

MOU with SUNY, Buffalo



MoU with the State University of New York at Buffalo, USA was signed on 17th July 2012. SUNY Buffalo was represented by their President Prof. Satish Tripathy and the Institute was represented by Prof. M. Chakraborty, Director.

Students Placement for 2011-12

Out of 87 students (for placement), 85 have been placed. Few of the students also received more than one job offers. The companies from which the students were offered jobs are:

Caterpillar India, TCS (R&D Division), Infosys, Deloitte (USA), Flipkart, Tata Motors, Tata Consulting Engineers, Altair Engineering, 3DPLM, Samsung R&D, Headstrong Services, United Health Group, Cognizant, Larson & Tubro, Bank of India, HCL, AFFINE Analytics, DRDO, Persistent, Kalinga Soft and Consulting Engineering Services.

Summer Internship of Students

For summer internship students are interning at various industries and as well as universities abroad viz., University of Warwick, University of Massachusetts Dartmouth, Ohio University, Imperial College, London, etc.

Prof. Madhusudan Chakraborty delivers the 14th National Technology Day lecture at NALCO



NALCO celebrated the 14th National Technology Day at its Corporate Headquarters, Bhubaneswar on 11th May 2012. Professor Madhusudan Chakraborty, Director of Indian Institute of Technology, Bhubaneswar was the Chief Guest of the function and delivered the 14th National Technology Day Lecture on "Poisoning and Fading Phenomena in the Grain Refinement of Aluminium & its Alloys". Prof. Chakraborty highlighted the importance of Science and Technology development and absorption in the country. He said that India has a long way to go in technology development. He also emphasized on collaborative research. Finally he highlighted the development made in different types of Aluminium alloys and Grain refinement along with areas of applications. He stressed upon the need for development of such alloys and new materials in future.



Dr. Sandeep Pattnaik joined the School of Earth, Ocean and Climate Sciences as an Assistant Professor on 24th April 2012. His areas of research are Tropical Cyclone Modelling and Cloud Microphysics.



Dr. Malay Kumar Bandyopadhyay joined the School of Basic Sciences (Physics) as an Assistant Professor on 1st May 2012. His areas of research are Equilibrium and non-equilibrium statistical mechanics, Open quantum systems and in quantum dissipation, Problems of biophysical systems, and DNA dynamics.



Dr. A. K. Ojha joined the School of Basic Sciences (Mathematics) as an Associate Professor on 15th May 2012. His areas of research are Programming and Data Structure Transform Calculus.



Dr. T. V. S. Sekhar joined the School of Basic Sciences (Mathematics) as an Associate Professor on 16th May 2012. His areas of research are Computational Fluid Dynamics and Numerical Methods.



Prof. B. K. Dhindaw joined the School of Minerals, Metallurgical & Materials Engineering as an Emeritus Professor on 3rd August 2012. His areas of research are Solidification Processing, Composites, Bio-medical materials, Frictional Stir Processing, Nano materials, Physical Metallurgy and Modeling & Simulation.



Prof. N. P. H. Padmanabhan joined the School of Minerals, Metallurgical & Materials Engineering as the MGM Chair Professor on 6th August 2012. His areas of research are Modeling and simulation of mineral processing unit operations, Studies on development of process technologies for extracting metal/mineral values from complex ores, Material balance calculations.



Dr. Seema Bahinipati joined the School of Basic Sciences as Assistant Professor in Physics on 16th July 2012. Her area of research is Experimental High Energy Physics.



Dr. P. K. Mishra joined the School of Mechanical Sciences as Emeritus Professor on 10th July 2012. His areas of research are Non-conventional Manufacturing (Thermal Processing of Materials: Spark Erosion, Laser Processing Micro manufacturing, Rapid Prototyping and Microsystems Technology) and MEMS & Microsystems Engineering.



Prof. Sadananda Sahu has joined the School of Mechanical Sciences as an Emeritus Professor on 16th August 2012. His areas of research are Logistics, Supply Chain Management, Productivity Studies, Operations Management, Facilities Layout.



Dr. Shoobhankar Pati has joined the School of Minerals, Metallurgical & Materials Engineering as an Assistant Professor on 31st August 2012. His areas of research are Extraction and Recycling of Metals, Electrochemical and Photo-electrochemical synthesis of gases, Fuels Cells, Batteries, Inert Anodes for Metal Production.



Dr. Syed Hilal Farooq joined the School of Earth, Ocean and Climate Sciences as an Assistant Professor on 2nd May 2012. His areas of research are Hydro-geochemistry, Hydrology, Soil and Water Contamination, Environmental Impact Assessment.



Dr. Sankarsan Mahapatro joined the School of Electrical Sciences as Assistant Professor on 2nd July 2012. His areas of research are Air Pollution Control, Electrostatic Precipitators, Diesel Exhaust Treatment, Pulse Generator for Automobile Exhaust Cleaning, High Voltage Engineering.



Dr. N. C. Sahoo joined the School of Electrical Sciences as Associate Professor on 20th June 2012. His areas of research are Power System Optimization and Control, Power Electronics and Control of Electric Drives, Renewable Energy Systems, Applied Soft Computing.



Dr. N. B. Puhana joined the School of Electrical Sciences as Assistant Professor on 27th June 2012. His areas of research are Signal and Image Processing, Computer Vision, Biometrics, Digital Watermarking.

Gymkhana Activities

Dance Production

The annual dance production of the Dance Society was held on 4th April 2012. The show started with a Bharatnatyam dance followed by a medley of dancing styles including B-Boying, Hip Hop, and Bollywood styles finally ending with an exclusively choreographed dance keeping in mind the favourite dance styles of the graduating class.

Farewell

The 3rd year students held a farewell event for the first graduating class of IIT Bhubaneswar on 14th April 2012. The event began with a speech by the Director followed by Registrar, B. K. Ray; Dean of Student Affairs, Prof. S. K. Mahapatra; and Dean of Faculty & Planning Affairs, Prof. Sujit Roy. The Cinematics Group screened a special documentary that captured memorable moments of the graduating classes' time at the Institute. Sobriquets such as Mr. IIT, Miss IIT and others were given to students of the graduating class to delight of all. The event concluded with souvenir distribution to the graduates.

Gymkhana Elections

The Student Gymkhana elections for the year 2011-2012 were held on 15th April 2012. The election was presided over by the newly appointed President of Student Gymkhana, Dr. Mihir K. Das and was supervised by Dr. Arun Ku. Pradhan as the Election Officer. The election witnessed heavy participation among 2nd year students for posts of Secretaries and General Secretaries.

The elected members are as follows:

1. Vice President – Rongali Madhavi
2. General Secretary (Socio-Cultural) – Abhay Ranjan
 - a) Dance and Music Secretary – Abhinav Krishnan
 - b) Fine Arts Secretary – Mahipal Singh
 - c) Literary Secretary – Navya Satyalaya
 - d) Dramatics Secretary – Akash Deep Chabra
3. General Secretary (Science & Technology) – M. Preetham Krishna
 - a) Technical Secretary – V. Sri Ansh
 - b) Web & Design Secretary – S. G. S. Venkatesh
 - c) Robotics Secretary – E. Pranay
 - d) Event Coverage Secretary – Souryadipto Ghosh
4. General Secretary Sports – M. Phani Teja
 - a) Cricket Secretary – Gajula Mahesh
 - b) Football Secretary – Avnesh Kumar Gupta
 - c) Indoor Games Secretary – Dixit Vashi
 - d) Small Area Sports Secretary – Sake Venkat Kiran

Music Production

The Music Society staged its annual production on 17th April 2012. The audience was enthralled by an eclectic mix of genres and guitar solos based on many popular tracks as well as original compositions by the members of the Society. The newly formed band of IIT Bhubaneswar, SYNC LAYER, also gave a splendid performance. Keeping in mind the first graduating class of the Institute, many songs and tracks performed, had a college & student life theme.



Rhythm
The Newsletter

Indian Institute of Technology Bhubaneswar

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Director's Message

A warm welcome to the new members of the IIT Bhubaneswar family - faculty, staff and most of all the students of the B. Tech., Joint M. Tech. - Ph. D. and Ph. D. programme. It gives me immense pleasure to announce that IIT Bhubaneswar is offering a new academic programme, Joint M. Tech. - Ph. D. in various disciplines and we are looking forward to more such academic ventures in the future.

A word of advice to our young and budding graduates in the making: your hard work does not end here; it is entirely your interest, participation and the inquisitive thirst in you to acquire knowledge that is going to make you a true IITian. This span of your student life should not pass without knowing life in its beauty and challenges. Let us join our hands in taking the Institute to new heights. I hope your stay here in IIT Bhubaneswar will add to your rich repertoire of experiences.

Here's wishing you the very best as a new chapter in your life begins.

Prof. Madhusudan Chakraborty
Director, IIT Bhubaneswar

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In Focus

First Annual Convocation 2012

Indian Institute of Technology Bhubaneswar hosted its First Annual Convocation on 31st August 2012. Ninety-four students were awarded the Bachelor of Technology (B. Tech.) degree in Civil Engineering, Electrical Engineering and Mechanical Engineering and one student was awarded Ph. D. in Electrical Sciences. Eminent nuclear scientist and former Chairman of Atomic Energy Commission of India, Shri. Anil Kakodkar delivered the Convocation Address.

While delivering his first convocation address, Dr. Anil Kakodkar emphasized on the fact that "our large youth force must be provided with opportunities for constructive engagement...". Addressing the students on the occasion, Dr. Kakodkar urged that the youth should be equipped with quality education to meet emerging changes; he further stated that, "the aim of research should be to push the frontiers of knowledge as well as to evolve technologies and to implement them for development". The Director gave a detailed report on the four years of Institute building and the many goals and achievements during the period. Dr. T. V. Mohandas Pai, Chairman (Acting), Board of the Governors of the Institute



advised the graduates to never accept mediocrity from themselves as well as from their surroundings and always adapt and reinvent while constantly innovating as graduates of the prestigious IIT system.

The first Ph. D. of Institute was awarded to Nithin V. George for his thesis on "Development of a class of adaptive algorithms for active noise control". The Institute also awarded Doctor of Science (*Honoris Causa*) to Dr. Bhakta B. Rath, Associate Director of Research and Head, Material Sciences & Component Technology Directorate, Naval Research Laboratory, Washington DC, USA.

The President of India Gold Medal for the best graduate of the graduating class was awarded to Raghav R, from the School of Mechanical Sciences. The Dinesh Memorial Award for Mechanical Engineering students was awarded to Rajkamal Sendha and Prabhat Chandra. The Tejaswi Memorial Award for Electrical Engineering students was awarded to Vasu Gupta. The branch toppers were presented the Institute Silver Medals. Vasu Gupta (School of Electrical Sciences), Anurag Raj (School of Infrastructure) and Raghav R (School of Mechanical Sciences) received the medals. The Institute Proficiency Prizes for the best B. Tech. project were awarded to Preetam Priyadarshi Nayak from School of Electrical Sciences, Rajneet Kumar from the School of Infrastructure and Anand Nagarajan from the School of Mechanical Sciences.



Pan IIT 2012 Meet in Bhubaneswar



Pan IIT Alumni Bhubaneswar organized a meet on 5th May 2012 including an outreach program for the Pan IIT Alumni Global Conference 2012 at Kolkata. It was specially memorable as the first graduating class of B. Tech. students, the pioneering alumni of the Institute were also a part of the event. In the welcome address delivered by the Director, IIT Bhubaneswar mentioned the many challenges that the first batch of engineers who passed out of the Institute this year will be facing. Hon'ble Jairam Ramesh, an alumnus of IIT-Bombay and the Union Minister for Rural Development, was the Chief Guest at the Pan IIT Meet. He urged fellow IITians to inculcate values such as humility, integrity and tolerance for diversity in themselves in order to achieve the goal of nation building. The event, attended by over

400 IIT alumni, also had Shri Vishal Dev, Commissioner of Bhubaneswar Municipal Corporation and Pronob Guha, Chairman, Marketing Committee Pan IIT 2012, Shri Sandipan Chakravorty, Managing Director Tata Steel Processing & Distribution Limited and also Chairman Pan IIT Global Conference 2012, Shri Ramnath S Mani, President IIT KGP Alumni Foundation India, Shri Upendra Nath Behera, Co-Chairman, Pan IIT Alumni Bhubaneswar, amongst others were present.

Continuing Education

Short Term Course on Computational Fluid Dynamics & Heat Transfer (STC on CFDHT-2012)

A short course on "Computational Fluid Dynamics & Heat Transfer" was held by the School of Mechanical Sciences, IIT Bhubaneswar between the 14th and 18th of May 2012 to build awareness about the Computational tools and their application to Fluid Dynamics & Heat Transfer (CFDHT).

Over 30 participants across various states attended this short-term course with seven scientists from labs of national importance such as PXE Chandipur & LPSC Bangalore, two R&D engineers from Maruti Suzuki Pvt. Ltd apart from Academicians & Researchers from various NITs, Universities and technical institutes. Prof. Goutam Biswas a renowned academician, Computational Fluid Dynamist and a J. C. Bose Fellow was the Chief Guest for the inaugural session. Prof. Biswas delivered the inaugural lecture on "Simulation of free surface flows with special focus on falling drops".

The Short term course included: Imparting the fundamentals of chief computational techniques used in CFDHT such as Finite Difference

Methods, Finite Volume Methods, Finite Element Methods, Turbulence Models by the faculty of the School of Mechanical Sciences – Prof. S. K. Mahapatra, Dr. P. Rath, Dr. S. N. Panigrahi and Dr. Sathyanarayana. A; Training in solving non-linear governing equations along with their appropriate boundary conditions; Illustration of the wide application of these techniques by drawing examples from varied topics such as turbulence, fluid structure interaction, conjugate heat transfer problems, material processing, bio heat transfer and radiation modelling; Hands on training on the use of FLUENT® software to various basic as well as complex industrial problems by Dr. S. N. Panigrahi along with personnel from ANSYS®; and Industrial applications of CFD and dealing with many practical aspects of computational modelling by Prof. S. K. Dash from IIT Kharagpur.

SWARM Intelligence: Theory and Applications



The School of Electrical Sciences organized a national workshop on "Swarm Intelligence: Theory and Applications" from 25th to 27th May 2012. The workshop was attended by 100 participants from all over the country. Prof. G. Panda, Head, School of Electrical Sciences was the workshop coordinator and chief resource person. The major topics covered during the workshop were genetic algorithm, particle swarm optimization, bacteria foraging optimization, cat swarm

optimization, differential evolution and multi objective optimization. Simulation based experiments for various applications were carried out in the laboratory for in-depth understanding of the theory taught during the workshop. The three days workshop was highly successful as evident from the feedback obtained from the participants.

Environmental Impact Assessment: Issues, Challenges and Policy Implications in India (EIA-2012)



The School of Humanities, Social Sciences & Management, IIT Bhubaneswar organised the 1st National Workshop on "Environmental Impact Assessment: Issues, Challenges and Policy Implications in India" from 9th to 10th June 2012.

The main objective of the Workshop was to provide guidance on EIA processes, correct methods of baseline data generation and impact prediction techniques. Dr. Ashok Sahu, Principal Advisor, Labour Employment and Manpower Division, Planning Commission, Govt. of India was the key note speaker delivering the talk "Assigning Importance to Creation of Green Jobs in Environmental Impact Assessment in India". The guest lecturer of the event was Dr. D. K. Behera, Senior



Environmentalist, State Pollution Control Board, Odisha who delivered a talk on "Basic Concepts of EIA".

More than 60 academicians from all over India participated in the workshop. Eminent economists, scientists, academicians, entrepreneurs, and officials from around the country contributed to the quality of the workshop by giving lectures on varied topics like Environmental Impact Assessment, Creating Green Jobs, Management of River Water, Estimation of Pollution Load, EIA and its effect on Biodiversity. Dr. Naresh Chandra Sahu, Convener and Dr. Dukhabandhu Sahoo, Head of the School and Co-convener of the workshop coordinated the event.

Indo-US Advance Workshop and Colloquium on Modeling and Data Assimilation for Tropical Cyclone Predictions



The School of Earth, Ocean and Climate Sciences organized "Indo-US Advance Workshop and Colloquium on Modeling and Data Assimilation for Tropical Cyclone Predictions" from 9th – 14th July 2012, in collaboration with the Centre for Atmospheric Sciences, IIT Delhi. The workshop was inaugurated by the Chief Guest, Dr. Shailesh Nayak, Secretary, Ministry of Earth Sciences, Government of India. Dr. L. S. Rathore, Director General of Meteorology, Indian Meteorological Department was the Guest of Honour.

During the workshop, 16 resource persons from US and 7 from India delivered lectures covering various aspects of the Tropical Cyclone Predictions with especial reference to North Indian Ocean, Bay of Bengal and Arabian Sea. Four students from USA and 35 participants from India attended the workshop and the colloquium. Participants from India included academicians, scientists, students from premium research and operational organizations, such as, Indian Meteorological Department (IMD), Space Application Centre, Indian Space Research Organization, Indian Institute of Tropical Meteorology, Indian Institute of Technology Kharagpur, National Atmospheric Research Laboratory, Indira Gandhi Centre for Atomic Research, etc.

The workshop provided a unique opportunity to share and learn the advanced understanding and forecasting techniques on tropical cyclone over the Indian Ocean and especially significant to the coastal regions of India, particularly the state of Odisha which, has experienced a devastating super cyclone earlier.

The programme was jointly coordinated by Prof. S. Tripathy, School of Earth, Ocean and Climate Sciences, IIT Bhubaneswar; Prof. U. C. Mohanty, Centre of Atmospheric Sciences, IIT Delhi and Dr. S. G. Gopalkrishnan, Hurricane Research Division, USA.