IIT Guwahati organised the National School on Sustainable Polymers and First Symposium on Advances in Sustainable Polymers during 6-11 January 2014.

The School was attended by nearly 100 participants and featured lectures by eminent scientists and academicians on various topics related to sustainable polymers. The lectures were well complemented by several hands-on laboratory sessions on sustainable polymer synthesis, characterisation, polymer processing, and degradation. Another highlight of the school was a workshop on Materials Studio software for modelling and simulation of polymers. The response of the participants to the various events of the school was very enthusiastic.

The School was followed by the First Symposium on Advances in Sustainable Polymers (ASP-14), an event aimed at providing a platform for researchers to share recent state-of-the-art advances in the area of sustainable polymers. The symposium was inaugurated and addressed by Prof. Gautam Biswas, Director, IIT Guwahati. It was followed by plenary talk by Prof. Ashish Lele, Chief Scientist, NCL Pune, a renowned figure in the field of polymers in general and sustainable polymers in particular. The Symposium also hosted several invited talks by eminent researchers as well as numerous oral and poster presentations covering a wide range of topics such as biodegradable polymers, green nanocomposites, hydrogels, bio-based adhesives, tissue engineering, etc. The event drew participants from several IITs, NITs, CSIR laboratories, industries in India and from abroad.

Dr. Vimal Katiyar, Associate Professor, Chemical Engineering Department, was the convener of both events with Prof. Alok Kr. Ghoshal, Dr. Prakash Kotecha, Assistant Professor and Dr. Amit Kumar, Assistant Professor, as co-conveners.
IIT Guwahati organised a discussion meeting on EWSB and Flavours in the light of LHC during 20-22 February 2014.

Recently Large Hadron Collider (LHC) discovered a new particle, which could be the much awaited Higgs boson revealing the first hints of Electroweak Symmetry breaking (EWSB). Acknowledging the importance, the Nobel prize for Physics for the year 2013 is awarded to the originators of this idea. Apart from direct searches at collider, significant progress has been made in the B, D and K meson decays for an indirect search of new physics. The discussion meeting was organised in this light to review the ideas of EWSB and flavor physics in the light of LHC data and discuss future prospects.

The talks were aimed at covering broad areas in Standard and beyond the Standard Model of particle physics, reviewing the experimental and theoretical status. Well known experts in this field addressed on these topics.

This meeting was jointly organised by Department of Physics, IIT Guwahati and Regional Centre for Accelerator based Particle Physics (RECAPP), Harish Chandra Research Institute (HRI), Allahabad.

Dr. P. Poulose, Associate Professor, Department of Physics, IIT Guwahati, was the Convener, and Dr. Arunansu Sil, Assistant Professor, Dr. Soumitra Nandi, Assistant Professor, Department of Physics, IIT Guwahati, and Prof. B. Mukhopadhyaya, HRI, Allahabad were the Co-Conveners.

IIT Guwahati organised the 3rd Belle Analysis Workshop (BAW 2014) during 24 February - 4 March 2014. The workshop – equivalent to a winter school – was meant for students working on the Belle experiment and its approved upgrade (Belle II) at KEK, Japan. About 30 participants participated in this workshop, which provided them an ideal pedestal for a close interaction with the experts from India as well as abroad.

Dr. Bipul Bhuyan, Associate Professor, Department of Physics, IIT Guwahati, was the co-convener of the workshop.

A workshop on Seismic Safety Agenda in North-Eastern Region of India was conducted at IIT Guwahati on 22 March 2014. The workshop was jointly organised by IIT Guwahati and National Information Centre of Earthquake Engineering (NICEE), IIT Kanpur. The workshop was attended by 29 participants representing various engineering and technological institutes, Govt. agencies, and professional bodies. The event was inaugurated by Prof. A. K. Sarma, HoD, Department of Civil Engineering, IIT Guwahati.

Several issues related to seismic risk in North-Eastern region of India were discussed in the day long workshop. Though the awareness about the seismic hazard is high in the region, innovative strategies are required to reduce the growing seismic risk due to existing vulnerable structures and further increase in their inventory. The agenda for addressing the seismic risk mitigation issues in the region was drawn up.

The workshop was coordinated by Dr. Hemant B. Kaushik, Associate Professor, Department of Civil Engineering, IIT Guwahati.
National Seminar on Translation and Assamese Literature: History and Theory

A national seminar cum workshop on Translation and Assamese Literature: History and Theory was held at IIT Guwahati during 7-8 March 2014. It was organised by the Department of Humanities and Social Sciences, IIT Guwahati, in collaboration with Jamia Millia Islamia, New Delhi and Sahitya Academy. The keynote address was given by Prof. Ranjit Kr. Dev Goswami, retired Professor of English of Gauhati University and a renowned scholar who highlighted on the literal and figural aspects of Indian translation. Participants from Tezpur University, Jawaharlal Nehru University, Jamia Millia Islamia, University of Delhi, EFLU, Shillong and Cotton College, Guwahati participated in the seminar cum workshop.

New Research Projects

BIOTECHNOLOGY

Title: Silk2Heal; Sponsor: DBT; Duration: 3 years; Principal Investigator: Biman B. Mandal

Title: Development of novel tissue engineered silk biomaterial based wound dressing patch for diabetic foot ulcers; Sponsor: DBT; Duration: 3 years; Principal Investigator: Biman B. Mandal

NANOTECHNOLOGY

Title: Centre for excellence in research and development of nanoelectronic theranostic devices; Sponsor: DeitY; Duration: 5 years; Principal Investigator: A. Chattopadhyay, P. Roy Paily, D. Bandyopadhyay

Lecture Series Organised

Association of Civil Engineers (ACE), IIT Guwahati organised three lecture series as follows —

1. Lecture Series on ‘AutoCAD and ArchiCAD’ during 24-27 February 2014
2. Lecture Series on ‘Technical Writing and Presentation’ during 12-13 February 2014
3. Lecture Series on ‘Introduction to Civil Engineering’

RuTAG-NE Workshop

Rural technology action Group–North East (RuTAG-NE) organised a workshop to deliberate upon identification of challenging, need based problems concerning rural economy and addressing the same through science and technology interventions within the framework of RuTAG-NE by involving new NGOs on 25 February 2014 at NIT Meghalaya. 20 NGO members from different parts of Meghalaya participated in the workshop. Prof. Dilip K. Saikia, Director, NIT Meghalaya, inaugurated the workshop. Prof. Anil K. Goswami, Consultant, and Mr. B. R. Bhattacharjya, Associate Project Engineer, RuTAG-NE, conducted the workshop.

Visitors/Invited Lectures/Seminars

CIVIL ENGINEERING

Prof. Sivakumar Babu, President ASCE India Section and Professor, IISc Bangalore, ‘Use of soil nailing technique for infrastructure improvement’, 20 January 2014.
Student Branch of Institute of Electrical and Electronics Engineers of IIT Guwahati organised a two-day national workshop on Micro-Electro-Mechanical Systems (MEMS) and Very-Large-Scale Integration (VLSI) Digital Design Flow on 8-9 February 2014. The workshop provided various tutorials and hands-on experience along with the knowledge of different optimisations required in the field of MEMS and VLSI digital design using globally used computer aided tools such as CoventorWare, Synopsis and Cadence.

Student and faculty members of IIT Guwahati and from institutes like NIT Silchar, Tezpur University, NIT Meghalaya, Assam Engineering College, Gauhati University, West Bengal Technical University, Don Bosco Institutions, NITS Mirza took part in the workshop.
The 65th Republic Day of India was celebrated on 26 January 2014 in the Institute campus. Prof. Gautam Biswas, the Director of the Institute, hoisted the tricolour and addressed the gathering. This was followed by colourful cultural programmes presented by the students of the Institute, IIT Guwahati Akshara School and children of the campus. Employees and students of the Institute and residents of the campus were present throughout the scintillating function.

**PhDs Completed During January–March 2014**

<table>
<thead>
<tr>
<th>Department/Centre</th>
<th>No. of Students</th>
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<tbody>
<tr>
<td>Biotechnology</td>
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<tr>
<td>Chemical Engineering</td>
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<td>Computer Science and Engineering</td>
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<td>Humanities and Social Sciences</td>
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<td>Mathematics</td>
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**Memorandum of Understanding**

IIT Guwahati signed an MoU with Tongmyong University, Korea for international joint degree programme, internship and students exchange on 10 January 2014.
Publications (Research Journal/Book/Book Chapter)

BIOTECHNOLOGY


CHEMICAL ENGINEERING


C. Kundu and A. K. Dasmahapatra, ‘Crystallization of double crystalline symmetric diblock copolymers’, Polymer, 55, 958, 2014


CHEMISTRY


S. Mahato, S. Haldar and C. K. Jana, ‘Diastereoselective α-C–H functionalisation of aliphatic N-heterocycles: An efficient route to ring-fused oxazines’, Chemical Communications, 50, 332-334, 2014 (The work has been highlighted in Synfacts)


A. Kumar, G. Das and B. Bose, ‘Recombinant receptor-binding domain of diphtheria toxin increases the potency of curcumin by enhancing cellular uptake’, Molecular Pharmaceutics, 11 (1), 208-217, 2014


S. K. Santra, A. Banerjee and B. K. Patel, '2,3-Diarylquinoxaline directed mono ortho-arylation via cross dehydrogenative coupling using aromatic aldehydes or alkylbenzenes as aroyl surrogate,' Tetrahedron, 70, 2422, 2014

CIVIL ENGINEERING

D. Barman and A. K. Sarma, 'Applicability of cartosat stereo dem for understanding flooding genesis – A case study from Pagladia river watershed in lower Assam, India,' International Journal of Earth Sciences and Engineering, 6 (1), 2013

P. Sonowal, M. Khwairakpam and A. S. Kalamdhad, 'Stability analysis of dewatered sludge of pulp and paper mill during vermicomposting,' Waste and Biomass Valorization, 5, 19-26, 2014


S. S. Kumar, A. Murali Krishna, and A. Dey, 'Parameters influencing dynamic soil properties: A review treatise,' International Journal of Innovative Research in Science, Engineering and Technology, 3 (Spl. Is. 4), 47-60, 2014

DESIGN

T. Patel and S. Karmakar, 'Anthropometric and strength data of Indian agricultural workers for farm equipment design: Book review,' International Journal of Industrial Ergonomics, 44, 189-190, 2014


A. Chowdhury, S. Karmakar, S. Ghosh and D. Chakrabarti, 'Purchase intention of anthropomorphic chair is influenced by visual attractiveness and perceived pleasure,' International Review of Applied Engineering Research, 4 (2), 133-140, 2014

M. Majhi and D. Chakrabarti, 'Computer graphics and understanding semiotics in design,' World Academy of Science, Engineering and Technology, 7 (6), 2013

ELECTRONICS AND ELECTRICAL ENGINEERING


M. Manohar, R. S. Kshetrimayum and A. K. Gogoi, 'Printed monopole antenna with tapered feed line, feed region and patch for super wideband applications,' IET Microwaves, Antennas and Propagation, 8 (1), 39-45, 2014

HUMANITIES AND SOCIAL SCIENCES

S. Mallick, 'The realm of commodified technoscience,' Seminar, 654, 32-42, 2014

MATHEMATICS


S. Saha and S. N. Bora, 'Flexural gravity waves trapped in a two-layer fluid of finite depth,' Applied Ocean Research, 44, 1-12, 2014

M. Hassan and S. N. Bora, 'Rotational motion due to the


**MECHANICAL ENGINEERING**


N. S. Priya, C. M. Somayaji and S. Kanagaraj, ‘Optimisation of Ce$_{0.6}$Zr$_{0.4-x}$Al$_{1.3x}$O$_2$ solid solution based on oxygen storage capacity’, *Journal of Nanoparticle Research*, 16 (2), 1-10, 2014


**PHYSICS**


R. K. Biroju, P. K. Giri, S. Dhara, K. Imakita and M. Fujii,
Graphene assisted controlled growth of highly aligned ZnO nanorods and nanoribbons: Growth mechanism and photoluminescence properties, *ACS Applied Materials and Interfaces*, 6, 377, 2014

**CENTRE FOR ENERGY**


M. Das, L. Barbora, P. Das and P. Goswami, ‘Biofuel cell for generating power from methanol substrate using alcohol oxidase bioanode and air-breathed laccase biocathode’, *Biosensors and Bioelectronics*, 2014 (DOI: 10.1016/j.bios.2014.03.016)

**CENTRE FOR NANOTECHNOLOGY**


**Book Chapter**

**CHEMICAL ENGINEERING**


**NEW JOININGS**

Soumen Kumar Maiti
Asst. Professor
Biotechnology

Lalit Mohan Pandey
Asst. Professor
Biotechnology

Basudeb Chatterji
Visiting Professor
Humanities and Social Sciences

Bhupen Deka
Asst. Professor
Mathematics

Awards and Honours

BIOTECHNOLOGY
Mr. Surojeet Das, MTech student, working with Dr. Biman B. Mandal, won Gandhian Young Technological Innovation Award (GYTI-2014) for his research on ‘Injectable Silk Fibroin Hydrogel for Tissue Engineering and Drug Delivery’.

CHEMICAL ENGINEERING
Dr. Anil Verma, Associate Professor, received Best Poster Award in International Conference on Environment Technology and Sustainable Developments: Challenges and Remedies (ET&SD 2014), Babasaheb Bhimrao Ambedkar University, Lucknow, 21-23 February 2014.

Mr. Y. Shyam Kumar Yadav, research student, received Best Oral Presentation Award (with cash prize) in Technical Annual Meeting (Reflux 2014), IIT Guwahati, 29-30 March 2014.

CHEMISTRY
Prof. Arun Chattopadhyay has become a Fellow of the Royal Society of Chemistry.

Mr. Narsimha Mamidi and Dr. D. Manna received best poster award in the 20th ISCB International Conference (ISCBC-2014), University of Delhi, 1-4 March 2014.

DESIGN
Mr. Avinash Shende, Assistant Professor, won Good Design Award 2012-2013 (Chicago, USA), for designing wired CU! chair. The chair is in production by a German Company ‘WILDE + SPIETH’. He also won Interior Innovation Award 2014 (given by German Design Council) and was a finalist in the FX Award 2013 London.

ELECTRONICS AND ELECTRICAL ENGINEERING
Dr. R. S. Kshetrimayum, Associate Professor, was elevated to IEEE Senior Member in March 2014.

MECHANICAL ENGINEERING
Dr. P. Muthukumar, Associate Professor, received Bhaskara Advanced Solar Energy Fellowship (BASE Fellowship) from Indo-US Science and Technology Forum, January 2014 for visiting University of South Florida, USA.

Dr. Pankaj Biswas, Assistant Professor, obtained ASME membership in MARCH 2014.

Mr. Santosh Kumar Behera and Dr. G. Krishnamoorthy received best poster award in the 3rd National Symposium on Functional Applications of Colorants (NSFAC-2013), Institute of Chemical Technology, Mumbai.

Mr. Santosh Kumar Sahoo received Eli Lilly and Company Asia Outstanding Thesis Award for Best Thesis.

Mr. Atul Kumar Dwivedy received Eli Lilly and Company Asia Outstanding Thesis Awards for Best Thesis.

Mr. Arghya Banerjee received Prof. Goverdhan Mehta best poster award in 16th CRSI National Symposium in Chemistry (NSC-16) held at IIT Bombay during 7-9 February 2014.

Mr. Ravi Kumar Biroju, research student, won the Best Poster Award at the 6th International Conference on Nano Science and Technology (ICONSAT), March 2014.

Mr. Biswajit Pathak, project JRF and PhD student working with Dr. Bosanta R. Boruah, has won the best paper award under the category of Optical Instrumentation and Techniques in OPTICS14: International Conference on Light held at NIT Calicut during March 2014.

CENTRE FOR NANOTECHNOLOGY
The work titled ‘Induction of Electromotive Force by an Autonomously Moving Magnetic Bot’ by Mr. Sunil Kumar Sailapu and Prof. Arun Chattopadhyay was selected as the cover page for Angewandte Chemie International Edition for the week starting 3 February 2014 (Volume 53, Issue 6).

Mr. Ravi Kumar Biroju, research student, won the Best Poster Award at the 6th International Conference on Nano Science and Technology (ICONSAT), March 2014.

Mr. Sunil Kumar Sailapu, research student, won first position for the exhibition of his paper in Reflux 2.0 at IIT Guwahati during 29–30 March 2014.
Meaning ‘dreamtime’, Alcheringa has grown into a big cultural event attracting participation from over 150 colleges and a footfall in excess of thirty thousand. In the past Alcheringa has featured some exhilarating performances from some of the biggest names in the entertainment industry, namely Sonu Niigaam, Shaan, Strings, KK, Euphoria, Parikrama, The Raghu Dixit Project, Shankar Ehsaan Loy, Javed Ali, Mohit Chauhan, Anoushka Shankar, the Swiss folk metal band Eluveitie, Orphaned Land – Israeli progressive metal band, etc.

Alcheringa 2014 was inaugurated on 30 January with the Mexican virtuoso violinists, songwriters and composers Villalobos Brothers. The four day scintillating event witnessed eagerly awaited Alcheringa regulars like Electric Heels—dance competition, Theatrix—drama competition, Crossfade—DJ competition, Rock-o-Phonix—rock song competition, Raga High—Indian song competition.

Rock band Undying Inc. performed in the Red Bull Tour Bus—a unique way of rock performance in the Blitzkrieg show of the Day 1 Alcheringa.

Well known Hindi playback singer Shilpa Rao performed before a large and appreciative crowd on the evening of 1 February 2014.

On the last evening of Alcheringa 2014 Michael Angelo Batio, American instrumental rock guitarist, enthralled the audience with his mindblowing guitar playing.

Apart from these, some of the notable programmes during the festival were street painting, personality contest Mr. and Miss Alcheringa, quiz, model United Nations, street circus, etc.