

DIRECTOR'S REPORT

Respected Chief Guest Smt. Smriti Zubin Irani, Hon'ble Minister of Human Resource Development, Shri S. K. Roongta, Chairman, Board of Governors, members of Board of Governors, members of Senate, distinguished guests, graduating students, their family members, my faculty and staff colleagues, dear students, media persons, friends, ladies and gentlemen – this Fourth Convocation of the Indian Institute of Technology Bhubaneswar is very special to us since it is the first ever to be organized in its tranquil permanent campus in the foothills of the historic Barunui hills at Jatni. It gives me great pleasure to extend a very warm welcome to you all on this historic occasion.

Today, we are privileged to have amidst us Smt. Smriti Zubin Irani, the Hon'ble Minister of Human Resource Development, who was gracious enough to accept our invitation to be the Chief Guest on this ceremonious occasion, where 109 B.Tech., 44 M.Tech., 50 M.Sc., and 12 Ph.D., students will receive their degrees. Madam, I on behalf of the Institute and on my personal behalf would like to extend a very special welcome to you to the Institute. We are most fortunate that today many dignitaries have graced this grand occasion with their august presence. I extend a cordial welcome to all of them. It is a proud moment to the graduating students, their parents, my faculty, staff and a special welcome to all.

For the IIT Bhubaneswar family, it has been a wonderful journey of seven years during which the Institute grew steadily and surely with its mission to become globally competitive and locally relevant. I took over as the director of this venerable institute on 22nd April 2015 with the mission of taking this institute to greater heights at an accelerated ascent. Now, I take this privilege to share with you a brief account of our journey emphasizing achievements and important milestones in the year 2014-15, and our dream of building an Institute of distinction.

Infrastructure at the Permanent Campus:

The Foundation Stone of the permanent campus at Argul (near Jatni) was laid on 12th February 2009 and the construction activity started in 2011. The progress of construction activity took time and the following of the buildings were inaugurated very recently:

- Mahanadi Hall of Residence (Boys Hostel) with a capacity of 800 students,
- Subarnarekha Hall of Residence (Girls Hostel) with a capacity of 200 students,
- A staff quarters block of 40 quarters,
- A 200 seated community centre,
- A 40 room guest house,
- A mini-shopping arena.

As soon as these buildings were nearly complete, the institute started using them. The construction activity of the academic complex consisting of the main administrative building and buildings of schools including Basic Sciences, Electrical, Infrastructure, Mechanical, Humanities, the first year student lab complex and a block of faculty quarters, is in progress. The Institute is very eager to shift its academic operations even if part by part to the permanent campus as and when a building is ready to occupy, in its endeavour to settle

early and grow. If things go on as planned, classes for first year students shall run in the permanent campus from January 2016 onwards.

Shifting of Students to Permanent Campus:

The long cherished dream of the institute to shift to its new campus has been fulfilled when we shifted all undergraduate, postgraduate and female PhD students (900 in number), some faculty and staff to the scenic new campus on 18th July 2015 with the commencement of the new academic year. This could only be possible by the committed pursuit of providing all services in place on war footing and making it livable. This offers students the much needed hostel life that facilitates peer learning which they were deprived of till date. The Institute is striving to have academic classes run in the permanent Campus from January, 2016-17 session onwards. The following facilities could be created in the last few months at the permanent campus:

- A Health Centre with round the clock availability of experienced doctors including a Lady doctor, paramedical staff nurses, life-saving drugs and well equipped ambulances to attend any sort of emergency cases.
- An effective transport facility for the students and staff to commute between Argul and academic campuses in Samantapuri and Toshali complex.
- Single seated hostel rooms with all amenities including electricity, water and sanitation.
- Dining facilities and Catering services in hostels.
- Play fields right in the hostels apart from a temporary common ground to promote sports activity.
- A 24 hours high alert security system available to ensure personal safety of every individual through manual guarding at various posts and also automated vigil through CCTVs.
- Gigabit Ethernet to individual hostel rooms and Internet access through fibre optic network as well as point-to-point Wireless bridges.
- Telephone connectivity with Wireless in the local loop as well as cellular mobile connectivity through two newly erected mobile towers to have uninterrupted communications with the world.
- A mini-market to provide food and general merchandise
- ATM facilities
- Construction of the boundary wall filling up the several long gaps by settling disputes with local villages.
- Furnishing the hostels and mess

I would be failing in my duty if I do not acknowledge the support the institute has been receiving from the state government. Some of these include,

- Construction of road over bridge to isolate the public road going through the campus,
- Helping IIT in settling land disputes to enable filling up of gaps in the construction of boundary wall,
- Establishing a police outpost near the campus,
- Providing water transportation
- Plantation within the campus through the forest development corporation

The institute has already started organizing important events including registration of fresh batch of B Tech students, ceremonies such as the foundation day, and important meetings like the Board meeting in its permanent campus.

Green field campus: The IIT campus would be a green and eco-friendly campus with a variety of theme based plantations, effective waste management facilities and zero-energy drawing.

In the last three months, the institute has taken up massive theme based plantation initiative in the campus and planted as many as 5,000 plants including a mango orchard of 70 varieties, teak plantation around the boundary, medicinal and flowering trees along the avenues to develop green cover besides many other theme based ones.

Academic Programmes:

The Institute started its journey in 2008 with a total of 94 students in three (3) undergraduate programmes viz. Civil, Electrical and Mechanical Engineering. Currently the Institute has 1038 Students (B Tech - 589, M Tech - 71, M Tech - PhD - 66 MSc - PhD - 141, PhD – 171), 100 full-time faculty members including one Chair Professor. In addition, the Institute has 10 officers and 70 supporting staff.

Academic Programmes: The institute offers BTech Programme in Electrical, Mechanical and Computer Sciences, Infrastructure and Metallurgical and Materials Engineering; M Tech Programmes in 9 specializations, MSc in 5 disciplines (Mathematics, Physics, Chemistry, Geology and Atmosphere & Climate Sciences); and PhD programme in all schools.

Academic Schools: The institute has the following seven (7) Schools offering academic programmes:

- 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 and Materials Engineering

New Academic Programmes: The following new academic programmes have been introduced in the year 2014-15:

- Structural engineering
- Transportation engineering
- Mechanical Systems Design
- Thermal Science and Engineering
- Power System Engineering.

Laboratory Equipment Procurement: During 2014-15, the institute procured advanced laboratory equipment worth Rs 24.00 Crore from institute grant and sponsored projects for research activity by students and faculty.

Research & Development Activities:

The Institute has made considerable progress in Research and Development front in the last one year. A sizable funding of about **Rs. 24.42 crore** has been received by the Institute through 38 new sponsored research and consultancy projects during the year. The major funding agencies are MoES, MHRD, ISRO, INCOIS, UGC-UKIERI, DST, DEITY, BRNS, IITM etc. The number of sponsored research and industrial consultancy projects received last year by different schools are as shown below:

Sl. No.	School	No. of Sponsored Projects	No. of Consultancy Projects	Total Budget (Rs. Lakh)
1	Electrical Sciences	04	01	199.30
2	Earth, Ocean & Climate Sciences	07		1207.85
3	Infrastructure	03	18	1027.91
4	Minerals, Metallurgical and Materials Engineering		02	7.05
5	Mechanical Sciences		03	3.96

In addition to addressing the issues of the Industries and academia through research and consultancy projects, currently the Institute is also focusing on the issues of the rural community through execution of some projects of societal importance in the villages. One of such prominent projects is funded by the Ministry of Information Technology, Govt. of India, targeting Improvement of groundwater level and quality through enhanced water use efficiency in agriculture.

The Institute is actively involved in execution of the Unnat Bharat Abhiyan (UBA), a flagship programme of the MHRD on rural development through use of affordable technologies. Two villages, 'Jorkul' in the Banki block and Argul have been adopted by the Institute under the UBA programme, where the faculty and students actively participate in creating awareness for using affordable technologies in education, health, sanitation, drinking water, solid waste management, affordable housing, use of renewable energy etc.

The Institute is also actively participating in the national level effort namely: "IMPacting Research, INnovation and Technology" (IMPRINT) where all IITs and IISc are involved for identifying the needs of the country in terms of research and technology requirements.

Bay of Bengal Coastal Observatory (BoBCO): The Ministry of Earth Sciences (MoES) sanctioned Rs 9.23 Crore as the first installment of funding to establish a Bay of Bengal Coastal Observatory to help investigate ocean-atmosphere-land interactions. This facility is going to be established at Puri coast where the Govt of Odisha agreed to provide land for the purpose.

Design Innovation Center: Under the national initiative on setting up of Design Innovation Centers (DIC) across the country under the aegis of the MHRD, IIT Bhubaneswar established

a DIC aimed at inculcating innovation culture among students. This DIC would also help College of Engineering and Technology Bhubaneswar, Ravenshaw University Cuttack, BOSE Cuttack and Kendriya Vidyalaya – I Bhubaneswar in this endeavor.

Research Publications & Patents:

The faculty members within 7 years of Institute's existence in the city of Bhubaneswar have contributed to creating new knowledge by publishing more than 688 original research papers in reputed national and international journals and 21 Books/book-chapters. Besides, 388 papers were presented in various national and international conferences in India and abroad and 10 Indian patents have been filed. Our students have also made technical presentations in national and international conferences.

The publication list during the last one year is as follows:

School	Journal publications	Conference publications	Total Publications
Electrical Sciences	47	78	125
Infrastructure	20	21	41
Mechanical Sciences	30	7	37
Minerals, Metallurgical & Materials Engineering	14	0	14
Basic Sciences	64	25	89
Earth, Ocean & Climate Sciences	57		57
Humanities, Social Sciences & Management	9	1	10

Awards & Honours Received by Faculty:

Several academic distinctions, honours and awards, distinguished fellowships, associate ship, named lectureship, coveted medals and awards have been bestowed on our faculty, staff and students in recognition of their academic achievements, during the current year. A few of these distinctions are noted below:

Laurels, Honours and Awards Won by Faculty Members:

- Dr. R. Jha received ICO-ICTP Gallieno Denardo Award
- Dr. R. Jha Elected as a member in the Executive Council, Optical Society of India for the year 2015-2016
- Dr. R.K. Singh selected for Indian National Science Academy, New Delhi - International Collaboration/ Exchange Program 2015 to visit Kiel Germany during summer vacation (2 months) of 2015
- Dr. S.H. Farooq selected for DAAD-revisit Programme 2015 to visit Karlsruhe Institute of Technology during May - July 2015 (2 months)
- Prof U. C. Mohanty Selected as Fellow of INSA, New Delhi, 2014
- Dr. Subhransu Ranjan Samantaray received the Mentor - Clayton Griffin Best Paper Award, PRC, Georgia Tech, USA-2015

- Dr. Subhransu Ranjan Samantaray selected as Member of National Academy of Sciences India (NASI)
- Dr. Padmalochan Bera: UGC Travel Grant for attending IET Systems safety and Cyber Security Conference, Manchester, UK, 2014.
- Dr. Sumanta Haldar served as visiting faculty at Lassonde School of Engineering, York University, Ontario, Canada from 10th May 2014 to 30th July 2014 which was sponsored by Department of Civil Engineering, York University
- Dr. C.S. Rout received the Venus International Foundation Young Researcher Award
- Dr. Punyashree Panda was awarded the Summer 2014 Residential Fellowship, WISC, Santa Fe, NM, USA.

Collaborative Research:

The Institute is very actively engaged in collaborative research with many reputed universities and research organizations in the world. Some of the collaborating universities include, 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 Columbia; University of Quebec, Canada; University of Waterloo, Canada; York University, Canada and many other reputed universities for joint research, student internship and faculty visits.

About 36 faculty members and 6 students visited foreign countries 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.

Distinguished Visitors:

Several distinguished visitors like Bharat Ratna awardee, Prof C N R Rao; Prof V S Raju, former director, IIT Delhi; Mr G C Pati, Chief Secretary, Odish govt; Prof. Mutsuhiro Shima, Gifu University, Japan; Dr. Morris Donald Edward, (Retd) Agilent Technologies, Colorado USA; Prof. Krishna Shenai, LoPel Corporation, USA; Prof. Bijen Das, formerly VSSC, Thiruvananthapuram; Prof. Devdas Menon, IIT Madras; Prof. Debakanta Mishra, Boise State University, USA; Prof. Devdas Menon, IIT Madras; Prof. Debakanta Mishra, Boise State University, USA; Dr. Glen Gawarkiewicz, Wood hole Institute of Oceanography, USA; Prof. Avijit Gangopadhyay, University of Massachusetts, Dartmouth, USA; Dr. B. B. Rath, Associate Director of Naval Research Laboratories, US Navy, USA; Prof. Dev Niyogi, Perdue University, USA; Prof. V. Chandrasekhar, Colorado State University; Dr. Ziad S. Haddad (Group Head, Radar Meteorology, JPL/Caltech, NASA) and many others visited the institute and delivered invited talks at the institute during the last year.

Student Activities:

IIT Bhubaneswar provides holistic education and opportunity for personality growth to its students by promoting extra academic activities through sports, music, Yoga, dramatics,

literary, dance and National Service Schemes. IIT Bhubaneswar is a ragging free institution. From the current academic session onwards, the institute introduced Odissi dance, Yoga, Football, Volley ball, Badminton, Athletics and Cricket as part of the mandatory Extra Academic Activity of students. This apart, the students organize various activities through societies like Dramatic Society, Music Society, Robotics Society, and Entrepreneurship Cell under the Students' Gymkhana. The students also organized the following festivals during the last academic year:

- Alma Fiesta – 2015, the Socio Cultural Festival during January 2015.
- Wissenaire – 2015, the Annual Techno – Management Festival during January 2015.
- E-Summit – 2015, a Workshop on Entrepreneurship during March 2015

Student Interaction with Distinguished Personalities: Several distinguished persons from many walks of life such as Mr. Varun Agarwal, Film Maker and Author; Dr. Pawan Agrawal, a Management Guru; Mr. Subroto Bagchi, Co-Founder of Mindtree; Roy Zaltsman, Mentalist from Israel; Falak Shabir, Pakistani Pop singer; Gajendra Verma, Singer; Pt. Tarun Bhattacharya, a famous Santoor Player and many others visited the institute and delivered talks and interacted with students.

Achievements and Prizes won by Students: Students and student groups also won several awards at conferences and inter institutional competitions including:

- Ms. Lopamudra Giri, a Research Scholar in the School of Basic Sciences was awarded the Best Poster Prize in the Royal Society-Faraday Discussions and Advances in Structure and Dynamics at IISc, Bangalore during 12-16 January, 2015 for her work.
- Mr. S. K. Nandi secured the best Poster paper award from Royal Society of Chemistry.
- The 1st prize in 'Lights Camera', 2nd prize in 'AdZap', the 3rd prize in 'Rangmanch' and the Best Actor award in the Dramatic Competition at Spring Fest-2015 of IIT Kharagpur.
- A Gold medal and a Silver medal in Aquatics events of the Inter IIT Sports meet-2014 held at IIT Bombay.

Continuing Education Programme:

Continuing Education is part of the IIT Bhubaneswar outreach programmes to extend its arm for the promotion and extension of the science and technology benefits to the society, apart from its main focus of teaching and research.

IIT Bhubaneswar conducted several Conferences, Workshops and Short courses with national and international participation including:

- National Workshop on Recent Development in Smart Grid Technology (NWSGT-2014) from 8-9th Nov 2014,
- Short term course on "MICROWAVE, PHOTONICS, DEVICES & WIRELESS COMMUNICATION," (MPDWC - 2014) from 5-7th Dec 2014,
- Workshop on Industrial Engineering for National Development during April 5-6, 2015.

- Short term course on Advances in Computational Fluid Dynamics conducted during June 8-12, 2015,
- Workshop on "Affordable housing: materials and technologies" in June 2015 in line with the national mission of "Housing for All by 2022" by the Ministry of Housing and Urban Poverty Alleviation, Gov. of India,
- Symposium on "Probiotics and Multi-scale Bioscience and Bioengineering", Dec 12, 2014,
- Workshop on "Queuing Theory and Optimization: Computational Aspects and Application", March 5, 2015.

Furthermore, the institute submitted proposals for the following government programmes:

- Several proposals for Global Initiative for Academic Networks (GIAN) programme of MHRD.
- Setting up of ICT & Electronics Academy to Ministry of DieTy in association with Govt of Odisha.
- Several programmes in association with the Government of Odisha through its Departments of Higher Education and Planning and Coordination.

Career Development Cell (CDC)

During the session 2014-2015, 27 companies visited the campus for recruitment. Many students availed this opportunity and 69 students got placed. The highest salary is Rs 13 lakh per annum and the average salary comes to about Rs 7.5 lakh per annum. The 3rd year students went to Industries as well Universities/Institutes in India and abroad for internship during the summer of 2015. CDC conducted many other events viz., quiz competitions, personality development programmes, etc.

Women's Grievance Redressal Committee (WGRC):

IIT Bhubaneswar has an active WGRC which conducts several training programmes and workshop for capacity building. Important of these include:

- A training-cum-workshop on the implementation of the "Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act - 2013" on February 20, 2015.
- International Women's day in association with E-cell, Indian Institute of Technology, Bhubaneswar on March 13, 2015 on fostering of Women Entrepreneurship in India.

Computer and IT services Cell (CITSC):

A voice, video and data convergence network was planned and implemented by the CITSC in-house team to provide inter-building connectivity, video surveillance and internet facility in the new campus of IIT Bhubaneswar. The network includes a 100Mbps (to be upgraded to Giga bit service in Jan-July 2016) fiber optic network and 20 Mbps wireless internet. A mini general computing facility (GCF) center at IIT Bhubaneswar Argul Campus is initiated to facilitate computing and internet browsing needs of faculties, students, guests, and others.