Department of Physics, IIT Guwahati organized a DST sponsored SERB School (formerly known as SERC School) on Frontiers in Quantum Optics from 01-19 December, 2017. The objective of the school was to prepare and motivate research students, post doctoral fellows, and lecturers towards building up thorough knowledge in the fascinating area of quantum optics and also to be acquainted with the recent progresses both theoretical and computational fronts. The course was significant owing to possible realization of futuristic applications such as quantum computing, cryptography and teleportation, and exciting advances in laser cooling and trapping.

Eminent speakers from IISc, TIFR, IISERs and IITs delivered their lectures. 40 outstation participants, comprising of Ph.D. and Post-Doc. students, selected through a screening process, attended the course.

5th International Conference on Advanced Nano-material and Nanotechnology (ICANN-2017) was organized by Centre for Nanotechnology at IITG during 18-21 December 2017. This was another major international conference being held in the North-Eastern region of India, in the area of Nano science and Nanotechnology. The international conference brought eminent scientists, technologists and young researchers from several disciplines across the globe together to provide a common platform for discussing their achievements and newer directions of research. The ICANN-2017 conference was focused on Advanced Nano-material for Nano engineering and recent advances in nanotechnology, covering fields from theory and experiment to applications of nanostructured materials in technology. The scientific program consisted of plenary sessions, invited talks, oral and poster presentations.

Prof. Gautam Biswas, Director, IIT Guwahati was conferred Honorary Doctorate by NIT Agartala at its tenth convocation held on 11 November 2017.

A team lead by the Hon’ble Director of IITG, Prof. Gautam Biswas met the Hon’ble Chief Minister of Assam, Shri Sarbananda Sonowal to hand over a cheque, as a token of contribution for the flood affected people of Assam, to Chief Minister’s flood relief fund, collected through voluntary contribution from the IIT Guwahati community.

### Students Statistics

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Department/ Centre</th>
<th>No. of Students</th>
<th>No. of UG Students</th>
<th>No. of PG Students</th>
<th>No. of PhD Students</th>
<th>No. of Foreign Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer Science and Engineering</td>
<td>545</td>
<td>349</td>
<td>84</td>
<td>112</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Electronics and Electrical Engineering</td>
<td>805</td>
<td>496</td>
<td>117</td>
<td>192</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Mechanical Engineering</td>
<td>743</td>
<td>319</td>
<td>212</td>
<td>212</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Civil Engineering</td>
<td>701</td>
<td>294</td>
<td>206</td>
<td>201</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Design</td>
<td>308</td>
<td>183</td>
<td>49</td>
<td>76</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Biosciences and Bioengineering</td>
<td>467</td>
<td>192</td>
<td>72</td>
<td>203</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Chemical Engineering</td>
<td>526</td>
<td>259</td>
<td>88</td>
<td>179</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>Physics</td>
<td>397</td>
<td>167</td>
<td>95</td>
<td>135</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Chemistry</td>
<td>470</td>
<td>158</td>
<td>94</td>
<td>218</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Mathematics</td>
<td>368</td>
<td>209</td>
<td>96</td>
<td>63</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Humanities and Social Sciences</td>
<td>154</td>
<td>154</td>
<td>51</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Energy</td>
<td>101</td>
<td>101</td>
<td>32</td>
<td>69</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>Environment</td>
<td>50</td>
<td>50</td>
<td>0</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Nanotechnology</td>
<td>41</td>
<td>41</td>
<td>0</td>
<td>41</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>Rural Technology</td>
<td>31</td>
<td>31</td>
<td>0</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>16</td>
<td>Linguistic Science and Technology</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

### PhD Completed during October– December 2017

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Department/ Centre</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer Science and Engineering</td>
<td>03</td>
</tr>
<tr>
<td>2</td>
<td>Electronics and Electrical Engineering</td>
<td>09</td>
</tr>
<tr>
<td>3</td>
<td>Mechanical Engineering</td>
<td>03</td>
</tr>
<tr>
<td>4</td>
<td>Civil Engineering</td>
<td>07</td>
</tr>
<tr>
<td>5</td>
<td>Design</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Biosciences and Bioengineering</td>
<td>03</td>
</tr>
<tr>
<td>7</td>
<td>Chemical Engineering</td>
<td>09</td>
</tr>
<tr>
<td>8</td>
<td>Physics</td>
<td>00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Department/ Centre</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Chemistry</td>
<td>06</td>
</tr>
<tr>
<td>10</td>
<td>Mathematics</td>
<td>02</td>
</tr>
<tr>
<td>11</td>
<td>Humanities and Social Sciences</td>
<td>05</td>
</tr>
<tr>
<td>12</td>
<td>Energy</td>
<td>00</td>
</tr>
<tr>
<td>13</td>
<td>Environment</td>
<td>01</td>
</tr>
<tr>
<td>14</td>
<td>Nanotechnology</td>
<td>00</td>
</tr>
<tr>
<td>15</td>
<td>Rural Technology</td>
<td>00</td>
</tr>
<tr>
<td>16</td>
<td>Linguistic Science and Technology</td>
<td>00</td>
</tr>
</tbody>
</table>
Conference/ Seminar Abroad

BSBE
Dr. Kannan Pakbirajan, Professor attended the International Conference on Challenges in Environmental Sciences & Engineering (CESE - 2017) held at Empark Grand Hotel Kunming, China from 11.11.17 to 15.11.17.
Dr. Manish Kumar, Associate Professor attended the 10th International Leptospirosis Society Meeting (ILS 2017) held at Palmerston North, New Zealand from 27.11.17 to 01.12.17.
Dr. Lingaraj Sahoo, Professor visited Gifu University for Collaborative research work and future planning of joint education from 15.12.17 to 23.12.17.

Computer Science
Dr. John Jose, Assistant Professor attended the 25th IFIP / IEEE International Conference on Very Large Scale Integration (VLSI - SoC) held at Yas Viceroy, Yas Island, UAE from 23.10.17 to 25.10.17.
Dr. Jatindra Kr. Deka, Professor attended the IEEE TENCON 2017 held at The Wembley A St Giles Premier Hotel, Penang, Malaysia from 05.11.17 to 08.11.17.
Dr. Deepanjan Kesh, Assistant Professor attended the 11th Annual International Conference on Combinatorial Optimization and Application (COCOA’17) held at Shanghai, China from 16.12.17 to 18.12.17.

Design
Dr. Amarendra Kr. Das, Professor attended the TED MINT organized by KTH, Royal Institute of Technology at Campus Värnamo and Kungliga Tekniska högskolan, Stockholm from 19.11.17 to 25.11.17.
Dr. Supradip Das, Assistant Professor attended the TED MINT organized by KTH, Royal Institute of Technology at Campus Värnamo and Kungliga Tekniska högskolan, Stockholm from 19.11.17 to 25.11.17.

Electronics
Dr. Shaik Rafi Ahamed, Associate Professor attended the IEEE Region 10 Conference (TENCON) held at Penang, Malaysia from 05.11.17 to 08.11.17.
Dr. Suresh Sudaram, assistant Professor attended the 14th IAPR International Conference on Document Analysis and Recognition (ICDAR 2017) held at Kyoto, Japan from 09.11.17 to 15.11.17.
Dr. Ramesh Kumar Sonkar, Assistant Professor attended the Asia Communications and Photonics Conference (ACP) held at Guangzhou, China from 10.11.17 to 13.11.17.

Chemistry
Dr. Bhisma K. Patel, Professor attended the RSC-NOST symposium on organic and Bimolecular Chemistry Symposium held at University of Leeds, Leeds, United Kingdom from 03.10.17 to 06.10.17.
Dr. Parameswar K. Iyer, Professor delivered an invited lecture at the 2nd Asian Conference on Chemosensors & Imaging Probes (Asian – ChiP 2017) held at ICCAS Beijing, China from 23.10.17 to 26.10.17.
Dr. Parameswar K. Iyer, Professor delivered an invited lecture at the 18th IUMRS International Conference in Asia (IUMRTS – ICA 2017) held at Taipei, Taiwan from 05.11.17 to 09.11.17.
Dr. Mohammad Qureshi, Professor delivered an invited talk at the Indo – German Meeting on Elementary Reactions in Functional Materials : From Biophysics to Technological Applications at University of Heidelberg, Germany from 14.11.17 to 17.11.17.

Civil
Dr. S. A. Kartha, Associate Professor attended the 16th International Waste Management and Landfill Symposium (SARDINA 2017) held at Cagliari, Italy from 02.10.17 to 06.10.17.

Humanities
Dr. Sambit Mallick, Associate Professor attended the 4th International Conference on Poverty and Sustainable Development (ICPSSD 2017) held at Colombo, Sri Lanka from 05.12.17 to 06.12.17.

Mechanical
Dr. Debabrata Chakraborty, Professor attended the 3rd international Conference on the Science and Engineering of materials (ICoSEM) held at Kuala Lumpur, Malaysia from 24.10.17 to 25.10.17.
Dr. K. S. R. K. Murthy, Professor attended the 3rd international Conference on the Science and Engineering of materials (ICoSEM) held at Kuala Lumpur, Malaysia from 24.10.17 to 25.10.17.
Dr. Gautam Biswas, professor attended the International Mechanical Engineering Congress & Exposition (IMECE 2017) held at Tampa, Florida from 03.11.17 to 09.11.17.

Physics
Dr. Gagan Kumar, Assistant Professor attended the 19th International Conference on Optics and Photonics (ICOP 2017) at Singapore from 09.11.17 to 10.11.17.
Dr. Tapan Mishra, Assistant Professor visited Tokyo Institute of Technology, Tokyo, Japan to attend discussion meeting following MoU between Tokyo Mech and Dept of Physics JIT Guwahati from 28.11.17 to 05.12.17.
Dr. Debaprasad Maity, Assistant Professor attended the Third LeCoPA International Symposium – Cosmic Prospects held at Taipei, Taiwan from 27.11.17 to 29.11.17.
Dr. Subhradip Ghosh, Professor visited Tokyo, Japan to attend discussion meeting following MoU between Tokyo Mech and Dept of Physics JIT Guwahati from 28.11.17 to 05.12.17.

Energy
Dr. Pankaj Kalita, Associate Professor visited Shantou, China for Research Collaboration at Shantou University, from 16.12.17 to 26.12.17.
New Research Projects

BSBE

Title: Optimal design and development of proximal femoral locking plate.
Funding Agency: IITG.
Principal Investigator: Dr. Souptick Chanda.

Title: Sequestration of hexavalent chromium from simulated and electroplating effluent using novel lignocellulosic biosorbents.
Funding Agency: IITG.
Principal Investigator: Dr. Selvaraju Narayanasamy.

Title: Use of silk from northeast India for culture and transplantation of corneal endothelial cells.
Funding Agency: DBT.
Principal Investigator: Dr. Biman B. Mandal.

Electronics

Title: Wireless networking for sustainable rural connectivity.
Funding Agency: DST.
Principal Investigator: Dr. Satyam Agarwal.

Title: Design of solid state microwave oven using gallium nitride power amplifier.
Funding Agency: IITG.
Principal Investigator: Dr. Mahima Arrawatia.

Title: Design of smart tunable plasmonic nanoparticle-based optical metadevices.
Funding Agency: IITG.
Principal Investigator: Dr. Debabrata Sikdar.

Chemistry

Title: Organo-catalytic Asymmetric Reactions with 3-Carbomethoxy-Dihydro-2-Quinolones.
Funding Agency: CSIR.
Principal Investigator: Dr. Subhas Chandra Pan.

Title: Use of alkali activated fly ash for production of functionally active ferrochromium based sludge.
Funding Agency: DST.
Principal Investigator: Dr. A. Murali Krishna.

Computer Science

Title: Approximate geodesic nearest neighbors and shortest paths.
Funding Agency: SERB.
Principal Investigator: Dr. R. Inkulu.

Title: Algorithms for Graph Similarity Self Join.
Funding Agency: SERB.
Principal Investigator: Dr. Amit Awekar.

Mathematics

Title: Numerical analysis and computational methods for hyperbolic conservation laws.
Funding Agency: SERB.
Principal Investigator: Dr. Sudarshan Kumar Kenettinkara.

Mechanical

Title: Understanding human intent through semantic perception for augmenting human machine interaction.
Funding Agency: IITG.
Principal Investigator: Dr. Shyamanta Moni Hazarika.

Title: Manufacturing and testing of fibre reinforced composites.
Funding Agency: IITG.
Principal Investigator: Dr. Nelson Muthu.

Title: Amplitude formation in vector finite elements for electromagnetic wave propagation.
Funding Agency: IITG.
Principal Investigator: Dr. Arup Kumar Nandy.

Humanities

Title: Assessment and review of MGNREGA as a social protection intervention in the Barak Valley region of Assam.
Funding Agency: UNICEF.
Principal Investigator: Dr. Rajshree Bedamatta.

Title: Inhibitors of indoleamine 2,3-dioxygenase 1 (IDO1).
Funding Agency: MHRD.
Principal Investigator: Prof. Kannan Pakshirajan.

Rural Technology

Title: DONER/STINER/NEHDC.
Funding Agency: NEHDC.
Principal Investigator: Dr. S. K. Kakoty.

Title: Development of a process technology for production of functionally active fermented soy product.
Funding Agency: IITG.
Principal Investigator: Dr. Siddhartha Singha.

Title: Terrestrial weed management using different composting techniques.
Funding Agency: IITG.
Principal Investigator: Dr. Meena Khwairakpam.

ITTG

Title: Establishment of Research Parks under the ‘Start-up India Initiative in Higher Educational Institutions (SIHIEI)’.
Funding Agency: MHRD.
Principal Investigator: Dean, R&D.

Patents

Inventor: Mrutyunjay Maharana; Akakesh Nanda; Sisir Kumar Nayak; Niranjan Sahoo.
Title: Natural and force convection imposed accelerated thermal ageing simulator to predict the life of the transformer oil before using it in the transformers.
Funding Agency: SERB.
Principal Investigator: Dr. Jagadish Ranjan Barai.

Inventor: Amit Kumar Baghel; Shashank Satish Kulkarni; Sisir Kumar Nayak; D. Senthil Kumar.
Title: Parabolic pyramidal horn antenna.
Funding Agency: CSIR.
Principal Investigator: Dr. Gaurav Kumar

Inventor: Mrutyunjay Maharana; Moon Moon Borah; Sisir Kumar Nayak; Niranjan Sahoo.
Title: Design and development of an automated open beaker oxidative ageing assessment apparatus.
Funding Agency: CSIR.
Principal Investigator: Dr. Pradhan Pratap Singh.

Inventor: Sumantra Bhattacharya; Subhankar Panda; Himanshu Pradhan; Ashok B. Roy; Dr. Sachin Kumar.
Title: Media converter using 3-DIMENSIONAL GLOTTAL VIBRATIONS.
Funding Agency: SERB.
Principal Investigator: Mr. Satya S. G Buddha.

Inventor: Debasis Manu; Subhankar Panda; Nirmalya Pradhan; Ashok B. Roy; Dr. Sachin Kumar.
Title: DEVICE FOR HUMAN SPEECH PRODUCTION USING 3-DIMENSIONAL GLOTTAL VIBRATIONS.
Funding Agency: CSIR.
Principal Investigator: Avilash Sahoo; S. K. Dwivedy; P. S. Robi.

Inventor: M. N. Sharma
Title: COMPACT REMOTELY OPERATED UNDERWATER VEHICLE (ROV) / AUTONOMOUS UNDERWATER VEHICLE (AUV).
Funding Agency: CSIR.
Principal Investigator: Avilash Sahoo; S. K. Dwivedy; P. S. Robi.

Inventor: Bosanta Ranjan Borah; Ranjan Kalita; Saitya S G Buddha.
Title: Laser scanning microscopy using different polarizations of the illumination beam with minimal time between the two polarizations.
Funding Agency: CSIR.
Principal Investigator: Pradhan Pratap Singh.
Collaboration with Universities

The Gifu University Winter School Program, already in its 3rd year, is one of the wonderful success stories for mobility programs at IIT Guwahati. It has seen enthusiastic participation from the students of IIT Guwahati. This year six (6) students have been selected for this prestigious program. Prof. Kannan Pakshirajan, Head of Department, BSBE IIT Guwahati is now at Gifu University as one of the Resource Persons for the Winter School.

Prof. Pakshirajan is seen here with other faculty members of Gifu University along with students of IIT Guwahati & other participating students from UKM, Malaysia.

IIT Guwahati has in the recent past been actively pursuing academic and research collaborations with top Universities in Japan such as Tokyo Institute of Technology, Kyoto University, Gifu University, Hokkaido University, Kagawa University, Kyoto Institute of Technology, and a few others. An International Joint Degree Masters and PhD programme in Food Science & Technology and Mechanical Engineering with Gifu University will formally be announced soon.

The Director of IIT Guwahati, Prof. Gautam Biswas has been at the forefront of this initiative along with other faculty members of IIT Guwahati. Prof. Biswas visited the Yokohama National University (YNU) to strengthen our engagement with the University and also to deliver a Keynote Lecture in an International Symposium.

Seen above is Prof. Gautam Biswas with Indian and Japanese delegates at the Pre-Symposium meeting and separately (L-R) with Prof. Nishino (YNU), Prof. Suzuki (Gifu University) Prof. Koyama (Gifu University) and Prof. Suzuki (YNU).

Delegation from Curtin University, Australia

The delegation from Curtin University, Australia called upon the Director, IIT Guwahati, Prof. Gautam Biswas during their current visit to IIT Guwahati. The delegation led by Prof. Brett Kirk discussed matters related to the Collaborative Doctoral Programme between IIT Guwahati and Curtin University. The delegation also engaged with representatives of various departments to explore possibilities of setting up Joint Research Centres.

Distinguished Lecture Series

Shri P. S. Raghavan, Convenor, National Security Advisory Board & Former Secretary, MEA, Former Ambassador of India to Russia, Ireland & Czech Republic delivering his lecture on “From Non-alignment to Multi-alignment: Challenges to India’s Foreign Policy in 21st Century”.

The event is part of the Distinguished Lecture Series: An initiative of Public Diplomacy Division, the Ministry of External Affairs, Govt. of India.
Surajbhan Devda, Ibrahim Abu Ressh; Effect of the organic load on salt removal efficiency of microbial desalination cell; Desalination and Water Treatment; 2017.

Kuldeep Mahato, Ashutosh Kumar, Pawan Kumar Maurya, Pranjali Chandra; Shifting paradigm of cancer diagnoses in clinically relevant samples based on miniaturized electrochemical biosensors and microfluidic devices; Biosensors and Bioelectronics; 2017; 100; 411-428.

Kashish, Surabhi Bansal, Anurag Jyoti, Kuldeep Mahato, Pranjali Chandra, Rajiv Prakash; Highly Sensitive In Vitro Biosensor for Enterotoxigenic Escherichia coli Detection Based on ssDNA Anchored on PtNPs-Chitosan Nanocomposite; Electroanalysis; 2017; 27; 1-8.

Saoroni Chung, Pranjali Chandra, Jaseok Peter Koo, Yoon-Bo Shim; Development of a bifunctional nanobiosensor for screening and detection of reticulum stress and cellulose degradation in the parasitic organism; Chemical Biology & Drug Design; 2017; 90; 962-967.

Ritesh S. Malani, Shubham Patil, Kuldeep, Sanjkar Chakma, Arun Goyal and Vijayanand Surayank Moholkar; Mechanistic analysis of ultrasound-assisted biodiesel synthesis with Cu2O catalyst and mixed oil feedstock using continuous (packed bed) and batch (stirred) reactors; Chemical Engineering Science; 2017; 170; 743-755.

Seema Patel, Aruna Rani and Arun Goyal; Insights into the immune manipulation mechanisms of pollen allergens by protein domain profiling; Computational Biology and Chemistry; 2017; 70; 31-39.

Rwivo Barath, Barsha Deka and Arun Goyal; Purification and characterization of dextranase from Wesserella cibaria RBA12 and its application in in vitro synthesis of prebiotic oligosaccharides in mango and pineapple juices; LWT - Food Science and Technology; 2017; 84; 449-456.

Manishakher Kumar, Samit Nadini, David Kaplan and Biman B Mandal; Localized Immunomodulatory Silk Macrocapsules for Islet-like Spheroid Formation and Sustained Insulin Production; ACS Biomaterials Science & Engineering; 2017; 3; 2443-2456.

Shreya Mehrotra, Samit Nadini, and Biman B Mandal; Stacked Silk-Coll Monolayers as a Biomimetic Three Dimensional Construct for Cardiac Tissue Reconstruction; Journal of Materials Chemistry B; 2015; 7; 6325-6338.

M JC, Reardon PJ, Konwarh R, Knowles JC, Biman B. Mandal; Three Dimensional Construct for Cardiac Tissue Regeneration and Sustained Insulin Production; ACS Biomaterials Science & Engineering; 2017; 9; 8000-8013.

Nandana Bhardwaj, Dimple Chouhan, Biman B Mandal; Tissue engineered skin and wound healing: current strategies and future directions; Current pharmaceutical design; 2017; 23; 3455-3482.

Dimple Chouhan, Bijaysree Chakraborty, Samit K. Nadini and Biman B. Mandal; Role of Non-Mulberry Silk Fibroin in Deposition and Regulation of Extracellular Matrix Towards Accelerated Wound Healing; Acta Biomaterialia; 2017; 48; 157-174.


D. Singh, D. Kabiraj, P. Sharma, H. Chetia, P. V. Mosahari, K. Neog, U. Bora; The mitochondrial genome of Muga silkworm (Antheraea assamensis) and its comparative analysis with other lepidopteran insects; PloS One; 2017; 12; 11; 1-23.
J. Bori, N. Behera, S. Mahata, V. Manivannan; Surface complexed ZnO quantum dot for white light emission with controllable chromaticity and color temperature; Langmuir, 2017; 33; 51; 14627-14633.


S. A. Bhat, A. A. Dar, S. Ahmad, A. T. Khan; Structural, vibrational and NMR spectroscopic investigations of newly synthesized 3-(ethyliothio(4-nitrophenoxy) methyl)-1H-indole; Journal of Molecular Structure; 2017; 1145; 94-101.

M. Belal, A. T. Khan; PTSA:H2O-Catalyzed Reaction of 3-Aminocoumarins and Phenylacetaldehydes: A Route to Access Various Pyrido[2,3-c]quinoline Derivatives; ChemistrySelect; 2017; 2; 32; 10501-10504.

A. Modi, P. Sau, B. K. Patel; Base-Promoted Synthesis of Quinoline-4(1H)-thiones from o-Alkynylanilines and Aroyl Isothiocyanates; Organic Letters; 2018; 19; 22; 6128-6131.

A. Mandal, B. K. Patel; Rationalization of weak interactions in the fluorescence active imidazo[1,5-a]-pyridine derivatives: A combined experimental and computational study; Journal of Molecular Structure; 2017; 1147; 735-746.

D. Mahesh, V. Satheesh, S. V. Kumar, T. Punniamurthy; Copper(II)-Catalyzed Oxidative Coupling of Anilines, D. Mahesh, V. Satheesh, S. V. Kumar, T. Punniamurthy, S. V. Kumar; Copper(II)-Catalyzed Oxidative Coupling of Anilines and 1H-Indoles; Journal of Molecular Structure; 2017; 1145; 94-101.


Monisha Singh, Sayantani Roy, Satya Deo Pandey, Subhendu Sekhar Bag, Prabuddha Bhattacharya, Moniak Das, Anindyad S. Ghosh, Debashis Ray, AmitBasak; Use of azidonaphthalimide carboxylic acids as fluorescent templates with a built-in photoreactive group and a flexible linker simplifies protein labeling as fluorescent tags for penicillin binding proteins; Chemical Communications; 2017; 56; 23; 14438-14445.

S. S. Bag, A. Vashnyeen; Uric-acid amino acid as a scaffold for -sheet peptidomimetics; Study of photophysics and interaction with BSA protein; Bioorganic and Medicinal Chemistry Letters; 2017; 27; 24; 5387-5392.


S. S. Bag, S. Jana; Axially chiral amino acid scaffolds as efficient fluorescent discriminators of methanol-3-(1-Isquinolinyl)imidazo[5,1-a]isquinoline; ChemistrySelect; 2017; 2; 11727-11731.

S. Samanta, S. Balder, P. Dey, U. Manna, A. Ramesh, G. Das; A ratiometric fluorogenic probe for the real-time detection of SO3 2- in aqueous medium: Application in a cellulose paper based device and potential to sense SO3 2- in mitochondria; Analyst, 2017; 143; 1; 250-257.


A. H. Malik, A. Kalita, P. K. Iyer; Development of Well-Preserved, Substrate-Versatile Flat Fingerprints by Aggregation-Induced Enhanced Activation-Conjugated Polyelectrolyte. ACS Applied Materials and Interfaces; 2017; 9; 42; 37501-37508.


A. Saha, S. Panda, N. Pradhan, K. Kalita, V. Trivedi, D. Manna; Azidophosphonate Chemistry as a Novel Class of Vesicle Forming Phosphonohydrid; Chemistry-A European Journal; 2017; 24; 5; 1121-1127.


B. Phukan, C. Mukherjee, R. Varshney; A New Heptadentate Picolinate-Based Ligand and Its Corresponding Gd(III) Complex; The Effect of Picolinate versus Acetate Pendant on Complex Properties; Dalton Transactions; 2017; 47; 135-142.

B. Phukan, S. Ghorai, K. Deka, P. Deb, C. Mukherjee; Interactions of Alkali and Alkali-Earth Metals in Water-Soluble Heterometallic FeIII/M (M = Na+, K+, Ca2+) -Type Coordination Complex; Crystal Growth & Design; 2017; 18; 3; 531-539.

S. Dutta, P. N. Das, D. Mahanta; Dynamics and control of spiral and scrollwaves; Complexity and Synergetics; 2017; 155-165.


S. Ghosh, C. K. Jana; Metal-Free Thermal Activation of Molecular Oxygen Enabled Direct CH2-Oxygenation of Free Amines; The Journal of Organic Chemistry; 2017; 83; 260-266.

Debapratim Das, Rajeshri Samanta; Iridium(III) Catalyzed Regiocontrolled Direct Amidation of Isoquinolines and Pyridones; Advanced Synthesis & Catalysis; 2017.

B. Pramanik, S. Ahmed, R. Roy, B. K. Das, N. Singh; A DNA-NDI hybrid to efficiently detect histone in parts trillon (ppt) level; ChemistrySelect; 2017; 2; 8911-8916.

B. Pramanik, S. Ahmed, N. Singha, D. Das; Self-Assembly Assisted Tandem Sensing of Ps2Cu and -CN by a Perylenediimide-Peptide Conjugate; Chemistry Select; 2017; 2; 10061-10066.


A. Phukon, K. Sahu; How do the interfacial properties of zwitterionic surfotetaine micelles differ from those of cationic alkyll quaternary ammonium micelles? An excited state proton transfer study; Physical Chemistry Chemical Physics; 2017; 19; 46; 31461-31468.


A. Das, S. Biswas; A multi-responsive carbazole-functionalized Zr(IV)-based metal-organic framework for selective sensing of Fe(II), cyanide and p-nitrophenol; Sensors and Actuators, B: Chemical; 2017; 250; 121-131.

P. Mandal, B. K. Kundu, K. Vyas, V. Sabu, A. Helen, S. S. Dhanakhar, C. M. Nagaraja, D. Bhattacharjee, K. P. Bhakab, B. Mukhopadhyay; Ruthenium(II) arené NSAID complexes: Inhibition of cyclooxygenase and antiproliferative activity against cancer cell lines; Dalton Transactions; 2017; 47; 2; 517-527.

A. Das, J. Deka, A. M. Rather, B. K. Bhunia, P. P. Saikia, B. B. Mandal, K. Raidongia, U. Manna; Strategic Formulation of Graphene Oxide Sheets for Flexible Monoliths and Robust Polymeric Coatings that Embedded with Durable Bio-inspired Wettability; ACS Applied Materials & Interfaces; 2017; 9; 48; 42354-42365.

D. Parbat, U. Manna; Selective Liaison With Liquids for Environment-Friendly and Comprehensive Oil/Water Separation; Chem Sus Chem; 2017; 10; 4839-4844.

A. M. Rather, N. Jana, P. Hazarika, U. Manna; Sustainable polymeric material for the facile and repetitive removal of oil-spills through the complementary use of both selective-absorption and active-filtration processes; Journal of Materials Chemistry A; 2017; 5; 23339-23348.


Design
U. R. Salve; Relationship of duration of work exposure and feeling of subjective fatigue: A case study on jewellery manufacturing workers in India; International Journal of Environmental Health Engineering; 2017; 6; 1; DOI: 10.4103/jehe.jehel_10_15.


Electronics
N. C. Resmi , Sonali Chouhan; A Novel Interdependent Source-Channel Coding Technique for Enhanced Energy Efficiency in Communication over Wireless Sensor Networks; Springer Wireless Personal Communications; 2017; 96; 3; 3727-3743.

S. Kumar, Sonali Chouhan; Performance Analysis of SIMO spectrum sharing networks over correlated k-shadowed fading relying on MRC reception; Elsevier AEU - International Journal of Electronics and Communication; 2017; 82; 104-108.


Pavan Kumar Manchi, Roy Paily and Anup Kumar Gogoi; Low Power Digital Baseband Transceiver Design for UBW Physical Layer of IEEE 802.15.6 Standard; IEEE Transactions on Industrial Informatics; 2017; 13; 15; 2474-2483.


R. Chopra, R. Annavajjala and C. R. Murthy; Distributed Cophasing With Autonomous Constellation Selection; IEEE Transactions on Signal Processing; 2017; 65; 21; 5798-5811.

Kukil Khanikar, Rohit Sinha, R. Bhattacharjee; Cooperative Spectrum Sensing using Quantized Energy Statistics in the Absence of Dedicated Reporting Channel; IEEE Transactions on Vehicular Technology; 2017; 19; PrePrint.

Rohit Sinha, Syed Shahnawazuddin; Assessment of Pitch-Adaptive Front-End Signal Processing for Children’s Speech Recognition; Computer Speech & Language; 2017; 1; 48; 103-121.

Om Singh, Rohit Sinha; Sparse coding of i-vector/JFA latent vector over ensemble dictionaries for language identification systems; International Journal of Signal Processing; 2017; 1-16.

J. Sanam, S. Ganguly, A. K. Panda; Distribution in India: A View from Households; Economic and Political Weekly; 2017; 15; 2474-2483.

Design
U. R. Salve; Relationship of duration of work exposure and feeling of subjective fatigue: A case study on jewellery manufacturing workers in India; International Journal of Environmental Health Engineering; 2017; 6; 1; DOI: 10.4103/jehe.jehel_10_15.


Electronics
N. C. Resmi , Sonali Chouhan; A Novel Interdependent Source-Channel Coding Technique for Enhanced Energy Efficiency in Communication over Wireless Sensor Networks; Springer Wireless Personal Communications; 2017; 96; 3; 3727-3743.

S. Kumar, Sonali Chouhan; Performance Analysis of SIMO spectrum sharing networks over correlated k-shadowed fading relying on MRC reception; Elsevier AEU - International Journal of Electronics and Communication; 2017; 82; 104-108.


Pavan Kumar Manchi, Roy Paily and Anup Kumar Gogoi; Low Power Digital Baseband Transceiver Design for UBW Physical Layer of IEEE 802.15.6 Standard; IEEE Transactions on Industrial Informatics; 2017; 13; 15; 2474-2483.


Design
U. R. Salve; Relationship of duration of work exposure and feeling of subjective fatigue: A case study on jewellery manufacturing workers in India; International Journal of Environmental Health Engineering; 2017; 6; 1; DOI: 10.4103/jehe.jehel_10_15.


Electronics
N. C. Resmi , Sonali Chouhan; A Novel Interdependent Source-Channel Coding Technique for Enhanced Energy Efficiency in Communication over Wireless Sensor Networks; Springer Wireless Personal Communications; 2017; 96; 3; 3727-3743.

S. Kumar, Sonali Chouhan; Performance Analysis of SIMO spectrum sharing networks over correlated k-shadowed fading relying on MRC reception; Elsevier AEU - International Journal of Electronics and Communication; 2017; 82; 104-108.


Pavan Kumar Manchi, Roy Paily and Anup Kumar Gogoi; Low Power Digital Baseband Transceiver Design for UBW Physical Layer of IEEE 802.15.6 Standard; IEEE Transactions on Industrial Informatics; 2017; 13; 15; 2474-2483.
parametric interactions; Physical Review A ; 2017; 96; 053827.

Jitendra Kumar, Harshal B. Nemade and P. K. Giri; Density functional theory investigation of negative differential resistance and efficient spin filtering in niobium-doped armchair graphene nanoribbons; Physical Chemistry Chemical Physics; 2017; 19; 29685-29692.


Gone Rajender, Jitendra Kumar, P. K. Giri; Interfacial charge transfer in oxygen deficient TiO2-graphene quantum dot hybrid and its influence on the enhanced visible light photocatalysis; Applied Catalysis B: Environmental; 2017; 224; 960-972.

Jitendra Kumar, Harshal B. Nemade and P. K. Giri; Adsorption of Small Molecules on Niobium Doped Graphene: A Study Based on Density Functional Theory; IEEE Electron Device Letters; 2017; 39; 2; 296-299.


D. Borah, A. Gupta; New viable region of an inert Higgs doublet dark matter model with scotogenic extension; Physical Review D; 2017; 96; 115012.

D. Nanda, D. Borah; Common origin of neutrino mass and dark matter from anomaly cancellation requirements of a U(1)B−L model; Physical Review D; 2017; 96; 115014.

K. Bora, D. Borah, D. Dutta; Probing Majorana neutrino textures at DUNE; Physical Review D; 2017; 96; 075006.

D. Borah, A. Dasgupta, S. Patra; Common origin of 3.55 keV x-ray line and gauge coupling unification with left-right dark matter; Physical Review D; 2017; 96; 115019.

Partha P. Dey and Arika Khare; Nonlinear optical and optical limiting response of PLD nc-Si thin films; Journal of Material Chemistry C; 2017; 5; 12211-12220.

Ramakrishna Madaka, Venkanna Kanneboina and Pratima Agarwal; Raman and Spectroscopic ellipsometry studies of a-Si:H thin films on low cost photo paper substrate; Materials today: PROCEEDINGS; 2017; 4; 14; 12666-12670.

V. Kanneboina, Ramakrishna Mandaka and Pratima Agarwal; Influence of Hydrogen Plasma treatment of intrinsic a-Si:H layer on the performance of the c-Si/a-Si:H heterogeneous solar cells; Materials today: PROCEEDINGS; 2017; 4; 14; 12726-12729.

Kajwal Kumar Patra, Akash Bhattacharya and Swati Bhattacharya; Allosteric Signal Transduction in HIV-1 Restriction Factor SAMHD1 Proceeds via Reciprocal Handshake across Monomers; Journal of Chemical Information and Modeling; 2017; 57; 2523-2538.

Energy

Asha Yadav and Pratima Agarwal; Laser Induced Selective Crystallization of Amorphous Silicon Thin Film for Device Applications; Materials Today: PROCEEDINGS; 2017; 4; 14; 12722-12725.

Environment

V. B. Barua, A. S. Kalamdhad; Anaerobic biodegradability test of water hyacinth after microbial pretreatment to optimise the ideal F/M ratio; Fuel; 2017; 91; 97.


V. B. Barua, A. S. Kalamdhad; Biochemical methane potential test of untreated and hot air oven pretreated water hyacinth: A comparative study; Journal of Cleaner Production; 2017; 166; 273-284.

I. Vishan, S. Senthilkumar, A. S. Kalamdhad; Biosoportion of lead using Bacillus badius AK strain isolated from compost of green waste (water hyacinth); Environmental Technology; 2017; 38; 1812-1822.


L. Senthilkumar, A. S. Kalamdhad; Biochemically methane potential test of untreated and hot air oven pretreated water hyacinth: A comparative study; Journal of Cleaner Production; 2017; 166; 273-284.

Rural Technology

B. Saha, C. Devi, M. Khwairakpam, A. S. Kalamdhad; Vermicomposting and anaerobic digestion – viable alternative options for terrestrial weed management − a review; Biotechnology Reports; 2017; 17; 70-76.
Students Awards and Honours

BSBE

Chemistry
Mr. Adil and Ms. Dibiyangana received the Tertiary Prize in ISBE Bionic Innovation Competition
Mr. Adil and Ms. Dibiyangana received the best poster award at Chemcon2017 held at IIT Guwahati.
Mr. Adil received the award for best oral presentation at International Conference on Advances in Polymer Science & Technology, 2017.
Titli Ghosh received the best poster award at Chemcon2017 held at IIT Guwahati.

Computer Science
Miss Sonia was awarded IEEE Systems, Man, and Cybernetics (SMC) Student and Young Professional Travel Grant by IEEE SMC on 05 October 2017 to present the paper titled “An Immuno-inspired Online Feature Selection Mechanism” at the conference.
Miss Sonia was the Winner of the Hackathon at 2017 IEEE Systems, Man, and Cybernetics (SMC) Brain Hackathon conference held at Banff, Canada. 5—8 October 2017.
Mousumi Handique received the Best Paper Award in VLSI Track at IEEE TENCON Conference on November 2017.

Design
Darpan Bajaj received the Best Film (Gender) award at 5th Woodpecker international film festival 2017 for the Documentary ‘Mahrarajin’ on 12 November 2017.
Darpan Bajaj received the Best Director award at the 6th Smita Patil Documentary and Short film festival 2017 for the Documentary ‘Mahrarajin’ on 11 December 2017.
Darpan Bajaj received the Best Documentary Jury (Student Category) award at the 6th Delhi shorts international film festival for the Documentary ‘Mahrarajin’ on 2 November 2017.

Humanities
Neelharit Kashyap received the Best Paper award to a research paper (with Ms Neel Harit Kausik) at the 7th InSPA International Conference on School Psychology: School Counselling and Skill Development. University of Mysore for the paper ‘An intervention based on self-determination theory and nurtured heart approach for students with learning disability’.

Mechanical
Sunil Kumar Singh received 2nd Prize at International-National Conference on Mechanism and Machines (iNaCoMM) held in BARC Mumbai on 15 December 2017 for the paper titled ‘A partially statically balanced scissor-linkage based robot’.

Physics
Prahald Kumar Baruah received the Best Poster Award at DAE Solid state Physics Symposium-2017, Bhabha Atomic Research Centre (BARC), Mumbai for the paper titled ‘Effect of laser energy on the SPR and size of silver nanoparticles synthesized by pulsed laser ablation in distilled water’ on 30 December 2017.
Eshita Mal received the Best Poster Award at National Laser Symposium (NLS), Bhabha Atomic Research Centre(BARC), Mumbai for the paper titled ‘Characterization of laser produced tungsten plasma in air using time resolved laser induced breakdown spectroscopy (LIBS)’ on 23 December 2017.
S. S. Goutam Buddha received the Optical Society of India second best poster award at the International Conference on Advances in Optics and Photonics, November 2017 for the paper ‘Development of a Scanning Optical Microscope with a Holographically Designed Illumination Beam’ on November 2017.

Environment
Poulami Datta received the Best paper award in Bioenergy and Biochemical Engineering from the Indian Institute of Chemical Engineers, CHEMCON 2017, for the paper titled “Isolation and Characterization of Crude Oil Degrading Bacteria from Formulation Water of Assam Oil Reservoir, India” on 30 December2017.
Sayanti Ghosh received the Best poster award in “Wastewater Treatment” category from the Indian Institute of Chemical Engineers, CHEMCON 2017, for the paper titled “Aerobic Granulation in Sequencing Batch Reactors (SBR) and Degradation of Waste Motor Oil” on 30 December 2017.

Energy
Sharbani Kaushik received the Young Scientist Award 2017 for his paper titled ‘Creditable contribution to advanced materials research’ from the Materials Research Society of India (MRSI), Kolkata Chapter held in IIEST, Shibpur on 11 October, 2017.
Sharbani Kaushik received the Best Poster award at 5th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN 2017), organized by ITG for the poster titled ‘Quantum dots and Graphene Nanoplatelets in a Silk film matrix stimulates cyanobacterial photosystems to generate steady current in a PMFC’ on 27 December 2017.
Asha Yadav received the Best paper presentation Award at the International Conference on Thin Films (Nov 13-17, 2017) NPL, New Delhi, India for the paper titled ‘Persistent photoconductivity and space charge limited conduction in a Si:H/In:H multilayer structure: Role of interface states’ on 17 November 2017.
Pilik Basumatary received the Best Poster Presentation Award at the XIX International Workshop on The Physics of Semiconductor Devices(Dec 11-15, 2017), IIT Delhi for the poster titled ‘Large area MAPbI3 perovskite thin films by two step method with improved stability’ on 15 December 2017.

Nanotechnology
Neha Arora received Student Travel Award for Poster presentation at Nano Today journal, The Institute of Bioengineering and Nanotechnology (IBN) and Elsevier for the poster titled ‘PEGylated Silver Nanoclusters Mediated Cytosolic Delivery of Tumor Suppresser Protein PTEN to Modulate in vitro Cellular Signalling’ on 6 December 2017.
Neha Arora received the ACS Poster presentation Award from the IIT Guwahati/American Chemical Society for the paper titled ‘PEGylated Silver Nanoclusters Loaded Recombinant PTEN’ on 19 December 2017.
Deepanjalee Dutta received the Indian Society of Nano medicine-BC best poster award from the Indian Society of Nano medicine for the paper titled ‘Bimetallic Au–Ag Nanoclusters embedded Cationic BSA nanocarrier for Bioimaging and Suicide gene therapy of HeLa cancer cells’ on 8 December 2017.
Deepanjalee Dutta received the RSC Poster Award for poster presentation from the IIT Guwahati/Royal Society of Chemistry for the paper ‘Bimetallic Au–Ag nanoclusters embedded nanocarrier for bioimaging and suicide gene therapy of HeLa cancer cells’ on 19 December 2017.

Chemical
Anusuya Talukdar received the Best Paper Award for the paper titled ‘Effect of H2S and Acetic Acid on CO2 Corrosion of Carbon Steel’ at CORCON-2017, Mumbai, India held from 17 -20 September 2017.
Saiarpur Pati received the Ambuja’s Young Researcher’s Awards for doing Post-Graduate Studies in India from CHEMCON 2017, Haldia held from 27-30 December 2017.
Binota Thokchom received the DST INSPIRE Faculty Award from DST.
Barnali Bhui received the Best Oral Presentation at Sustainable Energy and Environmental Challenges (SEECC-2018), IISC Bangalore held from 31 December—3 January 2018.
Hearing Loss by our alumnus, which was followed by a chat session with the Australian Cricketer. Global Hearing Ambassador of Cochlear. The Inaugural Ceremony started with a talk on spreading awareness in the world of cricket during his international career, and is also associated with raising awareness about hearing loss as the cricketer Mr. Brett Lee was the Chief Guest for the inauguration ceremony. Mr. Lee, one of the fastest bowlers in the world, was a part of the Spirit-2017 inaugural function of the 7th edition of the annual sports festival of IIT Guwahati, Spirit, held from 12th to 15th October 2017. The 7th edition of the annual sports festival of IIT Guwahati, Spirit, was held from 12th to 15th October 2017 at Dr. Bhupen Hazarika Auditorium. Renowned British Cricketer Mr. Brett Lee was the Chief Guest for the inauguration ceremony. Mr. Lee, one of the fastest bowlers in the world of cricket during his international career, is also associated with raising awareness about hearing loss as the Global Hearing Ambassador of Cochlear. The Inaugural Ceremony started with a talk on spreading awareness on Hearing Loss by our alumnus, which was followed by a chat session with the Australian Cricketer.

Mechanical
R. Tiwari; Rotor Systems: Analysis and Identification; CRC, 1; 2017; Total pages: 1089; 1138036285.

Environment
Rajeev Ravindran, Saptadiv P. Das, Deepmoni Deka, Mohammad Jawed and Arun Goyal; Lignocellulosic biomass as a sustainable source for bioethanol production; Water Science and Technology by Springer Book Series; Springer.

Faculty Awards and Honours
BSBE
Prof. Vikash Kumar Dubey received ICMR award from honorable Minister of State, Health and Family Welfare, Government of India and director general of the Indian Council of Medical Research on 11-Oct 2017 for his Scientific contribution in the field of Biomedical research.
Latha Rangan was made the Fellow of the National Academy of Sciences, Allahabad for her contribution in areas of Plant Sciences on 9 December 2017.
Prof. Arun Goyal received the Excellence in Carbohydrate Research (ECR) Award - 2017 from Association of Carbohydrate Chemists and Technologists of India, in recognition of outstanding contribution in the area of Structure and functions of carbohydrates and carbohydrate enzymes, on 18-20 December 2017.

Chemistry
Dr. U. Manna received the BNRS Young Scientist Research Award.
Dr. D. Das received the DST UKIERI Thematic Partnership Award.
Dr. D. Sriramani received Alexander von Humboldt at the Programme at RWTH Aachen University.

Computer Science
Purandar Bhaduri received IEEE Senior Membership from IEEE in October 2017.
Jatindra Kumar Deka and Santosh Biswas received the Best Paper Award in VLSI Track at IEEE TENCON in December 2017.

Design
Supradip Das received the TED MINT Internship from 3M Sweden and Campus Varnamo, Sweden on 20-24 Nov 2017.

Humanities
Dilwar Hussain received the Outstanding Scientist at the Centre for Advanced Research and Design (CARD) of Venus International Foundation (VIF) Chennai in 2017.
Dilwar Hussain received the Best paper award to a research paper (with Ms Neel Harit Kausik) at the 7th InSPA International Conference on School Psychology: School Counselling and Skill Development. University of Mysore for the paper ‘An intervention based on self-determination theory and nurtured heart approach for students with learning disability’.

Mechanical
Amaresh Dalal received the Prof. KN Seetharamu Medal and Prize for the Best Young Researcher in Heat-Transfer 2017 from the Indian Society of Heat and Mass Transfer on 29 December 2017.
Poonam Kumari received the Young Engineer INAE-2017 from the Indian National Academy of Engineering on 15 December 2017.
P. Muthukumar received the Mechanical Engineering Design Award 2017 from the National Design & Research Forum (NDRF) of Institute of Engineers (India) for outstanding Individual contribution in Engineering Design on 21 December 2017.
P. Muthukumar received the Fulbright-Nehru Academice & Professional Excellence Award (Teaching & Research) 2017 from the Indo - U.S. Science and Technology Forum for his contribution in Teaching and Research.
IIT Guwahati has been extending support to the Chief Minister’s Gyanjyoti Programme since its inception. Large number of students from various places of Assam visited the Institute this year too, as part of the programme. The Institute arranges motivational lectures, presentations and campus sightseeing for the visiting students.

**Visitors from Other Institutes**

**BSBE**

- **Prof. U N Das**, Founder and director of UND life sciences, USA; ‘Dogmas about health and disease’; 31 October 2017.
- **Dr. Partho Sarathi Ray**, Department of biological sciences, Indian Institute of science education and research (IISER), Kolkata; ‘Signal integration in biological systems: Combining computational and experimental approaches to decipher the translation regulatory network controlling p53 expression in response to DNA damage’; 28 November 2017.
- **Dr. Sankar Basu**, University of Delhi; ‘The globular disordered interface in proteins: Addressing molecular evolution from protein design’; 8 December 2017.
- **Dr. Ana M L Sousa**, University of Strathclyde, UK; ‘Plant based polyphenols coatings for surface functionalization’; 18 December 2017.
- **Dr Rahul Roy**, IISC Bangalore; ‘Microdroplet technologies for single cell and single molecule analysis’; 18 December 2017.

**Chemical**

- **Prof. Suryasarathi Bose**, Department of Materials Engineering, Indian Institute of Science (IISc); ‘Polymeric Membranes for Water Purification’; 13 November 2017.
- **Prof. Akio Ebihara**, Applied Biological Sciences, Gifu University, Japan; ‘Introduction to structural biology’; 13 December 2017.
- **Prof. Debashis Kuila**, Research Director, NSF CREST Bioenergy Centre; ‘Nanocatalyst Development for Fuels from Biomass at NSF-CREST Bioenergy Centre of NC A&T’; 19 December 2017.

**Computer Science**


**Electronics**

- **Dr. K. Samudravijaya**, Tata Institute of Fundamental Research (TIFR), Mumbai; ‘Advanced MATLAB Applications to Robotics & Signal Processing 2017’; 07 and 08 October 2017.

**Humanities**

- **Prof. Ratul Lahkar**, IIM Udaipur; ‘An Evolutionary Analysis of Growth and Fluctuations with Negative Externalities’; 20 October 2017.
- **Prof. Anabel Ford**, Director, ISBER/MesoAmerican Research Centre University of California, Santa Barbara, USA; ‘Learning from the Ancient Maya and El Pilar: Conservation of Culture and Nature in the Maya Forest’; 23 October 2017.
- **Prof. R. Radhakrishnan**, Chancellor’s Professor of English & Comparative Literature, University of California, Irvine; ‘Jacques Derrida: The Philosopher that Therefore he has to be’; 30 October 2017.
- **Dr. S.B. Ota**, Director, Archaeological Survey of India, Ministry of Culture, Govt. of India; ‘Investigations of Prehistoric Sites: Examples from Central India’; 21 November 2017.

**Energy**

- **Prof. Eduardo Corton**, University of Buenos Aires, and IQUIBICEN-CONICET, Argentina; ‘Exchange of research ideas and future research collaborations in the area of Biosensors and Microbial fuel cell’; 31 October – 16 January, 2018.

**Rural Technology**

- **Dr. Jayanta Kumar Sarma**; ‘Indigenous Knowledge System base practices and glimpses of traditional technology; Some observation from NER, India’; 15 November, 2017.
The Department of Humanities and Social Sciences of IIT Guwahati organized the fourth edition of its annual research meet from 2-4 November 2017. This conference is a novel event organized by the incumbent graduate students of the Department under faculty mentoring. The Graduate Research Meet was conceptualised first in 2014 as a platform to provide the research scholars in the North East and across the country to showcase their research, interact with their peers and receive mentorship from subject experts in a variety of fields. Student conferences are rare in India and young researchers in the humanities and social sciences often do not get opportunities for peer interaction and input on their research projects. Moreover, there is a significant gap in dialogue between graduate students of the North East and that of other parts of India. Organizing a national seminar in IIT Guwahati inviting students from all across India aims also to bridge this gap. The research scholars of IITG-HSS organize GRM every year with such realities and considerations in mind. The IIT Guwahati's HSS department is uniquely able to provide support in this respect in that it houses a multidisciplinary faculty comprising eleven disciplines from the humanities and social sciences. The catch line of GRM is ‘Ideas, Innovation, Interdisciplinary.’

This year’s meet was a successful event with the Director of IIT Guwahati, Prof. Gautam Biswas inaugurating the Meet and well-known author and academic Prof. Nilanjana Gupta, Dept. of English Jadavpur University, delivering the keynote address, which was interestingly titled “The In(ter)discipline of Knowledge”. Like every year, GRM ’17 too drew participants from prestigious institutes outside Assam, like Jawaharlal Nehru University, Delhi University, IIT Delhi, IIT Bombay and IIT-ISM Dhanbad, TISS Bombay, Central University of Gujarat, Aligarh Muslim University, Centre for Studies in Social Science, Calcutta, Ambedkar University, Delhi. Participants were also from premier institutes of North Eastern region such as Gauhati University, TISS Guwahati, Assam University, North Eastern Hill University, Dibrugarh University, etc. The themes of the papers were varied and ranged across the disciplinary spectrum of humanities and social sciences. Upholding its motto, the 3-day seminar was divided into sessions that clubbed papers of different disciplines while having a certain continuity in narrative. These sessions were chaired by experts from institutes of Assam as well as outside. This is what sets GRM apart from other national and international seminars in the sphere of humanities and social sciences where most of the academic seminars centre on either specific discipline or themes. By now GRM has gained considerable recognition within Indian academia and with each passing year it is levelling up in terms of organization and papers, carefully curated and animatedly discussed at the conference.

The Meet was sponsored by the Indian Council of Social Science Research (Delhi) with generous support from Oil India and the Indian Society of Labour Economics.

Graduate Research Meet 2017

FCS2017: National Workshop on Fluorescence and Raman Spectroscopy

FCS 2017: National Workshop on Fluorescence and Raman Spectroscopy was organized by the Department of Bioscience and Bioengineering at IIT Guwahati with support from Tata Institute of Fundamental Research, Mumbai and the Fluorescence Society, from 17 to 21 December 2017.

It was attended by several distinguished scientists from India and abroad. In the first half of the meeting, several teaching talks, hands-on and tutorial sessions were conducted to explain the techniques to students.

In the latter part of the meeting, several new developments on the application of fluorescence and Raman techniques in Chemistry and Biology were discussed. The meeting was successful and liked by all the participants.
Biotechnology Orientation Programme-1 was held on 17 October 2017 by Biotech Hub at Conference Hall and Centre for the Environment, IIT Guwahati which was attended by 79 students accompanied by 5 teachers from B.P. Chaliha College, Nagerbera, Kamrup. The students who came from a very interior and remote location was excited to attend the lectures from Prof. Utpal Bora and his PhD students, and also to interact via skype with experts from National Labs in Delhi namely Dr. Dinesh Kumar, IASRI and Dr. Nirala Ramchary, Jawaharlal NU.

Biotechnology Orientation Programme-2 was held on 7th November, 2017 by Biotech Hub at Centre for the Environment, IIT Guwahati which was attended by more than 50 participants including higher secondary level students and teachers from Mandia H.S. School, Mandia, Barpeta. Lectures and interactive sessions were organized by Prof. Utpal Bora and his team members. Skype-mediated interactions with senior scientists- Dr. Sunil Kumar Singh from ICARNBAIM, Mau (UP) and Prof. N. Senthil Kumar from Dept. of Biotechnology, Mizoram University.

Invited Lectures of IIT Guwahati Faculty in India and Abroad

BSBE
Kannan Pakshirajan; Bioprocessing for waste fed biorefineries; SASTRA, Thanjavur, Tamil Nadu; 11-16 December 2017.
Kannan Pakshirajan; Novel sulfidogenic bio reactors for metallic wastewater treatment; IIT Guwahati; 9-11 December 2017.
Kannan Pakshirajan; Evaluation of cheaply produced biochar from biomass gasification effluent for simultaneous polycyclic aromatic hydrocarbon degradation and lipid accumulation by Rhodococcus opacus; Challenges in Environmental Science and Engineering, CESE-2017; Kunming, China; 11 – 15 November 2017.
Kannan Pakshirajan; Chitosan production from Penicillium citrinum biomass for value addition and resource recovery from Industrial wastewater; Challenges in Environmental Science and Engineering, CESE-2017; Kunming, China; 11 – 15 November 2017.
Kannan Pakshirajan; Bioprocessing strategies for production of biofuels and value addition of waste water and waste sludge; Third winter school, Gifu University, Japan; 19-21 December 2017.

Chemistry
T. Punniyamurthy; Regioselective C-H Functionalization and Carbon-Heteroatom Bond Formation; National Symposium on Recent Trends in Chemical Sciences,NIT Meghalaya; 12 October 2017.
M. Sarma; Invited Lecture at Half Day Symposium; Department of Chemistry, I I T Bombay; 31 October 2017.
A. S. Achalkumar; Bay-annulated Perylene Tetraesters as Electroluminescent Liquid Crystals; 24th National Conference on Liquid Crystals, IISER Mohali ;11-13 October 2017.
Subhas Chandra Pan; Organocatalytic Asymmetric Cyclization Reactions; IIT Roorkee; 22-24 December 2017.

Dr. Biman B Mandal; Bioengineered Human Tissues; Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum; 25 October, 2017.

Nabin Gupta; Biclasted Independent Component Analysis (B-ICA) for Complex Biomarker and Subtype Identification; Invited Session Talk, Annual Meet of Indian Academy of Neuroscience 2017, Cuttack; October 2017.
Rakhi Chaturvedi; Cellular Totipotency and Bioaccumulation Capabilities of Plant Cells using Plant Tissue Culture Techniques; 2nd PAN IIT BIOTECH MEET on Synthetic Biology and Cardiovascular Diseases, The International Centre Goa; 5-7 October, 2017.

Anil K Saikia; Contemporary Facets in Organic Chemistry; IIT Roorkee; 22 December 2017.


Uttam Manna; International Conference on Nanotechnology: Ideas, Innovations and Initiatives; IIT Roorkee; 06-08 December 2017.

Uttam Manna; CompFlu; IIT Madras; 18-20 December 2017.

Design
Supradip Das; ‘Innovation in Entrepreneurship’; Lovely Professional University, Punjab; 27-29 October 2017.

Abhishek Srivastava; ‘Design Workshop’; Central Institute of Technology, Kokrajhar; 31 Octoberberto 01 November 2017.

Avinash Shende; A‘ductive Thinking in Design’; Panjab University, Chandigarh; February 2017.

Urmi R. Salve; ‘Basic Ergonomics for Design’; NID Kurukshetra; 3 October to 13 October 2017.

Mechanical


P. Muthukumar; “Green Energy Technologies”; Pondicherry University; 15th December 2017.


Physics
D. Borah; Neutrino Astronomy with the IceCube Experiment & Connection to Dark Matter; St. Anthony’s College; Shillong; 7 October 2017.


D. Borah; Connecting Dark Matter with the Baryon Asymmetry of the Universe; IISER Bhopal; 16 December 2017.


Rural Technology
Meena Khwairakpam; “Vermicomposting of biodegradable waste”; PG College, Chhindwara (M.P); 19-21 December 2017.

Sidip Mitra; “Managing Surface Water Bodies in East and NE India”; “National Ilkoshop on Environmental priorities and Challenges with Special Focus on Eastern and North-Eastern Regions” organised by CSIR-NEERI; 28 - 29 November, 2017.


New Joinings
Dr. Agnirup Sarkar
Assistant Professor
Humanities

Dr. Rithek Ranjan
Assistant Professor
Humanities

Mr. Phool Chand Kumawat
Jr. Tech. Superintendent
Electronics

Mr. Abhishak Sarma
Technical Officer Gr.-II
Electronics

Ms. Syeda Reshma Begum
Jr. Tech. Superintendent
Civil

Mr. Sujit Kumar Deb
Jr. Tech. Superintendent
CIF

Mr. Rumi Rani Pao
Jr. Tech. Superintendent
CIF

Mr. Jyotirmoy Kakati
Technical Officer Gr.-II
Mechanical

Ms. Hiran Deka
Jr. Attendant
Faculty Affairs

Mr. Rubul Gogoi
Jr. Tech. Superintendent
Humanities

Mr. Motiur Rahman Khan
Jr. Technician
Electronics

Mr. Prakash Tripathi
Jr. Technician
Electronics

Mr. Phool Chand Kumawat
Jr. Tech. Superintendent
Electronics

Mr. Rakesh Singha
Jr. Technician
Electronics

Mr. Dipunjay Bishna
Asst. Coach
Chemical

Ms. Jyoti Kumari Mahato
Jr. Technician
Chemical
Festivity at Umiam Hostel
Diwali Celebrations across various hostels of the Institute