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Ishān Vikās Programme Started

The Government of India is keen on developing the education scenario of the North-Eastern part of the country. In one such move to that direction, a special programme was envisaged where students of the North-Eastern states – especially schoolchildren – would be exposed to the best of the engineering institutions in different parts of the country. IIT Guwahati was given the responsibility to coordinate the efforts in that direction and to submit a report by the middle of August 2014.



Participants of Ishān Vikās pilot phase along with the coordinators

The general aims of the project are to (a) Introduce school children from the North-Eastern states to the best institutions of higher education in India, (b) Motivate them to pursue science, technology, engineering and mathematics, (c) Encourage internship for the engineering college students of North-Eastern states in various institutes of national importance, (d) Mentoring girl students to compete for admission at premier institutes, (e) Understand why students can or can not perform from the three perspectives of curriculum design, curriculum transaction and curriculum assessment, (f) Feedback for the understanding for curriculum reforms and training programmes for the teachers.

North Eastern States of India are epitome of memories of the evolving

history of the great Indian subcontinent. The pristine environs of the Himalayas have historically motivated mankind to pursuit of enlightenment and higher knowledge – leading to contributions to abstract science, philosophy and literature that have stood the test of time. Communities seeking the eternal truth or simply hiding from marauders; hardy travellers treading the hostile mountain routes to trade; sages and wisdom-seekers; monasteries and seats of religion had sprung up and left a trail of history. This magnificent gift of Mother Nature embraces some of the least explored, least understood and least developed regions of India. In a sense, then, this country – and in a larger sense, the world – owes it to the silent



Prof. Gautam Biswas, Director, IIT Guwahati, addressing the participating students of Ishān Vikās



Teaching science through fun projects

fountainhead of our civilization that the whole mountainous region and its peoples should partake of a full share in the burgeoning scientific, technological and economic growth of our nation.

Ishān Vikās, an initiative of the MHRD, therefore, was started as a comprehensive plan to bring selected schoolchildren from the North-Eastern states into close contact with the IITs and IISERs during their vacation periods. An internship programme for the engineering college students of North-Eastern states in various IITs and NITs has also come under the umbrella of this programme. One of the focal points of these visits is to open up the young minds and give them a broad overview of the future paths which they could traverse. They should get a wider perspective on how they can take a much more proactive role in shaping their own



future. Schoolchildren from the North-Eastern states will be naturally motivated to acquire higher skills if they get a chance to visit the campus of a premier institute, to walk inside the hostels, sit in the classes, talk to students and meet research scholars working in the laboratories.

Until now, about 200 schoolchildren and about 150 engineering students studying in various institutions in

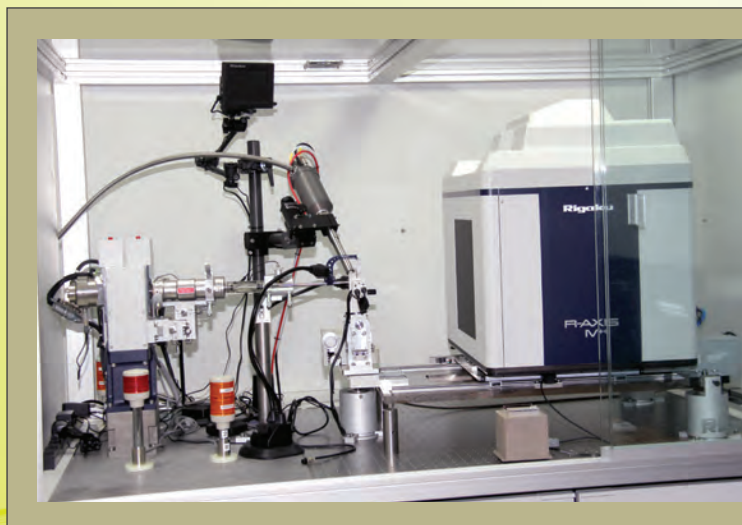


Prof. Gautam Biswas awarding a certificate to a participant

the North East have participated in the programme. In the pilot phase of the programme, IIT Bombay, IIT Kharagpur, IIT Kanpur, IIT Guwahati, IIT Delhi, IIT Madras and NIAS have already hosted participating students. From summer 2015, more IITs, IISERs are hosting participants from the NE region.



Prof. Chandan Mahanta, Dean, Students' Affairs, IIT Guwahati, while interacting with the participants



R&D Initiative

X-ray crystallography facility for macromolecules has been installed in the Central Instruments Facility of the Institute under the DBT sponsored project 'Studies on structure of enzymes and their interaction with nanostructured materials for bioelectronics devices and other applications' headed by Prof. Pranab Goswami, Department of Biosciences and Bioengineering. This cutting edge research facility is also considered as great asset for the researchers of this region working in the field of protein sciences.



HWWE 2014 - International Ergonomics Conference



The International Ergonomics Conference 'Humanising Work and Work Environment' (HWWE 2014) – the 12th annual conference of the Indian Society of Ergonomics (ISE) was held at IIT Guwahati during 3-5 December 2014. This year, the conference focussed on the theme 'User Centred Design and Occupational Wellbeing'. The Department of Design, IIT Guwahati hosted the event under the aegis of ISE in collaboration with the International Ergonomics Association (IEA).

The focus areas of HWWE 2014 were agriculture and animal husbandry; transport; industrial application; public utilities; psychology and cognitive science; HCI; occupational stress; health and safety; defense relevance; work physiology and sports science; rehabilitation; elderly and women concerns; design and usability and appropriate application of ergonomics in every sphere of our lives. About 400 participants presented their research work at three parallel symposiums – (1) Ergonomics awareness and training, (2) Design for elderly and differently abled, and (3) Design innovation and success.

Prof. Sukumar Nandi, Deputy Director, IIT Guwahati inaugurated the conference. Prof. Eric Min-yang Wang, President, IEA and Prof. G. G. Ray, President, ISE graced the inaugural ceremony along with Prof. Debkumar Chakrabarti, IIT Guwahati, Dr. Manas Kumar Mandal, Distinguished Scientist and Director General–Life Sciences, DRDO, Ministry of Defense and Padmashree Prof. Y. S. Rajan, Honorary Distinguished Professor at ISRO, Govt. of India.



Four executive committee members of IEA namely, Prof. Eric Min-yang Wang, President; Ms. Margo Fraser, Vice-President and Secretary General; Dr. Yushi Fujita, Vice-President and Treasurer; Prof. Jose Orlando Gomes, Professional Standard and Education Committee Chair attended technical sessions and participated in various panel meetings.

The proceedings of the conference entitled 'User Centered Design and Occupational wellbeing' (comprising 160 articles published by McGraw Hill Education Pvt. Ltd.) were released and distributed among participants on the first day of the conference. Moreover, a separate booklet containing 97 abstracts were published for those, who could not communicate their full paper in time.

In the valedictory session Margo Fraser, Vice-President, IEA appreciated the organisers for the successful management of the conference and expressed their gratitude for the hospitality and admiration on behalf of IEA.

Department of Design, IIT Guwahati organised this conference under Chairmanship of Prof. Debkumar Chakrabarti for the second time after its grand success in 2005. Along with him faculty members, research scholars and students of Department of Design, IIT Guwahati formed the organising committee with Dr. Sougata Karmakar as the Organising Secretary.



DAE-BRNS High Energy Physics Symposium

The XXI edition of the DAE-BRNS High Energy Physics Symposium was organised at IIT Guwahati during 8-12 December 2014. The symposium provided an excellent platform for showcasing the latest developments and trends in the fields of particle physics, astro-particle physics and cosmology with the active participation of around 250 physicists and researchers from all over India and abroad. Recent developments of new detector technology and accelerators were also discussed in the five-day-long symposium.



As part of the public outreach programme of the symposium, three public lectures were also held at Dr. Bhupen Hazarika Auditorium, IIT Guwahati on 8, 9 and 11 December 2014.

On 8 December, Prof. Amitava Raychaudhuri, Bhatnagar awardee and the Sir Tarak Nath Palit Professor of Physics at the University of Calcutta delivered the first public lecture. Prof. Raychaudhuri spoke on the progress that the humankind has made so far in understanding the Nature at the most fundamental level, the recent discovery of the Higgs particle at LHC, CERN and the future challenges that lie ahead.

On 9 December, Dr. Jim Strait, an experimental particle physicist at Fermi National Accelerator Laboratory (Fermi Lab), Chicago, USA and the current Project Director for the Long Baseline Neutrino Experiment (LBNE); an ambitious project aimed at understanding elusive particles called neutrinos delivered the second public lecture. Dr. Strait, who also led the US project to design and build advanced magnets and other accelerator components for CERN's Large Hadron Collider spoke on the design and construction of various accelerators and detectors that physicists have build so far to understand our Universe.

Finally, Prof. Asoke Sen, the Padma Bhushan awardee in 2013 and one of the outstanding Physicists India has ever produced, delivered the last public lecture on 11 December 2014. Prof. Sen, also the winner of the Dirac Medal by the Abdus Salam International Centre for Theoretical Physics (ICTP) in 2014 spoke at length on the current status of the String Theory.

In addition, Prof. Rahul Basu Memorial thesis award in 2014 was presented to two most outstanding PhD theses from India, across all areas of High Energy Physics (theoretical and experimental). The award, coordinated through the Indian Physics Association, comprises of a cash prize and a citation.

Dr. Bipul Bhuyan, Associate Professor, Physics was the convener of the symposium. While speaking to IITG Monitor, Dr. Bhuyan said, "The DAE-BRNS High Energy Physics Symposium is one of the largest gatherings of particle physicists in the country. During the symposium, we also had scientific delegations from Russia, USA and Japan to further strengthen scientific collaboration with India in the fields of particle physics and associated technologies such as particle detector and accelerator development."



North East Students Geo-congress on Advances in Geotechnical Engineering



The North East Students Geo-congress on Advances in Geotechnical Engineering – 2014 was organised at IIT Guwahati on 18 October 2014 by the department of Civil Engineering, in association with Indian Geotechnical Society-Guwahati chapter (NE) and Assam Engineering College. The main purpose of the seminar was to provide a common platform to students of North East India, so that they could express and exchange ideas on academic and research activities. Thirty papers were presented during the seminar with more than 120 participation from various institutes of North East India. Mr. David Allen Douglass, Resident Project Manager, Louis Berger Group, Inc., USA, delivered the keynote lecture on 'Design criteria of landfill liner'. Dr. Anil Kumar Mishra, Assistant Professor, Department of Civil Engineering, was the organising secretary of the seminar.

Workshop/Invited Talks Organised

A lecture cum demo workshop on Classical Performing Arts was organised at the department of Design on 8 October 2014 in order to impart aesthetic appraisals (in various forms of expressions) by Ms. Bhaswati Sarma (vocalist) and Mr. Devanand Pathak (instrumentalist).



Padmashree V. Prakash, former Director, CFTRI, delivered a lecture on 'Innovating the Innovation for Value addition to Agri-resources from Farm to Folk in the Food Chain through Strategic Entrepreneurship' at the Biotech Hub Symposium held on 2 December 2014 at IIT Guwahati.

A talk on 'Super-resolution over a restricted field of view' by Prof. Lakshmi Narayan Hazra, Emeritus Professor and Former Head, Department of Applied Optics and Photonics, University of Calcutta was given at Department of Physics on 25 November 2014.

New Research Projects

Civil Engineering

Title: Evaluation of a Strengthening Scheme for Unreinforced Masonry Buildings using Steel Bands; Sponsor: DST; Duration: 3 years; Principal Investigator: Dr. Hemant B. Kaushik

Humanities and Social Sciences

Title: Handloom as a sustainable socio-technological system: a study of textile industry in north east India; Sponsor: Indian Council of Social Science Research; Principal Investigator: Dr. Sambit Mallick

Patent

Inventor: Pranab Goswami, Ankana Kakoti, Mohd. Farhan Siddiqui, **Title:** Leak proof paper based analytical microfluidic device and process for its preparation (Application No. 1126/KOL/2014)

National Power Systems Conference (NPSC-2014)

The 18th National Power Systems Conference (NPSC-2014) was organised at IIT Guwahati during 18-20 December 2014. National Power Systems Conference has been India's premier conference in the area of power systems since 1981. The conference provides a platform for researchers and engineers from academia, industry and utility to exchange their knowledge, expertise and experience and to deliberate on the challenges of current and future electric power systems.



The main theme of NPSC-2014 was 'Towards greener, smarter and reliable electricity systems' and was inaugurated by Smt. Neerja Mathur and the guest of honor Dr. R. P. Singh, Chairman, Board of Governors, IIT Guwahati.

Prof. G. S. Raju, Prof. D. P. Kothari and Shri S. K. Soonee, were the recipients of the prestigious Malaviya Excellence Award in Power Systems-NPSC 2014, Academic Excellence Award-NPSC 2014 and Industry Excellence Award-NPSC 2014, respectively and shared their valuable experiences with the participants. The conference featured various plenary talks and tutorials from distinguished persons in the area of power systems. There were about 200 delegates from



academia, industries, utilities and R&D organisations who have attended the conference and shared their knowledge by panel discussions and paper presentations. Major topics like microgrid: the current status and future, reliability issues



in power system operation, recent advancements in power system protection, health assessment of power transformers, etc. were discussed in the conference. Dr. Praveen Tripathy, Assistant Professor, Electronics and Electrical Engineering, was the convener of the conference.



Awards and Honours

Biotechnology

Prof. Vikash Kumar Dubey, Professor, Biosciences and Bioengineering, was elected as a Fellow of Biotech Research Society of India. The award was announced on 6 November 2014 during International Conference on Emerging Trends in Biotechnology (ICETB-2014) at Jawaharlal Nehru University, New Delhi.



Prof. Vikash Kumar Dubey receiving the award

Chemistry

Prof. T. Punniyamurthy, Professor, Chemistry has been selected as the Fellow of the Royal Society of Chemistry (FRSC).

Civil Engineering

Prof. Arup Kumar Sarma, Professor, Civil Engineering, has been serving as Visiting Professor in Water Engineering and Management programme at Asian Institute of Technology, Bangkok, Thailand.

Dr. Arindam Dey, Assistant Professor, Civil Engineering, received the IGS Z-Tech Biennial Award for the Best Paper on 'Geosynthetics and Allied Construction Projects' for the period 2013-2015 at the Indian Geotechnical Conference,



Dr. Arindam Dey receiving the award

Annual Convention of the Indian Geotechnical Society.

Design

Ms. Charu Monga, Assistant Professor, Design, was awarded with Film Heritage Foundation fellowship by Film Division in association with Martin Scorsese's Film Foundation and Cineteca di Bologna, L'Immagine Ritrovata, 2014.

Mechanical Engineering

Dr. Deepak Sharma, Assistant Professor, Mechanical Engineering, received NVIDIA innovation award for his contribution towards using graphics processing unit in structure optimisation problems.

Physics

Prof. Pratima Agarwal, Professor, Physics, was invited by Gifu University, Japan, to visit the Department of Electrical and Electronics, to discuss joint research projects and promotion of students exchange programme between IIT Guwahati and Gifu University during 30 November to 6 December 2014.

Students Achievements

Mr. Himujjal Jibon Sarma, MDes student, Design, won the prestigious Business Plan competition of Young Indian's Guwahati Chapter – Road to Ideas with his proposition on innovations in furniture design and manufacturing.



Himujjal Jibon Sarma

Ms. Shweta Gupta, MDes student, Design, won the first prize in the competition for designing the logo for the Unnat Bharat Abhiyan, an initiative of Govt. of India. The logo is already in use.

Mr. Seim Timung, research student, Chemical Engineering, received Best Paper award at the International Conference on MEMS and Sensors 2014 held at IIT Madras.

Mr. Ashutosh Gupta, research student, Biosciences and Bioengineering, received the best paper award at the 29th Carbohydrate Conference, Centre of Innovative and Applied Bioprocessing, Punjab, in December 2014. Mr. Ashutosh

Gupta is working under the tutelage of Prof. Arun Goyal.

The paper entitled 'Mechanistic and kinetic investigations in ultrasound assisted acid catalysed biodiesel synthesis' published in Chemical Engineering Journal (Elsevier) authored by Miss Priyanka Parkar (MTech 2011 batch, Chemical Engineering) and Dr. Hanif Choudhury (PhD 2014, Centre for Energy) has received the Top Cited Paper award for the years 2011-12.

Mr. S. T. P. Bharadwaja (MTech 2014 batch) of Department of Chemical Engineering has received the 'Ambuja Young Researcher Award' given by Indian Institute of Chemical Engineers. The prize was awarded in Chemcon-2014 conference held in Chandigarh in December 2014.

Mr. Satish Cingadi, MTech student of Biosciences and Bioengineering, was awarded Best Poster Presentation in International Conference on Emerging Trends in Biotechnology (ICETB-2014) organised by the Biotech Research Society India at School of Environmental Sciences, JNU, New Delhi during 6-9 November 2014. Mr. Satish secured this award for his thesis work entitled 'Statistical optimisation of cassava fibrous waste hydrolysis by response surface methodology and use of hydrolysate based media for the production of optically pure D-lactic acid'.

Mr. Shyam Trivedi, research student, Centre for Nanotechnology, received the Best Poster Award in International Conference on MEMS and Sensors (ICMEMSS)

held during 18-20 December 2014 at IIT Madras.

Mr. Anirban Chowdhury, research student, Design, was awarded Young Scientist Award (Prof. Sacchidananda Banerjee Memorial Research Prize, 2014) by the Physiological Society of India during PHYSICON conference, 19-21 December 2014, for a published research work entitled 'Usability is more valuable predictor than product personality for product choice in human-product physical interaction' authored along with S. Karmakar, S. M. Reddy, S. Ghosh and D. Chakrabarti, in the International Journal of Industrial Ergonomics (Elsevier), 44 (5), September 2014.

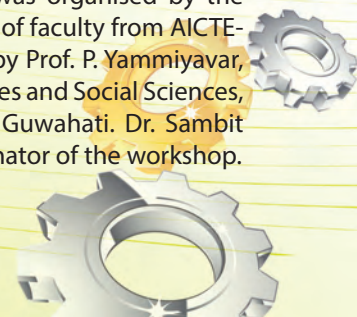
Mr. Y. Disco Singh, a research student of Centre for Energy and Neitho-o, an MTech student of Department of Bioscience and Bioengineering won Best Poster award for 'Indigenous plants used by local populace in North-East India as household remedies' at International Conference on Disease Biology and Therapeutics (ICDBT 2014) organised by IASST, Guwahati during 3-5 December 2014.

Mrs. Shahla Kianamiry, Iranian visiting PhD Student from Department of Nanobiotechnology, Tarbiat Modares University (TMU), Iran, working under the supervision of Dr. Utpal Bora, Department of Bioscience and Bioengineering won Best Poster award for 'Optimising of activation curcumin for conjugation with nanocarriers as an anticancer nanomedicine' at International Conference on Disease Biology and Therapeutics (ICDBT 2014) organised by IASST, Guwahati during 3-5 December 2014.

QIP CD Cell Workshop on Intellectual Property Rights and Innovation



A two-day Curriculum Development Cell Workshop on 'Intellectual Property Rights and Innovation' was organised by the Department of Humanities and Social Sciences, IIT Guwahati, during 11-12 December 2014. 32 members of faculty from AICTE-approved colleges in the country participated in the workshop. The inaugural ceremony was attended by Prof. P. Yammiyavar, Head, Centre for Educational Technology, IIT Guwahati; Dr. Arupjyoti Saikia, Head, Department of Humanities and Social Sciences, IIT Guwahati; and Dr. Utpal Bora, Convener, Intellectual Property Rights Management Committee, IIT Guwahati. Dr. Sambit Mallick, Associate Professor, Department of Humanities and Social Sciences, IIT Guwahati, was the coordinator of the workshop.



Publications (Research Journal/Book/Book Chapter)

Biosciences and Bioengineering

C. S. Kumar and S. Kumar, 'Species based synonymous codon usage in fusion protein gene of Newcastle disease virus', *PLoS ONE*, 9 (12), e114754, 2014

N. N. Barman, D. P. Bora, E. Khatoon, S. Mandal, A. Rakshit, G. Rajbongshi, K. Depner, A. Chakraborty and S. Kumar, 'Classical Swine fever in wild hog: report of its prevalence in Northeast India', *Transboundary and Emerging Diseases*, 2014, DOI: 10.1111/tbed.12298

Seraj Ahmad and Pranab Goswami, 'Application of chitosan beads immobilized Rhodococcus sp. NCIM 2891 cholesterol oxidase for cholestenone production', *Process Biochemistry*, 49, 2149-2157, 2014

Madhuri Das, Lepakshi Barbora, Priyanki Das and Pranab Goswami, 'Biofuel cell for generating power from methanol substrate using alcohol oxidase bioanode and air-breathed laccase biocathode', *Biosensors and Bioelectronics*, 59, 184-191, 2014

Chemical Engineering

J. B. Bhasarkar, S. Chakma and V. S. Moholkar, 'Investigations in physical mechanism of the oxidative desulfurisation process assisted simultaneously by phase transfer agent and ultrasound', *Ultrasonics Sonochemistry*, 2014, DOI:10.1016/j.ultsonch.2014.11.008

Chemistry

Buddhadeb Mondal and Subhas Chandra Pan, 'Primary amino acid catalysed asymmetric intramolecular Mannich Reaction for the synthesis of 2-Aryl-2,3-Dihydro-4-Quinolines', *Organic and Biomolecular Chemistry*, 12, 9789, 2014

Computer Science and Engineering

Pinaki Mitra, 'Characterising the Existence of P4 (39-41)', *Research & Reviews: Discrete Mathematical Structures*, 1 (3), 2014

Design

T. Patel, J. Sanjog, P. Kumar and S. Karmakar, 'Isometric muscular strength data of Indian agricultural workers for equipment design: Critical analysis', *Agricultural Engineering International: CIGR Journal*, 16 (2), 70-79, 2014

Charu Monga, 'De'Chakra: Method of Multidiscipline Design Education', *Design for All Institutes of India*, 2014

Humanities and Social Sciences

S. Mallick, 'The orbit of commodified technoscience: innovations in agricultural technology in India', *International Journal of Innovation and Sustainable Development*, 8 (4),

346-362, 2014

S. Borbora, 'Poverty Reduction Strategies and Development, in Poverty, Livelihood Rights and the Small Tea Growers in the Northeast', *Poverty Reduction Strategies for Small Tea Growers*, 17-22, 2014

S. Borbora, 'Disparity in Financial Penetration: A State Level Analysis in India', *International Journal of Business, Management and Social Sciences*, 4 (1), 2014

Archana Barua, 'The Gandhian way to environment and its critics', *International Journal of Multidisciplinary Educational Research (IJMER)*, 2, 67-73, 2014

Minakshi Das and Archana Barua, 'Phenomenology, Psychotherapy and the Quest for Inter-subjectivity', *Indo-Pacific Journal of Phenomenology*, 14 (2), 1-11, 2014

Tejasha Kalita and Archana Barua, 'The Issue of Abortion and Mother- Fetus Relations: A study from Buddhist perspectives', *Eubios Journal of Asian and International Bioethics*, 24 (5), 28-37, 2014

Mechanical Engineering

S. Mahto and U. S. Dixit, 'Shape optimisation of revolute-jointed rigid-flexible manipulator', *Journal of Institution of Engineers, Series C*, 95 (4), 335-346, 2014

N. J. Baishya, D. Sharma and U. S. Dixit, 'Optimisation of pressure vessel under thermo-elastic condition', *Journal of Institution of Engineers (India), Series C*, 95 (4), 389-400, 2014

B. J. Bora and U. K. Saha, 'Effect of compression ratio on performance, combustion and emission characteristics of a dual fuel diesel engine run on raw biogas', *Energy Conversion and Management*, 87, 1000-1009, 2014

S. Roy and U. K. Saha, 'An adapted blockage factor correlation approach in wind tunnel experiments of a Savonius-style wind turbine', *Energy Conversion and Management*, 86, 418-427, 2014

B. K. Debnath, U. K. Saha and N. Sahoo, 'Theoretical route towards the estimation of second law potential of an emulsified palm biodiesel run diesel engine', *ASCE Journal of Energy Engineering*, A4014007-1 – A4014007-10, 2014

B. K. Debnath, B. J. Bora, N. Sahoo and U. K. Saha, 'Influence of emulsified palm biodiesel as a pilot fuel in a biogas run dual fuel engine', *ASCE Journal of Energy Engineering*, A4014005-1 – A4014005-9, 2014

Physics

Mukesh Singh, Himanshu S. Jha and Pratima Agarwal,

'Growth of large sp² domain size single and multi-layer graphene films at low substrate temperature using hot filament chemical vapor deposition', *Materials Letters*, 126, 249-252, 2014

Centre for Energy

S. Singh, S. Sarma, M. Agrawal, A. Goyal, V. S. Moholkar, 'Ultrasound enhanced ethanol production from *Parthenium hysterophorus*: A mechanistic investigation', *Bioresource Technology*, 2014, <http://dx.doi.org/10.1016/j.biortech.2014.12.038>

H. S. Jha, A. Yadav, M. Singh, S. Kumar and P. Agarwal, 'Growth of wide band gap nanocrystalline Silicon Carbide films by HWCVD: influence of filament temperature on structural and opto-electronic properties', *Journal of Electronic Materials*, 2014, DOI: 10.1007/s11664-014-3580-9

Book

Mechanical Engineering

P. M. Dixit and U. S. Dixit, *Plasticity: Fundamentals and Applications*, CRC Press, Boca Raton, 602 Pages, October 2014, ISBN 9781466506183 - CAT# K14613

Guest editor

Mechanical Engineering

U. S. Dixit and A. De, Special issue on 'Design Analysis and Optimisation', *Journal of Institution of Engineers (India), Series C*, 95 (4), 293-294, 2014

Alumni Reunions

IIT Guwahati Alumni Association conducted an alumni meet on 1 November 2014 at Bangalore. More than 150 alumni participated on the reunion meet. Prof Gautam Biswas, Director IIT Guwahati, Prof D. N. Buragohain, founder Director, IIT Guwahati, Prof Gautam Barua, former Director, IIT Guwahati, and Prof. Subhash C. Mishra, Dean, Alumni Affairs and External Relations graced the event. An alumni newsletter was published on the occasion.

Another alumni meet was organised in Pune on 7 December 2014. Prof. Anil D. Sahasrabudhe, former Deputy Director of IIT Guwahati and currently the Director of College of Engineering Pune was the chief guest. Prof. Subhash C. Mishra, Dean, Alumni Affair and External Relation, IIT Guwahati was also present and interacted with the alumni.

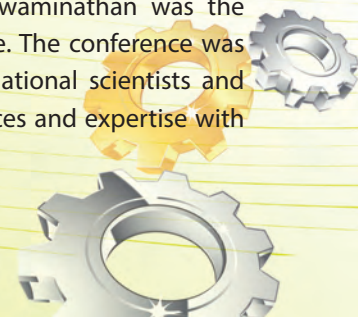
Conference on Recent Advances in Cancer Biology and Therapeutics



The Department of Biosciences and Bioengineering, IIT Guwahati, organised a national conference on "Recent Advances in Cancer Biology and Therapeutics" on 5

December, 2014. Cancer is one of the most dreadful diseases that takes over 8.4 million lives annually. North East India reports the highest cancer incidence in India. Unfortunately, research has not gained much pace in this region in cancer biology. The main aim of this conference was to motivate young scientists to pursue research in this field and explore the wide biodiversity of this region to develop therapeutics against this malevolent disease.

Over 300 delegates from all over India participated in the conference that was chaired by Prof. V. V. Dasu, Head, Department of Biosciences and Bioengineering. Dr. Ajaikumar B. Kunnumakkara, Associate Professor was the Organising Secretary and Prof. R. Swaminathan was the Scientific Chairman of the conference. The conference was graced by many international and national scientists and clinicians, who shared their experiences and expertise with the young minds.



National Conference on Frontiers in Chemical Sciences, FICS-2014

The Department of Chemistry, Indian Institute of Technology Guwahati organised a national Conference on Frontiers in Chemical Sciences (FICS - 2014) during 4-6 December 2014. Started in 2010, this biennial conference intends to bring together the eminent scientists, technologists and young researchers from across the country to provide a common platform for discussing their achievements and newer directions of research in the field of Chemical Science. This year

being the International Year of Crystallography, along with all other branches of chemistry, two complete sessions were dedicated to crystallography.

Dr. Sandip Paul, Associate Professor, Chemistry was the convener and Dr. Subhendu Shekhar Bag, Associate Professor and Dr. Lal Mohan Kundu, Assistant Professor, Chemistry were the co-conveners of the conference.



Brainstorming Workshop on Development of Processes and Devices for Bio-Medical applications

IIT Guwahati organised a one day brainstorming workshop on developing industry-academia collaborations to enhance entrepreneurship development, innovation and technology commercialisation in the North East on 8 October 2014. Through this workshop a consortium comprising of entrepreneurs, medical practitioners, academicians, engineers and scientists, and political leaders from India and abroad was formed to facilitate the development of talents, infrastructure and processes to make the North East region a premier location for transnational biomedical engineering and biotechnology (BEBT) research and development.

The key areas of discussion were to facilitate multidisciplinary

research for the areas which can have direct impact on rural India, to develop cost-effective medical technologies and healthcare solutions for low resource settings, to develop an effective process for developing technology initiatives focused on specific customer needs in India and the emerging markets, and to develop a framework for participation of scientists and engineers in multinational healthcare R&D projects.

Dr. Karuna Kalita, Dr. Amaresh Dalal, Dr. Dipankar Narayan Basu, Assistant Professors, Dr. S. Kanagaraj, Associate Professor, Mechanical Engineering were members of the organising committee.

Conference on Exploitation of Seribiodyersity for Novel Product Development

A two-day conference on Exploitation of Seribiodyersity for Novel Product Development was organised at IIT Guwahati during 29-30 November 2014. This conference intended to create a platform of interaction between the eminent scientists and young researchers working in the field of sericulture and provide an opportunity to discuss about

the recent developments, the challenges as well as the future prospects of seri-biotechnology. The conference was organised by Dr. Utpal Bora, Associate Professor, Department of Biosciences and Bioengineering and co-ordinator of Unit of Excellence on Seribiotechnology, Centre for the Environment.



Biotech Hub Symposium

One day Biotech Hub Symposium was conducted on 2 December 2014 by IITG Biotech Hub, Centre for the Environment at IIT Guwahati. More than two hundred participants from various colleges and institutes—Asian Institute of Management, Arya Vidyapeeth College, North Guwahati College, Pandu College, B. P. Chaliha College, GOIST, Institute of Advanced Study in Science and Technology, Cotton College, Pub Kamrup College, Valley College, National Research Centre on Yak, Pragjyotish College and others—attended the symposium. Eminent scientists viz. Prof. Bharat B. Aggarwal (M. D., Anderson Cancer Centre,



USA), Prof. Kapil Mehta (M. D., Anderson Cancer Centre, USA), Padmashree V. Prakash (Former Director, CFTRI), Dr. Pradip Nahar (IGIB, Delhi) spoke to the students and shared their research knowledge. The symposium was co-ordinated by Dr. Utpal Bora, Associate Professor, Department of Bioscience and Bioengineering.



Conference on North East in India's Look East: Issues and Opportunities

IIT Guwahati organised a Conference on North East in India's Look East: Issues and Opportunities during 28-30 October 2014. The conference tried to investigate the opportunities for North East India within the Look East Policy framework.

North-East India is the bridge between two sub-regions of Asia—South Asia and South-East Asia. Both the regions are



in the midst of tremendous change, spurred by economic growth and development. For various reasons, the Indian government has so far not been able to leverage various opportunities that this sub-region offers for the well-being and prosperity of the people residing in this region.

Today's challenge is to harness these opportunities and to ensure that economic exchanges and trade does not bypass this region but benefits the larger socio-economic interests of this region. It is encouraging to note in this context the role BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) and other regional initiatives are attempting to play in truly linking this region not only to other parts of India but beyond India. There has been growing realisation on the part of Indian policy makers



that development of physical connectivity with South-East Asia is a prerequisite to fully harness the opportunities provided by 'Look East Policy'. In order to make the 'Look East Policy' relevant for the region, India has laid greater emphasis on enhancing connectivity through all the possible modes of infrastructure development such as land routes, railways, air connectivity, waterways, energy infrastructure development both in field of hydroelectric and hydrocarbon and telecommunication linkages.

The conference discussed broad areas like trade and investment, transport and communication, technology, natural disaster management, counter-terrorism and transnational crimes, etc. Amongst other speakers, Prof Alka Acharya, Director, ICS, Delhi; Dr. V. S. Seshadri, Former Ambassador, Myanmar; Prof. Rakhahari Chatterjee, Director, ORF, Kolkata Chapter and senior journalist Mr. Rajeev Bhattacharyya delivered lectures in the conference.

Dr. Pahi Saikia, Assistant Professor, Department of Humanities and Social Sciences, IIT Guwahati and Dr. Imankalyan Lahiri, General Secretary, Jadavpur Association of International Relations (JAIR), were the conveners of the conference.



3rd National Knowledge Network (NKN) Annual Workshop

The 3rd National Knowledge Network (NKN) annual workshop was organised at IIT Guwahati during 15-17 December 2014. It was jointly organised by National Informatics Centre (NIC) and IIT Guwahati.



The focus area of the workshop was to discuss how NKN as the Next-Generation Network (NGN) could manage multiple types of traffic such as voice, data and multimedia. Policy makers, heads of important offices, scientists, and researchers

took part in the workshop. Dr. R. Chidambaram, Principal Scientific Advisor, Government of India and Chairman HLC (NKN) was present at the workshop as the Chief Patron. Others like Shri R. S. Sharma, Secretary, DeitY; Dr. Ajay



Kumar, DG, NIC; Prof. S. V. Raghavan, Scientific Secretary, GoI; Mr. Jitesh Khosla, Chief Secretary, Assam; Mr. Rajiv Bora, Principal Secretary, IT, Assam were also present during the workshop and shared their valuable ideas and impressions.



Leading experts from the academia and the industry also spoke at the workshop. Among them were Dr. A. K. Choubey, IASRI; Mr. Edward Moynihan, Internet2; Dr. Jagdish Arora, INFLIBNET; Mr. Subrata Chattopadhyay, C-DAC; Dr. Sukumar Nandi, IIT Guwahati; Mr. Alberto Masoni, National Institute of Nuclear Physics, Italy; Prof. Ratnajit Bhattacharjee, IIT Guwahati.

The workshop covered sessions on the leading practices in cyber security and networking, on-going experiments and experiences on NKN by few selected user institutes.



PhDs Completed During October–December 2014

New Joinings

Department/Centre	No. of Students
Biotechnology	1
Chemical Engineering	6
Chemistry	6
Civil Engineering	3
Computer Science and Engineering	4
Design	1
Electronics and Electrical Engineering	2
Humanities and Social Sciences	1
Mathematics	3
Mechanical Engineering	4
Physics	2
Centre for Energy	1
Total	34



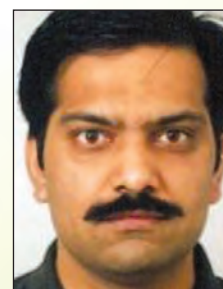
Budhaditya Hazra
Assistant Professor
Civil Engineering



Abhishek Shrivastava
Assistant Professor
Design



Pratul Chandra Kalita
Visiting Assistant Professor
Design



H. S. Shekhawat
Assistant Professor
Electronics and Electrical
Engineering

New Registrar Joined



Shri Uttam Chandra Das has joined as the Registrar of Indian Institute of Technology Guwahati. Shri Das joined IIT Guwahati in 1998 as Deputy Registrar. During this time he also successfully discharged his duties as the Registrar of Gauhati University during 2008-2013.

Shri Das took over charge from the outgoing Registrar, Dr. Brajendra Nath Ray Choudhury on 1 December 2014.



Uday Narayan Maiti
Assistant Professor
Physics



Bibhas Ranjan Majhi
Assistant Professor
Physics

Conference on Manufacturing, Technology, Design and Research

The 5th International and 26th All India Manufacturing, Technology, Design and Research (AIMTDR) conference was organised during 12–14 December 2014 at IIT Guwahati. The conference was attended by more than 400 delegates from the academia and industry. Prof. Amitabha Ghosh, former Director of IIT Kharagpur was the Chief Guest. Mr. P. K. Borthakur, former Director (Offshore) of ONGC was the president of National Advisory Committee of the conference.

A total of 22 invited lectures were presented in the conference. Some of the notable speakers from academia were Prof. Kornel Ehmann, Prof. Shiv G. Kapoor and Prof. Marc Madou from USA and Prof. H. Hocheng from Taiwan. Some of



Prof. Amitabha Ghosh lighting the inaugural lamp in the presence of Prof. Gautam Biswas, Prof. A. K. Chattopadhyay, Mr. P. K. Borthakur (2R) and Prof. A. K. Dass (2L), Head of the Department, Mechanical Engineering



Prof. Gautam Biswas (C), Director, IIT Guwahati; Prof. Amitabha Ghosh (R), former Director of IIT Kharagpur; Prof. A. K. Chattopadhyay (L), IIT Kharagpur on the dias

the invited speakers from industry/R&D organisations were Dr. V. K. Suri from BARC, Mr. Khongwir from IOCL Bongaigaon, Dr. Sumitesh Das from Tata Steel and Dr. Sanyal from CSIR. A total of 316 papers were presented in the conference.

On the last day of the conference, Prof. M. Rahman of National University of Singapore delivered Prof. Amitabha Bhattacharya Memorial lecture. AIMTDR conference conferred life time achievement awards to Prof. V. K. Jain of IIT Kanpur and Prof. V. K. Suri of BARC, Mumbai for contributing in manufacturing education and practice. In the valedictory session, Prof. U. S. Dixit informed that leading publishers would publish selected papers of the conference in the form of book chapters or journal papers.

Prof. Uday S. Dixit, Mechanical Engineering, was the organising secretary whereas Dr. R. Ganesh Narayanan, Associate Professor, and Dr. M. Ravi Sankar, Assistant Professor, were the joint organising secretaries of the conference.



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