

MARCHING FORWARD TO FINDING ITS PLACE AMONG THE TOP WORLD CLASS INSTITUTIONS



# Rhythm

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Indian Institute of Technology Bhubaneswar

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# GREEN<sup>AND</sup> HEALTHY CAMPUS ENVIRONMENT



## INSTITUTE RESEARCH HIGHLIGHTS

10 +  
INTERNATIONAL  
WORKSHOPS

40 +  
GIAN COURSES

125  
FACULTY

**Sponsored**  
81 Projects worth  
₹49.8 Cr (2015-17)

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**Consultancy**  
100 Projects worth  
₹4.9 Cr (2015-17)

**Publications :**

- 1000 Paper
- 30 Patents During 2015-17



Some of the Sponsored Research and Consultancy Agencies





**Prof. Raja Kumar, R. V.**  
Director

### ***Interview with the Director***

1. **Sir, you have an extensive administrative profile and under your eminent leadership the pedagogical system has undergone noticeable changes. Could you briefly share with us some of the aspects of the same and holistic learning?**

The method of teaching in classrooms should be of more student-centric than teacher-centric effectiveness. Learning-by-doing and/or Experiential learning and/or Learning by problem solving by students would immensely increase their understanding of concepts and assimilation of knowledge than by merely listening to the lectures. Such are the learning paradigms that we want to adopt at this institute. The lectures and assignments should be accordingly and properly designed to target deep learning and associated skill development including creativity and augment students' interests in the subject concerned. Unless creative skills are nurtured, they do not become part of behavior of students. The members of Faculty play a key role in this task. The success factor greatly depends on how every member of the Faculty understands, accepts and implements it. Thus, education needs to be made participatory, focused on imparting adequate knowledge to the students and inculcate capability to solve problems in a creative and innovative way. Teachers may avail and use the ample resources and technological tools which are readily available.

At IIT Bhubaneswar, we recognize that education has a broader meaning. We are committed to ensure that the learning is holistic, and provide ample opportunities to students to excel in various walks of life while making the education in a chosen field of science and technology, sound. One way, I try to implement this from my end, is to impress upon the faculty by sharing my experiences and by providing guidance directly through my interactions with them; and the other is by involving senior visiting faculty to address the issues in their interactions with our faculty.

(1)

2. **Changes and achievements are a part of big dreams. Could you share with us your exclusive vision for IIT, Bhubaneswar?**

Thank you for this question. Personally, I would like IIT Bhubaneswar to be amongst the cream of world-class institutes in terms of generating brilliant students, making research contributions and participation in solving nation's problems. There is no short cut for this and it doesn't come free. What matters is the quality and accountability of faculty, the academic research and governance culture, and facilities

In simple terms, you need to create global class standards for everything in the institute. In my first address itself, I called upon our Faculty and Staff to stop thinking that we are a new IIT in functioning and in spirit; thus they are motivated to aim for achieving high standards.

Soon after my joining, I realized that while there were some strengths, there were also many gaps in the institute's culture and standards. Though it is not easy and also not always appreciated, I personally engaged myself in fixing these gaps, particularly those in the culture, and quickly set the standards and implemented them. A significant part of the work has already been done with fairly good success for the last three years and the process will continue. High standards are being adopted in recruiting faculty, the most important of the resource which should be nothing short of global class when the aim is to make the institute one among the global class. This is not easy, yet we are going across the globe in search of adequate numbers of faculty. This would be sustainable only when the institutional standards including ambiance is of global class.

The above apart, preparation of a prospective plan for the growth of the institute was taken on to my own shoulders, created a detailed one, including planning of the academic programmes, put it up for discussion among the faculty for fine tuning. Thanks to the central government that for each of the IITs started in 2008, a grant of around Rs. 1200 Crores was sanctioned in 2016 for the next three years, for the institutes to grow. Here, I got an opportunity to build the institute as per the standards I could set in consultation with the faculty and the Board. I am confident that we would be able to make the institute grow as per the ambitious standard levels envisioned.

3. **It's been over 3 years now since the torch has been passed on to you. Do share with us about the notable accomplishments IIT Bhubaneswar has been credited under your Directorship since 22 April 2015.**

When I took over, IIT was operating from multiple transit campuses, with some academic programmes running with a total student strength of 970. Unfortunately, the contractor of the Mega project rescinded, and infrastructure creation in the permanent campus was stalled since Oct 2014. As a result, the academic buildings were standing with partially built structural frames. Getting the infrastructure creation re-started, completing the phase-1 infrastructure, shifting to the permanent campus phase-wise to full by now, redoing the master plan, getting Rs 850 Crore for phase-2 constructions started and getting the same to 50% completion stage could be done over since May 2015. Today the institute is fully established in its permanent campus with strong processes in place and with the student strength of 1765.

Vision of the institute is to be amongst the global class. In short, we need to establish it in commensurate standards and there is no short cut for the same. If you have money and the will power, and if you are hard-working, it is not difficult to build the physical infrastructure. It is very important, however, to set new standards and rising the existing standards including raising of quality faculty, the most important of the resources, academics, research output, creation of infrastructure in commensurate ambiance and running of the institutional operations. Improving upon the existing standards is far more challenging than initiating new standards. New standards could be established and the institute is made to undergo the transformation with fairly good success, through several innovations. In the process, the institute operates by modern standards better than some of the senior IITs, as of now. The biggest challenge has been to raise faculty of high standards to adequate numbers which is being attempted through a global search.

We could take innovative initiatives like recruiting faculty of foreign origin to teach at IIT Bhubaneswar over long terms to offer education with international flavor and to achieve high success. There have been other initiatives too. The institute made a future plan for its growth for over the next 10-12 years to shape itself to become an Institution of Eminence of global repute. To accomplish the same, necessary actions are being taken over the coming two years including for a steady growth of the current strength of the students to more than 3000 students by 2022.

(2)

**4. As a director you are keen on recruiting foreign faculty at IIT Bhubaneswar. Please tell us your strategy behind adding them to your work force.**

Providing education, the primary objective of an academic institute, with international flavor can be a means for internationalization, though very challenging. I personally feel that it is feasible. We could innovate and get as many as five faculty of foreign origin for a tenure of more than a semester as visiting faculty on Indian salaries, though after putting in spirited efforts. Four of the faculty expressed that teaching at IIT Bhubaneswar has been a rewarding experience. The students too expressed happiness about the variety and flavor of teaching. This first successes proved that it is feasible and we are putting in more efforts to have faculty of foreign origin teaching in every school, a regular feature.

This apart, we launched a global search for regular faculty. Through this process we intend to reach out to NRI PhD's and Postdocs and attract selected of them back to India in the role of faculty of IIT Bhubaneswar. We have been vigorously reaching our advertisement for faculty positions across the globe. Though some IITs have done it earlier, we are going global one-step ahead with several innovations.

**5. As a leader could you share with us the methods you follow to encourage and support the young members of the Faculty of IIT Bhubaneswar to engage in teaching and research?**

For the head of an institution, to direct or guide particularly the young faculty, nothing can be as effective as serving as a role model. I personally feel that the best way to promote traits like transparency, ethical standards, accountability, and commitment is to put them in practice and showing the path by setting an example. I believe that to be successful in this endeavor, you need to have these qualities, inherently within you. The contentment and the positive energy these practices give to an individual can be experienced very well and one may tend to adopt the same, permanently too.

I respect individuals irrespective of age and class. I try my best to recognize, appreciate and encourage merit, hard work, performance, responsibility and good service. I do not hesitate to point out weaknesses and am non-compromising where I should not and do not hesitate to criticize with positive intentions. Criticism is part of training.

I personally encourage and promote quality than quantity in research, and appreciate participation in projects that help in nation building. I have personally designed a central on-line teaching feedback from students, got it discussed and got implemented effectively at IIT Bhubaneswar in the first few months of my joining. Outstanding teachers as per student feedback are rewarded for their best teaching practices.

**6. What is the philosophy that you live by?**

Whatever life has given you, explore it to the fullest extent, live up to what it offers and return as much as you can to the nation by performing at your best. The director's position, particularly in a new IIT, is a grand opportunity to create or shape up it in such a way to realize the dream and vision which it envisages. If not done well, it would be a missed opportunity and a lot may be at stake. On the other hand, when you create a great institution, it would be a great service to the nation, very satisfying and gives you a sense of fulfilment. It calls for setting up a vision, mission and goals, plan properly, realize it and contribute to the fullest giving your best; moreover, be prepared to struggle if necessary. Honesty, integrity, vision and hardwork are pre-requisites for a genuine and sustainable contribution. When you are straight forward and serve honestly to fulfill a noble objective, you need not fear anything. Finally, what can be more rewarding than self-satisfaction? Though it sounds like a moral lesson, it is the intrinsic truth.

**7. What is your advice to aspirants of IIT?**

True education including subject knowledge and developing associated cognitive skills is more important than training on blind procedures aimed at succeeding in the entrance test as a short-cut; else, your education will be defective and it may make you lose your appetite for education. There is no short-cut for true education, and it can also get you into top most institutes like IITs in the right way. Examination success may get you into an IIT, but it is your true education which matters throughout your career and life. Lastly, at this juncture the country needs your performance excellence, at least on par, if not more, and that would greatly benefit you, your family, and the nation.

**- R. Guduru**

**Creating Green Campus**

IIT Bhubaneswar, a new generation IIT, prominent among the second generation IITs is located in Eastern India. It is currently making strong strides towards reaching its mission of globally well-respected academic institution. The Institute fully functions in its permanent lush green and wellness campus spreading across 936 acres of land situated at the foot of the Barunei Hill, in the outskirts of Bhubaneswar. The Institute has seven academic schools with 1760 students, 135 faculty members and is engaged in a speedy growth towards finding its proud place amongst the global class in all areas including teaching-learning and research. The high standards being created at the Institute is showing up in national and international rankings and improving year by year in prominent systems like NIRF, TIMES and QS ranging from 10 to 18 in National engineering institutes, 106 in BRICS and 600-800 worldwide.



At IIT Bhubaneswar the students are provided with holistic education in 6 branches of bachelors, 13 branches of post-graduation and 5 disciplines of science and PhD in unbounded areas and shaped into outstanding citizens.





The faculty members of the institute carry out research in cutting edge technology areas and have been publishing extensively in international journals of high repute and carry out high value sponsored research of national and international relevance. The institute has a very active Technology-Student-Gymkhana which is a hub of student activity. The students have been excelling in national level competitions under the active training and support from the student gymkhana.

In realizing the concept of a global village with eco-friendly technological advancements, IIT Bhubaneswar looks forward with commitment to providing scientific expertise, innovative environment, ingenious opportunities, and pragmatic experiences that would enable individuals and societies to look forward to a future of happiness and prosperity.



(5)



### Administrative Building

As one comes closer to the majestic gate of the permanent campus, one can see the Administrative Main Building standing in its full grandeur. The construction of the Main Building was completed recently and it's a house for all administrative offices and institute library.



(6)

## IIT BBS in Ranking

The strategic initiatives taken in the recent times have not only fostered the development of the institute, but also resulted in significant rise in institute's ranking performance. IIT Bhubaneswar's all India engineering institutional rank by NIRF in 2017-18 is at 18th position, and all India Overall rank by NIRF went up to 51st position from 66th position, in 2017-18. As per the India Today magazine's ranking, IIT Bhubaneswar's rank went up to 10th position from 22nd position; In The Week Hansa Research Engineering, the rank went up to 27th position from 32nd position. This year, our Institute also participated in QS and Times Higher Education Rankings. The Institute also ranked at 16th position by Career360 Engineering and 20th position by Times – i3RC Engineering. The rising trend is expected to continue.

During the year 2017 – 2018, a large number of distinguished personalities visited the Institute on different occasions and addressed the faculty, students and staff. The visitors include, Prof. Prahlad Rao (Former Joint Director, CDAC, currently IIIT-Bengaluru); Prof. Ramji Prasad (Aalborg University, Denmark); Prof. D. Manjunath (IIT Bombay); Prof. Sheshadri Mohan (University of Arkansas); Prof. Laxmidher Behera (IIT Kanpur), Dr. Ranjan Pradhan (University of Michigan, Ann Arbor); Prof. Vishwanath Sinha (formerly IIT

## Our Guests at IIT Bhubaneswar



*President Ram Nath Kovind addressing the technocrats and members of the Faculty on the 6th Convocation held at IIT Bhubaneswar's permanent campus.*

Kanpur); Prof. Vikram M. Gadre (IIT Bombay); Prof. Viktor Prasanna (University of Southern California); Prof. Saraju Mohanty (University of North Texas); Prof. Tangali Sudarshan (University of South Carolina); Prof. T. V. Srinivas (Indian

Institute of Science Bengaluru); Prof. Anjan K. Ghosh (Vice Chancellor, Tripura University); Prof. Purusottam Jena, Physics Department, Virginia Commonwealth University, USA; Prof. Manas K. Mandal, Distinguished Visiting Professor, IIT

Kharagpur; Prof. Amitabha Ghosh, formerly Director IIT Kharagpur, Honorary Scientist of Indian National Science Academy; Mr. Harun Rashid Khan, Retd. Deputy Governor of the Reserve Bank of India; Prof. S. C. Dutta Roy, (Retired Professor of Electrical Engineering, IIT Delhi; Prof. Kanchan Chowdhury, IIT Kharagpur; Prof. Parlapalli V. Satyam, Institute of Physics, Bhubaneswar; Dr. BVR Mohan Reddy, Executive Chairman, Cyient; Lt. Gen. P R Kumar, Retd. Director General Military Operations; Anindya Maitra, Associate Vice President, Mindtree; Prof. Avijit Gangopadhy, University Massachusetts Dartmouth, USA; Mr. Biranch Panda, NTU, Singapore; Mr. Biswaranjan Mohanty, University of Minnesota, USA; Prof. P. M. Pandey, IFB, Kolkata; Dr. Sofen Jena, Faurecia Clean Mobility, Bengaluru; Prof. Y. Joshi, Georgia Institute of Tech, USA; Mr. S. Mohapatra, SABIC Technology Centre, Bengaluru; Dr. Sampreeti Jena, University of Minnesota, USA; Dr. Sujit Bidhar, Fermilab, USA; Dr. Lucy Nandi, University of Minnesota, USA; Prof. Sumon Sinha,

Sinhatech; Dr. P. M. Pandey, IIT Delhi; Dr. ParthaSaha, IIT Kharagpur; Dr. C.S.Kumar, IIT Kharagpur; Prof. Suvrat Raju, ICTS Bangalore; Prof. Kajari Majumdar, TIFR Mumbai; Prof. Sachindeo Vaidya, CHEP, IISc Bangalore; Prof. Utpal Sarkar, (Former Director PRL, Ahmedabad), IIT Khargapur; Dr. Sudesna Basu, George Washington University; Prof. B.V. Rathish Kumar, IIT Kanpur; Prof. P.V.S.N Murthy, IIT Khargapur; Prof. Tian C. Zhang from University of Nebraska, Lincoln, USA; Dr. Ashok Mishra, Clemson University, USA; Prof. Kollure VL Subramaniam, IIT Hyderabad; Prof. Ravindra Gettu, IIT Madras; Dr. Nilanjan Mitra, IIT Kharagpur; Dr. Devendra Narain Singh, IIT Bombay; Dr. Radhakrishna Pillai, IIT Madras; Ms. Pavitra Parthasarathy, Hong Kong University of Science and Technology, Hong Kong; Dr. Piyush Ghaunsali, IIT Madras; Mr. Yu Jing, Hong Kong University of Science and Technology, Hong Kong; Prof. Dhanada Kanta Mishra, Hong Kong University of Science and Technology, Hong Kong

## Recent Happenings at IIT Bhubaneswar

### 7th Annual Convocation

The Institute celebrated its 7th Annual Convocation on 22nd September 2018 in the Community Centre of the Institute. Chief Guest of the 7th Convocation, Dr. Ashutosh Sharma, Secretary, Department of Science & Technology, Govt. of India addressed the gathering. He congratulated the students and the mentors for sowing seeds of innovative ideas in these fresh, young and fertile minds. Dr. Ashutosh called upon students to be job creators not to job seekers.



### Observance of Vigilance Awareness Week 2018

IIT Bhubaneswar observed Vigilance Awareness Week 2018, a week long programme started on 29th October to 3rd November 2018 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 2nd November 2018 evening, which was delivered



by Shri Sanjeeb Panda, IPS, Commissioner-cum-Chairman, State Transport Authority of Odisha. It was participated by large number of faculty, staff and students.

### Academic Programmes:

With an objective to fulfill the aspirations of the society, during the last three years, IIT Bhubaneswar raised its student intake with the current 1765 Students (B.Tech. - 1101, M.Tech. - 266, M.Sc. – 142, and Ph.D. - 256), 129 full-time faculty members, 15 officers and other supporting staff. This rise was made possible, despite a serious limitation caused by the Phase-1 infrastructure with only 1000 hostel rooms accommodation, and by availing hostel facilities from sister institution, NISER Bhubaneswar.

This year, a new M.Tech. Programme in Computer Science and Engineering with two sub-specializations, viz: Cyber Security & Forensics and Data Analytics is being offered for the first time in the country. Intake of the B. Tech. students is increased from 350 to 370 with the increase in supernumerary seats for female students in a significant step which made IIT Bhubaneswar have the highest intake amongst 2nd and 3rd generation IITs. Now, growth is going to be a phenomenon, almost every year. The number of programmes at the institute include B. Tech. programmes in 6 branches of Engineering (Computer Sciences, Electrical, Electronics & Communications, Mechanical, Civil, and Metallurgical & Materials), 5-year Dual degree programmes in 9 disciplines, M. Tech. in 11 specializations, and M. Sc. in 5 disciplines (Mathematics, Physics, Chemistry, Geology and Atmosphere & Climate Sciences) besides Ph.D. in almost all the disciplines ranging across the B.Tech., M.Tech. and M.Sc. Programmes.



### Engagement Programme for Fresh Students:

In order for the new comers, to overcome the burnout syndrome of the JEE coaching, IIT Bhubaneswar is organizing an 'engagement programme' since last year... To combat this problem, this year too, the Institute organized 'engagement programme' in a bigger way. This programme includes Director's message, interaction by the Deans of Academic and Student Affairs, Heads of the Schools, members of the faculty

and a session on 'Introduction to Engineering' by the Director. As part of this programme IIT Bhubaneswar sends its new entrants to nearby heritage sites to make them familiar with the locality and make them be aware of the history and culture of Odisha. The programme also includes a three day Personality Development Programme by name 'Yes+' conducted by Sri Sri University, Cuttack, during the period 27-29th July, 2018. The programme was in line with our objective of helping the students to develop team building capabilities,

creativity, leadership, independent thinking, stress management and mind control. The engagement was accepted by everyone with great enthusiasm. The above apart, cycling culture is introduced to the students to encourage a healthy and active life-style.

### 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. Besides these sanctioned projects,



100 project proposals worth about Rs. 72 Crore have been submitted during the last one year to different funding agencies by the faculty members. The major funding agencies are MHRD, DST, CSIR, UGC, ISRO, DRDO, DAE, CPRI, NALCO, IUSSTF, MoM, MoWR, MoES, INCOIS, IITM, BRNS etc. The various major areas covered by these projects 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 also actively participated in major initiatives of MHRD namely IMPRINT, Uchhatar Avishkar Yojana (UAY), Swachhta Action Plan etc.

The Institute initiated collaboration with National Aluminium Company (NALCO), which resulted in projects worth Rs. 1.70 Crores in the area of utilization of industrial wastes like redmud and



flyash in developing an environmental friendly geo-polymer concrete. An agreement was signed with Indo-US Science and Technology Forum on 25th September 2017 for research collaboration on "Smart Distribution System with Storage". A research collaboration agreement was made with the State Pollution Control Board (SPCB), Odisha for support in the activities planned under Bay of Bengal Coastal Observatory (BoBCO) in the area of Integrated Coastal Zone Management Project (ICZMP). A delegation of European Research & Innovation officials consisting of the Science, Technology & Innovation counselors, attachés and Directors of institutes from European countries, visited our Institute during February 2018 to explore the opportunities for International collaboration/exchange of students and faculty.



## Research Publications & Patents:

During the last one 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.

School-wise publication list during the last one year is as follows:

School	Book Chapter	Journal Publications	Conference Publications	Total Publications
Basic Sciences	1	116	9	126
Earth, Ocean & Climate Sciences	0	21	20	41
Electrical Sciences	2	75	57	134
Humanities, Social Sciences & Management	0	5	3	8
Infrastructure	5	37	29	71
Mechanical Sciences	1	53	14	68
Minerals, Metallurgical & Materials Engineering	0	14	3	17
<b>Total</b>	<b>9</b>	<b>321</b>	<b>135</b>	<b>465</b>

## Green Campus Initiatives:

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

**Plantation Initiative:** IIT Bhubaneswar strongly believes that nurturing nature is the best way to promote sustainability. Therefore, we created a positive, wellness and creative environment by maintaining outstanding landscapes and greenery in the campus. More than 27000 trees have been planted during the last three years. The exotic and indigenous evergreen and deciduous flowering trees and plants were chosen to create the healthy echo-system for attracting the exotic and migratory birds. 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" for promoting 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 for

riding a bicycle between the schools and hostels, and for constructing cycle parking infrastructure in each of the buildings.

**Energy-Harvesting Initiative:** IIT Bhubaneswar installed and commissioned a solar power plant with the capacity of 0.49 MW of capacity on the existing building roof tops to reduce carbon footprint and dependency on conventional sources of energy.

**Water-Harvesting Initiative:** IIT Bhubaneswar has initiated building up of rooftop rainwater harvesting and surface rainwater harvesting infrastructure, and setting up a waste management system and wastewater recycling plant, to make the campus zero-discharge.

**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 which are not only environment friendly, but also keep the building cool and clean. **Eco-friendly Waste Disposal:** IIT Bhubaneswar deployed dustbins with biodegradable and non-biodegradable categories.



## Seminars conducted during 2017 – 2018

IIT Bhubaneswar regularly organizes Institute Seminars on topics related to not only science and technology, but also a wide range of important topics including health, foreign affairs, defence, entrepreneurship, economics, spirituality and psychology. Talks are delivered by eminent personalities from all walks of life for the benefit of the students, faculty members and staff. All the seminars were successfully organized with a good number of young and enthusiastic participants from the educational institutes in and around Bhubaneswar.



## New Faculty

Welcome to new members of the Faculty!

### Dr. Abhijit Sutradhar

Visiting Assistant Professor  
School of Basic Sciences  
Research Interests: Bioluid mechanics; Magnetic drug targeting; Nanofluid convection in porous media



### Dr. Pathikrit Bhattacharya

Visiting Assistant Professor  
School of Earth, Ocean and Climate Sciences  
Research Interests: Mechanics of earthquakes and faulting; laboratory friction experiments; physics and mechanics of friction; earthquake statistics; fluid-rock interactions; fault-zone hydrology; high performance computing in modeling of earthquake processes; Bayesian inference on highly correlated spaces.



### Dr. Vasudeva Rao Allu

Associate Professor  
School of Basic Sciences  
Research Interests: Complex Analysis; Geometric Function Theory; Harmonic Mappings in the Plane.



### Dr. Sourabh Bhattacharya

Visiting Assistant Professor  
Research Interests: School of Earth, Ocean and Climate Sciences  
Ore Geology; Hydrothermal Ore Deposits; Fluid Inclusions & Laser Raman Microspectroscopy



### Dr. Olive Ray

Assistant Professor  
School of Electrical Sciences  
Research Interests: Renewable power integration; Converter modeling and control; Digital control of Power Electronics



### Dr. Yengkhom Kesorjit Singh

Assistant Professor  
School of Earth, Ocean and Climate Sciences  
Research Interests: Structural geology and tectonics; geochronology; photogrammetry; GIS and remote sensing; Natural hazard and disaster management; Augmented reality and virtual reality.



### Prof. P.K.J.Mohapatra

Visiting Professor  
School of Mechanical Sciences



### Prof. Godabarisha Mishra

Visiting Professor  
School of Humanities, Social Sciences & Management



### Dr. Anoop Thomas

Assistant Professor  
School of Electrical Sciences  
Research Interests: Coding techniques; Algebraic Error Correcting Codes; Index Coding; Network Coding; Coded caching; Coded Distributed Computing



**Dr. Manish Agrawal**  
Visiting Assistant Professor  
School of Mechanical Sciences  
Research Interests: Finite Element Analysis; Computational Mechanics; Continuum Mechanics; Topology Optimization; Multiphysics Simulations



**Dr. Debapratim Ghosh**  
Assistant Professor  
School of Electrical Sciences  
Research Interests: Microwave components, circuits, and systems, microwave measurement systems, analog and small-scale embedded systems



**Prof. Krishnamachar Prasad**  
Visiting Professor  
School of Electrical Sciences  
Research Interests: conventional and three-dimensional integrated circuits; silicon and compound semiconductor devices and integrated circuits; semiconductor based sensors; IC design; electromyography; electric vehicles; high temperature superconductors



**Dr. Pattabhi Ramaiah Budarapu**  
Assistant Professor  
School of Mechanical Sciences  
Research interests: Multiscale multiphysics fracture studies, polymer nano composites and bio-mimetic composite structures.



**Dr. Srinivas Boppu**  
Assistant Professor  
School of Electrical Sciences  
Research Interests: High Level Synthesis, Programmable Hardware Accelerators, Coarse - Grained Reconfigurable Architectures, System-on-Chip Design, Low power VLSI, and CAD for VLSI.



**Dr. Shweta Jain**  
Assistant Professor  
School of Electrical Sciences  
Research interests: Game Theory, Mechanism Design, Machine Learning, Multi-armed Bandit Problems, Social Networks



**Dr. Gaurav Bartarya**  
Assistant Professor  
School of Mechanical Sciences  
Research Interests: Finish Machining of hard metals and alloys, Modeling and Simulation of manufacturing processes, Reverse Engineering, Incremental forming



**Dr. Adway Mitra**  
Assistant Professor  
School of Electrical Sciences  
Research Interests: Modeling complex spatio-temporal processes using Machine Learning and Data Mining; Climate Informatics; Video Analytics; Complex Networks



**Dr. Anwoy Kumar Mohanty**  
Assistant Professor  
School of Electrical Sciences  
Research Interests: Research Interests: Bayesian Methods in Signal processing, Machine Learning, Bioinformatics, Statistical Signal Processing



**Dr. Suvradip Mullick**  
Assistant Professor  
School of Mechanical Sciences  
Research interests: Non-conventional Machining Processes Laser Beam Machining, Cutting, Grooving, Paint striping etc. Underwater or Water Assisted Laser cutting, welding Laser Additive Manufacturing: Direct Laser Deposition Laser Assisted Machining



**Dr. Srikant Gollapudi**  
Assistant Professor  
School of Minerals, Metallurgical and Materials Engineering  
Research Interests: Creep deformation behavior of Titanium and Magnesium alloys, Powder metallurgy, Corrosion behavior of nanocrystalline and amorphous materials



**Dr. Rajakumar Guduru**  
Assistant Professor  
School of Humanities, Social Sciences & Management  
Research Interests: Developing Critical Vocabulary of ESL Learners; Cognitive Reading Skills; Second Language Acquisition; Teacher Education and Development; Communication Skills; Technology and Language Learning;



**Dr. Srinivas Pinisetty**  
School of Electrical Sciences  
Research Interests: Formal methods, and software engineering in general, and runtime verification and enforcement in particular



**Dr. Chandrasekhar Perumalla**  
School of Electrical Sciences  
Research Interests: 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, Multi-Level Inverters, Electric Vehicles, Application of Power Electronics to Power Systems, Soft Computing Applications to Power Quality Problems



**Prof. Rambhatla G. Sastry**  
Visiting Professor  
School of Earth, Ocean and Climate Sciences (SEOCS)  
Research Interests: Exploration Geophysics, Engineering Geophysics, Geophysical Inversion and Geophysical imaging



**Dr. Bankim Chandra Mandal,**  
Assistant Professor  
School of Basic Sciences (Mathematics)  
Research Interests: Numerical solutions to Partial Differential Equations through Domain Decomposition Methods, generalization of substructuring methods with Waveform Relaxation method, formally named as the Dirichlet-Neumann Waveform Relaxation (DNWR) and the Neumann-Neumann Waveform Relaxation (NNWR).



### Dr. Balakrishna Pamulaparthu

Assistant Professor

School of Electrical Sciences

Research Interests: Power System Automation; Data Analytics for Smart Power Grids; Smart Grids/Micro Grids Technology; Power Distribution Systems; Substation/Distribution Automation; Advanced Metering Infrastructure; Power Transformer/Motor Asset Management, Diagnostics and Analytics



## Faculty and Staff Matters:

**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. This has expectedly infused new dimension in pedagogy, research collaboration and internationalizing education at IIT Bhubaneswar. A few notable names are Prof Luis Malera, USA; Prof Matjaz Kovse, Slovenia; Prof Scott Andrew Whattam, Canada and Prof Tian C. Zhang, USA. There are some more faculty of foreign origin selected and likely to join shortly at IIT Bhubaneswar.

## Teaching Excellence and Outstanding Service Award Initiatives:

In an endeavour to create an environment of teaching-learning of high order, faculty members who got highest rating in student feedback on courses and teaching, have been honoured with teaching excellence awards. In addition, to recognize the outstanding contribution in other service areas, Faculty and staff members are honored. The list of faculty members and staff who were honoured includes the following:

- ❖ Dr. C Bhamidipati – Award for Teaching Excellence (Best Teacher)
- ❖ Dr. KausikSamanta – Award for Teaching Excellence
- ❖ Dr. A. Venugopal – Award for Teaching Excellence
- ❖ Dr. K P N Murty – Award for Teaching Excellence
- ❖ Dr. S Manikandan – Outstanding contribution in services
- ❖ Mr. P K Sahoo – Outstanding contribution in services
- ❖ Mr. SambitRanjanMohanty – Outstanding contribution in services
- ❖ Mr. K Saikiran – Outstanding contribution in services
- ❖ Mr. Ramesh Chandra Biswal – Outstanding contribution in services
- ❖ Mr. BiswajitPegu – Best Male Athlete in Inter IIT Staff Sports
- ❖ Ms. Sunita Burma – Best Female Athlete in Inter IIT Staff Sports

**Awards & Honours Received by the Faculty:** Several academic distinctions, honours, distinguished fellowships, associate ships, 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.

## Research Projects:

**Collaborative Research:** The Institute is very actively engaged in collaborative research with many reputed universities and research organizations across the world. Some of the collaborating universities include, ShangaiJiotung University, China, Warwick Manufacturing Group, University of Warwick, UK; Washington University in St. Louis, USA; University of Massachusetts Dartmouth USA; University of Southampton UK;



National Oceanography Centre (NOC) UK; Woods Hole Oceanographic Institute USA; University of Concepcion, Chili; University of Surrey, London, UK; University of Manchester, UK; University of British Colombia; University of Quebec, Canada; University of Waterloo, Canada; York University, Canada, Texas A&M University, USA and many other reputed universities for joint research, student internship and faculty visits.

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 an innumerable number of

distinguished visitors for academic, research and other collaborative programmes.

**Alumni Activities:** The Institute alumni affairs and international office extends several facilities and services to the alumni. Alumni database has created to connect with its alumni. Within a short span of time, it has successfully conducted its first Alumni Meet during 14th April to 16th April, 2017 at its new permanent campus.

The second Alumni meet has been planned to be held during January-2019, to commemorate 10 years of a glorious inception of IIT Bhubaneswar. Alumni have brought out its 1st Newsletter 'Spaghetti' in Feb-2018, to bind all in unique ways and to spread the Institute news. Alumni have arranged series of didactic lectures for coming days for the students. Alumni Association is launching an online platform for structured mentoring.

We are pleased to share that a few Alumni have been selected and joined in Indian Administrative Services and Indian Engineering Services. Almost 15-20 of our Alumni have already started their own start-ups. A good number of the Alumni took up higher studies in reputed foreign Universities like Stanford University, the Ohio State University, University of California, University of Texas, University of Minnesota, University of British Columbia, University of Colorado and many more.

**Technology Incubator:** The Institute has established a Technology Incubation Centre to facilitate incubation of ideas of its students, alumni and faculty members for conversion into successful prototypes. The Centre provides up to Rs. 2 lakh grant to the selected teams towards consumables and allows use of its workshops and laboratories for their use. Three teams of incubatees have been successfully graduated from the centre and five teams are currently working in the centre.

**Startup Centre:** A Startup Centre has been established at IIT Bhubaneswar with an overall objective of the Centre to inculcate a culture of innovation-driven entrepreneurship in and around IIT Bhubaneswar. As many as 10 startups are operating in this centre now. IIT Bhubaneswar has also been nominated as a nodal agency by MSME Department, Government of Odisha, to promote the Startup Odisha initiatives.

**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 in October 2017 for promoting entrepreneurship, research, and startup activities.

In November 2017, Smt. Susmita Bagchi and Shri. Subroto Bagchi provided a philanthropic support of Rs 2.50 crore for establishing a Center of Excellence in Augmented Reality and Virtual Reality (VARCoE) which was followed by matching grants from Startup Odisha and Software Technology Parks of India (STPI). At present a group of faculty members from various disciplines is actively pursuing research on numerous projects in the area of Augmented Reality and Virtual Reality.

## Continuing Education Programme (CEP):

Continuing Education is part of the IIT Bhubaneswar's outreach programmes created to extend its arm for the promotion and extension of the science and technology benefits to the society, besides teaching and research.

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. A few notable ones are listed below.

- ❖ An International conference on "SOCPROS 2017 (Soft Computing for Problem Solving)" coordinator, Dr. A. K. Ojha, held during 23-24 December 2017
- ❖ A Workshop on "Electricity Market Based Control of Microgrids" in Collaboration with Lappeenranta University of Technology (LUT), Finland, at SES Coordinator by Dr. C. N. Bhende held during 13 to 15 December 2017.

IIT Bhubaneswar has been inducted as a new Quality Improvement Programme (QIP) Centre for providing opportunities to faculty members of the degree-level engineering institutions to improve their qualification by offering admissions to Ph.D. research Programme. The program is now being implemented and 26 fellowships have been granted for the doctoral research program. Initiatives have already been undertaken for admission under this program.

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 currently 29 short term courses have already been conducted with the support of fourteen eminent professors of foreign origin and fifteen renowned Indian Professors working in foreign Universities.



IIT Bhubaneswar is acting as Nodal E-Hub for implementing the PMYUVA (Pradhan Mantri Yuva Udyamita Vikas Abhiyan) program of Ministry of Skill Development and Entrepreneurship, Govt. of India. IIT Bhubaneswar has started the program in a proactive manner so that the friendly and creative ambience of IIT Bhubaneswar will instill confidence in the young minds to become job creators rather than job seekers.

**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 are highlighted below.



**Vigyan Jyoti Programme:** An initiative of Department of Science and Technology, Govt. of India aimed to inspire girl students to pursue higher education in the field of Science and Technology, was held during June 04 – 24, 2018, with the participation of 35 students across the Odisha including from the adopted village of IIT Bhubaneswar under Unnat Bharat Abhiyan Program.



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

IIT Bhubaneswar successfully organised Open House Day and interactive session for JEE Advanced 2018 rankers and prospective JEE Students for year 2019, on 18th June 2018 to enlighten them on the IIT education and process of admissions. About 190 participants (break up: 170 in-person, 20 live, on-line) were 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. Mrs. Satpathy, Chief Manager, SBI, Bhubaneswar appraised the audience about various possible loan schemes available and the Vidyalakshmi Scheme.

Open House and Science and Technology Exhibition on 10th Foundation Day: 100 Science and Technology exhibits of the IIT campus attracted as many as 1000 high school and junior college students, from across the city and the state. The exhibits showcased and presented students with various recent innovative advancements in technology.

## UBA Activities:

The UBA organized several meetings with the villagers residing in Khudupur and Kansapada. UBA Co-coordinator Dr. T. Nayak attended the Gramasabha on 15 Aug 2018 at Haripur Panchayat office on behalf of UBA. The Gramasabha resolution on Ghagudibandha check dam and plantation programmes has been submitted by the Panchayat office to UBA.

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.



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.

Five female students from the adopted villages, including Sunduria, were given an opportunity to participate in the Vigyan Jyoti program, held during June 4-24, 2018 at School of Basic Sciences, on supernumerary basis.



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## Career Development Cell (CDC):

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. Total 130 students from UG discipline received offers.
- 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 has been received from core industries.
- 53 companies had participated in this year placement season.
- Average salary is 11.15 Lakh per Annum for UG.
- 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, and Adobe have participated in this year of placements.
- 3rd year students have received internship offers from reputed industries like Amazon, Goldman Sachs, Go Jek, Microsoft, MAQ Software, MathWorks, Ittiam, Jindal Stainless, Tata Steel, Wipro. Many of them are engaged in Internships in R & D organisations like ATREE, BARC, TCS, and foreign universities like IOWA State University, Singapore University, Shanghai Jiao Tong University.

100% Placements

39,00,000 p.a Domestic CTC offered

87% Undergraduate placement

207 Students placed

## GIAN Course

A GIAN course on “Challenges for welding and fabrication of CSEF steel structures for low polluting ultra-supercritical power plant applications” was conducted at School of Mechanical Sciences during 9-13th July 2018. Prof. Leijun Li of University of Alberta, Canada was the resource person for the event. A total of 35 participants from various Institutes and universities across India had attended the event.



## Other Visits and Lectures

Brainstorming meeting on Establishment of Bay of Bengal Coastal Observatory, 17 January 2018 at IIT Bhubaneswar.



**Brainstorming meeting** on Urban Climate: Science, Impact and Adaptation during 21st and 22nd September 2017, at IIT Bhubaneswar.



**Indo-US colloquium** on “Prediction of Heavy Rainfall associated with Extreme Weather Events” during 14-16 December, 2017, at Bhubaneswar, Odisha.



**ERFS training workshop** on “Integration of Monthly and Seasonal ERFS forecast products with crop models for developing CRM tools in Agriculture: during 03-08 May, 2018, at Bhubaneswar, Odisha.



**Brainstorming meeting** on “Future strategies for the need and scope of ERFS products for robust agriculture advisories” during 09-10 May, 2018 at Bhubaneswar, Odisha.



### Lecture on Power System Automation

An Industrial Lecture on Power System Automation has been organized by PIC Electrical/AEE Electrical on 09th May 2018 at the School of Electrical Sciences in collaboration with M/s ABB India Pvt. Ltd. The session covered state-of-the art developments in substation automation, distribution automation and circuit breaker manufacturing. The session was well received by M.Tech Power System engineering students of the school. Students were able to understand practical aspects of power system operation and interact with industry professionals Mr. Amitava Choudhary, and Mr. Prashant Choudhury from M/s ABB who have more than 20 years of industrial experience in the power systems domain. Dr. Balakrishna Pamulaparthi, Dr. Srinivas Bhaskar, K. and Mr. Biswanranjan Pradhan from IIT Bhubaneswar have attended the session.



### 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. Ashima Sarkhel, Medical Officer, and Smt. Namrata Chadha, Social Activist, were respectively the resource persons for the event. 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 function as the chief guest and guest of honor. The workshop was well attended by Students, and members of Faculty and Staffs from the institute.

### Computer and IT services Cell (CITSC):

CITSC implemented Biometric Attendance System for taking attendance of students in the classrooms for all programmes/courses at IIT Bhubaneswar. Extended Unified Communication System (Telephone Exchange) facilities are provided to residential areas (faculty quarters) in IIT Bhubaneswar permanent campus at Argul. CITSC has also planned, designed and will implement the 2nd phase of Campus Area Network in IIT Bhubaneswar permanent campus. The CITSC in-house team has developed and implemented additional Enterprise Resource Planning modules for IIT Bhubaneswar.

### Activities of E-Cell in 2017–2018

The primary objective of E-Cell is to promote and develop the spirit of entrepreneurship among the students. To achieve this objective, E-Cell carried out many activities in 2017–2018. E-Cell has organized five E-Days (24 March 2017, 13 April 2017, 18 August 2017, 6 October 2017, and 10 March 2018) and Conducted Annual fest E-Summit 18 during 19–21 January 2018.

E-Summit-18 has observed good number of footfalls this year and was a grand success with many entrepreneurs delivering enthusiastic lectures and many events and workshops being organized to hone the entrepreneurial skills of the students. The guests list for panel discussion included Mr. S.K. Dash (Founder of UAS Laboratories), Mr. J. K. Rath (Director, Mechchem 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. This year E-Summit ‘18 had a participation of 15 startups at Investors’ Drive. Sh. Nirmal K Baradhvaj, CEO Resurgent, Sh. Avelo Roy, Founder Kolkota Ventures and Sh.Hari Bala Subramaniyan, Angle Investor from Kolkota took part in the event as the investors. The guest talks included the speakers like Prof. Saroj Kumar Nayak, Dean F & P, IIT Bhubaneswar, Mr. Damodar Sahoo, Wipro Technologies, Mr. Presanjeet Pati, CEO Afixi Technologies, Mr. Nirmal K Baradhvaj, CEO Resurgent, Mr. V. S. Sridhar, Vice President Tata Communications.



## Student Activities

### Student life at IIT Bhubaneswar

Contrary to popular opinion life at the institute isn't all studies, assignments, exams and sleepless nights. There is a very active student community at the institute that makes life here quite exciting. The administration also gives equal importance on extra-curricular activities. The institute provides facilities for holistic development of students. Being a budding Institute, it has never compromised in providing the facilities required to enhance the students' talent. There are many opportunities for students to improve themselves in various fields. Some of them are:



## Sports

The institute provides state of the art sports facilities. Students have opportunities to pursue their interest in a wide variety of sports such as Cricket, Football, Badminton, Basketball, Table tennis, Volleyball, Chess, Lawn Tennis, Athletics, and Aquatics etc. Well qualified coaches are available to instruct the students. Students have participated and shown their talents in many inter college events such as the Inter IIT sports meet.



## Socio-Cultural

The Socio-Cultural Council of IIT Bhubaneswar under Students' Gymkhana aims at promoting interest in socio-cultural activities among the students. There are many socio-cultural societies focused on various activities like dance, music, dramatics literature etc. Throughout the year, the societies with the help of Gymkhana hold many cultural events and workshops, providing students with opportunities to showcase their artistic and cultural talents. Students from the societies have participated and won prizes in many inter college events.



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## Science and Technology

IIT Bhubaneswar provides great opportunities and a stable platform for students to pursue their hobbies in the field of Science and technology. The technical council under the Students' Gymkhana aims at helping the students to think beyond the convention, supporting innovation and helps them showcase their talent in various competition like Inter IIT Tech Meet, Tech Fests of other IITs etc. The students also attend and organize workshops on software skills, robotics, design & innovation etc.



## Fests

The Students' Gymkhana organizes the yearly fests ALMA FIESTA and WEISSENAIRE. ALMA FIESTA, the socio-cultural fest provides students from the institute and outside opportunities to compete with each other and improve themselves in various cultural events. It's an extremely popular event attended by students from all over India. WISSENAIRE, the techno-management fest is a platform to boost the technical proficiency of the budding engineers in India. E-Cell of the Institute organizes an annual entrepreneurship summit (E-SUMMIT) to promote entrepreneurship among students.



## Gymkhana Activity

### Social Welfare Society (Souls for Solace)

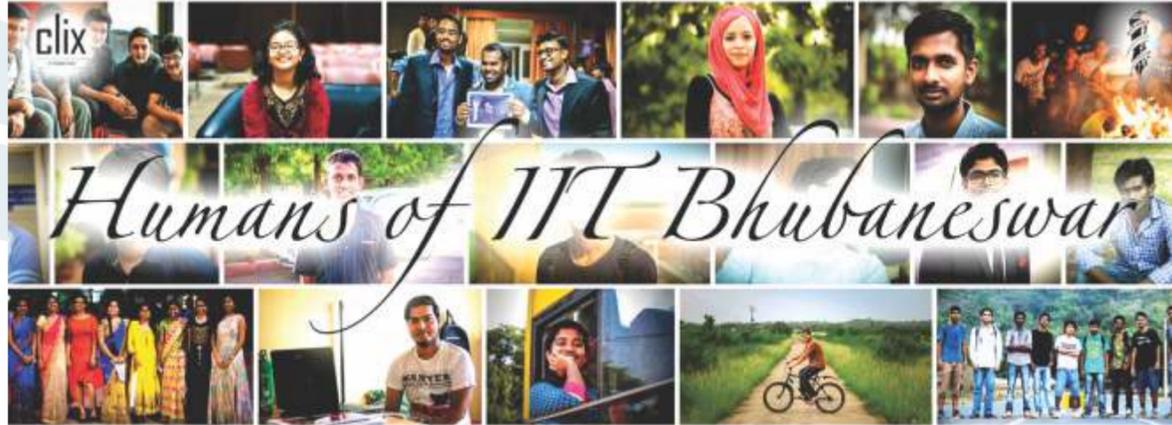
- ❖ Souls for Solace had a visit to Podapada village for Unnat Bharat Abhiyan survey and teaching the students of village.
- ❖ As a part of Diwali celebration, Souls for Solace conducted Cloth and Book Donation Drives, which we donated in nearby villages and in slums of Bhubaneswar.
- ❖ On the first 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.



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## Panacea:

- ❖ 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.
- ❖ 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.



## Kalakriti (Fine Arts Society)

Exhibition of artworks and Art e-Magazines were published on various arts for students of IIT Bhubaneswar. Various accolades were also won by the society in various competitions in the city as well as during the Inter IIT Cultural Meet.



## 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 extremely positive response from teams in and around Bhubaneswar making the inaugural event a grand success.



## 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, Ashwamedha 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 Trip organised for the First Year B.Tech. Students, Teacher's day besides, the regular national events and a large number of students, faculty and staff members participated in the events.

## Awards and Prizes Won by Students:

Students and student groups also won several awards at conferences and inter institutional competitions including the following:

- Ms. Amita Rani Sahoo won the Best Poster Award at CCBM 2017.
- Ms. Madhukrishna Priyadarshini (Ph.D. Scholar, SES) - Best paper award in IEEE SDS 2018 held in Barcelona during 23-26 April 2018
- Ms. Nibedita Behera, Mr. Debadatta Swain (PhD Students - SEOCS) secured the 2nd runners up position at the Oral Presentation in International Conference, RAROM, IIT Kharagpur.
- Ms. Shreyasi Som has been selected for the prestigious POSOCO Power Systems award (Masters Category)-2018.
- Ms. Shreyasi Som won "Innovative Student Projects Award 2017" from Indian National Academy of Engineering (INAE).
- Mr. Ajaya Kumar Dash (PhD Scholar, SES) - Won United by HCL Hackathon held in UK, Prize Money USD 5000
- Mr. Aman Pratap Singh was selected for Google Summer of Code 2018.
- Mr. P Abhishek (M.Tech) and Mr. Saikat Pramanik (Ph.D. student) participated in Ocean research cruise program in the Bay of Bengal Organized by Ministry of Earth Sciences (MoES) under the collaboration of Indian National Centre for Ocean Information Services (INCOIS), Physical Research Laboratory (PRL) and Indian Space Research Organization (ISRO) during 03 July - 05 August 2018 onboard Sagar Nidhi.
- Mr. Prangya R Rout was selected for Young Scientist Award 2018 by Odisha Vigyan Academy.
- Mr. Pranjal Bangani and Mr. Siddhant Kerhalkar were selected under SRFP 2018.
- Mr. Debiprasanna Sahoo (Ph.D Scholar, SES) - Most popular poster award, 2018.
- Mr. Manikanta Varma won the first prize in the National Competition of Stock Mind organised by ICICI Securities.
- Mr. Niranjana Dehuri won the Best Presentation Award at the 31st Annual Conference by Orissa Chemical Society.
- Mr. P Nitheesh Kumar and Mr. Vikas Sharma received the NRDC National Budding Innovators Award in the presence of Hon'ble President of India, Shri Ram Nath Kovind at Vigyan Bhavan, New Delhi.
- Mr. Rishi Gurjar won the best paper award at RECYCLE 2018.
- Mr. Samiran Mandal (PhD Student - SEOCS) was awarded the Young Researcher Award at OSICON (Ocean Science Conference 2017) by the Ocean Society of India.

## Students' Internship Experience

We, Piyush Khatri, Sampurna Borah, Shubhajit Mondal, MNVG. Prudhvi, the second-year under graduate students of SMMME and Sagar Singh Rathor, third year student of SMS, came to TATA Sponge for eight weeks summer internship at TATA Sponge Iron Limited in the first week of May this year. This was our first journey to the practical and industrial world of huge machinery, automation, and 24 hour-365 days working plant. We then had individual discussion with mentors, guide, and with Prof. Brahma Deo to chalk out the appropriate strategy and approach. After a week, we then presented our ideas to all the engineers in a huge meeting. Prof. Brahma Deo guided us in this regard as he stayed with all five of us at TATA sponge for nearly 12 days on site. That was a big moral support we have had which boosted our confidence in further endeavours.



We also participated in a 3-hour workshop on numerical methods using MATLAB for the first ten days. We ourselves gave lectures on whatever numerical methods we had learnt at IIT BBS on topics such as: iron ore reduction, Chaos analysis through Lyapunov, solution of linear and non-linear equations, linear programming, image processing, making of Graphical User Interfaces (GUI), Artificial Neural Network (ANN).

**Prof. Brahma Deo** has been constantly guiding and supporting us with his valuable time and expertise. We are quite happy that our work has been very well appreciated by the Plant. We never expected a sojourn like this. On the whole, summer internship has been a marvellous experience for all of us. We would strongly advise our next batch of fellow students to try for internship at an industry like that of TATAs.

**- Piyush Khatri and group**

It is the privilege to work at IIT Bhubaneswar under the guidance of Dr. Tabrez. I learnt a lot during the internship skills such as formulating research ideas and strategy to work. I am enjoying myself very much working with such talented research fellows. I am quite confident that I will learn many other skills before my internship ends. Now, I realize that to work in the Chemistry field is really much interesting and enjoyable. At last, I want to say a big thanks to Dr. Tabrez Khan who gave me an opportunity to work in this academic environment. I believe that such knowledge and experience I gained over here at IITBBS helps me to strengthen my both theoretical as well as practical knowledge.

**- Yash Rastogi**

Research facilities at IIT Bhubaneswar are excellent and extremely conducive towards development. The lab equipments and facilities are well maintained and can be easily accessed. The institute as an entirety motivates and inspires me to pursue research as a career option in future. My guide Dr. Animesh Mandal is very cooperative and kind enough to clear all my doubts without a speck of irritation. The PhD as well as M.Tech students have always been very helpful and cooperative during my ongoing internship period. Apart from that, the hostel provisions good enough and the hostel staff has extended a cordial behaviour towards me. Overall, my experience in IIT Bhubaneswar is great.

**- Ritupurna Sahoo**

## Fieldwork

M.Sc. (Geology) 2017-19 batch: 15 days field work in Ambaji and surrounding area of Gujrat and Rajasthan during 30-Nov-2017 to 15-Dec-2017



## Students' First Impressions:

My name is Parthiv Chandra, K., a 5 year dual degree student from the School of Mechanical Engineering, IIT BBS and I am from Kerala. On the first day of the admission itself I have come to know a lot about IIT Bhubaneswar as a lush green campus providing a calm and pollution free atmosphere which helps students concentrate in their studies. I was surprised that the campus is bigger than I had imagined before joining here. The beautiful site of the hills, magnificent buildings, mesmerizing landscapes as well as the location of the campus offer a perfect location for an educational environment.

I was very much excited with the cycling culture here and with the dedicated playgrounds for playing Basketball, Football, Cricket, and other sports. And truly, I was deeply attracted towards the institute because of the good facilities and friendly administration. Everything looked and felt well organized and properly maintained. I am very much keen to explore the campus more and study at this prestigious Institute.

**- Parthiv Chandra, K.**

IIT Bhubaneswar is very beautiful, big, clean and green campus located at the foot of the Barunei hill. As campus is very big, there

is cycling culture which is very good for health. IIT Bhubaneswar emphasizes on overall development of students. CST team provides guidance and help to all the freshers. Here all the events are managed by students under the expert guidance of teachers. A questionnaire was administered for students in order to know fresh entrants strengths, weakness, responsibilities and goals. English diagnostic test was conducted to help students know their language issues both in academic as well as in communication skills. Fun events and yes+ programmes were organized by seniors so that freshers feel good and comfortable. All the schools have advanced lab equipment. I am happy to say that my experience at IIT Bhubaneswar is very nice and satisfying.

**- Ayushi Kohli**

I'm Muhammed Anas K (ID. 18ME01039) from Kerala. About this campus, it's huge and beautiful. I made number of friends from different states of India. I really like this greenery because it reminds me of my native place. Some of my friends are in other new IITs. But, by their own words I can say that IIT Bhubaneswar is best among new IITs. Now, I am very proud to be an IITian

**- Muhammed Anas K**

On a particular day I got to know that I have been allotted IIT BBS in the JEE counseling. After that I started worrying about the distance from my hometown, type of food I will get there, kind of students I will meet, and communication skills as I cannot speak English very well. Also my parents and my brother started searching more information about IIT BBS campus and students lifestyle because they were also worried about me, but when we came to the campus all of our doubts were cleared. The campus is more beautiful than it is shown on the institute website. It's all green pollution free. After I met with students, seniors and faculties then I realized that I am in the right institution and I am sure that I will improve my communication skills and other skills, too.

**- Kuldeep Baghel**

Indian Institute of Technology, Bhubaneswar is located in the outskirts of the Bhubaneswar city, a 'city of temples,' in the state of Odisha. IIT Bhubaneswar is an abode of god in its own creation of breathtaking glimpses of nature. Being a student of this institute, I would like to pen down my thoughts about IIT Bhubaneswar in the form of a short poem as follows:

*Located at the footsteps of serene Barunei hills  
The life of the students here is full of thrills,  
The mesmerizing beauty of the campus of its own  
Sprawling over 936 acres with time has grown.  
The architectural buildup of the institute is quite analytical  
Even the academic and residential areas are diacritical.  
The 'green campus initiative' reflects the insights*

*of the director Taking strides for the holistic development, working together!*

**- Shruti Pattajoshi**

There is something special about the acronym 'IIT'. Especially in India, it immediately brings to mind a complete package of knowledge, freedom of speech, wisdom, and many more. It is a brand that the nation has constantly bettered over the years.

To be a part of IIT Bhubaneswar, a premier institution, is a wonderful experience, and being an alma-mater of an IIT [Madras], I did not perceive any significant difference in the campus culture. It feels like a homecoming to one big family. Personally, it has been a unique experience of travelling back in time to witness the making of an IIT, in this city.

The memories are still fresh from the days of my graduation at a private engineering college, Bhubaneswar. The rich cultural diversity (people from different districts) of this city sets a platform to have a perfect blend of cuisine, language (accent), monumental heritage, and cultural events, etc. As an engineering aspirant, I have been always wanted to be an IITian.

It has all the facilities of a world class technical institution such as: lush green landscape, cafeterias for hanging out with friends and colleagues, sports infrastructure, etc. The culture of unity-in-diversity unique at the old IITs has also been inherited here at IIT Bhubaneswar as individuals (students, faculty and staff) from all over the country unite to work together.

**- Rajesh Kumar, T.**

When I reached IIT Bhubaneswar campus in front of me was the magnificent main building. It stands tall and great welcoming all into the campus. I along with my parents dined in the hostel mess and we found it really delicious and healthy. Seeing the lush green and serene campus I was really feeling happy and thanked God for such a wonderful opportunity to study here at IIT Bhubaneswar. I am also happy as it's the result of the 2 years of hardwork I put in to achieve it.

**- Shivam Malviya**

First time when I entered in the campus I was very happy because this is one of my dreams coming true. All trees, beautiful flowers and Barunei hill add amazing look to campus. On the first day of my arrival at the Institute itself, I was very excited to visit the whole campus. The night view of the campus looked like a heaven, and so quickly I took some photos and sent them to my family and friends. They were all amazed seeing the campus photos and said, "You are in heaven!" With immense pride and happiness, I replied to them, "This is Arun's Institute." I found that people here are so helpful and supportive. I am quite inspired and motivated by the Director. I am in love with the IITBBS!

**- Arun Kumar Bisariya**