DIRECTOR'S REPORT

Respected Chief Guest Shri Pranab Mukherjee, the President of India and the Visitor of IIT Bhubaneswar, Guests of Honour Dr. S. C. Jamir, The Governor of Odisha and Shri Naveen Pattanaik, Hon'ble Chief Minister of Odisha, Shri S. K. Roongta, Chairman Board of Governors, members of Board of Governors and the members of the Senate of the Institute, distinguished guests, the graduating students and their family members, my faculty and staff colleagues, dear students, media persons, friends, ladies and gentlemen – it gives me a great pleasure to extend a very warm welcome to you all on the occasion of the Second Convocation of the Indian Institute of Technology Bhubaneswar.

Today, we are privileged to have amidst us Shri Pranab Mukherjee, the President of India, who was gracious enough to accept our invitation to be the Chief Guest on this solemn occasion where **103** B. Tech. and **02** Ph. D. students will receive their degrees. My warm congratulations and best wishes for all the degree recipients. In this convocation we will also confer D.Sc. (*Honoris Causa*) on three internationally acclaimed professionals of eminence who have been mentoring this Institute with their worldly vision and love for academics.

The IIT Bhubaneswar family is very happy to have Shri Pranab Mukherjee, the President of India amidst us on this solemn day of convocation. Shri Pranab Mukherjee assumed office as the 13th President of India on July 25, 2012. Shri Pranab Mukherjee's intellectual and political prowess and his remarkable knowledge of international relations, financial affairs and parliamentary process are widely admired. He has been acclaimed for his role as a consensus builder to forge unity amongst diversity that form part of India's vibrant multi-party democracy.

Shri Mukherjee acquired Master's degrees in History and Political Science as well as a degree in Law from the University of Calcutta. He is a man of unparalleled experience in governance with the rare distinction of having served at different times as Foreign, Defence, Commerce and Finance Minister in Government of India. He was elected to the Upper House of the Parliament (Rajya Sabha) five times from 1969 and twice to the Lower House of the Parliament (Lok Sabha) from 2004.

In the seventies and eighties, he was instrumental in setting up the Regional Rural Banks (1975) and the EXIM Bank of India as well as National Bank for Agriculture and Rural Development (1981-82). Shri Mukherjee was also the author of a modified formula for resource sharing between the Centre and the States in 1991 which came to be known as the Gadgil - Mukherjee formula. Shri Mukherjee has extensive diplomatic experience and has served on the Board of Governors of the IMF, World Bank, Asian Development Bank and African Development Bank.

I am certain that our graduating students would feel highly privileged to have a persona like Shri Pranab Mukherjee amidst us. Sir, I on behalf of the Institute and on my personal behalf would like to extend a very special welcome to you to the Institute.

I would like also to extend a warm welcome to Dr. S. C. Jamir, The Governor of Odisha and Shri Naveen Patnaik, Hon'ble Chief Minister of Odisha, who have nurtured and mentored the Institute since its establishment. Our sincere and heart-felt thanks to Sri Naveen Patnaik ji for being the moving force in getting an IIT to the State of Odisha.

We are most fortunate that today many dignitaries have kindly consented to grace this solemn occasion with their august presence. I extend a cordial welcome to all of them.

For the IIT Bhubaneswar family, it has been a wonderful journey of five years during which the Institute grew steadily and surely with its mission to become globally competitive and locally relevant. I take this privilege to share with you a brief account of our journey with important milestones, emphasizing achievements in the year 2012-13, and our dreams of building an institute of distinction.

IIT Bhubaneswar – Moments we cherish

The Institute was established on 22nd July 2008; and moved to this temple city of Bhubaneswar in 2009 with classes starting from 22nd July 2009. The first batch of graduates was conferred degree last year on the 31st August 2012.

The Institute is currently operating from 8 different temporary locations which include two major academic campuses – one at Samantapuri near Jaydev-Vihar and the other at Toshali Bhawan at Satyanagar. Besides the above, we also have Workshops and Lab Complexes at Samantapuri, CSIR-IMMT and CTTC Bhubaneswar. I sincerely acknowledge the unflinching support received from CSIR-IMMT, CTTC, CIPET as well as many other Institutes in this temple city of learning who helped us generously to keep the flag of IIT Bhubaneswar furling high.

IIT Bhubaneswar is well equipped with modern class rooms, teaching and research laboratories, seamless wireless connectivity, virtual class rooms, and dedicated 1-GBPS network connectivity from National Knowledge Network (NKN). We have recently inaugurated a modern Training and Placement Cell in the Toshali Campus. Beside the existing gymkhana, the Institute will shortly have a state-of-the-art wellness centre to take care of physical and mental well-being of students, to guide them to achieve academic goals and to promote lifelong wellness.

IITs are known for the *de rigueur* to have a residential campus in order to facilitate one-to-one human interaction. Beside, the twin towers at Toshali Bhawan, the Government of Odisha has also provided us 14 flats at Government Colony, Gajapati Nagar. We have found cooperation from the Housing Society in SBI Colony Kesura (10 Km from city centre) wherein we have hired 77 HIG (3-bed room) and 70 MIG/LIG flats for the accommodation of our students, and few of our staff and faculty members. Another hostel at Madanpur (15 Km from the city centre) has been provided for M. Tech. students and Ph. D. scholars. In addition, IIT Kharagpur has constructed a 200 capacity Dr. A. N. Khosla Hall of Residence at Samantapuri for the students of this institute. I take this opportunity to thank IIT Kharagpur for being a constant partner during our journey

and for constructing the hostel which is of great convenience to us. I would also like to put on record my deep sense of appreciation to the students, the staff and faculty members who have to commute regularly between their residence and the various academic campuses. I am aware that this is strenuous. But, I am sure that our students, faculty and staff members would bear it and be a part of the history in the making.

Permanent campus

The Foundation Stone of the permanent campus at Arugul (near Jatni) was laid on 12th February 2009. The Government of Odisha has been very proactive in allotting 936 acres of land at Arugul for developing this IIT of which the Institute has already taken possession of 595.57 acres. The Government of Odisha has actively supported the establishment of this Institute by constructing a 4-lane access road to the campus from the National Highway No. 5 and providing water and power supply. The work on water and power supplies to the campus is also in progress. The State Government will provide 3 million gallon water per day (MGD). The Government of Odisha has also agreed to provide 75 acres of land on the Puri–Konark coast line to set up an Innovation Centre for Climate Change for the School of Earth, Ocean and Climate Sciences. I express my sincere gratitude to the people of the State and the Government of Odisha for their unstinted support.

During the current year we are able to accomplish construction of 16 Km of boundary wall out of 19 Km. 8 Bore wells have been sunk. The Institute has also taken up tree plantation programme to ensure a green campus at Arugul. The master plan of the new campus has been approved for 10,000 students, 1,000 faculty and 1,100 supporting staff. The total construction will be completed in 3-phases in next 12-15 years. The Ground Breaking Ceremony was on 14th August 2011 by the august hands of Shri Naveen Patnaik, Hon'ble Chief Minister of Odisha. The work for land-grading, road and other related construction have started. Administrative approval has been accorded for construction of 1,27,368 sqm within a budget of 388 Crores approved by the Ministry of HRD, Government of India. The Institute has made a request to the East Coast Railways to connect 3 parcels of the Institute land by over-bridges. Clearances for construction from various statutory bodies have been obtained. The tendering process for part of the construction has been completed. Construction of 800 capacity Boys' Hostel and 200 capacity Girls' Hostel, Guest House, Shopping and Community Centres, Type C Apartments are in progress. Work on road construction, drainage and other related site development activities are also in progress. So far, 4400 out of 4898 meters of roads have been laid and 3500 out of 3896 meters of drains have been constructed in the Residential part of the campus. Till now, 5750 out of 6380 meters of roads have been laid and 6150 out of 6815 meters of drains have been completed within the Academic Complex. A 132 KV grid with 250 KVA sub-station is in operation. Masonry work of the flyover by the State PWD has been completed – work for the approach road is in progress. Order has been placed for construction of main Administrative Building, School of Mechanical Sciences, School of Electrical Sciences, School of Basic Sciences, School of Infrastructure, First Year Laboratory Complex, Type A Apartments etc have been placed and work is expected to commence in a months time.

Academics

Academic Schools

The Institute started its journey with a mission to promote a borderless academic pursuit with the concept of Schools, rather than Departments to enable and encourage the academic staff and students to work in an interdisciplinary environment. The following seven (7) Schools have been set up:

- School of Basic Sciences (Physics, Chemistry, Bioscience, Mathematics)
- School of Humanities, Social Sciences and Management (Economics, English, Psychology, Management)
- School of Mechanical Sciences (Mechanical, Manufacturing & Industrial Engineering, Aerospace Engineering, Naval Architecture)
- School of Infrastructure (Civil Engineering, Architecture, Urban Design, Town Planning, Traffic & Transportation Engineering)
- School of Electrical Sciences (Electrical Engineering, Electronics & Communication Engineering, Computer Science & Engineering, Energy, Learning Sciences, Instrumentation)
- School of Minerals, Metallurgical & Materials Engineering
- School of Earth, Ocean & Climate Sciences

The Institute is also setting up an Innovation Centre for Climate Change on the Puri-Konark coast line.

The following Schools are proposed to be set up in the second phase of expansion:

- School of Chemical & Biochemical Engineering (Chemical, Biochemical and Biomedical)
- School of Design & Creative Arts.

Academic Activities

The Institute started its journey in 2008 with a total of 94 students in three (3) undergraduate programmes viz. Civil, Electrical and Mechanical Engineering having an intake of 40 students in each. From July 2013, undergraduate programme in Computer Science & Engineering has started. The Institute introduced Ph. D. programme from the very first year of its operation from the city in 2009. From July 2012 we have started postgraduate (Joint M. Tech. – Ph. D.) programme in Applied Geoscience, Climate Science & Technology, Civil Engineering, Electronics & Communication Engineering, Materials Science & Engineering and Mechanical Engineering. The Institute has also started Joint M. Sc. – Ph. D. program in Chemistry, Earth Science, Mathematics and Physics from July 2013.

Currently the Institute has 758 students (B. Tech. 501; M. Tech.-Ph.D. 87; M. Sc. - Ph. D. 53; Ph. D. 117), 83 full-time faculty members including 1 Chair Professor. In addition, the Institute has 9 officers and 52 supporting staff.

It is heartening to note that the first batch of undergraduate students are all placed. Five out of ninety-three students have joined prestigious universities abroad, which include Stanford University, University of Illinois at Urbana Champaign, Ohio State University, University of Texas and Imperial College of London.

Research & Development Activities: In-house, Sponsored, Consultancy

Our faculty members, research scholars and undergraduate students have been actively pursuing research in varying areas. The main research focuses are on Energy, Climate Change, Minerals and Materials, Manufacturing, Bio Engineering. The Institute has received 47 sponsored projects from various funding agencies like DST, CSIR, DBT, BRNS, CPRI, ICSSR, NPOL, BRFS, ITRA-Ministry of Information Technology and DRDO worth more than 11 Crores and 13 consultancy from industries worth more than 56 Lakhs. Project proposals worth more than 11 Crores are in active consideration. The in-house funding support for newly joined faculty members has been raised to 10 Lakhs per faculty member.

IIT Bhubaneswar has been successful in its bid for the following UK-India Education and Research Initiative (UKIERI) international collaborative projects:

Joint Masters and split site Ph. D. programme:

An Integrated Doctoral and Masters Programme with the University of Warwick - To develop an integrated suite of postgraduate joint degree programmes.

Thematic Partnerships programme-1:

UKIERI Thematic Partnership in Low Carbon Materials Technologies, Innovation and Application jointly with the University of Warwick - To enable the rapid and effective introduction of new steel and multi-material combinations, for new applications addressing the global imperative of carbon reduction.

Thematic Partnerships programme-2:

UKIERI Thematic Partnership jointly with the University of Southampton and National Oceanography Centre and University of Massachusetts at Dartmouth - To establish the School of Earth, Ocean and Climate Sciences at the Indian Institute of Technology Bhubaneswar and Marine Campus on the Bay of Bengal.

I would like to highlight in brief the on-going R&D activities in various Schools:

School of Basic Sciences: The School is a cluster of disciplines namely Bioscience, Chemistry, Mathematics and Physics. The thrust areas of research in Chemical Science are: green chemistry, multimetallic catalysis, organometallic chemistry, supramolecular chemistry, coordination chemistry, synthesis of natural products and intermediates. The research work in Biosciences is focused on

understanding the structure and function of various proteins of eye lenses, leprosy and tuberculosis. The research in high energy physics is focused on understanding fundamental particles and their interaction using theoretical tools such as string theory, and experimental setup in collaboration with CERN, Geneva. Specific areas include conformed field theory, pure spinor formalism of superstrings, super symmetry and black holes. A number of projects have been undertaken in the area of the plasmonics, photonics, ion-surface interactions, design and development of sensors, magnetic grids, energy storage devices and optoelectronic devices. Multidisciplinary work is underway in the area of nanomaterial-based device design, assembling and clustering. On-going research in mathematics includes complex dynamics and fractals, queuing theory, optimization theory, spectral graph theory and higher order compact schemes.

School of Earth, Ocean and Climate Sciences: The major R & D activities of the school includes the monitoring, prediction and providing mitigation solutions for natural disasters with sound and precise observational network of meteorological, oceanographic, geological and geophysical instruments combined with data-assimilative modeling in a multi-institutional framework and use of Information and Communication Technology (ICT), thereby becoming a hub of such activities on the east-coast of India with an international presence. The thrust areas are: Climate Modeling, Modeling of extreme events, Cloud Physics, Numerical Weather Prediction, Natural Resources-exploration and utilization, Climate Change and its Effects, Biological Oceanography, Application of the Space Technology for the Study of the Earth System Science, Soil-Water Interactions, Waste Utilization, and Pollutant Pathways. The School is also actively pursuing to set up the Bay of Bengal Coastal Ocean Observatory (BOBCO) with support from the Ministry of Earth Sciences, Government of India and develop it into a national center for pan global collaborative activities for studying air-sea interaction, monsoon prediction, sea-level changes etc.

School of Electrical Sciences: The school is pursuing research in the following areas: Antenna Design, Smart Antenna Techniques For MIMO Systems, Radio Frequency Identification System Design and Application, Non-Destructive Testing Methods, Digital Signal Processing, Speech and Real time Interactive Audio processing, Active Noise Controller, Cognitive Radio, Sensor Network, Intelligent Instrumentation, Opto-Electronics Device, Long-haul Optical Communication System Design, Optical Sensor, Communication and Wireless Communication System modeling and Design, Semiconductor Material & Device Characterization, Wide Band gap Semiconductor Devices, MMICS, Decoupling Control, Robust Control, Periodic Feedback Control, Power Quality, Custom Power Devices, Renewable Energy Sources and Application of Soft Computing Techniques to Power Systems, Intelligent Protection to Transmission Systems Including Facts, Micro and Smart grids, Distributed Generation and Dynamic Security Assessment in Large Power Network, Structural Health and Integrity analysis and Monitoring (SHIM).

School of Humanities, Social Science and Management: The active research areas are: Environmental Economics, Natural Resources Economics, Macroeconomics, Development, Economics & Rural Development, Indian Writing in English, Post-Colonial Literature, Travel Writing, Business Communication, American Literature, Canadian Literature, ELT, Cross Cultural Communication, Autobiography, Consumer Behaviour, Cyber Psychology, Clinical Psychology, Cognitive Psychology, Cognitive Neuroscience, Psycholinguistics, Psychology of Personality, Marketing.

School of Infrastructure: The present thrust areas of research are: Concrete Technology, Earthquake Engineering, Traffic Flow Modeling, Travel Demand Modeling, Travel Behaviour Analysis, Transportation System Planning and Policy Address, Energy Geotechnology, Soil-Structure Interaction, Fluvial Hydraulics, Waste Water Engineering, Water Resources Engineering, and Study of Unsaturated soils behavior.

School of Mechanical Sciences: The School has undertaken R&D activities in the following areas: Computer-Aided Design and Manufacturing, Advanced Manufacturing, Robotics and Controls, IC Engines, Multi-Phase flow, Composite Materials, Sandwich structures, Fracture Mechanics, Material Science, Green Supply Chain Management, Computational Fluid Dynamics, Conjugate Heat Transfer, Acoustic and High Performance Computing.

School of Minerals, Metallurgical and Materials Engineering: The School is actively pursuing research in the following areas: Bio-medical materials, Nano materials, Metal Matrix Composites, Alloy development, Modelling and simulation of mineral processing unit operations, Development of technologies for metal/mineral recovery from complex ores, Semi-solid processing, High cycle fatigue and fracture in metals, Friction stir welding/processing, Modeling & simulation of Materials/ Metallic glasses, High purity alumina for optical applications, Process modelling, Structural & Magnetic frustration of materials, Synchrotron and Neutron diffraction, 3-D Atom probe (LEAP), Green Extraction and Recycling of Metals, Inert Anodes for Metal Production, Fuels Cells, Batteries, Rare earth extraction and processing.

Publications & Patents

Within 5 years of existence in the city of Bhubaneswar, the faculty members have contributed to creating new knowledge by publishing 310 original research papers in reputed national and international journals and 20 books/book-chapters. Besides, 156 papers were presented in various national and international conferences in India and abroad and 9 Indian patents have been filed. Our students have also made technical presentations in national and international conferences.

Endowment

Shri Mohandas Pai, Chairperson, Manipal Global Education Services Private Limited has created two Endowments: Dr. K. Kasturirangan Award for best outgoing student and Dr. P. Rama Rao Award for best outgoing lady student.

National and International Collaborations

Since inception, the Institute has started collaborative activities with many universities abroad. The institute has already signed MOUs for faculty and student exchange programmes with the University of Massachusetts at Dartmouth, the State University of New York at Buffalo, the

University of North Dakota, the University of Warwick, the University of Southampton and the University of Edinburgh.

I take this opportunity to announce that in the city of Bhubaneswar, we have signed the first MoU with CSIR-IMMT which is allowing both the Institutes to build close academic and research partnership in a seamless manner.

The Institute is proud to have the following luminaries as the Distinguished Visiting Professors of IIT Bhubaneswar: Professor Lord S. Kumar Bhattacharyya of the Warwick Manufacturing Group at the University of Warwick, Dr. B. B. Rath, Associate Director of Research, Naval Research Laboratory, Washington DC and Professor Asit K. Biswas, President of the Third World Centre for Water Management and the Winner of Stockholm Water Prize (2006).

The following academicians and professionals of international repute are helping the Institute in their capacity as the Honorary Institute Professor of IIT Bhubaneswar: Professor Avijit Gangopadhyay of the University of Massachusetts at Dartmouth, Professor Lalu Mansinha of the University of Western Ontario, Professor K. L. Chopra, Professor Amitabha Ghosh, Professor O. N. Mohanty, Dr. T. C. Rao and Justice Markandey Katju.

Summer Internship & Placement

Our students have received support from various Universities and Industries in India and abroad for summer internships. Few among these are the University of Massachusetts at Dartmouth (USA), Iowa State University (USA), University of Warwick (UK), Finisar (Malaysia), KIMS (South Korea), Wonkwang (South Korea), Harbin Engineering College (China), MINGCHI (Taiwan), VU University (Holland), Fraunhofer (Germany), Tsukuba University (Japan), International Atomic Energy Agency (Austria), Philips (NXP), University of Malaysia, NUS Singapore, Trinity College (Ireland), University of Alberta (Canada), HITACHI Research Laboratory (Japan), Hokkaido University (Japan), Rajamangala (Thailand), ECP (France), Institute of Plasma Physics (Belgium), TCS R&D, Tata Steel (Jamshedpur), Tata Motors (Pune), DRDL (Hyderabad), DRDO (Bangalore), ALCON (GOA), BARC (Mumbai), Hindustan Colas etc.

Workshops & Conferences

A number of conferences and workshops have been organized by the Institute to foster scholarly exchange of ideas and research collaboration. The School of Earth, Ocean and Climate Sciences conducted the Indo-US Advanced Workshop and Colloquium on Modelling and Data Assimilation for Tropical Cyclone Predictions during 9-14 July 2012 in collaboration with the Centre for Atmospheric Sciences, IIT Delhi. The Fifth International Conference on Solidification Science and Processing (ICSSP5) was jointly organized by School of Minerals, Metallurgical and Materials Engineering and School of Mechanical Sciences from 19-22 November 2012. The School of Earth, Ocean and Climate Sciences organized a workshop on Evolution of Water within the Ganga River Basin, Natural vs Anthropogenic Contributions: Implications for River Basin Management

and Climate Change during 17-19 December 2012 in collaboration with University of Alberta. The School of Infrastructure organized the 2nd Workshop on Indian Water Management in 21st century (IWM) and Symposium on Sustainable Infrastructure Development (SID) during 7-9 February 2013 and a training programme on Design, Construction and Maintenance of Rural Roads under Prime Minister's Gram Sarak Yojana (PMGSY) during 11-13 January 2013. A workshop on "Ethics and Integrity" was organized on 16th April 2013 by the School of HSS & M.

Awards & Honours

Our students and faculty members have brought numerous laurels to the Institute in terms of distinguished fellowship, associateship, named lectureship, coveted medals and awards. This is a testimony to the vibrant academic spirit of the student and faculty members of the Institute and their commitment to pursue excellence. A few of these distinctions are noted below:

Prof. M. Chakraborty, Director has been awarded ET Now National Education Leadership Award in recognition of leadership & development of IIT Bhubaneswar and creation of a strong academic and industry interface for the Institute. Prof. U. C. Mohanty, Visiting Faculty in the School of Earth, Ocean and Climate Sciences has been honoured with the "National Award in Atmospheric Sciences and Technology" by the Ministry of Earth Sciences, Government of India in recognition of his outstanding contributions in the field. He has also been appointed as the President of Odisha Bigyan Academy by the Government of Odisha. Prof. S. C. Dutta has been elected as a Fellow by the West Bengal Academy of Science and Technology. Dr. P. K. Sahu has been elected as a Senior Member of IEEE. The paper by Dr. S. R. Samantaray has been awarded the IEEE PES PSDP Technical Committee Prize. Dr. S. Chatterjee received DAAD Fellowship-2012 under the DAAD-IIT faculty exchange program. Dr. Dukhabandhu Sahoo received the best paper award at "CPR South-7 Conference" in the ICT and Growth Segment in Mauritius. Dr. K. K. Sahu's research work featured in International Innovation, October 2012. Dr. S. Pati has received the Young Professional Leader Award from the Minerals, Metals and Materials Society (TMS), San Antonio, USA. Shri Sandip Nandi, Research Scholar, School of Basic Sciences has received the Dr. D. S. Bhakuni Award at 49th Annual Convention of Chemists of Indian Chemical Society in Bhopal during December 2012. Ms. Mobina Fatima, an undergraduate student in the School of Infrastructure has been awarded the prestigious BOSE fellowship to work as summer intern at University of Wisconsin, USA.

Events at the Institute

Celebrations

On the Engineer's day commemorating the birthday of Sir Mokshagundam Vishveshwariah, a quiz session on Engineering Marvels of India was organized on 15th September 2012.

IIT Bhubaneswar participated in the PAN IIT Global conference, at Science City, Kolkata during 7 – 9 December 2012. Prof. M. Chakraborty and Prof. S. C. Dutta led a group of student and staff at the event.

The 5th Foundation Day of the Institute was celebrated on 12th February 2013. Shri R. Gopal Krishnan, Executive Director, Tata Sons Limited graced the occasion and delivered the 2nd Foundation Day Lecture.

The 3rd National Science Day Lecture was delivered by Prof. U. R. Rao on 28th February 2013. The Research Scholar Day was also organized on 28th February 2013.

Distinguished Visitors

A number of distinguished personalities visited IIT Bhubaneswar in the past year and addressed our students and faculty members. Notable among them are: Dr. M. M. Pallam Raju, Hon'ble HRM, Govt. of India; Dr. Prasanna Kumar Patsani, Hon'ble Member of Parliament; Shri Baijayant Panda, Hon'ble Member of Parliament and Member Consultative Committee, Ministry of HRD; Padma Vibhushan Dr. Anil Kakodkar, eminent Nuclear Scientist and former Chairman of Atomic Energy Commission; Shri R. Gopal Krishnan, Executive Director, Tata Sons Limited; Professor U. R. Rao, Internationally Renowned Space Scientist, former Chairman ISRO and Chairman of the Governing Council of the Physical Research Laboratory, Ahmedabad; Smt. Shobhana Radhakrishna from Ministry of Rural Development, Government of India; Prof. K. L. Chopra, former Director, IIT Kharagpur and Prof. Ravi Ravindran from Ryerslon University, Canada.

Student Activities

Our students under the auspices of Students' Gymkhana are quite active and are organizing various activities. They have formed several societies like Robotics Society, Entrepreneurship Cell, Dramatic Society, Music Society to name a few. They have been organizing Socio-Cultural (Alma Fiesta) and Techno-Management (Wiessenaire) festivals successfully every year with support from many sponsors/industries drawing participations from various colleges/institutions across the country. The students are regularly taking part in inter-IIT sports meet and various other inter-IIT social and cultural events. Mr. Ramesh Chandra Meena and Mr. Muhammadali M.S brought accolades to the Institute by winning silver and bronze medals in the 48th Inter IIT sports meet held at IIT Roorkee during 17-24 December 2012.

Graduates of the Year

As I have remarked earlier, in this convocation we are going to confer degrees to 2 doctorates and to 103 B. Tech outgoing students. I am pleased to announce that the following students are recipients of Institute Medals:

- Shri Vemireddy Hari of the School of Mechanical Sciences is the recipient of the President Gold Medal for the best academic performance among the outgoing B. Tech. (Hons.) students. He also wins the Institute Silver Medal for the best academic performance among the outgoing students of the School of Mechanical Sciences.

- Shri Biswajit Sahoo is the recipient of the Institute Silver Medal for the best academic performance among the outgoing B. Tech. (Hons.) students of the School of Electrical Sciences.
- Shri Tanzeel Ahmed is the recipient of the Institute Silver Medal for the best academic performance among the outgoing B. Tech. (Hons.) students of the School of Infrastructure.

We are proud in conferring D. Sc. (*Honoris Causa*) of this Institute to the following three luminaries:

- Prof. U. R. Rao, former Chairman ISRO, former Secretary, Department of Space and Chairman of the Governing Council of the Physical Research Laboratory, Ahmedabad
- Prof. Asit Biswas, Professor and President, Third World Centre for Water Management, Mexico
- Prof. Lord S. Kumar Bhattacharyya, Professor and the Director of WMG (Warwick Manufacturing Group) at the University of Warwick, UK.

I congratulate all the graduating students, awardees and medal winners. Graduation is a milestone in the journey of life and each of you will now enter the big world of opportunities and endeavours. With your most formative years behind you, you will now begin a journey called life. I am certain that you will look back with pride and joy to your days in this Institute and the memories will continue to inspire you in your pursuit of excellence and service to the motherland. You will always remain an intrinsic part of this Institute. I also welcome each one of you as the would-be alumnus of the Institute and you will be our brand-ambassador of good will, peace, courage and knowledge.

Jai Hind

Professor M. Chakraborty

September 7, 2013