

THE IITG MONITOR



Indian Institute of Technology Guwahati

Volume: III, Issue: IV, The Quarterly Newsletter, October–December 2012

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21st International Symposium on Processing and Fabrication of Advanced Materials (PFAM-21)

The 21st International Symposium on Processing and Fabrication of Advanced Materials (PFAM-21) was organised by the Department of Mechanical Engineering during 10-13 December 2012. The primary purpose of the symposium was to bring together developments on all aspects related to the processing and fabrication of advanced materials and covered the recent developing areas of new manufacturing techniques of materials. The symposium provided an attractive forum for presenting the latest advances on aspects related and relevant to materials processing and fabrication advances by researchers and engineers from industry, research laboratories and academia.

Renowned scientists and academicians in the field addressed the symposium. Some of them are Prof. Massaki Nakai, Tohoku University, Japan; Prof. Satish V. Kailas, IISc, Bangalore; Prof. Joong Hee Lee, Chonbuk National University, Republic of Korea; Dr. B. C. Pai, NIIST, Thiruvananthapuram; Prof. Masaki



Prof. T.S. Srivatsan, University of Akron, USA lighting the inaugural lamp

Nakai, Tohoku University, Japan; Dr. G. P. Kothiyal, BARC; Dr. Mayank Dwivedi, DRDO, etc.

The symposium was co-organised by Prof. P. S. Robi, Department of Mechanical Engineering, IIT Guwahati, Prof. Naresh Bhatnagar, Department of Mechanical Engineering, IIT Delhi, Prof. T.S. Srivatsan, Department of Mechanical Engineering, The University of Akron, USA.

Theoretical Chemistry Symposium

The thirteenth Theoretical Chemistry Symposium (TCS) 2012 was organised at IIT Guwahati during 19–22 December 2012 by the Department of Chemistry. The biennial symposium focussed on various fields of theoretical and computational chemistry.

The field of theoretical and computational chemistry is a rapidly growing field and the boundaries of the field are constantly being pushed due to the large quantum of work in this area. TCS is the largest meeting of theoretical chemistry in India and is characterised by many insightful talks, posters and intense discussions.



Prof. Gautam Barua inaugurating the symposium

Several recognised theoretical chemists across India and abroad attended the meeting along with a large number of student participants. Some of the renowned speakers were Prof. B. M. Deb, IISER, Kolkata; Prof. G. N. Patey, University of British Columbia, Canada; Prof. Mike Gilson, University of California, San Diego, USA; Dr. Motoyuki Shiga, University of Tokyo, Japan; Prof. Satrajit Adhikari, IACS Kolkata and Dr. Paul W. Ayers, McMaster University, Canada.

Prof. Arun Chattopadhyay, Chemistry, was in the Chair and Dr. Sandip Paul, Dr. Manabendra Sarma, Assistant Professors, Chemistry were the conveners of the symposium.

Frontiers of Engineering Symposium



The seventh National Frontiers of Engineering Symposium (7NatFoE), the annual flagship event of the Indian National Academy of Engineering (INAE), was hosted by IIT Guwahati, during 12-14 October 2012. The event had four themes relating to the country's progress in science and technology: Engineering in Daily Life, Engineering in National Development, Research in Engineering, and Innovations in Engineering. About forty engineers and academicians took part in the symposium to discuss issues and developments in the broad areas as mentioned above.

The symposium was inaugurated by Prof. Sukumar Nandi, Deputy Director, IIT Guwahati, and the chief guest was Prof. Srikumar Banerjee, currently DAE-Homi Bhabha Chair Professor at BARC, Mumbai. The symposium co-chairs were Dr. Hemant B. Kaushik, Assistant Professor, Civil Engineering, IIT Guwahati, and Dr. Dheepa Srinivasan, GE Bangalore.

International Conference on Information Systems Security

The International Conference on Information Systems Security 2012 (ICISS 2012) was organised by the Department of Computer Science and Engineering during 15-19 December 2012. The conference is held annually and provides a forum for disseminating latest research results in information and systems security. ICISS 2012, the 8th conference in this series, was held under the aegis of the newly formed Society for Research in Information Security and Privacy (SRISP). The



technical programme comprised six tutorials, six technical sessions, a panel discussion and a student forum poster presentation. The proceedings have been published as part of the Springer-Verlag series of Lecture Notes in Computer Science.

INDO-US Cytometry Workshop



The 13th INDO-US Cytometry workshop on 'Applications of Flow Cytometry in Nanotechnology and Plant Genomics' was jointly organised by the Department of Biotechnology, IIT Guwahati and Miller School of Medicine, Miami, USA during 8-10 October 2012.

Students and researchers from the North East region attended the workshop which comprised of lectures and lab sessions by experts on the topic. Dr. Latha Rangan, Associate Professor, Biotechnology, was the Convenor of the workshop.

Workshop on Mathematical Finance

A Workshop on Mathematical Finance (WMF 2012) was organised by the Department of Mathematics along with IISc Mathematics Initiative (IMI) during 29 October – 3 November 2012.

A series of lectures on the topic was delivered to an audience of about sixty post-graduate students, researchers, academic and industry participants. Some of resource persons for the workshop were Dr. Vijaysekhar Chellaboina, TCS Innovation



Labs, Hyderabad; Prof. Mrinal K. Ghosh, IISc Bangalore; Prof. Srikanth K. Iyer, IISc Bangalore; Prof. Rajeeva L. Karandikar, Chennai Mathematical Institute (CMI), Chennai; Prof. Bernt Øksendal, University of Oslo, Norway; Prof. Sitabhra Sinha, Institute for Mathematical Sciences (IMSc), Chennai.

The workshop was sponsored by Science and Engineering Research Board (SERB), National Board for Higher Mathematics (NBHM), Tata Consultancy Services (TCS) and Council of Scientific and Industrial Research (CSIR). Dr. N. Selvaraju and Dr. Siddhartha P. Chakrabarty, Department of Mathematics, were the conveners of the workshop.

Workshop on Technology Up-gradation

A workshop on 'Demand driven technology up-gradation needs of NGOs through S&T intervention for better performance, better efficiency, commercialisation and popularisation' was held at IIT Guwahati on 23 November 2012 with Prof. S. K. Kakoty, Mechanical Engineering, IIT Guwahati, Coordinator, Rural Technology Action Group - North East (RuTAG-NE) in the Chair. Besides representatives of 11 NGOs and experts from a number of technical institutions of North-East, including IIT Guwahati, several faculties and students of IIT Guwahati, Major S. Chatterjee, Scientific Adviser to the Principal Scientific Adviser to the Govt. of India participated in the workshop.

IITG OSA Student Chapter Workshop on Optics

The first IIT Guwahati OSA (The Optical Society) Student Chapter Workshop on Optics was organised by OSA student chapter during 15-17 November 2012. The aim of the workshop was to motivate and provide adequate exposure to young students and researchers from the North-East region in the areas of optical technologies.

This workshop offered a unique platform to the young participants to exhibit their talent/innovation through various activities and to excel with memorable learning experiences through the hang-out sessions with eminent global scholars. It featured lectures from internationally renowned scientist;

contributed/thematic paper presentations; scientific model exhibition to highlight optics in various science and technological applications; and close-room direct interactive sessions. In addition, a quiz competition was also organised.

Mr. Parvendra Kumar, research student, Physics, was the convener and Ms. Poulami Ghosh and Mr. Onkar N. Verma, research students, Physics, were the co-conveners.

PANIIT-2012

A team of faculty, staff and student delegates led by Prof. Gautam Barua, Director, represented IIT Guwahati in the PANIIT-2012 meet held at Science City Kolkata during 7-9 December 2012. IIT Guwahati put up displays of short video and slides highlighting the academic programmes, facilities and achievements of the Institute.

Prof. Barua also had a discussion with the visiting alumni of the Institute on various issues pertaining to future alumni related programmes.



The IIT Guwahati pavilion

International Symposium on Bioengineering



The International Symposium on Bioengineering 2012 (ISBE 2012) was organised by Biotech Hub, Centre for the Environment on 10 December 2012. International and national

experts from diverse areas of bioengineering including Prof. R. V. Lewis, Utah State University USA; Dr. A. N. Bezbaruah, North Dakota State University USA; Prof. Y. P. Lim, CNU South Korea; Dr. K. Kadono-Okuda, NIAS Japan; Dr. A. Lynn, JNU Delhi and many took part in the symposium and shared their knowledge with over 70 participating scientists, teachers and research scholars from all over the country. Three best posters awards were voluntarily provided by JPMCB Memorial Foundation. An electronic souvenir *Sohojatri* was published on the occasion. The symposium was coordinated by Dr. Utpal Bora, Associate Professor, Biotechnology.

Training Programme on Green Chemistry and Clean Technology



The three day training programme on 'Green Chemistry and Clean Technology', was organised by the Centre for the Environment during 26–28 November 2012. It was funded by the Central Pollution Control Board (CPCB) of India. Participants from the CPCB as well from various state pollution boards were gathered to discuss issues related to environmental pollution, impact on human health and recent trends and developments towards a cleaner and greener environment. A series of lectures as well as laboratory training sessions were conducted during the programme. The training programme was convened by Dr. Lal Mohan Kundu and Dr. A. S. Achalkumar, Assistant Professors, Chemistry.

National Conference on Frontiers in Chemical Sciences

National Conference on Frontiers in Chemical Sciences (FICS) -2012 was organised by the Department of Chemistry during 3-4 December 2012. The objective of the conference was to bring together eminent scientists, technologists and young researchers from across the country to discuss their achievements and newer directions of research in the field of Chemical Sciences. The programme consisted of plenary sessions, invited talks and poster presentations.

Prof. Arun Chattopadhyay, Chemistry was the Chair and Dr.

Biplab Mondal, Associate Professor, Dr. Debasis Manna, Dr. Chandan K. Jana, Assistant Professors, Chemistry were the conveners.

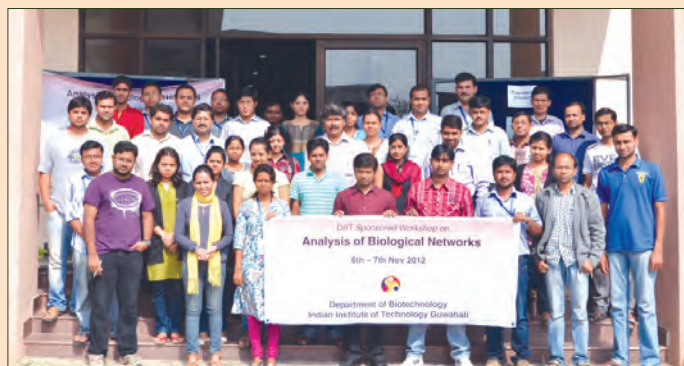
Conference for Research Scholars

The 8th NOST Conference for Research Scholars (J-NOST) was jointly organised by National Organic Symposium Trust (NOST), a non-profit organisation, and the Department of Chemistry, IIT Guwahati during 15-17 December 2012.

J-NOST symposium is a premier event to highlight recent research endeavours in organic chemistry by young and green minds while pursuing their Doctoral Degree. The 8th J-NOST Symposium witnessed lectures of three distinguished speakers, showcasing of achievements of more than fifty young growing scientists and twenty five posters presentations.

Prof. Arun Chattopadhyay, Chemistry, was in the Chair, Prof. Bhisma K. Patel, Chemistry, was the Convener and Dr. Parameswar K. Iyer, Associate Professor, Dr. Subhendu Sekhar Bag, Assistant Professor, Chemistry, IIT Guwahati were the co-conveners.

Workshop on Analysis of Biological Networks



A workshop on 'Analysis of Biological Networks' was organised by the Department of Biotechnology during 6-7 November 2012 as part of the Department of Biotechnology, Government of India sponsored series on the theme of 'Cancer Genomics and Proteomics: Data Interpretation Tool'. The workshop was intended to sensitise practicing biologists to the basic concepts of biological networks and mathematical tools to analyse those.

Faculty, scientists and research scholars of various universities and research institutes throughout the country attended this two day workshop. Eminent scientists like Prof. Somdatta Sinha, IISER, Mohali; Dr. Sharmila A. Bapat, NCCS, Pune; Dr. Karthik Raman, IIT Madras, etc. delivered lectures on various facets of the subject. Additionally, hands on sessions were held to introduce commonly available computational tools for analysis of biological networks. Dr. Biplab Bose, Assistant Professor, Department of Biotechnology, was the coordinator of the workshop.

Publications (Research Journal/Book/Book Chapter)

Research Journal

Biotechnology

Soma Sekhar R. Chinnadayala, M. Santhosh and P. Goswami, "Microwave based reversible unfolding and refolding of alcohol oxidase protein probed by fluorescence and circular dichroism spectroscopy", *Journal of Biophysical Chemistry*, 3 (4), 317-323, 2012

T. Medhi, S. Kar and P. Goswami, "Properties of a soluble n-alkane monooxygenase from extracts of *Cladosporium rasinae*", *International Journal of Applied and Natural Sciences*, 1 (2), 59-67, 2012

S. Mishra, P. Singh, S. Dutta, L. Rangan and S. Mitra, "Exploration of 'hot-spots' of methane and nitrous oxide emission from the agriculture fields of Assam, India", *Agriculture and Food Security Journal* (BioMedCentral Open Access Journal), 1:16, 2012

V. Kesari, A. M. Ramesh and L. Rangan "Rapid multiplication and assessment of genetic purity by biomolecular techniques in micropropagated plants of *Pongamia pinnata*, a potential biodiesel plant", *Biomass and Bioenergy*, (DOI 10.1016/j.biombioe.2012.03.029) 2012

A. Das, N. Kasoju, U. Bora and L. Rangan, "Chemico-biological investigation of rhizome essential oil of *Zingiber moran* – native to Northeast India", *Medicinal Chemistry Research* (DOI: 10.1007/s00044-012-0432-0) 2012

R. K. Das, P. J. Babu, N. Gogoi, P. Sharma and U. Bora, "Microwave mediated rapid synthesis of gold nanoparticles using *Calotropis procera* latex and study of optical properties", *ISRN Nanomaterials*, Vol. 2012, Article ID 650759, 6 pages, 2012

A. Kumar and U. Bora, "Molecular docking studies on inhibition of Stat3 dimerization by curcumin natural derivatives and its conjugates with amino acids", *Bioinformation*, 8, 988-993, 2012

P. J. Babu, P. Sharma, S. Sibyala, R. Tamuli and U. Bora, "Piper betel-mediated green synthesis of biocompatible gold nanoparticles", *International Nano Letters*, 2, 18-27, 2012

P. J. Babu, S. Sibyala, P. Sharma, R. Tamuli and U. Bora, "Gold nanoparticles: sonocatalytic synthesis using ethanolic extract of *Andrographis paniculata* and functionalisation with polycaprolactone-gelatin composites", *Frontiers of Materials Science*, 6, 236-249, 2012

A. Sett, S. Das, P. Sharma, U. Bora, "Aptasensors in health, environment and food safety monitoring", *Open Journal of Applied Biosensor*, 1, 9-19 (doi: 10.4236/ojab.2012.12002), 2012

S. N. Balaji and V. Trivedi, "Extracellular methemoglobin mediated early ROS spike triggers osmotic fragility and RBC destruction: An Insight into the enhanced hemolysis during malaria", *Indian Journal of Clinical Biochemistry*, 27 (2), 178-185, 2012

V. Trivedi and S. Nag, "In silico characterisation of atypical

kinase, PFD0975w from plasmodium kinome: A suitable target for drug discovery", *Chemical Biology and Drug Design*, 79 (4), 600-9, 2012

K. M. N. Prasad and V. Trivedi, "Engineering high resolution horizontal native PAGE for proteins", *International Research Journal of Biotechnology*, 3 (4), 40-46, 2012

S. Nag, K. M. N. Prasad and V. Trivedi, "Identification and screening of antimalarial Phytochemical reservoir from northeastern Indian plants to develop PfPRIO-2 Kinase Inhibitor", *European Food Research and Technology*, 234, 905-911, 2012

Chemical Engineering

P. Mishra, H. P. Uppara, B. Mandal and S. Gumma, "Adsorption of lower alkanes on a zinc based metal organic framework", *Journal of Chemical and Engineering Data*, 57 (9), 2610-2619, 2012

J. Annadkumar and B. Mandal, "Single, binary and ternary metal adsorption using acid-treated *Aegle marmelos* Correa shell: kinetic, mechanistic and thermodynamic study", *Asia-Pacific Journal of Chemical Engineering*, 7 (6), 928-939, 2012

R. Muraleedharan, A. Mondal and B. Mandal, "Absorption of carbon dioxide into aqueous blends of 2-Amino-2-hydroxymethyl-1,3-propanediol and Monoethanolamine", *Separation and Purification Technology*, 94, 92-96, 2012

P. Mishra, S. Gumma and B. Mandal, "Adsorption of CO₂, CO, CH₄ and N₂ on a zinc based metal organic framework", *Separation and Purification Technology*, 94, 124-130, 2012

Chemistry

D. Jiao, J. Geng, X. J. Loh, D. Das, T. C. Lee, and O. A. Scherman, "Supramolecular peptide amphiphile vesicles through host-guest complexation", *Angewandte Chemie*, 124 (38), 9771-9775, 2012

Civil Engineering

T. T. Devi and B. Kumar "CFD simulation of flow patterns in unbaffled stirred tank with CD-6 impeller", *Chemical Industry and Chemical Engineering Quarterly*, 18 (4), 535-546, 2012

V. Deshpande and B. Kumar, "Review and assessment of the theories of stable alluvial channel design", *Water Resources Springer*, 39 (4), 481-487, 2012

R. B. Hiremath, R. Kattumuri, B. Kumar, V. N. Khatri and S. S. Patil, "An integrated networking approach for a sustainable textile sector in Solapur city, India", *Urban Challenge*, 23 (2), 140-151, 2012

A. K. Maurya and P. S. Bokare, "Study of deceleration behaviour of different vehicle types", *International Journal for Traffic and Transport Engineering*, 2 (3), 253-270, 2012

P. K. Basudhar, A. Dey and A. S. Mondal, "Optimal cost analysis and design of circular footings", *International Journal of Engineering and Technology Innovation*, 2 (4), 243-264, 2012

Computer Science and Engineering

N. Modani, R. Gupta, S. Nagar, S. Shannigrahi, S. Goyal and K. Dey, "Like-minded communities: Bringing the familiarity and similarity together", *Lecture Notes in Computer Science*, 7651, 382-395, 2012 (Runner-up in the 13th International Conference on Web Information System Engineering)

Humanities and Social Sciences

M. Das and A. Barua, "The Zen way to enlightenment with special emphasis on American Zen Buddhism", *International Journal of Social Science Tomorrow*, 1 (5), 1-5, 2012

T. P. Vanlal and A. Barua, "Can AI really outsmart Humans?", *International Journal of Multidisciplinary Educational Research*, 1 (2), 14-20, 2012

T. P. Vanlal and A. Barua, "Mystical approach to self and no self: 'Being' and 'Nothingness' in Meister Eckhart and Heidegger", *International Journal of Humanities and Religion*, 1 (2), 56-61, 2012

T. Kalita and A. Barua, "Music, mathematics and philosophy", *Indian Philosophical Quarterly*, 39 (1-2), 17-27, 2012

R. Mokashi-Punekar, "The *Bharuds* of Eknath: Performance, humour and satire", *Indian Satire in the Period of First Modernity*, Ed. Monika Horstmann and Heidi Pauwels, Wiesbaden, Harrossowitz Verlag, 77-95, 2012 (ISBN: 9783447065375)

S. Borbora and G. K. Sarma, "Sustainability of microfinance under microfinance institution model: A case of Assam", *Finance India*, XXVI (2), 471-488, 2012

S. Borbora and A. Majumdar, "Growth dynamics of the informal manufacturing sector in Assam: A comparison to the national level", *Journal of Business Management and Social Science Research*, 1 (1), 104-120, 2012

Mechanical Engineering

A. Banerjee, "Simulation of SMA wire actuator behavior under arbitrary thermo-mechanical loading", *Smart Materials and Structures*, 21, 125018, 2012

N. Yadaiah and S. Bag, "Effect of heat source parameters in thermal and mechanical analysis of linear GTA welding process", *ISIJ (Iron and Steel Institute of Japan) International*, 52 (11), 2069-2075, 2012

S. Bag, D. V. Kiran, Arshad A. Syed and A. De, "Efficient estimation of volumetric heat source in fusion welding process simulation", *Welding in the World*, 56 (11/12), 88-97, 2012

Roland E. Logé, P. Bernard, K. Huang, S. Bag and M. Bernacki, "Mean field and finite element modelling of static and dynamic recrystallisation", *Materials Science Forum*, 737, 715-716, 2012

S. Panda and G. G. Sopan, "Nonlinear analysis of smart functionally graded annular sector plates using cylindrically orthotropic piezoelectric fiber reinforced composite", *International Journal of Mechanics and Materials in Design* (DOI 10.1007/s10999-012-9204-8) 2012

Physics

D. K. Singh, P. K. Iyer and P. K. Giri, "Role of molecular interactions and structural defects in the efficient fluorescence quenching by carbon nanotubes", *Carbon*, 50, 4495, 2012

P. Kumar and A. K. Sarma, "Optical dipole force on ladderlike three-level atomic systems induced by few-cycle-pulse laser fields", *Physical Review A*, 86, 053414, 2012

M. Saha and A. K. Sarma, "Modulation instability in nonlinear metamaterials induced by cubic-quintic nonlinearities and higher order dispersive effects", *Optics Communications*, (DOI 10.1016/j.optcom.2012.11.011), 2012

Energy

A. Ranjan, R. Mayank and V. S. Moholkar, "Process optimisation for butanol production from developed rice straw hydrolysate using *Clostridium acetobutylicum* MTCC 481 strain", *Biomass Conversion and Biorefinery* (DOI: 10.1007/s13399-012-0062-2), 2012

R. Mayank, A. Ranjan and V. S. Moholkar, "Mathematical models of ABE fermentation: review and analysis", *Critical Reviews in Biotechnology*, (DOI: 10.3109/07388551.2012.726208), 2012

R. Mayank, A. Ranjan and V. S. Moholkar, "Economics of Biobutanol: A Review", *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 4 (3), 2012

L. Barbora and A. Verma, "Enhanced performance of direct methanol fuel cell using talc modified nafion membrane", *International Journal of Innovative Research and Development*, 7, 128-133, 2012

G. S. Paul and P. Agarwal, "Evolution of SnS nanostructures—Their structural, thermal and transport studies", *Materials Chemistry and Physics*, 136, 673-679, 2012

Nanotechnology

A. Jaiswal, S. S. Ghosh and A. Chattopadhyay, "Quantum dot impregnated-chitosan film for heavy metal ion sensing and removal", *Langmuir*, 28 (44), 15687-15696, 2012

Book / Book Chapter

Civil Engineering

H. B. Kaushik and K. S. Ravindra Babu, "Assam-type House", *World Housing Encyclopedia Report*, Earthquake Engineering Research Institute (EERI), USA and International Association for Earthquake Engineering (IAEE), Japan, 154, 2012

B. Kumar and R. B. Hiremath, "Energy planning for sustainable development in India", *Handbook of Sustainable Management*, World Scientific Press, 641-666, 2012

Humanities and Social Sciences

R. Mokashi-Punekar, "Chokhamela", *Brill's Encyclopedia of Hinduism*, Vol. IV, Ed. Knut A. Jacobsen, et al, Leiden, Brill, 201-208, 2012 (ISBN: 9789004178953)

S. Borbora, "India-ASEAN FTA and India's North East : A look into infrastructure" *India-Asean Economic Integration- Opportunities and Challenges for India's North East*, Ed. Lianzela, R. S. Ratna and Vanlal Chhawna, Macmillan, 245-251, 2012

S. Borbora, "Microfinance at crossroads: Issues of sustainability, efficiency in the present scenario", *Segments from Development Discourse in Northeast India*, Ed. Niranjana Roy, Raju Mandal, Assam University, Silchar, 216-241, 2012

Mechanical Engineering

U. S. Dixit and R. Das, "Microextrusion", *Micromanufacturing Processes*, Ed. V.K. Jain, CRC Press, Florida (ISBN: 9781439852903)

U. S. Dixit, S. N. Joshi and Hemanth Kumar V., "Microbending with LASER", *Micromanufacturing Processes*, ed. V.K. Jain, CRC Press, Florida (ISBN: 9781439852903)

U. S. Dixit, "Mechatronics education", *Mechanical Engineering Education*, Ed. J. Paulo Davim, ISTE Wiley, London, UK (ISBN: 9781848213814)

Prof. Tarit Bose, Retired Professor, Department of Aerospace Engineering, IIT Madras gave a speech on 'Aerodynamic Noise' on 28 September 2012 at the Department of Mechanical Engineering.

Prof. R. C. Kar, former Professor, IIT Kharagpur delivered a lecture on 'Stability analysis of elastic structure: from equilibrium to chaos' on 25 October 2012 at the Department of Mechanical Engineering.

Prof. Debjyoti Banerjee, Associate Professor, Texas A&M University, USA gave a speech on 'Nano-devices for enhanced thermal energy storage, cooling and sensing' on 1 November 2012 at the Department of Mechanical Engineering.

Dr. Chaitanyamoy Ganguly, senior nuclear scientist and fellow of Indian National Science Academy delivered a speech on 'Prospects and Challenges of Nuclear Power and Related Nuclear Fuel Cycle' on 14 November 2012 at the Department of Mechanical Engineering.

Guest Lecture

Dr. Urs Rauwald, Fellow, Trinity college, University of Cambridge, UK, gave a lecture on 'Complex Aqueous Solution Structures from Simple Components: the Power of Hierarchical Self-assembly' on 11 December 2012 at Department of Chemistry.

Prof. C. P. Chandrasekhar, Economics, Jawaharlal Nehru University, delivered a lecture on 'International Finance and India: The Changing Relationship' as part of the Annual Lecture Series of the Department of Humanities and Social Sciences 2012-2013.

Prof. Kamal S. Lodaya, Institute of Mathematical Sciences, Chennai gave lectures on 'Probabilistic systems and their verification' on 25 October and 1 November 2012 at the Department of Mathematics.

Prof. Bijoy S. Mazumder, Fluvial Mechanics Laboratory, Physics and Applied Mathematics Unit, Indian Statistical Institute, Calcutta delivered a lecture on 'Perturbed flow and turbulence statistics over bedform structures simulated through laboratory experiments' on 25 October 2012 at the Department of Mathematics.

Prof. S. Thangavelu, Department of Mathematics, IISc, Bangalore gave lectures on 'Segal Bargman transforms' on 24, 26 and 28 December 2012 at the Department of Mathematics.

Bhakti Niskama Shanta Swami, PhD, of Sri Chaitanya Saraswat Math, West Bengal, delivered a technical presentation on 'Life and Its Origin' at the Centre for Energy on 21 December 2012.

Dr. Rishi Raj, Post-doc fellow from MIT, USA gave a speech on 'Multiscale Transport Phenomena for Space and Energy Applications' on 25 September 2012 at the Department of Mechanical Engineering.

Awards and Honours

Mr. Abhishek Panigrahi, alumnus of Chemical Engineering, (BTech 2011 batch) received the prestigious Panasonic Fellowship for higher study in Japan. He is among the four students receiving this award for the year 2013 from India chosen from a total of 6186 applicants on the basis of a rigorous selection process. The students will be entitled for a scholarship package from April 2013 and Panasonic shall provide a financial support of 150,000 yen per month as the tuition fee for the first year; and for the subsequent two years, it will increase to 180,000 yen per month besides the tuition fees.

Dr. Manas Kamal Bhuyan, Assistant Professor, Department of Electronics and Electrical Engineering, won the National Award for Best Applied Research and Innovation. The award is in recognition of his contribution towards research on Computer Vision and Human Computer Interactions aiming at Indian Sign Language Recognition and Education. The award will be conferred by the Honourable President of India at an event in New Delhi.

Dr. Vikash Kumar Dubey, Associate Professor, Department of Biotechnology, has been conferred with the Malviya Memorial Award (Young Faculty) for year 2011 by Biotech Research Society of India (BRSI) in the area of medical biotechnology. The award ceremony was held at Punjabi University, Patiala on 21 November 2012.

Dr. Ajay Kalamdhad, Assistant Professor, Department of Civil Engineering won the ISTE-SGSITS national award for best research by young teachers (below 35 years) of engineering colleges for the year 2012 at the 42nd ISTE national annual convention at Hyderabad on 20 December 2012. The award consists of cash prize, a medallion and a citation.

Dr. Sougata Karmakar, Assistant Professor, Department of Design was awarded Professor Sachchidananda Memorial Young Scientist Research Award-2012 by Physiological Society of India.

Mr. Keyur Sorathia, Assistant Professor, Department of Design, has received IBM Shared University Research Awards for the year of 2012 in recognition of his research in the area of interactive design. The award comprised of 10000 USD and a citation.

Dr. Subhas Chandra Pan, Assistant Professor, Chemistry, received Young Scientist Research Award in basic sciences from Department of Atomic Energy (DAE), Govt. of India.

Prof. Subashisa Dutta, Civil Engineering Department, has been awarded the R. J. Garde research award of Indian Society of Hydraulics at the inaugural session of Hydro-2012 conference held at IIT Bombay on 7 December 2012.

IIT Guwahati's students 'Team Aarogya' won the fifth edition of the famed GE Edison Challenge held at the GE India Technology Centre, Bangalore. The IIT Guwahati team was awarded an incubation prize of ₹ 10 lakh, an official statement said. The winning team's project proposes wireless EEG (Electroencephalography) for monitoring of autistic patients. The EEG signals will be transferred through wireless means while the patient is at home.

New Joinings



Piruthivi Sukumar
Asst. Professor
Biotechnology



T. Venkata Bharat
Asst. Professor
Civil Engineering



Manish K. Goyal
Asst. Professor
Civil Engineering



Arnab Sarkar
Asst. Professor
Computer Science
and Engineering



Prithwjit Guha
Asst. Professor
Electronics and
Electrical Engineering



Rajesh K. Srivastava
Asst. Professor
Mathematics



Pratyoosh Kumar
Asst. Professor
Mathematics



Sameer Kamal
Asst. Professor
Mathematics



Debanjan Mitra
Asst. Professor
Mathematics



Soumitra Nandi
Asst. Professor
Physics



Debaprasad Maity
Asst. Professor
Physics



Swati Bhattacharya
Asst. Professor
Physics

PhDs Completed During October-December 2012

Department/Centre	No. of Students
Chemistry	7
Civil Engineering	2
Design	2
Electronics and Electrical Engineering	4
Mathematics	2
Mechanical Engineering	2
Physics	1
Centre for Energy	1
Centre for the Environment	1
Total	22