHIT TRIPATHI
16.	132123018	NAVEEN CHANDRA BHAGAT
17.	132123019	PALASH SARKAR
18.	132123020	PRABHAT KUMAR
19.	132123022	PRANOY MODAK
20.	132123023	PRIYA WADHWA
21.	132123024	RAHUL KUMAR
22.	132123025	RAKESH JANA
23.	132123027	SHANTIRAM MAHATA
24.	132123028	SHITU SINGH
25.	132123029	SHREYASI GHORAI
26.	132123030	SHRIJANI CHAKRABORTY
27.	132123032	SHUBHAM GUPTA
28.	132123033	SOMNATH GHOSH
29.	132123034	SONALI CHHABRA
30.	132123035	SONU KARMAKAR
31.	132123036	SUBHA PAL
32.	132123037	SUBHA SARKAR
33.	132123038	SUBHAJIT GIRI
34.	132123039	SUDARSHAN SANTRA
35.	132123040	SUJEET KUMAR SINGH

36.	132123041	SUMIT DAS
37.	132123042	SUSMAY NANDI
38.	132123043	SWARUP KUILA
39.	132123044	SYED FAISAL HASAN
40.	132123046	VISHU
41.	122123003	AMRITA PATGIRI
42.	122123025	NIKHIL KUMAR SINGH
43.	122123032	SACHIN SINGH
44.	122123036	SHAILENDRA KUMAR SHUKLA
45.	122123038	SIYARAM
46.	122123039	SOMVEER SINGH

**List of students who have fulfilled requirements for award of M.A. degree in Development Studies**

Sl. No.	Roll No	Name
1.	132241001	AKASH DAS
2.	132241002	AMIT PARASHAR
3.	132241003	ANAND PRAKASH
4.	132241004	ANVITA
5.	132241006	ARPITA BHUYAN
6.	132241007	ASHISH BAROI
7.	132241008	BIDYUT BIKASH KATAKI
8.	132241009	DHIRAJ PEGU
9.	132241010	GAYATRI ROY
10.	132241013	HOIMAWATI TALUKDAR
11.	132241014	HRISHIKESH THAKUR
12.	132241015	ISHANI IPSHITA SARMA
13.	132241016	JITH J R
14.	132241017	KRISHNA SMITA PATHAK
15.	132241019	MRINAL KANTI BORAH
16.	132241020	NAMRATA BORKOTOKY
17.	132241021	NAYANAKHEE SARMA
18.	132241023	PRADEEP B
19.	132241026	ROSE BASUMATARY
20.	132241027	RUCHINILO KEMP
21.	132241028	SANTARPANA CHOUDHURY
22.	132241034	TULIKA
23.	122241002	ASHISH KUMAR
24.	122241003	ASHOK KUMAR DASH

**List of students who have fulfilled requirements for award of M.Tech. degree in Computer Science and Engineering**

Sl. No.	Roll No	Name	Project Title
1.	11410126	JYOTIPRASAD BAISHYA	Rogue IPv6 Router Advertisement Attack Detection in NDP Using MLD
2.	11410127	NAYANMANI SHARMA	Event Detection in Soccer Video using Gesture Recognition
3.	11410142	PARIKSHIT SAIKIA	MPIR-Mobility Pattern based Incentive Routing for DTN- An Application of VCG Mechanism
4.	124101002	KAKARALA RAJENDRA	Proactive fault tolerance using failure prediction in Hadoop
5.	124101007	SURISHETTY SRINIVAS	A Study of Packet Pacing and AQM Schemes in Short Buffer Networks
6.	124101008	SUBHRENDU CHATTOPADHYAY	Joint Transmit Power and Rate Scheduling in Wireless Mesh Network for Performance Optimization ensuring Fairness

Sl. No.	Roll No	Name	Project Title
7.	124101010	VIVEK TIWARI	Robust Watermarking of H.264/SVC-Encoded Video resisting Temporal Adaptation
8.	124101012	REDDAPPA NAIDU G	Discrete and Geometric Unit Sector Cover
9.	124101013	KOTRIKE VENKATESH	Evaluation of AQM strategies on the performance of applications
10.	124101016	ANKITA MAHAJAN	Virtualization in 4-4 1-4 Data Center Network
11.	124101017	PANKAJ SACHAN	A Robust Intra Mode Based Watermarking Scheme for H.265/HEVC Video Stream
12.	124101018	JITHIN K GEORGE	Cooperative caching of Video on Demand (VoD) and User Generated Content (UGC) video applications in Hybrid CDN-ISP-P2P architecture
13.	124101032	VINOD KUMAR	Probabilistic Minimum Dominating Set in Unit Disk Graphs
14.	124101033	JADHAV AMBADAS DEVRAO	Object Motion Planning in Graphs
15.	124101034	AMBATI LAKSHMANA RAO	Worst Case Coverage Path in Heterogeneous Sensor Networks
16.	124101036	KUNDAN KUMAR	Distributed Trigger Counting for Ring Topology with Single Link Failure
17.	124101038	AKASH ANIL	Modeling Evolution of a Social Network using Temporal Graph Kernels
18.	124101045	PRASHANT ARYA	Solving Data Placement Problem Using Linear Programming
19.	124101047	SWARNENDU RAY	A Pseudo-Deadline Based $O(1)$ Proportional Share Scheduler for Embedded Systems
20.	124101061	ANKUSH PATEL	Clustered based Hybrid Task Partitioning in Multiprocessor Systems
21.	124101062	ARIF ALI AP	Computing Generating set of Lattice ideals
22.	124101063	KAMBLE ABHIJEET ARUN	Implementation of QR algorithms in STXXL Library
23.	134101003	RAMAKANT SINGH	Feature vector selection using kernel matrix learned from semidefinite programming
24.	134101005	MANOJ ASHOKRAO BODE	Managing Emergency Service vehicles amidst Urban Traffic using a Multi-Agent based Internet of Things
25.	134101007	SIDHARTHA AUROBINDA DASH	Performance Analysis of Fibonacci Heaps
26.	134101010	TUHIN BHATTACHARYA	Speech Characterization based on Sound Cues for Clusterization
27.	134101012	SANKET KISHOR DAYMA	Static Energy reduction by selective bank shutdown
28.	134101013	ANUPAM AGRAWAL	Assessing Reliability of Protein Interactions using Learning to Rank
29.	134101014	LAT SAHAB	Encoding User Supervision into Spectral Community Detection Algorithm
30.	134101015	MAYANK GUPTA	Low Complexity Speech Representation Based on Temporal and Spectral Properties of Sounds
31.	134101017	DIPTESH MAJUMDAR	Reconfigurable Communication Middleware for FlexRay-based Distributed Embedded Systems
32.	134101021	SUMMIT VERMA	Cache oblivious algorithms on VAT model
33.	134101033	PULKIT VERMA	Resource Usage Analysis for Speech Recognition Techniques
34.	134101036	SWARUP RANJAN BEHERA	Spectral Clustering using Convex and Constrained Settings
35.	134101038	SUDHANSHU KUMAR	The incentive ratio of Linear utility market for 2 players

Sl. No.	Roll No	Name	Project Title
36.	134101055	BERHE GEBREZGIABHER WEKELLE	Online testing of reversible circuits using M-out-of-N-checker
37.	134101057	EYERUSALEM DAGNEW GEBRU	Online Test for Reversible Circuit
38.	134101071	DEVENDRA MALVIYA	Implementation of bus Interconnect for chip Multiprocessors

**List of students who have fulfilled requirements for award of M.Tech. degree in Electronics and Electrical Engineering with specialization in Signal Processing**

Sl. No.	Roll No	Name	Project Title
1.	124102011	TAMMINA SIVA NAGA SRINIVASU	Performance Evaluation of Video Interest Point Detectors
2.	124102013	PASUPUREDDY VIJAYA KUMAR	Informed and Non-Informed Analysis of Linear & Rotational Interpolations
3.	124102015	VISHWAJEET	Facial Expression Recognition using DWT, DCT and SVM
4.	124102018	HIMANSHU SRIVASTAVA	Backward-Forward Resosoning in Multiple Object Tracking
5.	124102019	MARUPALLI NARAYANA GANGADHAR	FACE EXTRACTION IN COMPLEX & STATIC BACKGROUNDS
6.	124102020	SWAYAM SAMPANNA PADHI	Methods for single-Image super-resolution
7.	124102021	NALLA KARTHIK	Hierarchical Classification of Broadcast News Video
8.	124102022	ARSI SHIVA	Text Detection and Extraction in Broadcast Videos
9.	124102023	M PHANIDHAR KUMAR	VIRTUAL CROWD SIMULATION IN SPACES WITH OBSTACLES
10.	124102027	SOMNATH GHORAI	Novel Algorithms for Automatic Polyp Detection in Endoscopic Images
11.	124102028	CHETAN MEHRA	Disparity Map Estimation for Stereo Images
12.	124102030	GASADA. V. B. PRAKASH	Outlier Rejection with IRLS-RANSAC
13.	124102034	SREE NILENDRA GADRE	Analysis of Excitation Source Information for Speaker Change Detection

**List of students who have fulfilled requirements for award of M.Tech. degree in Electronics and Electrical Engineering with specialization in VLSI**

Sl. No.	Roll No	Name	Project Title
1.	124102001	VIJAYA KUMAR K	ASIC Implementation of Multi-Standard LDPC Decoder
2.	124102002	THOTHADRI KRISHNA B	Gm-C Filter for LTE
3.	124102003	PATAN IMRAN KHAN	Design and implementation of FPGA based controllers for contactless power transfer
4.	124102004	S RAKESH KUMAR	Design and Implementation of FBLMS based Adaptive Decision Feedback Equalizer using Distributed Arithmetic
5.	124102005	K.V. MAHESH	FPGA BASED MATRIX ALGORITHMS FOR CIRCUIT SIMULATION
6.	124102007	GAJENDRA KUMAR	Design and Implementation of FPGA based direct torque control of three phase induction motor
7.	124102008	NIKHIL DAS	Design and Implementation of Baseband Processor for IR-UWB WBAN for IEEE 802.15.6
8.	124102009	KALI CHARAN DAS	High Performance Telemetry Circuit Design for Cardiac Pacemaker
9.	124102010	PRITI SONOWAL	A Device Specific Device Simulator for Novel Devices
10.	134102013	ANSHU CHAUHAN	Area, Power and Performance Optimized Approximate Circuit Design Techniques for Computationally Intensive Algorithms

**List of students who have fulfilled requirements for award of M.Tech. degree in Electronics and Electrical Engineering with specialization in Communication Engineering**

Sl. No.	Roll No	Name	Project Title
1.	11410238	RAHUL CHHATWANI	On the existence of sum-networks with linear coding capacity $k/n$ only over a specific set of finite fields
2.	124102031	SALUNKHE AKSHAYKUMAR ARVIND	Investigation on Different Aspects of Direction of Arrival Estimation
3.	124102038	VOMMI DHOORJATI	ON ADAPTIVE DISTRIBUTED STORAGE SYSTEMS
4.	124102041	MANISH SHAW	MIMO communication using SAW devices
5.	124102042	NAGENDRA KUMAR	Performance analysis of MIMO based cooperative communication in $k$ - $q$ and $\eta$ - $q$ fading channels
6.	124102047	SHIBSANKAR SARKAR	Beamforming & Tracking of Mobile users Using Smart Antennas
7.	124102048	SUBHRAJYOTI SUNANI	Performance analysis of MIMO wireless communications with antenna selection
8.	124102049	PATEL PIYUSHKUMAR DINESHBHAI	DESIGN OF DUAL BAND MICROSTRIP POWER DIVIDER WITH APPLICATION IN ANTENNAS
9.	124102050	SRINU NAIK MUDAVATHU	De Bruijn Sequences
10.	134102068	Y BHAGATH KUMAR REDDY	Detection with erasure in cooperative relay system

**List of students who have fulfilled requirements for award of M.Tech. degree in Electronics and Electrical Engineering with specialization in Applied Control**

Sl. No.	Roll No	Name	Project Title
1.	124102052	HARIOM CHAUHAN	Speed Control of Brushless DC Motor Using Fuzzy Logic
2.	124102070	BANOTH SHIVA	Design and Analysis of FEM based MEMS Piezoresistive Accelerometer for Involuntary Hand Motion

**List of students who have fulfilled requirements for award of M.Tech. degree in Mechanical Engineering with specialization in Machine Design**

Sl. No.	Roll No	Name	Project Title
1.	124103002	AKOLKAR MANGESH RAOSAHEB	Experimental verification of optimal strain gage locations for the accurate determination of KI in internal cracked plates
2.	124103003	SEELAM VISHNUVARDHAN NAIDU	A new method for computation of stress intensity factors of sharp V-notched two dimensional configurations
3.	124103004	TALATAM VISWANADH	Experimental Estimation of Speed-Dependent Dynamic Parameters of Active Magnetic Bearings
4.	124103005	GAIKWAD HANMANT KRISHNA	Multi-objective Optimization of Spherical & Tapered Roller Bearing Designs using Genetic Algorithms
5.	124103006	JANASWAMY TAGORE SAI MANIKANTA SARMA	Design of a viscoelastic composite for enhanced unconstrained layer damping of structural vibration
6.	124103007	PATIL NILESH SUNIL	FINITE ELEMENT ANALYSIS OF CARBON NANOTUBE BASED COMPOSITES
7.	124103009	RAKESH NATH	Modeling of Largely Deflected Beams under Antagonistic SMA Wire Actuation for Energy Harvesting Application
8.	124103010	SIKHAKOLLI L V N AVINASH	Dynamic Analysis of Multilayered Sandwich Beam with MRE Core
9.	124103012	HARSHWARDHAN RATNAPARKHI	Development of High Performance Computing Tool For Structure Topology Optimizaton
10.	124103014	PATIL KAPEEL DINANATH	Non-linear Finite Element Analysis of Beam under Follower Forces



Sl. No.	Roll No	Name	Project Title
11.	124103016	PURUSHOTTAM GANGSAR	Fault Diagnostics of Rolling Bearing Based on Vibrations by Support Vector Machine Algorithm
12.	124103017	PANKAJ RAWAT	Nonlinear frequency response analysis of a smart functionally graded cylindrical shell under a heated shell-surface
13.	124103019	BHUSARE NEETIN NAVANATH	Stability Analysis of Time Varying Dynamical Systems
14.	124103022	GAJENDRA MUNDEL	Fabrication and Mechano-Tribological Characterization of LLDPE/Sea Shell Bio-Composite
15.	124103024	VISWESWARA RAO LENKA	Design of Compact Active Magnetic Bearing
16.	124103025	SURAJ M G	Performance Analysis of Gas Foil Bearing
17.	124103026	SUNIL KUMAR SINGH	Experimental Investigation on the Effect of Different Coatings on Laser Forming of Mild Steel Sheets
18.	124103030	LAXMAN RAM	Customized Evolutionary Algorithm for Topology Optimization of Mechanical Components
19.	124103052	RAHUL YADAV	DESIGN AND DEVELOPMENT OF THREE DIMENSIONAL FORCE MEASUREMENT SET-UP FOR FRICTION STIR WELDING
20.	134103045	ANURAG MISHRA	Performance Evaluation of Polymer Composite Gears for Precision Motion and Bidirectional Load Application

**List of students who have fulfilled requirements for award of M.Tech. degree in Mechanical Engineering with specialization in Fluids and Thermal Engineering**

Sl. No.	Roll No	Name	Project Title
1.	124103033	SUBHASH CHANDRA LAIK	Simulation and Experimental Validation of Nanofuel In Direct Injection Diesel Engine
2.	124103035	SUNIL G N	Computation of flow field coupled with electric field on unstructured grid
3.	124103049	SRIKANTH SURENDRANATH	Study of convergence acceleration method in USHAS solver
4.	124103051	VIJAY SHANKER VERMA	Experimental Investigation of A Dual Fuel Diesel Engine Run On Scrubbed Biogas
5.	124103056	KULDEEP KUMAR SINGH	Design and Analysis of Spiral Plate Heat Exchanger
6.	124103066	SATYANARAYANA KUMBHA	Numerical Simulation of Transients in Supercritical Water Cooled Reactor
7.	124103093	SHATRUGHAN PRASAD JAISWAL	A NUMERICAL STUDY OF NATURAL CONVECTION IN A WATER-FILLED CAVITY WITH DENSITY INVERSION
8.	124103101	PUSHPENDRA	Performance Evaluation of Nanofluid in a counter flow Heat Exchanger
9.	134103040	ANKIT KUMAR SHUKLA	PERFORMANCE INVESTIGATIONS OF LATENT HEAT STORAGE SYSTEMS
10.	134103043	AMIT SHUKLA	Computational Studies on High Speed Reacting Flows
11.	134103048	ROHIT CHANDRA PAURIYAL	Computational Analysis of Fluid Structure Interaction in Hypersonic Flow
12.	134103049	GIRIRAJ SHARMA	Numerical Optimization of Elliptical Savonius Rotor using Guideway Augmenters
13.	134103051	VINEET KUMAR MISHRA	Investigation of fluid flow & Heat Transfer in Straight & Diverging Microchannels

Sl. No.	Roll No	Name	Project Title
14.	134103052	MOHD IMRAN	ANALYSIS OF COMPRESSION – DRIVEN METAL HYDRIDE BASED COOLING SYSTEM
15.	134103057	SANDIP KUMAR GUPTA	Experimental Investigation on Liquid Mass Distribution By Using Pressure Swirl Automization
16.	134103058	SARBINDU KUMAR	Numerical & Experimental studies of vertical axis helical water turbine
17.	134103075	ARIJEET BARDHAN	Experimental Investigation of Impinging Jet Automization
18.	134103100	SWASTIK ACHARYA	NUMERICAL MODELING OF CONTINUOUS CASTING OF STEEL
19.	134103102	ABHISHEK KUMAR	NUMERICAL SIMULATION OF ELECTROHYDRODYNAMIC FLOW FIELD IN ELECTROSTATIC PRECIPITATOR AND PARTICLE TRACKING
20.	134103104	SANTOSH KUMAR SINGH	NUMERICAL SIMULATION OF GROUNDWATER FLOW
21.	134103106	GIRJESH KUMAR	COMPUTATIONAL STUDY OF DYE CELL

**List of students who have fulfilled requirements for award of M.Tech. degree in Mechanical Engineering with specialization in Computer Assisted Manufacturing**

Sl. No.	Roll No	Name	Project Title
1.	124103070	ROKKHAM PAVANKUMARREDDY	Experimental Comparative Study of Conventional, Textured and Textured with coating tools in machining
2.	124103073	ANCHE LOHIT	Prediction of weld induced distortion of large structure
3.	124103076	MRUTYUNJAY MAHARANA	Design and development of trans-femoral amputee walking simulator
4.	124103077	BIBHUTI RANJAN BHATTACHARJYA	Development of Deformation Mechanism Maps by Static hot compression Testing
5.	124103082	JADDIVADA SIDDHARTHA	Design and Modelling of suspension system for walking apparatus
6.	124103090	RICHA SINGH	Residual stress and fatigue life prediction of laser welded stainless steel structure
7.	124103102	RAVI KUMAR VALECHA	Finite Element Modeling of Electromagnetic Shearing of Sheets & Tubes
8.	124103107	UTTAM KUMAR TARAI	Processing and Mechanical Property Evaluation of Ultra fine grained aluminum alloy by Friction Stir process
9.	134103001	NIZAR ALKAYEM	MODELING AND OPTIMIZATION OF FRICTION STIR WELDING PROCESS USING SOFT COMPUTING TECHNIQUES

**List of students who have fulfilled requirements for award of M.Tech. degree in Mechanical Engineering with specialization in Computational Mechanics**

Sl. No.	Roll No	Name	Project Title
1.	124103091	VINAY KUMAR MISHRA	A meshfree solver based on meshless local petrov galerkin method for solid mechanics
2.	124103092	RAUT PRATHAMESH PRAKASH	Solution to Inverse elasticity problem in the framework of Finite Element Method
3.	124103109	SAURABH DHOPESHWAR	A numerical study of self-induced oscillatory natural convection in a top cooled cavity with a surface mounted heater
4.	124103112	NITIN CHAUHAN	IMPLEMENTATION OF SPARSE LINEAR ITERATIVE SOLVERS: GMRES AND AMG
5.	124103114	RAJENDRA PRASAD SONI	Study of transient natural convection in a cavity with surface- mounted heaters

Sl. No.	Roll No	Name	Project Title
6.	134103084	SATEESH KUMAR	Numerical Simulations of Natural Convection Inside Complex Enclosure Filled With Nanofluids
7.	134103121	PRABHASH GOYAL	Real gas effect in shock wave boundary layer interaction
8.	134103123	SANDEEP KUMAR	A TIME INTEGRATION SCHEME FOR DYNAMIC PROBLEM

**List of students who have fulfilled requirements for award of M.Tech. degree in Civil Engineering with specialization in Structural Engineering**

Sl. No.	Roll No	Name	Project Title
1.	124104004	BRAHANDAM LAXMI NARASHIMHA KIREETI	Critical Issues in Nonlinear Static Analysis of RC Flat Plate Building with Staircase and Elevator Core
2.	124104006	SANTANU SAMANTA	Capacity Estimation of Nuclear Containment structural component (RC Slab) subjected to Impact Loading
3.	124104008	JIM NOBLE THOMAS	NON-OBSTRUCTING BRACING CONFIGURATIONS FOR OPEN STOREY STRENGTHENING
4.	124104009	VETSA SRI RAM GOWTHAM	EFFECT OF STIFFENERS IN LEAN DUPLEX STAINLESS STEEL(LDss) HOLLOW CIRCULAR STUB COLUMNS UNDER PURE AXIAL COMPRESSION
5.	124104011	MOHD ABDUL RAHEEM WASAY	STRUCTURAL BEHAVIOUR OF LEAN PUPLEX STAINLESS STEEL I-SECTION STUB COLUMNS SUBJECTED TO AXIAL COMPRESSION
6.	124104014	MUKESH KUMAR ROY	INFLUENCE OF OPENINGS IN MASONARY INFILLS ON LATERAL LOAD BEHAVIOUR OF OPEN GROUND STOREY BUILDINGS
7.	124104015	SUBHASIS PRADHAN	Flexibility based analysis of reinforced concrete frame structures
8.	124104016	GUMPENA RAJENDRA	EVALUATION OF SEISMIC ENERGY DEMAND IN RC. FRAME WITH & WITHOUT MASONRY WALLS
9.	124104017	MOHAMED SAJEER M	OPTIMAL DESIGN OF TUNED MASS DAMPER FOR SEISMIC RESPONSE CONTROL OF LINEAR TIME INVARIANT SYSTEM
10.	124104019	KULDEEP KHARE	STATIC AND DYNAMIC RESPONSE ANALYSIS OF TALL STRUCTURES
11.	124104021	ARUNACHALAM J.	Comparison of Linear and Nonlinear Static Methods of Analyses for Seismic Behaviour of Asymmetric RC Frame Buildings
12.	124104051	BURA AKSHAY RAMESH	Effect of replacement level of fly ash on strength and chloride induced corrosion of steel reinforcement in concrete
13.	124104073	KAVITA DEKA	Capacity Estimate of RC Members Subject to Blast Loading
14.	134104100	WELDEBERHAN GEBREKIROS ADHANA	Utilization of Bamboo as a reinforcement in cement concrete for low cost and hazard resitant housing

**List of students who have fulfilled requirements for award of M.Tech. degree in Civil Engineering with specialization in Water Resources Engineering and Management**

Sl. No.	Roll No	Name	Project Title
1.	124104057	PRADIP KUMAR BARMAN	Efficiency of Non-Classical Optimization Algorithms in the estimation of Flow and Virus Transport Parameters
2.	124104060	RUPASREE PANDA	Glacial Lake outburst flood and its impact on hydropower projects in Tawan Basin
3.	124104061	DINESH P	Transient groundwater modeling of Bihar using GMS 3D grid approach
4.	124104062	CHANDRA UPADHYAYA	Assessment of Environmental Flow Considering Eco-Index
5.	124104068	IROM ROYAL	Study on soil carbon sequestration and carbon flux evaluation
6.	134104067	RANGANATHAN K	An Integrated Study on carbon dioxide emissions from Indian energy and municipal solid waste sectors

**List of students who have fulfilled requirements for award of M.Tech. degree in Civil Engineering with specialization in Geotechnical Engineering**

Sl. No.	Roll No	Name	Project Title
1.	124104024	DAMMALA PRADEEP KUMAR	Study on Behaviour of Cantilever Retaining Wall Backfilled with Lightweight Materials
2.	124104028	CHARU BHARDWAJ	A STUDY ON ANALYSIS AND PERFORMANCE OF FLOOD EMBANKMENTS
3.	124104031	BIPIN KUMAR GUPTA	A STUDY ON LOAD-DEFORMATION BEHAVIOUR OF MONOPILE FOUNDATIONS FOR OFFSHORE WIND TURBINES
4.	124104032	SAYANTAN CHAKRABORTY	A STUDY OF SOME DESIGN ASPECTS FOR PILED RAFT FOUNDATION
5.	124104033	CHANDRA BHANU GUPT	Determination of volumetric Shrinkage Curve of Soils
6.	124104034	BIKASH KUMAR SAH	Model studies on foundations with shredded tyre mixtures over clay subgrade
7.	124104035	YUDHVIR YADAV	Analysis of Rainfall induced Landslide problems
8.	124104040	JANARDHAN TAHASILDAR	Analysis of Shrinkage behaviour of compacted sand-bentonite mixtures
9.	124104041	HIMADRI BARUAH	Consolidation Characteristics of Fiber Reinforced Sand-Bentonite Mixtures
10.	134104023	RISHIKESH KUMAR PANDEY	EXPERIMENT EVALUATION OF CAPILLARY RISE IN SANDS
11.	134104058	AMRIT KUMAR	Laboratory fall cone testing of unsaturated soils
12.	134104101	BEREKET MAMO GEBREMESKEL	Effect of Strain Rate, Relative Density and Specimen Size on Shear Strength Parameters of Cohesionless Soil: Direct Shear Test

**List of students who have fulfilled requirements for award of M.Tech. degree in Civil Engineering with specialization in Environmental Engineering**

Sl. No.	Roll No	Name	Project Title
1.	124104081	PRITI MISHRA	REMOVAL OF HEXAVALENT AND TRIVALENT CHROMIUM FROM SYNTHETIC WASTEWATER USING IRON(II) SULPHIDE
2.	124104082	SHASHIBHUSHAN BILIANGADI	Metal Uptakes by Granular Activated Alumina Exposed Repeatedly to Mono- and Binary Metal Ion Systems Comprising of Cr(III) and Pb(II) Ions through Batch Kinetics and Continuous Column Studies
3.	124104083	THAKER PRASHANT ASHWINKUMAR	NUMERICAL SIMULATION OF CARBON MONOXIDE DISPERSION IN AN URBAN STREET CANYON WITH HETEROGENEOUS TRAFFIC
4.	124104084	MOHIT PRAKASH MOHANTY	Studies on Effects of Phenol and Nitrate on Sulfate Reduction by Mixed Microbial Culture
5.	124104085	AKSHAY KUMAR	Removal of Cu(II) and Pb(II) using Iron(II) Sulfide in Mono and Binary Systems
6.	124104086	VIKAS KUMAR	Anaerobic Digestion of Food Waste using Different Inoculums
7.	124104088	KAMMA RAMU	Composting of Vegetable waste using Different Composting Techniques
8.	124104089	KANEKAR HIRANMAYEE DILIP	Microbial Study of Rotary Drum Composting of Water Hyacinth
9.	124104090	MANOJ KUMAR YADAV	Batch Kinetics and Continuous Column-Studies for Cu(II) and Pb(II) Uptake by Granular Activated Alumina Exposed Repeatedly to Mono-and Binary-Metal Ion Systems

Sl. No.	Roll No	Name	Project Title
10.	124104091	MOHNISH SATRAWALA	EVALUATION OF IRON AND ARSENIC REMOVAL MECHANISM USING COMMUNITY FILTER SAND
11.	124104092	ABHIJITH K V	INVESTIGATION OF POLLUTANT DISPERSION CHARACTERISTICS IN STREET CANYON IN PRESENCE OF TREES AND ON-STREET PARKED CARS
12.	124104093	ARUL NATH K	ADSORPTION BEHAVIOUR OF LEAD, CADMIUM AND MERCURY ON CHITOSAN IN MONO, BINARY AND TERNARY SYSTEM
13.	124104094	BHAUTMAGE UTKARSH PRAKASH	NUMERICAL SIMULATION AND FIELD VALIDATION OF CARBON MONOXIDE DISPERSION IN ROAD TUNNELS
14.	124104095	SHASHI KUMAR PANKAJ	Bioavailability of Heavy Metals during Composting of Phumdi Biomass
15.	124104097	SANDEEP MARKAM	DISTRIBUTION OF GROUND WATER ARSENIC IN AN ALLUVIAL AQUIFERS OF THE BRAHMAPUTRA FLOODPLAIN, ASSAM, INDIA

**List of students who have fulfilled requirements for award of M.Tech. degree in Civil Engineering with specialization in Transportation Systems Engineering**

Sl. No.	Roll No	Name	Project Title
1.	124104036	BHARAT RAJAN	DESIGN OF OPEN GRADED FRICTION COURSES
2.	124104042	ARIJIT KUMAR BANERJI	STRENGTH CHARACTERISTICS OF EVOTHERM 3G WARM MIX
3.	124104046	MANISH RAJ	EVALUATION OF PROPERTIES OF BITUMEN MODIFIED WITH DIFFERENT ADDITIVES
4.	124104050	M SURENDRANATH	Effect of Maximum Aggregate Size With Its replacement By Lower Size And Fillers on Bituminous Mix Properties
5.	124104056	IBAIAHUN NONGBET SOHLANG	ROLE OF MIX COMPACTION AND BINDER CONTENT IN MOISTURE SUSCEPTIBILITY OF HOT MIX ASPHALT

**List of students who have fulfilled requirements for award of M.Tech. degree in Civil Engineering with specialization in Infrastructure Engineering and Management**

Sl. No.	Roll No	Name	Project Title
1.	124104074	NANDURU HARISH KRISHNA	Analysis of impact of pre-construction practices on success of construction project
2.	124104075	MALLISETTI VARA PRASAD	Pre-construction Risk Management in Infrastructure Development Projects
3.	124104077	MOJAHEDUL ISLAM NAYYER	Procurement option analysis for public private partnership wastewater projects
4.	124104078	ARJUN P	Decision support system for procurement option selection for municipal solid waste projects
5.	124104080	MUNA KALUNDIA	Effect of added chloride dosage on properties of concrete
6.	124104101	JYOTISH KUMAR DAS	Effect of corrosion inhibitor on chloride induced corrosion of steel in concrete

**List of students who have fulfilled requirements for award of M.Tech. degree in Biotechnology**

Sl. No.	Roll No	Name	Project Title
1.	124106001	CHANDRA SHEKHAR KUMAR	Analysis Of synonymous codon usage of important proteins encoded by Newcastle disease virus and infectious bursal disease virus
2.	124106022	RICHA ARYA	Investigations into the role of amphiphilicity and aromatic interactions in A $\beta$ 16-22 self – assembly

Sl. No.	Roll No	Name	Project Title
3.	124106031	NIHARIKA CHANDRA	Effect of light – dark Cycle and light intensity on Growth and lipid productivity of <i>Chlorella</i> sp FC2 IITG
4.	124106032	JAGGA BIKSHAPATHI	Deciphering the Mechanism of 3' end maturation of the 16S Ribosomal RNA
5.	134106001	KULKARNI ALARK SHRIPAD	Instrumentation System Design and Fabrication of Cost – effective Portable Fluorometer Using LEDs
6.	134106002	SUBBI RAMI REDDY TADI	Statistical optimization and kinetic modeling of D (-) lactic acid production in palmyra jaggery and whey protein hydrolysate based fermentation medium
7.	134106004	GARIMA SINGH	Silk based injectable hydrogel as potential cell delivery matrix
8.	134106005	RAJANI KANT RAI	Studies on Bactericidal and Antibiofilm Potential of Metal – complexity Ligands
9.	134106006	EKTA KUMARI	Integrated computational and biochemical studies on glutamine synthetase of <i>Leishmania donovani</i>
10.	134106007	PROMI DAS	Mass Isotopomer Profiling and Quantification Of Glycerol Metabolism In <i>E.coli</i>
11.	134106009	BHANUPRIYA CHOUHAN	Construction Of Fluorescence Correlation Spectroscopy Module for Inverted Fluorescence Microscope And Investigating Hen Lysozyme Aggregation using FCS
12.	134106011	RISHABH SINGH	“Charaterization of predicted novel extracellular proteins of pathogenic <i>Leptospira interrogans</i> ”
13.	134106012	SHRAYAN KUMAR DAS	IN VITRO PRODUCTION OF AUTOTRAPLOIDS OF <i>AZADIRACHTA INDICA</i> A. JUSS
14.	134106014	SOMYA SRIVASTAVA	Exploring Receptor Binding Domain of Diphtheria Toxin for Therapeutic Use
15.	134106015	IFFAT JAHAN	“A funanoflavone karanjin : structural elucidation and its antibacterial activity with biocomposite copper nanoparticles”
16.	134106017	AMBUJ SRIVASTAVA	Analysis and development of protein – protein docking algorithm
17.	134106018	KORE SUKHADEV APPANNA	Towards understanding the role of GPR30 in Stromal – Epithelial interaction
18.	134106020	MAYENGBAM SHYAMANANDA SINGH	“Sensitizing Triple Negative Breast Cancer Cells to Chemotherapeutic Agents”
19.	134106021	MOHD FARHAN SIDDIQUI	A low cost design and fabrication method for developing a leak proof microfluidic paper – based analytical device ( $\mu$ PAD) with customized test zone.
20.	134106023	RATNAKARAM SIVA KUMAR RAJU	A novel combination therapy for highly resistant oral squamous cell carcinoma
21.	134106029	ASHISH ANAND	Isolation, Identification and Characterization of novel metabolites from an endophytic fungus <i>Aspergillus tamari</i>
22.	134106030	NAVEEN BEDI	Development of An Improved In – situ Solvent Recovery Process for Acetone – Butanol – Ethanol ( ABE ) Fermentation
23.	134106031	AJAY KUMAR SAHI	Advanced Glycation End products (AGEs) and macrophage Store Operated Calcium ( SOC ) channels
24.	134106033	NEITHOO	Synthesis of Silver Nanoparticles with <i>Artemisia indica</i> Willd and <i>Tetrastigma voinierianum</i> collected from Nagaland
25.	134106036	S VANITHA	Functional characterization of silica nanoparticle - stabilized recombinant GMCSF protein for cancer therapy

**List of students who have fulfilled requirements for award of M.Tech. degree in Chemical Engineering with specialization in Petroleum Science and Technology**

Sl. No.	Roll No	Name	Project Title
1.	124107002	SONIT BALYAN	Numerical and Experimental Studies on Underground Coal Gasification
2.	124107004	KARAN MALIK	Numerical Investigation of Bubble Column and Experimental Validation
3.	124107006	NAGIREDDI SRINU	Pd(II) adsorption characteristics of glutaraldehyde crosslinked chitosan copolymer and Lewatit Monoplus TP214 resins
4.	124107007	KUNAL PANT	Synthesis and Performance Evaluation of FAU Zeolite-Ceramic Composite Membrane by Separation of Cr (VI) from Aqueous Solution
5.	124107013	PRASENJIT BARMAN	PROCESS INTENSIFICATION OF ESTERS SYNTHESIS BY HYDRO-DYNAMIC CAVITATIONS TECHNIQUE
6.	124107021	DEOASHISH PANJIARA	Optimization of rubber oil methyl ester synthesis using response surface methodology
7.	124107023	VENKATA RAO JANAMALA	MIXING CHARACTERISTICS IN HELICAL COIL
8.	124107026	SOURABH SHAW	Characterization of Mesua Ferrea (Nahor) Oil for Biodiesel Production
9.	124107027	ARINDAM	Mass transfer efficiency of microbubble flow based on mixing phenomena
10.	124107029	SANDUP TSHERING BHUTIA	Preservation and Storage Study of Clarified Synthetic Juice: Experimental and Theoretical Consideration
11.	124107058	RAVI BHANDARI	Preparation and Characterization of Fly Ash based Mesoporous Catalyst for Transesterification of Soybean Oil

**List of students who have fulfilled requirements for award of M.Tech. degree in Chemical Engineering with specialization in Materials Science and Technology**

Sl. No.	Roll No	Name	Project Title
1.	11410728	SATENDRA KUMAR	Artificial Intelligence based multi-objective optimization for combinatorial problems
2.	124107030	ABHINAV SHARMA	Localized Electric Field Induced Transition of Two-Phase Flow Patterns inside Microchannels
3.	124107031	MANAS RANJAN BEHERA	Foaming in Emulsion: Effect of Surfactant, Salt and Oil
4.	124107036	PRAKRAM SEHGAL	Carbon Dioxide hydrogenation over alumina and ceria supported nickel and zinc catalysts
5.	124107037	PASUMARTHI VISWANATH	Hydrogen production through self-motile microbots
6.	124107040	VISHAL KUMAR SANDHWAR	TREATMENT OF HUMIC ACIDS USING SPINNING BASKET MEMBRANE MODULE
7.	124107041	PRADIP DAS	Controlled Drug Delivery using Iron based Metal Organic Framework
8.	124107042	RAJASEKHAR KADAMBUR	Optimal Scheduling of Production Operations
9.	124107046	MUDIT BAURAI	Gas Adsorption characteristics of Amino-MIL-53(Al) Metal Organic Framework
10.	124107047	MURCHANA CHANGMAI	Synthesis and characterization of surface modified NiFe <sub>2</sub> O <sub>4</sub> nanoparticles and its application in adsorbent modification
11.	124107048	CHIRANJIB DAS	Studies on convective heat transfer of two phase flow in vertical helical coil
12.	124107051	PRADEEP KUMAR RAMTEKE	Crystallization Kinetics of Diblock Copolymer Thin Film

Sl. No.	Roll No	Name	Project Title
13.	124107052	VARADE SHAILESH RAVI	Ion-Specific Effect in Stability of Foams and Emulsions in Presence of Anionic Surfactant and 1:1 Electrolytes: Role of Adsorption and Interfacial Charge
14.	124107061	MERY KUMARI MEDIKONDA	Biodegradation of Poly (Lactic acid) and its composites
15.	124107062	SOHAN BIR SINGH	Desulphurization by reactive adsorption over zinc oxide based adsorbents
16.	124107065	SHRAVAN KUMAR	Molecular Simulation Study of Gas Adsorption on Carbon Molecular Sieve

**List of students who have fulfilled requirements for award of M.Des. degree in Design**

Sl. No.	Roll No	Name	Project Title
1.	134205001	SHRUTI PRABHAKAR SALE	Exploring lifestyle products using Bamboo and Cane
2.	134205002	YASHODHAN VIKAS MANDKE	Board Game Design for Interest & Motivation in Chemistry
3.	134205003	PRABHAT KUMAR TIWARI	Supercar Concept for Mahindra & Mahindra Ltd.
4.	134205004	ABIR NAGIA	Packaging for Fruits
5.	134205005	SRI HARSHA VSSS ANDUKURI	Communication Challenges of the deaf: Learnings from experiments in the field
6.	134205006	ARUSHI SINGH	Karuna: Smart Home Solutions for Indian Elderly
7.	134205007	ARUNIMA V J	The Carnatic music experience
8.	134205008	KUNAL DREGO	Exterior Styling of a C segment Hatchback for Renault
9.	134205009	PARVATHY V R	Ancient Wisdom of India for the youth
10.	134205010	JAHNVI MUDGAL	Exformation
11.	134205011	BINOY CYRIAC	Easing of kitchen activities for elderly through design
12.	134205012	NIKHIL PAVITHRAN	Hope for Autism: Interactive and Informative web based platform for the Autistic Community
13.	134205013	SUMIT ARORA	Designing for accessibility : Solutions to enhance Smartphone usage among geriatric, motor and hearing impaired users
14.	134205014	ANISUR RAHMAN	Branding on Muga Silk
15.	134205015	JOJO M GEORGE	Thira: A Visual Guide of Malayalam Movies
16.	134205016	ADITYA CHAUDHARY	Virtual Reality Game Experience Design
17.	134205017	DEEPIKA KASHYAP	back to roots -storage for fruits and vegetable
18.	134205018	RANJITH R	Behaviour Change Campaign : Influencing perception of single-use-commodities and promoting reusable behaviours
19.	134205019	RAJIB BHAKAT	Removing Mobility Barriers for Paraplegic
20.	134205020	PRADYUT NATH	Strategy and Signage Design for Gauhati Medical College and Hospital (with specific references for rural visitors)
21.	134205022	BRAJESH DHIMAN	Solar Ambrosear
22.	134205023	KULMANALI TANAJI KHILARE	Improving Quality of life for elderly through designing smart spaces
23.	134205024	SHILPA S BABU	Bio Inspired Furniture for urban spaces
24.	134205025	SAURAV KHUTTIYADEORI	Tourist Guide Book: Assam
25.	134205026	WANRISA BOK KHARKONGOR	Collaborative Design for Tourism
26.	134205027	GASHAYE MAHTEMU AMARE	Design through Exploration of Tensegrity



**List of students who have fulfilled requirements for award of Ph.D. degree in Computer Science and Engineering**

Sl. No.	Roll No	Name	Thesis Title
1.	03610105	PALLAV KUMAR DUTTA	An Online Semi Automated Part of Speech Tagging Technique Applied To Assamese
2.	04610101	ABHIJIT SARMA	Context Aware Handover for WiFi and Its Extension to WiMAX
3.	04610106	MAMATA SAMAL	Quality Analysis of Correlation Clustering
4.	07610108	SUDDHASIL DE	Improvements in Coordination Functionality of Tuple Space model for Mobile Middleware
5.	07610109	MAUSHUMI BAROOAH	An Architectural Framework for Seamless Hand-off between UMTS and WLAN Network
6.	09610110	SHRINIVASA N. C. L.	Asymmetric Region Local Binary Patterns for Face Image Analysis
7.	10610101	HARI PRABHAT GUPTA	Stochastic Coverage and Connectivity in Heterogeneous Wireless Sensor Networks
8.	10610106	TANIMA DUTTA	Robust Compressed Domain Video Watermarking for H.264 / AVC

**List of students who have fulfilled requirements for award of Ph.D. degree in Electronics and Electrical Engineering**

Sl. No.	Roll No	Name	Thesis Title
1.	06610211	G. ARUNA	Performance Analysis of EGC and MRC Receivers over Fading Channels with Phase Estimation Error and Co-channel Interference
2.	07610203	SUMITRA SHUKLA	SPECTRAL ANALYSIS OF STRESSED SPEECH FOR SPEECH RECOGNITION
3.	08610206	ASHISH KUMAR NAMDEO	Surface Acoustic Wave Devices with Non-Contact Interdigital Transducers
4.	08610208	NAGESH CH	DESIGN AND FABRICATION OF AN OSMOTIC PRESSURE SENSOR FOR GLUCOSE SENSING APPLICATION
5.	09610206	GAURAV SAXENA	Design, Modeling and Fabrication of Microhotplate for Gas Sensing Applications
6.	09610208	RAHUL SHRESTHA	VLSI Design and Implementation of High-Throughput Turbo Decoder for Wireless Communication Systems
7.	09610209	EZHIL REENA JOY T.P.	Modeling and Analysis of Electric Vehicle Charging Interface
8.	09610219	HARIS B.C.	JOINT SPARSE CODING OVER LEARNED DICTIONARIES AND THE USE OF LOW-COMPLEXITY PROJECTIONS FOR SPEAKER VERIFICATION
9.	10610220	MURLI MANOHAR	Design, Fabrication and Testing of Printed Monopole Antennas for Super Wideband Applications
10.	11610222	BAJARANGBALI	IDENTIFICATION OF PROCESS DYNAMICS USING RELAY WITH HYSTERESIS

**List of students who have fulfilled requirements for award of Ph.D. degree in Mechanical Engineering**

Sl. No.	Roll No	Name	Thesis Title
1.	07610309	LINTU ROY	GROOVE LOCATIONS FOR OPTIMUM PERFORMANCE OF TWO-AXIAL GROOVE AND MULTI-LOBE HYDRODYNAMIC BEARINGS
2.	09610304	SHRAVANKUMAR C	CRACK IDENTIFICATION IN ROTORS WITH FULL-SPECTRUM
3.	09610310	S. ANBARASU	Studies on Metal Hydride Based Hydrogen Storage Device
4.	09610311	BIBIN JOHN	Numerical Investigations of Shock Wave Boundary Layer Interaction in Hypersonic Flows
5.	09610314	RAVI KUMAR PEETALA	CONJUGATE HEAT TRANSFER ANALYSIS IN HYPERSONIC APPLICATIONS
6.	10610303	DHRUBA JYOTI BORDOLOI	OPTIMUM MULTI-FAULT CLASSIFICATION OF GEARS WITH INTEGRATION OF EVOLUTIONARY AND SVM ALGORITHMS

Sl. No.	Roll No	Name	Thesis Title
7.	10610305	PITAMBAR RAMBHAU RANDIVE	MESOSCOPIC MODELING OF CAPILLARITY-WETTABILITY INTERACTION
8.	10610307	SUKANTA ROY	AERODYNAMIC PERFORMANCE EVALUATION OF A NOVEL SAVONIUS-STYLE WIND TURBINE THROUGH UNSTEADY SIMULATIONS AND WIND TUNNEL EXPERIMENTS
9.	10610311	SATHEESHKUMAR V.	FORMING OF ADHESIVE BONDED STEEL SHEETS
10.	10610314	RUPESH SINGH	Computational Study on Thermal Responses of Laser Irradiated Blood Perfused and Vascularized Tissues
11.	10610317	H. LALHMINGSANGA	POST COMBUSTION CO <sub>2</sub> CAPTURE THROUGH ADSORPTION PROCESS IN FIXED AND FLUIDIZED BEDS
12.	126103027	KOUSHIK DAS	NON-INVASIVE DETECTION OF A TUMOR IN A HUMAN BREAST

**List of students who have fulfilled requirements for award of Ph.D. degree in Civil Engineering**

Sl. No.	Roll No	Name	Thesis Title
1.	08610406	ARUP BHATTACHARJEE	NUMERICAL STUDIES ON DYNAMIC BEHAVIOR OF REINFORCED SOIL RETAINING WALLS
2.	08610409	ANIMESH DAS	SEISMIC RESPONSE CONTROL OF LOW-RISE BUILDINGS USING FIBRE-REINFORCED ELASTOMERIC ISOLATOR
3.	09610405	M. LONGSHITHUNG PATTON	Numerical Modelling of Lean Duplex Stainless Steel Hollow and Concrete-filled Columns of Square, L-, T- and +-shape Sections under Pure Axial Compression
4.	09610410	PARTHA PRATIM SARKAR	ANALYSIS AND MODELING OF TRAVEL BEHAVIOR FOR A SMALL SIZED INDIAN CITY
5.	10610410	THIYAM TAMPHASANA DEVI	DESIGN OF UNBAFFLED STIRRED TANK WITH CONCAVE BLADE IMPELLER
6.	10610417	HRIDAY MANI KALITA	OPTIMAL PROTECTION MEASURES FOR CONTROLLING RIVER BANK EROSION
7.	11610414	RATAN SARMAH	Two- and Three-Dimensional Analysis of Flow into Ditch Drains from a Poned Field
8.	11610417	TRIPTIMONI BORAH	Development of Efficient Pollution Source Identification Model Using ANN-GMS-GA Based Simulation-Optimization Approach

**List of students who have fulfilled requirements for award of Ph.D. degree in Design**

Sl. No.	Roll No	Name	Thesis Title
1.	09610503	PRAKASH KUMAR	Ergonomic Design Intervention for Pineapple Peeling Task in Small Fruit Processing Units
2.	09610510	SANGEETA PANDIT	Assistive design intervention to reduce Occupational Ergonomic stress among Women Handloom Weavers of Assam

**List of students who have fulfilled requirements for award of Ph.D. degree in Biosciences and Bioengineering**

Sl. No.	Roll No	Name	Thesis Title
1.	08610604	SAGARIKA MISHRA	Novel Vacuolar Na <sup>+</sup> /H <sup>+</sup> Antiporters Of Cowpea And Mungbean Confer Salt Tolerance In Transgenic Plants
2.	08610607	ASHOK KUMAR	Recombinant Truncated Diphtheria Toxin for Possible Therapeutic Applications
3.	08610610	POJUL LOYING	Regulation of Human Cripto-1 Expression
4.	08610613	TUSHAR	Tapping Zingiberaceae – Wilderness to Mining Plastome

Sl. No.	Roll No	Name	Thesis Title
5.	08610616	SERAJ AHMAD	Studies on Production, Characterization and Application Potential of Cholesterol Oxidase from Rhodococcus sp. NCIM 2891
6.	09610601	MITUN CHAKRABORTY	Molecular and Functional Characterization of a Novel Alcohol Oxidase From <i>Aspergillus terreus</i> MTCC6324
7.	09610611	SOMASEKHAR REDDY C D	STUDIES ON THE ALCOHOL OXIDASE FROM <i>PICHIA PASTORIS</i> FOR DEVELOPING NANOCOMPOSITE BASED ALCOHOL BIOSENSORS
8.	09610613	GAURI DEB	MOLECULAR INSIGHTS INTO THE MODULATION OF GELATINASES BY THE GREEN TEA POLYPHENOL (-) - EPIGALLOCATECHIN-3-GALLATE (EGCG) IN HUMAN BREAST CANCER CELLS
9.	09610615	ARABINDA GHOSH	Molecular cloning, expression, purification and characterization of $\beta$ -mannanase of family 26 glycoside hydrolase and associated family 35 carbohydrate binding module from <i>Clostridium thermocellum</i> and its application in manno-oligosaccharides production
10.	09610616	AYAN SADHUKHAN	Isolation and functional characterization of a stress-inducible transcription factor VuDREB2A from cowpea
11.	09610617	HIMANGSHU SONOWAL	STUDIES ON CYTOSKELETON, DIFFERENTIATION AND PHENOTYPIC PROPERTIES OF HUMAN MESENCHYMAL STEM CELLS
12.	09610620	ANIL KUMAR	DEVELOPMENT OF A CURCUMIN RESOURCE DATABASE AND IN-SILICO INTERACTION STUDIES WITH SELECTED TARGETS
13.	09610621	ANIL KUMAR VERMA	Structural, biochemical and functional analyses of modular recombinant glucuronoxylan-xylohydrolase (CtXynGH30) of family 30 Glycoside Hydrolase and its truncated derivative CtXyn30A and associate family 6 carbohydrate binding module CtCBM6 from <i>Clostridium thermocellum</i>
14.	09610622	KIMJOLLY LHOUVUM	Cloning, Over-expression and Biochemical Characterization of Putative Protease PFI1625c from <i>Plasmodium falciparum</i> 3D7
15.	10610604	MUTHU SIVA RAMA PANDIAN M	Biochemical and system biology approach to characterize novel fresh water microalgal isolate directed towards biodiesel production
16.	10610614	DAMINI KOTHARI	Synthesis, purification, characterization and prebiotic applications of dextran and oligosaccharides from <i>Leuconostoc mesenteroides</i> NRRL B-1426 dextransucrase

**List of students who have fulfilled requirements for award of Ph.D. degree in Chemical Engineering**

Sl. No.	Roll No	Name	Thesis Title
1.	08610705	ARIJIT MONDAL	CO <sub>2</sub> -Selective Thin-Film Polymer Composite Membranes: Improvement of Thermal Stability and Role of Amine Carriers
2.	08610706	VINOTHKUMAR N	Hydrogen production from water-methanol over visible light active modified titanium and indium oxides based photocatalysts
3.	08610710	AVIJIT GHOSH	Synthesis and Evaluation of Graphene for Polymer Electrolyte Membrane Fuel Cell Components
4.	09610707	VENKATA SWAMY NALAJALA	MOMENTUM AND HEAT/MASS TRANSFER PHENOMENA OF CONTAMINATED BUBBLES IN POWER-LAW LIQUIDS
5.	09610715	D. VASANTH	Preparation, Characterization and Applications of Kaolin Based Low Cost Ceramic Membranes
6.	09610717	DASARI ANJALI	Hydrodynamics of viscous oil-water flow through horizontal and upward inclined pipelines
7.	09610719	PRASHANT MISHRA	The Role of Framework Flexibility and Coordinatively Unsaturated Metal Sites on Gas Adsorption of Selected Metal Organic Frameworks

Sl. No.	Roll No	Name	Thesis Title
8.	09610720	ARDHENDU SEKHAR GIRI	ADVANCED OXIDATION PROCESSES FOR TREATMENT OF MODEL PHARMACEUTICAL WASTEWATER
9.	09610722	ANAND BABU DESAMALA	Hydrodynamics of viscous oil-water flow through undulated pipelines
10.	09610723	YENNAM RAJESH	Adsorption Characteristics of Activated Carbon for the Recovery of Ni (II) and Pd (II) from Synthetic Electroless Plating Solutions
11.	09610726	E. SRI HARSHA	Microfiltration Studies Using Low Cost Ceramic Membranes
12.	09610727	LEELA MANOHAR AESHALA	Studies on Solid Polymer Electrolyte for Direct Electrochemical Reduction of CO <sub>2</sub> to Fuel
13.	10610706	L. SRAVANTHI	AMINE FUNCTIONALIZED MCM-41 FOR CO <sub>2</sub> CAPTURE
14.	10610707	MRIGANKA SEKHAR MANNA	Simultaneous Extraction and Recovery of Catechins using Liquid Membrane
15.	10610709	MURALI PUJARI	Combinatorial plating characteristics of electroless processes for dense Pd-PSS composite membrane fabrication
16.	10610711	CHINA MALAKONDAIAH KANIGANTI	Preparation and Characterization of Low Cost Ceramic and Silver-Ceramic Composite Membranes for Bacteria Filtration Applications
17.	10610714	SANTHI RAJU PILLI	Extraction of Endocrine Disrupting Compounds from Aqueous Solutions using Ionic Liquids: Theoretical Predictions and Experimentations using Supported Liquid Membrane
18.	10610717	AMRITA AGARWAL	Optimality of Electroless Plating Processes for Dense Metal Ceramic Composite Membrane Fabrication
19.	11610704	KRUSHNA PRASAD SHADANGI	Thermal, Catalytic and Co-conversion of Non-edible Oil Seeds to Pyrolytic Oil

**List of students who have fulfilled requirements for award of Ph.D. degree in Physics**

Sl. No.	Roll No	Name	Thesis Title
1.	09612102	TRIBEDI BORA	Magnetic Properties of La-Cr-O and Nd-Cr-O Based Orthochromites
2.	09612103	ABHIJIT DAS	Development of Optical Sectioning Microscope using Binary Diffraction Hologram
3.	09612105	DEEPANWITA DUTTA	Branching fraction measurement for the decay Bs <sub>0</sub> and search for the decay Bs <sub>0</sub> at high energy e <sup>+</sup> e <sup>-</sup> collisions at (5S) energy
4.	09612107	ENAMULLAH	A Theoretical Study of Rabi Oscillations In Graphene
5.	09612108	PADAM RAJENDER	Study of Magnetic Properties and Exchange Bias in Co(Cr <sub>1-x</sub> M <sub>x</sub> ) <sub>2</sub> O <sub>4</sub> (M = Fe, Co & Al)
6.	09612109	BATAKRUSHNA SANTARA	Studies on Intrinsic Defects and Doping Induced Tunable Optical and Magnetic Properties of TiO <sub>2</sub> Nanostructures
7.	09612110	POULAMI GHOSH	STUDIES ON VARIOUS MORPHOLOGIES OF ZINC OXIDE NANOSTRUCTURES GROWN VIA PULSED LASER DEPOSITION
8.	09612111	T SANTHOSH KUMAR	Studies on bulk and thin films of MgTiO <sub>3</sub> ceramics for microwave and electronic applications
9.	09612112	AKHILESH KUMAR SINGH	MAGNETIC PROPERTIES OF SINGLE AND MULTILAYER STRUCTURED AMORPHOUS AND NANOCRYSTALLINE FeTaC MAGNETIC THIN FILMS
10.	09612113	SOUVIK PAUL	First-principles electronic structure based investigations of Mn <sub>2</sub> NiX magnetic alloys with Inverse Heusler structure
11.	09612115	PATHI MUNENDHAR	EXPERIMENTAL STUDIES ON THE DEVELOPMENT OF FIBER BRAGG GRATING BASED SENSORS FOR STRUCTURAL HEALTH MONITORING

Sl. No.	Roll No	Name	Thesis Title
12.	09612118	SHYNI P. C.	MAGNETIC PROPERTIES OF NANOCRYSTALLINE Fe-(Al,Cr)-Co-Si ALLOYS PREPARED BY MECHANICAL ALLOYING PROCESS
13.	09612119	APURBA BARMAN	Studying Disorder and Correlation Effects on the Phase Diagram of Bosons via Mean Field Theory
14.	09612130	ONKAR NATH VERMA	DIFFRACTION MANAGEMENT BY USING COHERENT CONTROL FIELDS IN OPTICAL MEDIA
15.	10612101	GEDDA MURALI	Fabrication of CoPc and PTCDI-Ph based low-operating voltage organic field-effect transistors

**List of students who have fulfilled requirements for award of Ph.D. degree in Chemistry**

Sl. No.	Roll No	Name	Thesis Title
1.	08612223	V. ANILKUMAR	Mechanistic Insights into Unusual Reactions by High - Valent Iron Intermediates
2.	09612201	SRIMANTA GUIN	Beyond Traditional Coupling: Transition Metal Catalyzed C—C and C—O Bond Formations via C—H Activation
3.	09612205	THALLURI KISHORE	Development of Chemoselective and Stereoselective Strategies for Peptide Synthesis and Related Organic Transformations
4.	09612207	BHASKAR NATH	Supramolecular chemistry of Bis-phenols and related metal complexes
5.	09612210	RENJITH B.	DNA Damage Induced by Low-Energy Electrons: A Theoretical Approach
6.	09612211	PARAMARTHA GOGOI	Some Aspects of Chemistry of Oxygenated Heterocycles and Use of Chiral 1,3-Diols in Asymmetric Synthesis
7.	09612214	R. SIDICK BASHA	Stereoselective Synthesis of 2-Deoxy-2-Iodo-O-Glycoside in Biphasic Medium and BDMS Mediated Facile Access to 2,3-Unsaturated-O-Glycoside, Imidazopyridine and $\alpha$ -Aminoamidine
8.	09612215	NARSIMHA MAMIDI	Design and Synthesis of Esters as Protein Kinase C (PKC)-C1 Domain Regulators
9.	09612216	BIGYAN RANJAN JALI	Supramolecular chemistry of some naphthoquinone derivatives
10.	09612217	BURGULA LAXMINARAYANA	Studies on the Synthesis and Properties of Modified Pyrimidine Nucleobases, Bis-Pyrimidine Dimers and Peptide Nucleic Acids
11.	09612220	JIBAN SAIKIA	Interfacial Interaction Study of Proteins and Pollutants onto Inorganic Surfaces
12.	09612223	KIRAN INDUKURI	Stereoselective Synthesis of Some Six Membered Oxygen and Nitrogen Heterocyclic Compounds
13.	09612227	SAROJ KUMAR ROUT	Beyond Retrosynthetic Analysis: Copper Catalyzed Synthesis of Esters via C—H Functionalization
14.	09612230	CHIRANTAN KAR	Design, Synthesis and Application of Fluorogenic Probes for Selective Detection of Ionic Analytes in Physiological Condition
15.	10612246	SANGITA TALUKDAR	Design, Synthesis and Studies on the Photophysical Properties of Unnatural Triazolyl and Tetrazolyl Nucleosides and the Applications of Triazolyl Nucleosides Thereof
16.	11612213	SAMIR GHORAI	Geometrical and Substitutional Influences on the Electronic Structure and the Reactivity of First-Row Transition Metal-Radical Complexes

**List of students who have fulfilled requirements for award of Ph.D. degree in Mathematics**

Sl. No.	Roll No	Name	Thesis Title
1.	08612304	RAJ BHAWAN YADAV	Density Results in $C(S_n, S_n)$ for Lower Dimensions and Riemannian Morphisms
2.	08612306	NAMITA BEHERA	FIEDLER LINEARIZATIONS FOR LTI STATE-SPACE SYSTEMS AND FOR RATIONAL EIGENVALUE PROBLEMS
3.	09612302	JITENDER KUMAR	AFFINE NEAR-SEMRINGS OVER BRANDT SEMIGROUPS
4.	09612305	KAUSHIK MONDAL	Designing Localization Algorithms for Wireless Sensor Networks: A Geometric Approach
5.	09612306	SANTU DAS	LINEAR WATER WAVE DAMPING BY A BOTTOM-MOUNTED POROUS STRUCTURE AND BY VERTICAL DUAL POROUS PLATES
6.	09612313	BIDYUT BIKASH GOGOI	SOME DIVERSE DIRECTIONS IN HIGHER ORDER COMPACT METHODOLOGY
7.	09612314	DINESH KUMAR	DYNAMICS AND CONTROL OF A PREDATOR-PREY SYSTEM WITH THE SUPPLY OF ADDITIONAL FOOD TO PREDATORS
8.	09612317	MOHAMMAD HASSAN	DIFFRACTION AND RADIATION OF WATER WAVES BY TWO COAXIAL VERTICAL CYLINDERS
9.	10612304	SUNANDA SAHA	STUDY OF TRAPPED MODES IN TWO- AND THREE-LAYER FLUIDS

**List of students who have fulfilled requirements for award of Ph.D. degree in Humanities and Social Sciences**

Sl. No.	Roll No	Name	Thesis Title
1.	06614104	JITU TAMULI	Institution for the Use of Groundwater in Assam: A Study of Groundwater Markets with Special Emphasis on Structure, Determinants, Reliability and Efficiency
2.	07614102	MAMTA TRIPATHI	THE DYNAMICS OF KNOWLEDGE MANAGEMENT IN ORGANIZATIONS: ROLE OF LEADERSHIP, TRUST AND ORGANIZATIONAL CULTURE
3.	07614104	DITEE MONI BARUAH	Polity and Petroleum - Making of an Oil Industry in Assam, 1825–1980

**List of students who have fulfilled requirements for award of Ph.D. degree in Energy**

Sl. No.	Roll No	Name	Thesis Title
1.	09615103	SHUCHI SINGH	Bioethanol production from <i>Parthenium hysterophorus</i> involving cellulase from <i>Bacillus amyloliquefaciens</i> SS35: Process development, optimization and intensification
2.	09615108	DEBJYOTI SAHU	Hydrogen Adsorption on Selected Metal Organic Frameworks

**List of students who have fulfilled requirements for award of Ph.D. degree in The Environment**

Sl. No.	Roll No	Name	Thesis Title
1.	08615205	BHARATI BRAHMACHARIMAYUM	STUDIES ON SULFATE REDUCTION TO ELEMENTAL SULFUR UNDER ANAEROBIC/MICROAEROBIC CONDITIONS
2.	09615201	NAYANMONI GOGOI	ECOLOGICAL STUDY OF BRAHMAPUTRA RIVER FLOODPLAIN IN SELECTED AREAS OF MAJULI AND KAMRUP AND POTENTIAL BIORESOURCE UTILIZATION PERSPECTIVES

**List of students who have fulfilled requirements for award of Ph.D. degree in Nanotechnology**

Sl. No.	Roll No	Name	Thesis Title
1.	06615301	AGILE MATHEW	Cylindrical Quantum Dots, Spin Qubits, and Decoherence
2.	09615301	AMARESH KUMAR SAHOO	Nanocomposites for Theranostic Applications

## PROGRESS IN CONSTRUCTION WORKS

Sl. No.	Works	Cost of works (₹ in lakhs)	Physical Progress		Total Progress upto 31.03.2016		Remarks
			Upto 31.03.15	During 2015-2015	Physical	Financial (₹ in lakhs)	
1.	Boys' Hostel 10 (956 capacity with 31050 Sqm floor area)	8228.00	70%	15%	85%	5741.40	<p>Pile Works: Complete.</p> <p>Block A &amp; B: Out of 528 rooms in these two blocks 504 rooms have been handed over for occupation. Remaining 24 rooms shall be ready before this academic session.</p> <p>Dining and Kitchen area: Dining along with kitchen is ready and kept under use. The food court in the first floor shall also be ready before this Academic session.</p> <p>Central Common Facilities: All common facilities including games rooms, security, warden and caretaker's office etc. are ready for occupation.</p> <p>Block C: Out 324 rooms in the block 204 have already been handed over and the remaining 120 rooms shall be ready before the start this Academic session.</p> <p>Block D: All foundation completed. All works are expected to be complete by December, 2016.</p>
2.	Girls' Hostel 2 (500 capacity, 13790 sqm floor area)	4240.17	90%	10%	100%	4025.67	<p>172 double seater rooms along with kitchen and dining hall were handed over in July 2014 while 176 single seater rooms handed over in July 2015.</p> <p>New proposal for construction of an canteen above the dining hall is also complete in March 2016.</p>
3.	Married Scholars hostel and Dormitory Building (96 flatlet 6712sqm floor area)	2532.53	50%	35%	85%	1854.80	<p>Married Scholar Building: R.C.C. for all structural works is completed and the other finishing works are in progress. Block-A with 32 units is handed over for occupation. Block-C shall be ready by June, 2016 and Block-B by August, 2016.</p> <p>Dormitory Building: Handed over and occupied.</p>

Sl. No.	Works	Cost of works (₹ in lakhs)	Physical Progress		Total Progress upto 31.03.2016		Remarks
			Upto 31.03.15	During 2015-2015	Physical	Financial (₹ in lakhs)	
4.	Boys' Hostel 11 (1152 capacity with 34785.sqm floor area)	9665.03	5%	20%	25%	2459.00	50% of the foundation work has been completed. RCC framing work for 1st floor slab started in one block. 580 rooms shall be made available for occupation by March'17. The entire hostel will be completed by September'17
<b>5.</b>	<b>Extension of Academic Complex</b>						
a)	(Phase-IV & Classroom) Department of Chemistry, EEE & ME Class room (9875 sqm floor area)	6094.68	65%	10%	75%	3918.97	Phase-IV The expansion work of Chemistry, EEE and Mechanical Department. Has been completed except some additional internal partitioning work in some laboratories of ME deptt. Class Room Complex: (i) 18 nos 120 capacity hall: Internal finishing work are in progress including HVAC and electrical works. (ii) 6 nos. 200 capacity halls: Structural works of top two galleries are in progress. It is expected that the work will be completed within December 2016.
b)	Research Building Complex	5675.46	35%	10%	45%	2501.80	The structural framing work in progress at G+8 floor and AAC block masonry work at various floor level upto G+7 is in progress. It is expected that the work will be completed within December, 2016
c)	(Phase – V) DoD, CSE, Physics, Chemical Engg, CIF, HSS, Mathematics, CET (19045sqm floor area)	6944.71	--	25%	25%	1186.46	Work was allotted in March 2015. DoD, CSE, Physics, Chemical, HSS and Math: About 85% of structural work is complete. It is expected to complete all structural works in July, 2016. Work running on schedule. Nano-Centre: All piling works are done and pile caps are in the process of completion.
6.	Guest House 2 (15090 sqm floor area)	4059.00	45%	20%	65%	2126.50	The 90% of structural work and masonry is completed till date. Out of 162 rooms, 32 nos room has been completed in last Dec15. It is expected to complete the project by the end of this year.
7.	Dormitory Buildings (2nos., 325sqm floor area each)	808.03	--	40%	40%	324.83	RCC framing work at G+2 level is in progress in one building and G+1 level in the other block.
8.	Construction of boundary wall phase-IV.	1476.90	60%	35%	95%	1512.52	95% work is complete. Only one stretch of around 500mtrs. Is left out as the electrical overhead line had to be shifted. Now, the line has been shifted by APDCL and the work will be started in this stretch shortly. The work will be completed within July 2016.



## Appendix-V

## SUMMARY OF INSTITUTE ACCOUNTS

## Balance Sheet as on 31 March 2016

SOURCES OF FUNDS	Current Year (Amount in Rs.)	Previous Year (Amount in Rs.)
CORPUS/CAPITAL FUND	10,999,048,890	10,554,680,937
DESIGNATED/ EARMARKED / ENDOWMENT FUNDS	568,251,124	543,604,566
CURRENT LIABILITIES & PROVISIONS	3,132,033,859	2,514,334,327
<b>TOTAL</b>	<b>14,699,333,873</b>	<b>13,612,619,830</b>

APPLICATION OF FUNDS	Current Year (Amount in Rs.)	Previous Year (Amount in Rs.)
FIXED ASSETS		
Tangible Assets	8,460,066,944	7,982,444,229
Intangible Assets	40,910,279	-
<b>Capital Works-In-Progress</b>	<b>2,689,169,577</b>	<b>2,273,949,429</b>
<b>INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS</b>		
<b>Long Term</b>	659,798,160	583,691,041
<b>Short Term</b>	-	-
<b>INVESTMENTS - OTHERS</b>	106,982,050	479,043,436
<b>CURRENT ASSETS</b>	1,405,850,266	1,429,164,499
<b>LOANS, ADVANCES &amp; DEPOSITS</b>	1,336,556,596	864,327,195
<b>TOTAL</b>	<b>14,699,333,873</b>	<b>13,612,619,830</b>

## Income and Expenditure Account for the year ended on 31 March 2016

Particulars	Current Year (Amount in Rs.)	Previous Year (Amount in Rs.)
<b>INCOME</b>		
Academic Receipts	224,853,407	209,804,465
Grants / Subsidies	2,088,289,992	1,533,300,000
Income from investments	-	23,052,124
Interest earned	1,000,832	968,956
<b>Other Income</b>	33,342,231	32,915,620
Prior Period Income	137,924	1,143,741
<b>TOTAL (A)</b>	<b>2,347,624,386</b>	<b>1,801,184,907</b>
<b>EXPENDITURE</b>		
Staff Payments & Benefits (Establishment expenses)	1,162,602,793	1,015,336,301
Academic Expenses	642,348,502	472,823,480
<b>Administrative and General Expenses</b>	<b>209,698,568</b>	<b>168,496,694</b>
Transportation Expenses	21,230,065	20,364,334
Repairs & Maintenance	228,832,543	158,143,161
<b>Finance costs</b>	55,453	25,410
Depreciation	409,266,676	303,307,681
<b>Other Expenses</b>	-	-
<b>Prior Period Expenses</b>	<b>461,758,031</b>	<b>10,896,233</b>
<b>TOTAL (B)</b>	<b>3,135,792,630</b>	<b>2,149,393,294</b>
<b>Balance being excess of Income over Expenditure (A-B)</b>	<b>(788,168,245)</b>	<b>(348,208,387)</b>
<b>Transfer to / from Designated Fund</b>		
<b>Building fund</b>		
<b>Others (specify)</b>		
<b>Balance Being Surplus / (Deficit) Carried to Capital Fund</b>	<b>(788,168,245)</b>	<b>(348,208,387)</b>

**Receipt and Payment Account for the Period Ended on 31 March 2016**

<b>RECEIPTS</b>	<b>Current Year (Amount in ₹)</b>	<b>Previous Year (Amount in ₹)</b>	<b>PAYMENTS</b>	<b>Current Year (Amount in ₹)</b>	<b>Previous Year (Amount in ₹)</b>
<b>I. Opening Balance</b>			<b>I. Expenses</b>		
a) Cash Balances	161,000	135,500	a) Establishment Expenses	708,111,881	982,038,345
b) Bank Balance			b) Academic Expenses	608,212,015	472,823,480
i. In Current accounts	265,595,158	525,324,433	c) Administrative Expenses	205,095,037	267,661,132
ii. In Deposit accounts	-		d) Transportation Expenses	17,358,016	21,295,527
iii. Savings accounts	1,046,984,456	685,672,149	e) Repairs & Maintenance	182,817,987	82,356,172
<b>II. Grants Received</b>			f) Prior period expenses	71,844	10,896,233
a) From Government of India	2,275,000,000	2,968,300,000	g) Finance Cost	70,993	9,014,724
b) From State Government	-	-	<b>II. Payments against Earmarked/ Endowment Funds</b>	131,315,205	81,844,281
c) From others		28,336,641	<b>III. Payments against Sponsored Projects/Schemes</b>	472,296,176	464,736,966
			<b>IV. Payments against Sponsored Fellowships/Scholarships</b>	24,519,459	17,979,987
			<b>V. Investments and Deposits made</b>		
<b>III. Academic Receipts</b>	355,366,409	208,962,662	a) Out of Earmarked/ Endowments funds	289,300,000	111,613,370
<b>IV. Receipts against Earmarked/ Endowment Funds</b>	140,032,515	141,494,847	b) Out of own funds (Investments- Others)	1,670,253,000	1,046,343,436
<b>V. Receipts against Sponsored Projects/Schemes</b>	800,774,298	858,746,806	<b>VI. Term Deposits with Scheduled Banks</b>	-	-
<b>VI. Receipts against sponsored Fellowships and Scholarships</b>	24,398,300	25,209,079	<b>VII. Expenditure on Fixed Assets and Capital Works - in- Progress</b>		
<b>VII. Income on Investments from</b>	44,750,126		a) Fixed Assets	304,144,820	400,859,185
a) Earmarked/Endowment funds		52,176,879	b) Capital Works-in- Progress	672,041,903	889,898,727
b) Other investments		23,052,124	<b>VIII. Other Payments including statutory payments</b>	665,780,157	739,519,911

RECEIPTS	Current Year Amount in ₹	Previous Year Amount in ₹	PAYMENTS	Current Year Amount in ₹	Previous Year Amount in ₹
<b>VIII. Interest received on</b>					
a) Bank Deposits			<b>IX. Refunds of Grants</b>		
b) Loans and Advances		968,956	<b>X. Deposits and Advances</b>	932,850,196	1,126,247,597
c) Savings Bank Accounts		-	<b>XI. Other Payments</b>	122,442,104	-
<b>IX. Investments encashed</b>		969,167,520	<b>XII. Closing balances</b>		
<b>X. Term Deposits with Scheduled Banks encashed</b>	2,281,445,789	-	a) Cash in hand	232,000	161,000
<b>XI. Other income (including Prior Period Income)</b>	16,983,428	34,901,165	b) Bank balances		
<b>XII. Deposits and Advances</b>	930,896,554	566,625,884	In Current Accounts	221,803,694	265,595,158
<b>XIII. Miscellaneous Receipts including Statutory Receipts</b>	69,635,642	-	In Savings Accounts	1,028,566,846	1,074,933,990
<b>XIV. Any Other Receipts - Fixed Asstes/ Direct-Indirect expenses</b>	5,259,657	976,744,578	In Deposit Accounts	-	-
<b>TOTAL</b>	<b>8,257,283,332</b>	<b>8,065,819,222</b>	<b>TOTAL</b>	<b>8,257,283,332</b>	<b>8,065,819,222</b>