# ANNUAL REPORT

2017-2018


**INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR**

Argul, Khordha, PIN-752050, Odisha
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# ANNUAL REPORT
## 2017-18

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# FROM DIRECTOR'S DESK

The last year marked the 10th year of IIT Bhubaneswar after its inception, and since then there have been significant historic developments such as shifting of central administration to the permanent campus which completes the migration.

One of the ambitions I have been personally embarked upon as the Director is to help the Institute move towards finding its place amongst the top global class institutions. Some of the important measures taken up in elevating the standards, in this endeavor, have started yielding results including rapid growth and these have also been reflecting in a significant rise in institute's ranking performance. The all India engineering institutional rank by NIRF is at 18 in 2017-18 and all India Overall rank by NIRF went up to 51 in 2017-18 from 66th in 2016-17. As per the India Today ranking, it went up to 10 from 22; and as per The Week Hansa Research Engineering, it went up to 27 from 32. This year, the Institute made a respectable debut into the international ranking frameworks, QS BRICS & India University Rankings 2019 and Times Higher Education Rankings. As per QS BRICS & India University Rankings 2019, IIT Bhubaneswar is ranked 21 in QS Indian University Ranking and 107 in QS BRICS University Rankings. As per The Times Higher Education Rankings, IIT Bhubaneswar proudly stands at 601–800 amongst 1258 institutions worldwide. Within India, IIT Bhubaneswar secured top 10th position, along with few other institutions, out of 49 institutions. The Institute has also been ranked at 16th position by Career 360 Engineering and 20th by Times – i3RC Engineering.

**Academics:**

With the objective of fulfilling the aspirations of the society, during the last three years, IIT Bhubaneswar raised its student intake and the current strength sands at 1765 students, 129 full-time faculty members, 15 officers and other supporting staff. This year we started a new M. Tech. Programme in Computer Science and Engineering with two sub-specializations Cyber Security & Forensics and Data Analytics which is perhaps the first of its kind in the country. Intake of the B. Tech. students is increased to 370 including supernumerary seats for female students and now IIT Bhubaneswar has the highest B.Tech. intake amongst the 2nd and 3rd generation IITs. The number of programmes at the institute includes B. Tech. programmes in 6 branches of Engineering, 5-year Dual degree programmes in 9 disciplines, M. Tech. programme in 11 specializations, and M. Sc. programme in 5 disciplines.

## Research & Development Activities:

There has been considerable progress in Research and Development front during last one year. A total of 68 sponsored research and consultancy projects worth about Rs. 16 Crore have been sanctioned to the Institute during the year (2017-18) from different funding agencies. Moreover, 100 project proposals worth about Rs. 72 Crore have been submitted during the last year to different funding agencies such as MHRD, DST, CSIR, UGC, ISRO, DRDO and DAE. Various major areas covered by these projects include Advanced Materials, Energy, Nanotechnology, Health Care, Defense, ICT, Next Generation Networks, Environmental Sciences & Climate Change, Water Resources & River Science, Manufacturing and Sustainable Urban Design.

## Research Publications & Patents:

During the last year (2017), the institute contributed to creating new knowledge by publishing more than 447 research articles including, 319 research papers in National and International Journals of repute and high impact factor, and 5 Book-chapters. Further, 129 papers were presented in various national and international conferences in India and abroad and 8 patents have been filed.

## International Faculty at IITBBS – A New Initiative:

The Institute took up a new initiative to appoint faculty from other countries for a period of one semester to two years and we could have 5 faculty colleagues in the last two years.

## Awards Won:

In an endeavour to create an environment of teaching-learning of high order, the institute honoured its best teachers based on student feedback. This apart, several academic distinctions, honours, distinguished fellowships, associateships, named lectureships, coveted medals and awards have been bestowed on our faculty, staff and students in recognition of their academic achievements, during the last year.

## Collaborative Research:

The Institute is very actively engaged in collaborative research with many reputed universities and research organizations across the world. The Institute initiated research collaborations with National Aluminum Company (NALCO), Indo-US Science and Technology Forum and State Pollution Control Board (SPCB). About 36 faculty members and 6 students visited foreign countries this year on various academic and research assignments and paper presentations. The institute also had innumerable number of distinguished visitors for academic, research and other collaborative programmes.

## Infrastructure Development:

During 2015-17, the institute was engaged in solving problems emerged due to earlier rescinding of works by the contractor and getting the much delayed Phase-1 constructions completed. Towards the end of financial year 2016-17, MHRD, Govt. of India sanctioned Rs 850 Crore to the institute for Phase-2 constructions to fully develop the institute in all respects for a student strength of 3500.

The institute went on a serious planning exercise, significantly improved the master plan and came out with outstanding planning and the architectural designs for phase-2 buildings.

The new constructions include, a lecture hall complex, a 1500 seated auditorium, three school buildings, an outstanding student activity center, 200 faculty quarters, 88 staff quarters, dispensary, hostels for accommodating 2000 more students, Central Workshop, Central Research and Instrumentation facility, extension of the existing school buildings, play fields, roads, cycle paths, landscaping, besides many others.

In addition, IIT Bhubaneswar installed 490 kw capacity Rooftop Solar PV system on 9 different buildings of the campus and it has been operational since May 2018.

## Green Campus Initiatives:

IIT Bhubaneswar adopted several green campus initiatives to make the campus which was not habitable three years back into an eco-friendly and outstanding green campus with 100% cycle culture for students, Energy-Harvesting, Water-Harvesting, GRIHA compliant Green Buildings and Eco-friendly Waste Disposal.

## Distinguished Visitors:

An innumerable number of distinguished personalities visited the Institute on different occasions and addressed the faculty, students and staff. As many as 50 distinguished personalities visited the campus.

## Student Activities:

The Students' Gymkhana at IIT Bhubaneswar is a central hub for all round development of students. The major councils under Students' Gymkhana are Social & Cultural, Science & Technology and Sports & Games, which are active throughout the year. The annual techno-management fest Wissenaire, socio-cultural fest Alma Fiesta, and Entrepreneurship meet E-Summit, Aswamedha the sports fest have set a distinguished mark in the eastern zone.

Societies of Technical and Socio-cultural Councils participated and won in competitions in and around Bhubaneswar and brought glory to the institute. There has been tremendous improvement in the results of Inter IIT Sports Meet, Inter IIT Cultural Meet and Inter IIT Tech Meet. Many students were awarded with best presentation and best paper awards in the conferences and the list is given in the Convocation brochure.

## Alumni Activities:

The Alumni Affairs and International Office at the institute serves as outward-facing window to the alumni and within a short span of the Institute's existence, it has successfully conducted its first Alumni Meet during 14th April to 16th April, 2017 at its new permanent campus. Our alumni have been performing well in their initiatives living up to the IITian brand.

## Entrepreneurship & Startup Activity:

E-Cell Activity: IIT Bhubaneswar took very ambitious steps in the last two years and drafted a vision paper for encouraging entrepreneurship at the institute, put up an Entrepreneurship Cell (E-Cell), Technology Incubator and an IIT Bhubaneswar Research and Entrepreneurship Park in place. As many as 10 startups are operating in this centre now.

## Continuing Education Programme (CEP):

As many as fourteen conferences and workshops have been organized by the institute to foster scholarly exchange of ideas and research collaboration during the last year including “Soft Computing for Problem Solving” in Dec 2017, and “Electricity Market Based Control of Microgrids” in Collaboration with Lappenranta University of Technology (LUT), Finland, in December 2017.

IIT Bhubaneswar has been inducted as a new Quality Improvement Programme (QIP) Centre with 26 Ph.D. seats for providing opportunities to faculty members of the degree-level engineering institutions to improve their qualification by offering admissions to Ph.D. research Programme.

Under the aegis of the Flagship programs of the Ministry of Human Resource Development Government of India “GIAN (Global Initiative of Academic Networks)” short term courses inviting Guest Faculty from abroad and 29 short term courses have already been conducted.

## Placements:

IIT Bhubaneswar has been performing outstandingly well on placement front and the highlights of placement season 2017-18 are as follows:

- A total of 207 students have been placed from all the disciplines. 20% rise in no of students placed this year as compared to last year.
- Undergraduate placement is about 87%.
- Highest domestic CTC offered was 39 Lakhs per annum.
- Almost 100% placements achieved for the 3 M. Sc. programs (Mathematics, Physics and Chemistry).
- Highest number of job offers have been received from core industries.
- 53 companies had participated in this year's placement season.
- Average salary is 11.15 Lakh per Annum for UG.

## Women's Grievance Redressal Committee (WGRC):

WGRC, IIT Bhubaneswar, organized a three day programme as a part of International women's day celebration-2018. The programme included: (i) theme based competitions along with health awareness workshop, and (ii) a session on Women's Issues and Rights at Workplace. Dr. Gitanjali Batmanabe, Director of AIIMS Bhubaneswar and Dr. Nandini Harinath, the Deputy Operations Director for the Mars Orbiter Mission (MOM) addressed the women's day evening. The workshop was well attended by Students, and members of Faculty and Staff from the institute.

## Outreach Programmes:

IIT Bhubaneswar considers itself as privileged to reach out to the society besides engineering education and research of societal relevance for educating and inspiring the young and under-privileged of the country, through its outreach programmes. Some of the major ones include, Vigyan Jyoti Programme, Open House Day and Interactive Session with IIT Rankers and Aspirants, Open House and S&T Exhibition on 10th Foundation Day. These apart, the institute organized many programmes in the six adopted villages under the Unnat Bharat Abhiyan.

## Other Activities:

The Institute observed and celebrated several events like the International Yoga Day, 10th Institute day, 72nd Independence Day, Engineer's Day, Vigilance Awareness Week 2017, Rashtriya Ekta Saptah, Unity Run, Alma Fiesta, E-Summit '18, Ashvamedha 18, 69th Republic Day, Matribhasa Diwas, International Women's Day, National Science Day, 10th Foundation Day, Unnat Bharat Abhiyan (UBA), Ek Bharat Shreshtha Bharat, Vigyan Jyoti Programme, National Technology Day 2018, Yeh India Ka Time Hai (celebration of 70 years of Independence and 75th year of Quit India Movement), heritage trips organized for the First Year B.Tech. Students, Teacher's day, besides the regular national events. A large number of students, faculty and staff members participated in the events.

## Acknowledgements:

This Institute and its entire activities could not have been carried out well without the full participation and support of all stakeholders – our members of the Faculty, students and staff; agencies and industries sponsoring R&D and consultancy projects; professionals from other organizations and our alumni. The Institute is grateful to the Ministry of Human resource Development, Govt. of India for its continued and sustained encouragement and support. There is still a lot of work to be done and I would like to assure that we shall only march forward, year to year.

**Prof. R. V. Raja Kumar**
November 14, 2018

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REGISTRAR
IIT Bhubaneswar
[Till 30.06.2017]

**Shri Debaraj Rath**
Registrar In-Charge
IIT Bhubaneswar
[From 01.07.2017]

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Professor, School of Infrastructure
Indian Institute of Technology Bhubaneswar

**SECRETARY**

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[Till 30.06.2017]
Registrar
Indian Institute of Technology Bhubaneswar

**Shri Debaraj Rath**
[From 01.07.2017]
Registrar In-Charge
Indian Institute of Technology Bhubaneswar

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Director, Indian Institute of Technology Bhubaneswar

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CESU, Odisha
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Head, School of Infrastructure
Indian Institute of Technology Bhubaneswar

**Dr. Prasant Kumar Sahu**
Head, School of Electrical Sciences
Indian Institute of Technology Bhubaneswar

**SECRETARY**

**Dr. D Gunasekaran**
[Till 30.06.2017]
Registrar
Indian Institute of Technology Bhubaneswar

**Shri Debaraj Rath**
[From 01.07.2017]
Registrar In-Charge
Indian Institute of Technology Bhubaneswar

# SENATE

| | | |
|---|---|---|
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| **Prof. Nirod Chandra Sahoo** | Member | Dean (Academic Affairs ) |
| **Prof. V. R. Pedireddi** | Member | Dean, (Students' Affairs) |
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| **Prof. R.K. Panda** | Member | Dean(R&D)/Head, School of Infrastructure |
| **Prof. Saroj K. Nayak** | Member | Head, School of Basic Sciences (Upto 29.10.2017) |
| **Dr. T.V.S. Sekhar** | Member | Head, School of Basic Sciences (w.e.f. 30.10.2017) |
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| **Prof. Brahma Deo** | Member | Visiting Professor, Academic Coordinator, MM&ME |
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| | | |
|---|---|---|
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| **Prof. V. Chandrasekhar** | External Member | Director, NISER Bhubaneswar (two years w. e. f. 24th March, 2017) |
| **Prof. Gopal Krishna Nayak** | External Member | Director, IIIT Bhubaneswar (two years w. e. f. 24th March, 2017) |
| **Mrs. Kumkum Mohanty** | External Member | Geeta Govinda Charitable Trust, Bhubaneswar (two years w. e. f. 24th March, 2017) |
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| **Dr. Manoranjan Satpathy** | Member | Associate Professor, School of Electrical Sciences (two years w. e. f. 24th March, 2017) |
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| **Dr. Niharika Mohapatra** | Member | Assistant Professor, School of Basic Sciences (two years w. e. f. 24th March, 2017) |
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| **Dr. Rajan Jha** | Member (Ex-Officio) | Chairman, JAM W.e.f. 27.04.2017 (Tenure as Chairman GATE for 2 years w.e.f. 01.08.2016) |
| **Dr. Bibhuti Bhusan Sahoo** | Member | Deputy Librarian w.e.f. December 2017 |
| **Mr. Ajay Babu Kambhampati** | Student Invitee | Ph.D. Research Scholar (School of Electrical Sciences) (Upto 28.02.2018) |
| **Mr. Samiran Mandal** | Student Invitee | Ph.D. Research Scholar, School of Earth, Ocean and Climate Sciences (w.e.f. 09.03.2018) |
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| **Shri Debraj Rath** | Secretary | Registrar I/c, IIT Bhubaneswar (w.e.f. 01.07.2017) |

# ADMINISTRATION

## DIRECTOR

**Prof. R V Raja Kumar**

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**Dr. Sourav Sil**
Assistant Warden
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## STAFF

### Director's Office

**Shri K. Saikiran** [Private Secretary]

**Shri Surendranath Patra** [Secretary – On contract]

**Shri Ramesh Chandra Biswal** [Driver – On contract]

### Registrar's Office

**Shri Pradeep Kumar Pattanaik** [Private Secretary]

### Dean Faculty & Planning Office

**Shri Satyabrota Ghosh** [Junior Superintendent]

### Dean Continuing Education Office

Shri Marshal Tudu [Junior Assistant]

### Establishment

**Smt. Jignyasha Behera** [Jr. Superintendent]

**Smt. Smruti Smaranika Kumar** [Junior Assistant]

**Shri Arup Kumar Pandab** [Junior Assistant]

### Finance and Account Section

**Shri Ajit kumar Sahoo** [Jr. Superintendent]

**Shri Sambit Ranjan Mohanty** [Jr. Superintendent]

**Smt. Suhana Parween** [Jr. Accounts Officer]

**Shri Raghunath Behera** [Jr. Accounts Officer]

**Shri Guru Parsad Sahoo** [Jr. Accounts Officer – On contract]

### R&D Section

**Shri Giresh Kumar Pitta** [Jr. Superintendent]

**Shri Anirudha Bai** [Jr. Superintendent]

### Store & Purchase Section

**Smt. Nibedita Patnaik** [Jr. Superintendent]

**Shri Rajsekhar Bendi** [Jr. Superintendent]

### Academic Section

**Shri Satyajit Sarangi**, Jr. Superintendent

**Shri Abhimanyu Mahal** [Jr. Superintendent]

**Shri Susanta Kumar Prusty** [Junior Assistant]

**Shri Gouri Shankar Mishra** [Junior Assistant – On contract]

### Central Library

**Smt. Sangita Sahu** [Sr. Library Information Asst.]

### CITSC

**Shri Durgaprasad Acharya** [Associate Network Administrator – On contract]

**Shri Rabinson Behera** [Associate Network Administrator - On contract]

### Gymkhana

**Smt. Sunita Verma** [Physical Training Instructor]

**Shri Biswajit Pegu** [Physical Training Instructor]

**Shri Ravinder Kumar Sagar** [Physical Training Instructor]

### Health & Sanitary Unit

**Shri Pradip Kumar Poddar** [Sanitary Inspector – On contract]

### Medical Unit

**Smt. Prabhavathy M** [Staff Nurse]

**Smt. Soniya John** [Staff Nurse – On contract]

**Smt. Swarnalata Swain** [Staff Nurse – On contract]

**Shri Srinibash Panigrahy** [Pharmacist]

### Security Unit

Shri Tapan Kumar Mohapatra [Assistant Security Officer]

### Engineering Cell

**Shri Dipti Ranjan Pattanaik** [Junior Engineer (Civil)]

**Shri Abhisek Das** [Junior Engineer (Electrical)]

**Shri Gajendra Behera** [Junior Engineer (Electrical)]

**Shri Rupesh Kumar Pradhan** [Junior Engineer (Civil))

### School of Basic Sciences

**Shri Nihar Ranjan Panda** [Jr. Technical Superintendent]

**Shri Tarapada De** [Jr. Technician]

**Shri Samir Kumar Jena** [Junior Laboratory Assistant]

**Shri Naresh Koppula** [Junior Laboratory Assistant]

**Shri Sukesh Kumar Mishra** [Junior Laboratory Assistant]

### School of Electrical Sciences

**Smt. Madhusmita Divyadarsini Mohapatra** [Junior Technical Superintendent]

**Shri Santosh Kumar Sahoo** [Junior Technical Superintendent]

**Shri Bikram Ranjan Behera** [Junior Technician]

**Shri Dillip Kumar Biswal** [Junior Technician]

**Shri Birata Keshari Nanda** [Junior Technician]

**Shri Raimohan Behera** [Junior Technician]

**Shri Brajamohan Mohapatra** [Junior Technician]

**Shri Mrinal Datta** [Junior Technician – On contract]

**Shri Sk Tajuddin Ahmed** [Junior Technician – On contract]

**Shri Krushana Chandra Nayak** [Junior Technician – On contract]

### School of Infrastructure

**Smt. Supriyarani Mohanty** [Junior Technical Superintendent]

**Shri Samir Kumar Sethi** [Junior Technical Superintendent]

**Ms. Souravi Behera** [Junior Assistant]

**Shri Jitendriya Raul** [Junior Technician]

**Smt. Akasmika Sarangi** [Junior Technician]

**Shri Soubhagya Kumar Behera** [Junior Technician– On contract]

### School of Mechanical Sciences

**Shri Aloka Kumar Nayak** [Jr. Technical Superintendent]

**Shri Malaya Kumar Routray** [Jr. Technical Superintendent]

**Shri Sidhartha Biswal** [Jr. Assistant]

**Shri Dillip Kumar Sahoo** [Jr. Technician]

**Shri Sunil Kumar Pradhan** [Jr. Technician]

**Shri Bibhudata Mohanty** [Jr. Technician– On contract]

**Shri Purnendu Kumar Bisoi** [Jr. Technician– On contract]

### School of Mineral Metallurgical Materials engineering

**Shri Ramakrishna Pantangi** [Junior Technical Superintendent– On contract]

**Shri Ravinder Kumar** [Jr. Technician– On contract]

**Shri Sonu Kumar Goyal** [Jr. Laboratory Assistant– On contract]

# ABOUT IIT BHUBANESWAR

Indian Institute of Technology is established by the government of India in 2008 under The Institutes of Technology Act 1961 with Amendments upto 2012. The Act was passed in the Lok Sabha on 24 March 2011 and by the Rajya Sabha on 30 April 2012. IIT Bhubaneswar became an Institute of National Importance from 29 June 2012 with notification of Amendment in the Institutes' of Technology Act, 1961 by the Ministry of Human Resource Development, (Department of Higher Education) Government of India published in the Gazette of India dated 2 July 2012.

**The Institute started functioning from the campus of IIT Kharagpur on 22nd July 2008 and shifted its operation to the city of Bhubaneswar on 22nd July 2009. The Institute has adopted the concept of Schools rather than Departments for promoting inter-disciplinary research. At present there are 7 schools offering academic programme.**

Presently the academic programmes of Institute include B. Tech. (Hons.) in Computer Science, Civil, Electrical, ECE, Mechanical Engineering, Metallurgical and Materials Engineering. The institute is also starting Dual degree courses in Mechanical and civil with intake of 10 from academic year 2016-17. The institute offers 2 years M.Sc. and M. Tech courses. The Institute started the Doctoral programme from the academic session 2009-2010 and offer admission to the joint M. Tech-Ph.D. Programme from July 2012.

The Institute has broadly adopted the course curricula, syllabi and other academic regulations of IIT Kharagpur, the mentor institute. The pedagogy emphasizes participatory, student centric and participatory learning. The academic programmes are equipped with very relevant courses for a budding entrepreneur, the entire institute may be used as a technology incubator and the institute has a 40,000 sft.Start-up space for students to avail.

The institute is committed to provide holistic education aimed at producing tomorrow's leaders, nurturing personality, creativity, innovative mind-set and capability be it in Science or Technology or Management or in other domains of human excellence. It provides ample opportunity for a young mind to take any path and excel apart from providing opportunity to research in a chose area. Institute is also committed to create a wellness environment, including in green, clean and healthy environment, quality education, efficient and effective governance, effective health services, security, equality and enlightenment.

The Institute has started all academic operations from permanent campus at Arugul from academic session 2015-16. The Institute provides well qualified faculty, state-of-the art infrastructure facilities creating a conducive environment for rapid growth of the students' skill sets in all aspects of the personality – academic, research, cultural, sports, ethical and social responsibility. Our Institute's numerous collaborations with foreign universities, industries and institutions across the world provides a scope to the students to be exposed to the global trends in education, research and industry. Ample opportunities in both national and international stints for internships, research projects and exchange programs has been a prominent trend among our students. In the past 10 years the Institute Co-offered degrees to 600 students (B.Tech, M.Tech, Phd, Msc etc.)

During last 10 years the Institute's faculty members and students have contributed to creating knowledge by publishing more than 1850 original research papers in reputed national and international Journals and Conferences. Students also won several awards in conferences and competitions.

It has been ranked well amongst the top engineering institutions in the country. IIT Bhubaneswar was ranked 18th in engineering category by the National Institutional Ranking Framework in 2018. IIT Bhubaneswar is also ranked 22nd by India Today in 2017, 16th by i3RC Times Engineering Institute Rankings 2017, and 11th position by Edu-Rand among engineering colleges in 2017.

# VISION & MISSION

Indian Institute of Technology Bhubaneswar inherits the brand name IIT. This fact itself charges the Institute not only to be worthy of its inheritance but also to be distinctive and distinguished on its own by scripting a path towards novelties. Presented below are the statements for Vision, Mission, Goals & Strategies (to achieve the Goals) and the Core Values of IIT Bhubaneswar.

## VISION

"We will be a highly respected Institute in the world for our distinctive knowledge"

## MISSION

- To shape ourselves into a learning community where we work, listen and respect each other.
- To encourage and facilitate faculty, researchers and students to work synergistically across discipline boundaries.
- To infuse a sense of excitement in students in innovation & invention, design & creation and entrepreneurship.
- To develop and pursue curricula those are dynamic, flexible and holistically designed to facilitate creativity and cognitive thinking.
- To strive for productive partnership between the industry and the Institute.

# GOALS AND STRATEGIES

### Promoting globally competitive academic programs and ambience that support intellectual growth and skill acquisition.

- Promote skills to critically analyze and the competency to effectively synthesize and apply new knowledge in curriculum development and delivery.
- Address the changing needs of the region, state, nation and world in the learning process.
- Create a diverse, fully-engaged, learner-centric campus environment.
- Strengthen the national and international competitiveness of the students by facilitating international internships, industrial project opportunities, student exchange and study abroad participation.
- Put equal emphasis on discovery science and solution science.
- Bring research into class rooms.

## Expanding world-class interdisciplinary research and scholarly endeavours.

- Promote distinctive research programs that address the real life as well as futuristic issues.
- Strengthen integrated and synergistic interdisciplinary research within and across the various Schools.
- Broaden and strengthen the Institute's research base and support infrastructure by engaging with partners from all sectors of the economy.
- Create a talent pool of world-class faculty members, postdoctoral fellows, doctoral and post-graduate students.
- Create an excellent support staff structure and regularly upgrade their competencies.
- Evolve itself into a repository of intellectual properties and prototypes on a globally competitive basis.

## Strengthening and providing support in sustaining a healthy society by improving the quality of life through application of technology.

- Establish an institutional structure to facilitate and promote community engagement and societal enterprise.
- Include community engagements into the Institute's promotional guidelines.
- Encourage and reward faculty and students' efforts in community development. Acknowledge efforts and gains in official statements and transcripts.

## Establishing a strong and sustainable economic base for the Institute.

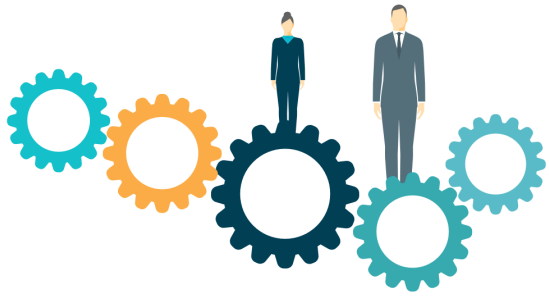
- Encourage and facilitate sponsored projects, consultancy and technology transfer for creating a sound corpus.
- Utilize brand value for attracting endowment for sponsored chairs and scholarships.
- Support entrepreneurial endeavours especially in commercializing emerging technologies evolved out of the Institute labs through public private partnership.

## Building up a healthy and robust IIT Bhubaneswar family.

- Promote and sustain a positive working environment and maintain a significantly improved service quality.
- Improve staff support through expanding professional development opportunities.
- Perform Institute's corporate social responsibilities with utmost sincerity.
- Nourish and sustain vibrant co- and extra-curricular activities.
- Create an ambience for bonding through equity, trust and mutual respect.

# CORE VALUES

- Respecting students as budding engineers and scientists embarking on a journey towards innovation and invention.
- Nurturing freedom of thought and expression and encouraging sense of inquiry.
- Empowering each person to rise to his/her full potential.
- Respecting the opinions and rights of others.



# ABOUT CAMPUS

The permanent campus of IIT Bhubaneswar spreads over 936 Acres of land. It is situated at the foot of Barunei Hill, which is famous for its rich history. The campus provides a unique serene and pollution free academic environment. The campus includes Academic area, Residential area and area for Training centres and Research Park. The students are also staying in NISER hostel.

## Mahanadi Hall of Residence

Boys Hostel with capacity of 800 students

Mess Facilities; Modern and well equipped kitchens; Gym and Physical Fitness; Basketball and Volleyball Courts; Badminton and Table Tennis Court; Media Entertainment Room; Solar Lighting Systems; 24 Hours high alert security system; Gigabit Ethernet to individual hostel rooms; ATM facilities

## Subarnarekha Hall of Residence

Girls Hostel with capacity of 200 students

Independent mess facilities; Modern and well equipped kitchens; Basketball and Volleyball Courts; Solar lighting systems; 24 hours high alert security system; Gigabit Ethernet to individual hostel rooms


## Health center

- Dispensary-Male
- Dispensary-Female
- Round the clock availability of experienced doctors
- Well equipped ambulances
- Paramedical staff nurses
- Life-saving drugs

## Sports Facility

- Cricket field
- Volleyball courts
- Basketball courts
- Table tennis rooms

## Residential facility for Faculty and Staff

- Faculty quarters block having 80 quarters
- 40 room guest house
- Staff quarter block having 40 quarters
- Mini-Market
- 200 seated community centre

## Guest House

The guest house is comprised of a total of 42 single and double bedded air conditioned rooms with attached bathrooms and all modern amenities. Online booking and e-payment facilities are available.

## Phase-II Constructions

MHRD has sanctioned Rs. 1260 Crores for Phase –I & II constructions of IITBBS. Out of Rs. 1260 crores, IIT Bhubaneswar had approved the Preliminary Estimated cost of 410 Crores for Phase-I and CPWD was given A/A and E/S and planned for the expenditure of Rs. 850 Crores for Phase – II constructions by appointing NBCC (India) Ltd. as the Project Management Consultant for phase – II constructions of IIT Bhubaneswar. Rs. 850 Crores is to be spent for infrastructure development of the Institute by March 2019.

## The following buildings/facilities are under construction by NBCC as PMC

| Sl. No. | Name of the Work | Area (Sq.m.) | Date of Start | Date of Completion |
|---|---|---|---|---|
| A) Works in Progress | | | | |
| M/s. Krishna Builders (Awarded value 87.88 Cr.) | | | | |
| 1. | Boys' Hostel (800 Seater)- 1 No. | 24504 | 20.04.2017 | 19.10.2018 |
| 2. | Girls' Hostel (400 Seater)- 1 No. | 15043 | | |
| M/s. Simplex Infrastructures Ltd. (Awarded value 524.12 Cr.) | | | | |
| 1. | Boys' Hostel (800 Seater)- 1 No. | 24504 | 27.11.2017 | 26.02.2019 |
| 2. | Type – A Faculty Qtrs. (44 Nos)-2 unit | 11342 | | |
| 3. | Type –B Faculty Qtrs. (88 Nos) -4 unit | 20658 | | |
| 4. | Type –C Staff Qtrs. (88 Nos)-4 unit | 18280 | | |
| 5. | Type –D Staff Qtrs. (44 Nos) - 2 unit | 6733 | | |
| 6. | Director's Bungalow | 474 | | |
| 7. | Students activity centre (including swimming Pool 50 x 25M) | 4350 | | |
| 8. | Dispensary | 1224 | 27.11.2017 | 26.02.2019 |
| 9. | Auditorium (1500 Capacity) | 5281 | | |
| 10. | School of Minerals, Metallurgical and Materials, Engineering | 3648 | | |
| 11. | School of Earth Ocean & Climate Sciences | 3648 | | |
| 12. | School of Humanities, Social Sciences & Management | 1582 | | |
| 13. | Central Workshop | 2554 | | |
| 14. | Central Research and Instrumentation facilities | 2508 | | |
| 15. | Lecture Theater (60 Seater Class room-48 Nos., 120 Seater Class room-22 Nos., 240 Seater Class room - 4 Nos. | 26354 | | |
| M/s. SNS Infracon Pvt. Ltd (Awarded value 29.29 Cr.) | | | | |
| 1. | Commercial Complex (Academic) | 1443 | 01.06.2018 | 31.05.2019 |
| 2. | Commercial Complex (Residential) | 1143 | | |
| 3. | Extension of SES Building | 8468 | | |
| M/s. Saket Infra Developers Pvt. Ltd (Awarded value 19.25 Cr.) | | | | |
| 1. | Construction of Sewerage Network with STP at Argul Campus | | 09.06.2018 | 08.03.2019 |
| B] Works for which tender will be called | | | | |
| External Development | | Tender will be called within two weeks | | |
| (i) | Covered Car Parking Works | | | |
| (ii) | Open air Theatre works(With Green Room) | | | |
| (iii) | Basketball ,Volley ball, Lawn tennis | | | |
| (iv) | Open Car, Cycle parking | | | |
| (v) | Sports Stand Works | | | |
| (vi) | Equipment Room) | | | |
| (vii) | Football Ground & Athletic Track Works | | | |
| (viii) | LTC Circle Works | | | |
| (ix) | Road Works ,Footpath & Drain Works | | | |
| (x) | School ring hard and soft landscaping including waterbody Works | | | |
| (xi) | Lecture Hall Ring Hard and soft landscape including three nos. lily pool and water body Works | | | |
| (xii) | Cricket ,Javelin/Discus throw Field | | | |
| (xiii) | Hockey Ground & Seating area | | | |
| (xiv) | External Plumbing | | | |
| (xv) | External Electrical | | | |
| C) Building in Design Stage | | | | |
| 1. | One side Extension of SBS Building | These buildings are in design stage | | |
| 2. | One side Extension of SIF Building | | | |
| 3. | One side Extension of SMS Building | | | |
| 4. | Efficiency Hostel for Married scholars | | | |
| 5. | Kendriya Vidyalaya (Ground floor only) | | | |

## Photographs of Phase-II Construction Dt. 30.06.2018

# ACADEMIC BLOCK

Auditorium: Plinth beam work is in progress

Aerial view of LTC-1, 2 & 3

Central Workshop: Roof slab shuttering and column casting work is in progress.

SMMME: Plinth beam and earth filling work is in progress

SMMME : Plinth beam and earth filling work is in progress

SEOCS: PCC for plinth beam base work and earth filling are in progress.

HSSM : Plinth beam work and column above plinth beam work is in progress.

HSSM : Plinth beam work and column above plinth beam works is in progress.

LTC-3: Plinth beam and column work above plinth beam are in progress.

LTC-2: Plinth beam and column work above plinth beam are in progress.

LTC-2: Plinth beam and column work above plinth beam are in progress.

LTC-1: Plinth beam and column work above plinth beam are in progress.

LTC-1: Plinth beam reinforcement work and earth filling are in progress.

# RESIDENTIAL **BLOCK**

Type-C1 & C2 Quarters: Plinth beam work is in progress.

Type-C3 Quarters: Filling work is in progress.

Type-B1 & B2 Quarters: Ground floor slab completed. Column work is in progress in first floor.

Type-B3 & B4 Quarters: Ground floor slab completed in B4 and B3 column work is in progress.

Director's Bungalow: Ground floor slab completed.

Boys' Hostel-2: A wing terrace completed. 7th floor block work is in progress. B wing fifth floor column work is in progress and 3rd floor block work is in progress.

Boys' Hostel-2: A wing 7th floor column work is in progress and roof beam shuttering work is in progress.
Block work 2nd floor is in progress.

Boys' Hostel-2: B wing 3rd floor roof slab casted. Column work is in progress. 2nd floor block work is in progress and front side block work completed.

Girls' Hostel- 2 : A wing terrace slab completed.

Girls' Hostel- 2: B wing back side 6th floor slab completed& Front side column work in 6th floor slab is in progress.

SAC: Column work up to plinth beam is in progress.

D Type Quarters: Front side roof slab shuttering work is in progress.

Type- A1 & A2 Quarters: Front side ground floor slab completed. Column work is in progress.

Dispensary: Column footing work is in progress.

# FOOTBALL

# INITIATIVES TAKEN BY THE INSTITUTE TO MAKE THE CAMPUS ECO-FRIENDLY

## Green Campus

IIT Bhubaneswar adopted the following green campus initiatives to make the campus eco-friendly.

## Plantation Initiative

IIT Bhubaneswar believes that nurturing nature is the best way to promote creativity and increasing the amount of landscaping and greenery in the campus can provide positive effect on mental and physical health of the community. More than 27000 trees have been planted in last two years. The exotic and indigenous deciduous and coniferous trees and plants were chosen to create the healthy echo-system for attracting the exotic and migratory birds. The avenue trees can sooth and relax us by providing the pleasant smells. The massive teak plantation was completed along the boundary wall of our campus to help in maintaining the balance between the oxygen and carbon dioxide in the atmosphere.

## Cycle Friendly Campus Initiative

IIT Bhubaneswar banned power vehicle use by students and incorporated the "Cycling Culture" by considering the health benefits of students, faculty, staff and the community and for controlling environmental risk factors. The institute has initiated the Bicycle Infrastructure Development Plan for creating "Cycle Friendly Campus" by providing sustainable and convenient tree-lined cycle path to a ride a bicycle between the schools and hostels, and to create cycle parking in each of the buildings.

## Energy-Harvesting Initiative

IIT Bhubaneswar has installed solar panels on the building rooftops to reduce carbon footprint and dependency on conventional sources of energy.

## Water-Harvesting Initiative

IIT Bhubaneswar has initiated building up rooftop rainwater harvesting and surface rainwater harvesting infrastructure and setting up a waste management system and wastewater recycling plant.

## Green Buildings

The buildings are GRIHA (Green Rating for Integrated Habitat Assessment) 4 and 5 compliant. The building construction is done by using the fly ash bricks recognized as an environmentally friendly product because it helps in keeping building cool and clean environment, and also saves agricultural land which is used for manufacturing clay bricks.

## Eco-friendly Waste Disposal

IIT Bhubaneswar deployed dustbins with biodegradable and non-biodegradable categories.

## IIT Bhubaneswar is Ragging Free

The Institute strongly adheres to anti-ragging policy and implements it through true spirit of actions. The institute takes several timely actions including close monitoring to ensure the system is in place. Also the administration, concerned faculty and staff conducts several meetings with the newly joined fresher's as well as senior students appraising them about the policy of the institute and counselling them about the good practices of interaction with new students and development of brotherhood towards personality building.

## Anti-ragging activities

The Dean (SA) closely monitors the activities in the campus being supported by Warden and faculty members to make it ragging free. In order to build up the confidence in the minds of freshers, faculty do regularly visit the hostels to ensure truest interaction between freshers and senior students and spend nights in the hostel during initial few months.

# ACADEMIC

In the Academic Year 2017-18, the Institute started new 5-year Dual degree in 5 disciplines, one each in Schools of Infrastructure, School of Mechanical Sciences and School of Minerals, Metallurgical and Materials Engineering and 2 programmes in School of Electrical Sciences. The intake of the BTech students increased from 260 to 350. Two new M.Tech. programmes in School of Infrastructure were started. With this the number of programmes at the institute includes BTech programmes in 6 branches of Engineering (Computer Sciences, Electrical, Electronics & Communications, Mechanical, Civil, and Metallurgical and Materials), 5-year Dual degree programme in 9 disciplines, M. Tech. in 10 specializations and MSc in 5 disciplines (Mathematics, Physics, Chemistry, Geology and Atmosphere & Climate Sciences) besides PhD in almost all the disciplines ranging across the BTech, MTech and MSc Programmes. The Institute has 1482 Students (B.Tech. - 910, M. Tech. - 218, M.Sc. – 137, and Ph. D. - 211).

The Institute has taken several innovative initiatives on raising global class faculty, fostering teaching-learning excellence, infrastructure building, collaborative research, entrepreneurship, start up activity, placement of students in core industries, transparency in governance, accountability, security, house-keeping etc.

The 6th Annual Convocation was held on Sunday, 18th March 2018 in the Sports Ground, Argul Campus, IIT Bhubaneswar. The Honourable President of India and Visitor, IIT Bhubaneswar Shri Ram Nath Kovind graced the occasion as Chief Guest. The First Lay Smt. Savita Kovind, Honourable Governor of Odisha Dr. S.C. Jamir, Shri Dharmendra Pradhan, Union Minister of Petroleum & Natural Gas, Dr. Satya Pal Singh, Union Minister of State for HRD, The Chairman, Board of Governors, Shri Pankaj Ramanbhai Patel, the Director IIT Bhubaneswar Prof. Ratnam V. Raja Kumar and other dignitaries were present on the occasion. Total 295 students (150 B.Tech., 60 M.Tech., 71 M.Sc., and 14 Ph.D.) students were awarded degrees by Director during the occasion. The graduates were awarded degrees during the occasion. Mr. Kamal Nayan Reddy Challa from B.Tech. (Computer Science and Engineering) was awarded the President of India Gold Medal for topping among all B. Tech. branches, Mr. Rishav Goyal of M.Tech. (Climate Science and Engineering) was awarded the Director's Gold Medal for topping among all M.Tech. programmes and Mr. Partha Sarathi Jena of M.Sc. (Geology) was awarded the Director's Gold Medal for topping among all M.Sc. disciplines. Several other medals and endowment awards were also distributed.

# ACADEMIC INFORMATION FOR 2017-18

## Programmes Offered

| | |
|---|---|
| 4-year B.Tech. Programme | Civil Engineering, Electrical Engineering, Mechanical Engineering, Computer Science & Engineering, Metallurgical and Materials Engineering, Electronics and Communication Engineering |
| 5-year Dual Degree (B.Tech. + M.Tech) | B. Tech in Mechanical Engineering + M. Tech. in Mechanical System Design, B. Tech in Mechanical Engineering + M. Tech. in Thermal Science & Engineering, B. Tech. in Mechanical Engineering + M. Tech. in Manufacturing Engineering, B. Tech in Civil Engineering + M. Tech. in Structural Engineering, B. Tech in Civil Engineering + M. Tech. in Transportation Engineering, B.Tech. in Civil Engineering + M. Tech. in Transportation Engineering, B. Tech in Civil Engineering + M. Tech. in Environmental Engineering, B.Tech. in Computer Science and Engineering + M.Tech. in Computer Science and Engineering, B.Tech. in Electrical Engineering + M.Tech. in Power Electronics and Drives, B.Tech. in Metallurgical & Materials Engineering + M.Tech. in Materials Science and Engineering |
| M. Tech. Programme | Climate Science and Technology, Electronics and Communication Engineering, Transportation Engineering, Structural Engineering, Materials Science and Engineering, Mechanical Systems Design, Thermal Science and Engineering, Power System Engineering, Environmental Engineering, Water Resources Engineering |
| Joint M.Sc.-Ph.D. Programme | Physics, Chemistry, Mathematics, Geology, Atmosphere and Ocean Sciences |
| Ph.D. Programme | School of Basic Sciences, School of Earth, Ocean & Climate Sciences, School of Electrical Sciences, School of Humanities, Social Sciences and Management, School of Infrastructure, School of Mechanical Sciences, School of Minerals, Metallurgical & Materials Engineering |

## Year-Wise Sanctioned (Approved) Intake

| Academic Programme | 2017-18 | 2016-17 | 2015-16 | 2014-15 |
|---|---|---|---|---|
| B.Tech & Dual Degree | 350 | 260 | 180 | 180 |
| M. Tech | 154 | 130 | 130 | 130 |
| Joint M.Sc. - Ph.D. | 100 | 100 | 100 | 100 |
| Ph.D | 360 | | | |

## Year wise admitted strength of students in various academic programmes

| Year | B.Tech & Dual Degree | M.Tech | M.Sc | Ph.D. | Total |
|---|---|---|---|---|---|
| 2010-11 | 126 | | | 25 | 151 |
| 2011-12 | 112 | | | 21 | 133 |
| 2012-13 | 113 | 42 | | 50 | 205 |
| 2013-14 | 148 | 50 | 57 | 44 | 299 |
| 2014-15 | 164 | 71 | 71 | 48 | 354 |
| 2015-16 | 162 | 74 | 76 | 58 | 370 |
| 2016-17 | 249 | 106 | 73 | 61 | 489 |
| 2017-18 | 338 | 125 | 70 | 51 | 584 |

## Total Actual Student Strength (2017-18)

| Programme | No. of Male Students | No. of Female Students | Total Students | Within State | Outside State | Economically Backward | Socially Backward ( SC, ST, OBC-NCL) |
|---|---|---|---|---|---|---|---|
| B.Tech | 834 | 76 | 910 | 36 | 874 | 283 | 466 |
| M.Tech | 169 | 49 | 218 | 63 | 155 | 61 | 103 |
| M.Sc. | 102 | 35 | 137 | 17 | 120 | 52 | 71 |
| Ph.D | 164 | 47 | 211 | 117 | 94 | 89 | 68 |

## Course Wise Student Strength

## B.Tech & Dual Degree

| Sl. No. | Name of Programme | Approved Intake | No. of students admitted in 2017-18 | | Total number of students in 2017-18 | | No. of Students passed in 2016-17 | No. of Students passed in 2017-18 (upto Spring End Sem 2017-18) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1 | B.Tech. ( Civil Engineering) | 50 | 42 | 6 | 137 | 12 | 28 | 5 | 29 | 4 | | |
| 2 | B.Tech ( Electrical Engineering) | 50 | 46 | 4 | 151 | 15 | 30 | 8 | 32 | 3 | | |
| 3 | B.Tech. (Computer Science and Engineering) | 50 | 44 | 6 | 161 | 22 | 38 | 3 | 35 | 7 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | B.Tech (Electronics and Communication Engineering) | 40 | 34 | 4 | 70 | 12 | | | | |
| 5 | B.Tech. (Mechanical Engineering) | 50 | 46 | 3 | 151 | 4 | 37 | 1 | 38 | 0 |
| 6 | B.Tech. (Metallurgical and Materials Engineering) | 20 | 19 * | 1 | 54 | 2 | | | 9 | 0 |
| 7 | Dual Degree (B. Tech in Mechanical Engineering + M. Tech. in Mechanical System Design) | 10 | 10 * | 1 | 21 | 1 | | | | |
| 8 | Dual Degree (B. Tech in Mechanical Engineering + M. Tech. in Thermal Science & Engineering) | 10 | 10 | 0 | 20 | 0 | | | | |
| 9 | B. Tech. in Mechanical Engineering + M. Tech. in Manufacturing Engineering | 10 | 10 | 0 | 10 | 0 | | | | |
| 10 | Dual Degree (B. Tech in Civil Engineering + M. Tech. in Structural Engineering) | 10 | 7 | 2 | 13 | 3 | | | | |
| 11 | Dual Degree (B. Tech in Civil Engineering + M. Tech. in Transportation Engineering) | 10 | 8 | 2 | 16 | 2 | | | | |
| 12 | B. Tech in Civil Engineering + M. Tech. in Environmental Engineering, | 10 | 8 | 0 | 8 | 0 | | | | |
| 13 | B.Tech. in Computer Science and Engineering + M.Tech. in Computer Science and Engineering, | 10 | 8 | 2 | 8 | 2 | | | | |
| 14 | B.Tech. in Electrical Engineering + M.Tech. in Power Electronics and Drives | 10 | 8 | 1 | 8 | 1 | | | | |
| 15 | B.Tech. in Metallurgical & Materials Engineering + M.Tech. in Materials Science and Engineering | 10 | 6 | 0 | 6 | 0 | | | | |
| | Total | 350 | 306 | 32 | 834 | 76 | 133 | 17 | 143 | 14 |

*including preparatory course completed students

## M.Tech

| Sl.No | Name of Programme | Approved Intake | No. of students admitted in 2017-18 | | Total number of students in 2017-18 | | No. of Students passed in 2016-17 | | No. of Students passed in 2017-18 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Male | Female | Male | Female | Male | Female | Male | Female |
| 1 | Electronics and Communication Engineering | 18 | 8 | 6 | 19 | 10 | 4 | 3 | 10 | 4 |
| 2 | Power System Engineering | 18 | 10 | 7 | 20 | 12 | 2 | 2 | 10 | 4 |
| 3 | Mechanical Systems Design | 18 | 18 | 0 | 31 | 1 | 10 | 0 | 13 | 1 |
| 4 | Thermal Science and Engineering | 18 | 17 | 0 | 33 | 0 | 10 | 1 | 16 | 0 |
| 5 | Civil Engineering | | | | | | 2 | 0 | 1 | 0 |
| 6 | Structural Engineering | 12 | 8 | 3 | 13 | 7 | 3 | 0 | 4 | 4 |
| 7 | Transportation Engineering | 10 | 8 | 1 | 12 | 5 | 2 | 0 | 3 | 3 |
| 8 | Environmental Engineering | 12 | 6 | 1 | 6 | 1 | | | | |
| 9 | Water Resources Engineering | 12 | 5 | 2 | 5 | 2 | | | | |
| 10 | Climate Science and Technology | 18 | 13 | 4 | 14 | 7 | 5 | 3 | 3 | 3 |
| 11 | Materials Science and Engineering | 18 | 6 | 2 | 15 | 5 | 11 | 2 | 9 | 2 |
| | Total | 154 | 99 | 26 | 168 | 50 | 49 | 11 | 69 | 21 |

## M.Sc

| Sl. No. | Name of Programme | Sanctioned (Approved) Intake | No. of students admitted in 2017-18 | | Total number of students in 2017-18 | | No. of Students passed in 2016-17 | | No. of Students passed in 2017-18 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Male | Female | Male | Female | Male | Female | Male | Female |
| 1 | Chemistry | 20 | 15 | 2 | 25 | 8 | 13 | 4 | 10 | 6 |
| 2 | Physics | 20 | 15 | 4 | 25 | 10 | 13 | 4 | 10 | 5 |
| 3 | Mathematics | 20 | 17 | 2 | 31 | 7 | 11 | 6 | 11 | 5 |
| 4 | Geology | 20 | 9 | 2 | 19 | 8 | 14 | 2 | 9 | 5 |
| 5 | Atmosphere and Ocean Sciences | 20 | 4 | 0 | 2 | 2 | 4 | 0 | 2 | 2 |
| | Total | 100 | 60 | 10 | 102 | 35 | 55 | 16 | 42 | 24 |

## Ph.D

| Sl. No. | Name of course/School | Approved Intake | No. of students admitted in 2017-18 | | Total number of students 2017-18 | | No. of Students passed in 2016-17 | | No. of Students passed in 2017-18 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Male | Female | Male | Female | Male | Female | Male | Female |
| 1 | School of Basic Sciences | 360 | 11 | 2 | 46 | 11 | 7 | 2 | 1 | 0 |
| 2 | School of Earth, Ocean & Climate Sciences | | 2 | 0 | 17 | 8 | 0 | 0 | | |
| 3 | School of Electrical Sciences | | 6 | 2 | 35 | 8 | 2 | 1 | 1 | 0 |
| 4 | School of Humanities & Social Sciences | | 1 | 0 | 3 | 1 | 0 | 0 | | |
| 5 | School of Infrastructure | | 10 | 3 | 27 | 5 | 1 | 0 | | |
| 6 | School of Mechanical Sciences | | 10 | 1 | 30 | 1 | 1 | 0 | 1 | 0 |
| 7 | School of Minerals, Metallurgical & Materials Engineering | | 3 | 0 | 15 | 4 | 0 | 0 | | |
| | **Total** | **360** | **43** | **8** | **173** | **38** | **11** | **3** | **3** | **0** |

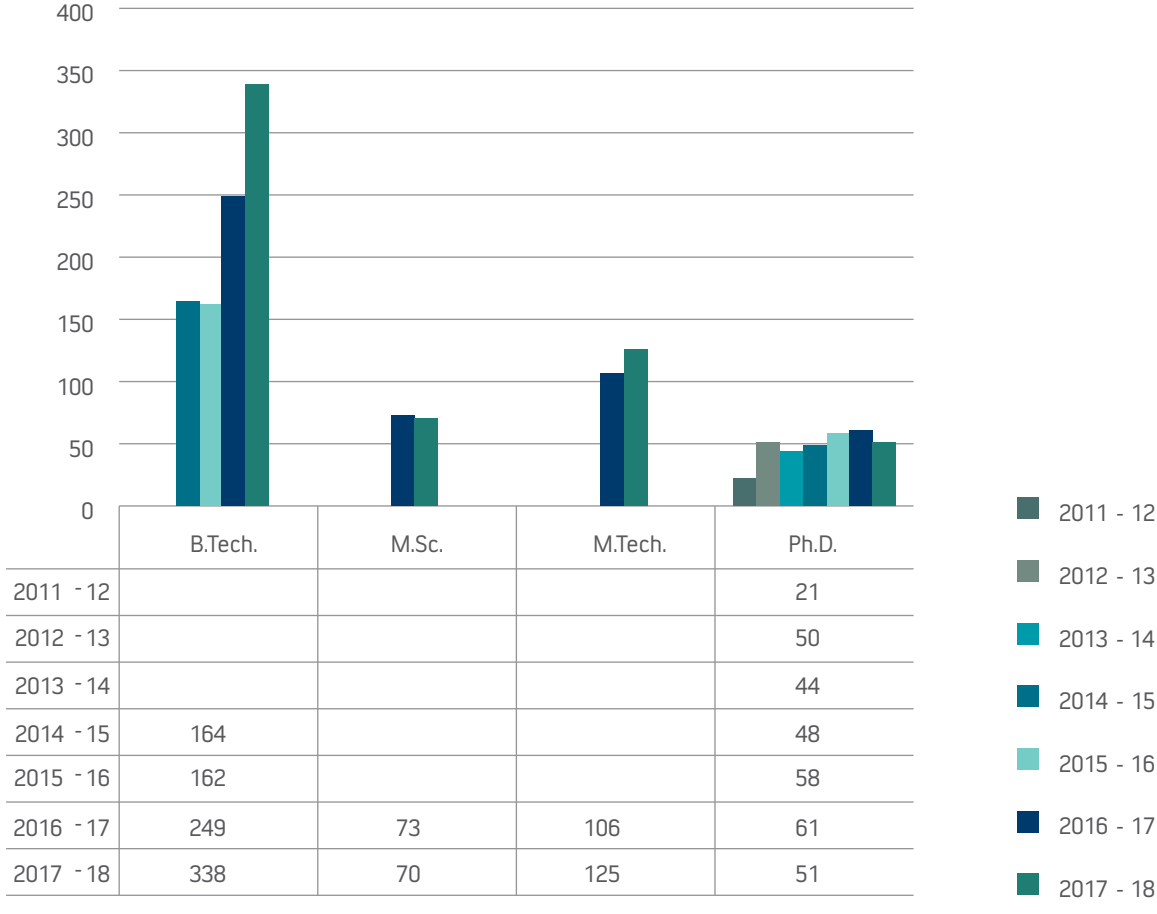
## Total fees per students for academic year 2017-18 (per semester)

| | General | OBC-NCL | SC/ST | Sponsored |
|---|---|---|---|---|
| B.Tech | 1,47,392.00 | 1,47,392.00 | 47,392.00 * | Not applicable |
| M.Tech | 52,392.00 | 52,392.00 | 47,392.00 | 71,892.00 |
| M.Sc | 47,392.00 | 47,392.00 | 47,392.00 | Not applicable |
| Ph.D | 49,892.00 | 49,892.00 | 47,392.00 | 49,392.00 |

*including PwD candidate

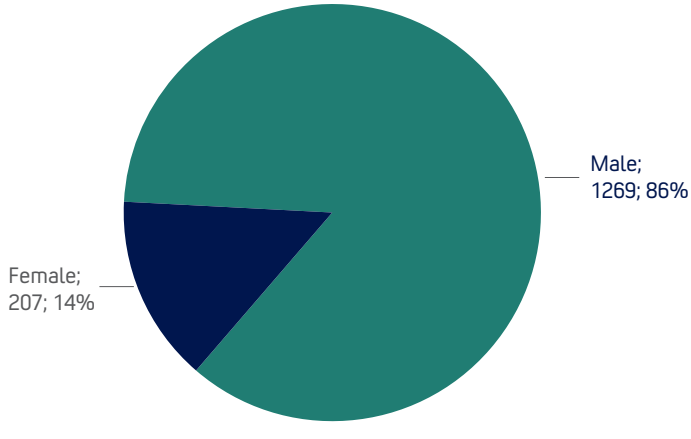
## Graphical Representation of different Academic Programmes up to 2017-18 (Based on admission records)

### Yearwise Admitted strength of the exisitng batch of students in various Academic Programmes



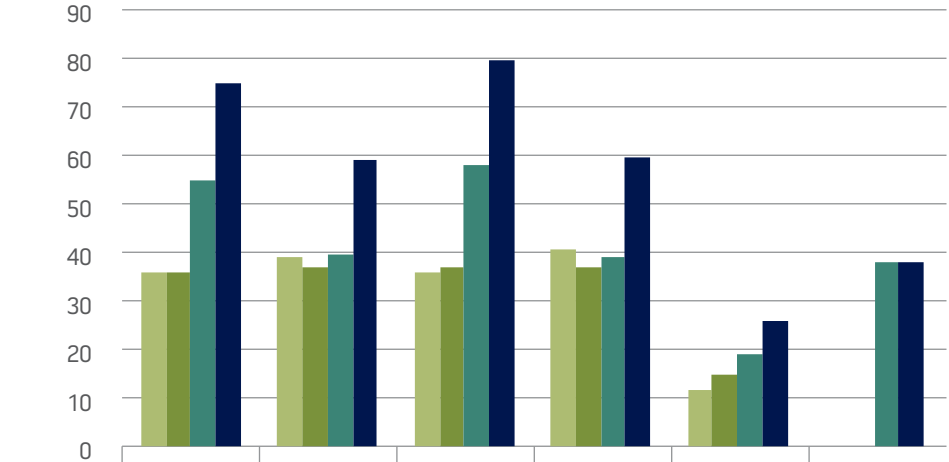

| | B.Tech. | M.Sc. | M.Tech. | Ph.D. |
|---|---|---|---|---|
| 2011 - 12 | | | | 21 |
| 2012 - 13 | | | | 50 |
| 2013 - 14 | | | | 44 |
| 2014 - 15 | 164 | | | 48 |
| 2015 - 16 | 162 | | | 58 |
| 2016 - 17 | 249 | 73 | 106 | 61 |
| 2017 - 18 | 338 | 70 | 125 | 51 |

### Genderwise student strength



## B.Tech & Dual Degree Programme

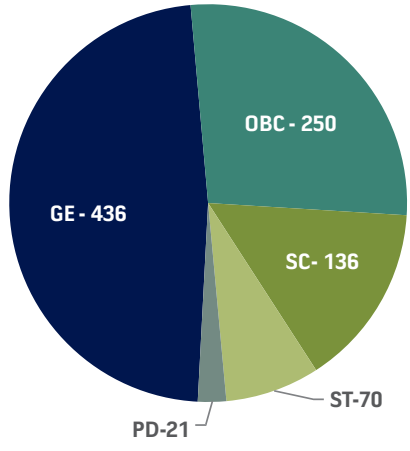
### Yearwise Student Admitted in B.Tech. & Dual Degree Programme



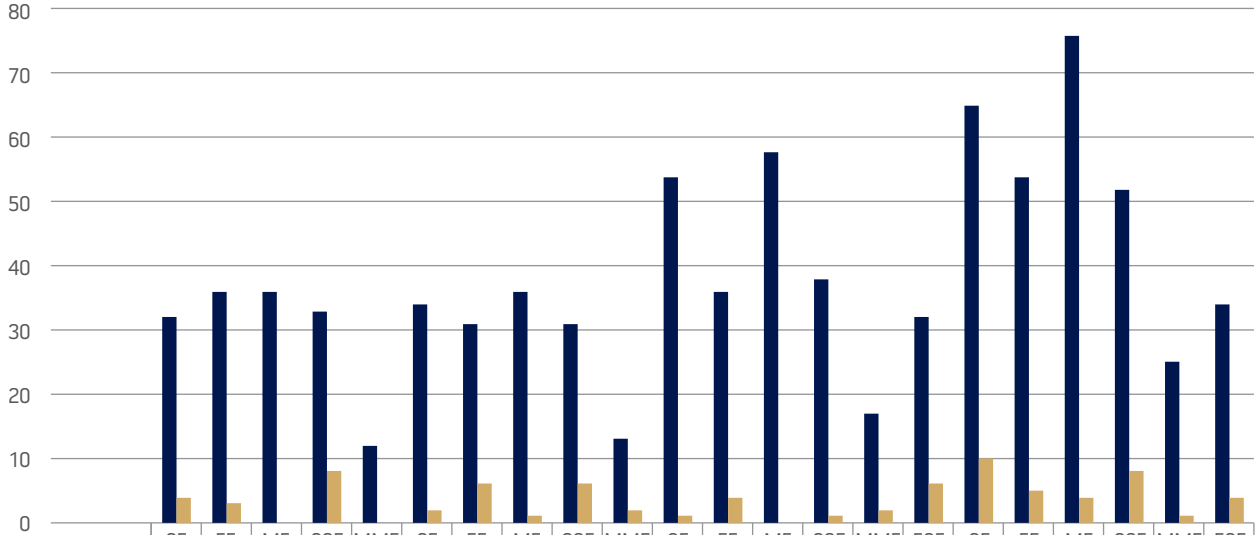

| | CE | EE | ME | CSE | MMME | ECE |
|---|---|---|---|---|---|---|
| 2014 -15 | 36 | 39 | 36 | 41 | 12 | |
| 2015 -16 | 36 | 37 | 37 | 37 | 15 | |
| 2016 -17 | 55 | 40 | 58 | 39 | 19 | 38 |
| 2017 -18 | 75 | 59 | 80 | 60 | 26 | 38 |



### Student Admitted category wise

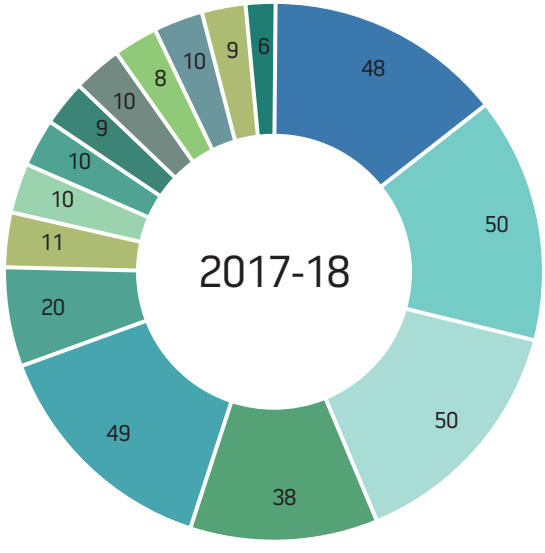


## Gender Statistics of Students in B.Tech Programe




| | 2014-15 | | | | | 2015-16 | | | | | 2016-17 | | | | | | 2017-18 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CE | EE | ME | CSE | MME | CE | EE | ME | CSE | MME | CE | EE | ME | CSE | MME | ECE | CE | EE | ME | CSE | MME | ECE |
| M | 32 | 36 | 36 | 33 | 12 | 34 | 31 | 36 | 31 | 13 | 54 | 36 | 58 | 38 | 17 | 32 | 65 | 54 | 76 | 52 | 25 | 34 |
| F | 4 | 3 | 0 | 8 | 0 | 2 | 6 | 1 | 6 | 2 | 1 | 4 | 0 | 1 | 2 | 6 | 10 | 5 | 4 | 8 | 1 | 4 |

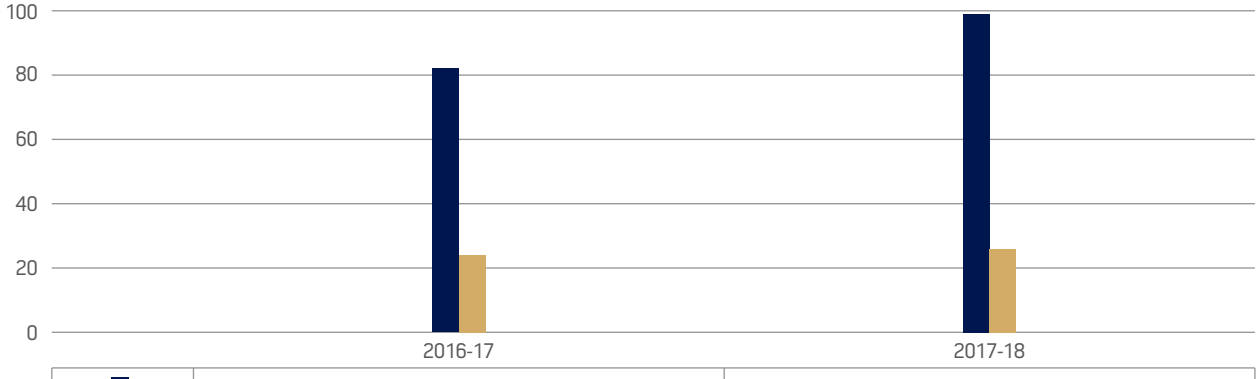
## Students admitted in different Programmes : 2017-18




- B.Tech. ( Civil Engineering)
- B.Tech ( Electrical Engineering)
- B.Tech. (Computer Science and Engineering)
- B.Tech (Electronics and Communication Engineering)
- B.Tech. ( Mechanical Engineering)
- B.Tech. (Metallurgical and Materials Engineering)
- Dual Degree (B. Tech in Mechanical Engineering + M. Tech. in Mechanical System Design)
- Dual Degree (B. Tech in Mechanical Engineering + M. Tech. in Thermal Science & Engineering)
- B. Tech. in Mechanical Engineering + M. Tech. in Manufacturing Engineering
- Dual Degree (B. Tech in Civil Engineering + M. Tech. in Structural Engineering)
- Dual Degree (B. Tech in Civil Engineering + M. Tech. in Transportation Engineering)
- B. Tech in Civil Engineering + M. Tech. in Environmental Engineering
- B.Tech. in Computer Science and Engineering + M.Tech. in Computer Science and Engineering,
- B.Tech. in Electrical Engineering + M.Tech. in Power Electronics and Drives
- B.Tech. in Metallurgical & Materials Engineering + M.Tech. in Materials Science and Engineering

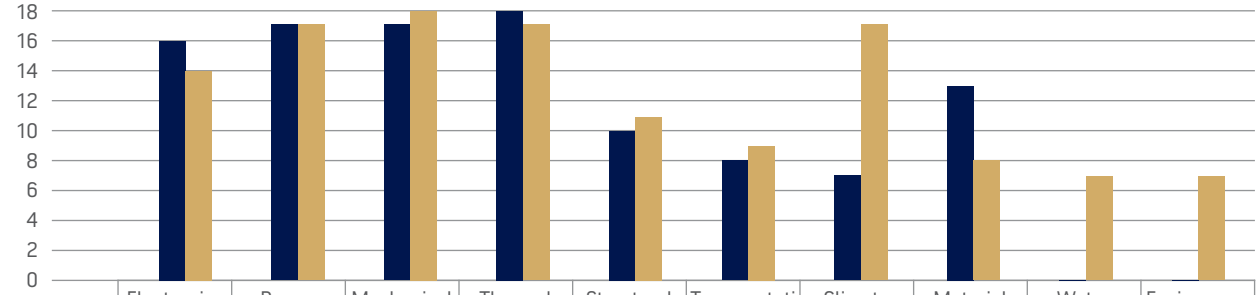
## M.TECH PROGRAME

### Gender Statistics



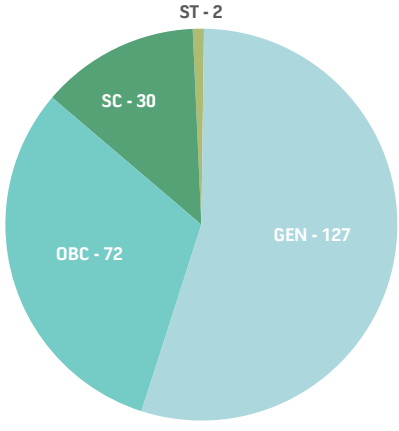

| | 2016-17 | 2017-18 |
|---|---|---|
| M | 82 | 99 |
| F | 24 | 26 |

### Admission Status (in different disciplines)

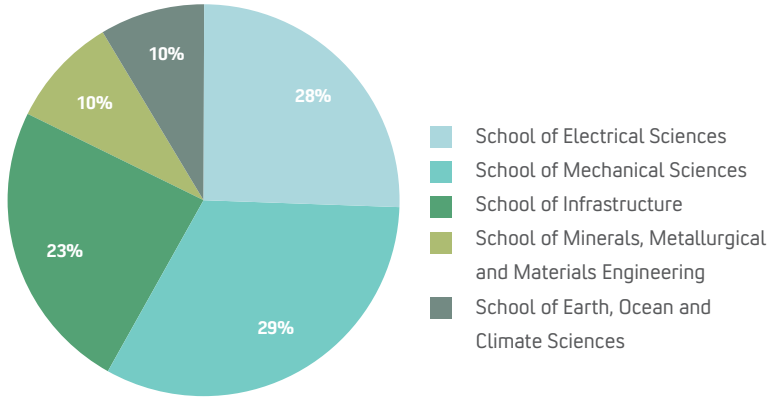



| | Electronics and Communication Engineering | Power System Engineering | Mechanical System Design | Thermal Science and Engineering | Structural Engineering | Transportation Engineering | Climate Science and Technology | Material Science and Engineering | Water Resource Engineering | Environmental Engineering |
|---|---|---|---|---|---|---|---|---|---|---|
| 2016-17 | 16 | 17 | 17 | 18 | 10 | 8 | 7 | 13 | - | - |
| 2017-18 | 14 | 17 | 18 | 17 | 11 | 9 | 17 | 8 | 7 | 7 |

### Distribution of students in different categories

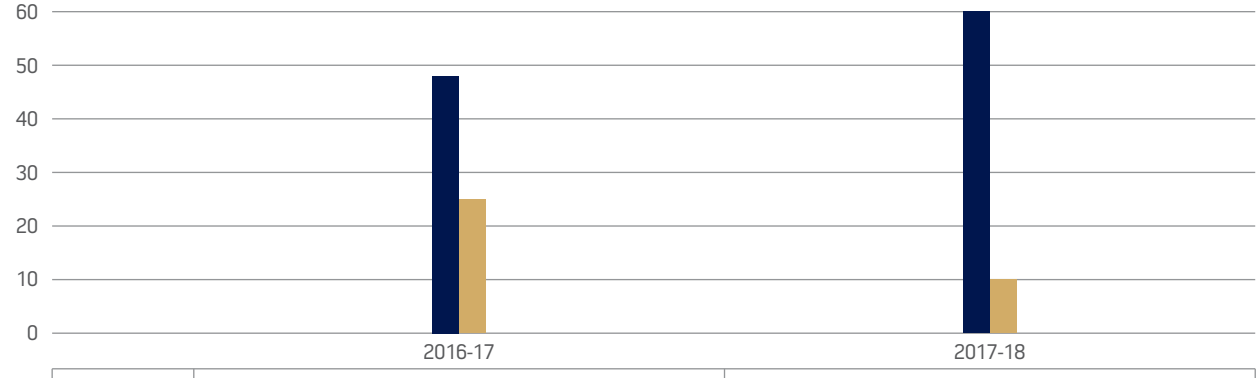



### School wise representation of students



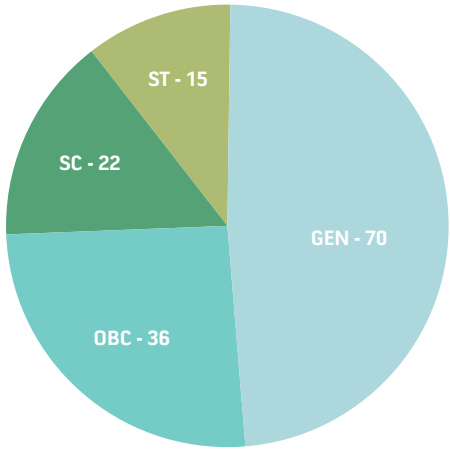
## Joint M.Sc. – Ph.D. Programme

### Gender Statistics

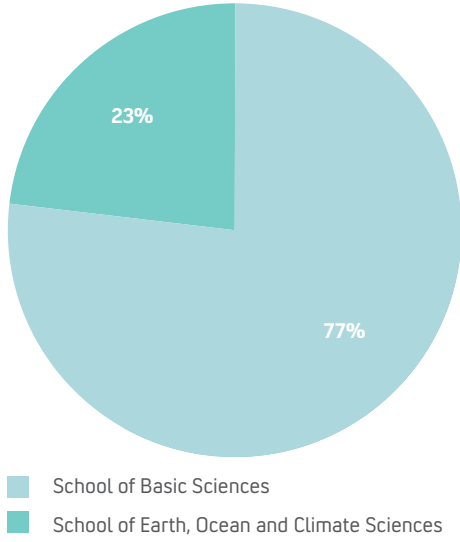



| | 2016-17 | 2017-18 |
|---|---|---|
| M | 48 | 60 |
| F | 25 | 10 |

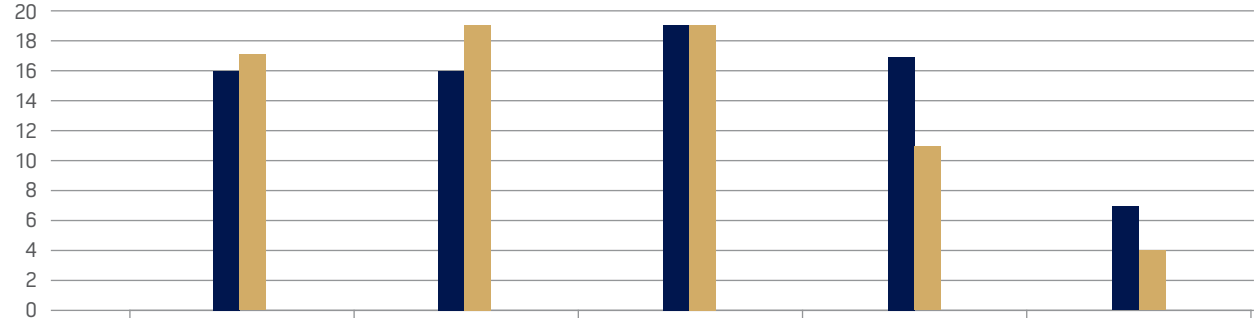
### Distribution of students in different categories




### School wise representation of students



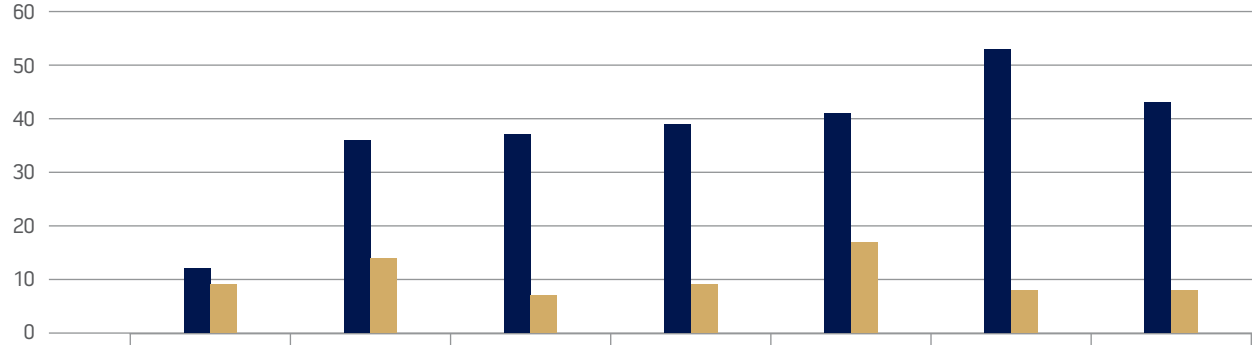

### Admission Status (in different disciplines)




| | Chemistry | Physics | Mathematics | Geology | Atmosphere & Ocean Science |
|---|---|---|---|---|---|
| 2016-17 | 16 | 16 | 19 | 15 | 7 |
| 2017-18 | 17 | 19 | 19 | 11 | 4 |

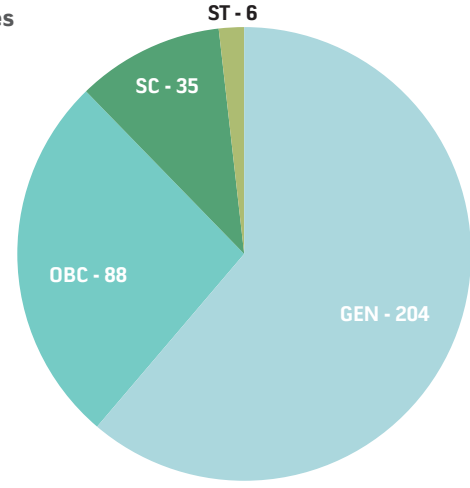
## Ph.D. Programme

### Gender Statistics

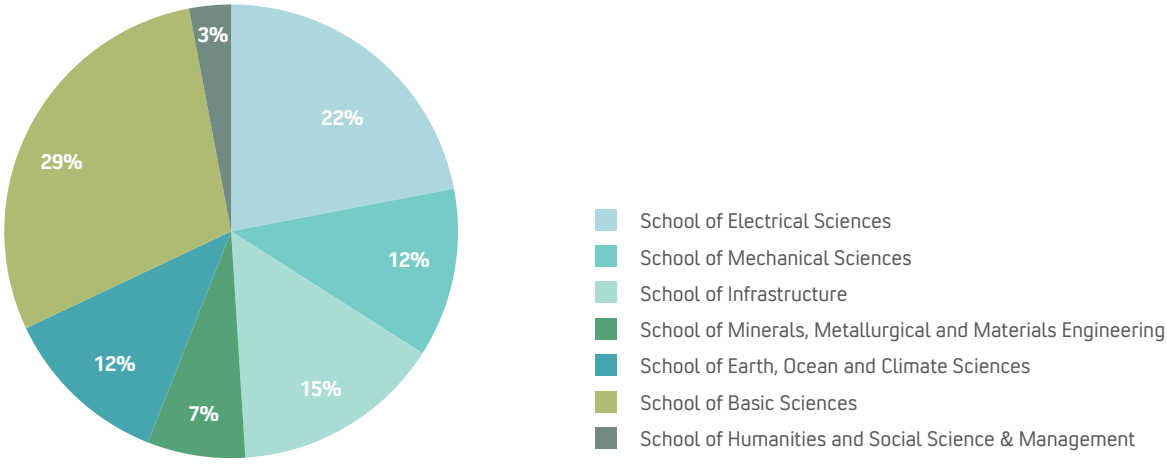



| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|---|
| M | 12 | 36 | 37 | 39 | 41 | 53 | 43 |
| F | 9 | 14 | 7 | 9 | 17 | 8 | 8 |

### Distribution of students in different categories




### School wise representation of Ph.D. Scholar



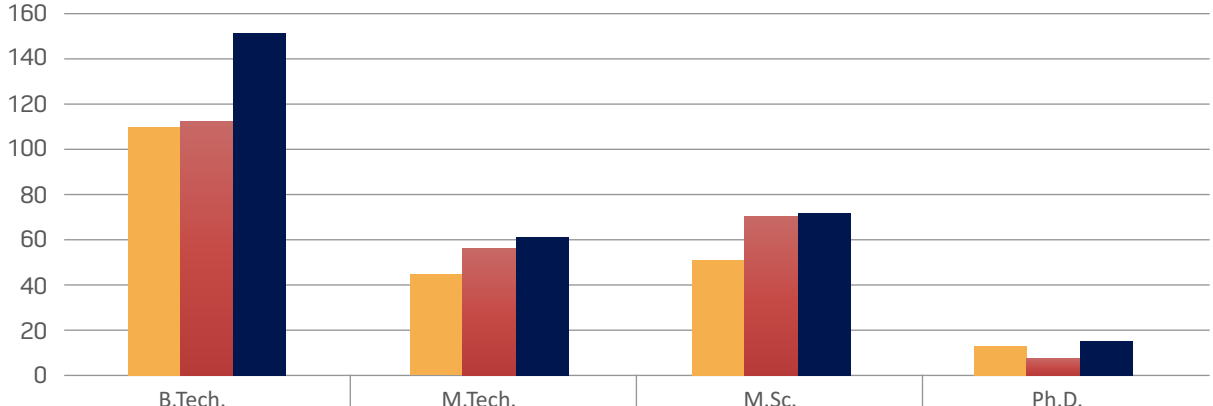
## GRADUATION DATA (LAST THREE YEARS)

| GRADUATION DATA 2015 | | | | |
|---|---|---|---|---|
| **Disciplines** | **Ph.D.** | **M. Tech.** | **M.Sc.** | **B. Tech.** |
| Civil Engineering | 1 | 9 | - | 33 |
| Electrical Engineering | 1 | - | - | 36 |
| Electronics & Com. Engineering | - | 11 | - | - |
| Mechanical Engineering | 5 | 8 | - | 40 |
| Materials Science & Engineering | - | 11 | - | - |
| Basic Sciences | 2 | - | - | - |
| Climate Science & Technology | - | 5 | - | - |
| Humanities & Social Sciences & Management | 3 | - | - | - |
| Chemistry | - | - | 7 | - |
| Geology | - | - | 12 | - |
| Mathematics | - | - | 16 | - |
| Physics | - | - | 15 | - |
| **Total :** | **12** | **44** | **50** | **109** |

| GRADUATION DATA 2016 | | | | |
|---|---|---|---|---|
| **Disciplines** | **Ph.D.** | **M. Tech.** | **M.Sc.** | **B. Tech.** |
| Civil Engineering | 1 | 5 | - | 30 |
| Electrical Engineering | 2 | | - | 43 |
| Electronics & Communication Engineering | - | 14 | - | - |
| Mechanical Engineering | - | - | - | 37 |
| Materials Science & Engineering | - | 9 | - | - |
| Climate Science & Technology | - | 5 | - | - |
| Mechanical System Design | - | 1 | - | - |
| Power System Engineering | - | 14 | - | - |
| Thermal Science and Engineering | - | 7 | - | - |
| School of Basic Sciences | 3 | - | - | - |
| School of Electrical Sciences | | - | - | - |
| School of Humanities & Social Sciences & Management | 1 | - | - | - |
| School of Infrastructure | - | - | - | - |
| Atmosphere and Ocean Sciences | - | - | 11 | - |
| Chemistry | - | - | 13 | - |
| Geology | - | - | 15 | - |
| Mathematics | - | - | 15 | - |
| Physics | - | - | 15 | - |
| **Total :** | **7** | **55** | **69** | **110** |

| GRADUATION DATA 2017 | | | | |
|---|---|---|---|---|
| **Disciplines** | **Ph.D.** | **M. Tech.** | **M.Sc.** | **B. Tech.** |
| Civil Engineering | - | 2 | - | 33 |
| Computer Science and Engineering | - | - | - | 41 |
| Electrical Engineering | - | - | - | 38 |
| Mechanical Engineering | - | - | - | 38 |
| Electronics & Communication Engineering | - | 7 | - | - |
| Materials Science & Engineering | - | 13 | - | - |
| Climate Science & Technology | - | 8 | - | - |
| Mechanical System Design | - | 10 | - | - |
| Thermal Science and Engineering | - | 11 | - | - |
| Power System Engineering | - | 4 | - | - |
| Structural Engineering | - | 3 | - | - |
| Transportation Engineering | - | 2 | - | - |
| School of Basic Sciences | 9 | - | - | - |
| School of Electrical Sciences | 3 | - | - | - |
| School of Infrastructure | 1 | - | - | - |
| School of Mechanical Sciences | 1 | - | - | - |
| Atmosphere and Ocean Sciences | - | - | 4 | - |
| Chemistry | - | - | 17 | - |
| Geology | - | - | 16 | - |
| Mathematics | - | - | 17 | - |
| Physics | - | - | 17 | - |
| **Total :** | **14** | **60** | **71** | **150** |

## Graphical representation of students Graduated




| | B.Tech. | M.Tech. | M.Sc. | Ph.D. |
|---|---|---|---|---|
| 2015 | 109 | 44 | 50 | 12 |
| 2016 | 110 | 55 | 69 | 7 |
| 2017 | 150 | 60 | 71 | 14 |

| Programme | Name of Scholarship | 2017 (Batch) | 2016 (Batch) | 2015 (Batch) | 2014 (Batch) |
|---|---|---|---|---|---|
| B. Tech. | MCM Scholarship 2017-18 | 66 | 55 | 39 | 38 |
| | Free Studentship 2017-18 | -- | 3 | 16 | 10 |
| | Financial Assistance 2017-18 | 2 | 8 | 1 | 2 |
| Joint M.Sc.– Ph.D. | INSPIRE & Other Scholarship | 18 | 16 | -- | -- |

## Participation in Conference, Awards & Medals

| Programme | Awards & Medals | National Conference | International Conference |
|---|---|---|---|
| B. Tech. | 5 | -- | -- |
| M. Tech. | 5 | 15 | -- |
| Joint M. Sc. – Ph.D. | 5 | 1 | -- |
| Ph.D. | -- | 67 | 4 |

## Special Events in 2017-18

| Programme | Date |
|---|---|
| Senate Meetings | 07.04.2017 |
| | 16.05.2017 |
| | 20.09.2017 |
| | 21.12.2017 |
| | 13.03.2018 |
| Convocation | 18.03.2018 |
| National Science Day | 28.02.2017 |


BASIC SCIENCE
EARTH, OCEAN AND CLIMATE SCIENCES
HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT
ELECTRICAL SCIENCES
INFRASTRUCTURE
MECHANICAL SCIENCES
MINERALS, METALLURGICAL AND MATERIALS ENGINEERING

# SCHOOL OF BASIC SCIENCE (SBS)

## About the School

The School of Basic Sciences is an unique school with emphasis on interdisciplinary research in areas of Physics, Chemistry, Mathematics and Biosciences. Presently SBS offers programs as follows:

- Joint M.Sc.- Ph.D. in Physics, Chemistry and Mathematics
- Ph.D. in Physics, Chemistry, Mathematics and Biosciences
- Post-doctoral program

The School is proud to have two Centres of Excellence, namely MHRD Centre of Excellence for Novel Energy Materials (CENEMA) and S. K. Dash Centre of Excellence of Bio-sciences and Engineering & Technology (SKBET).

## Statistics

- No. of faculty: 29
- No. of PhD Students enrolled : 54
- Number of Ph.D. Students Graduated :01
- Number of
- M.Sc. Students: 104
- Number of Publications in 2017: 127
- No. of on-going sponsored research projects - 32
- No. of Class Rooms with multimedia projectors- 06
- No. of Seminar/Conference Rooms- 01
- No. of Computer Labs- 01
- No. of Faculty Rooms- 27 (29 Faculty)
- No. of Major Equipment- 15

## Major Research Areas

The broad areas of research in Physics includes Theoretical and Experimental High Energy Physics, Theoretical and Experimental Condensed Matter Physics, Optics and Photonics, Atomic Molecular and Surface Physics, Non-equilibrium Statistical Mechanics, Nanoscience and Nanotechnology, and Novel Material search.

The research in Chemistry discipline spans over the areas of Physical, Organic, Inorganic and Green Chemistry: the design and development of metal complexes towards catalysis and anti-cancer drugs, functionalization of nanoparticles and nanoparticles based biosensors, coordination chemistry, magnetic materials and magnetostructural correlation and bio-inspired coordination chemistry, catalysis for fine chemicals, molecular recognition for the synthesis of exotic organic and organic-inorganic hybrid materials

The main areas of research in Mathematics are Analysis, Applied Functional Analysis, Complex dynamics and Fractals, Matrix Theory, Graph theory, Optimization Theory, Queueing Theory, Applied Probability Models, Computational Fluid Dynamics, Numerical Methods, and Soft Computing.

The research work in biosciences is focused on G-protein coupled receptor biology, peptide/protein design and engineering, molecular modelling, computational biology, the structure-function studies of various proteins of eye lenses, leprosy, tuberculosis and mechanism and regulation of a class of enzyme ATPases involved in various biological pathways and human diseases.

## State of the art Facilities

The School has procured state-of-art equipment to pursue advanced research. Following advanced instrumentation facilities have been established through central instrumentation facility:

- X-ray diffractometers (XRDs)
- Scanning Electron Microscope (SEM)
- Raman Spectrophotometer
- Rheometer
- Nuclear Magnetic Resonance (NMR)
- Physical Properties Measurement System (PPMS)
- Gas Chromatography–Mass Spectrometry (GC-MS)

IIT Bhubaneswar is a member of both Belle and Belle II collaborations at KEK, Japan and a member of CMS collaboration, at Large Hadron Collider (LHC), CERN, Geneva.

The School is fully equipped with a central computing server system and integrated and functional for all sorts of high computing research and analysis.

## Laboratories

The School of Basic Sciences presently has the following laboratories equipped with relevant modern equipment and instruments:

- Atomic Molecular and Surface Physics Lab
- Biochemistry Lab
- Bioinstrumentation Lab
- Chemical Biology Lab
- Coordination Chemistry and Materials Chemistry Lab
- Coordination Chemistry Lab
- Experimental High Energy Physics Lab
- M.Sc. Chemistry Lab
- M.Sc. Mathematics Lab
- M.Sc. Physics Lab
- Magnetic Materials Lab
- Nano Photonics & Plasmonics Lab
- Nanostructure & Soft Matter Physics Lab
- Organic Chemistry Lab
- Organic Synthesis Lab
- Protein Chemistry Lab
- Quantum Chemistry Lab
- Renewable Energy Lab
- Supramolecular Chemistry Lab
- Undergraduate Chemistry Lab
- Undergraduate Physics Lab

# SCHOOL OF EARTH, OCEAN AND CLIMATE SCIENCES (SEOCS)

## About the School

The school aims to provide intellectual, congenial and vibrant atmosphere for developing state of the art education and research in Earth System Sciences guided by an integrated systemic view of Earth-Ocean-Atmospheric interaction processes for sustainable development.

Academic programs :

- Joint M.Sc. – Ph.D. in Geology, Atmosphere and Ocean Sciences,
- M. Tech. in Climate Science & Technology
- and Ph.D. in Geosciences, and Climate Sciences

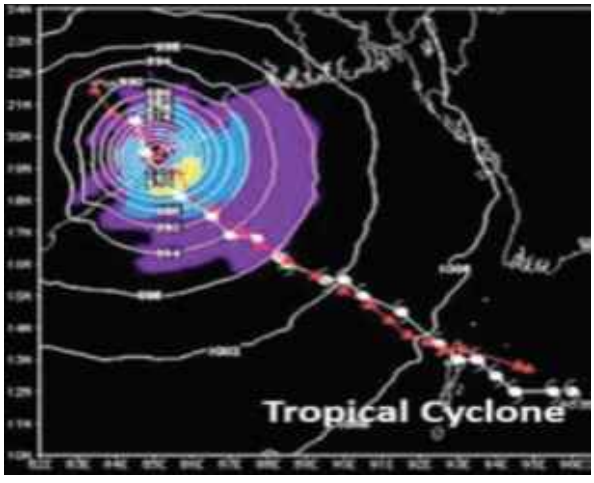
Experienced and motivated faculty members with varied specializations has been one of the strengths of the School. Currently, the specializations of these faculty members include geochemistry, hydrogeology and watershed management, geophysics, paleoceanography & paleoclimatology, remote sensing & GIS applications, atmospheric aerosols & climate, data assimilation & analysis, ocean circulations & modeling, mesoscale modeling and prediction of extreme weather events, tropical cyclones, storm surges & air-sea interactions, tropical waves, modelling inter-tropical convergence zone, intraseasonal variability, monsoon dynamics and climate change etc.


## Statistics

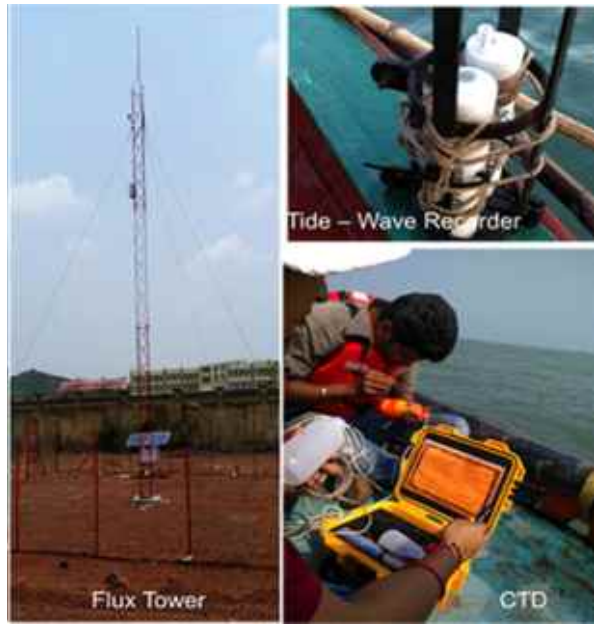
- No. of faculty:10
- No. of Ph.D. students enrolled (2017-2018): 2
- No. of M.Sc. students: 31
- No. of M.Tech. students in Climate Science and Technology (2017-2018) : 21
- No. of Publications in 2017: 41

## State of the art Facilities

Laboratories are equipped with state-of-the-art computational and scientific instruments viz. Broadband Seismometers, Engineering Seismograph, Digital Gravimeter, Resistivity meter, Continuously Operating GPS Reference Stations, High precision Multi-parameter ocean profiler, Binocular and Trinocular polarizing microscopes, High resolution stereo zoom microscope, range of hydrological and hydro-meteorological instruments, High Performance Liquid Chromatography, Total Organic Carbon Analyzer, Deionized Water Purification System, Ion Chromatograph, Microbalances, Microrain radar, Echo-sounder, CTD profiler, ADCP, Current meter, Celiometer, Lighting sensor detector. In addition, a number of high-end workstations, cluster server are available for simulation, modelling and visualization purposes.






## Laboratories

The following laboratories are equipped with state-of-the-art facilities for Geophysical and Geochemical analyses, Petrological and Paleontological studies, Remote Sensing &GIS, Modeling and Visualization, Weather Analysis and Forecasting and Simulation of Atmospheric and Oceanic processes.

- Advance Geochemistry Laboratory
- Advanced Mineralogy & Crystallography Laboratory
- Applied Paleontology Laboratory
- Air quality Laboratory
- Climate Observatory
- Cloud physics Laboratory
- Computational Geosciences & Geophysical Laboratory
- Hydro geological and Hydro-metrological Laboratory
- Instrumentation and Observation Laboratory
- Modelling and Visualization Laboratory
- Numerical Simulation Laboratory
- Ore Geology Laboratory
- Petrology & Geochemistry Laboratory
- Paleoceanography and Paleoclimatology Laboratory
- Remote Sensing and GIS Laboratory
- Structure Geology Laboratory
- Weather Analysis and Forecasting Laboratory

The School is moving forward to establish Bay of Bengal Coastal Observatory (BoBCO) at Laudigaon, Ganjam (Odisha). Institute is aggressively perusing to develop the site (40 acres of land) to make it operational.

# SCHOOL OF ELECTRICAL SCIENCES

## About the School

The School of Electrical Sciences was established in the year 2008.

Presently SES offers programs as follows:

- 4-year B. Tech. in Electrical Engineering, Computer Science & Engineering, Electronics and Communication Engineering
- 5-year dual degree (B. Tech. and M.Tech.) in Electrical Engineering, Computer Science & Engineering
- M. Tech. in Electronics & Communication Engineering, Power System Engineering, and Computer Science and Engineering
- Ph.D. Programmes

The school has a distinguished record in both teaching and research. Faculty members are active in research activities and publishing their research findings in highly reputed national and international leading journals and in national and international conferences. In addition, the faculty members are engaged in number of consultancy and in project activities sponsored by government and leading industries.

## Statistics

- No. of Faculty : 29
- No. of B.Tech / dual degree Students Enrolled 2017-18 :
  - Electrical Engineering : 59
  - Computer Science Engineering : 60
  - Electronics and Telecommunication Engineering : 38
- No. of PhD Students Enrolled (2017-18) : 8
- No. of PhD Students Graduated : 2
- No. of M.Tech. Students Enrolled 2016-17 : 29
- No of Publications in 2017 : 136
- The number of patents filed till date : 10
- The number of patents granted till date : 8

## State of the art Facilities

The School has numerous state of the art laboratories and facilities including VLSI system design and fabrication lab, RTDS lab, Renewable Energy system lab, Radiating system design lab and computational facilities for application development and research. Full-fledged FPGA implementation and development facilities linked with embedded system tool and MATLAB provides a smooth platform for ambitious developers.

## Laboratories

The School has full-fledged laboratories to train the undergraduate, postgraduate students, and research scholars from the very basics to modern trends in the field of Electrical Engineering, Electronics and Communication and Computer Science Engineering. Students utilize the modern lab facilities and equipment to carry out design and testing of various projects. At present there are 33 laboratories that include :

- Advanced Communication Lab
- Algorithm Lab
- Analog & Digital Electronics Lab
- Architecture Lab
- Basic Electronics Lab
- Biomedical Signal Processing Lab
- Cloud Lab
- Communication Engineering Lab
- Computer Networking Lab
- Control & Instrumentation Lab
- Database Systems Laboratory
- Digital Signal Processing Lab
- Electric Machines Lab
- Electrical Technology Lab
- FACTS and Power Quality Laboratory
- HPC laboratory
- Image & Video Processing Lab
- Measurement and Instrumentation Lab
- Microfabrication and Characterization Lab
- Multimedia Lab
- Operating System & DBMS Lab
- Optical Communication Lab
- ·Power Electronics & Electric Drives Lab
- Power Quality & FACT Lab
- Power System Analysis & Protection Lab
- Real Time Digital Simulation (RTDS) Lab
- Real time Embedded Systems Lab
- Real-time Signal Processing Lab
- Renewable Energy Systems
- RF, Microwave & Characterization Lab
- Security Lab
- Signal Processing Lab
- Smart Grid & Hybrid Energy System Lab
- Telemedicine Lab
- Wireless Communication & Sensor Networks Lab

# SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

## About the School

The School aims at imparting inter-disciplinary education in Humanities and other Social Sciences to its students. It has developed into a full-fledged department having expertise in three different disciplines – Economics, English and Psychology. Having a team of six young and dynamic faculties, well-versed in inter-disciplinary areas like environment, finance, management, personality development, communication skills and neural science, this school seeks to generate erudite citizens who would be perfect amalgamation of technical knowledge, creativity, empathy and social responsibility.



## Statistics

- Number of Faculty: 06
- Number of Ph.D. students graduated: 09
- Number of Ph.D. students enrolled at present: 07
- Number of Ph.D. students submitted the thesis: 05
- Number of Publications in 2017 : 8
- Ongoing Research Projects:01
- Completed Research Projects: 12
- No. of Computer Labs: 01
- No. of Computers: 39
- No. of Faculty Rooms: 4
- No. of Equipment's (No. of Major Equipment's): 3

## Integrated Computational Lab with Data Bank (ICLDB)

The ICLDB is meant to be used by the research scholars and faculty members for computation and forecasting of various socioeconomics variables.

## Research Areas

- English language training programme
- Forest Resource Management
- Impact of climate change on Agricultural sector
- Mining Sector and Productivity
- Solid Waste Management
- Valuation of natural resource

# SCHOOL OF INFRASTRUCTURE

## About the School

In the arena of worldwide infrastructural escalation, School of Infrastructure at IIT Bhubaneswar has come up to dedicate its excellence in engineering education, creation of knowledge, innovation in research and leadership in professional services. The mission of the School is to offer unbounded academic environment in undergraduate and postgraduate teaching, doctoral program, research, and public outreach. Presently the School offers programs as follows:

- B.Tech. in Civil Engineering, Dual-degree B. Tech in Civil Engineering + M. Tech. in Structural Engineering, Dual-degree B. Tech in Civil Engineering + M. Tech. in Transportation Engineering,
- M.Tech in Environmental Engineering, M.Tech. in Structural Engineering, M. Tech. in Transportation Engineering and M.Tech. in Water Resources Engineering
- Ph.D. Programmes

The academic activities of the School emphasizes on thorough understanding of fundamental principles, development of creative ability to handle the challenges of real-world Civil Engineering problems and the analytical ability to solve problems having interdisciplinary in nature. The School also encourages its students to engage in extracurricular activities, promotion of team spirit, and refining their budding managerial skills.

## Basic Statistics

- No of faculty members : 16
- No.of B.Tech Students :
  - 48 (1st Year)
  - 32 (2nd Year)
  - 36 (3rd Year)
  - 36 (4th Year)
- No of Dual Degree students:
  - 26 (1st Year)
  - 16 (2nd year)
- No. of PhD Students enrolled in 2017-18: 14
- Number of Ph.D. Students Graduated in 2017-18: 01
- Number of Master Students:
  - Environmental Engg: 06 in 1st Year
  - Structural Engg: 09 in 1st Year and 09 in 2nd Year
  - Transportation Engg: 09 in 1st Year and 08 in 2nd Year
  - Water Resources Engg: 07 in 1st Year
- No of Publications in 2017-18 : 53

## State of the art Facilities

The School is having Advanced Computational Laboratory facility with modelling and simulation packages like PLAXIS 3D, ABAQUS, HYDRUS 3D, VMODFLOW for practical training in handling real-world civil engineering problems. The Environmental Engineering Laboratory of the School is equipped with state-of-the-art equipment like AAS, GC, Freeze Dryer, Radiometer, UV-Vis. Spectrophotometer, Zeta Potential cum Particle Size Analyzer, etc. for carrying out various sophisticated analysis of water and wastewater. The Geotechnical Engineering Laboratory houses advanced instruments such as GPR, Cyclic Triaxial Setup, Laser Profilometer, Flexible Wall Permeameter, etc. The Structural Engineering and Concrete Technology Laboratories house state-of-the-art facilities such as Dynamic Actuators, Shake Table, Servo Controlled Compression Testing Machines, NDT Equipment, Corrosion Analyser, etc. for analysis and evaluation of various types of civil engineering structures. The Transportation Engineering Laboratory is equipped with state-of-the-art instruments to carry out advanced experiments and simulations works such as bituminous mix design, pavement evaluation, rutting measurement, evaluation of multi-modal urban transportation network, traffic flow etc. The Laboratory facility houses sophisticated instruments such as Dynamic Shear Rheometer, Repeated Load Triaxial Test, Wheel Tracking Machine with Roller Compactor, Superpave Gyratory Compactor etc. Besides the lab has a computational facility for those working in Transportation System Planning and Traffic Engineering field. The Water Resources Engineering Laboratory is capable of carrying out various experiments and simulations relating to fluvial hydraulics, flow through submerged and emergent vegetation. The laboratory is equipped with state-of-the-art equipment like Down looking and Side looking Acoustic Doppler Velocimeters, Acoustic Doppler Profilers, Recirculating Tilting Flumes with Wave Generator and sensors like Flow Visualisation Apparatus, MIKE_SHE software, Water Depth Recorder, Digital Flowmeter, etc.


## Laboratories

The School of Infrastructure currently runs with eight well-equipped under graduate and postgraduate laboratories as follows:

- Advanced Computational Laboratory
- Concrete Technology Laboratory
- Engineering Mechanics Laboratory
- Environmental Engineering Laboratory
- Geotechnical Engineering Laboratory
- Groundwater Hydrology Laboratory
- Hydro-meteorology Laboratory
- Soil Dynamics Laboratory
- Structural Engineering Laboratory
- Surveying Laboratory
- Transportation Engineering Laboratory
- Water Resources Engineering Laboratory

All of the above laboratories are equipped with modern facilities to carry out high-end research works in any of the micro specializations of Civil Engineering field.

In addition to the state-of-the-art laboratories, the classrooms are equipped with multimedia projectors. Besides, the school is having 20 faculty office chambers, 01 seminar room, and 01 conference room.

**The School is involved in the following industrial and academic collaborations:**

| Name of Faculty Member | Industrial and Academic Collaboration |
|---|---|
| Prof. R.K. Panda | • Collaboration with Texas A & M, IIT Kharagpur and OUAT and KIIT University through a multi-institutional project.<br>• Industrial collaboration with Bokaro Steel Ltd. SAIL,Bokaro |
| Dr. U.C. Sahoo | Providing technical support under PMGSY to Ministry of Rural Development |
| Dr. Debasis Basu | IMPRINT-India, an initiative of MHRD, Govt. of India and Partner Ministry is Ministry of Housing and Urban Affairs, GOI, with Bhubaneswar Development Authority (BDA) as industry implementation partner. |
| Dr. B.H. Rao | NALCO, Bhubaneswar |
| Dr. Arindam Sarkar | Received research project in collaboration with IISC Bangalore from Ministry of Water Resources, GOI |

Currently, the school is working on 16 research projects involving 12 of its faculty members and 15 students' participation.

The School organized the GIAN programme on the theme “Design and performance of Pavements” between 19th and 23rd June, 2017.

# SCHOOL OF MECHANICAL SCIENCES

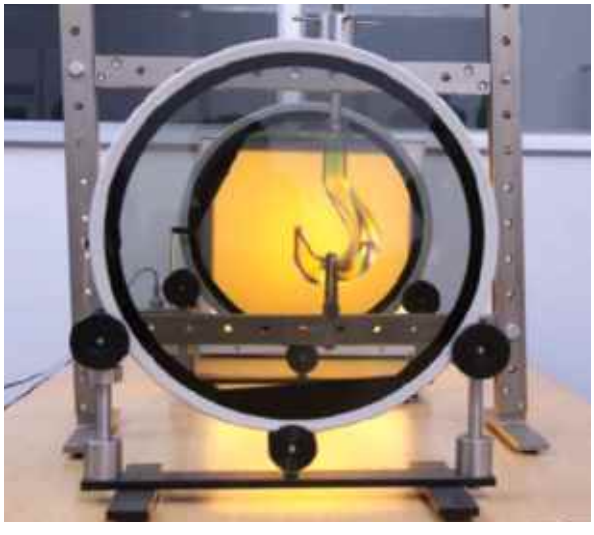
## About the School

The School of Mechanical Sciences at IIT Bhubaneswar endeavors to be both globally competent and locally relevant.

Presently the School offers programs as follows:

- B. Tech. in Mechanical Engineering, B. Tech. in Mechanical Engineering + M. Tech. in Mechanical System Design, B. Tech. in Mechanical Engineering + M. Tech. in Thermal Science & Engineering, B. Tech. in Mechanical Engineering + M. Tech. in Manufacturing Engineering
- M. Tech. in Mechanical System Design,
- M. Tech. in Thermal Science and Engineering and
- Ph.D. Programmes

Thrust areas of the School include Energy & Environment, Advanced Manufacturing, Autonomous Robotics, Product Design and Agricultural automation. The faculty members of the school are also involved in basic research in their own areas of specialization while also coming together to blend their shared expertise in creating technologies, products and processes that will enrich both the national and local economy. The school sees its role in nation building via three important avenues of contribution – building of human capital, building of knowledge capital and building of wealth capital through creation of comprehensive idea to-industry cycle.



## Statistics

- No of faculty : 20
- No. of B. Tech Students: 204
- No. of PhD Students enrolled (2017-18): 11
- Number of M.Tech. Students: 58
- Number of Publications 2017: 68
- No. of Patents filled: 4

## State of the Art Facilities

The Advanced Product Development Laboratory houses a high end FORTUS 400 FDM based rapid prototyping machine and a high accuracy 3-D Optical Profilometer. The advanced manufacturing laboratory has various in-house developed equipment such as 400W Fiber laser micro workstation, Laser-Milling Hybrid processing and a Pulsed Micro Micro-Electroforming. Besides, the lab also houses CNC Router with Digitizer for Reverse Engineering, CNC Milling and Gear Hobbing Machine. The thermo-fluid laboratory has NEXA PEM Fuel Cell Training System, Flame propagation & stability unit and Mach-Zehnder Interferometer for visualization of various heat transfer phenomena.

## Laboratories

School has well equipped laboratories along with a high-end computational laboratory with 30 workstations served byan 18 blade server. This laboratory also provides various software packages like ANSYS, SolidWorks, NASTRAN, Hyper Works, Pro-E, CATIA, ADAMS, COMSOL, MATLAB, LabVIEW, ASAP-PRO, Tecplot360etc. School has following laboratories with major equipments:

**Advanced Manufacturing Laboratory**

Optical Profilometer, Profile projector, Grinders, Laser based Micro-machining Workstation.

**Advanced Product Development Laboratory**

Fused Deposition Method based Rapid Prototyping Production system, Optical Three Dimensional (3D) Profiler System

**Artificial Intelligence and Mechatronics Lab**

Stewart Platform, Humanoid robot platforms (Bioloid and Lamark), Manipulator arm, Hexapod robot, four wheeled robots, Table top CNC Milling and Turning machines

**CAD/CAM/CAE Laboratory**

Work Station for CADLAB, UPS for CADLAB, Electrification of CADLAB, Work Station for CADLAB, Blade Server, ANSYS Software (25users), ANSYS Software (75users), PRO Engg. Software, Hyper Works Software, Scanner & Plotter for CADLAB, UPS for CADLAB, MSC Software bundle, PBS Pro, Tech Plot 360, CATIA, DELMIA, SmartTeam.

**Computational Aero-Acoustics Laboratory**

**CWF Laboratory**

TIG & MIG welding, General purpose belt grinder & surface polisher, Hydraulic specimen mounting press, Induction furnace, Resistance furnace, Foundry equipment & Machinery, Muffle furnace, 80 Ton Hydraulic Press.

**Fluid Dynamics Laboratory**

4 Channel Hot Wire Anemometer, 70 cfm 13 bar Screw Type Compressor

**Fluid Mechanics Laboratory**

Experimental set ups for measurement of fluid viscosity, flow measurement, major and minor losses, forces on immersed bodies, flow visualization (All experimental set ups are developed by U.G. students of IIT Bhubaneswar)

**Heat Transfer Laboratory**

Concentric Tube heat exchanger Unit, Shell and Tube Heat Exchanger Unit, Combined Free and Forced Convection and Radiation Heat Transfer Unit, Radiation Errors in Temperature Measurement, Unsteady State Heat Transfer Unit, Refrigeration Cycle Demonstration Unit, Linear and Radial Heat Conduction Unit, Radiation Heat Transfer Unit, Combined Cycle Refrigeration Unit with Cycle Inversion Valve, Extended Surface Heat Transfer Unit, Single Tube Boiling Heat Transfer Unit, Critical Heat Flux Boiling Heat Transfer Unit, Plate Heat Exchanger Unit, Boiling Heat Exchanger Unit, 5×3 Tube Bundle Boiling Heat Transfer Testing Setup, PCM Based Electronic Chip Cooling Setup

**IC Engine Laboratory**

Variable Compression Ratio Engine, Axial Flow Gas Turbine Unit, Flame Propagation & Stability Unit, Nexa Fuel Cell Training System, 4 Stroke 4 Cylinder CRDi Diesel Engine with Open ESU, Exhaust Gas Analyzer.

**Machine and Mechanism Laboratory**

Static and Dynamic Balancing, Whirling of Shaft, Gyroscope, Governor, Anti-Friction Bearing, Hydrodynamic Lubrication, Basic Kinematics Demonstrations – Gears, Linkages, Mechanism, Inversion, Differential, Universal Vibration Apparatus.

**Machine Tools & Machining Laboratory**

Wire cut EDM, Ultrasonic drilling cum milling machine, CNC vertical milling center, Master gear hobbling, radial drilling machine, Industrial grinder, Lathe machine, Milling machine, Hydraulic surface grinder, Die Sinking EDM, Dynamometer, Lapping Machine, Telerond.

**Materials Testing Laboratory**

Hardness Testing Machines: Rockwell, Brinell, Vickers, Spring Testing Machine, Torsion Testing Machine, Rotary Bend Fatigue Testing Machine, Erichsen Cupping Test Machine, Photo-elastic Bench

Opto-Thermal Lab (Thermo-Fluid Lab)

Mach– Zehnder Interferometer setup

**Sense & Process Laboratory**

Sound Impedance Tube, Handheld Sound Analyzer, DAQ Boards & PXI Chassis, Compact CRIO DAQ system

# SCHOOL OF MINERALS, METALLURGICAL AND MATERIALS ENGINEERING

## About the School

The School of Minerals, Metallurgical and Materials Engineering at IIT Bhubaneswar, established in 2012, is a unique initiative where minerals, metals and materials have come into a collaborative existence with a mission to be locally relevant and globally competitive.

Presently the School offers programs as follows:

- B.Tech. in Metallurgical and Materials Engineering,
- B.Tech.-M.Tech. Dual degree in Metallurgical and Materials Engineering,
- M. Tech. in Metallurgical and Materials Engineering and
- ·Ph.D. Programme

Located in the state of Odisha, one of the most mineral rich states of India, the school is aware that the maximum economic benefit from a mineral could be achieved when economically transformed to its final product leading to ultimate benefit.

The focus of school activities is therefore multi-directional with an emphasis on both teaching and research. In this regard, the school has drawn a road-map to progress via partnership with Institute of Minerals and Materials Technology (CSIR-IMMT) at Bhubaneswar and student and faculty exchange with Warwick Manufacturing Group (WMG) at Warwick University, UK and Shanghai Jiao Tong University, China. The School has also received a generous endowment of 30 million INR from MGM Group to establish a permanent Chair Professorship.

Currently, the faculty members are engaged in sponsored projects by Department of Science and Technology, UGC-DAE Consortium of Scientific Research - Kalpakkam, Planning Coordination Department - Government of Odisha and Uchchatar Aviskar Yojana - MHRD. Also, few consultancy projects with Tata Sponge Iron Limited and others are being undertaken.

## Statistics

- No of faculty: 11
- Number of Publications 2017: 17
- No. of Class Rooms with multimedia projectors : 2 Nos
- No. of Seminar/Conference Rooms: Meeting room with 1 No multimedia projector
- No. of Computer Labs : 1 No
- No. of Computers : 10 Nos workstation + 6 nos desktop (5 per use and 1 for equipment)
- No. of Faculty Rooms : 11 Nos
- No. of Equipment ( No. of Major Equipment) : 56 Nos
- Student exchange programme: Six undergraduate sixth semester students were sent to SJTU, China for summer internship in 2017. Two M. Tech. students were sent to WMG, UK for M. Tech. project work in 2017.
- No. of students sent abroad through student exchange programme: 8
- Industry and academic collaborations: Tata-sponge iron limited, Joda
- Number of Live projects with student participation: 1 (with Tata sponge iron limited)


## State of the art Facilities

The School has procured a Field Emission Scanning Electron Microscope with EDX and EBSD facility which is under Central Instrumentation Facility.

## Laboratories

The School has been developing a number of laboratories to cater to undergraduate and postgraduate teaching and well as various research activities of the School and the Institute. The School is in process of creating facilities for microstructural characterization of materials. Some of them include the microscopy facilities like Field Emission Scanning Electron Microscope with EDX and EBSD, Inverted Optical microscopes with image analysis facility, Melting and heat treatment facility, Metallography facility for sample preparation, Universal Hardness, Testing Machine, Electrochemical workstation and Computer workstation. The school has the following laboratories:

- Electrometallurgy and Thermodynamics Laboratory
- High Temperature Processing Laboratory
- Mechanical Testing Laboratory
- Metallography Laboratory
- Minerals Processing Laboratory
- Modeling and Simulation Laboratory
- Optical Microscopy Laboratory
- Physical Metallurgy Laboratory
- Powder Processing Laboratory
- Materials Characterization Laboratory
- Process Control and Instrumentation Laboratory

# CENTRE OF EXCELLENCE

## Augmented Reality and Virtual Reality (VARCoE)

As part of IIT Bhubaneswar's initiative for strengthening Research and Entrepreneurship supported by In Jan 2018, Smt. Susmita Bagchi and Shri Subroto Bagchi provided a philanthropic support of Rs 2.50 crore followed by a matching grant from Startup Odish to Research and Entrepreneurship Park of IIT Bhubaneswar to establish a Center of Excellence in Augmented Reality and Virtual Reality (VARCoE) to enhance research and entrepreneurship activity in this important area. Subsequently, Software Technology Parks of India (STPI), provided a grant of Rs 2.50 crore to the VARCoE initative.

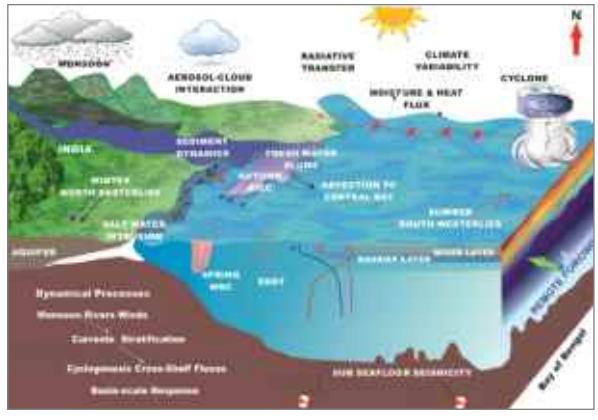
In a meeting held on 21.04.2018 (Saturday) Mr. Manas Ranjan Panda, Director, STPI Bhubaneswar handed over a cheque of Rs.2.5 crores to Prof. R. V. Rajakumar, Director, IIT Bhubaneswar in presence of Mr A P Padhi, Chief Secretary Govt. of Odisha, Mr L.N. Gupta, Additional Chief Secretary, Mr Ashok Meena, Principal Secretary, CA&PG Department, Shri Subroto Bagchi, Chairman, Odisha Skill Development Authority, Dr Manoranjan Satapathy, Professor-in-charge of the center and Dr Satyanarayan Panigrahi, Head of School of Mechanical Sciences, IIT Bhubaneswar.

Prof. R. V. Raja Kumar, Director, IIT Bhubaneswar mentioned that establishment of VARCoE is one of the first few initiatives in the country in the area of ARVR and expressed his sincere thanks to all the donors for being party to an august beginning and reiterated the commitment of the IIT Bhubaneswar to foster research and entrepreneurship activity in this important area. He also acknowledged that the support will give an impetus to the ongoing research, and help in taking the research activity to the next level including immersive visualisation and technology incubation.

Speaking on the occasion, Chief Secretary, Govt. of Odisha expressed satisfaction on management of the fund and development of the centre by the Institute of National Importance and urged the team members to come out with real innovation that can reach to the masses.

## Bay of Bengal Coastal Observatory (BoBCO)

Bay of Bengal Coastal Observatory (BoBCO) is a centre of excellence in Earth System Sciences. It aims to generate high skilled and competent human resources to address challenging issues such as climate change, monsoon variability, tropical cyclone, extreme weather events and disaster mitigation through multiscale and multidisciplinary approach by examining the complex interactions of Land-Ocean-Atmosphere in terms of observations, modeling and prediction with special reference to Bay of Bengal.



## Centre of excellence on Novel Energy Materials (CENEMA)

Centre of excellence on Novel Energy Materials (CENEMA) at IIT Bhubaneswar seeks to develop cutting edge and futuristic materials for energy application. The center focuses on development of two dimensional (2D) hybrid materials for energy storage and conversion.

The primary aim of this center is to become hub for developing and designing new materials for energy conversion and storage, with a bottom up approach starting from atomistic/molecular design to a final usable product. Other complementary functions of center include: industrial outreach and knowledge transfer, operation of shared facilities to support materials research on- and off-campus, educational outreach to graduate and undergraduate researchers. The current team members come from three different centrally funded institutes in Bhubaneswar (IITBBS, IMMT and IOP) with expertise ranging from supramolecular chemistry to fuel cell engineering and other partners include Rice University, Applied Materials.

## DESIGN INNOVATION CENTRE (DIC)

Design Innovation Centre (DIC) an initiative of MHRD under the National Design Innovation Network since its days of establishment in February 2015 has been pioneer creating an usher among youth of IIT Bhubaneswar. The financial year 2017-18 witnessed some of exciting events, innovations with establishment of startups from DIC.

### AIMS & OBJECTIVES:

We work in HUB & SPOKE Model with IIT Bhubaneswar as Hub and Spokes are as follows:

- Ravenshaw University (Psychology & Philosophy Department), Cuttack
- Bhubanananda Orissa School of Engineering (BOSE), Cuttack
- Kendriya Vidyalaya School – No.1, Bhubaneswar
- College of Engineering & Technology (CET), Bhubaneswar

“Our Projects focus on the domain of children's product such as toys, teaching aids, furniture, books, movies, medical aids and many more.”

“We infuse a culture of innovative thinking in the budding engineers to undertake projects which lead to development of educational and community driven products primarily for children.”

### OUR FOCUS:

- Product Development and Design Teaching.
- To become financially self-sustained within five years of inception through aggressive entrepreneurial activities.
- To act as a bridging element between industry and academia.
- Explore and proliferate the rich heritage and culture.


## DIC STATUS

The financial year 2017-18 witnessed some of exciting events which are as follows.

- "Advanced Industrial Automation" informative workshop based on learning about the PLC, HMI/MMI, SCADA, AC Driver was organized by the DIC, IITBBS from 19th to 21st January, 2017.

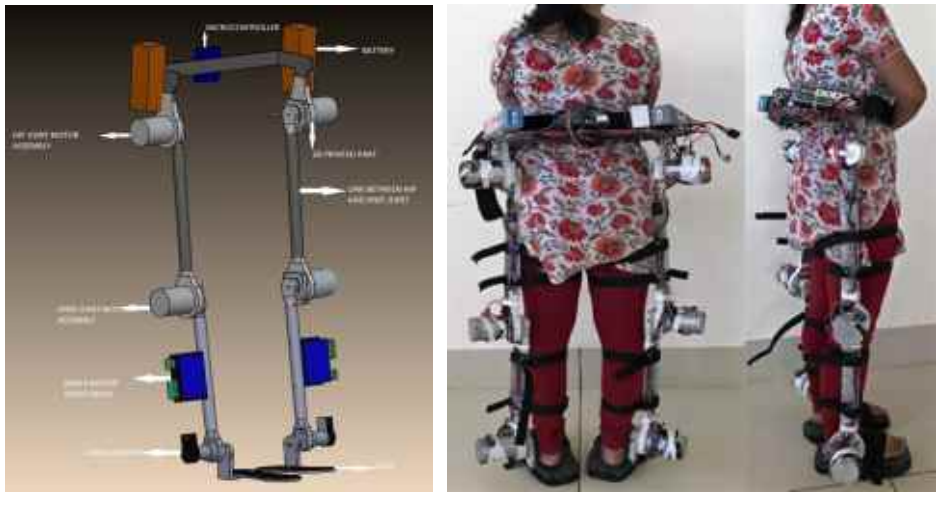
- "Lab Fest" featuring M.Tech students of the School of Mechanical Sciences showcased their projects based on topics like MatLab, Hyperspace and Cryogenics with encouraged participants from children of Kendriya Vidyalaya-I, Bhubaneswar along with their teachers visited DIC during this event.


- An exciting design competition “EGGLOURIOUS BATTLE-The Egg Drop Challenge” was conducted on 3rd September, 2017.

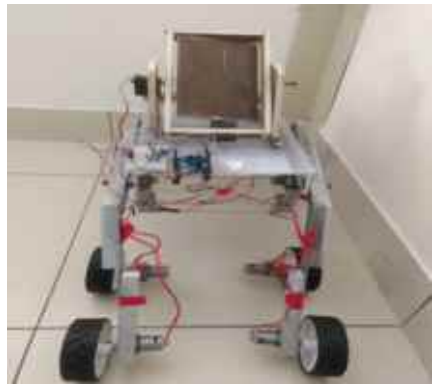
- An Idea Pitching session was conducted for SPOKE KV No-1, Bhubaneswar students on 26th July, 2017.

- A team of DIC HUB & SPOKES participated at ALL INDIA DIC MEET-2018 organized by DIC, IIT BHU & BHU on 9th & 10th February 2018 thereby showcasing DIC activities.

**Glance of different products made by students, faculties as well as DIC officials.**

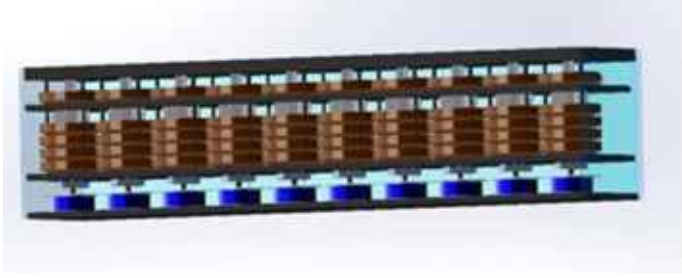


**LOWER LIMB EXOSKELETON FOR HUMAN LOCOMOTION ASSISTANCE**



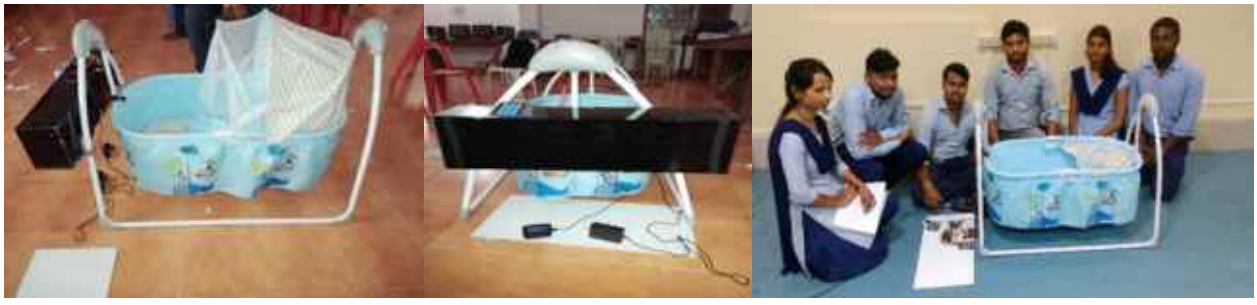
**UNMANNED ARMED GROUND VEHICLE**

**A BOARD GAME "KNOTTY KNOTS"**



**AUTO ABACUS VEHICLE DEVELOPMENT FOR REDUCTION OF CHILD MORTALITY RATE IN RURAL and INACCESSIBLE AREAS DEVELOPMENT OF SIMULATOR FOR COGNITIVE BRAIN DEVELOPMENT IN CHILD**
**Products developed by SPOKES, Bhubanananda Orissa School of Engineering (BOSE), Cuttack**

Back Pack Folding Bicycle For Kids



Smart Baby Swing

Folding Chair Cum System Smart Stroller

Smart Air Bed For Kids

Arduino Based Urination System

**STARTUP ACTIVITIES OF DIC**

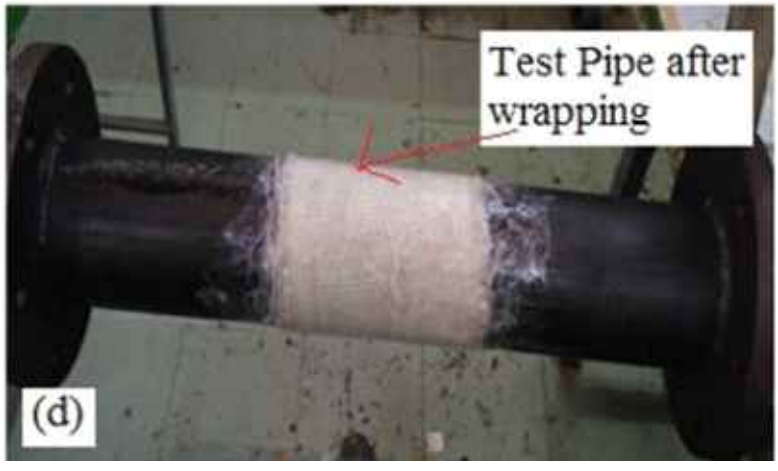
**VASITARS PVT. LTD**

VASITARS Pvt. Ltd. Co-founded by Mr. Vishwas Chandra Khan and Mr. Tushar Gautam is a technology-based startup founded by students & faculty members of School of Mechanical Sciences, IIT Bhubaneswar to provide In-Situ composite repair solutions to damaged transmission pipelines (Patent No. allotted is 201731007916). It is the first Indian company to provide "Complete in-situ Composite Repair Solutions" to all kind of damage scenarios in transmission pipelines. The technique is well tested at laboratory scale and presently it is in pilot scale.


Wraping
Applying resin
(a)


Applying resin
(b)


Rolling for better wetting of resin
(c)


Test Pipe after wrapping
(d)

**REAL TIME WEIGHT MEASUREMENT USING IOT AND BIG DATA ANALYSIS FOR LPG GAS CYLINDER**

### ACHIEVEMENTS

- The said company has been supported by Indian Oil Corporation with a fund of Rs. 64 Lakhs for Testing & Commercialization.
- Startup Odisha funded Vasitars with an amount of Rs. 5.0 Lakhs.
- The company was selected among Top 50 innovators in IIGP-2.0 (Indian Innovation Growth Programme).
- They also received 1st Prize in Business Plan competition at TECHKRITI-2017, IIT Kanpur.
- The company got incubated at STARTUP CENTRE, IIT Bhubaneswar and IIT Madras Research Park with extended lab facilities for their Prajjawala Project.
- Vasitars has received 2nd Prize at TECHKRITI-2018, IIT Kanpur under the category of Social Track Events.
- They also received 1st Prize for their Prajjawala Project in SRIJAN at IIT Kharagpur, Global Entrepreneurship Summit-2018.
- They also received 1st Prize for their Prajjawala Project in E-Summit Business Plan Event at IIT Bhubaneswar.
- Vasitars founders in association with IITBBS faculties have filed 3 patents.
- Vasitars has been successful in implementing the pipeline mechanism at sites of IOCL (Paradeep), Apollo Tyres (Chennai) etc.

### TOBEL.IN

TROBEL Co-founded by Mr. Manoranjan Kumar in 2016, is an entrepreneurial endeavor which aspires to provide the service of a centralized library throughout the country, with the initial stages focusing more on the metropolitans and other major cities of the country, starting with Bhubaneswar, Odisha. We aim to provide the joy of book reading to people in the most convenient, affordable, and accessible in secure manner possible.

The company is expanding its horizon beyond IIT Bhubaneswar campus to different parts of the city, with upcoming recent outlet services at KIIT University square.

## SK Dash Centre of Excellence of Bio-Sciences and Engineering and Technology (SKBET)

IIT Bhubaneswar established the S K Dash Centre of Excellence of Bio-Sciences and Engineering and Technology (SKBET) with a generous grant from Dr. S. K. Dash Foundation, USA to carry out research on probiotics and broader areas of biology. The center hosts workshops and brainstorming sessions by bringing together experts on the broad areas of probiotics and multiscale modeling at IIT Bhubaneswar. The goal of SKBET is to carry out cutting-edge research on microbiome from various sources such as; human, soil, and water from the state of Odisha. The next generation probiotics and microbes discovered through this research will help in making formulations for the human consumption as well as for the organisms in aquaculture. The center now hosts to the Probiotics and Human Microbiome research laboratory. This Laboratory is applying innovative approaches and state of the art technology to understand and solve problems that are related to Human gut microbiome associated diseases. The laboratory is designed to carry out: Probiotic culture & characterization area (Microbiology /infective work area), Molecular biological characterization of isolated probiotics (Molecular biology work –non-contaminated), Cell culture facility (sterile), Bioinformatics workstation, Utility (Media preparation, autoclave area). The laboratory is now fully equipped with various instruments and consumables. Researchers are currently working in the center for the development of a microbial formulation to prevent eutrophication in aquaculture. Development of a few next-generation probiotics formulations suiting the microbiome of the local population is another objective of the center.

(a) The working area of the molecular biology laboratory

(b) Microbiological work in progress

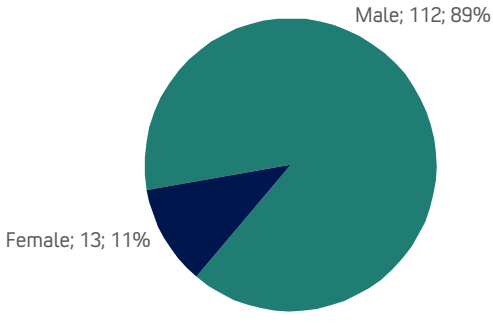
(c) The gel documentation system

(d) The PCR cabinet with PCR machine

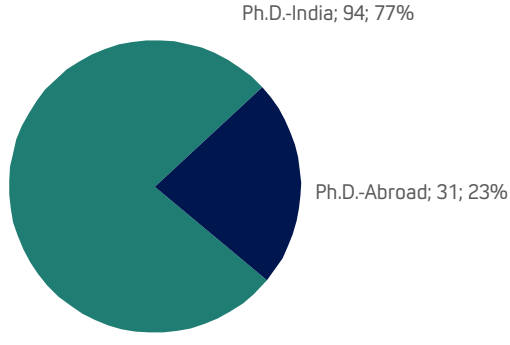
**Figure.** The molecular biology laboratory equipped with instruments and molecular as well as general chemicals and consumables.

# OUR FACULTY

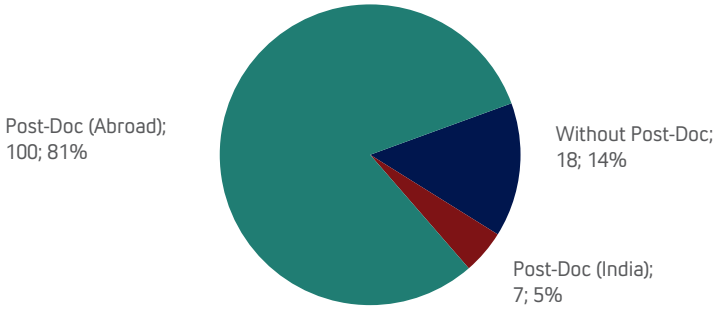
## Gender wise distribution of Faculty



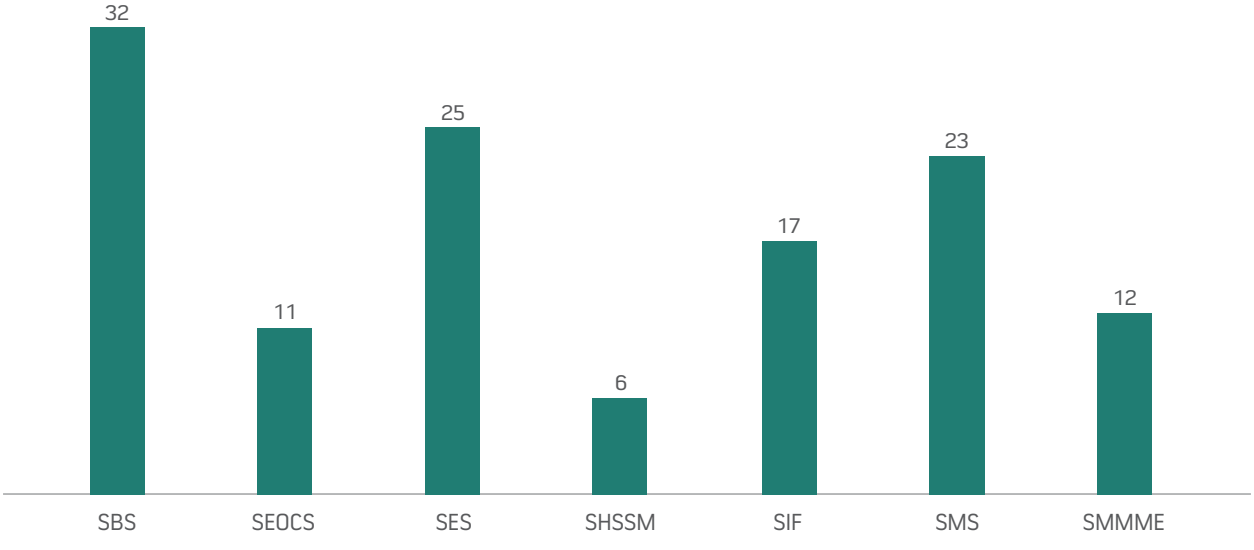

## All Faculty with PhD




## Faculty With Post Doctoral Experiences




## School wise distribution of Faculty



## School of Basic Sciences

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 1. | **Prof. Saroj Kumar Nayak**<br>Professor<br>nayaks@iitbbs.ac.in | Jawaharlal Nehru University, 1995 | First Principles Molecular dynamics Simulations, Nanostructures, Quantum transport, Quantum Biology |
| 2. | **Prof. Sujit Roy**<br>Professor<br>sroy@iitbbs.ac.in | IIT Kanpur, 1987 | Organometallic Chemistry, Homogeneous Catalysis |
| 3. | **Prof. V. R. Pedireddi**<br>Professor<br>vr.pedireddi@iitbbs.ac.in | University of Hyderabad, 1993 | Solid State Chemistry; Supramolecular Chemistry; Self-Assembly of Biological, Organic and Organic-inorganic Ensembles |
| 4. | **Prof. A. K. Kapoor**<br>Visiting Professor<br>akkapoor@iitbbs.ac.in | IIT Kanpur, 1975 | Quantum Mechanics and Quantum Field Theory<br>LEFT ON 31.12.2017 |
| 5. | **Prof. V. R. Yerikalapudy**<br>Visiting Professor<br>ryvasudeva@iitbbs.ac.in | Andhra University, 1980 | Mathematical Modelling for Ultrasonic Nondestructive Testing ;Numerical Methods in elastic wave motion and vibration; Techniques of Applied Mathematics |
| 6. | **Prof. Matjaz Kovse**<br>Visiting Faculty of Foreign Origin | University of Maribor, 2008 | Graph Theory |
| 7. | **Dr. Akshay Kumar Ojha**<br>Associate Professor<br>akojha@iitbbs.ac.in | Utkal University, 1997 | Soft computing; Optimization Theory(Geometric programming and Fractional Programming; Data Mining and Portfolio Optimization |
| 8. | **Dr. T. V. S. Sekhar**<br>Associate Professor<br>sekhartvs@iitbbs.ac.in | IIT Madras, 1995 | Numerical Methods; Computational Fluid Dynamics; |
| 9. | **Dr. Abhijit Datta Banik**<br>Assistant Professor<br>adattabanik@iitbbs.ac.in | IIT Kharagpur, 2007 | Queueing Theory, Applied Probability Models, Stochastic Modelling and Simulation, Stochastic Models in Operations Research and their application in Communication systems, Transportation, Manufacturing, Production and Inventory Systems. |
| 10. | **Dr. Akhilesh Kumar Singh**<br>Assistant Professor<br>aksingh@iitbbs.ac.in | IIT Kanpur, 2007 | Fluorogenic and Chromogenic Chemosensors; Magnetic Materials and MRI Contrast Agents; Synthesis and Characterization of Task Specific Ionic Liquids and Their Application |
| 11. | **Dr. Anasuya Roychowdhury**<br>Assistant Professor<br>aroychowdhury@iitbbs.ac.in | University of Texas Medical Branch, 2009 | Chemomechanistic physiology and regulation of class of enzyme ATPase; Role of ATPase in Cancer Biology; Role of ATPase in Biological Clock |
| 12. | **Dr. Ashis Biswas**<br>Assistant Professor<br>abiswas@iitbbs.ac.in | Bose Institute, 2006 | Elucidation of structure-function relationships in small heat shock proteins and its importance in human diseases (leprosy and tuberculosis) using biochemical and biophysical techniques.; Investigating the effect of various post-translational modifications on the eye lens crystalline proteins and their role in developing cataract formation in human lens using biophysical methods.; Elucidating the mechanism behind the interaction of metal complexes (anti-cancer agents) with DNA and proteins using various biochemical techniques. |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 13. | **Dr. C. S. Rout**<br>Ramanujan Fellow<br>csrout@iitbbs.ac.in | JNCASR, Bangalore, 2008 | Applied Physics, 2D Materials, Energy storage devices and Supercapacitors, biosensors, Field emission<br>LEFT ON JULY, 2017 |
| 14. | **Dr. Chandrasekhar**<br>Bhamidipati<br>Assistant Professor<br>chandrasekhar@iitbbs.ac.in | Institute of Physics, 2006 | Heat Engines, Thermodynamics and Statistical Mechanics; Black Holes; String Theory |
| 15. | **Dr. Kousik Samanta**<br>Assistant Professor<br>kousik@iitbbs.ac.in | Texas A&M University, College Station, USA, 2009 | Quantum Chemistry; Scattering theory; Mixed quantum-classical dynamics |
| 16. | **Dr. Malay Kumar**<br>Bandyopadhyay<br>Assistant Professor<br>malay@iitbbs.ac.in | Jadavpur University, Calcutta, 2008 | Open Quantum System; Non-equilibrium Statistical Mechanics; Nanomagnetism |
| 17. | **Dr. Niharika Mohapatra**<br>Assistant Professor<br>niharika@iitbbs.ac.in | IIT Bombay, 2006 | Multiferroics; Thermoelectrics; Topological phases of matter |
| 18. | **Dr. Rajan Jha**<br>Assistant Professor<br>rjha@iitbbs.ac.in | IIT Delhi, 2007 | Optical Devices; Plasmonics; Fiber Optic |
| 19. | **Dr. Rajesh Kumar**<br>Visiting Faculty<br>rajesh@iitbbs.ac.in | Otto-von-Guericke University Magdeburg, Germany, 2011 | Pure and Applied Mathematics<br>LEFT ON 27.07.2017 |
| 20. | **Dr. Sabyasachi Pani**<br>Assistant Professor<br>spani@iitbbs.ac.in | IIT Kharagpur, 2004 | Variational Inequalites and Complementarity Problems; Applied Functional Analysis; Optimization Techniques |
| 21. | **Dr. Sasmita Barik**<br>Assistant Professor<br>sasmita@iitbbs.ac.in | IIT Guwahati, 2007 | Combinatorial Matrix Theory; Graph Theory; |
| 22. | **Dr. Satchidananda Rath**<br>Assistant Professor<br>srath@iitbbs.ac.in | Institute of Physics Bhubaneswar, 2006 | Semiconductor nanosheets, Dilute magnetic semiconductor, Metal clusters, graphene,; Optical properties, fast transitions, Raman scattering, Small angle x-ray scattering, Rheology; Solar cell, Light Emitting Diodes |
| 23. | **Dr. Seema Bahinipati**<br>Assistant Professor<br>seema.bahinipati@iitbbs.ac.in | University of Cincinnati, Ohio, U.S.A., 2008 | Experimental High Energy Physics [B Physics, CP Violation, Beyond Standard Model Physics] |
| 24. | **Dr. Shantanu Pal**<br>Assistant Professor<br>spal@iitbbs.ac.in | IIT Bombay, 2006 | Development of novel methodology and total synthesis of biologically active natural products; Development of chemically modified small molecules as therapeutic agent; Synthesis of modified nucleic acid as anticancer or antiviral drug. |
| 25. | **Dr. Shyamal Chatterjee**<br>Assistant Professor<br>shyamal@iitbbs.ac.in | The University of Heidelberg, Germany, 2007 | Experimental atomic, molecular and surface physics; Nanomaterials; Biomolecules, clusters |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 26. | **Dr. Snehasis Chowdhuri**<br>snehasis@iitbbs.ac.in | IIT Kanpur, 2005 | Theoretical Chemistry; Statistical Mechanics; Molecular Dynamics Simulation |
| 27. | **Dr. Soumendra Rana**<br>Assistant Professor<br>soumendra@iitbbs.ac.in | IIT Bombay, 2007 | G-protein Coupled Receptor Biology; Molecular Modelling and Computational Biology; Design, Synthesis and Characterization of Peptides |
| 28. | **Dr. Srikanta Patra**<br>Assistant Professor<br>srikanta@iitbbs.ac.in | IIT Bombay, 2005 | Metal Mediated Organic Transformations (Catalysis);Metal Based Anticancer Drugs; Functional Materials, Luminescent Materials, Sensors |
| 29. | **Dr. Tabrez Khan**<br>Assistant Professor<br>tabrez@iitbbs.ac.in | University Of Mumbai, 2009 | Synthetic Method Development; Natural products and natural product inspired bioactive molecule synthesis |
| 30. | **Dr. Tarakanta Nayak**<br>Assistant Professor<br>tnayak@iitbbs.ac.in | IIT Guwahati, 2007 | Complex Dynamics; Fractals; Independence polynomials and independence fractals of graphs |
| 31. | **Dr. Bankim Chandra Mandal**<br>Assistant Professor | University of Geneva, Switzerland, 2014 | Numerical Analysis, Scientific Computing, Partial Differential Equations, Domain Decomposition Methods |
| 32. | **Dr. Sunil Kumar Prajapati**<br>Visiting Faculty | IIT Delhi, 2013 | Algebra |

## School of Earth, Ocean and Climate Sciences

| | | | |
|---|---|---|---|
| 33. | **Prof. Prem Chand Pandey**<br>Visiting Professor<br>pcpandey@iitbbs.ac.in | Allahabad University, 1972 | Oceanography; Atmospheric Sciences; Climate Science and Polar research<br>LEFT ON 17.11.2017 |
| 34. | **Prof. Uma Charan Mohanty**<br>Visiting Professor<br>ucmohanty@iitbbs.ac.in | Odessa Hydro-Meteorological Institute, USSR, 1978 | Tropical Meteorology, Numerical Weather Prediction, Monsoon Dynamics, Regional Climate Studies and Meso-scale Modelling |
| 35. | **Prof. Hrusikesh Mishra**<br>Visiting Professor | University of Wollongong, New South Wales, Australia, 1987 | Coal Geology/Petrology, Coal Preparation, Coal Petrology and its application in Coal & Hydrocarbon exploration |
| 36. | **Dr. Kiranmayi Landu**<br>Assistant Professor<br>kiranmayi@iitbbs.ac.in | IISc Bangalore, 2008 | Climate Dynamics; Tropical Meteorology; Extreme Weather events |
| 37. | **Dr. Sourav Sil**<br>Assistant Professor<br>souravsil@iitbbs.ac.in | IIT Kharagpur, 2012 | Physical Oceanography; Ocean Circulation Modelling; Coastal Dynamics |
| 38. | **Dr. Debadatta Swain**<br>Assistant Professor<br>dswain@iitbbs.ac.in | University of Pune, 2009 | Satellite & Physical Oceanography; Ocean-Atmosphere Interactions & Modelling; Atmospheric Dynamics |
| 39. | **Dr. Raj Kumar Singh**<br>Assistant Professor<br>rksingh@iitbbs.ac.in | IIT Kharagpur, 2009 | Paleoclimatology and Paleoceanography; Marine Micropaleontology; Hydrogeology |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 40. | **Dr. Sandeep Pattnaik**<br>Assistant Professor<br>spt@iitbbs.ac.in | Andhra University, 2006 | Tropical Meteorology; Monsoon, Cloud Physics; Extreme Events (e.g. Tropical cyclone, Heavy Rainfall, Lightning) |
| 41. | **Dr. Syed Hilal Farooq**<br>Assistant Professor<br>hilalfarooq@iitbbs.ac.in | IIT Bombay, 2010 | Hydrogeochemistry; Geothermal Energy; Organic Geochemistry |
| 42. | **Dr. Vinoj. V**<br>Assistant Professor<br>vinoj@iitbbs.ac.in | IISc Bangalore, 2009 | Aerosol Cloud Climate Interactions; Satellite Remote Sensing, Radiative Forcing, Field Measurements; Monsoon and Climate Change, Climate Modelling |
| 43. | **Dr Abhishek Kumar Rai**<br>Visiting Faculty<br>akrai@iitbbs.ac.in | University of Cambridge, UK, 2005 | Seismology; Geophysics |
| 44. | **Prof. Scott Andrew Whattam**<br>Visiting Faculty of Foreign Origin<br>sawhatta@iitbbs.ac.in | The University of Hong Kong, 2003 | Igneous Petrology, Tectonics, Cosmochemistry, Planetary Science, Geochronlogy |

## School of Electrical Sciences

| | | | |
|---|---|---|---|
| 45. | **Prof. R. V. Raja Kumar**<br>Professor, Director<br>director@iitbbs.ac.in | IIT Kharagpur, 1987 | Wireless communications systems; Wireless networking protocols; Channel equalization and baseband processing; Detection methods and systems; Tracking algorithms; Adaptive filtering algorithms and their performance analysis; Estimation of time-varying signals and systems; Spectral Estimation methods; Audio and video coding; VLSI based processors for wireless communication systems;<br>Voice and multimedia over IP |
| 46. | **Prof. N. C. Sahoo**<br>Professor<br>ncsahoo@iitbbs.ac.in | National University of Singapore, 2001 | Renewable Energy Systems; Power System Optimization and Control; Control of Electric Drives |
| 47. | **Prof. Ganapati Panda**<br>Visiting Professor<br>gpanda@iitbbs.ac.in | IIT Kharagpur, 1982 | Digital Signal processing; Machine Learning and applications; Intelligent Instrumentation |
| 48. | **Prof. Jayanta Pal**<br>Visiting Professor<br>jpal@iitbbs.ac.in | University of Roorkee. [Now IIT, Roorkee], 1981 | Reduced Order Modelling; Fractional Order Systems; Electrical Power Systems |
| 49. | **Prof. K.R. Srivathasan**<br>Visiting Professor<br>krs@iitbbs.ac.in | Queen's University, Canada, 1981 | Information Systems and Informatics, e-Learning and Management<br>LEFT ON 31.07.2017 |
| 50. | **Dr. Chandrashekhar Narayan Bhende**<br>Associate Professor<br>cnb@iitbbs.ac.in | IIT Delhi, 2008 | Renewable Energy, Distributed Generation; Power Quality, Custom Power Devices; Application of soft computing techniques to power systems |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 51. | **Dr. Manoranjan Satpathy**<br>Associate Professor<br>manoranjan@iitbbs.ac.in | IIT Bombay, 1997 | Software Testing and verification; Advanced Computer Architecture; Programming Languages |
| 52. | **Dr. Prasant Kumar Sahu**<br>Associate Professor<br>pks@iitbbs.ac.in | IIT Kharagpur, 2008 | Optical Communication; Remote Sensing; Speech and Signal Processing |
| 53. | **Dr. Pravas Ranjan Sahu**<br>Associate Professor<br>prs@iitbbs.ac.in | IIT Kanpur, 2006 | Digital Communications, Mobile Communications, Receiver performance in fading channels. |
| 54. | **Dr. Subhransu Ranjan Samantaray**<br>Associate Professor<br>srs@iitbbs.ac.in | NIT Rourkela, 2007 | Power System protection; Smart-Grid; PMU and WAMs |
| 55. | **Dr. Adway Mitra**<br>Assistant Professor<br>adway@iitbbs.ac.in | IISc. Bangalore, 2016 | Data Mining; Machine Learning; Climate Informatics; Modelling complex spatio-temporal processes; Bayesian Modeling; Computer Vision; Video Analytics; Social Network Analysis |
| 56. | **Dr. Ankush Sharma**<br>Assistant Professor<br>ankush@iitbbs.ac.in | IIT Kanpur, 2014 | Power System State Estimation; Smart Grid Technology Development; Wide Area Monitoring and Control<br>LEFT ON 21.02.2018 |
| 57. | **Dr. Balakrishna Pamulaparthy**<br>Assistant Professor<br>balakrishnap@iitbbs.ac.in | IIT Madras, 2016 | Power System Automation; Data Analytics for Smart Power Grids; Smart Grids/Micro Grids Technology; Power Distribution Systems |
| 58. | **Dr. Barathram Ramkumar**<br>Assistant Professor<br>barathram@iitbbs.ac.in | Virginia Tech, 2011 | Signal Processing; Wireless Communication; Bio-Signal Processing |
| 59. | **Dr. Chandrasekhar Perumalla**<br>Assistant Professor<br>pcsekhar@iitbbs.ac.in | IIT Delhi, 2014 | Integration and Control of Renewable Energy Systems; Design and Development of Smart Controllers for Microgrid/Smart Grid Systems; Control of Active Distribution Systems; Energy Management in Hybrid AC/DC Microgrid Systems; Application of Power Electronics to Power Systems; Application of Soft Computing to Power Quality Problems |
| 60. | **Dr. Debalina Ghosh**<br>Assistant Professor<br>deghosh@iitbbs.ac.in | Syracuse University, Syracuse, NY, USA, 2007 | Remote Sensing; Electromagnetic Engineering and Antennas; Radar Systems |
| 61. | **Dr. Debapratim Ghosh**<br>Assistant Professor<br>debapratim@iitbbs.ac.in | IIT Bombay, 2017 | Microwave components, circuits, and systems, microwave measurement systems, analog and small-scale embedded systems |
| 62. | **Dr. Debi Prosad Dogra**<br>Assistant Professor<br>dpdogra@iitbbs.ac.in | IIT Kharagpur, 2012 | Visual Surveillance and Computer Vision; Human Computer Interface; Augmented Reality |
| 63. | **Dr. Dipankar De**<br>Assistant Professor<br>dipankar@iitbbs.ac.in | IISc Bangalore, 2011 | Switched Mode Power Converter and Design of Integrated Magnetics; Application of Power Electronics in Power Systems; Wide band-gap Device based Power Conversion |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 64. | **Dr. Joy Chandra Mukherjee**<br>Assistant Professor<br>(On Contract)<br>joy@iitbbs.ac.in | IIT Kharagpur, 2015 | Distributed Algorithms, Time-varying Network Algorithms, Intelligent Transportation Systems, Smart Grid |
| 65. | **Dr. M. Sabarimalai**<br>Manikandan<br>Assistant Professor<br>msm@iitbbs.ac.in | IIT Guwahati, 2009 | Signal and Image Processing; Biometric and Multimodal Interfaces; VLSI and Embedded System |
| 66. | **Dr. Neti V L N Murty**<br>Assistant Professor<br>murtyn@iitbbs.ac.in | IIT BHU, 2008 | Compound Semiconductor Device Modelling and Characterisation; Radiation Effects on Semiconductor Devices; Thin-film Sensors<br>RELIEVED ON 20.09.2017 WITH LIEN FOR 1 YEAR W.E.F 21.09.2017 |
| 67. | **Dr. Niladri Bihari Puhan**<br>Assistant Professor<br>nbpuhan@iitbbs.ac.in | Nanyang Technologcal University, Singapore, 2007 | Image Processing; Biometrics; Biomedical Imaging |
| 68. | **Dr. Padmalochan Bera**<br>Assistant Professor<br>plb@iitbbs.ac.in | IIT Kharagpur, 2011 | Networks and System Security; Cryptography; Software Defined Networks |
| 69. | **Dr. Sankarsan Mohapatro**<br>Assistant Professor<br>sankarsan@iitbbs.ac.in | IISc Bangalore, 2011 | High Voltage Engineering; Industrial Application of High Voltage for Pollution Control; Renewable Energy Systems |
| 70. | **Dr. Somindu Chaya Ramanna**<br>Assistant Professor<br>(On Contract)<br>somindu@iitbbs.ac.in | Indian Statistical Institute, Kolkata , 2015 | Cyber Security<br>LEFT ON 30.06.2017 |
| 71. | **Dr. Srinivas Bhaskar Karanki**<br>Assistant Professor<br>skaranki@iitbbs.ac.in | IIT Madras, 2012 | Power Quality; DC DC Converters for Renewable energy sources; Power Electronics Applications to Power Systems |
| 72. | **Dr. Srinivas Boppu**<br>Assistant Professor<br>srinivas@iitbbs.ac.in | University of Erlangen-Nuremberg, 2015 | Programmable Hardware Accelerators |
| 73. | **Dr. Srinivas Pinisetty**<br>Assistant Professor<br>spinisetty@iitbbs.ac.in | INRIA Rennes, University of Rennes1, France | Formal methods, runtime monitoring |
| 74. | **Dr. Sudipta Saha**<br>Assistant Professor<br>(On Contract)<br>sudipta@iitbbs.ac.in | IIT Kharagpur,2015 | Wireless Sensor Network; Cyber-Physical Systems; Internet-of-Things |
| 75. | **Dr. Shweta Jain**<br>Visiting Faculty<br>shwetajain@iitbbs.ac.in | IISc. Bangalore, 2017 | Game Theory; Mechanism Design; Machine Learning |

## School of Humanities, Social Sciences and Management

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 76. | **Dr. Amrita Satapathy**<br>Assistant Professor<br>asatapathy@iitbbs.ac.in | Utkal University, 2009 | Commonwealth Studies, Indian Diaspora Literature, Travel Writings/ Autobiographies/ Memoirs |
| 77. | **Dr. Anamitra Basu**<br>Assistant Professor<br>anamitrabasu@iitbbs.ac.in | IIT Kharagpur, 2010 | Laterality ; Psycholinguistics; clinical Psychology |
| 78. | **Dr. Dukhabandhu Sahoo**<br>Assistant Professor<br>dsahoo@iitbbs.ac.in | Institute for Social and Economic Change, Bangalore, 2007 | Open Macroeconomics; Development Economics; Environment and Natural Resource Economics |
| 79. | **Dr. Naresh Chandra Sahu**<br>Assistant Professor<br>naresh@iitbbs.ac.in | IIT Kanpur, 2008 | Environmental Economics; Finance; Mining and Rural Development |
| 80. | **Dr. Punyashree Panda**<br>Assistant Professor<br>ppanda@iitbbs.ac.in | Berhampur University, 2008 | Postcolonial World Literature, Indigenous Writings; Indian Writing in English; ELT, Cross-cultural Communication |
| 81. | **Dr. Rajakumar Guduru**<br>Assistant Professor<br>rajakumarguduru@iitbbs.ac.in | English and Foreign Languages University, 2011 | Developing Critical Vocabulary of ESL Learners; Cognitive Reading Skills; Second Language Aquisition; Teacher Education and Development; Communication Skills; Technology and Language Learning |

## School of Infrastructure

| | | | |
|---|---|---|---|
| 82. | **Prof. Rabindra Kumar Panda**<br>Professor<br>rkpanda@iitbbs.ac.in | Indian Agricultural Research Institute, New Delhi, 1984 | Hydrology ;Watershed Management; Non-point Source Pollution of Water Resources |
| 83. | **Dr. Dinakar Pasla**<br>Associate Professor<br>pdinakar@iitbbs.ac.in | IIT Madras, 2005 | Concrete Technology |
| 84. | **Dr. Sumanta Haldar**<br>Associate Professor<br>sumanta@iitbbs.ac.in | IISc Bangalore, 2008 | Offshore wind energy foundation; Soil-structure interaction; Dynamics of soil and foundation |
| 85. | **Dr. Arindam Sarkar**<br>Assistant Professor<br>asarkar@iitbbs.ac.in | IIT Kharagpur, 2006 | Flow through submerged and emergent vegetation; Scour around hydraulic structures; Mathematical flow modelling |
| 86. | **Dr. B. Hanumantha Rao**<br>Assistant Professor<br>bhrao@iitbbs.ac.in | IIT Bombay, 2009 | Geotechnical Engineering; Environmental Geotechnics; |
| 87. | **Dr. Debasis Basu**<br>Assistant Professor<br>dbasu@iitbbs.ac.in | IIT Kharagpur, 2008 | Sustainable Transportation, Operation of Public Transport; Transportation Economics; Traffic Studies |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 88. | **Dr. Goutam Mondal**<br>Assistant Professor<br>gmondal@iitbbs.ac.in | IIT Kanpur, 2011 | Earthquake Engineering and Structural Dynamics; Seismic Analysis of Bridges; Soil-Structure Interaction |
| 89. | **Dr. Manaswini Behera**<br>Assistant Professor<br>manaswini@iitbbs.ac.in | IIT Kharagpur, 2012 | Water and wastewater treatment and reuse; Bioenergy recovery during wastewater treatment in microbial fuel cell; Solid waste management |
| 90. | **Dr. Meenu Ramadas**<br>Assistant Professor<br>meenu@iitbbs.ac.in | Purdue University, USA, 2015 | Hydrology; Water Resources; Drought Modelling |
| 91. | **Dr. Partha Pratim Dey**<br>Assistant Professor<br>ppdey@iitbbs.ac.in | IIT Roorkee, 2006 | Traffic Flow Modelling |
| 92. | **Dr. Pushpendu Bhunia**<br>Assistant Professor<br>pbhunia@iitbbs.ac.in | IIT Kharagpur, 2008 | Nutrients removal and recovery from wastewater; Vermi-filtration of domestic and industrial wastes; Recovery of energy and biogas generation from biodegradable wastes |
| 93. | **Dr. Rajesh Roshan Dash**<br>Assistant Professor<br>rrdash@iitbbs.ac.in | IIT Roorkee, 2008 | Environmental Engineering; Treatment of Water and Wastewater; Solid Waste Management |
| 94. | **Dr. Remya Neelancherry**<br>Assistant Professor<br>remya@iitbbs.ac.in | National Chiao Tung University Taiwan, 2010 | Microwave photocatalytic treatment of complex wastewater; Catalytic copyrolysis of mixed solid waste; Solar photocatalytic treatment and preparation of supported catalyst |
| 95. | **Dr. Saikat Sarkar**<br>Visiting Faculty | IISc Bangalore, 2014 | Structural Engineering |
| 96. | **Dr. Shantanu Patra**<br>Assistant Professor | IIT Delhi, 2013 | Geotechnical engineering, geosynthetics and their application |
| 97. | **Dr. Suresh R Dash**<br>Assistant Professor<br>srdash@iitbbs.ac.in | University of Oxford, 2011 | Structural Dynamics and Earthquake engineering; Soil - Structure Interaction; Seismic Analysis and Design of Pipelines |
| 98. | **Dr. Umesh Chandra Sahoo**<br>Assistant Professor<br>ucsahoo@iitbbs.ac.in | IIT Kharagpur, 2009 | Pavement Analysis and Design; Pavement Materials; Low Volume Roads |
| 99. | **Prof. Tian C. Zhang**<br>Visiting Professor of Foreign Origin<br>tzhang@iitbbs.ac.in | University of Cincinnati, Cincinnati, OH, 1994 | Alternative energy sources/low carbon technologies, nanotechnology and its environmental aplications, non-point source pollution control technologies and miro-scale environmental conditions. |

## School of Mechanical Sciences

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 100. | **Prof. Swarup Kumar Mahapatra**<br>Professor<br>swarup@iitbbs.ac.in | Jadavpur University, 2000 | Conjugate Heat Transfer; Radiation Modelling; Bio Heat Transfer |
| 101. | **Prof. P.K. J. Mohapatra**<br>Visiting Professor<br>pkjm@iitbbs.ac.in | IIT Kharagpur, 1978 | Industrial Engineering; Systems Dynamics; Operations Research & Management |
| 102. | **Prof. Prasanta K. Mishra**<br>Visiting Professor<br>pkm@iitbbs.ac.in | Jadavpur University, Calcutta, 1974 | Non-conventional Manufacturing; MEMS & Microsystems Engineering<br>LEFT ON 09.07.2017 |
| 103. | **Prof. Sadananda Sahu**<br>Visiting Professor<br>sahus@iitbbs.ac.in | IIT, Kharagpur, 1978 | Logistics; Supply Chain Management; Productivity Studies; Operations Management; Facilities Layout<br>LEFT ON 16.08.2017 |
| 104. | **Dr. Arun Kumar Pradhan**<br>Associate Professor<br>akpradhan@iitbbs.ac.in | IIT Kharagpur, 2008 | Solid Mechanics, Composite Materials & Structures, Fracture Mechanics & Delamination studies in Composites; Smart Materials & Structures; Natural Fibre Reinforced Composites |
| 105. | **Dr. Manas Mohan Mahapatra**<br>Associate Professor<br>mmmahapatra@iitbbs.ac.in | IIT Kharagpur, 2008 | Welding Residual Stress & Distortion control, Friction Stir Welding Tool Design, Friction Stir Processing and Friction Cladding; Thermal Spray and Laser Coating for Wear and High Temperature Applications; In-situ Metal Matrix Composites and their Manufacturability |
| 106. | **Dr. Mihir Kumar Pandit**<br>Associate Professor<br>mihir@iitbbs.ac.in | IIT Kharagpur, 2009 | Design and Solid Mechanics; Sandwich Structures; Composite Materials |
| 107. | **Dr. Satyanarayan Panigrahi**<br>Associate Professor<br>psatyan@iitbbs.ac.in | IISc Bangalore, 2007 | Underwater acoustic absorbers; Acoustics of mufflers and ducts; Acoustic metamaterials |
| 108. | **Dr. Akhilesh Barve**<br>Assistant Professor<br>akhilesh@iitbbs.ac.in | IIT Delhi, 2009 | Supply Chain Management; Humanitarian Logistics; Industrial Engineering |
| 109. | **Dr. Anirban Bhattacharya**<br>Assistant Professor<br>anirban@iitbbs.ac.in | IISc Bangalore, 2014 | Multi-phase and multiscale transport phenomena; Phase change and grain structure modelling; Boiling heat transfer modelling |
| 110. | **Dr. Gaurav Bartarya**<br>Assistant Professor | IIT Kanpur, 2014 | Conventional and nonconventional Machining Processes |
| 111. | **Dr. K. Srinivasa Ramanujam**<br>Assistant Professor<br>sramanujam@iitbbs.ac.in | IIT Madras, 2012 | Active Passive Remote Sensing; Engineering Design and Optimization; Atmospheric Radiation |
| 112. | **Dr. Mihir Kumar Das**<br>Assistant Professor<br>mihirdas@iitbbs.ac.in | IIT Roorkee, 2006 | Two Phase Heat Transfer; PCM based Cooling System; Internal Combustion Engines |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 113. | **Dr. Prasenjit Rath**<br>Assistant Professor<br>prath@iitbbs.ac.in | Nanyang Technological University, Singapore, 2007 | Transport Phenomena in Materials Processing; Ultrafast Transport; CFD/HT |
| 114. | **Dr. Sasidhar Kondaraju**<br>Assistant Professor<br>sasidhar@iitbbs.ac.in | Wayne State University, 2009 | Microfluidics; Micro/Nanoscale Thermofluids; Multiphase Flows |
| 115. | **Dr. Sathyanarayana Ayyalasomayajula**<br>Assistant Professor<br>sathya@iitbbs.ac.in | Cornell University, NY, USA, 2007 | Turbulence; DNS & LES, Spectral Methods; Experimental Fluid Mechanics |
| 116. | **Dr. Satish Dhandole**<br>Assistant Professor<br>satish@iitbbs.ac.in | IIT Delhi, 2009 | Dynamic Design; Vibro-acoustic; Mechanisms |
| 117. | **Dr. Suvradip Mullick**<br>Assistant Professor | IIT Kharagpur, 2016 | Laser material processing, Non-conventional machining |
| 118. | **Dr. V. Pandu Ranga**<br>Assistant Professor<br>pandu@iitbbs.ac.in | IIT Kharagpur, 2009 | Robotics; Manufacturing; Soft Computing |
| 119. | **Dr. Venugopal Arumuru**<br>Assistant Professor<br>venugopal@iitbbs.ac.in | IIT Bombay, 2014 | Fluid Structure Interaction and unsteady Aero-Hydrodynamics; Heat Transfer augmentation; Acoustics |
| 120. | **Dr. Yogesh G. Bhumkar**<br>Assistant Professor<br>bhumkar@iitbbs.ac.in | IIT Kanpur, 2012 | High performance computing; Computational aero acoustics; Transitional and turbulent flows |
| 121. | **Dr. Ankur Gupta**<br>Visiting Faculty<br>ankurgupta@iitbbs.ac.in | IIT Kanpur, 2015 | Nanotechnology; Micro-system fabrication; Manufacturing |
| 122. | **Dr. Pattabhi Ramaiah Budarapu**<br>Visiting Faculty | Bauhaus University of Welmar, Germany, 2015 | Multiscale methods for fracture; molecular dynamics; fracture in multiphysics problems; structural dynamics |

## School of Minerals, Metallurgical and Materials Engineering

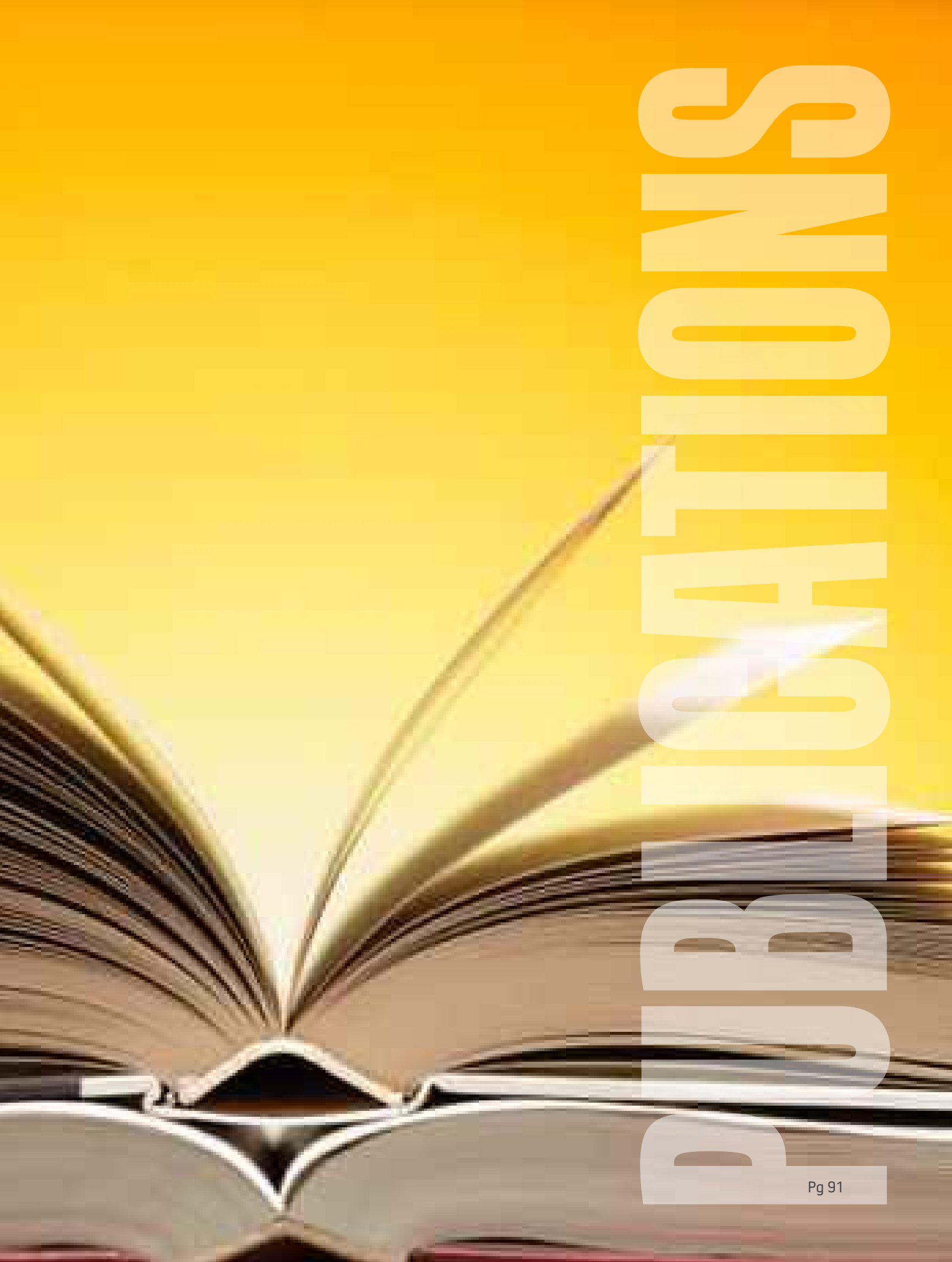
| | | | |
|---|---|---|---|
| 123. | **Dr. Brahma Deo**<br>Professorial Fellow<br>bdeo@iitbbs.ac.in | University of Burdwan, 1975 | Iron and steel making; Dynamic process control and optimization; Chaos control in dynamical systems |
| 124. | **Prof. Golok B Nando**<br>Professorial Fellow<br>golokrtc@gmail.com | IIT Kharagpur, 1979 | Rubber Products manufacturing and new materials development, Polymer Blends and Alloys with silicone rubber, Thermoplastic Elastomers and Thermoplastic Vulcanizates, Rubber & Thermoplastic Elastomer nano-composites |

| Sl. No. | Name/Designation/Email | Ph.D./Year | Specialization/Research Area |
|---|---|---|---|
| 125. | **Prof. Brij Kumar Dhindaw**<br>Visiting Professor<br>dhindaw@iitbbs.ac.in | IIT Kharagpur,1971 | Solidification Processing and Composites; Physical Metallurgy; Mineral Processing |
| 126. | **Dr. Amritendu Roy**<br>Assistant Professor<br>amritendu@iitbbs.ac.in | IIT Kanpur, 2012 | Ferroelectric and multiferroic materials for memory and energy applications; Multi component alloy design; Electronic structure calculations |
| 127. | **Dr. Animesh Mandal**<br>Assistant Professor<br>animesh@iitbbs.ac.in | IIT Kharagpur, 2007 | Aluminium alloys; Metal matrix composites; Semisolid processing of metallic systems |
| 128. | **Dr. Kaushik Das**<br>Assistant Professor<br>kaushik@iitbbs.ac.in | McGill University, 2012 | Mechanical Behaviour of Nanomaterials; Integration of Nanomaterials to Microelectromechanical Systems (MEMS); |
| 129. | **Dr. Kisor Kumar Sahu**<br>Assistant Professor<br>kisorsahu@iitbbs.ac.in | Kyoto University, 2006 | Modelling and simulation of materials; Energy materials and systems; Structural and magnetic frustration of materials |
| 130. | **Dr. Kodanda Ram Mangipudi**<br>Assistant Professor | University of Groningen, 2012 | Computational Mechanics Mechanical behavior of (nano)composite materials Mechanics of cellular solids |
| 131. | **Dr. Partha Sarathi De**<br>Assistant Professor<br>parthasarathi.de@iitbbs.ac.in | Missouri University of Science & Technology, USA, 2010 | Friction stir welding and processing; High entropy alloys; Thermo-mechanical processing of metals |
| 132. | **Dr. Randhir Singh**<br>Assistant Professor<br>randhir@iitbbs.ac.in | Imperial College London, 2009 | Computational modelling of electrochemical systems; fuel cell and hydrogen production; electrometallurgy of Al and Ti reduction |
| 133. | **Dr. Soobhankar Pati**<br>Assistant Professor<br>spati@iitbbs.ac.in | Boston University, 2010 | Electrochemistry ;Energy Materials; Sustainable Materials and Process |
| 134. | **Dr. Srikant Gollapudi**<br>Assistant Professor<br>srikant@iitbbs.ac.in | North Carolina State University, 2007 | Creep behavior of titanium, zirconium, magnesium and aluminum alloys and solders Mechanical alloying of amorphous and nanocrystalline alloys |

## ADJUNCT FACULTY 2017-18

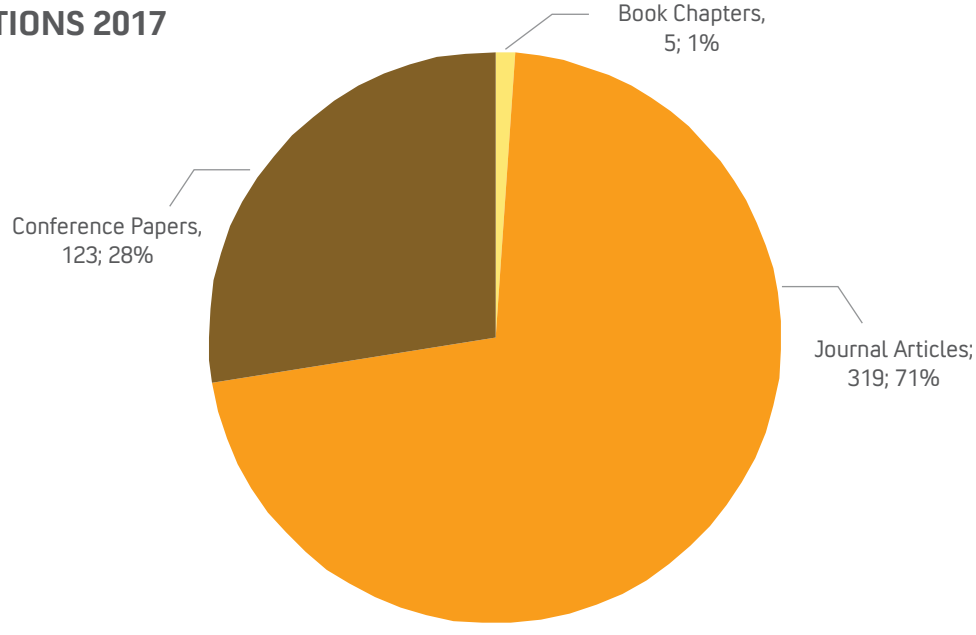
| Sl. No. | Name | Parent Institute | Name of the School visited |
|---|---|---|---|
| 1. | **Prof. Samrat L Sabat** | University of Hyderabad | SBS |
| 2. | **Prof. Ajit Mohan Srivastava** | Institute of Physics, Bhubaneswar | SBS |
| 3. | **Prof. Swapan Kumar Saha** | Indian Institute of Astrophysics (IIA), Bangalore | SBS |
| 4. | **Prof. Geetanjali Panda** | IIT Kharagpur | SBS |
| 5. | **Prof. P V Satyam** | Institute of Physics, Bhubaneswar | SBS |
| 6. | **Prof. K. P. N. Murthy** | Manipal University, Chennai | SBS |
| 7. | **Prof. Arghya Taraphder** | IIT Kharagpur | SBS |
| 8. | **Prof. Biswajit Mishra** | IIT Kharagpur | SEOCS |
| 9. | **Prof. Rengaswamy Ramesh** | NISER, Bhubaneswar | SEOCS |
| 10. | **Prof. Santanu Banerjee** | IIT Bombay | SEOCS |
| 11. | **Prof. T. K. Biswal** | IIT Bombay | SEOCS |
| 12. | **Dr. Ravikant Vadlamani** | IIT Kharagpur | SEOCS |
| 13. | **Dr. M. D. Behera** | IIT Kharagpur | SEOCS |
| 14. | **Prof. T. N. Singh** | IIT Bombay | SEOCS |
| 15. | **Prof. Saibal Gupta** | IIT Kharagpur | SEOCS |
| 16. | **Dr. Ashwini Nanda** | HPC Research Inc., USA | SES |
| 17. | **Dr. Subhankar Mishra** | NISER Bhubaneswar | SES |
| 18. | **Dr. N. K. Goyal** | IIT Kharagpur | SES |
| 19. | **Dr. Goutam Biswas** | IIT Kharagpur | SES |
| 20. | **Dr. Korra Sathya Babu** | NIT Rourkela | SES |
| 21. | **Dr. Bibhudatta Sahoo** | NIT Rourkela | SES |
| 22. | **Dr. Shailendra K. Varshney** | IIT Kharagpur | SES |
| 23. | **Prof. Partha Roop** | University of Auckland, New Zealand | SES |
| 24. | **Prof. (Mrs.) S. Mohanty** | Orrisa Bigyan Academy | SES |
| 25. | **Prof. Bijaya Kumar Rath** | Berhampur University | SHSSM |
| 26. | **Prof. Binayak Rath** | IIT Kanpur | SHSSM |
| 27. | **Padmashree Kumkum Mohanty** | Odisha Sangeet Maha Vidyalaya | SHSSM |
| 28. | **Dr. Pranaya Kumar Swain** | NISER Bhubaneswar | SHSSM |
| 29. | **Shri Gokul Chandra Pati** | IAS- Retired | SHSSM |
| 30. | **Prof. Fakir Mohan Sahoo** | Xavier Institute of Management, Bhubaneswar | SHSSM |
| 31. | **Dr. Aurobindo Behera** | IAS- Retired | SHSSM |
| 32. | **Prof. G. B. Nando** | IIT Kharagpur | SMMME |
| 33. | **Prof. Dhanush Dhari Misra** | IIT (ISM) Dhanbad | SMMME |

# PUBLICATIONS



# PUBLICATIONS

## PUBLICATIONS 2017




## Book Chapter

### School of Basic Sciences

1. Udhayakumar, S., Sekhar, T. V. S., & Sivakumar, R. (2017). MHD mixed convective heat transfer over an isothermal circular cylinder using low Rm approximation (Vol. Part F8). https://doi.org/10.1007/978-81-322-2743-4_150

### School of Electrical Sciences

2. Kolluru, S. K., Shrimal, S., & Krishnaswamy, S. (2017). Cognitivecam: A visual question answering application. In Applications of Cognitive Computing Systems and IBM Watson: 8th IBM Collaborative Academia Research Exchange (pp. 85–90). https://doi.org/ 10.1007/978-981-10-6418-0_11
3. Pradhan, H. S., Sahu, P. K., Ghosh, D., & Mahapatra, S. (2017). Brillouin distributed temperature sensor using optical time domain reflectometry techniques (Vol. 21). https://doi.org/10.1007/978-3-319-42625-9_10

### School of Infrastructure

4. Rao, B. H., & Reddy, N. G. (2017). Zeta Potential and Particle Size Characteristics of Red Mud Waste. In Geoenvironmental Practices and Sustainability (pp. 69–89). Springer, Singapore. https://doi.org/10.1007/978-981-10-4077-1_8

### School of Mechanical Sciences

5. Mondal, K. and Gupta, Ankur (2017), Carbon based Nano-materials for Water Remediation, (Ed.), Springer, 2017.

## Paper published in Peer-reviewed Journals

### School of Basic Sciences

1. Abhinav, K., Chandrasekhar, B., Vyas, V. M., & Panigrahi, P. K. (2017). Heisenberg symmetry and collective modes of one 5, 5 February 2017, Pages 457-461, https://doi.org/10.1016/ j.physleta.2016.12.018.
2. Adamczyk, K., Aihara, H., Angelini, C., Aziz, T., Babu, V., Bacher, S., ... Yoshinobu, T. (2017). The Belle II silicon vertex detector assembly and mechanics. Nuclear Instruments and Methods in Physics Research,

Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 845, 38–42. https://doi.org/10.1016/j.nima.2016.03.100

3. Banik, A. D. (2017). Stationary analysis of a BMAP/R/1 queue with R-type multiple working vacations: Communications in Statistics - Simulation and Computation: Vol 46, No 2. (n.d.). Retrieved July 11, 2018, from https://www.tandfonline.com/doi/abs/10.1080/03610918.2014.990096
4. Barik, N. B., Sekhar, T. V. S. (2017). A novel RBF-FD meshless scheme in curvilinear geometry for unbounded flows: International Journal for Computational Methods in Engineering Science and Mechanics: Vol 18, No 4-5. (n.d.). Retrieved July 11, 2018, from https:// www.tandfonline. com/doi/full/10.1080/15502287.2017. 1339135
5. Barik, S., & Sahoo, G. (2017). On the distance spectra of coronas. Linear and Multilinear Algebra, 65(8), 1617–1628. https://doi.org/10.1080/03081087.2016.1249448
6. Barik, S., & Sahoo, G. (2017). On the Laplacian spectra of some variants of corona. Linear Algebra and Its Applications, 512, 32–47. https://doi.org/10.1016/j.laa.2016.09.030
7. Barik, S., & Sahoo, G. (2017). Some results on the Laplacian spectra of graphs with pockets. Electronic Notes in Discrete Mathematics, 63, 219–228. https://doi.org/10.1016/j.endm. 2017.11.017
8. Bera, G., Reddy, V. R., Rambabu, P., Mal, P., Das, P., Mohapatra, N., … Turpu, G. R. (2017). Triclinic–monoclinic–orthorhombic (T–M–O) structural transitions in phase diagram of FeVO4-CrVO4 solid solutions. Journal of Applied Physics, 122(11), 115101. https://doi.org/ 10.1063/1.4985793
9. Bhamidipati, C., & Yerra, P. K. (2017). A note on Gauss-Bonnet black holes at criticality. Physics Letters B, 772, 800–807. https://doi.org/ 10.1016/j.physletb.2017.07.052
10. Bhamidipati, C., & Yerra, P. K. (2017). Heat engines for dilatonic Born–Infeld black holes. The European Physical Journal C, 77(8), 534. https://doi.org/10.1140/epjc/s10052-017-5076-2
11. Chand, A., Chettiyankandy, P., Pattanayak, S. K., & Chowdhuri, S. (2017). Effects of trimethylamine-N-oxide (TMAO) on aqueous N-methylacetamide solution: A comparison of different force fields of TMAO. Journal of Molecular Liquids, Complete(225), 926–935. https://doi.org/10.1016/j.molliq.2016.05.044
12. Chaudhry, M. L., Banik, A. D., & Pacheco, A. (2017). A simple analysis of the batch arrival queue with infinite-buffer and Markovian service process using roots method: $$ GI ^{[X]}/C$$-$$ MSP /1/\infty $$MSP/1/∞. Annals of Operations Research, 252(1), 135–173. https://doi.org/10.1007/s10479-015-2026-y
13. Das, A. S., Roy, M., Roy, D., Kar, T., Rath, S., & Bhattacharya, S. (n.d.). (2017). Investigations of Microstructure and Dc Conductivity of V2O5-Nd2O3 Glass Nanocomposites. ChemistrySelect, 2(34), 11273–11280. https://doi.org/ 10.1002/slct.201701590
14. Das, P., Dhal, S., Ghosh, S., Chatterjee, S., Rout, C. S., Ramgir, N., & Chatterjee, S. (2017). Superhydrophobic to hydrophilic transition of multi-walled carbon nanotubes induced by Na+ ion irradiation. Nuclear Instruments and Methods in Physics Research B, 413, 31–36. https://doi.org/10.1016/j.nimb.2017.10.004
15. Dash, J. N., & Jha, R. (2017a). Cascaded Taper Collapsed Region-Based PCF Sensor: Wavelength and Intensity Interrogation. IEEE Sensors Journal, 17(24), 8338–8342. https://doi.org/10.1109/JSEN.2017.2764158
16. Dash, J. N., & Jha, R. (2017c). Fabrication of Inline Micro Air Cavity with Choice-Based Dimensions. IEEE Photonics Technology Letters, 29(14), 1147–1150. https://doi.org/10.1109/ LPT.2017.2703086
17. Dash, J. N., Dass, S., & Jha, R. (2017). Microfiber Assisted Highly Birefringent PCF-Based Interferometric Sensors. IEEE Sensors Journal, 17(5), 1342–1346. https://doi.org/10.1109/ JSEN.2016.2628912
18. Dash, J. N., Negi, N., & Jha, R. (2017). Graphene Oxide Coated PCF Interferometer for Enhanced Strain Sensitivity. Journal of Lightwave Technology, 35(24), 5385–5390. https://doi.org/10.1109/JLT.2017.2771784
19. Dash, N., Bahinipati, S., Bhardwaj, V., Trabelsi, K., Adachi, I., Aihara, H., … Zupanc, A. (2017). Search for CP Violation and Measurement of the Branching Fraction in the Decay D0 → KS0 KS0. Physical Review Letters, 119(17). https://doi.org/10.1103/PhysRevLett.119.171801

20. Dass, S., & Jha, R. (2017b). Tapered Fiber Attached Nitrile Diaphragm-Based Acoustic Sensor. Journal of Lightwave Technology, 35(24), 5411–5417. https://doi.org/10.1109/ JLT.2017.2776519

21. Dhal, S., Chatterjee, S., Facsko, S., Möller, W., Böttger, R., Satpati, B., ... Hübner, R. (2017). Discrete Single Crystalline Titanium Oxide Nanoparticle Formation from a Two-Dimensional Nanowelded Network. Crystal Growth and Design, 17(5), 2660–2666. https://doi.org/10.1021/acs.cgd.7b00173

22. Dhanasekar, M., Ratha, S., Rout, C. S., & Bhat, S. V. (2017). Efficient sono-photocatalytic degradation of methylene blue using nickel molybdate nanosheets under diffused sunlight. Journal of Environmental Chemical Engineering, 5(3), 2997–3004. https://doi.org/10.1016/j.jece.2017.05.054

23. Dutta, D., Adamczyk, K., Aihara, H., Angelini, C., Aziz, T., Babu, V., ... Zani, L. (2017). Belle II silicon vertex detector. Journal of Instrumentation, 12(2). https://doi.org/10.1088/1748-0221/12/02/C02074

24. Ghosh, S., & Banik, A. D. (2017b). Computing conditional sojourn time of a randomly chosen tagged customer in a BMAP/MSP/1 queue under random order service discipline. Article in Press. https://doi.org/10.1007/s10479-017-2534-z

25. Grygier, J., Goldenzweig, P., Heck, M., Adachi, I., Aihara, H., Al Said, S., ... Zupanc, A. (2017). Search for B →hv v -decays with semileptonic tagging at Belle, Physical Review D, 96(9). https://doi.org/10.1103/PhysRevD.96.091101

26. Hirose, S., Iijima, T., Adachi, I., Adamczyk, K., Aihara, H., Al Said, S., ... Zupanc, A. (2017). Measurement of the t Lepton Polarization and R (D*) in the Decay B →d*t-? t. Physical Review Letters, 118(21). https://doi.org/10.1103/ PhysRevLett.118.211801

27. Horiguchi, T., Ishikawa, A., Yamamoto, H., Adachi, I., Aihara, H., Al Said, S., ... Zupanc, A. (2017). Evidence for Isospin Violation and Measurement of CP Asymmetries in B →k* (892)?. Physical Review Letters, 119(19). https://doi.org/10.1103/PhysRevLett.119.191802

28. Hossain, S. M., Lakma, A., Pradhan, R. N., Demeshko, S., & Singh, A. K. (2017). Valence directed binding mode of [2 × 2] iron grids of an unsymmetrical picolinic hydrazone based ligand. Dalton Transactions, 46(37), 12612–12618. https://doi.org/10.1039/c7dt02433a

29. Hossain, S. M., Singh, K., Lakma, A., Pradhan, R. N., & Singh, A. K. (2017). A schiff base ligand of coumarin derivative as an ICT-Based fluorescence chemosensor for Al3+. Sensors and Actuators, B: Chemical, 239, 1109–1117. https://doi.org/10.1016/j.snb.2016.08.093

30. Jarzembska, K. N., Hoser, A. A., Varughese, S., Kami ski, R., Malinska, M., Stachowicz, M., ... Wo niak, K. (2017). Structural and Energetic Analysis of Molecular Assemblies in a Series of Nicotinamide and Pyrazinamide Cocrystals with Dihydroxybenzoic Acids. Crystal Growth and Design, 17(9), 4918–4931. https://doi.org/10.1021/acs.cgd.7b00868

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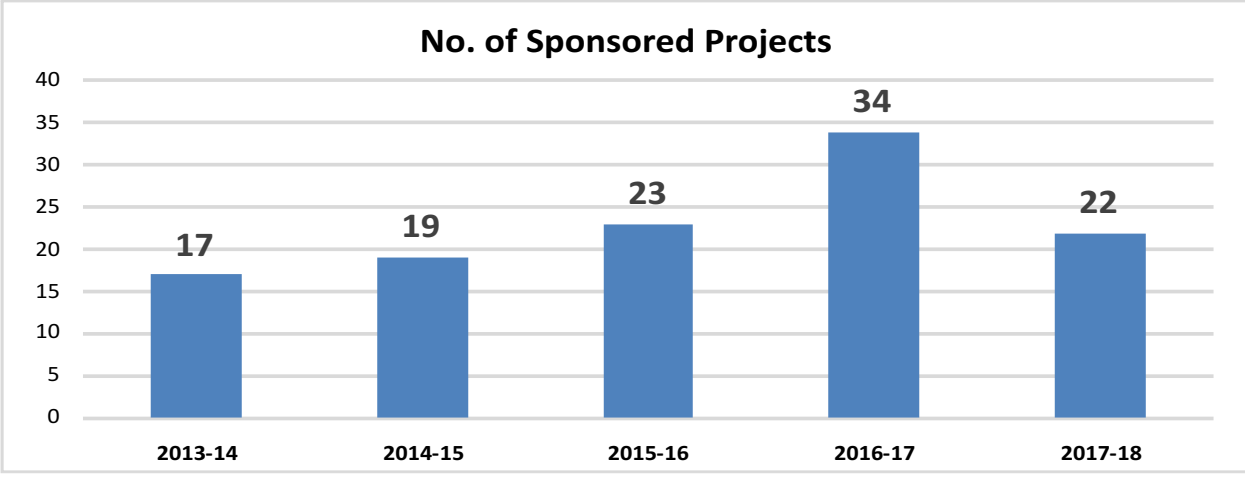
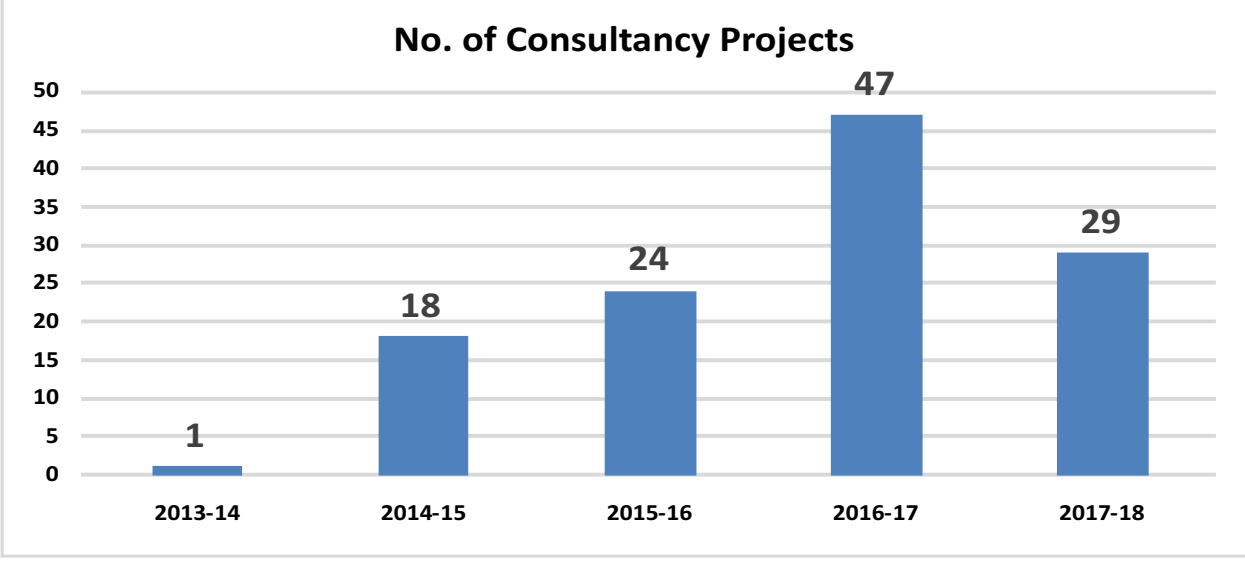
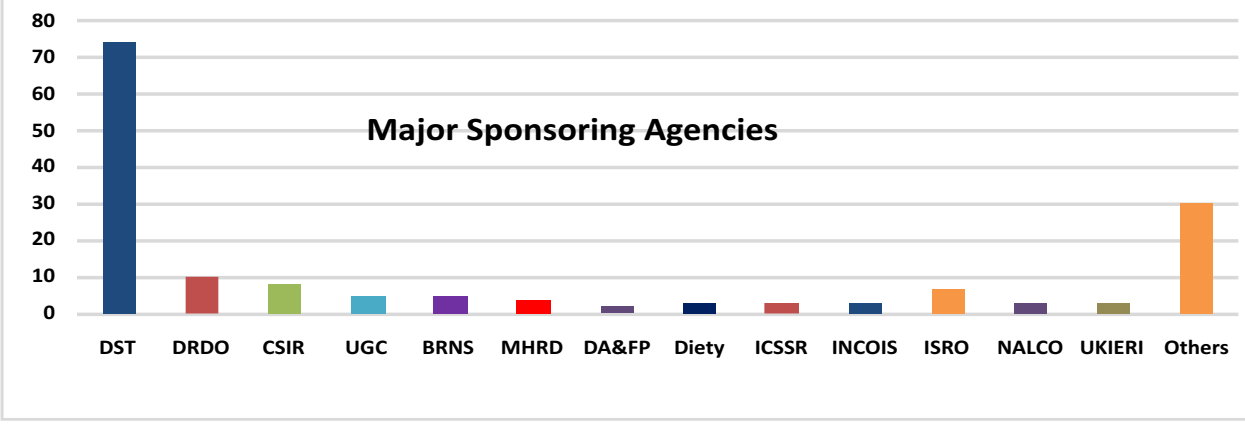
**123.** Deepak Kumar, S., Karthik, D., Mandal, A., & Pavan Kumar, J. S. R. (2017). Optimization of Thixoforging process parameters of A356 alloy using Taguchi's experimental design and DEFORM Simulation (Vol. 4, pp. 9987–9991). Presented at the Materials Today: Proceedings. https://doi.org/10.1016/j.matpr.2017.06.307

# RESEARCH DEVELOPMENT

# RESEARCH, DEVELOPMENT AND COLLABORATIONS



The Research and Development activities of the Institute are growing at a faster rate. The total project funding received so far (2010-2018) from different agencies is around Rs. 87.00 crore from 158 Nos. of sponsored research projects and 131 Nos. of consultancy projects, which includes around Rs. 80.00 crore towards sponsored research projects and nearly Rs. 7.00 crore towards consultancy projects. During the current year (2017-18), projects worth of Rs. 12.40 crore have been received, which includes Rs. 10.30 crore towards sponsored research projects and Rs. 2.10 crore towards consultancy projects. The major funding agencies are MHRD, DST, CSIR, UGC, ISRO, DRDO, ICSSR, DAE, CPRI, DAC, DBT, Deity, NALCO, NPOL, IUSSTF, INCOIS, MoES, MoWR, IITM, NCAOR, BRNS KPIT, P&C Dept.-Govt. of Odisha etc. In addition to the above, the faculty members of the Institute have submitted 77 project proposals worth Rs. 58 crore. The various major areas under which these projects have been submitted are: Advance Materials, Energy, Nanotech Hardware, Health Care, Defense, CS & ICT, Environmental Sciences & Climate Change, Water Resources & River Science, Manufacturing and Sustainable Urban Design. Our faculty members participated in major initiatives of MHRD like IMPRINT, UchhatarAvishkarYojana (UAY), Swachhta Action Plan and Unnat Bharat Abhiyan (UBA) etc.

Some of the worth quoting recent Industry-Academia collaborations and R&D initiatives as well as projects connected to the National/State Missions are as follows.

A broad based Research Cooperation Agreement was signed with the National Mineral Development Corporation (NMDC) on 9th October 2017. A research collaboration agreement was also signed with Indo-US Science and Technology Forum on 25th September 2017 for research collaboration on “Smart Distribution System with Storage”. Another worth quoting initiative of the Institute funded by NALCO is in the area of utilization of industrial wastes for developing an environmental friendly geo-polymer concrete using red mud alone, fly ash along, and a combination of red mud and fly ash.

IIT Bhubaneswar also initiated a research collaboration with State Pollution Control Board (SBCB), Odisha to work on a common platform considering the activities planned under Bay of Bengal Coastal Observatory (BoBCO) and SPCB, Odisha under Integrated Coastal Zone Management Project (ICZMP).

The Institute is also actively participating in the national level efforts namely: "IMPacting Research, Innovation and Technology (IMPRINT)" in ten identified research domains of national interest. Two of the project proposals worth Rs. 1.60 Crore approved under IMRINT. Similarly, 4 proposals worth Rs. 3.51crore have been submitted for consideration under the UchhatarAvishkarYojna.

A significant activity of the Institute is the Unnat Bharat Abhiyan(UBA), a flagship mission of MHRD, in which our Institute is participating actively and have adopted six villages. One worth quoting activity under UBA is development of Science Labs by the Institute in two schools of the two adopted villages under UBA, which were inaugurated by the Director on 14th July 2017 in presence of the Sub-collector of the District, as well as students and faculty members.


Visit of European Delegation: A delegation of European Research & Innovation officials visited our Institute on 22 February 2018to explore the opportunities for International collaboration/exchange. The delegation consists of the Science, Technology & Innovation counsellors, attachés and directors of institutes from European countries, headed by Ms. Tania Friederichs, Head of Research & Innovation, EU Delegation to India

# ONGOING SPONSORED RESEARCH PROJECTS

| Sl. No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|
| **School of Basic Sciences** | | | |
| 1. | Nanostructure Genomics Designing Functionality of 2-Dimensional Nanostructure and Nano-Bio Interfaces | Prof. Saroj Nayak | IUSSTF |
| 2. | Materials and related storage devices for grid-deprived communities | Prof. Saroj Nayak | DST |
| 3. | Design and study of Nano and micro displacement sensor based on Photonic Crystal Fiber modal interferometer | Dr. Rajan Jha | ISRO |
| 4. | Synthesis of some natural marine pyrrole alkaloids and molecules inspired from them for multi-drug resistance (MDR) Cancer Cells | Dr. Tabrez Khan | CSIR |
| 5. | Growth and characterization of semiconductor graphene hybrid nanosheets for sola cell applications | Dr. Satchidananda Rath | DST |
| 6. | Design and Development of Optical Microfiber based Acoustic Sensors for Under/ Over Water Applications | Dr. Rajan Jha | DST |
| 7. | Structural studies on the interaction of hc5a with the N-terminus peptides of C5aR and C5L2 receptor | Dr. Soumendra Rana | DST |
| 8. | Ion irradiation induced modification of one-dimensional functional nano-materials | Dr. Shyamal Chatterjee | BRNS |
| 9. | Study of hybrid improper ferroelectricity in layered perovskites by high resolution neutron diffraction techniques | Dr. Niharika Mohapatra | UGC-DAE |
| 10. | A bound-state electronic structure theory approach to investigate the electron detachment initiated by light | Dr. Kousik Samanta | DST |
| 11. | Process for development of new applications of Aluminium based Materials in Solar light, solar roof sheets and in Battery having Superior Thermal and Electronic Properties | Prof. Saroj Nayak | NALCO |
| 12. | Atomic Scale Aluminium as Interconnects in Electronic devices | Prof. Saroj Nayak | NALCO |
| 13. | Compact Muon Solenoid (CMS) Upgrade, Operation and Utilization | Dr. Seema Bahinipati | DST |
| 14. | Design and Development of heterodimetallic complex of ruthenium iridium and palladium and their chemical and biological aspects | Dr. Srikant Patra | DST |
| 15. | Magnetic properties of self-assembled bivalent, trivalent and mixed-valent [2x2] transition metal grids | Dr. Akhilesh Ku Singh | UGC-DAE |
| 16. | Development of Higher Order Compact Scheme to capture Taylor column phenomena in rotating fluids | Dr. T V S Sekhar | DST |
| 17. | Development of a general synthetic approach directed towards the total synthesis of bioactive iridoid class of terpenoids | Dr. Tabrez Khan | DST |

| Sl. No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|
| 18. | Center of Excellence for Novel Energy Materials (CENEMA) | Prof. Saroj Nayak | MHRD |
| 19. | Design, Synthesis and biological evaluation of novel Ftsz inhibitors a potential anti tubercular agents | Dr. S Pal | DBT |

## School of Earth, Ocean and Climate Science

| | | | |
|---|---|---|---|
| 20. | Detection of lighting phenomena and associated process and its now casting | Dr. Debadatta Swain | ISRO |
| 21. | Numerical simulation of sub-mesoscale features along Odisha coast using SCATSAT winds | Dr. Sourav Sil | ISRO |
| 22. | Estimation of upwelling indices and study of propagating ocean fronts in the Indian and Global Oceans utilizing SCATSAT-1 gridded wind fields | Dr. Debadatta Swain | ISRO |
| 23. | Role of cloud physics and dynamics on lifecycle of monsoon low pressure using high resolution observation and modeling | Dr. Sandeep Pattnaik | DST |
| 24. | Utilization of ITR Doppler Weather Radar Products in High Resolution Mesoscale Model for Prediction of Severe Weather Over Chandipur | Prof. U C Mohanty | ITR Chandipur |
| 25. | Seasonal and inter-annual variability of Relative Heat Content (RHC) in the Indian Ocean | Dr. Debadatta Swain | ISRO |
| 26. | Establishment of Coastal Ocean Observatory at the Innovation Centre for Climate Change (IC3) and Capacity Building of School of Earth, Ocean and Climate Sciences | Dr. Sandeep Pattnaik | Ministry of Earth Sciences |
| 27. | Simulation of coastal circulation on North-West Bay of Bengal | Dr. Sourav Sil | DST |
| 28. | Monsoon dynamics and thermodynamics from the land surface, through convection to the continental-scale (INCOMPASS) | Dr. Sandeep Pattnaik | IITM |
| 29. | Improved under-standing and representation of land surface processes for short, medium and long range prediction of monsoon rainfall | Prof. U C Mohanty | IITM |
| 30. | Millennial to centennial scale variability in the Asian summer monsoon: Foraminiferal perspective from the East China Sea | Dr. Raj Kumar Singh | NCAOR |
| 31. | Investigations of Aerosol Outflow from Indo Gangetic Plain | Dr. V. Vinoj | ISRO |
| 32. | Development and application of extended range forecast system for climate risk management in Agriculture phase – II | Prof. U C Mohanty | DAC |

| Sl. No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|

## School of Electrical Science

| | | | |
|---|---|---|---|
| 33. | Online Target Scoring system for consistency trails with scintillation removal in images | Dr. N B Puhan | DRDO |
| 34. | UI-ASSIST: US-India collaborative for smart distribution system with storage | Dr. S R Samantaray | Indo-US Science & Technology Forum |
| 35. | Development of Speech Interface for Form-filling Application in Five Indian Languages | Dr. M S Manikandan | MEIT under IMPRINT |
| 36. | Si/SiC Hybrid semiconductor based solid state transformer for PV application | Dr. Dipankar De | DST |
| 37. | Brush less DC machine based solar pumping system | Dr. C N Bhende | DST |
| 38. | Design development of light weight wearable wireless acoustic wave sensor array based audio-visual digital stethoscope device | Dr. M S Manikandan | DST |
| 39. | UK India clean energy research institute (UKICERI) | Dr. S B Karanki | DST |
| 40. | Techniques and tools for verification of network security policies based on formal methods to assess security of networks | Dr. Padmalochan Bera | DRDO |
| 41. | Driver behavior modelling for autonomous driving | Dr. N C Sahoo | KPIT Technologies Ltd |
| 42. | Fabrication and characterisation of CVD diamond detectors for plasma diagnostics in nuclear fusion reactors | Dr. Satchidananda Rath | BRNS |
| 43. | Design and implementation of High-speed low-power embedded signal processor based custom power devices for power quality improvement | Dr. S B Karanki | DST |
| 44. | Design and Development of Affordable and Movable Solar Photovoltaic (SPV) Water Pumping System | Dr. S B Karanki & Dr. M S Manikandan | DAFP |
| 45. | Diesel engine Emission Control using Electrical Discharge based Technique for Clean Environment: A Non-Conventional Approach | Dr. Sankarsan Mohapatro | DST |
| 46. | Aeronautic Telemetry Channel Estimation and Equalization | Dr. P R Sahu | ITR Chandipur |
| 47. | Real time Implementation of Image Fusion Algorithms for IR and CCD Video | Dr. N B Puhan | ITR Chandipur |
| 48. | Development of intellegent relaying scheme for micro-grids with DG penetration | Dr. S R Samantaray | CPRI |
| 49. | VisvesvarayaPh scheme for Electronics and IT | Dr. M S Manikandan | DeitY |
| 50. | Computer vision guided mass gathering surveillance using crowd flow analysis | Dr. Debi Prosad Dogra | DST |

| Sl. No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|
| 51. | Design and implementation of MIMO based transceiver for emergency applications | Dr. Barathram Ramkumar | DST |
| 52. | Special Manpower Development Program for Chips to System Design (SMDP-C2SD) | Dr. M S Manikandan | DeitY |
| 53. | Development of a comprehensive wide-area based back up protection scheme for power transmission network | Dr. S R Samantaray | DST |
| 54. | Photovoltaic (PV) based grid-interactive and off-grid electricity system | Dr. C N Bhende | DST<br>Indo-Finish Joint |
| 55. | Integration and intelligent management of renewable via ICT for smart Micro-Grid networks | Dr. N C Sahoo | DST |
| 56. | Speech Based Access of Agricultural Commodity Prices and Weather Information in 12 Indian Languages / Dialects | Dr. P K Sahu | DeitY |

## School of Infrastructure

| | | | |
|---|---|---|---|
| 57. | Estimation of morphodynamicity and its remedial action using red-mud based concrete at coastal zone of Eastern Odisha | Dr. B Hanumantha Rao | Ministry of Mines |
| 58. | Impact Assessment of climate change on Hydrometeorological processes and water resources of Mahanadi river basin | Dr. Arindam Sarkar | Ministry of Water Resources, GOI |
| 59. | Treatment for domestic wastewater using microphyte assisted vermifiltration system | Dr. R R Dash | MHRD |
| 60. | Measures for Improving the Attractiveness of Pedestrian Facility Accessing Urban Local Bus Stops | Dr. Debasis Basu | MHRD |
| 61. | Characterization studies of Nano-enhanced Phase Change Material (NEPCM) in thermal storage devices for sustainable building designs in India | Dr. B Hanumantha Rao | DST |
| 62. | Design and analysis of reactor for catalytic co-pyrolysis of biomass and plastic: A treatment technique for mixed solid waste | Dr. Remya Neelancherry | DST |
| 63. | Study of the effects of Climate Change on Hydro-meteorological processes: Droughts and Floods at Different Spatial and Temporal Scales in Eastern India | Prof. R K Panda | DST |
| 64. | Greywater treatment and reuse by combined sequencing batch reactor and solar photocatalytic reactor | Dr. Remya Neelancherry | DST |
| 65. | Bioelectricity recovery during treatment of kitchen waste in combined leach bed reactor and low cost microbial fuel cell | Dr. Manaswini Behera | DST |
| 66. | Rice mill wastewater treatment and bio-electricity generation in low cost microbial fuel cell employing ceramic separator | Dr. Manaswini Behera | DST |
| 67. | Establishment of Innovation-cum-Incubation Centre at IIT Bhubaneswar | Prof. R K Panda | Planning & Coordination Dept. |
| 68. | Performance Evaluation of Pavements with Stabilized Bases/Subbases for Rural Roads | Dr U C Sahoo | NRRDA |
| 69. | Improving groundwater levels and quality through enhanced water use efficiency in eastern Indian Agriculture | Prof. R K Panda | ITRA |

| Sl. No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|
| **School of Mechanical Sciences** | | | |
| 70. | Investigation on quantification and prevention of high residual stresses and hydrogen assisted cracking in creep strength enhanced ferritic steel welds for low pollution ultra supereritical power plant applications | Dr. Manas Mohan Mohapatra | DST |
| 71. | Performance Improvement of Steam Generator through the Enhanced Hydrophobic Surface | Dr. Mihir Kumar Das | Central Power Research Institute (CPRI) |
| 72. | Droplet impact and splashing on oblique surface | Dr. Sasidhar Kondaraju | DST |
| 73. | Development of enhanced hydrophobic tube bundle with low pressure drop for two phase shell and tube heat exchanger | Dr. Mihir Kumar Das | DST |
| 74. | Study of Wetting and De-Wetting Transition for Fog-Water Harvesting | Dr. Sasidhar Kondaraju | DST INSPIRE Research Grant |
| 75. | Impact of disaster risk reduction activities on livelihood patterns, community resilience and socioeconomic vulnerability in coastal districts of Odisha: A case study | Dr. Akhilesh Barve | ICSSR |
| 76. | Development of Deep Hole Drilling Technique for Measurement of Residual Stresses and its Validation | Dr. Manas Mohan Mohapatra | BRNS |
| 77. | Pool Boiling Crisis on Porous Coated Surface: An Experimental Study and Model Development | Dr. Mihir Kumar Das | DST |
| 78. | National Initiative for Design Innovation | Dr. S N Panigrahi | MHRD |
| **School of Minerals, Metallugrical and Materials** | | | |
| 79. | Value added Electrochemical Devices from Zircon Obtained from Beach Sands of Odisha | Dr. Soobhankar Pati | Ministry of Mines |
| 80. | Panel head of materials panel of Naval Research Board | Dr. Brij Kumar Dhindaw | DRDO |
| 81. | Optimization Of Silos, Bins And Hoppers Designs Through Modelling, Primarily Intended For Iron Ore Storage | Dr. K K Sahu | UAY of MHRD & NMDC |
| 82. | Recycling of cast alloys scraps to produce alloys with comparable microstructure and properties as that of primary alloys | Dr. Animesh Mandal | UAY of MHRD & NALCO |
| 83. | Dissimilar joining of Al with Ti and steel using friction stir welding | Dr. ParthaSarathi De | Naval Materials Research Laboratory (NMRL) |
| 84. | Modelling of Chemical Vapour Infiltration (CVI) process for Fabrication of Carbon Reinforced Carbon Matrix Composites | Dr. Soobhankar Pati | ASL, DRDO |
| 85. | Study of piezoelectric nanomaterial reinforced polymer nanocomposite films for applications in MEMS | Dr. Kaushik Das | DST |
| 86. | Designing of Novel Multiferroic Transition Metal Oxides for Memory and Energy Applications | Dr. Amritendu Roy | DST |
| 87. | Optimization HIP process conditions for 9Cr and 18Cr ODS steel powder | Dr. Animesh Mandal | UGC-DAE |

# CONSULTANCY/ DEVELOPMENT PROJECTS FOR 2017-18

| S.No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|
| **School of Electrical Science** | | | |
| 1. | Designing of video synopsys algorithms for visual surveillance | Dr. Debi Prosad Dogra | Korea Institute of Science and Technology |
| **School of Infrastructure** | | | |
| 2. | Electrical Conductivity Test in Bricks | Dr. Dinakar Pasla | M/s Jindal Steel and Power Ltd |
| 3. | Inspection of defective works and submission of compliance report for construction of school building, staff quarters etc. at KendriyaVidyalaya No. 2, Sambalpur, Odisha | Dr. Dinakar Pasla | M/s Braithwaite Burn and Jessop Construction Company Limited |
| 4. | Vetting of Structural Design, drawing (Pre-Engineered Building), A/c The Samaja, Mancheswar, Bhubaneswar | Dr. Goutam Mondal | M/s LLoyd Insulations |
| 5. | Reconstruction with geometric improvement of existing single/intermediate lane to 2 -lane with paved shoulders configuration from existing KM 92.880 to KM 121.550 of NH-125 in the state of Uttarkakhand on EPC mode, through engineering, procurement and construction (EPC) basis contract | Dr. Partha Pratim Dey | Shivalaya Construction Co. Pvt Ltd. |
| 6. | Rehabilitation and upgradation to two-lane with paved shoulders from KM 531/250 to KM 597/946 (Kunkuri to CG/JH border section) of NH-78 in the state of Chhattisgarh under NHDP - IV through engineers, procurement & construction (EPC) basis | Dr. Partha Pratim Dey | GAWAR-S.C.C.(JV) |
| 7. | Slope stability analysis for new BG Line from Nuagaon to Paradeep | Dr. Sumanta Halder | M/s ARSS Infrastructure Project Ltd. |
| 8. | Consultancy services for design of structural element of MIG 29K & HAWK-AJT infrastructure at INS DEGA Visakhapatnam | Dr. S R Dash | M/s Subhadra Consultants |
| 9. | Checking of safe bearing capacity of pile and suitable remedial measures for ROB at Ghantapada, talcher | Dr. Sumanta Halder | RITES Limited |
| 10. | Concrete cube testing for "Cyclone alert Communication System" in EWDS-Odisha Project for the Village situated in 6 districts viz., Kendrapara, Balasore, Bhadrak, Jagatsinghpur, Puri&Ganjam along coastal line of Odisha state | Dr. Goutam Mondal | RG2SK Business Solution |

| S.No. | Title of the Project | Name of Faculty (Principal Investigator) | Name of the Funding agency |
|---|---|---|---|
| 11. | Improvement of Tara Tarini Temple Ring Road (Regarding with protection works- Hill top portion) in the district of Ganjam | Dr. U C Sahoo | Rural Works Department, Govt. of Odisha |
| 12. | Development of Structural Grade Concretes for TG Deck Foundations | Dr. Dinakar Pasla | M/s JK Paper Mill |
| 13. | Proof Checking of guided and fixed pot PTFE bearing | Dr. S R Dash | M/s Rail Vikas Nigam Ltd |
| 14. | Vetting of bearing capacity calculations of mission shaktibhawan at pokhariput | Dr. B Hanumantha Rao | IDCO |
| 15. | Design proff checking of six-buildings of RVNL work at Haridaspur-Paradeep New BG line | Dr. Goutam Mondal | D K Construction |
| 16. | Service as proof consultant for structural design components of proposed HL bridge over river biluakhai | Dr. S R Dash | M/s Eastern India Construction (P) Ltd |
| 17. | Proof Checking of 19m RCC T Beam ROB for railway siding Project of M/s Emami Cement Ltd. | Dr. S R Dash | M/s Emami Cement Ltd |
| 18. | Proof Checking of launching scheme of composite girders for ROB No. 438 of RVNL Sambalpur – Titlagarh Project | Dr. S R Dash | Rahee Infratech Ltd., West Bengal |
| 19. | Proof Checking of Design and Drawing of 14.2m steel semi through rail bridge girder | Dr. S R Dash | Sparsh Engineering Company (P) ltd |
| 20. | Mix Design for construction of ATC tower, Bijupatnaik International Airport, Bhubaneswar | Dr. Dinakar Pasla | Airport Authority of India |
| 21. | Mix Design for M25 and M30 Grade concretes | Dr. Dinakar Pasla | M/s Rathee, NBCC |
| 22. | Geotechnical investigations on soil/rock samples | Dr. B Hanumantha Rao | Vedanta Limited |
| 23. | Evaluation of Terrazyme (A bioenzyme) stabilized roads constructed under PMGSY | Dr. U C Sahoo | Avijeet Agencies |
| 24. | Examination of soundness of the intake well at Pankapal on the bank of river Bramhani, Dist: Jajpur | Dr. Arindam Sarkar | IDCO |
| 25. | Work on technical support of Cold-Mix technology | Dr. U C Sahoo | SAPCO Bitumen Company Ltd |
| 26. | Design and drawing of minor bridges of RVNL proof checking | Dr. S R Dash | Rail Vikas Nigam Ltd |
| 27. | Proof checking of launching scheme of composite girders for ROB no 439 A and 423A of RVNL SambalpurTitlagarh Project | Dr. S R Dash | M/s RaheeInfratech Ltd |

## School of Mechanical Sciences

| | | | |
|---|---|---|---|
| 28. | Residual stress measurement in unrestrained and restrained double "V" joints | Dr. M M Mahapatra | NMRL, DRDO |
| 29. | Vetting/ Proof checking of refrigeration for 3000 MT and 5000 MT | Prof. S K Mahapatra | Engineering Projects (India) Ltd |

# PATENTS FILLED IN THE YEAR 2017-18

| S.N. | Title | Name of the | Application No. | Year | School |
|---|---|---|---|---|---|
| 1 | Graphene coated metal/metal alloy wire and its process of manufacture | Dr. Amritendu Roy , Dr. Kishor K Sahu, Mr. SoumyabrataBasak,Mr. Turin Dutta, Mr.Anil D Pathak, Mr. V Sai Pranav , MsShreeja Das | 201631017052 | 2017 | SMMME |
| 2 | Artificial odour generator system | Vishwas Chandra Khan, Dr. BalaganesanGuruswamy, Dr. Mihir Kumar Pandit, Mr. TusharGautam, Dr. Arun Kumar Pradhan, Aditya Kumar Gupta | 201731012054 | 2017 | SMS |
| 3 | Diaphragm free optical fiber hydrophone based on cascaded single mode fiber tapers | Dr. Rajan Jha, Mr. Sumit Dass | 201731014677 | 2017 | SBS |
| 4 | A system and a method for steering and focusing of momentum jets | Dr. Venugopal Arumuru and Mr. Syam Sanosh Nair | 201731035216 | 2017 | SMS |
| 5 | A single unit fixed bed reactor for simultaneous hetero- trophic nitrification-aerobic denitrification adsorptive coupled denitrifying phosphate removal from waste water | Dr. R. R. Dash, Dr. P. Bhunia and Mr. Prangya Ranjan Rout | 201731036014 | 2017 | SIF |
| 6 | Autobacus | Mr. Sadik R Syed, Mr. Soham Shailesh Kulkarni, Dr. Mihir Pandit | 201831005630 | 2018 | SMS |
| 7 | Removal of Toxic Azo Dyes/ Aromatic Amines and Industrial Effluent treatmentt by Porous Ruthenium Nanocatalyst | Dr. Srikant Patra and Mr. Anoop Sahoo | 201831002728 | 2018 | SBS |
| 8 | Optical fiber model interferometer based Vortex Flowmeter | Dr. R Jha, Dr. A Venugopal, Mr. Dhrubaraj Dora | 201831019721 | 2018 | SBS/ SMS |

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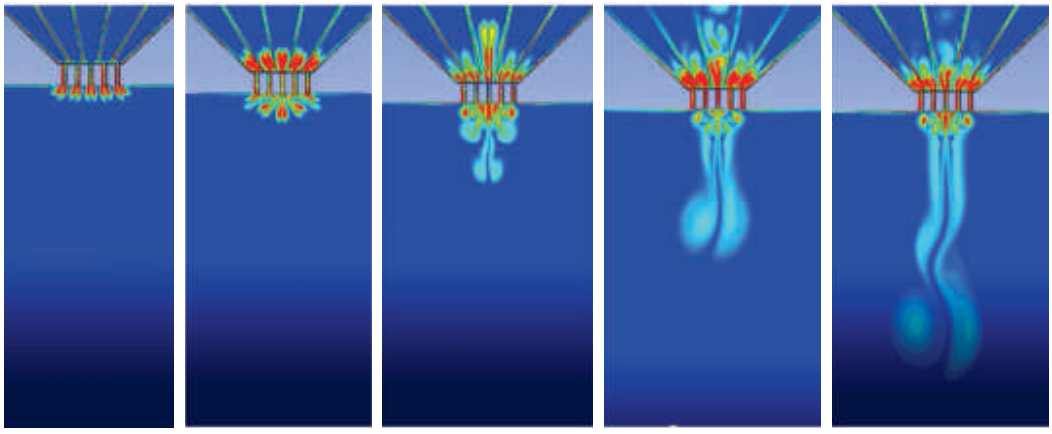
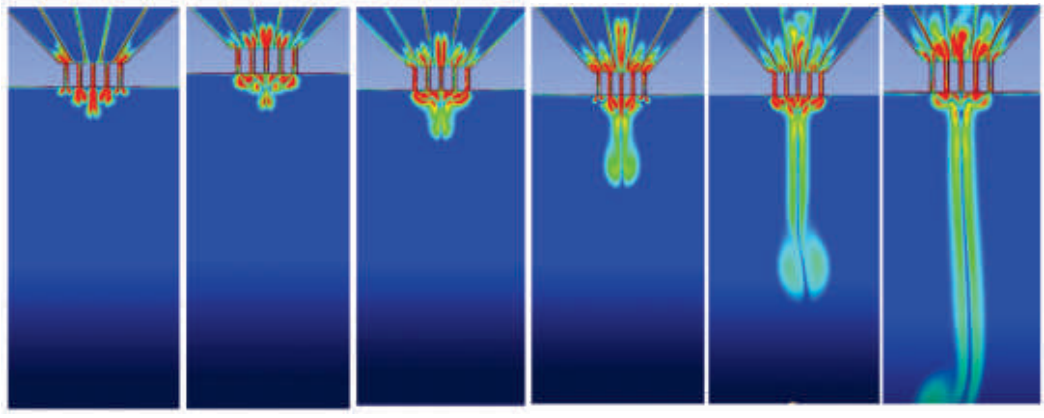
In all 32 no. of patents are filled by the Institute during the years 2011 through 2018. Last year 08 no. of Patents are filled.

## Simulation results showing jet focusing



(Vorticity magnitude contours for an unfocused synthetic jet)



(Vorticity magnitude contour for a focused synthetic jet with phase distribution)

A one day workshop on "Awareness Generation on Intellectual Property Rights" has been organized at IIT Bhubaneswar on 27th March, 2018. The workshop included different aspects of Intellectual Property Rights with its benefits in safeguarding innovations along with outputs of research and development among innovators/ scientists/ faculties/ researchers and students.

# INVITED

## LECTURES/PRESENTATION/CONFERENCE/WORKSHOP/GIAN PROGRAMMES/ SEMINAR/ LECTURES/ COLLOQUIUM

| S.N. | Title of Lecture/ Presentation | Author(s) | Conference Name, Year, Duration | Remarks |
|---|---|---|---|---|
| **School of Basic Sciences** | | | | |
| 1. | Domain Decomposition methods for Optimal Control Problems | Dr. Bankim C. Mandal | SocProS 2017 | Won Best Paper Award |
| 2. | Physics prospects of exotic and conventional bottomonia at Belle II | Dr. S. Bahinipati | Light Cone 2017 | Plenary Talk |
| 3. | Belle-II Silicon Vertex Detector | Dr. S. Bahinipati | The Technology and Instrumentation in Particle Physics 2017 (TIPP2017) | Oral Presentation, on behalf of Belle II Collaboration |
| 4. | Optical Fiber Sensors: Principles to Practice | Dr. Rajan Jha | IONS Kochi, 11-14 September, CUSAT, Kerela | |
| 5. | Interferometric Sensors based on Inline Fabry-Perot Cavity on Demand | Dr. Rajan Jha | Student Conference on Optics and Photonics (SCOP-2017), 1-2 September, PRL Ahmedabad | |
| 6. | Specialty and Tapered Fiber modal Interferometer for sensing applications | Dr. Rajan Jha | IEEE WRAP, December 18-19, 2017, Mahindra EcoleCentrale, Hyderabad | |
| 7. | "Two-site Binding Model of C5a Receptor (C5aR) Exemplified via Native and Engineered hC5a" in theme "Synthetic Biology and Cardiovascular Disease" | Dr. S. Rana | 2nd PAN IIT Biotech Meet, during 5-7th October 2017, Goa | |
| 8. | Unnatural amino acids in DenovoDesign of Peptides and Proteins | Dr. S. Rana | Zonal Institute of Education and Training, at KV-6, Bhubaneswar on 11th October 2017 | Addressed to the participating faculty members of KV (east zone) at a workshop |
| 9. | Important Discoveries at the Frontiers of Chemical Biology | Dr. S. Rana | Dept. of Bioinformatics, OUAT, Bhubaneswar on 27th December 2017 | Addressed to the PG students |
| 10. | On the spectra of bipartite multidigraphs | Dr. S. Barik and Dr. G. Sahoo | International Linear Algebra Society (ILAS) 2017 Meeting: Connections, July 24-28, 2017. | |
| 11. | Design and Development of Homo- and Heterodimetallic Complexes of Ruthenium, Iridium and Palladium as Tandem Catalysts | Dr. Srikanta Patra | Modern Trends in Inorganic Chemistry (MTIC)-XVII, Pune, December 11-14th, 2017 | Invited Speaker |
| 12. | Heterodinuclear Complexes of Ruthenium and Iridium as Anticancer Agents | Dr. Srikanta Patra | New perspective to Advance Functional Materials" (NPAFM 2017) during 15 -17 December, 2017, Ravenshaw University, Cuttack, Odisha | Invited Speaker |

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|---|---|---|---|---|
| 13. | Multimetallic Systems and Their Diverse Applications | Dr. Srikanta Patra | Invited talk by Department of Chemistry Revenshaw University, Cuttack, Odisha | Invited Speaker |
| 14. | The Nobel Prize Winning Discovery (2017) on Physiology / Medicine | Dr. A. Roychowdhury | Institute Seminar on 14th November 2017, IIT Bhubaneswar | Talk Title:"Discoveries on molecular mechanisms controlling the circadian rhythm". |
| 15. | Magnetoresistance in semimetals and narrow gap semiconductors | Dr. Niharika Mohapatra | International conference on Laser Deposition, 2017, November 20-22 | |
| 16. | Frustrated Magnetism | Dr. Niharika Mohapatra | Condensed Matter Physics Meeting | |
| 17. | Unusual magnetic properties of frustrated spin systems | Dr. Niharika Mohapatra | Seminar on Recent developments in condensed matter physics | |
| 18. | Smart Magnetic Materials | Dr. Akhilesh Kumar Singh | International Conference on Advanced Engineering and Functional Material -2K17 | |
| 19. | Independence fractal of a graph | Dr. Tarakanta Nayak | 83rd Annual Conference of Indian Mathematical Society, 12-15 Dec 2017 | Held at Sri Venkateswar University, Tirupati |
| 20. | Completely invariant domains | Dr. Tarakanta Nayak | ICTP | Delivered on 23 June 2017 |
| 21. | Completely invariant domains | Dr. Tarakanta Nayak | ICTP | Delivered on 23 June 2017 |
| 22. | A moving football in a spherical playground | Dr. Tarakanta Nayak | State Level UGC Sponsored Autonomy Seminar on Recent Trends in Mathematics and Applications , 24 March 2018 | at Baba Bhairabananda Autonomous College, Chandikhol, Odisha |
| 23. | Dynamics in the unit disk | Dr. Tarakanta Nayak | National Level Seminar on Recent Advances in Mathematics, 9 February 2018 | at Pingla Thana Mahavidyalaya, West Bengal |
| 24. | Potential of 2D-Nanomaterial based devices under harsh condition | Dr. S Rath | Recent trends in Science,Technology & Management | |
| 25. | Nano-dimensional states of Matter: An observation of unique optical and electronic properties | Dr. S Rath | Recent Trends of Nano Materials for Futuristic Applications | |
| 26. | Black Holes at Criticality | Dr. Chandrasekhar Bhamidipati | Quantum Space-Time Seminar Series, 2017, TIFR, Mumbai, 14-17 August 2017 | |
| 27. | Critical Heat Engines and Black Holes in AdS | Dr. Chandrasekhar Bhamidipati | Raman Research Institute, Bangalore, January 2018 | |
| 28. | Tuning wettability of nanostructured surface by ion beam irradiation | Dr. Shyamal Chatterjee | International conference of complex fluids (CompFlu 2017), IIT Madras, 18-20 December, 2017 | |

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| 29. | Welding of ceramic nanostructures | Dr. Shyamal Chatterjee | International conference of laser deposition (iCOLD), 20-22 November, 2017, IIT Madras | |
| 30. | Slow ions: A tool for welding ceramic nanomaterials | Dr. Shyamal Chatterjee | International conference on nano structuring by ion beam (ICNIB 2017), 10-13, Oct, 2017, DAVV, Indore, India | |
| 31. | Basics on Higher order compact schemes | Dr. T V S Sekhar | Faculty Development Programme, KIIT University, 2017 | |

## School of Earth, Ocean and Climate Sciences

| | | | | |
|---|---|---|---|---|
| 32. | Radiative properties of geoengineering aerosols | Dr. V. Vinoj | National Roundtable Discussion on Geoengineering and India: Science and Policy, 23rd June, 2017 | organized jointly by DST, IISc and IIT Delhi |
| 33. | Urbanization and Climate Change | Dr. V. Vinoj | Urbanization and Climate Change, | Organized by GeotheZentrum, Hyderabad at NGRI |
| 34. | Changing Dust and Climate over South Asia | Dr. V. Vinoj and S. K. Pandey | Environmental, Climate change, Agriculture and Human Health: National and Regional scenario Conference | Organized by S.K. University |
| 35. | Climate Change over NE India | Dr. V. Vinoj | Brahmaputra Conclave | Gauhati University |
| 36. | Land Use Change and Climate Change Signatures in Surface Temperature over Odisha State | Dr. V. Vinoj | NICES Workshop | IMMT, Bhubaneswar |
| 37. | Lightning Monitoring Network | Dr. D. Swain | Regional Environment & Climate in Odisha: Lightning, Thunderstorm and Heatwave (RECO2018), 2018, Mar. 23. | by Indian Meteorological Society (Bhubaneswar Chapter) and ITER |
| 38. | Is our energetic ocean leading us into climate extremes: An investigation of the North Indian Ocean and its role in modulating the regional climate? | Dr. D. Swain | Spring Semester Climate Seminar Series of Interdisciplinary Programme in Climate Studies, Indian Institute of Technology Bombay, 2018, Mar. 14. | by IDP, IIT Bombay |
| 39. | Remote Sensing of the Earth System: Challenges & Way Ahead | Dr. D. Swain | Remotely Sensed Big Data Analysis and Mining (RSBDAM'18), 2018, Jan. 23-24. | by IEEE-GRSS Kolkata Chapter and Centre for Soft Computing Research (Indian Statistical Institute), Kolkata |
| 40. | Big Data Analytics in Climate Sciences | Dr. D. Swain | Big Data and Earth Science, 2017, Nov. 15-16. | by IEEE-GRSS (India) and KIIT University |
| 41. | Thermal Inertial of the North Indian Ocean: Exploring its Significance | Dr. D. Swain | Civil Engineering Association, IIT Bombay, 2017, May 1. | Invited Talk at Civil Engineering Association, IIT Bombay |
| 42. | Coal Petrography and its application | Dr. H.K.Mishra | Department of Earth and Atmospheric Sciences ,NIT Rourkela | Actively interacted with faculty and students in NIT Rourkela |

## School of Electrical Sciences

| | | | | |
|---|---|---|---|---|
| 43. | Issues and Challenges in "Micro-grid Protection | Dr. S. R. Samantaray | WORKSHOP AT IIT BBSR | |
| 44. | Wide-Area Back-Up Protection schemes for Transmission Systems | Dr. S. R. Samantaray | NWET 2018, SIT BBSR | |
| 45. | Issues and Challenges in Micro-grid Protection | Dr. S. R. Samantaray | IIT Roorkee | |
| 46. | Wide-Area Back-Up Protection schemes for Transmission Systems | Dr. S. R. Samantaray | IIT Delhi | |
| 47. | Issues and Challenges in "Micro-grid Protection including Renewables" | Dr. S. R. Samantaray | IGIT Saranga | |
| 48. | VSSUT Burla | Dr. D P Dogra | IEEE Bhubaneswar Subsection-National Energy Conservation Day, 12 December 2017. | Invited Talk |
| 49. | Key Developmental Challenges and Research Directions in Internet of Things (IoT) Enabled Monitoring Systems | Dr. M Sabarimalai Manikandan | International Conference on Microelectronics Devices, Circuits and Systems (ICMDCS 2017) | |
| 50. | Advances in Wireless Communication | Dr. Barathram. R | TEQIP, May, 2018, VSSUT, Burla | |
| 51. | Advanced crypto-systems for enforcing data security in cloud | Dr. Padmalochan Bera | Faculty Development programme in Cyber Security sponsored by Electronics and ICT Academy, NIT Warangal | |
| 52. | Security Challenges for Software Defined Networks - Research Roadmap | Dr. Padmalochan Bera | Faculty Development programme in Cyber Security sponsored by Electronics and ICT Academy, NIT Warangal | |
| 53. | Smart Grid Technology | Dr. Balakrishna P | TEQIP Program, 2018, 1 Day | At Andhra University |
| 54. | Integration of Devices and Systems for Smart Grid | Dr. Balakrishna P | AICTE Program, 2018, 1 Day | At Coimbatore University |
| 55. | Runtime Enforcement of Reactive Systems Using Synchronous Enforcers | Dr. Srinivas Pinisetty, Dr. Partha Roop, Steven Smyth, Stavros Tripakis and Reinhard von Hanxleden | International SPIN Symposium on Model Checking of Software, 2017, July 13, 14 | |
| 56. | Smart Electric Grid-An Overview | Dr. P. Chandrasekhar | TEQIP-III Workshop on Recent Techniques in Energy Management for Smart Grid | At NIT Nagpur |
| 57. | High Penetration of RES-Challenges & Probable Solutions | Dr. P. Chandrasekhar | AICTE FDP on RESEARCH PERSPECTIVES ON SOLAR AND WIND ENERGY SYSTEMS | At RIT Kottyam, Kerala |

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| 58. | Mircrogrid-A Building Block of Smart Grid | Dr. P. Chandrasekhar | ISTE Golden Jubilee Celebrations | At Gandhi Institute for Education and Research |
| 59. | Voltage Regulation in Smart Distribution Systems With high RES Penetration | Dr. P. Chandrasekhar | MHRD, TLC's Workshop on Smart grid and Microgrid Technologies | At NIT Warangal |
| 60. | Problems and Probable Solutions with high PV Penetration | Dr. P. Chandrasekhar | FDP on Research issues in Renewable Energy Sources | At CPRI Bangalore |
| 61. | Internet of Thing (IOT) | Dr. P. K. Sahu | National conferece | Guest of Honour |
| 62. | Turning the tables: Journey from a Ph.D student to a Faculty member | Dr. Debapratim Ghosh | 29 May 2018 at IIT Bombay | Hosted by the Students Reading Group, Dept. of EE, IIT Bombay |

## School of Humanities, Social Sciences & Management

| | | | | |
|---|---|---|---|---|
| 63. | Developing Content in Long Writing Tasks | Dr. Amrita Satapathy | Content Enrichment Program for Senior Secondary Level English Teachers, DAV, CDA, 20 May 2018 | |
| 64. | Key Note Speaker, Role of language in Cognitive Psychology | Dr. Anamitra Basu | International Conference on Social Science and Humanities | |
| 65. | Speaking Skills | Dr. Rajakumar Guduru | VigyanJyothi Programme | |

## School of Infrastructure

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|---|---|---|---|---|
| 66. | Agricultural Drought Monitoring Framework for an Eastern India River Basin using Remotely Sensed Soil Moisture Data | Dr. Ramadas, M., Singh, G., Samantaray, A., and Panda, R. K. | ASCE World Environmental and Water Resources Congress, May 21-25, 2017 | |
| 67. | Climate Change & Application of Software | Dr. M. Ramadas | National Workshop on “Climate Change & Sustainable Livelihood”, January 2, 2018 | |
| 68. | Advanced Technology for Nutrient Removal from domestic wastwater | Dr. P R Rout, Dr. R R Dash, Dr. P Bhunia | Green Technology in Industrial Waste Minimization, 2017, 18th - 31st January 2017 | |
| 69. | Bioenergy recovery during wastewater treatment in Microbial fuel cell | Dr. Manaswini Behera | Faculty Development Program on “ Abatement of Environmental Pollution through Clean Technology” in ITER, SOA University campus, 3rd-8th July, 2017 | |
| 70. | Electricity generation from kitchen waste in low cost microbial fuel cell employing earthenware separator | K. Rajesh Naidu, Vijay Ranjan Dhulipala, Dr. Manaswini Behera | INDO-EU Workshop on The recent developments in microbial fuel cell and membrane bioreactor Technology, IIT Kharagpur, Feb 02-03, 2018 | |

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|---|---|---|---|---|
| 71. | Sustainable Development of Road Infrastructure in India | Dr. U. C. Sahoo | National Seminar on Advances in Civil Engineering, 21-22nd Oct 2017, organized by Govt. College of Engg., Bhawanipatana, Odisha | Invited Lecture |
| 72. | Use of Non-Conventional Materials in Construction of Rural Roads | Dr. U. C. Sahoo | 2nd Training Programme on Quality Control and Quality Monitoring of Third Part QM, 23rd Aug 2017, organized by Architechno Consultants, Bhubaneswar | Invited Lecture |
| 73. | Conventional and modern retaining technologies | Dr. S. Patra | Bio-Engineering Measures for controlling Landslides and Go-Environmental Issues, 2017, three days | Invited Lecturer |
| 74. | Liquefaction of Soil and Ground Improvement Techniques | Dr. S. Patra | Earthquake Resistant Low Cost Housing, Six day | Invited as Expert Lecturer |
| 75. | Recent revision of Is1893-2016 and its impact in seismic design of structures | Dr. Suresh Ranjan Dash | Short Term Course on Recently Revised Seismic Code-Impact on analysis and design using software, NITTR Extension Center, Bhubaneswar 10-14 July 201 | |
| 76. | Ductile Design Concept and Application using IS13920 | Dr. Suresh Ranjan Dash | Short Term Course on Recently Revised Seismic Code-Impact on analysis and design using software, NITTR Extension Center, Bhubaneswar 10-14 July 201 | |

## School of Mechanical Sciences

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|---|---|---|---|---|
| 77. | Key note lecture | Dr. Pandu R. Vundavilli | Two-day National Conference on Recent Advances in Mechanical Engineering held at Andhra University, Vizag, AP on 10th Mar 2017 | |
| 78. | Aeroacoustics | Dr. Yogesh G Bhumkar | VSSC, July 5 - 7 2017 | Delivered 8 hour lectures for scientists from VSSC |
| 79. | Nanoscale Manipulation in Sensing Application | Dr. Ankur Gupta | BRICS Young Scientist Conclave-2017 | Invited talk (July 2017) |
| 80. | Recent trends on EDM and Wire-EDM | Dr. Ankur Gupta | AICTE short term course on Recent Advances in Machining Processes (RAMP) at Veer SurendraSai University of Technology, Burla | |
| 81. | Scope of Electroforming in Nanotechnology | Dr. Ankur Gupta | Third International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018). | |
| 82. | Nanofabrication through Electroforming | Dr. Ankur Gupta | Invited talk in CSIR NIIST, Thiruananthpuram, Kerala, India on 14 May 2018. | |
| 83. | Residual stresses in thick weldments | Dr. M M Mahapatra | International Congress 2017, Dec 7-9, 2017 | |
| 84. | PCM based solar PV cooling system | Dr. Anirban Bhattacharya | GIAN program on Recent Advances in PCM Based Cooling Technology | |

## School of Minerals, Metallurgical and Materials Engineering

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|---|---|---|---|---|
| 85. | Formability of a wrought Mg alloy evaluated by impression testing | S. Gollapudi, W. Mohamed, I. Charit, K. L. Murty | National Conference on Processing and Characterization of Materials, 2017, Dec 8-9 | |
| 86. | Processing and characterization of as-cast aluminium based in-situ composites reinforced with Titanium diboride particles | Dr. Animesh Mandal, Prakash Srirangam, Madhusudan Chakraborty | NMD-ATM, 2017, November 11-14 | |
| 87. | Gallium Ferrite: a functionally rich room temperature multiferroic | Dr. Amritendu Roy | Recent Advances in Science and Technology (RAST) 2018, IGIT Sarang, Orissa, March 10, 2018 | |
| 88. | Designing of novel multiferroic transition metal oxides for memory and energy applications | Dr. Amritendu Roy | National Seminar on Advanced Materials and Technology, AMT 2018, Centurion University, Bhubaneswar, April 17, 2018 | |
| 89. | Recycling of Aluminium scrap | Dr. B. K. Dhindaw | Waste to Wealth in Mineral and Metallurgical Industries" [WWMMI-2018] during 9th -10th March, 2018, at CSIR-IMMT | Key Note lecture |
| 90. | Recyclability of Aluminium alloys, Twin Roll Casting and Nucleation Issues | Dr. B. K. Dhindaw | lecture in Prof. T. Ramchandran Lecture Series, NIT Surathkal 5th October 2017 | Plenary lecture |
| 91. | Biodegradable Mg base/Hydroxyapatite composite materials | Dr. B. K. Dhindaw | Conference on Advanced Engineering Functional Materials (ICAEFM 2017). date of Conference 21st -23rd Sep, 2017 at Bhubaneswar, Odisha. | Key Note lecture |

## SEMINARS / CONFERENCES / WORKSHOPS

# ATTENDED

| S.N. | Name | Title | Attended | Dates | | Place | Remarks |
|---|---|---|---|---|---|---|---|
| | | | | From | To | | |
| **School of Basic Sciences** | | | | | | | |
| 1. | Dr. Bankim Chandra Mandal | SocProS 2017 | Conference | 2017-12-23 | 2017-12-24 | IIT Bhubaneswar | |
| 2. | Dr. Seema Bahinipati | XI SERC School on Experimental High-Energy Physics at NISER | Workshop | 2017-11-07 | 2017-11-27 | NISER, Bhubaneswar | Resource Person |
| 3. | Dr. Seema Bahinipati | Light Cone 2017 | Conference | 2017-09-18 | 2017-09-22 | University of Mumbai, Mumbai | Plenary Talk |
| 4. | Dr. Seema Bahinipati | The Technology and Instrumentation in Particle Physics 2017 (TIPP2017) | Conference | 2017-05-22 | 2017-05-26 | Beijing, China | Oral Presentation |
| 5. | Dr. Soumendra Rana | | Symposium | 2018-02-23 | 2018-02-23 | NISER, Bhubaneswar | jointly organized by INSA & NISER |
| 6. | Dr. Sasmita Barik | International Linear Algebra Society (ILAS) 2017 Meeting: Connections | Conference | 2017-07-24 | 2017-07-28 | Iowa State University, Ames, USA | |
| 7. | Dr. Srikanta Patra | Design and Development of Homo- and Heterodimetallic Complexes of Ruthenium, Iridium and Palladium as Tandem Catalysts | Conference | 2017-12-11 | 2017-12-14 | NCL-PUNE/IISER PUNE | Invited Speaker |
| 8. | Dr. Srikanta Patra | Heterodinuclear Complexes of Ruthenium and Iridium as Anticancer Agents | Conference | 2017-12-15 | 2017-12-17 | Ravenshaw University | Invited Speaker |
| 9. | Dr. Srikanta Patra | Multimetallic Systems and Their Diverse Applications | Seminar | 2018-03-23 | 2018-03-23 | Department of Chemistry Ravenshaw University | Invited Speaker |
| 10. | Dr. Malay Kumar Bandyopadhyay | DAE Solid State Physics Symposium 2017 | Symposium | 2017-12-26 | 2017-12-30 | BARC Mumbai | |
| 11. | Dr. Niharika Mohapatra | International conference on Laser Deposition | Conference | 2017-11-20 | 2018-06-22 | IIT Madras | |
| 12. | Dr. Niharika Mohapatra | Recent developments in condensed matter physics | Seminar | 2018-02-11 | 2018-02-11 | U. N. (Autonomous) College of Science and Technology Adaspur-754011 | |
| 13. | Dr. Tabrez Khan | Exploration of [2+2+1] cycloaddition based strategy towards the synthesis of modest to complex molecular architecture | Conference | 2018-02-24 | 2018-02-25 | Aligarh | AMU |
| 14. | Dr. Tabrez Khan | CYCLOADDITION BASED STRATEGIES TOWARDS THE TOTAL SYNTHESIS OF SOME BIOACTIVE NATURAL PRODUCTS | Conference | 2018-02-15 | 2018-02-17 | Gwalior | Jiwaji University |

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|---|---|---|---|---|---|---|---|
| 15. | Dr. Tabrez Khan | Exploration of [2+2+1] cycloaddition based strategy towards the synthesis of modest to complex molecular architecture | Conference | 2018-01-08 | 2018-01-10 | Kolkatta | Prof.Ashima Chatterjee Foundation |
| 16. | Dr. Tabrez Khan | SYNTHETIC STUDIES TOWARDS SOME MARINE PYRROLE ALKALOIDS AND MOLECULES INSPIRED FROM THEM FOR MDR CANCER CELLS | Conference | 2017-08-16 | 2017-08-18 | Malaysia | ICYC-2017 |
| 17. | Dr. Akhilesh Kumar Singh | ICAEFM-2K17 | Conference | 2018-09-21 | 2018-09-23 | GITA-Bhubaneswar | |
| 18. | Dr. Akhilesh Kumar Singh | MTIC-2017 | Conference | 2018-12-16 | 2018-12-18 | NCL-IISER-Pune | |
| 19. | Dr. Satchidananda Rath | Recent Trends of Nano Materials for Futuristic Applications | Seminar | 2018-01-31 | 2018-01-31 | Dhenkanal, Odisha | |
| 20. | Dr. Satchidananda Rath | Recent trends in Science,Technology& Management | Conference | 2018-03-16 | 2018-03-17 | Khurdha | |
| 21. | Dr. Sabyasachi Pani | SOCPROS 2017 | Conference | 2017-12-23 | 2017-12-24 | BHUBANESWAR | |
| 22. | Dr. Shyamal Chatterjee | International conference of complex fluids (CompFlu 2017) | Conference | 2017-12-18 | 2017-12-20 | IIT Madras | |
| 23. | Dr. Shyamal Chatterjee | International conference of laser deposition (iCOLD) | Conference | 2017-11-20 | 2017-11-22 | IIT Madras | |
| 24. | Dr. Shyamal Chatterjee | International conference on nano structuring by ion beam (ICNIB 2017) | Conference | 2017-10-10 | 2017-10-13 | DAVV, Indore | |
| 25. | Dr. Akshay Kumar Ojha | 45th Annual conference of Orissa Mathematical Society | Conference | 2018-02-03 | 2018-02-04 | ParalaMoharaj Engineering College, Berhampur | As an Invited speaker |
| 26. | Dr. Akshay Kumar Ojha | UGC Seminar at Salepur Autonomous College | Seminar | 2018-03-17 | 2018-03-18 | Salepur Autonomous College | As Chief Guest |
| 27. | Dr. Akshay Kumar Ojha | UGC Seminar at Udala College Keonjhar | Seminar | 2018-01-13 | 2018-01-13 | Udala College, Keonjhar | As Key note speaker |

## School of Earth, Ocean and Climate Sciences

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|---|---|---|---|---|---|---|---|
| 28. | Dr. Raj Kumar Singh | 26th Indian Collaquium of Micropaleontology and Stratigraphy | Seminar | 2017-08-17 | 2017-08-19 | Department of Geology, University of Madras, Guindy Campus, Chennai | Co-Chaired session and given oral presentation |
| 29. | Dr. Sandeep Pattnaik | International Tropical Meteorology Symposium | Conference | 2018-11-07 | 2018-11-10 | Space Application Centre Ahmedabad | |
| 30. | Dr. Debadatta Swain | Urban Climate: Science, Impacts and Adaptation | Workshop | 2017-09-21 | 2017-09-22 | IIT Bhubaneswar | Joint Convenor. Sponsored under |
| 31. | Dr. Debadatta Swain | Big Data and Earth Science | Workshop | 2017-11-15 | 2017-11-06 | KIIT University | IEEE-GRSS |
| 32. | Dr. Debadatta Swain | Remotely Sensed Big Data Analysis and Mining (RSBDAM'18) | Workshop | 2018-01-23 | 2018-01-24 | Indian Statistical Institute, Kolkata | IEEE-GRSS, kolkata Chapter |

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|---|---|---|---|---|---|---|---|
| 33. | Dr. Debadatta Swain | Biodiversity and Climate Change (2nd International) | Workshop | 2018-02-24 | 2018-02-27 | IIT Kharagpur | CORAL, IIT Kharagpur |
| 34. | Dr. Debadatta Swain | Regional Environment & Climate in Odisha: Lightning, Thunderstorm and Heatwave (RECO2018) | Workshop | 2018-03-23 | 2018-03-23 | ITER Bhubaneswar | Indian Meteorological Society (Bhubaneswar Chapter) |
| 35. | Dr. Kiranmayi Landu | Role of multiple equatorial waves on cyclogenesis over Bay of Bengal | Conference | 2017-08-06 | 2017-08-11 | Singapore | |
| 36. | Prof. Hrusikesh Mishra | Urban climate science impacts and adaptations | Seminar | 2017-09-21 | 2017-09-22 | IIT Bhubaneswar | |
| 37. | Prof. Hrusikesh Mishra | Indo-US Workshop on prediction of heavy rainfall associated with extreme weather events | Workshop | 2017-12-15 | 2017-09-16 | IIT Bhubaneswar | |
| 38. | Prof. Hrusikesh Mishra | Brainstorming workshop | Workshop | 2017-01-17 | 2017-01-27 | IIT Bhubaneswar | |

## School of Electrical Sciences

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|---|---|---|---|---|---|---|---|
| 39. | Dr. Dipankar De | EPE 2017 | Conference | 2017-09-11 | 2017-09-15 | Warsaw, Poland | |
| 40. | Dr. Debi Prosad Dogra | ICSIPA | Conference | 2017-09-12 | 2017-09-14 | Kuching, Malayasis | Paper presentation |
| 41. | Dr. Barathram Ramkumar | IEEE Tencon | Conference | 2017-11-05 | 2017-11-08 | Penang, Malaysia | |
| 42. | Dr. Barathram Ramkumar | IEEE VTC | Conference | 2017-09-24 | 2017-09-27 | Toronto, Canada | |
| 43. | Dr. Padmalochan Bera | The Fifth IEEE International Conference on Software Defined Systems (SDS-2018) | Conference | 2018-04-23 | 2018-04-28 | Barcelona, Spain | |
| 44. | Dr. Padmalochan Bera | Cyber Security 2017 | Conference | 2017-05-10 | 2017-05-15 | London, UK | |
| 45. | Dr. Srinivas Bhaskar Karanki | TENCON -2017 | Conference | 2017-11-04 | 2017-11-08 | Penang, Malaysia | Presented a Paper and Chaired one Session |
| 46. | Dr. Srinivas Bhaskar Karanki | National Power Electronics Conference | Conference | 2017-12-18 | 2017-12-20 | Pune, India | Presented two Papers and Chaired one Session |
| 47. | Dr. Srinivas Pinisetty | International SPIN Symposium on Model Checking of Software | Conference | 2018-07-13 | 2017-07-14 | Santa Barbara, California, United States | |
| 48. | Dr. Debalina Ghosh | 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting | Conference | 2017-07-09 | 2017-07-14 | San Diego, US | |
| 49. | Dr. Prasant Kumar Sahu | S. Malik and P. K. Sahu, | Symposium | 2017-07-09 | 2017-07-14 | Sandiego | |

## School of Humanities, Social Sciences & Management

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 50. | Dr. Amrita Satapathy | 2nd International Conference on Politics and Letters: The Function of Criticism at the Present Times | Conference | 2018-01-23 | 2018-01-25 | Utkal University, Bhubaneswar | Presented paper on The Politics of Travel: A Study of the Travel Memoirs of Mirza Sheikh I'tesamuddin and Sake Dean Mahomed |
| 51. | Dr. Anamitra Basu | Role of Priming and Multilingualism | Conference | 2017-10-11 | 2017-10-12 | Egypt | |
| 52. | Dr. Rajakumar | WGB2: National Workshop on e-Learning, MOOCs and Basic ICT Tools for Educators | Workshop | 2018-03-19 | 2018-03-20 | Bhubaneswar | |
| 53. | Dr. Punyashree Panda | Resistance Through Writing in Two Marginal Women's Debut Novels(IMRF Goa 2017) | Conference | 2017-12-28 | 2018-06-30 | Goa | |
| 54. | Dr. Naresh Chandra Sahu | , International Journal of Arts & Sciences' (IJAS) International Conference for Business and Economics | Conference | 2017-11-14 | 2017-11-17 | Rome | |

## School of Infrastructure

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 55. | Dr. Meenu Ramadas | National Workshop on Climate Change & Sustainable Livelihood | Workshop | 2018-01-02 | 2018-01-02 | Bhubaneswar | Delivered a key note lecture |
| 56. | Dr. Meenu Ramadas | SocProS 2017 | Conference | 2017-12-23 | 2017-12-24 | IIT Bhubaneswar | oral paper presentation and session moderator |
| 57. | Dr. Meenu Ramadas | Urban Climate: Science, Impacts and Adaptation | Workshop | 2017-09-21 | 2017-09-22 | IIT Bhubaneswar | |
| 58. | Dr. Rajesh Roshan Dash | Recycle 2018- International Conference on Waste Management | Conference | 2018-02-22 | 2018-02-24 | IIT Guwahati | |
| 59. | Dr. Manaswini Behera | IUWMM 2018, INDO-EU workshop on The Recent Developments in Microbial Fuel Cell and Membrane Bioreactor Technology | Workshop | 2018-02-02 | 2018-02-03 | IIT Kharagpur | Oral presentation |
| 60. | Dr. Manaswini Behera | RECYCLE 2018, International conference on waste management | Conference | 2018-02-22 | 2018-02-24 | IIT Guwahati | Oral presentation |
| 61. | Dr. Shantanu Patra | International conference on Trends and Recent Advances in Civil Engineering (TRACE 2016) | Conference | 2016-08-11 | 2016-08-12 | Noida, India. | |
| 62. | Dr. Shantanu Patra | National Workshop on Technology Enabled Learning | Workshop | 2015-08-04 | 2018-06-05 | NIT Rourkela | |
| 63. | Dr. Shantanu Patra | Indian geotechnical Conference | Conference | 2014-12-18 | 2014-12-20 | Kakinada, India. | |

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|---|---|---|---|---|---|---|---|
| 64. | Dr. Shantanu Patra | International Conference on Sustainable Civil Infrastructures (ICSCI 2014) | Conference | 2014-10-17 | 2014-10-18 | Hyderabad, India | |
| 65. | Dr. Shantanu Patra | International conference on Information Technology in Geo-Engineering | Conference | 2014-07-21 | 2014-07-22 | Durham, UK | |
| 66. | Dr. Shantanu Patra | workshop on High Performance Interviews | Workshop | 2013-11-20 | 2013-11-20 | Dundee, UK | |
| 67. | Dr. Shantanu Patra | OES Mooring and Anchoring Practices Offshore: 40 years of experience with drag embedment anchors | Workshop | 2013-04-08 | 2013-04-08 | Aberdeen, UK | |
| 68. | Dr. Shantanu Patra | National Instruments Hands-On Taster seminar | Seminar | 2013-06-27 | 2013-06-27 | Newbury, UK | |
| 69. | Dr. Shantanu Patra | Indian geotechnical conference | Conference | 2012-12-13 | 2012-12-15 | Delhi, India | |
| 70. | Dr. Shantanu Patra | Institute Seminar on What makes us happy? Unanswered questions | Seminar | 2017-08-30 | 2017-08-30 | IIT Bhubaneswar | |
| 71. | Dr. Suresh Dash | Earthquake Safety Assessment of Buildings | Workshop | 2017-08-30 | 2017-08-31 | IIIT Hyderabad | |
| 72. | Dr. Debasis Basu | Integrated Transport System for Kolkata: Opportunities and Challenges | Workshop | 2018-02-23 | 2018-02-23 | Kolkata | Organised by British deputy High Commission, Kolkata, Invited to join Panel Discussion |
| 73. | Dr. Debasis Basu | Making Urban Transport Smart and Sustainable in India | Workshop | 2017-05-31 | 2017-05-31 | Kharagpur | Jointly Organised by Univ. of Strathclyde, Glasgow Scotland, Invited to join Panel discussion |
| 74. | Dr. B. Hanumantha Rao | Bauxite Residue Valorisation and Best Practices conference | Conference | 2018-05-05 | 2018-05-10 | Athens, Greece | |
| 75. | Dr. B. Hanumantha Rao | Int. Conf. on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering | Conference | 2018-03-28 | 2018-03-31 | NIT Jalandhar, India | |
| 76. | Dr. Pasla Dinakar | Corrosion Conference CORCON 2017 | Conference | 2017-09-17 | 2017-09-20 | Mumbai | |
| 77. | Dr. Pasla Dinakar | International Conference in Advances in Construction Materials and Systems | Conference | 2017-09-03 | 2017-09-08 | IIT Madras | |

## School of Mechanical Sciences

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 78. | Dr. K. Srinivasa Ramanujam | iRAD 2018 | Conference | 2018-01-08 | 2018-01-11 | NARL Gadanki | Oral presentation |
| 79. | Dr. Gaurav Bartarya | 10th Intl. Conf. on Conference on Precision, Meso, Micro and Nano Engineering (COPEN10) | Conference | 2017-12-06 | 2017-12-08 | IIT Madras, Chennai | presented the paper |
| 80. | Dr. V. Pandu Ranga | 2nd International Conference on Mechanical Engineering and Robotic Research | Conference | 2017-12-09 | 2017-12-15 | Paris, France | |
| 81. | Dr. V. Pandu Ranga | 7th International Conference on Soft Computing for Problem solving | Conference | 2017-12-23 | 2017-12-24 | IIT Bhubaneswar | |
| 82. | Dr. Manas Mohan Mahapatra | IIW-2017 Congress | Conference | 2017-12-07 | 2017-12-11 | Chennai | |
| 83. | Dr. Anirban Bhattacharya | GIAN program on Recent Advances in PCM Based Cooling Technology | Workshop | 2017-12-11 | 2017-12-15 | IIT Bhubaneswar | |
| 84. | Prof. Swarup Kumar Mahapatra | Engaging Canada and India: Perspectives on Sustainability | Conference | 2017-05-13 | 2017-05-14 | SICI, DELHI | |
| 85. | Dr. Sasidhar Kondaraju | Workshop on Wetting | Workshop | 2018-04-09 | 2018-04-09 | Bhubaneswar | IMMT |

## School of Minerals, Metallurgical and Materials Engineering

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|---|---|---|---|---|---|---|---|
| 86. | Dr. Kodanda Ram Mangipudi | Discussion Meeting on Mechanics/Materials Interface | Conference | 2018-02-18 | 2018-02-22 | Coorg, Karnataka, India | International Conference ONLY on INVITATION |
| 87. | Dr. Srikant Gollapudi | Advances in Materials and Additive Manufacturing | Workshop | 2018-03-21 | 2018-03-22 | Chennai | |
| 88. | Dr. Srikant Gollapudi | National Conference on Processing and Characterization of Materials | Conference | 2017-12-08 | 2017-12-09 | Rourkela | In addition to my presentation, I was asked to judge the poster session |
| 89. | Dr. Animesh Mandal | Indo-Australian Workshop on Advances in Materials and Additive Manufacturing (AM2) | Workshop | 2018-03-21 | 2018-03-22 | IIT Madras | |
| 90. | Dr. Animesh Mandal | Indo-Italian Metal Hub seminar | Seminar | 2018-01-20 | 2018-01-20 | NALCO, Bhubaneswar | |
| 91. | Dr. Amritendu Roy | NMD-ATM 2017 | Conference | 2017-11-11 | 2017-11-14 | BITS Pilani Goa Campus | |
| 92. | Dr. Amritendu Roy | Indo-Austrian workshop on Advances in Materials and Additive Manufacturing | Workshop | 2018-03-20 | 2018-03-23 | IIT Madras | |
| 93. | Dr. Kaushik Das | Indo-Australian Workshop on Advances in Materials Manufacturing | Workshop | 2018-03-21 | 2018-03-22 | IIT Madras | |
| 94. | Dr. Soobhankar Pati | Strategy on Resource Efficiency | Workshop | 2018-01-22 | 2018-01-23 | Bhubaneswar | |
| 95. | Dr. Soobhankar Pati | Indigenous Li-ion Batteries for special Applications | Workshop | 2017-06-08 | 2018-06-08 | Vishakhapatnam | |

## SEMINARS / CONFERENCES / WORKSHOPS

# ORGANIZED

| S.N. | Name | Title | Organized | Dates | | Place | Remarks |
|---|---|---|---|---|---|---|---|
| | | | | From | To | | |
| **School of Basic Sciences** | | | | | | | |
| 1. | Dr. Seema Bahinipati | XI SERC School on Experimental High-Energy Physics at NISER | Workshop | 2017-11-07 | 2017-11-27 | NISER, Bhubaneswar | Member, Local Organizing Committee |
| 2. | Dr. Rajan Jha | Member of Physics on Open day | Workshop | 2018-02-12 | 2018-02-12 | IIT Bhubaneswar, Physics Lab | Demonstrated some basic experiments on Optics |
| 3. | Dr. Chandrasekhar Bhamidipati | National Strings Meeting 2017 | Conference | 2017-12-04 | 2017-12-11 | NISER/IITBBS | Joint Organizer/Convener |
| 4. | Dr. Akshay Kumar Ojha | 7th International conference on Soft computing for Problem solving (SocProS2017) | Conference | 2017-12-23 | 2017-12-24 | IIT Bhubaneswar | As Convener |
| **School of Earth, Ocean and Climate Sciences** | | | | | | | |
| 5. | Dr. Vinoj Velu | National Workshop on Urban Climate: Science, Impacts and Adaptation | Workshop | 2017-09-21 | 2017-09-22 | Bhubaneswar | Co-codinator |
| 6. | Prof. Uma Charan Mohanty | Indo-US colloquium on “Prediction of Heavy Rainfall associated with Extreme Weather Events” | Workshop | 2017-12-14 | 2017-12-16 | IIT Bhubaneswar | |
| 7. | Dr. Sandeep Pattnaik | Brainstorm workshop on Establishment of Bay of Bengal Coastal Observatory | Workshop | 2018-01-17 | 2018-01-17 | IIT Bhubaneswar | 22 Institutes within India and abroad participated |
| 8. | Dr. Sandeep Pattnaik | Prediction of Heavy Rainfall Associated with Extreme Weather Events | Workshop | 2017-12-15 | 2017-12-16 | IIT Bhubaneswar | |
| 9. | Dr. Debadatta Swain | Biodiversity and Climate Change (2nd International) | Workshop | 2018-02-24 | 2018-02-27 | IIT Kharagpur | Organizing Committee Member |

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|---|---|---|---|---|---|---|---|
| 10. | Dr. Debadatta Swain | 7th International Conference Soft Computing for Problem Solving - SocProS 2017 | Workshop | 2017-12-23 | 2017-12-24 | IIT Bhubaneswar | Hospitality Committee Member |
| 11. | Dr. Debadatta Swain | Urban Climate: Science, Impacts and Adaptation | Workshop | 2017-09-21 | 2017-09-22 | IIT Bhubaneswar | Joint Convenor. Sponsored under Climate Change Programme by SPLICE Division (Dept. of Science and Technology, Govt. of India) |

## School of Electrical Sciences

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12. | Dr. Chandrashekhar Narayan Bhende | Electricity Market Oriented Control of Renewables based Microgrids | Workshop | 2017-12-13 | 2017-12-15 | IIT Bhubaneswar | Joint Indo-Finish Workshop |
| 13. | Dr. Debi Prosad Dogra | SocProS 2017 | Conference | 2017-12-23 | 2017-12-24 | IIT Bhubaneswar | Local Organizing Committee Member |
| 14. | Dr. M Sabarimalai Manikandan | A Three Day Workshop on VLSI and Embedded System Design (VESD-2017) | Workshop | 2017-10-13 | 2017-10-15 | IIT Bhubaneswar | |
| 15. | Dr. Barathram Ramkumar | A Three Day Workshop on VLSI and Embedded System Design (VESD-2017) | Workshop | 2017-10-13 | 2017-10-15 | IIT Bhubaneswar | With Dr.Manikandan and Dr.Srinivas |
| 16. | Dr. Chandrasekhar Perumalla | Smart Grid and Microgrid Technologies | Workshop | 2017-12-04 | 2017-12-08 | NIT Warangal | |
| 17. | Dr. Manoranjan Satpathy | GIAN course on Advanced Computer Architecture | Seminar | 2017-12-14 | 2017-12-23 | IIT Bhubaneswar | |

## School of Infrastructure

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|---|---|---|---|---|---|---|---|
| 18. | Dr. B. Hanumantha Rao | Low clinker high performance cement composites (HPCC) | Workshop | 2018-06-13 | 2018-06-15 | SIF, IIT Bhubaneswar | |

## School of Minerals, Metallurgical and Materials Engineering

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|---|---|---|---|---|---|---|---|
| 19. | Animesh Mandal | Current Trends in Solidification Processing and Technology | Workshop | 2017-04-07 | 2017-04-07 | IIT Bhubaneswar | Attended by delegates from SJTU China |
| 20. | Dr. Soobhankar Pati | Current Trends in Solidification Processing and Technology | Workshop | 2017-04-03 | 2018-04-06 | Bhubaneswar | |

# GIAN Programmed Organised

| S.N. | Course Name/ Duration | Host Faculty | Foreign Faculty |
|---|---|---|---|
| 1. | Comparative Literature for the Twenty-First Century<br>6th Dec, 2017 to 16th Dec, 2017 | Dr. Punyashree Panda | Neil ten Kortenaar, University of Toronto Canada |
| 2. | Recent Advances In PCM Based Cooling Technology<br>11th Dec, 2017 to 15th Dec, 2017 | Dr. P. Rath | Yogendra Kumar Joshi, Georgia Institute of Technology, Atlanta United States of America |
| 3. | Polynomials with Polynomiography and Applications<br>21st Dec, 2017 to 30th Dec, 2017 | Dr. Tarakanta Nayak | Bahman Kalantari, Rutgers University United States of America |
| 4. | Integration of Electronically-Coupled Energy Resources and Apparatus in Electrical Power Systems<br>19th Feb, 2018 to 23rd Feb, 2018 | Dr. Debalina Ghosh | Reza Iravani, University of Toronto Canada |

# Institute Seminars

IIT Bhubaneswar regularly organizes Institute Seminars which are delivered by eminent personalities throughout the world for the benefit of the students, faculty members and staff. Apart from topics related to science and technology, seminars have been arranged on a wide range of important topics including health, foreign affairs, defence, entrepreneurship, economics, spirituality and psychology. Seminars receive an enthusiastic participation from the educational institutes in and around Bhubaneswar. List of all the seminars conducted during the academic year 2017-2018 have been given below.

**List of Institute Seminars:**

| S.N. | Title of the talk | Speaker | Date |
|---|---|---|---|
| 1 | What makes us happy? Unanswered questions | Prof. Manas K. Mandal, (Distinguished Visiting Professor, IIT Kharagpur) | 30/8/2017 |
| 2 | Conceptual Evolution of Mechanics and the Little Known Story of F = ma | Prof. Amitabha Ghosh, (formerly Director IIT Kharagpur, Honorary Scientist of Indian National Science Academy) | 1/9/2017 |
| 3 | Some Perspectives on I N D I A (Innovation, Natural resources, Demography, Inclusion and Agriculture) | Mr. Harun Rashid Khan, (Retd. Deputy Governor of the Reserve Bank of India) | 13/10/2017 |
| 4 | On the art of setting a good question paper | Prof. S. C. Dutta Roy, (Retired Professor of Electrical Engineering, IIT Delhi) | 27/10/2017 |

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|---|---|---|---|
| 5 | Know your Self to get true success and lasting happiness | Prof. Kanchan Chowdhury, (IIT Kharagpur) | 10/11/2017 |
| 6 | The Nobel Prize Winning Discoveries (2017) on Chemistry, Physiology / Medicine and Physics | Prof. Parlapalli V. Satyam, (Institute of Physics, Bhubaneswar) ,Dr. Anasuya Roychowdhury, (IIT Bhubaneswar),Dr. Chandrasekhar Bhamidipati, (IIT Bhubaneswar) | 24/11/2017 |
| 7 | Super-ion Inspired Materials for Energy Storage and Conversion | Prof. Purusottam Jena (Physics Department, Virginia Commonwealth University, Richmond, VA 23284) | 21/2/2018 |
| 8 | My story: Building a successful, sustainable global company | Dr. BVR Mohan Reddy (Executive Chairman, Cyient) | 10/3/2018 |
| 9 | India-China relations: Cooperation, competition, confrontation; A security perspective | Lt. Gen. P R Kumar, PVSM, AVSM, VSM (Retd. Director General Military Operations) | 16/3/2018 |

# Awards/Honours/ Fellowships/Industry Internships/Scholarships/ Memberships

| S.N. | Name | Details of the Awards/Honours/Fellowship |
|---|---|---|
| **School of Basic Sciences** | | |
| 1. | Dr. Bankim Chandra Mandal | Best Paper Award in SocProS 2017, held in IIT Bhubaneswar in December 2017. |
| 2. | Dr. Rajan Jha | Senior Member, Optical Society of America (OSA)<br>For individuals having ten year or greater record of professional and/or service accomplishments within the optics and photonics field. |
| 3. | Dr. Srikanta Patra | Life membership from National Academy of Science Indian (NASI) |
| 4. | Dr. Chandrasekhar Bhamidipati | Award for Excellence in Teaching (Best Teacher) from IIT Bhubaneswar<br>Best Teacher (Among all other faculty who received award for teaching excellence in 2017) |
| 5. | Dr. Shyamal Chatterjee | Recipient of prestigious Bhaskara Advanced Solar Energy (BASE) Fellowship from Indo-US Science and Technology Forum - 2018 |
| 6. | Dr. Kousik Samanta | Teaching Excellence Award 2017 (IIT Bhubaneswar) |
| **School of Earth, Ocean and Climate Sciences** | | |
| 7. | Dr. Syed Hilal Farooq | United Nations University Fellowship<br>Duration 17 April 2018 - 6 October 2018 |
| 8. | Prof. Uma Charan Mohanty | Biju Pattnaik award for scientific excellence- 2018<br>Highest science award of Government of Odisha through Odisha Bigyan Academy |
| 9. | Prof. Uma Charan Mohanty | Faculty Research Awards for Outstanding Research Faculty from CAREERS 360- 2018<br>CAREERS 360 is an online counselling service for students and researchers gives best academicians with highlighted research over India every year in various science streams. |
| **School of Electrical Sciences** | | |
| 10. | Dr. Subhransu Ranjan Samantaray | Outstanding Reviewer, IEEE Transactions on Power Systems- 2017<br>IEEE PES SOCIETY |

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|---|---|---|
| 11. | Dr. Subhransu Ranjan Samantaray | IEEE India Council Outstanding Volunteer Award-2017<br>IEEE India Council |
| 12. | Dr. Subhransu Ranjan Samantaray | Exceptional Reviewer, IEEE Trans. On Power Delivery-2015, 2017<br>IEEE PES SOCIETY |
| 13. | Dr. Subhransu Ranjan Samantaray | Editor, IEEE Transactions on Power Delivery<br>IEEE PES Society |
| 14. | Dr. Chandrashekhar Narayan Bhende | Bhaskara Advance Solar Energy (BASE) Fellowship<br>Sponsored by Indo-US Science & Technology Forum |
| 15. | Dr. N. C. Sahoo | Professor Dr. Muhammad H Rashid Best Paper Award for the paper entitled "Implementation of Demand Side Management using Microcontroller and Wireless Communication" presented at 2017 IEEE ICECCT Conference |
| 16. | Dr. Sudipta Saha | The presentation of the paper titled "Design and application of a many-to-one communication protocol" received the best-in-session-presentation-award in IEEE INFOCOM 2017. |
| 17. | Dr. Debalina Ghosh | IEEE Senior Member |
| 18. | Dr. Debalina Ghosh | IETE Fellow |
| 19. | Dr. Debalina Ghosh | SSI Life Member |
| 20. | Dr. Chandrasekhar Perumalla | IEI Young Engineer Award 2017-2018 from The Institution of Engineers (India)<br>For the research done in the fields of Renewable Energy and Microgrid / Smart grid control |
| 21. | Dr. Chandrasekhar Perumalla | Transnational Access Researcher of European Union's ERIGrid under H2020<br>Conducted Research at The National Smart Grid Laboratory, SINTEF Energy and NTNU, Trondheim, Norway, 2017 |
| 22. | Dr. Chandrasekhar Perumalla | Indo-US Postdoctoral Fellowship sponsored by SERB, DST, GoI and Indo-US Science & Technology Forum, 2017 |
| 23. | Dr. Chandrasekhar Perumalla | SERB Overseas Postdoctoral Fellowship sponsored by SERB, DST, GoI, 2017 |
| 24. | Dr. Prasant Kumar Sahu | Member International Speech Communication Association |
| 25. | Dr. Prasant Kumar Sahu | Fellow IETE |
| 26. | Dr. Prasant Kumar Sahu | Senior Member IEEE |
| 27. | Dr. Prasant Kumar Sahu | Member Indian Society of Systems For Science and Engineering |
| 28. | Dr. Prasant Kumar Sahu | Life member System society of India |
| 29. | Dr. Prasant Kumar Sahu | Member OSA |

| | | |
|---|---|---|
| **School of Infrastructure** | | |
| 30. | Dr. Sumanta Haldar | Representing Indian Geotechnical Society on the International Technical Committee TC 209 on "Offshore Geotechnics" of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) |
| 31. | Dr. Manaswini Behera | Best paper Award for the paper titled "Bio-electricity generation from kitchen waste in a low cost earthenware microbial fuel cell" presented in Recycle 2018, 2nd International Conference on Waste Management held at Indian Institute of Technology Guwahati from 22nd to 24th February 2018. |
| 32. | Dr. Shantanu Patra | Received IGS-Delhi Chapter YGE Award for the Best Paper on “Computational Geomechanics” (Dec, 2016) |
| 33. | Dr. Shantanu Patra | Received IGS-Baroda Chapter YGE Award for the best paper on “Ground Improvement” (Dec 18, 2014) |
| **School of Mechanical Sciences** | | |
| 34. | Dr. Ankur Gupta | BRICS Young Scientist award<br>Selected as "BRICS Young Scientist" by DST for participating in "BRICS Young Scientist Conclave", held from 11-15 July 2017 at Zhejiang University, Hangzhou, China. |
| 35. | Dr. Venugopal Arumuru | Teaching Excellence Award 2017-2018<br>IIT Bhubaneswar |
| 36. | Dr. Venugopal Arumuru | Young Scientist Award 2017<br>Venus International Foundation |
| **School of Minerals, Metallurgical and Materials Engineering** | | |
| 37. | Prof.Brij Kumar Dhindaw | Outstanding reviewer citation for reviewing research papers in the following journals: 1. Material Science and Engineering A 2. Material Science and Engineering B, 3. Journal of Alloy and Compounds and 4. Journal of Material Processing Technology. All high impact factor journals in the domain of metallurgcal and materials engineering |

## Award for outstanding service in 2017-18

1. Dr. S Manikandan, Assistant Professor, School of Electrical Sciences
2. Shri Pradeep Kumar Sahoo, Assistant Registrar (Store and Purchase Section)
3. Mr. Sambit Ranjan Mohanty, Jr.Superintendent , Finance and Account Section
4. Mr. K Saikiran, Private Secretary, Director’s Office
5. Mr. Ramesh Chandra Biswal
6. Mr. Biswajit Pegu, Physical Training Instructor, Gymkhana
7. Ms Sunita Burma, Physical Training Instructor, Gymkhana

## Awards to Students

1. Pranjal Bangani, a member of Panacea, the English Literary Society was awarded special mention at the recently held Global Peace Conference Model United Nations (MUN) Bhubaneswar.
2. Mr. Partha Sarthi Jena, MSc (Geology) a student from the School of Earth, Ocean and Climate Sciences secured all India 10th rank in the recent CSIR-NET examinations.
3. The basketball team of IIT Bhubaneswar clinched the runners-up trophy at the closure of the College of Engineering (CET) Tournament, after defeating three

strong opponents to reach the finals. The team was led by Vivek Goddu and Lian Min Tonsing, who guided the team well and motivated the players.

4. Mr. Ashutosh Acharya, Ms. Babita Jangir, Ms. Annu Panwar got awarded the TROPMENT conference 2016.
5. Mr. Deepak Kumar, POSOCO Power system award 2016 (Doctoral category)
6. Mr. Himadri Baisya awarded best poster Monsoon conference 2016 at IITM Pune.
7. Mr. Jeeban Nayak, Got 1st prize for best poster presentation on the National science day.
8. Mr. Loknath Tripathy , POSOCO Power system award 2017 (Doctoral category)
9. Pankaj Dillip Achlerkar, POSOCO Power system award 2017 (Masters category)
10. Mr. Praveen Kumar, Mr. Rishav Goyal, Mr. Pintu Layek, Mr. Archan Ganguly, Ms. Joyita Chattaraj got joint Indian Academics summer research fellowship 2016.
11. Mr. Rahul Kumar Dubey, POSOCO Power system award 2017 (Doctoral category
12. Mr. Samiran Mandal, got 1st prize in best poster presentation in workshop at NIT, Chennai
13. Mr. Samar Kumar Ghosh, got 3rd prize in best poster presentation in workshop at NIT, Chennai.
14. Mr. Satyanarayan Dhal, got 1st Prize in International conference on IBMEC-2016.
15. Mr. Satyanarayan Dhal and Dr. Shyamal Chatterjee received Ganesh Mishra memorial award from Institute of Engineers (India).
16. Mr. Sourav Dutta got summer fellowship award from PRL Ahmedabad.
17. Mr. Subrota Halder, got 2nd prize Best poster research conclave'17, IIT Guwahati.
18. Ms. Susmita Kar , POSOCO Power system award 2017 (Doctoral category)
19. Kamal Narayan Reddy Challa , Computer science and Engineering received Silver medal for topping in BTech branches.
20. Vishwas Chandra Khan, Mechanical Engineering received Silver medal for topping in BTech branches.
21. Yogendra Singh Patel, Civil Engineering received Silver medal for topping in BTech branches.
22. Harleen Hanspal , Electrical Engineering received Silver medal for topping in BTech branches.
23. Rishav Goyal, Climate science and technology received Silver medal for topping in MTech Specialization.
24. Nikita Trivedi, Electronics and Communication Engineering received Silver medal for topping in MTech Specialization.
25. M Naresh, Mechanical System Design received Silver medal for topping in MTech Specialization.
26. Suryakant Kumar , Materials science and engineering received Silver medal for topping in MTech Specialization.
27. Partha Sarathi Jena ,Geology received Silver medal for topping in M.Sc. Specialization.
28. Pijush Chakraborty , Chemistry received Silver medal for topping in M.Sc. Specialization.
29. Priyanka Mishra, Mathematics received Silver medal for topping in M.Sc. Specialization.
30. Smita Chakraborty , Physics received Silver medal for topping in M.Sc. Specialization.
31. Akshay Ramachandran received Dinesh memorial award for best Btech thesis in Mechanical engineering.
32. Deepak Kaushik received Tejaswi memorial award for best Btech thesis in Electrical Engineering.
33. Harleen Hanspal received Prof. P. Rama Rao award for best lady graduate.
34. Kamal Narayan Reddy Challa received Dr. K. Kasturirangan Award for best graduate.
35. Vishwas Chandra Khan received B.K. De memorial award for most innovative project.

# DISTINGUISHED VISITORS

| Sl. No. | Name | Name of the Institution |
|---|---|---|
| 1. | Dr. Ashok Mishra | Clemson University, USA |
| 2. | Dr. BVR Mohan Reddy | Executive Chairman, Cyient |
| 3. | Dr. C.S.Kumar | IIT Kharagpur |
| 4. | Dr. Devendra Narain Singh | IIT Bombay |
| 5. | Dr. Lucy Nandi | University of Minnesota,USA |
| 6. | Dr. Nilanjan Mitra | IIT Kharagpur |
| 7. | Dr. P.M.Pandey | IIT Delhi |
| 8. | Dr. Partha Saha | IIT Kharagpur |
| 9. | Dr. Piyush Ghaunsali | IIT Madras |
| 10. | Dr. Radhakrishna Pillai | IIT Madras |
| 11. | Dr. Ranjan Pradhan | University of Michigan, Ann Arbor |
| 12. | Dr. Sampreeti Jena | University of Minnesota,USA |
| 13. | Dr. Sofen Jena | Faurecia Clean Mobility,Bengaluru |
| 14. | Dr. Sudesna Basu | George Washington University |
| 15. | Dr. Sujit Bidhar | Fermilab, USA |
| 16. | Lt GEN P R Kumar | Retd. Director General Military Operations |
| 17. | Mr. Anil Trigunayat | Ambassador, IFS Retd. |
| 18. | Mr. Anindya Maitra | Associate Vice President, Mindtree |
| 19. | Mr. Biranch Panda | NTU, Singapore |
| 20. | Mr. Biswaranjan Mohanty | University of Minnesota,USA |
| 21. | Mr. Harun Rashid Khan | Retd. Deputy Governor of the Reserve Bank of India |
| 22. | Mr. S. Mohapatra | SABIC Technology Centre, Bengaluru |
| 23. | Mr. Yu Jing | Hong Kong University of Science and Technology, Hong Kong |
| 24. | Ms. Pavitra Parthasarathy | Hong Kong University of Science and Technology, Hong Kong |
| 25. | Neil ten Kortenaar | University of Toronto Canada |
| 26. | Padma Shri Dr. T. P. Das | Vice Chairman, L V P Eye Institute |
| 27. | Prof. Amitabha Ghosh | Formerly Director IIT Kharagpur, Honorary Scientist of Indian National Science Academy |

| | | |
|---|---|---|
| 28. | Prof. Anjan K. Ghosh | Vice Chancellor, Tripura University |
| 29. | Prof. Avijit Gangopadhya | University Massachusetts Dartmouth, USA |
| 30. | Prof. B.V. Rathish Kumar | IIT Kanpur |
| 31. | Prof. Bahman Kalantari | Rutgers University United States of America |
| 32. | Prof. D. Manjunath | IIT Bombay |
| 33. | Prof. Dhanada Kanta Mishra | Hong Kong University of Science and Technology, Hong Kong |
| 34. | Prof. Kajari Majumdar | TIFR Mumbai |
| 35. | Prof. Kanchan Chowdhury | IIT Kharagpur |
| 36. | Prof. Kollure VL Subramanium | IIT Hyderabad |
| 37. | Prof. Laxmidher Behera | IIT Kanpur |
| 38. | Prof. Manas K. Mandal | Distinguished Visiting Professor, IIT Kharagpur |
| 39. | Prof. P. M. Pandey | IFB, Kolkata |
| 40. | Prof. P.V.S.N Murthy | IIT Kharagpur |
| 41. | Prof. Parlapalli V. Satyam | Institute of Physics, Bhubaneswar |
| 42. | Prof. Prahlad Rao | Former Joint Director, CDAC, currently IIIT-Bengaluru) |
| 43. | Prof. Purusottam Jena | Virginia Commonwealth University, USA |
| 44. | Prof. Ramji Prasad | Aalborg University, Denmark |
| 45. | Prof. Ravindra Gettu | IIT Madras |
| 46. | Prof. Reza Iravani | Professor, University of Toronto Canada |
| 47. | Prof. S. C. Dutta Roy | Retired Professor of Electrical Engineering, IIT Delhi |
| 48. | Prof. Sachindeo Vaidya | CHEP, IISc Bangalore |
| 49. | Prof. Saraju Mohanty | University of North Texas |
| 50. | Prof. Sheshadri Mohan | University of Arkansas |
| 51. | Prof. Sumon Sinha | Sinhatech |
| 52. | Prof. Suvrat Raju | ICTS Bangalore |
| 53. | Prof. T. V. Srinivas | Indian Institute of Science Bengaluru |
| 54. | Prof. Tangali Sudarshan | University of South Carolina |
| 55. | Prof. Tian C. Zhang | University of Nebraska, Lincoln, USA |
| 56. | Prof. Utpal Sarkar | Former Director PRL, Ahmedabad, IIT Khargapur |
| 57. | Prof. Vikram M. Gadre | IIT Bombay |
| 58. | Prof. Viktor Prasanna | University of Southern California |
| 59. | Prof. Vishwanath Sinha | Formerly IIT Kanpur |
| 60. | Prof. Yogendra Kumar Joshi | Georgia Institute of Technology, Atlanta United States of America |

# CENTRAL LIBRARY

The mission of the Central Library is to provide quality information resources in all forms to the academic and research community of IIT Bhubaneswar. With a commitment to excel, the Library plays a vital role starting from acquiring to disseminating all types of information resources by timely and innovative services to support the academic and research need of the user community.The range and quality of services offered by the Central Library are comparable to any modern libraries in India of International standard.

In 2016,Central Library has extended its services at Argul campus i.e. the permanent campus of Institute. Further, it has also extended the Library timing up to 9 pm at permanent campus. Central Library sifted all its operation to the permanent campus in April 2017. In a nut shell, currently it is having over 17600+ volumes of books, 49+ full text as well as bibliographical database subscriptions, and other resources like popular magazines/print journals, theses, and reports in Engineering, Science & Technology, Management, Humanities and Social Sciences. Apart from the procurement on print books, the Central Library achieved phenomenal progress in the subscription of e-resources which includes more than 8645 e-journals to its digital collection making "24 x 7 Library" in real sense on institute-wide network and off-campus access to e-resources through ezproxy.

## Online Subscriptions

There are 49 Electronic Resources including e-journals, online databases, bibliographic databases, data sets, software tools, e-Books etc. are being subscribed and renewed annually in both through institute funding and also through eSS (e-ShodhSindhu: A nationwide initiative by Ministry of HRD for Higher Education e-Resources).

## THE TOTAL COLLECTION OF LIBRARY AS ON MARCH 2018

- Printed Books: 17,450
- E- Books: 30 Lakhs + (World eBook Library (WEL))
- Journals & Magazines: 24 Nos.
- Daily Newspapers: 12 Nos.
- E-resources: 8750+ e-journals
- (Technology: 3322+; Science: 3129+ & Humanity & Social Sc.: 2299+ e-journals)
- Full text online databases: 45 Nos.
- Bibliographical databases: 04 Nos.
- CD/Multi-media databases: 01 Nos.
- Patent Database: 01 No.
- E-Book Database: 02 No.
- Web tools: 02 Nos.

## LIBRARY SERVICES & FACILITIES

- Reader's Assistance
- Membership and Borrowing Facilities
- Photocopying Facility
- Hindi Collection (Rajbhasa Collection)
- Leadership Corner
- Non-Book Materials
- Reserved Collection in reading area
- Special Collection for Scheduled Castes & Scheduled Tribes
- Display of Scholarship and fellowship information
- Orientation Programmes
- Document deliver services

## Full Text Online Databases

- AAAS (Science)
- ABI INFORMComplete
- ACI Materials journals
- ACM Digital Library
- American Chemical Society
- American institute of Aeronautics and Astronautics
- American Institute of Physics
- American Mathematical Society
- American Meteorological Society
- American Physical Society
- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers (ASME)
- Annual Reviews Journals
- ASTM International Standards and Engineering DL
- Begell HouseEngineering Research Collection
- Cambridge Journals
- Cell Press Journals
- ECS Digital library Online
- Economic & Political Weekly New
- Emerald Journals
- Geo Science World
- ICE+ Thomas Telford
- IEEE Xplore Digital Library
- IOP Science Extra
- ISID
- JSTOR
- McGraw-Hill Access Engineering Library
- NATURE - 12 Titles
- Optical Society of America
- Oxford University Press
- Project Muse
- Proquest Dissertation & Theses
- Royal Society of Chemistry
- Sage (2 Journals)
- Science Direct Option-1 (5 Sub- Phy, Chm, Mat, Eng, & Mt.Sc)
- Earth & Planetary Sc. - Elsevier (Science Direct Additional)
- SIAM Journals
- SPIE Digital Library
- South Asia Archive
- Springer Journals
- Taylor & Francis Online (Sc. & Tech, Business & Mgmt. & Ecos)
- Transportation Research Board
- Wiley Online - 65 titles

## Bibliographical E-DATABASES

- SCIFINDER Scholar (web enabled version)
- MATHSCINET
- SCOPUS
- Web of Science (SCIE) (back files since 1965)

## Patent Database

- WIPS Global Advanced

## E book

- McGraw-Hill Access Engineering Library
- World eBook Library

## CD/ Multi-media Databases

- Cambridge Structural Database System (Researcher License)

## Computing Infrastructure & Services

The Library has its own sub-LAN, which is connected to the Campus LAN. It has more than 20 PCs dedicated for the user to access electronic resources (e-journals, e-databses, etc), SUN Fire Server and Blade Server. The Central Library has a comprehensive Home Page as a part of the Institute's web site. The Library Home page serves as an integrated interface for all services available from the Central Library. The interface, available at http://library.iitbbs.ac.in/ and offers the following web-based services:

- Recent Additions to the IIT Library (http://library.iitbbs.ac.in/)
- New Arrival Display & Alert Services (both physical & online)
- Electronic Resources subscribed (http://library.iitbbs.ac.in/online-e-resources.php)
- Web-based Library OPAC (http://10.10.32.47/ -intranet; http://14.139.204.213/ - outside Argul network)
- Web Access to Journals subscribed in Print.
- Off Campus Remote Access to all e-Resources through EZProxy (http://14.139.204.214:2048/login)\
- Institutional Repository (http://idr.iitbbs.ac.in:8080/xmlui/)

## Open Source Software (OSS) for Library Automation and Institutional Repository

Open source Library Management Software (KOHA) has been installed and the day-to-day housekeeping activities are being done through this system. Central Library has upgraded to the latest koha version of 17.05 in July 2017. Central Library has also successfully implemented an IR (Institutional Repository)using the open source software Dspace in accordance with the National Digital Library (NDL), IIT Kharagpur mandate.

## Out-reach and other Programs

- Research Analytics and management using SciVal
- Session on Proquest Dissertations & Theses & ABI Inform
- Library Services and citation search for PhD scholars.

# CAREER DEVELOPMENT CELL

The Career Development Cell (CDC) offers a broad range of student-centred support service that empower students to explore, define, and realize their career goals. The CDC also engages in one-on-one counselling sessions, consultations throughout the career planning process, and assistance with goal-setting and goal achievement through a variety of career exploration activities. The ultimate aim is to provide lifetime tools and skills for professional development, job search success, and career satisfaction, supporting the students in shaping and managing their careers by building key ingredients required for a student to be a complete professional.

Campus placements of 2018 pass out batch has seen the best placement season so far in terms of quality and quantity of student placed. A total of 206 students have been placed from all the branches taken together.

## Key highlights of placement of 2017-18

- Total 130 students from UG received offers.
- Undergraduate placement is about 87%.
- Highest domestic CTC offered was 39 Lakhs per annum.
- M.Tech placements are close to 60%.
- M. Sc students from basic sciences was near 100% placements.
- Highest number of job offers have been received from core industries.
- No. of companies visited are 52.
- Average salary is 11.15 Lakh per Annum.
- PSU's like ISRO, IOCL, HPCL, NCCBM participated in the campus placements.
- MNC companies like Goldman Sachs, Renault Nissan, Samsung R & D, Oracle, Infosys, TCS R & D, Adobe have participated in this year of placements.
- 3rd year students have received internship offers in reputed industries. A few of them are engaged in Internships in R & D organisations and foreign universities.

## Companies

Goldman Sachs, IndianOil, HP, Adobe, amazon, Capgemini

Deloitte., ISRO, Directi, KPIT, LARSEN & TOUBRO, Microsoft

SAMSUNG, TATA MOTORS, TATA STEEL, TATA CONSULTANCY SERVICES, MARUTI SUZUKI

TESCO, UnitedHealth Group, vedanta, WORKS APPLICATIONS, wipro, Jio, RENAULT NISSAN

## Course/stream wise distribution of placement: 2017-18

| Branch (B.Tech) | No. of students Registered | No. of students Placed |
|---|---|---|
| Civil | 29 | 18 |
| Comp. Science | 42 | 42 |
| Electrical | 36 | 30 |
| Mechanical | 35 | 32 |
| MMME | 9 | 8 |

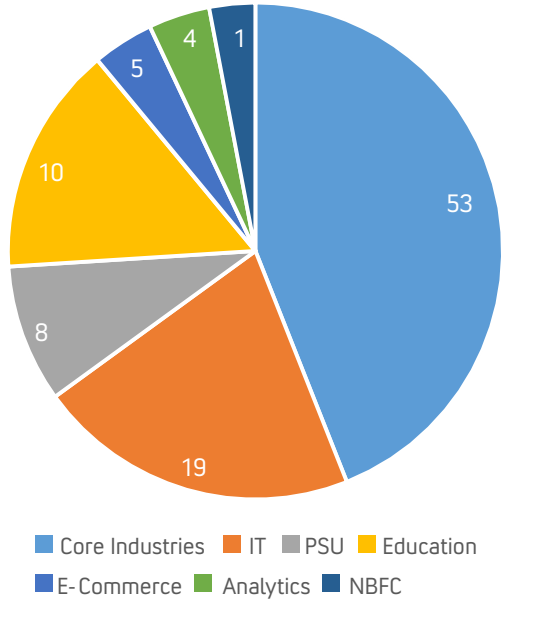
| Branch (M.Tech/ M.Sc) | No. of students interested in placement | No. of students placed |
|---|---|---|
| M Tech | 69 | 40 |
| M Sc | 46 | 33 |
| PhD | - | 03 |

Overall placement:
No of students registered: 266
No of students placed: 206
Percentage of placement: 78%

## Sector- wise placement analysis

IT: 19 %
Core: 53 %
PSU: 8%
Analytics: 4%
Education: 10%
NBFC: 1%
E- Commerce: 5%

## Sector-wise placement data



## Placement & Higher studies for previous 3 years

| Academic Year (first admitted) | No. of first year students admitted | Academic year (pass out) | No. of students graduating in minimum stipulated time | No. of students participated in campus placement | No. of students placed through campus placement | Median salary of placed graduates (in Lakh) |
|---|---|---|---|---|---|---|
| **B. Tech** | | | | | | |
| 2012-13 | 113 | 2015-16 | 105 | 90 | 87 | 6.5 |
| 2013-14 | 148 | 2016-17 | 147 | 126 | 105 | 7.5 |
| 2014-15 | | 2017-18 | | 151 | 130 | 8.8 |
| **M. Tech** | | | | | | |
| 2014-15 | 71 | 2015-16 | 55 | 31 | 20 | 6.5 |
| 2015-16 | 74 | 2016-17 | 58 | 44 | 37 | 6.7 |
| 2016-17 | | 2017-18 | | 69 | 40 | 6.2 |
| **M. Sc** | | | | | | |
| 2014-15 | 71 | 2015-16 | 69 | 35 | 9 | 7 |
| 2015-16 | 76 | 2016-17 | 69 | 43 | 14 | 6.9 |
| 2016-17 | | 2017-18 | | 46 | 33 | 6 |

## Companies recruited in the Academic Year 2017-18

| | | | |
|---|---|---|---|
| Adobe | Amazon | Accenture | Affine Analytics |
| Akash Institute | Bharat Seats Ltd. | BSEC | CEWIT |
| Capgemini | CTS | Delta Power Solutions | Dolcera |
| Deloitte | Directi | Edubrisk Solutions | Fiitjee |
| Futures First | Go-Jek | Goldman Sachs | GMR IT |
| HCL | HPCL | IOCL | ISRO |
| Ittiam | Infosys | KIIT | KPIT |
| L & T Construction | L & T Limited | Maruti Suzuki | MIC College of Technology |
| MathWorks | MAQ Software | NCCBM | OYO |
| Oracle | Renault Nissan | Rao Edusolutions | Reliance Jio |
| Samsung R&D | Swasth Bharat Prerak | Tata Steel | Tata Motors |
| TCS R&D | Transweb Educational | Tesco | UHG |
| Vedanta | Vidyamandir Classes | Wipro | Zuti Engg. |
| **Recruitment Details** | No of students recruited<br>Minimum salary Offered<br>Maximum salary offered<br>Average salary offered<br>Median salary offered | 206<br>4.8 (LPA)<br>39 (LPA)<br>10 (LPA)<br>8 (LPA) | |

**Details for jobs for year 2015-16, 2016-17, 2017-18**

| | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|
| Percentage of students placed for jobs | **93%** | **83%** | **87%** |
| Average salary offered per annum (in Rs. lakhs) | 7.05 | 10.52 (LPA) | 11.15 (LPA) |
| Median salary offered per annum (in Rs. lakhs) | 6.5 | 8.33 (LPA) | 8.8 (LPA) |
| Maximum salary offered per annum (in Rs. Lakhs) | 16 | 38 (LPA) | 39 (LPA) |
| Minimum salary offered per annum (in Rs. lakhs) | 3 | 4.5 (LPA) | 5.1 (LPA) |
| Total number of companies that visited the campus | 35 | 45 | 52 |

Selected candidates & officials from the Company

Group discussion session is on

Pre placement talk

# STARTUP CENTRE

The Department of Science & Technology and the Ministry of Human Resource Development, Government of India, sanctioned Rs. 1.50 crore for establishing Startup Centre at IIT Bhubaneswar. Prof. R. V. Raja Kumar, Director, IIT Bhubaneswar, inaugurated the Centre on 20th June 2016. This facility is available to all budding entrepreneurs of the region.

## Important dates

- Date of selection letter received by the Institute
  22 March 2016
- Date on which the IIT Startup Centre was inaugurated
  20 June 2016
- Date of selection of first round of startups
  28 September 2016
- Date of selection of second round of Startups
  6 May 2017
- Date of selection of 3rd round of startups
  29 December 2017

## Activities

- The Startup Centre was inaugurated on 20 June 2016 by the Director of the Institute.
- The Institute has earmarked more than 50,000 sq. ft. area for the startup centre.
- Invitation for opening startups and the relevant application forms are uploaded on the Institute Website and are also sent to various college/ universities/ industrial enterprises in and around the State of Odisha which includes Andhra Pradesh, West Bengal, Jharkhand, Chhattisgarh etc.
- Advertisements regarding invitation for opening startups are also sent to leading newspapers.
- 56 applications were received in the first round of advertisement out of which 13 Startups were selected.
- 30 applications were received in the second round of advertisement. The second round selection committee meeting was held on 6th May 2017 and 12 startups were selected.
- 16 applications were received in the third round of advertisement. Selection committee meeting was held on 29th December 2017 and 4 startups were selected.
- At present 11 nos. of startups are incubated.
- Villa Mart, one of the promising startup incubated in the IIT Bhubaneswar's startup center has made it to the top 10 list of social enterprises at the sixth edition of Tata Social Enterprise Challenge (TSEC). Currently operational in Nayagarh District, Villa Mart provides a mobile market place besides making available around 260 items of vegetables, grocery and other essential commodities forb the villagers at their door steps.

## IIT Bhubaneswar Research and Entrepreneurship Park

IIT Bhubaneswar received license and incorporation certificate from Registrar of companies (RoC) to run IIT Bhubaneswar Research and Entrepreneurship Park, a section-8 (not for profit) company. This newly formed company will operate from the Samantapuri campus of IIT Bhubaneswar, at the heart of the capital city Bhubaneswar, and will promote entrepreneurship, research, and startup activities. Opening a section-8 company will also help IIT Bhubaneswar to receive grants under various government schemes promoting entrepreneurship, research, and startup activities. Eventually the park will operate from the permanent campus of the Institute where already a 70 acres space earmarked for the purpose, said Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

IIT Bhubaneswar Research and Entrepreneurship Park will initially operate under the chairmanship of Prof. R. V. Rajakumar, Director, IIT Bhubaneswar. He will be assisted by Prof. R. K. Panda, Dean R&D IIT Bhubaneswar, and Dr. Yogesh Bhumkar, PIC Startup Centre IIT Bhubaneswar, as two other directors of the company.

Prof. R. V. Raja Kumar, Director, IIT Bhubaneswar reiterated to promote entrepreneurship and innovation not only in this state but also in the surrounding states. There are numerous colleges and universities offering various courses, such as engineering, science, and agriculture, to their students. Therefore, a rich pool of talent is available in and around IIT Bhubaneswar which needs to be guided for innovation, research, and the entrepreneurship activities. To shape their innovation and promote their entrepreneurship interests, IIT Bhubaneswar Research and Entrepreneurship Park will act as a nodal center.

The Research and Entrepreneurship Park has already

received funds as given below:

| | | |
|---|---|---|
| (I) | Ms Susmita Bagchi | Rs. 2.50 crores |
| (ii) | Govt. of Odisha | Rs. 2.50 crores |
| (iii) | STPI | Rs.2.50 crores |

**Facilities for Startups:**

- Furnished/Semi-furnished/Unfurnished space as per the requirement of the entity
- Internet, electricity, and water facility
- Hostel facility, if available
- Library facility
- Laboratory and workshop facilities
- Networking
- Mentoring support by faculty members
- Support for legal and financial advice by empanelled consultants
- Availability of IIT students for internship
- Interactive workshops with Angel Investors and venture capitalists
- Workshop on different issues of Entrepreneurship
- Entrepreneur skill development
- Guidance and support for filing patents
- Fooding and lodging facility available in nearby Atmaram Hotel


# RAJBHASHA EKAK

In pursuance of the Official Language Policy of the Government of India, Rajbhasha Ekak of the Institute is promoting the progressive use of Hindi in IIT Bhubaneswar. Presently the Cell has one sanctioned post of Junior Hindi Translator. The Institute is completely tried to follow the rules and regulations of the Govt. of India related to Official Languages Hindi. Further the Rajbhasa Ekak is looking the Town Official Language Implementation Committee (TOLIC) Bhubaneswar (Central) activities and our director is Chairman of TOLIC Bhubaneswar (C). Some the highlights are as follows:

## On Going Activities

Translation of Institute Annual Report, Annual Accounts, Audit Report and various other documents which comes under Section 3(3) of Official Language Act, 1963. In addition, various other letters and correspondence, replies etc. are either translated or prepared in Hindi. The Ekak also try to ensure the effective implementation of Official Language policy of Govt. of India at Institute. The Ekak ensures the bilingual display and use of different nameplates, notice boards, rubber stamps, routine type forms and also help in preparing bilingual Degrees certificate awarded by the Institute during Convocation. The Ekak involved the students and motivated them to use official language and organise official language program during different institute function with the help of Hindi literary society "Abhivyakti" under student gymkhana.

## Hindi Training and workshop

Time to time, Rajbhasha Ekak impart Hindi training to all Institute employees who has no working knowledge in Hindi on Roster. To solve the problem faced by the employees in using official language, the Rajbhasha Ekak organized workshops for the employees of the Institute and member office of TOLIC Bhubaneswar (C). In the report year, the following workshops were organized:

1) On 13th July, 2017 a Hindi Workshop on " : " was organized for the employees.
2) On 31st August, 2017 a workshop was organised on "Official Language Policy and problem in online report filing" for all the member offices of TOLIC Bhubaneswar (C).

Prof. R.V. Rajkumar, Director, Sri Debraj Rath, Joint Registrar and Dr. Raj K. Singh, PIC Rajbhasha encouraged, addressed and motivated the participants on these occasions to work more in Hindi.

## Hindi Pakhwada Ceremony

During 01-14 September, 2017 Rajbhasha Ekak organized "Hindi Pakhwada" in the Institute. Several Programmes and competition in Hindi were organized for employees and students of the Institute. The highlights of this year Hindi Pakhwada was inter institute as well as intra institute competition for the students were organised with support of "Abhvyakti". Various neighbouring colleges and institutes were participated in these programs. The popular programs were hindi creative writing "Rachnatamak Lekhan" and "Awaz Dil Ki". On 14th September, 2017 Hindi Diwas was celebrated in the Institute. Prof. R. Ramesh, Senior Professor, National Institute of Science education and research was chief guest and Prof. P.C.Pandey, Senior professor, IIT Bhubaneswar was guest of honour. Prizes were distributed to the winners of the various competitions on that day by the chief guest and guest of honour. A very motivational speech on progressive use of hindi is given by Prof. Ramesh, Prof. Pandey.

## Publications

Rajbhasha Ekak publishes a bi-monthly newsletter "E-Samachar" in Hindi, covering all the academic, cultural, extra-curricular activities of the Institute followed by "Hindi Sahitya Manch" column.

In addition, Rajbhasa Ekak has also published TOLIC Bhubaneswar (C) E-magzine "Nagrik".

## Bilingual Website

As per the Official Language policy, Govt. of India, Rajbhasha Ekak maintains bilingual updation in Institute's website. Further, Rajbhasha Ekak links added in our institute website which contains various useful information related to effective use of Official Language Policy.

## Official Language Implementation Committee

The Institute has an Official Language Implementation Committee to look after the implementation of Official Language policies of Govt. of India and to review the progressive use of Hindi in Institute. Three quarterly meetings of the committee were held last year under the chairman ship of the Director of the Institute. In the meeting discussion were made to accelerate the progressive use of Hindi in the Institute.

## Town Official Language Implementation Committee (TOLIC)

In addition of this, Rajbhasha Ekak plays a vital role in coordinating the implementation the Official Language policy in the city and adjoining area. Rajbhasha Vibhag, Ministry of Home Affairs, Govt. Of India has selected our Institute Director as Chairman, TOLIC Bhubaneswar (C). All the Heads of Central government offices of the city and its adjoining areas are the ex-officio members of TOLIC. The 61$^{st}$& 62$^{nd}$ meetings of the TOLIC was organized on 30.08.2017 and 28.03.2018 under the chairmanship of Hon'ble Director Prof. R.V.Rajakumar. At present, there are nearly 120 central government offices and institutes are member of TOLIC Bhubaneswar (C). Workshop and training programs were also organised under the aegis of TOLIC (C) Bhubaneswar.

# EVENTS

## First Alumni Meet

To take a stroll down the corridors of nostalgia and to unite all the alumni, the first Alumni Meet was organized by Indian Institute of Technology, Bhubaneswar from 14th of April to 16th April, at their permanent campus at Argul. The institute welcomed all passed-out graduates with warmth and vigour. It was the first time that they got a feel of their own new permanent campus at the foothills of the majestic Barunei Hills.

The meet was graced by around 50 alumni ranging across various batches from B.Tech, M.Tech and Ph.D. The 3-day long extravaganza started traditionally with the lighting of lamp by Prof. R.V.Rajakumar, Hon'ble Director of the Institute and other officials from the Alumni Affairs body of the college. The Director, Prof. R.V.Rajakumar and the Dean of Alumni Affairs and International Relations, Prof. Swarup Kumar Mohapatra welcomed the alumni and appreciated their zeal to assemble for the meet despite their busy schedule and called for greater participation of alumni for the development of the college as many hold positions of responsibility in various government organizations, PSUs, private sector and academic institutions. Many of them are successful entrepreneurs providing jobs to others as well.

Later, the alumni were taken for a campus tour which highlighted the recent developments in the college infrastructure. It also focused on visits to various schools and academic departments.

The evening witnessed a panel discussion among the alumni, professors and Mr. Prasenjeeth Pati, Founder of Afixi Technology and Sri Rajendra Kumar Senapati, Director HR, OPTCL with a special focus on “Role of alumni in development of an institution”. This interaction was vastly important for the juniors to get connected with their alumni. The present batch of students had organised a Food Fest in the campus for the dinner. The night was truly owned by the splendorous cultural performances put forth by the students as a tribute to their senior alumni friends.

Esteemed guest Dr. Ashwini Nanda, CEO, HP Links and Mr. N. N.Rao, CEO, SDI Bhubaneswar along with other alumni were the panellists for yet another enlightening panel discussion on the topic “Industry-academia relations” held on the following day in the college auditorium. A trip to the famous Konark Temple was also organised for the alumni.

On the third day, a farewell programme was organised. The 3-day extravaganza ended with a promise to meet again and everyone bid emotional farewell to each other and their beloved Alma Mater, IIT Bhubaneswar.

## Representation in Festival of Innovation at Rashtrapati Bhavan

Four Students and Two Faculty Members, Dr Satyanarayan Panigrahi and Dr Mihir Kumar Pandit represented DIC of IIT Bhubaneswar in the Festival of Innovation at Rashtrapati Bhavan. Two startups and one project was exhibited by the students. Sadik Syed developed a prototype for a self solving abacus – Autobacus. Tushar Gautam and Vishwas Chandra Khan exhibited their startup Vasitars Pvt. Ltd. Which had three feature products namely – In site composite pipeline repair solution, Ballistic Chronograph and Artificial odour generator.The second startup was exhibited by Manoranjan Kumar – TROBEL , which gives online book rental solution and services.

## Signing of MoU with NALCO

A broad-based Memorandum of Understanding (MoU) was signed between IIT Bhubaneswar and the National Aluminium Company (NALCO) on 15th April 2017 in the NALCO Bhavan, in presence of the Hon'ble Union Minister for Tribal Affairs Shri Jual Oram and Union Minister for Power, Coal, New and Renewable Energy and Mines Shri Piyush Goyal; Managing Director of NALCO, Dr. T K Chand; a team of faculty members of IIT Bhubaneswar and other dignitaries. The MoU was signed by Prof. R K Panda, Dean (R&D) on behalf of IIT Bhubaneswar and Shri Subrat Kar, General Manager (R&D) on behalf of NALCO. The MoU will facilitate need-based collaboration to address the issues of mutual interest to IIT Bhubaneswar and NALCO, e.g. Continuing Education for Skill Development of NALCO technical personnel, internship for students of IIT Bhubaneswar, skill development programmes for training of the under-privileged beneficiaries, development of state-of-the-art laboratories at IIT Bhubaneswar and NALCO's R&D centers, promotion of a vibrant culture of innovation and entrepreneurship.

## Open House Day and Interactive Session with IIT Rankers and Aspirants

IIT Bhubaneswar successfully organized Open House Day and interactive session for JEE Advanced 2017 rankers and

prospective JEE Students for year 2018, in person and also through Skype webcast, as well as through telephone, on 18th June 2017. About 190 participants (break up: 170 in-person, 20 live Welcomed by Prof. V. R. Pedireddi, Dean-Student Affairs, the live counselling session was started with in depth details of IIT education in general by Prof. R. V. Rajakumar, Director, IIT Bhubaneswar, followed by introduction of programs of study by Prof. N. C. Sahoo, Dean-Academic Affairs and presentation on general procedures to be followed for Admission in to IITs by Dr. C. Bhamidipati, Chairman JEE at IITBBS. Like in 2016, IIT Bhubaneswar would continue to conduct Reporting Centre (RC) activity for JEE Advanced 2017 qualified candidates at its campus, Argul. Candidates allotted seats in any of the

IITs can do their reporting, document verification at IIT Bhubaneswar. The dates of Reporting Centre and Counselling are announced on the website: http://josaa.nic.in. through skype/phone - including students and parents/guardians) participated in the Live Counselling session.

A special seminar addressed by Mrs. Satpathy, Chief Manager, SBI, Bhubaneswar appraised the audience about various possible loan schemes available to prospective UG students, with special emphasis on Vidyalakshmi Scheme.

The Q & A session which followed the seminars was highly interactive with active participation of students/parents/guardians from Odisha, as well from other states and Live through all over India. The questions raised by participants were answered by the Panel members and the Director. Special attention was paid to female students and informed that extra supernumerary seats for girl students will start from year 2018. The girl students were also counselled by the JEE help desk team to fill as many choices as possible to maximize their chances of getting a seat in IITs.

## International Yoga Day

The Institute celebrated the International Day of Yoga on 21st June 2017 with the enthusiastic participation of students, faculty and staff with the celebrations spreading from 10th June to 21st June, 2017. Preceding to the yoga day, the Institute has organized practice sessions on 10th, 17th, & 20th June 2017. On the first day, an expert Yoga teacher initially briefed about the essence of Yogic exercises on the health of individuals and thereafter, held a long practice session with demonstration of asanas. Faculty, staff and students enthusiastically participated during the practice sessions on all preceding days to acclimatize the body to Yogic exercises & Yoga. The participants were introduced to Yogasanas, Kapalbhati, Pranayama, Dhyna, Sankalpa and Meditation, as per the common protocol issued by Ministry of Ayush, Govt. of India. Payers were recited before and after the programme. The practice of the same was continued on 17th and 20th June, 2017. On the day of International Yoga Day i.e. on 21st June, 2017, an enthralling practice session with demonstrations was held.

The celebrations on 21st June 2017 (Wednesday) were started with lighting of lamp by Honorable Director Prof. R.V. Raja Kumar. He addressed the gathering about yoga and benefits of practicing Yoga to individual in everyday life and highlighted the potential for customization to suit the individual. He shared his experience & wisdom about his decade's long Yoga practice. He, along with other participants, actively participated in the practice session. Mr. Tapan Mishara, a faculty Member of Art of Living, Bhubanewar, was invited on this occasion to teach Yoga

with demonstrations. He also delivered an excellent talk on “Towards Excellence” and enlightened the participants about scientific relevance and importance of Yoga in our life and explained how a Yoga practiced perpetually benefits to reduce stress at work for a healthier body and mind.

Mr. Sitakanth Panda, President of Patanjali Yoga Samiti of Khurda District, and his team imparted the best Yoga training to all participants during the practice sessions. The whole programme was organized by Dr. B. Hanumantha Rao and arranged by Mr. SS Yadav, with active support from Prof. Pedireddi, Dean (SA) & Dr. Sankarsan Mohapatro, President Gymkhana.

## 10th Institute Day

The Institute celebrated its 10th Institute Day on 22.07.2017 in the Community Hall at the permanent campus of the Institute, Argul. Nine years ago, on this day the first batch of B.Tech students of IIT Bhubaneswar started their academic activities at the campus of IIT Kharagpur, the mentor IIT. Shri R. Subrahmanyam, IAS, Additional Secretary, Department of Higher Education, Ministry of Human Resources Development (MHRD) graced the 10th Institute Day function as the Chief Guest. Prof. Sudhakar Panda, Director, Institute of Physics, and Acting Director, NISER, Bhubaneswar was the Guest of Honour. Nearly 500 students along with several alumnus of IIT system faculty, staff and guests congregated in the Community Hall to participate in the celebration.

In his welcome address, Prof. R. V. Raja Kumar, Director, IIT Bhubaneswar narrated the fast-paced growth of the Institute in recent years, and Institute's dream to march ahead along with senior IITs. He also mentioned the initiative of the Institute to hire Professors of foreign origin, who are adding to the international outlook of the Institute. Prof. Raja Kumar thanked MHRD for its support towards the Phase-II construction worth more than Rs.1000 crores. He assured that the Phase-II infrastructure will be ready by March-2019, as targeted. He reiterated the initiatives made by PM Modi ji for making India digitized.

Speaking on the occasion, Mr. R. Subrahmanyam, Chief Guest emphasized the emergent need to connect knowledge-economy with innovation, and urged the students to take up the challenge. He also elaborated the various initiatives taken up by MHRD, one of which is in the area of Student driven Technology Solution. Mr. Subrahmanyam also asked IITs to be globally completive yet locally relevant.

Guest of Honour Prof. Sudhakar Panda, while delivering Instiute Day lecture called upon the students to orient themselves in critical thinking, and ensure smooth handshake between Science & Technology. He also emphasized the need to have meaningful student-teacher interaction to improve upon the education system. He also shared about the collaborative research and other activity that is happening among IIT, IOP and NISER with the audience.

## 71st Independence Day

The Institute celebrated the 71st Independence Day in its campus at Argul today at 9.00 am. Prof R V Raja Kumar, the Director hoisted the National Flag, offered floral tribute to the Father of the Nation and delivered his Independence Day address followed by Guard of Honour by the Security forces and the students of the Institute. The faculty, staff and students of the institute participated in the celebration in large numbers with patriotic fervour. In his address the

Director emphasised on the initiatives taken by the Government for country's self reliant and economic security through innovative developmental programs like Digital India, Make in India, Start up India etc. He further emphasized on the digital initiatives being taken by MHRD and at different institutes and observed that within a span of a few years, India is going to take strong lead in providing digital educational content to cater to the needs of different education programmes across the globe. He referred to the glorious past of Nalanda and Takshashila which may be regained through these digital initiatives. He stated that the institute has made strong plans and started implementing, to emerge as a strong institute providing world class education and to fulfil the National dream to create wellness environment for students to gain a distinctive knowledge and skills in green, clean and healthy environment.

While addressing, the Director stated that "On this day, let's all of us join in paying our respectful homage to the great personalities who sacrificed their lives and fought for the independence of India, re-ignite our hearts with patriotic manifestation, re-resolved to maintain unity in diversity and work towards strengthening the nation in all its dimensions through hard work, adopting high ethical standards, spirited performance of our duties and innovating to bring in positive differences to the society".

He called upon the students to get empowered with right learning, harness the inherent potential, stay away from being complacent, become informed and knowledgeable individuals by emulating the personalities of the leaders like Bapuji, take to entrepreneurship than job seekers. He reiterated the students to adopt good culture in the campus to improve GREEN TECHNOLOGY and wanted them to strive to make the institution a world class institution by setting standards with proper teaching learning. He expressed that the institute will make sure by engaging faculty of foreign origin to add flavour.

The programme was followed by excellent performance displayed by the students of all the local villages adopted by IIT. The school kids performed folk dances & skits, sang songs on patriotic themes. The students were given away with prizes by the Director. The Director called on the students to emulate the spirit of becoming good human beings and look forward to work hard and get into the main stream.

The programme was organised by Prof. V. R. Pedireddi, Dean Student Affairs. Dr. Hanumanta Rao, EAA Coordinator thanked the faculty staff and students for their enthusiastic participation. The programme was marked by the cultural function organised by the Dramatic Society of the institute.

## Engineer's Day

The Institute celebrated, for the first time, the Engineers' Day on 15th September, 2017, in honour of Bharat Ratna Sir Mokshagundam Visvesvarayya as a tribute to one of the greatest engineer of the country for his outstanding

contribution to society. The celebration was attended by a large number of students, faculty and staff members.

Renowned Professor and Transportation Engineer Prof. Braj Bhushan Pandey from IIT Kharagpur graced the occasion as the Chief Guest and the Director Prof. R.V.Raja Kumar presided over the function.

The event was initiated with a working model making competition, participated by the students of the Institute. A large number of models were there for the demonstration. The Director and the Chief Guest of the event, evaluated the models based on innovation and creativity involved. Four out of the Ten teams earned cash prizes and all the other teams received certificates of participation.

Prof. R.K.Panda, Dean (R&D) introduced the purpose of celebrating the Engineers' Day and mentioned that incidentally this is the Golden Jubilee Year of celebration of Engineers' Day in the country with the theme: "Role of Engineers in a Developing India". He also introduced the Chief Guest to the audience.

The Director, in his address, emphasized on the importance and advised students to start feeling and role playing as young Engineers, right from their first year of engineering education, immerse themselves into becoming engineers on purpose. He reminded the audience about the selfless services of Sir. M. Visvesvarayya and urged the fraternity to follow his footsteps for building future India.

Prof. Pandey, in his splendid lecture, emphasized on the importance of innovative, low cost and indigenous technology for construction of durable urban and village roads at a cost at par with that of conventional flexible pavements using an innovative technology developed by his team at IIT Kharagpur. The technology paves the way, he said, for construction of cast-in-situ concrete block pavement using recycled plastic cells. This technology creates three dimensional interlocking among the concrete blocks. The cost of such pavement compares favorably with conventional asphalt pavements usually adopted for rural roads.

He also talked on paneled concrete pavements, which can be used as white topping over existing asphalt pavements for rehabilitation and also for construction of new concrete pavements with lesser thickness compared to conventional concrete pavements. IIT Kharagpur, under his leadership is providing technical support to NHAI for demonstrating this technology on Indian highways.

The event ended with the vote of thanks by Dr. S.N.Panigrahi, Head of SMS

## Gender Sensitization Programme Organized by WGRC

Gender sensitization programme was organized by Women's Grievance Redressal Committee at IIT Bhubaneswar on 20/10/2017, Friday. The event started with the welcome speech by honorable director Prof. R V Rajakumar. Mrs Namrata Chadha, Lawyer, Social activist and member of internal complaints committee IIT Bhubanesawar, delivered seminar on "Sexual Harassment of Women at workplace – acts and rules". The seminar aimed at sensitization of the students, faculty and staff of the campus regarding the acts, rules and legal consequences of complaints if lodged. The seminar was emphasized on the gender bias and related issues, the current judicial scenario for sexual harassment at workplace and various do's and dont's for prevention such malpractices. The programme ended on a note that any such grievance is catered with utmost importance and sincere investigation in every national institute through a competent committee. The students, staff and faculty members enthusiastically attended the session and made it very interactive.

## Vigilance Awareness Week 2017

Vigilance Awareness Week 2017 was observed by the Institute during 30th October 2017 to 4th November 2017 as mandated by the Central Vigilance Commission (CVC). To commemorate this celebration a special lecture was organized in the Community Centre of the Institute on 3rd November 2017 evening, which was delivered by Shri Y. B. Khurania, IPS, Commissioner of Police. It was participated by large number of faculty, staff and students.

At the beginning of the Programme, Prof. R. K. Panda, the CVO of the Institute, introduced the Chief Guest, Shri Y. B. Khurania and administered the "Integrity Pledge" to all persons present on the occasion.

The Director, Prof. R. V. Raja Kumar welcomed the Chief Guest and addressed the gathering. In his speech the Director reiterated that probity and transparency are the two key parameters to be followed by one and all. He mentioned that IIT system is known for transparency and

ethical standards, while contributing to the nation building. He also appreciated the local police for its continuous support to the Institute, as and when required.

Shri Y. B. Khurania made a detailed presentation of different measures being taken up by the law enforcement authority to prevent corrupt practices at all walks of life. He also expressed the bottlenecks in the system, which may deter prevention of corruptions. Mr. Khurania emphasised the importance of transparency and accountability and mentioned that Odisha is one of the leading states in law enforcement.

The meeting ended with vote of thanks by the CVO.

## 142nd birth anniversary of Sardar Vallabhai Patel, Iron Man of India

The Institute organized Unity Run (a mini marathon) on 5.11.2017 at 6.30 am on the occasion of 142nd birth

anniversary of Sardar Vallabhai Patel, Iron Man of India.

Prof. R. V. Raja Kumar, Director, offered floral tribute to Sardar Vallabhai Patel and flagged off the Unity Run. Director reminded the students about the sacrifice and contribution of Sardar Vallabhai Patel in unifying the nation and administered the pledge to the students for maintaining the spirit of unity on all sphere of life. Director reiterated efforts of Govt. of India under the leadership of Hon'ble Prime Minister, Shri Narendra Modiji in spreading the message of unity across the country through this initiation.

Unity Run started from IIT Main Gate at Argul covering a distance of ~ 8 Km, going up to Haribhaina Square Jatni and returned to the Main Gate. Around 500 students, staff and faculty took part in the event so enthusiastically giving a perception as if the road getting painted white by blocks of a kilometer length.

Dean, Student Affairs (Prof. V. R. Pedireddi), President Gymkhana (Dr. Sankarsan Mohapatro) of IIT Bhubaneswar, organized the mini marathon and participated in the unity run.

The event witnessed an unprecedented welcome and participation of the local people throughout the run. The local administration and police extended all their cooperation in making it a grand success.

## 7th International Conference on Soft Computing for Problem Solving (SocProS)- 2017

The 7th International Conference on Soft Computing for Problem Solving (SocProS)- 2017 was organized at IIT Bhubaneswar during 23-24, December 2017. The Conference was attended by 250 delegates from across the country and abroad.

The conference was inaugurated by Prof. R V Raja Kumar, Hon'ble Director of IIT Bhubaneswar, the host institution.



Prof. Raja Kumar in his inaugural address welcomed all the dignitaries participating in the conference and invoked strong appreciation towards the emergence of soft computing from classical areas of mathematical modeling, signal processing and computing. He reiterated the importance of soft computational techniques in addressing complete and multi modal importance in addressing problem solving.

Addressing the gathering as Chief Guest, Prof. Gokulananda Das, Mathematician, Ex-Vice Chancellor of Utkal University, Vani Vihar motivated the audience by touching upon the aspects of bi-variance and multi-variance approaches of soft computing. Prof Kusum Deep, General Chair and Member of the Steering Committee enthralled the audience by her inspiring words of the contribution made by SocProS. Speaking on the occasion Prof. Chander Mohan, Honorary Chair extended his hearty blessings and wished all success of the society and the team members for their dedication and involvement.

The conference was carried forward with the presentation and key notes speech by eminent academicians such as Prof. Kalyanmoy Deb, from Michigan State University USA, Prof. Ram Narayan Mohapatra Central University of Florida USA, Prof. Song Ping Zhu, University of Wollongong Australia, Prof. Seyedali Mirjalili, Griffith University Australia, Prof. Ajit Verama, Haugesund University Norway, Prof. Swagatam Das, ISI Kolkata and Prof. Radhakanta Padhi from IISc Bangalore.

Nearly 185 numbers of technical papers are being presented in 28 parallel sessions covering all most all areas in soft computing and its applications for solving complex nature of problems during two days of the deliberations. The delegates from Industry and academia took part in the discussion on the interdisciplinary areas on soft computing and thought-provoking problems. The Some successful delegates were awarded with Best Thesis, Best Paper Presentation, Best application papers etc.

Dr. A K Ojha, Convenor of SocProS 2017 extended vote of thanks to all the delegates, dignitaries, guests, media for their participation.

A Souvenir cum book of Abstract of the conference was released during the conference. The conference was concluded with a cultural program performed by Padmashree Mrs. Aruna Mohanty along with some melodious song by Prof. Anusaya Nath of Utkal University, Vanivihar.

The delegates expressed satisfaction in the hospitality and were overwhelmed with the scenic beauty of the campus. The conference is a grand success.

## Alma Fiesta (12 - 14 January 2018)

The ninth edition of Alma Fiesta, the annual socio-cultural event of Indian Institute of Technology Bhubaneswar was held from January 12th to January 14th at our permanent campus in Arugul. The inaugural night was presided by Prof. R. V. Rajakumar, Director, IIT Bhubaneswar. Dr. Sangita

Gosain, noted vocalist and chief executive of Guru Kelu Charan Mohapatra Odissi Research Centre was the chief guest in this inaugural event. The cultural performances of the inaugural session were a treat, as the specially-abled children and performers from the Swabhiman foundation mesmerised everyone with their brilliant performances. The second day of the 9th edition of the annual socio-cultural fest of IIT Bhubaneswar, Alma Fiesta 2018 initiated with same zeal and enthusiasm with which inauguration ceremony of the fest ended on the previous night. The day began with workshops which featured students from every part of India ranging from Kerala to Delhi. Model United Nations (MUN) saw a participation of around 120 candidates hailing from colleges and universities from all over the nation, such as Jadavpur University and Aligarh Muslim University. The discussions were conducted smoothly and involved a healthy debating atmosphere with enthusiastic participants. The solo and group dance performances had competitors from various colleges of Odisha, including KIIT, GEC, and GITA. The audience was thoroughly enthralled by the performers as they unleashed their full potential on stage. The second day of the fest also included events of fine-arts like sketching and literary events like Poetry Slam. Alma Fiesta kick-started the music competition with UpBeat, the acoustic band competition. A total of eight bands participated from various colleges of Odisha. The highlight of the day was the Kite Flying Festival which was inspired by the vision of the Honourable Director, Prof. R. V. Raja Kumar. The kite flying festival was thoroughly enjoyed by the students, the external participants as well as by the family members of faculty and staff. The evening concert by Bodhi Route was awe-inspiring and saw the participants on the edge of their toes, dancing to the beats. The final day of the fest turned out to be the most exciting with Nukkad natak, Stage Plays attracting large groups of students from sister institutions in and around Bhubaneswar. The three-day extravaganza culminated with the 3rd star-nite performance by an internationally acclaimed artist

## E-Summit '18 (19 -21 January, 2018)

### 19th January,2018 - Day 1

The 3rd edition of annual Entrepreneurship conclave of IIT Bhubaneswar by the E-Cell, E-Summit 2018 was held from 19th January to 21st of January 2017. It began with Panel Discussion on Theme of E-Summit '18 (Vision Night) - "Entrepreneurship and Innovation in the Digital Era". The guests list included Mr. S.K. Dash (Founder of UAS Laboratories), Mr. J. K. Rath (Director, Mechem Pvt.LTD), Mr. Prasanjeet Pati (CEO, Afixi Technology), Mr. N.D. Rao (Sr Vice President, Jindal Steel), Mr. Sumit Kumar Chand (Vice

President, Altisource Technology) and Prof. PKJ Mohapatra ( Professor, SMS, IIT Bhubaneswar). The gathering was treated to a talk by Mr. Sumit Kumar Chand, who is an expert in the field of Machine Learning. Inaugural Ceremony organized followed by Vision Night had Chief Guest Mr. S.K. Dash (Founder of UAS Laboratories) and Guest of Honour Mr. Sri Kumar Misra (Founder, Milk Mantra) in presence of the Director, IIT Bhubaneswar.

### 20th & 21st January, 2018-Day 2 & Day 3

Events of E-Summit '18 :

**Investors Drive**

Investors Drive is a one stop solution for all startups who are in the need of funding, mentoring, Incubation space especially for early stage startups by bringing Investors, Mentors & IIT Bhubaneswar Startup Centre faculty all together.

This year E-Summit '18 had a participation of 15 startups at Investors Drive.

**Investors Invited**

Nirmal K Baradhwaj, CEO Resurgent; Avelo Roy, Founder

Kolkota Ventures; Hari Bala Subramaniyan, Investor from Kolkota

**Workshops**

Workshops organized on following topics :

Big Data & Hadoop; Share Market and Investment; Startup Basics

All workshops saw a gathering of 20 - 30 students.

**Competitions**

IPL Auction; Stockwars; Biz Quiz; Entrepreneurial Ideation ; Case Challenge

All competitions are team based and each saw 20 teams. Each Competition top 3 winners are awarded with prize money.

**Guest Talks**

**20th January, 2018**

1) Talk by Prof. Saroj Kumar Nayak, Dean F & P, IIT Bhubaneswar
2) Talk by Mr. Damodar Sahoo, Wipro
3) Talk by Presanjeet Pati, CEO Affixi Technologies

**21st January, 2018**

1) Talk by Mr. Nirmal K Baradwaj, CEO Resurgent
2) Talk by Mr. V. S. Sridhar, Vice President Tata Communications

## Ashvamedha 18: 1st Annual Sports Fest

Indian Institute of Technology Bhubaneswar, conducted the first edition of annual sports Fest Ashvamedha'18. This first edition of the sports extravaganza was a huge success. The event was scheduled over the period of two days during 27th-28th January 2018, at the permanent campus of IIT Bhubaneswar. Twenty-five (25) teams from thirteen different colleges around Bhubaneshwar and Cuttack participated in this event to take home a shiny trophy and a handsome cash award in the three games the institute had to offer, namely, Basketball, Mini-Football, and Volleyball. The award ceremony was facilitated by the presence of Prof. R. V. Rajakumar, Director, IIT Bhubaneswar, Prof. V.R. Pedireddi, Dean (SA) and Dr. Sankarsan Mohapatro, President, Students' Gymkhana and Dr. Venugopal A, Faculty Advisor (Sports & Games).

As quoted by Prof. R.V. Rajakumar, Director, IIT Bhubaneswar “Sports are a means to bring together people from different domains of life”. Ashvamedha witnessed this in a cut throat competition among the future engineers, doctors and lawyers, who participated in this


event to showcase their sportsmanship. The institute is looking forward towards conducting the event at a much larger scale in the coming years as the sports infrastructure of the institute will be fully functional within the next six to Eight months. And we can all hope to see this small initiative grow into grandeur in terms of sports festivity around the nation within few years.

## 69th Republic Day

The Institute has celebrated 69th Republic Day in its Campus at Argul, attended by Faculty, Staff and Students in

a large numbers with a great enthusiasm and spirit. On this occasion, the Director Professor R V Raja Kumar hoisted the National Flag and took Guard of Honour.In his address he reminded the contributions of the Great Leaders in making the country as Republic and documentation of Constitution of India. He also informed the need of the hour and importance of dedicated efforts of every individual for the growth of the country, especially stressing upon the power of youth.He also shared the development plans of the Institute about new construction and growth plans of the Institute in terms of Infrastructure, Academics and Research.

The meeting is concluded with cultural programmes (singing of patriotic songs and dancing) performed by the students of the Institute as well as also by young school children from the nearby village adopted by the Institute and finally with the performance of the security drill.

## 10th Foundation Day, Open House and S&T Exhibition

The Institute observed its 10th Foundation Day on 12th February 2018 (Monday) at its Argul Campus, Jatni, Bhubaneswar. Hon'ble Chief Secretary, Govt. of Odisha, Shri Aditya Prasad Padhi, IAS graced the programme as the Chief Guest and inaugurated the Ceremony. C. Uday Bhaskar, Director, Society for Policy Studies attended and delivered Foundation Day Lecture as the Guest of Honour.

Prof. R V Raja Kumar, Director of the Institute welcomed the Guest and the invitees gave brief development of the Institute growing from strength to strength.

The Chief Guest gave a brief introduction of the development of the technology in all fields helping the country to shine in the International arena. He lauded the spirit of IIT Bhubaneswar in utilizing state of the art technology to bring disruptive technologies to address societal problems. He was pleasantly surprised to see green and vibrant campus in place not too long ago was a barren land. Mr. Padhi also emphasized on use of data for next generation economy and encouraged students to start indigenous technology driven companies.

The Chief Guest and the Director felicitated faculty and staff members and students of the Institute for their outstanding contribution in their respective fields. These


are as follows:

1) Dr. C Bhamidipati – Award for Teaching Excellence (Best Teacher)
2) Dr. Kausik Samanta – Award for Teaching Excellence
3) Dr. A. Venugopal - Award for Teaching Excellence
4) Dr. K P N Murty - Award for Teaching Excellence
5) Dr. S Manikandan – Outstanding contribution in services
6) Mr. P K Sahoo – Outstanding contribution in services
7) Mr. Sambit Ranjan Mohanty – Outstanding contribution in services
8) Mr. K Saikiran – Outstanding contribution in services
9) Mr. Ramesh Chandra Biswal - Outstanding contribution in services
10) Mr. Biswajit Pegu – Best Male Athlete in Inter IIT Staff Sports
11) Ms. Sunita Burma – Best Female Athlete in Inter IIT Staff Sports

The vote of thanks was given by Prof. V. R. Pedireddi, Chairman, Organising Committee.

The program was shortly followed by the foundation day lecture by the Guest of Honour, Mr C Udaya Bhaskar on "National Security – the role of youth". He emphasised that it is the responsibility of every citizen of the country to contribute to national security. He talked about the importance of maintaining national integrity. He also talked about role that a nation's security forces have to play to ensure the well being of the populace of the country, by giving various historical examples. He asked the audience to read through the Constitution of India to truly understand the idea of "Republic of India" which was founded on 26th January 1950 and said it will go a long way in maintaining the cohesive integrity within the country. The lecture was followed by in-depth question and answer session.

The day witnessed organising an Open Day in the campus from 11:30 AM to 5: 30 PM for participation of School students from Class-VIII to Class- XII and Junior Engineering students from across the city and the state. On the eve, as a part of the open day, a Science and Technology exhibition was organized by the students of IIT, spanning across all of its schools. More than 100 exhibits were exhibited and demonstrated to the visitors. The visiting students went through S&T exhibits and working models from school to school and enthusiastically participated in the science exhibition and shared their views with the students and faculty. It was very exciting and enriching experience for all the school children. More than 1000 students from more than 25 schools and colleges participated in the programme.

The day ended with a Kathak dance by Mrs. Sushmita Banerjee of SPIC MACAY followed by cultural performance by students of IIT Bhubaneswar.

## Matribhasha Diwas (Mother Tongue Day)

The Institute celebrated the Matribhasha Diwas in its campus at Argul on 21.02.2018 at 5.00 PM to commemorate the International Mother Language Day – a day dedicated to promote awareness of linguistic and cultural diversity and multilingualism.



The programme was graced by Prof. Soubhagya Kumar Mishra, Retd. Professor and an eminent writer/poet as Chief Guest. Speaking on the occasion Prof. Mishra emphasized on maintaining the cultural heritage of India by giving respect to the Mother Toungue. Prof. R.V. Rajakumar,

Hon'ble Director, IIT Bhubaneswar has presided over the function. The Director reiterated the rich linguistic diversity of the country and called upon the audience to feel proud of our own Mother Tongue to maintain the tradition. This was followed by a symbolic lamp lighting event by the Chief Guest, Prof. Soubhagya Kumar Mishra, Prof. R V Rajakumar, Director and Shri Debaraj Rath, Registrar, IIT Bhubaneswar.

The programme was witnessed different performances displayed by some students, staff and faculty members and their wards in different languages. Dr. S N Routray, Assistant Registrar proposed the vote of thanks to everyone present there. The programme was concluded with a Odissi dance programme show cased by local dance group "Sangeeta".

## National Science Day

The Institute celebrated the National Science Day on February 28, 2018 in order to commemorate the invention of the Raman Effect by the Indian physicist and Nobel Laureate Sir C. V. Raman. The event was celebrated in the presence of the students, research scholars, faculty members and the functionaries of the Institute.

The event was comprised of a poster presentation session by the Research Scholars of the Institute and a function held in the Institute Community Centre. The poster presentation session was inaugurated by the Acting Director & Dean (R & D), Prof. R. K. Panda. In the poster presentation session, the Research Scholars displayed their research findings in posters and explained their research works to all.

In his address, Prof. R K Panda wished a very Happy Science Day to all and emphasized on development of conducive ecosystem for quality research resulting in more number of Ph D. degree holders. He also highlighted the immediate need of the IITs to be engaged in mentoring other educational institutions for inculcating this in the students staring from the school level. The Chief Guest for the occasion was Prof. L. M. Patnaik, a distinguished computer scientist and former Professor of Indian Institute of Science Bangalore (Department of Computer Science and Automation). In his lecture, he gave a spirited address to the students and faculty members on the topic “Joys and Challenges of Doing Research” and emphasized the scholars to focus on the fundamental understanding of the research topic and genuine innovations. It was followed by announcement of the three best posters, as evaluated by a panel of experts, by Prof. N. C. Sahoo, Dean (Academic Affairs). The prize winners were: Ajay Babu Kambhampati from School of Electrical Sciences (1st prize), Anil D Pathak


from School of Minerals, Metallurgical and Materials Engineering (2nd prize) and Paltan Laha from School of Basic Sciences (3rd prize). The cash prizes and certificates were awarded to the Research Scholars of these posters. The participation certificates were also given to all the Research Scholars participating in the poster presentation session.

## International Women's Day

The Women's Grievance Redressal Committee (WGRC), IIT Bhubaneswar organized a three day programme as a part of International Women's Day celebration-2018. The theme for this year's International Women's Day was 'Press for Progress'.

1st Day (6.3.2018): Health Awareness Workshop and Theme : The health awareness workshop was conducted, specifically on women's health. Dr. Ashima Sarkhel, Medical Officer, IIT Bhubaneswar delivered an immensely informative talk on women's health and hygiene. The workshop was attended by Students, and members of

Faculty and Staffs from the institute.

Various theme based competitions were also organized to commemorate the event. The competitions and the winners have been outlined below:

**Elocution**

1. Ankita Nandi
2. Shruti Pattajoshi
3. Shivam Sethi

**Slogan Writing**

1. Adarsh Divyajyoti
2. Madhusmita Nanda
3. Kajari Chatterjee

**Quiz**

1. Kajari Chatterjee
2. Meenu Ramdas
3. Adarsh Divyajyoti

2nd Day (7.3.2018): Interactive Question/Answer session on Women's Issues and Rights at workplace and society. An interactive session on Women's Issues and Rights at Workplace and Society was conducted. The session was chaired by renowned social activist and a lawyer by profession, Adv. Namrata Chadha. Various questions regarding women's rights and issues, from the social and legal aspects, were raised by the audience present in the room. It was an engaging and active discussions where the audience learnt much about the glaring problems in the society concerning women. Few theme based competitions were also organized and the winners have been enlisted below:

**Poem Writing**

1. Kausani Ghatak
2. Malaya Mohanty
3. Navinya Chirmukar and P.Sai Sindhu Story

**Writing**

1. Harsh Mantri
2. Sagarika Mishra
3. Malaya Mohanty

3rd Day (8.3.2018): International Women's Day Lecture & Cultural evening

The three day programme reached its culmination on 8 March 2018. Dr. Gitanjali Batmanabe, Director of AIIMS Bhubaneswar, was the Chief Guest for the evening. Dr. Nandini Harinath, senior scientist at the ISRO Satellite Centre, Bengaluru and the Deputy Operations Director for the Mars Orbiter Mission (MOM), was the Guest of Honor for the evening. The program started with the lighting of the lamp followed by formal welcome address by Dr.Kiranmayi Landu, the Chairperson-in-charge, WGRC. Director-in-charge Prof. Sujit Roy gave the presidential address by sharing his valuable thoughts and insights on the importance of celebrating International Women's Day and this year's theme 'Press for Progress'. Prof. Roy talked about the need for gender parity and the need for a change in our attitude towards women's needs. Dr. Gitanjali Batmanabe delivered an inspiring as well as a memorable speech on motivating the youth to achieve their goals by stepping out of their comfort zones. She regaled the audience with interesting anecdotes from her life. She also reminded that as enlightened and learned women we must teach and give to those who need. The Guest of Honor, Dr. Nandini Harinath, shared her immense knowledge and wonderful experience of working as a senior scientist at ISRO and also gave valuable insights into the Mars Orbiter Mission (MOM) by her brilliant presentation. The audience was fascinated by the unique and enthralling lecture experience. Prizes were distributed to the winners of various competitions. A token of appreciation was presented to Dr. Nandini Harinath and Dr. Gitanjali Batmanabe by WGRC. The Vote of Thanks was proposed by Student Coordinator of WGRC, Anu Panwar. The event concluded on a celebratory note with cultural programmes showcasing the remarkable performances from students, members of faculty and staff, and their family members.

## Ek Bharat Shreshtha Bharat :

During November, 2017 – March, 2018

Ek Bharat Shreshtha Bharat (EBSB) program was launched by the Honorable Prime Minister Sri Narendra Modi on 31st October, 2016 during the Rashtriya Ekta Divas to promote engagement amongst the people of states and union territories in the country in order to enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India. The program envisions to portray the unity amongst cultural diversity of the paired states and union territories,

as per the guidelines of Ministry of Human Resources and Development. Indian institute of Technology Bhubaneswar headed by Director, Prof. R. V. Raja Kumar, geared up fully responding to the holistic endeavor of the Government to make it reality by planning to organize sixteen events of cultural exchange in a span of one year to make the cause so vibrant.

Our country has diverse cultures and rich cultural heritage in each of them. The cultural exchange programs will help us admire and appreciate our cultures mutually and thus, build a sense of togetherness and bonding. National integration, irrespective of the regions that we hail from, is of vital importance since the key to our progress is hidden in our unity amidst our diversity. The series of events that our Institute has planned to conduct under EBSB programme has the objective to strengthen our unity and help us all build a stronger and better India. The celebrations have been planned be for 16 odd days throughout the year and a complete schedule for it has been prepared. For the organization of the events, a committee comprising of several faculty members has been formed by IIT Bhubaneswar, which has been organizing the events with the help of Students' Gymkhana. Out the scheduled events, five events have already been conducted during November-March 2018 as follows:

| Date | Paired States |
|---|---|
| 15-Nov-17 | Rajasthan-Assam & West Bengal |
| 15-Jan-18 | Haryana-Telengana |
| 26-Jan-18 | Punjab-Andhra Pradesh |
| 13-Feb-18 | Madhya Pradesh-Manipur & Nagaland |
| 19-Mar-18 | Delhi-Sikkim |

The remaining events are scheduled to be conducted as follows.

| Date | Paired States |
|---|---|
| 01-Apr-18 | Maharashtra-Odisha |
| 29-Jun-18 | Goa-Jharkhand |
| 28-Jul-18 | Bihar-Tripura & Mizoram |
| 15-Aug-18 | Himachal Pradesh-Kerala |
| 25-Aug-18 | Uttarakhand-Karnataka |
| 07-Sep-18 | Uttar Pradesh-Arunachal Pradesh & Meghalaya |
| 15-Sep-18 | Jammu Kashmir-Tamil Nadu |
| 02-Oct-18 | Gujrat-Chattisgarh |
| 27-Oct-18 | Chandigarh- Dadra Nagar Haveli |
| 110-Nov-18 | Puducherry-Daman & Diu |
| 10-Nov-18 | Lakshadweep -Andaman & Nicobar |

The details of the five events are reported herewith.

**First Event** (paired states of Rajasthan-Assam & West Bengal)

IIT Bhubaneswar celebrated the first event EBSB program November 15, 2017showcasing the cultural diversity of the paired states: Rajasthan, Assam and West Bengal. The honorable Director of IIT Bhubaneswar, Prof. R. V. Raja Kumar, inaugurated the program by lighting the traditional lamp along with Prof. V. R. Pedireddi, Dean Student Affairs and the Nodal Officer for EBSB, Dr. Rajesh R. Dash and Dr. Seema Bahinipati, Coordinators of EBSB, and the faculty members of the EBSB committee, at the community centre of IIT Bhubaneswar at Argul, Jatni.

In his speech Director appreciated this initiative taken by Govt. of India under the leadership of Hon'ble Prime Minister, Shri Narendra Modiji to spread the message of unity between the people of different cultures and bring them together. He reiterated that IIT being a premier institute of the country having students, faculty and staffs from diverse culture and region will be leading to uphold the objective of EBSB by cultural exchange between people in a spirited manner.

A cultural program was organized with the participation of students, faculty and staff members of IIT Bhubaneswar and their family members. The events showcased the cultural diversity of the states of Rajasthan, Assam and West Bengal through light songs accompanied by orchestra, instrumental music, folk dances, traditional fancy dress, photography and documentary screening amongst other activities. More than 25 performers and 250-300 audience were participated. Doordarshan covered the whole event and telecasted the highlights.

**Second Event** (paired states of Haryana-Telengana)

IIT Bhubaneswar has celebrated 2nd day event of EBSB program with paired states of Haryana and Telengana on

15th January 2018, attended by faculty members, staff members and students in a large numbers. Documentary videos and informative Photographs on the culture, tradition, heritage of both the states were displayed. On this occasion, students, staffs, faculty and their family members from different age groups, cultures, and states participated in the social and cultural events of the paired states of Haryana and Telengana, proving that state boundaries are not barriers and there is unity in diversity. Nodal officer EBSB of IIT Bhubaneswar, Prof. V.R. Pedireddi appraised the importance of organization of the events and encouraged the participants for their participation in these events. The event ended with distribution of mementos to all participants.

**Third Event** (paired states of Haryana-Telengana)

Indian Institute of Technology (IIT) Bhubaneswar celebrated third day event of EBSB program with paired states of Punjab and Andhra Pradesh on 26th January 2018. The

program was attended by more than 300 audiences. Documentary videos and informative photographs on the culture, tradition, heritage of both the states were displayed. Students, staffs, faculty and their family members from different age groups, cultures, and states participated in the social and cultural events of the paired states. Director Prof. R V. Raja Kumar expressed his pleasure and congratulated coordinating committee members and participants for making the event successful with good standards. Performers received awards for their performances from Director. Participants received awards for their performances from the Director.

**Fourth Event** (paired states of Madhya Pradesh-Manipur & Nagaland)

IIT Bhubaneswar celebrated fourth day event of EBSB with paired states of Madhya Pradesh-Manipur and Nagaland in

its Campus at Argul on 13th February 2018, more than 300 Faculty, Staff and Students attended the event. On this day, documentary videos and informative Photographs on the culture, tradition, heritage of both the states were displayed.

On this occasion, more than 15 students, staffs, faculty and their family members from different age groups, cultures, and states participated in the social and cultural events of the paired states of Madhya Pradesh-Manipur and Nagaland, proving that state boundaries are not barriers and there is unity in diversity. Professor R.K. Panda and Prof. Jayant Pal distributed mementos to participants for their outstanding performances in the events in the presence of EBSB committee members.

**Fifth Event** (paired states of Delhi and Sikkim)

IIT Bhubaneswar celebrated fifth event EBSB series of events, with paired states of Delhi and Sikkim on 19th March, 2018. On this occasion, 35 performers including


students, staffs, faculty and their family members from different age groups, cultures, and states participated in the social and cultural events of the paired states. They performed dance, song, fancy dress and many more on the culture of paired states. Informative videos and photograph slide shows were displayed to make the audience to know more about the paired states. More than 250 audiences attended the event and appreciated the entertaining performance. The additional attraction of the event was group performance by the students of Mother Teresa Play School, IIT Bhubaneswar campus. Prof. R.K. Panda and Prof. Jayant Pal encouraged the participants by awarding them with a participation certificate and a memento.

## COORDINATING COMMITTEE OF EBSB, IIT BHUBANESWAR

| Name of Faculty Member | Designation, School/Department | |
|---|---|---|
| Prof. V.R. Pedireddi | Professor, SBS | Nodal Officer |
| Dr. Rajesh Roshan Dash | Associate Professor, SIF | Coordinator |
| Dr. Seema Bahinipati | Assistant Professor, SBS | Coordinator |
| Dr. Manaswini Behera | Assistant Professor, SIF | Member |
| Dr. Meenu Ramadas | Assistant Professor, SIF | Member |
| Dr. Ankur Gupta | Assistant Professor, SMS | Member |
| Dr. Y.G. Bhumkar | Assistant Professor, SMS | Member |
| Dr. Sankarshan Mohapatra | Assistant Professor, SES | Member |
| Dr. Sasmita Barik | Assistant Professor, SBS | Member |
| Dr. Sourav Sil | Assistant Professor, SEOCS | Member |
| Dr. Tabrez Khan | Assistant Professor, SBS | Member |
| Dr. Akhilesh Barve | Assistant Professor, SMS | Member |

## NSS activities

The National Service Scheme (NSS) is introduced under the Extra Academic activities (EAA) in the academic year 2017-18. The first-year students of B. Tech and Dual Degree curriculum who opted for NSS under EAA will be given 1-credit semester-wise with the credit structure L-T-P: 0-0-3.

Activities under NSS:

| Sl. No. | Activities |
|---|---|
| 1. | Plantation |
| 2. | Shramadaan & Awareness Programme (use of digital platform) |
| 3. | Blood donation camp |
| 4. | Self-defense training |
| 5. | Swachha Bharat mission/ Cleaning Campus |
| 6. | Health Camp |
| 7. | Under privileged child education |
| 8. | Rural development programme (Socio-economic survey, general awareness and Sanitation ) |
| 9. | Program on National Integration |
| 10. | Program on Peace and Harmony |

As per the requirement in different categories, the student volunteers are divided in three different subgroups and each group will be assigned to a faculty coordinator:

(i) Volunteers for Schools and under privileged child education (30 Nos.): weekly minimum 3-hours will be given by individual.

(ii) Volunteers for Rural development programme (which includes plantation, shramadaan, digital awareness, sanitation etc.)- 50 nos.

(iii) Volunteers for organizing Blood donation camp, Health camp, self-defense training etc. – 20 nos.

**NSS activities at IIT Bhubaneswar (Autumn & Spring Semester)**

The NSS activities for current academic semester (Autumn, 2017-18) started with the campus cleaning near the LBC and SBS building area on 20th August, 2017. All ninety-five NSS volunteers participated on that day. As per the schedule, self-defence training program was organized on 3rd and 9th September with the help of 'Balaram Defence School', Sailashree Vihar, Bhubaneswar. All our first year girl students (on 3rd September) along with the NSS volunteers participated in the program.

Beside our regular NSS activities, we have also given emphasis particularly on “Laboratory practices in school and e-payment training to the villagers in the adopted villages”. Total 32 NSS volunteers joined in teaching team under the guidance of Dr. S. Bahinipati and visited regularly all schools in five adopted villages (Arugul, Khudupur, Podupada, Kansapada and Padanpur) with an agenda to


teach English to the school students and help to build science laboratory in these schools.

The volunteers will help run the science laboratories, where they are established and help build science laboratories, where it is not set up yet. In addition to this, they will work on improving the English writing, speaking and understanding abilities of the students.

On the awareness programme, digital platform/e-payment training, NSS volunteers participated in a survey regarding socio-economic status of the villagers in the two of our adopted villages Khudupur and Podupada, to know that exactly what kind of digital-platform help can be provided to them considering our first focus will be on e-payment training. Beside the survey, as a good gesture, our volunteers are also actively participated in Swachha Bharat mission both in Khudupur and Podupada which creates awareness among the villagers to keep environment clean for healthy life.

The NSS unit and Souls for Solace (student's social welfare society) of IIT Bhubaneswar organised a blood donation camp on 4th November, 2017. The blood donation drive held from 8.30am-4:30pm in the community centre, coincided with the auspicious occasion of Guru Nanak's birthday. In this journey, a team from HDFC bank partnered up with the NSS unit for smooth coordination of the event as well as logistical arrangements. One hundred fifty two (152) donors successfully donated blood, under the vigilant supervision of the medical team from Blood bank unit of SCB Medical College, Cuttack. Certificates of participation and mementos were distributed to the donors to appreciate their selfless contribution. Thirty active members from 'NSS Unit and Souls for Solace' of IIT Bhubaneswar enthusiastically participated as volunteers in the event. The NSS and Social Welfare Society of IIT Bhubaneswar expresses gratitude to The Director, IIT Bhubaneswar and The Dean, Student Affairs who graced the occasion and motivated the student donors for the noble cause. The event was successful in promoting a humanitarian outlook amongst the student community for rendering selfless community service.

The NSS volunteers of IIT Bhubaneswar participated in the 'Peace and Harmony' program and organized a 'Cycle Rally' on 11th November as a mark of their responsibility on the societal issues. After the cycle rally, all volunteers participated in a brain storming session to discuss how the society can remain in peace and harmony and what to be done in this regard. In the future the NSS volunteers of IIT Bhubaneswar may play a greater role in this issue by performing nukkad acts, and organizing general awareness program through blood donation camp, sports activities, plantation etc.

The NSS programme for Autumn semester 2017-18, concluded on 12th November followed by a written examination for EAA-I, for one hour.

The NSS activities for the current academic semester (Spring, 2018) started with the Swachhata mission cleaning campus near the LBC and SBS building area on 6th of January, 2018. The self-defence training program was organized on 11th and 17th of March with the help of 'Balaram defence school', Sailashree Vihar, Bhubaneswar. All NSS volunteers honed their skill under the supervision of the self-defence trainer Mr. Balaram Naik during the training session.

Our NSS Volunteers organised “Digital Awareness Camp” on 7th of April at Podapada village from 10:00AM – 4:00 PM, regarding Net-banking, online railway ticket reservation, electricity and other bill payments, etc. The volunteers also share online enrolment procedure to get the knowledge of different Government scholarship schemes for students. NSS volunteers motivated the villagers not only by theoretical description of these posters but also demonstrated through their mobile phones.


A team of 50 volunteers on 7th of April, also participated in Swachhata mission to clean the school campus at Podapada village as well as some area of the village near to the school ground with the idea to spread this awareness campaign to the villagers.

A peace and harmony programme was conducted on 14th of April, as the date celebrated as the birth day of Dr. B. R. Ambedkar who campaigned against social discrimination against backward classes, and also supported the rights of women and labour. On this occasion NSS volunteers were divided in eight different groups and shared their ideas through group discussion. At the end, they concluded that "though the Constitution of India gives the right to equality to all citizens to ensure complete harmony among them, there have been several instances where peace has been disrupted owing to different social, political and economic reasons. They all agreed that the Government alone cannot be responsible for peace and harmony in the country. Each one of us must take it as a responsibility and one should do one's duty to nurture feelings of brotherhood with fellow citizens. Our NSS volunteers pledged to set an example by upholding these values and transforming these ideas into reality.

Finally, the NSS programme for Spring semester is concluded on 22nd April, 2018 followed by a written examination scheduled at 10:00 am - 11:00 am.

At the end, we, the NSS volunteers, need your support to carry forward these activities.





## Autumn & Spring Semester (2017-18) report at a glance

| Sl. No. | Activities for Autumn & Spring Semester, 2017-18 | Date(s) |
|---|---|---|
| 1. | Swachha Bharat mission in Campus & Adopted villages Podupara, Khudupur | Approximately, 60 NSS volunteers participated in the Cleaning mission as a general awareness program.<br><br>20th August, 8th and 21st October, 2017, 6th January, 2018, 28th January, 2018, 10th February, 2018,3rd & 24th of March, 2018.<br><br>7th October, 2017<br>14th October, 2017<br>7th April, 2018 |
| 2. | Self-defense training | Self-defence training program was organized on 3rd and 9th September, 29th October, 2017, and 11th & 17th of March, 2018 with the help of 'Balaram Defence School', Sailashree Vihar, Bhubaneswar. |
| 3. | Laboratory practices and teaching at school in five adopted villages (Arugul, Khudupur, Podupada, Kansapada and Padanpur) | 32 NSS volunteers under the guidance of Dr. S. Bahinipati visited regularly all schools in five adopted villages (each Saturday, from August to October, 2017, January-March, 2018). |
| 4. | Rural development programme (Socio-economic survey, general awareness and Sanitation ) | NSS volunteers participated in Socio-economic survey on 7th and 14th October, 2017 in Podupara and khudupur respectively. |
| 5. | Blood donation camp | The NSS unit and student's social welfare society of IIT Bhubaneswar organised a blood donation camp on 4th November, 2017. The blood donation drive held from 8.30am -4:30pm in the community centre, and total one hundred fifty two (152) donors successfully donated blood, under the vigilant supervision of the medical team from Blood bank unit of SCB Medical College, Cuttack. |
| 6. | Program on Peace and Harmony | The NSS volunteers of IIT Bhubaneswar participated in the 'Peace and Harmony' program and organized a 'Cycle Rally' on 11th November as a mark of their responsibility on the societal issues.<br><br>14th of April, 2018 (in-house group discussion) on Dr. B. R. Ambedkar's Birth day by NSS volunteers. |
| 7. | Digital Awareness Camp | The “Digital Awareness Camp” on Net-banking, online railway ticket reservation, electricity and other bill payments, online enrolment procedure to get the knowledge of different Government scholarship schemes related to students, conducted on 7th of April, 2018 at Podapada village school ground. |

## Unnat Bharat Abhiyan (UBA)

Under this initiative, IIT Bhubaneswar has adopted six villages in Odisha, including a cluster of five villages in Khordha district (Arugul, Podapada, Kansapada, Khudupur and Padanpur) adjacent to the IIT campus and Sunduria village, Jajpur district. Some of the issues identified to be addressed in the first phase are improvement in skill development for unemployed youth, quality of School Education, sanitation, health care, awareness towards digital India, renewable energy use.

UBA team established science laboratories, for experiments in Physics, Chemistry, Biology and Mathematics at Arugul High School for Class IX, X students and at Khudupur Primary School for Class VI - VIII students, with the initiative of Dr. S. Bahinipati, Co-coordinator. These laboratories were inaugurated on July 14, 2017, by the Director. Mr. Manoj Kumar Mohanty, ADM, Bhubaneswar was the Guest of Honour. Prof. R. K. Panda, Coordinator, UBA, Registrar, Mr. D. Rath, faculty members, students and staff of IIT Bhubaneswar participated in the function. The Director called upon the students and teachers of the schools to maximum benefit out of this newly built labs established by IIT Bhubaneswar under UBA.

As part of ongoing activities under the UBA for the establishment of science laboratories in the schools of the villages adopted by our institute, UBA team has done ground work to establish science laboratories in the village schools of Podapada and Padanpur. The National Service Scheme (NSS) teaching team had also contributed towards this work. In addition, they also conducted English teaching classes for the school kids.


A B.Tech project was carried out in School of Infrastructure during 2017-18 to assess the quality of available water resources in the villages adopted under UBA. Water quality indices were developed for water quality parameters, which would help in addressing the issues of borne diseases in the villages. A dual media filter developed under the project can be used at the household as well as community level.

Another B.Tech project was carried out in School of Infrastructure during 2017-18 to assess the quantity and characteristics of waste generated from the adopted villages. Economic evaluation of sustainable solid waste management practices for the adopted villages were carried out. The effectiveness of biogas generation in a laboratory scale anaerobic digester using biodegradable fraction of the solid waste collected from the villages was evaluated, which can be installed for domestic or community use (such as schools).

# STUDENTS' ACTIVITIES

## SOCIO-CULTURAL COUNCIL

### MUSIC SOCIETY (AAROH)

- The Music Society has performed on various occasions like Independence Day and Republic Day presenting the National Anthem, National Song and other patriotic songs.
- The official YouTube channel of Aaroh, the Music Society was launched: https://www.youtube.com/AarohIITBhubaneswar
- The Music Society Introduction on 15.08.16 was as beautiful as a spectacular painting. It was a vocal and instrumental masterclass.
- Workshop (19-08-17): Aaroh conducted its second workshop on guitar and keyboard for all the interested people and there was significant attendance in the workshop. Special Workshops for vocalists were also conducted.
- The Music Society conducted its auditions on 25-08-17 following a guitar workshop for the freshers. Around 75 students actively participated in the workshop.
- Teachers' Day (05/09/2017): As a token of gratitude to the teachers, Aaroh, the Music Society put up some performances on the occasion of Teachers' Day.
- Autumn Music Productions: On 20th October, Aaroh conducted its Autumn Productions.
- Inter IIT Cultural Meet (28th- 30th December 2017): This was the first time our college participated at Inter IIT cultural meet held at IIT Kanpur.

- Foundation Day (12/02/2017): Foundation Day was the perfect opportunity for all the members to showcase their full potential, and they set the stage on fire with wonderful presentation of rock version of Raghupati Raghav Raja Ram and Sweet Child O' Mine.
- Convocation 2018: Aaroh was on hand again to perform the National Anthem when our most recent alumni came to collect their hard earned degrees.
- Spring Productions 2017: Beautiful performances were produced by members of Aaroh. The Music Society of IIT Bhubaneswar conducted its Spring Productions. There was a huge turnout of people to cheer for the final year students and it would be an understatement to say that the event was a success.

**DANCE SOCIETY (D-GANG):**

- Independence Day/Dance society introduction (15-08-2017): Dance Society performed various styles of dance through a variety of collection of songs .
- Dance Workshop: Dance Society conducted a workshop (20-08-2017) for the students in order to encourage them to learn and discover their dancing skills.
- Dance Auditions: On 27th August 2017, Dance Society took auditions for the students who are interested to join the dance society.
- Participation in various competitions: The Dance Society performed in the Alma Fiesta (13-01-2018), Spring Fest (IIT Kharagpur,27-01-2018) in group dance competition, Celegence at CV Raman college and at AIIMS college in group dance competition.
- Participation in Inter IIT Cultural Meet: The Dance Society participated in DO-IT competition, Group Dance competition and Cypher Hustle in Inter IIT Cultural Meet held at IIT Kanpur.
- Foundation Day: On the eve of Institute's Foundation day, 'D-Gang' performed various styles of dance and many solo performances.
- Spring Productions: The Dance Society gave their spring productions and gave an astonishing 45 minutes performance with many songs that included solos, duets and group dances of hip-hop, top-rock, popping, classical and many different styles.

**DRAMATICS SOCIETY (THE FOURTH WALL)**

- Independence Day (15/08/17) : The society was introduced with a Nukkad Natak
- performance on themes reflecting the hardships of a farmer and the stereotypes on gay marriage.
- Auditions for freshers (26/08/17) : The inductions held for new members witnessed active participation and interest among freshers .
- Diwali Celebrations (21/10/17) : A stage play performance was put up by the newly
- Inducted members on the occasion of Diwali.
- The Dramatics Society participated in Spring Fest , IIT Kharagpur.
- Foundation Day (12/02/18) : On the occasion of Institute Foundation Day ,the society had a stage play performance on murder mystery.
- Spring Productions: On the eve of Hostel Day the Dramatics Society presented its Spring Production a Nukkad Natak based on demonetisation and black money.


**CINEMATIC SOCIETY (CINEWAVE)**

Following videos were produced by the society:

- Video for institute introduction.
- (Link: https://www.youtube.com/watch?v=HL1_Iwuef0E)
- Surprise video of Freshers.
- (Link: https://www.youtube.com/watch?v=kafpBu-ij5E&t=322s)
- Two short film on ragging.
- (Link of one of them: https://www.youtube.com/watch?v=Sw9u7tjM_IY&t=47s)
- Video for open day programme of institute.
- Video of glimpses of First EBSB programme.
- Video covering Unity Run.
- After movie of Alma Fiesta'18.
- Video of Dramatics production on August'15,2017.
- A short film for AINA competition.
- A short film for Spring Fest,2018.
- A short film for Inter IIT Cultural Meet online short film making.
- (Link: https://www.youtube.com/watch?v=xi95-OpHvlc)
- A short film made at Inter IIT Cultural Meet (offline competition).
- (Link: https://www.youtube.com/watch?v=WiqAmZVKJug)
- Spring Fest Documentary.
- (Link: https://www.youtube.com/watch?v=NCRN6mHRaxE)

Following Events are covered by the society:

- Performing societies' (Aaroh,D-Gang, The Fourth Wall) introductions.
- Diwali productions.; Unity Run; Aghaaz 2017, Alma Fiesta.
- All Ek Bharat Shreshta Bharat events.; Open Day of Institute.
- Foundation day Productions. ; Womens' day.
- Alma-Fiesta'18.; E-Summit'18 ; Wissenaire'18.

## SOCIAL WELFARE SOCIETY (SOULS FOR SOLACE)

- After the introductions of society, Souls for Solace had a visit to Podapada village for Unnat Bharat Abhiyan survey and teaching the students of village.
- As a part of Diwali celebration, Souls for Solace conducted Cloth and Book Donation Drives, which we donated in nearby villages and in slums of Bhubaneswar.
- On the first weekend of November, Souls for Solace, with the help of NSS and HDFC Bank, conducted a Blood Donation Camp which was a great success.
- On the second weekend of January, Souls For Solace, with the help of Team Alma Fiesta, had a Children Fest 'Bachpan Ka Rang Mach' which was a great success.

## LITERARY SOCIETIES

### PANACEA

- The Introduction of the English Literary Society included events and competitions that were creative and innovative like never before. The overwhelming participation of the students carried the momentum forward, thus leaving a mark among the audience.
- The Inductions were conducted in 3 rounds, validating the overall talent of the students. More than 50 students applied for the inductions, thus increasing the competition among them.
- Model United Nation Conference: IIT BBSR MUN'18 was conducted from 13th to 14th January, in association with Alma Fiesta. It witnessed a participation of 200+ students from various colleges in and around Bhubaneswar.
- Facebook Page: Panacea has been working with Clix, the Photography Society for the page “HUMANS OF IIT BHUBANESWAR”. Panacea has also been writing articles on the problems faced by students and latest achievements of the students and the institute, transcripts of various Gymkhana members and alumni, and covering various events like the Inter IIT Sports Meet.
- Hosted events: Panacea has hosted a lot of events in the campus like the Independence day, Republic Day, Transfer of Power etc.



- Participated in: KIIT MUN, UTKAL MUN, GPC MUN and IIIT's Lit Fest Ingenium. We won laurels in all the competitions we participated in. We also bagged the 7th place in Turncoat event in the Inter IIT cult meet.
- Intra College Competitions: A variety of fun competitions were held in the institute level, like the best caption on Valentine's Day, find the word during inductions and many more.

**QUIZ CLUB**

- Conducted a Quiz on Maharashtra tourism.
- Participated in the MELA, India and General Quizzes in the Inter IIT Cultural meet held at IIT Kanpur.
- Conducted an inter-college Business Quiz in association with E-Summit.
- Conducted Inter-college Business and Science Quizzes in association with Wissenaire.
- Conducted a Quiz on Maharashtra and Odisha in association with Ek Bharath Shresht Bharath.

**ABHIVYAKTI**

- Conducted Hindi Pakhwada.
- Intra College Competitions "रचनात्मक लेखन" and "आवाज़ दलि की" were organized among students of the institute to take out their hidden talents in the field of literature writing .
- Inter College Competitions "वाद-ववािद" and "बस ये पल" were organized among different colleges and institutes of Bhubaneswar and around to promote competition between institutes which enhances students capabilities and skills.
- Essay writing competitions: Online essay writing on Paryatan Parv, Online essay writing on National unity day
- Alma Fiesta: Poetry Slam was conducted during Alma Fiesta 2018 on January 14th which attracted as many as 30 participants from different colleges in and around Bhubaneswar. The competition was successful in offering a stage for the students to showcase their poetry skills.
- Participation outside institute: Participated in Inter IIT Cultural Meet and bagged 6th position.

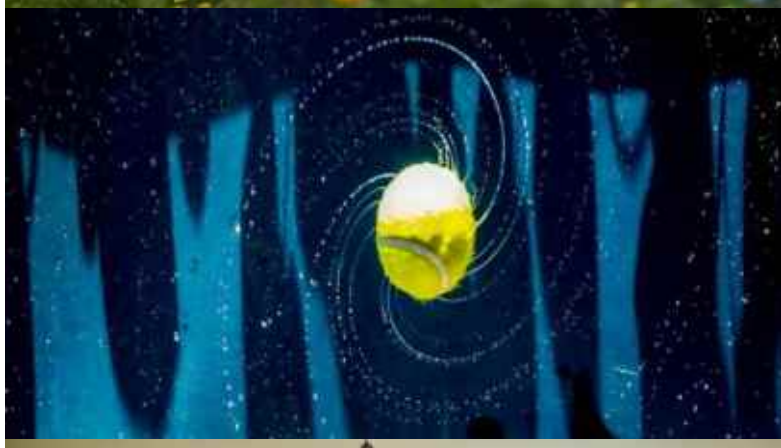
## KALAKRITI (FINE ARTS SOCIETY)

- In Independence Day Celebration, society actively participated in making rangoli at community center.
- Society made a rangoli and sketches on the occasion of Teachers Day and presented their greetings to the teachers.
- Mahanadi Hall of Residence was decorated on the occasion of Diwali and a small puja was organized for the same in MHR.
- Various competitions were organized in community center on the occasion of Diwali like Rangoli competition and Diya Painting competitions.
- Kalakriti members participated in Xpressions '17, annual management and cultural fest of XIMB Bhubaneswar.
- Kalakriti members also participated in Alma Fiesta, Inter IIT cultural meet (IIT Kanpur) and Spring fest (IIT Kharagpur).
- Mahanadi Hall of Residence was decorated on the occasion of Alumni Dinner.
- Exhibition of artworks by the students was also organized in Mahanadi Hall of Residence on the occasion of Alumni Dinner.
- Rangolis were made at Community Center on the occasions of Ek Bharat Sreshta Bharat events.
- Mehendi and Rangoli competitions were also organized with an aim to celebrate tradition and culture during Paryatan Parv.
- Face painting, sketching and T-shirt designing competitions were organized on occasion of National Unity Day.
- Art e-Magazines were published on various arts for students of IIT Bhubaneswar.
- Rangoli work at Community Center on Republic Day.

## ACHIEVEMENTS

- The Music Society took part in socio-cultural fests of IIIT Bhubaneswar and bagged 4th position in solo singing and 5th position in the acoustic band competition.
- Music Society performed and bagged 7th position in solo singing and pair-on-stage respectively, bested only by the senior IITs.
- Dance Society won 1st position in Celegance at CV Raman College.
- Dance Society won 3rd position in Chiasma, the fest of AIIMS.
- Dance Society won 4th position in Cypher Hustle in Inter IIT Cultural Meet at IIT Kanpur.
- Cinewave won the 5th and 6th positions in Inter IIT Cultural Meet at IIT Kanpur in offline and online competitions respectively.
- Cinewave won 4th position in documentary making competition and 6th position in short film making competition in Spring Fest, IIT Kharagpur.
- Cinewave won 9th position in AINA.
- Shobhit Sahoo from Panacea won 1st position in Air Crash and 2nd position in Debate Competition in Ingenium, IIIT Bhubaneswar.
- Aditya Pal from Panacea won 2nd position in Twist in the Tale in Ingenium, IIIT Bhubaneswar.
- Sai Prasath from Panacea won 2nd position in Ultimate Literati and 2nd position in Spell Bee in Ingenium, IIIT Bhubaneswar.
- Panacea won 3rd position in TV Series Quiz in Ingenium, IIIT Bhubaneswar.
- Pranjal Bangani from Panacea won Special Mention in Global Peace Conference Model United Nations(MUN) Bhubaneswar.
- Panacea won Special Mention in GPC MUN.
- Panacea won KIIT MUN Best Delegate and 2 Special Mention awards.
- Quiz Club won 4th position in Mettle Meet the Inter-College Quiz conducted by OrissaPost.
- Abhivyakti won 1st position in Utkal Diwas symposium organized by The Samaj, a renowned Odiya newspaper.
- Kalakriti won 1st position in painting competition in Xpressions '17, annual management and cultural fest of XIMB Bhubaneswar.
- Kalakriti won 1st and 2nd positions in Shadez competition at Alma Fiesta, annual cultural fest of IIT Bhubaneswar.
- Kalakriti won 5th position in online doodle making competition at Inter IIT Cultural Meet at IIT Kanpur.
- Kalakriti won 5th position in painting competition at Inter IIT Cultural Meet at IIT Kanpur.
- Kalakriti won 6th position in costume designing competition at Inter IIT Cultural Meet at IIT Kanpur.
- Kalakriti won 11th position in sketching competition at Inter IIT Cultural Meet at IIT Kanpur.
- Kalakriti won 11th position in Street Art competition at Inter IIT Cultural Meet at IIT Kanpur.





## TECHNICAL COUNCIL

### CLIX, THE PHOTOGRAPHY SOCIETY

- A photowalk was organised to Nandankanan National Park.
- A advanced photo editing workshop was organised for the members of the society.
- Picture of the fortnight competition was organised.
- Online photograph submission was organised.
- An active photography club was maintained.
- Time-lapse and hyperlapse videos of the campus were made.
- A Picture Hunt (online photography contest was organised) for inducting members for the society.
- The group was very much active on the social media pages where the members and non-members reviewed our photos and gave different scopes for improvement.
- Various events were covered including the Independence Day, Republic Day, Facchas Got Talent, various Ek Bharat Shreshtha Bharat, various events of fests, various productions of D-Gang, Aaroh, Fourth Wall, etc., various institute events and seminars, guest talks etc.

## NAKSHATRA - ASTRONOMY SOCIETY

- Participated in the second round of this quiz challenger National Student's Space Challenge at IIT Kharagpur.
- Conducted a workshop by highly experienced professional with decades of experience in practical astronomy for all the first year students of the institute.
- A team member also participated in the case study competition of NSSC at IIT Kharagpur where a presentation on JUNO spacecraft was given and the member qualified for the final round. In the final round, the qualified member gave a seminar presentation at IIT KGP on the exoplanet detection with special focus on Trappist-1 exoplanet system and several ways to detect exoplanets including Transit Photometry, gravitational lensing, etc.
- Conducted regular sky watching sessions on roof top

of SBS throughout the semester where each member actively participated in the practical astronomy application using society's telescope and binoculars.

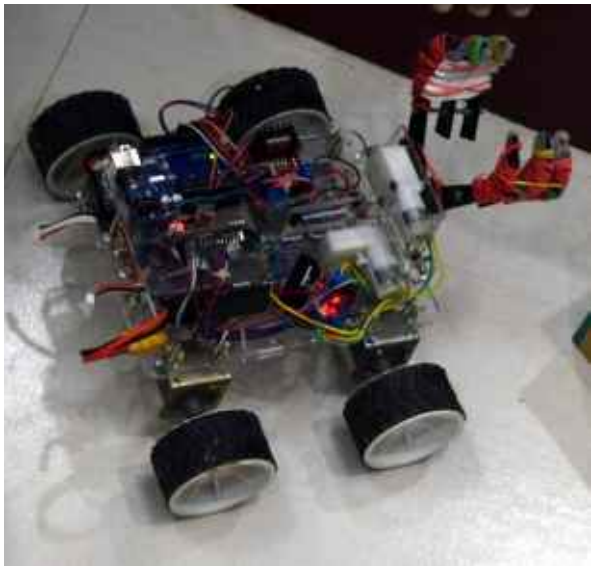
- The society members also participated actively in the presentations on different topics related to astronomy like black holes, exoplanet detection etc.
- The society members also visited renowned astronomers to learn new concepts and telescope handing.
- Coverage of the 2nd supermoon of 2018 (which was a rare event) was done by the society.
- Topics for research (related to cosmology) were given to the society members and their discussion was done several times.
- Suggestions from secretaries of Astronomy Clubs at different IITs were taken to improve our society's working.
- Internal quiz competitions were held within the society to enhance our knowledge.
- The postgraduate students of the college discussed about the astrophysics (the branch of astronomy that employs the principles of physics and chemistry "to ascertain the nature of the heavenly bodies, rather than their positions or motions in space.") and mathematics involved in it giving a new aspect to discover more and work upon.

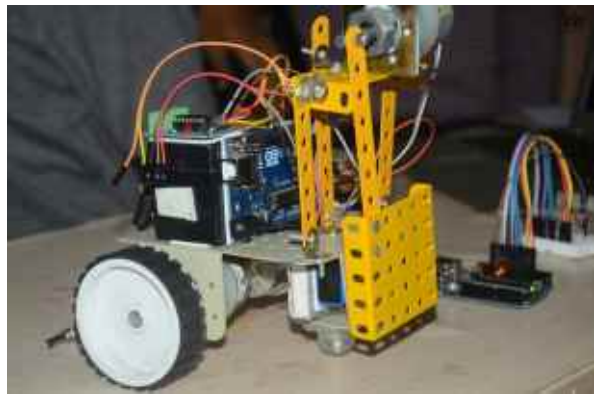
### NEUROMANCERS - PROGRAMMING SOCIETY

- Two members of Neuromancers were selected for Google Summer of Code.
- Two teams from Neuromancers participated in the ACM-ICPC.
- Two members went to the second round of Google Code Jam.
- Weekly workshops were conducted by Neuromancers for the first years.
- The society took few projects like Institute App, Bus tracking in the spring semester. The work on all these projects have started and is expected to be completed shortly.
- IBWC (IIT Bhubaneswar Winter Code) also took place throughout the winter vacation (December) where the seniors guided some allotted juniors with learning new skills.
- There was great participation from Neuromancers in Advaita, the technical fest of IIIT Bhubaneswar. Six teams participated in Switch and Code, a team in Swig and code, a team in Principium, and two teams in web app development contest.
- Neuromancers team organized 3 coding contests (including the one in innovation challenge) and one Hackerrank problem solving session.
- Neuromancers team also designed the problem statements for the Annual Code Challenge as a part of the General Championship(Technical).
- We have managed to increase our online presence at various coding platforms (like Codeforces/Codechef/SPOJ). We have successfully created an environment for coding with huge participation from IIT Bhubaneswar.

## RISC - ROBOTICS SOCIETY

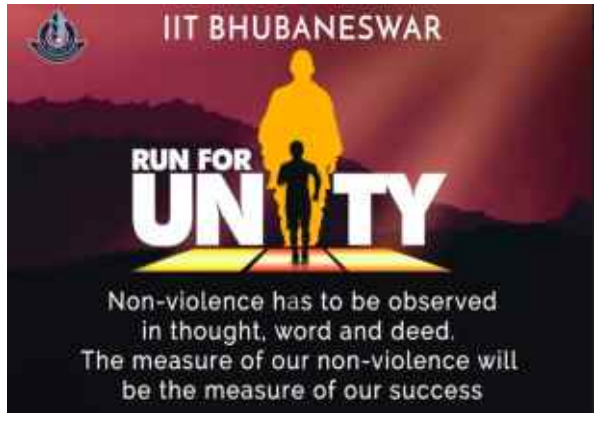
- Made the following devices for the introduction.
- Kick off Bot: Using a Bluetooth and an android phone, two bots were made which could be controlled wirelessly.
- Line follower bot: Line follower bot and its hardware working were showcased.
- Music LEDs : LEDs that are operated as a response to the music played were displayed.
- Kick-off competition was organized in the institute: Full standard Kick-off competition was conducted where participants were required to make a bot which can move and kick a ball. This was conducted in the first week of November.
- Yantrix Events were designed: Competitions which would be conducted in Wissenaire as part of Yantrix were designed and were be conducted by the society members. The competitions are Clean India, Robo-wars, Kick-off, Maze Runner, Bomb squad, Trekk-on.
- Participated in IIT kanpur events: In this semester members of the society have participated in Robotics events conducted by IIT Kanpur. The team qualified two preliminary rounds and lost in the last round.
- For the first time an in house robotics competitions open for all branches was organised as a part of Innovation Challenge IIT Bhubaneswar. The problem statements were designed and the events were organised successfully.





## WEB AND DESIGN SOCIETY

- Posters: Web and Design Society has designed posters for various events like Open Day, Ek Bharat Shrestha Bharat, Run for Unity, Sankalp Se Siddhi, Republic Day.
- Work for Convocation : works like photos gathering, response gathering, templates for yearbook, brochure, designing yearbook according to graduation list of year 2017.
- Hostel Website : As per the request of Hostel Council we have made a new website for the hostel.



## ACHIEVEMENTS

- Nakshatra secured the first position in the online first round of Quiz 2.0 competition in National Students' Space Challenge by IIT Kharagpur among more than 10,000 participants.
- Neuromancers secured first prize in Swig and Code; third in Principium; first, third, fourth in Switch and Code.
- Ajaya Kumar Dash won 1st position in United by HCL Hackathon held by HCL.
- Ramit Ashutosh won 2nd position in The Picture Tale in Spring Fest, IIT Kharagpur.
- Shruti Pattajoshi, Putrevu Manasa, T.R. Pratyusha won 1st position in Sub-opreti Competition in Techkriti, IIT Kanpur.
- Shivam Sethi, Aakash Garg, Manthan Srivastava won 2nd position in Marketing Villa competition in Techkriti, IIT Kanpur.
- Nitheesh Kumar and team won 1st position in Business Plan Competition: Srijan, Purvodaya 2018.

## SPORTS COUNCIL

- Inter IIT Trials: The activities of the Sports Council started from March 2017 with Inter IIT Trials. Two teams, Team A and Team B for were made for each game in Inter IIT Sports Meet.
- Summer Fitness Camp: For the very first time in the institute, we started a Summer Fitness Camp which was open for all faculty, staff and students of our institute. The camp began at 6:00 am, May 17 2017 with 3 members initially and by the end of July, the strength increased to 60-70 members.
- EAA: EAA was made compulsory for 2 days a week. It helped to mobilize students and also in creating a healthy sports environment in IIT Bhubaneswar.
- Inter IIT Practice: Practice for Inter IIT was increased drastically with providing coaches for each Inter IIT game for 5 days a week and students have utilized this opportunity and practiced extra hours to improve their performance in Inter IIT. Inter IIT Practice started from March 2017 and practice sessions continued till December with 5-6 days a week along with having friendly matches with nearby colleges.

Fitness training in summer at hilly area near staff quarters.

**INTER SPORTS MEET (IIT Madras)**

Our journey at IIT Madras started with extraordinary performance of IIT Bhubaneswar contingent team in March Past.


## ATHLETICS

This year, the athletics team constituting of 8 members participated in almost all the track events. The following results depicts our Inter IIT performance of this year:

| Event | Participants | Time | Gold Time |
|---|---|---|---|
| 100m | Vikram | 12.8s | 10.8s |
| | Chaitanya | 13.4s | |
| 200m | Vikram | 25.1s | 22.0s |
| | Vikas | 25.6s | |
| 400m | Kodam | 58.3s | 49.6s |
| | Chandan | 57.8s | |
| 800m | Gaurav | 2 min 11s | 1 min 56s |
| 1500m | Gaurav | 4 min 51s | 4 min 18s |
| 400m Relay | Vikram, Boola, Kodam, Chandan | 4 min 3s | 3 min 21s |
| 100m women | Prathibha | 19.3s | 15.6s |
| 200m women | Prathibha | 35.2s | 28.9s |

## BADMINTON

The performance of the badminton team was much better than the previous year. Practice sessions were planned accordingly with the resources in hand. The team reached the pre-quarter finals.

| Team | Opponent | Score | Team | Opponent | Score |
|---|---|---|---|---|---|
| Women | IIT Roorkee | 0-2 | Men | IIT Ropar | 3-0 |
| | IIT Madras | 0-2 | | IIT Delhi | 0-3 |
| | IIT Gandhinagar | 0-2 | | IIT Roorkee | 0-3 |

## BASKETBALL

The overall performance of the team was much better than the previous year's performance. Even though the team was placed in a tough pool, the team gave a good fight to all teams. The team got its first ever victory which is notable.

| Team | Opponent | Score | Team | Opponent | Score |
|---|---|---|---|---|---|
| Men | IIT Madras | 30-46 | Women | IIT Kanpur | 6-28 |
| | IIT Jodhpur | 52-30 | | IIT Gandhinagar | 2-40 |
| | IIT BHU | 25-47 | | IIT BHU | 4-17 |
| | IIT Dhanbad | 42-47 | | | |

## CRICKET

The cricket team is undergoing a phase of reconstruction and with time, can excel against other teams.

| Opponent | Result |
|---|---|
| IIT Bombay | Lost by 128 runs |
| IIT Goa | Lost by 11 runs |

## FOOTBALL

Overall the team was happy with its performances and for qualifying into the knockouts. This performance would not have been possible had it not been for the daily practice sessions. These were the best ever results as the football team had never won a match yet at Inter IIT sports meet. The team has made huge inbounds into giving a stellar performance.

| Opponent | Result |
|---|---|
| IIT Dharwad | 5-0 |
| IIT Guwahati | 0-0 |
| IIT Madras | 0-3 |

## LAWN TENNIS

Inter-IIT 2017 was a great learning experience for the team. The members of team gave their best in practice sessions and in the tournament. The team performance was much better when compared to the previous year in all aspects like fitness, strokes, rallies and competition. The team gave a good fight to all the teams in spite of being placed in a tough group.

| Opponent | Result |
|---|---|
| IIT Hyderabad | 0-2 |
| IIT Madras | 0-2 |
| IIT Guwahati | 0-2 |


9
7

## TABLE TENNIS

As compared to previous year, this year performance is very good considering the fact that the team is reconstructing and relatively has lesser experience.

| Opponent | Result |
|---|---|
| IIT Guwahati | 0-3 |
| IIT Palakkad | 2-3 |

## VOLLEYBALL

Inter IIT Practice started from March 2017 and practice sessions continued till December 5-6 days a week along with having friendly matches with nearby colleges which helped improve the results drastically.

| Opponent | Result |
|---|---|
| IIT Hyderabad | 3-2 |
| IIT Dhanbad | 3-0 |
| IIT Roorkee | 0-3 |
| IIT Kharagpur | 0-3 |

## GENERAL CHAMPIONSHIP

Inter-department Championship was conducted with formation of 9 teams of different departments. The Sports Council organised a 5km cross country race on January 26th 2018. It attracted large competition among students competing from different departments. Along with the cross country race, the Council successfully organized all General Championship games.

## ASHWAMEDHA

The Sports Council of IIT Bhubaneswar conducted Ashwamedha, the sports fest of IIT Bhubaneswar for the very first time in our institute. Competitions for three games - football, volleyball and basketball were held which drew positive response from teams in and around Bhubaneswar.

## ACHIEVEMENTS

- The football team won 1st position in Ashwamedha.
- The volleyball team won 2nd position in Ashwamedha.
- The volleyball team won the 2nd position in Chiasma-2.0, AIIMS.
- The basketball team won the 3rd position in Ashwamedha.

## ACHIEVEMENTS BY OTHER STUDENTS:

- Mr. Samiran Mandal was awarded with Young Researcher Award in OSICON (Ocean Science Conference -2017) held by Ocean Society of India.
- Nibedita Behera and team won 2nd position in Oral presentation in International Conference,RAROM at IIT Kharagpur.
- Niranjan Dehuri won Best Presentation Award in 31st Annual Conference by Orissa Chemical Society.
- Amita Rani Sahoo won the Best Poster Award at CCBM 2017.
- Shreyasi Som won “Innovative Student Projects Award 2017” from Indian National Academy of Engineering (INAE).
- Rishi Gurjar and Vijay Ranjan won the Best Paper at RECYCLE 2018.

# FINANCIAL INFORMATION

## RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31.03.2018

(Amount- Rs.) (Amount- Rs.)

| SN | RECEIPTS | CURRENT YEAR 2017-18 | PREVIOUS YEAR 2016-17 | SN | PAYMENTS | CURRENT YEAR 2017-18 | PREVIOUS YEAR 2016-17 |
|---|---|---|---|---|---|---|---|
| I. | **Opening Balance** | | | I. | **EXPENSES** | | |
| | a) Cash in Hand | | | | a) Establishment Expenses | 276,913,439.00 | 190,501,588.00 |
| | b) Bank Balances | | | | b) Academic Expenses | 128,044,237.42 | 116,442,555.37 |
| | i) In Current accounts | | | | c) Administrative Expenses | 54,786,257.97 | 34,466,519.00 |
| | ii In deposit accounts | | | | d) Transportation Expenses | 12,194.00 | 15,154.00 |
| | iii) In Savings accounts | 257,851,875.70 | 255,232,322.79 | | e) Repairs & Maintenance | 253,138.00 | 490,403.00 |
| | | | | | f) Prior Period Expenses | 81,275.00 | 36,452.83 |
| | | | | | g) Finance Cost | 68,818.93 | 1,157.59 |
| | | | | | g) Gymkhana Expenses | 3,725,794.00 | 2,083,055.85 |
| | | | | | | | |
| II. | **Grants Received** | | | II. | **Payment against Earmarked/ Endowment Funds** | 309,442.31 | 33,862,577.00 |
| | a) From Govt. of India | 3,573,520,000.00 | 1,788,970,985.00 | | | | |
| | b) From State Government | | | | | | |
| | c) From Other Sources(Details) | | | | | | |
| | (Grants from Capital and Revenue expenses to be Shown Separately) | | | | | | |
| III. | **Academic Receipts** | 147,032,267.00 | 77,358,795.00 | III. | **Payment against Sponsored Projects/ Schemes** | 161,956,298.27 | 178,748,295.36 |
| IV. | **Receipts against Earmarked/ Endowment Funds :** | | | IV. | **Payment against Sponsored Fellowships/ Scholarships** | | |
| | a)Earmarked/Endowment Fund | | - | | | | |
| | c)Own Funds (other Investment) | | | | | | |
| V. | **Receipts against Sponsored Projects/ Schemes** | 203,615,415.11 | 172,515,387.97 | V. | **Investments and Deposits made** | | |
| | | | | | a) Out of Earmarked/ Endowment funds | 795,845.57 | 6800000 |
| | | | | | b) Out of Own funds (Investments - other) | | |

| SN | RECEIPTS | CURRENT YEAR 2017-18 | PREVIOUS YEAR 2016-17 | SN | PAYMENTS | CURRENT YEAR 2017-18 | PREVIOUS YEAR 2016-17 |
|---|---|---|---|---|---|---|---|
| | | | | | a) Out of Earmarked/ Endowment funds | 795,845.57 | 6800000 |
| | | | | | b) Out of Own funds (Investments - other) | | |
| **VI.** | **Receipts against Sponsored Fellowships and Scholarships** | | | **VI.** | **Term Deposits with Scheduled Banks** | 3,275,795,325.49 | 1,273,096,500.00 |
| **VII.** | **Income/ receipt on Investment** | | | **VII.** | **Expenditure on Fixed Assets and Capital Wrok-in-Progress** | | |
| | a) Earmarked/ Endowment funds | 3,295,882.00 | 10,305,483.47 | | a) Fixed Assets | 22,905,032.93 | 32,929,785.28 |
| | b) other Investments | | | | b) Capital Works-in-Progress | 89,017.00 | 1,161,938,213.00 |
| **VIII.** | **Interest received on** | | | **VIII.** | **Other Payments including statutory payments** | 409,428,239.09 | 549,467,476.20 |
| | a) Bank deposits | 16,113,900.54 | 6,169,852.75 | | **Capital fund** | | |
| | b) Loans and Advances | | - | | | | |
| | c) Savings Bank Accounts | 7,606,645.33 | 8,053,913.55 | | | | |
| **IX.** | **Investments encashed** | | | **IX.** | **Refunds of Grants** | | - |
| | | | | | | | |
| **X.** | **Term Deposits wih Scheduled Banks encashed** | 1,859,972,946.09 | 1,407,430,085.07 | **X.** | **Deposits and Advances** | 1,828,298,071.52 | 35,705,065.61 |
| **XI.** | **Other Income (including Prior Period Income)** | 19,952,729.79 | 10781074.51 | **XI.** | **Other Payments** | | |
| | | | | | Hostel Payment | 1,868,206.71 | 37,897,629.00 |
| | | | | | Hostel Payment against Fixed Assets | 536,101.00 | 432,508.00 |
| | | | | | Hostel Payment against Current Liabilities | 6,336,138.00 | 6,907,157.00 |
| **XII.** | **Deposits and Advances** | 36,962,005.42 | 19,950,831.00 | **IX.** | **Closing Balances** | | |
| | | | | | a) Cash in Hand | | |
| **XIII.** | **Miscellaneous Receipts including Statutory Receipts** | 183,305,248.16 | 126,706,835.47 | | b) Bank Balances | | |
| | | | | | i) In Current accounts | | |
| **XIV** | **Any Other Receipts** | | | | ii In deposit accounts | | |
| | Hostel Income | 1,622,243.74 | 15,795,617.66 | | iii) In Savings accounts | 166,856,566.71 | 257,851,875.70 |
| | Receipt against Hostel Current Assets | 28,045,730.04 | 19,948,146.55 | | | | |
| | Accured Interest | - | 454,637.00 | | | | |
| | **TOTAL** | **6,338,896,888.92** | **3,919,673,967.79** | | **TOTAL** | **6,338,896,888.92** | **3,919,673,967.79** |

# RESEARCH & DEVELOPMENT

## RECEIPT & PAYMENTS A/C FOR THE FINANCIAL YEAR 2017-18

| RECEIPT | In (Rs) | |
|---|---|---|
| **Opening Balance** | **390,078,624.49** | |
| **Add: Receipt during the year** | | |
| Consultancy Project | | 15,668,690.00 |
| Sponsored Research Project | 96,730,489.00 | |
| Less : Refunded | 2,869,887.00 | 93,860,602.00 |
| Seed Grant | | 4,175,000.00 |
| Sponsored Fellowship | | 6,135,743.00 |
| Institute Overheads | | 11,346,729.75 |
| TDS | | 2,664,502.00 |
| Service Tax | | 1,095,344.00 |
| Goods & Service Tax | | 1,844,966.00 |
| Professional Tax | | 25,100.00 |
| EMD | | 2,177,250.00 |
| Other Current Liability | | 87,959.00 |
| Sundry Creditors | | 52,531,055.00 |
| Liquidated Damages | | 814,780.00 |
| Bank Interest | | 1,543,094.09 |
| Interest on TDR | | 1,051,622.00 |
| Stale Cheque | | 149,270.00 |
| Interest on TDR Accrued | | 7,174,708.27 |
| Workshop | | 1,200,000.00 |
| Tender fee | | 69,000.00 |
| **TOTAL RECEIPT** | | **593,694,039.60** |

| LESS: PAYMENT DURING THE YEAR | | In (Rs) |
|---|---|---|
| **FOR REVENUE EXPENSES** | | |
| Salary to JRF/SRF and project Assistant | | 23,104,692.00 |
| Consumables | | 5,545,859.00 |
| Contingencies | | 2,676,388.00 |
| Recurring Expenses | | 1,076,743.00 |
| Travel Expenses | | 4,230,583.00 |
| Consultancy Fees & Honorarium | | 7,850,962.00 |
| Meeting & Workshop Expenses | | 1,891,013.00 |
| School Development Fund | | 90,600.00 |
| Fellowship | | 5,964,513.00 |
| Overhead Expenses | | 181,000.00 |
| R&D Recurring Expenses | | 781,918.00 |
| Technical Assistance Expenses | | 151,076.00 |
| Operation and Maintenance | | 309,746.00 |
| Fabrication & Other Cost | | 267,047.00 |
| Startup & IPR Expenses | | 201,209.00 |
| Training & Development | | 247,907.00 |
| Duty & Taxes | | 4,325,912.00 |
| Stale Cheque | | 17,812.00 |
| Sundry Creditors | | 48,224,544.00 |
| Faculty Development Fund | | 466,645.00 |
| Bank Interest | | 25,647.00 |
| Research Grant | | 60,645.00 |
| EMD | | 1,403,800.00 |
| PBG | | 30,342.00 |
| Other Current Liability | | 840,207.00 |
| Accrued Interest on TDR | | 196,994.00 |
| **TOTAL PAYMENT** | | **110,163,804.00** |
| **CLOSING BALANCE** | | **483,530,235.60** |

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