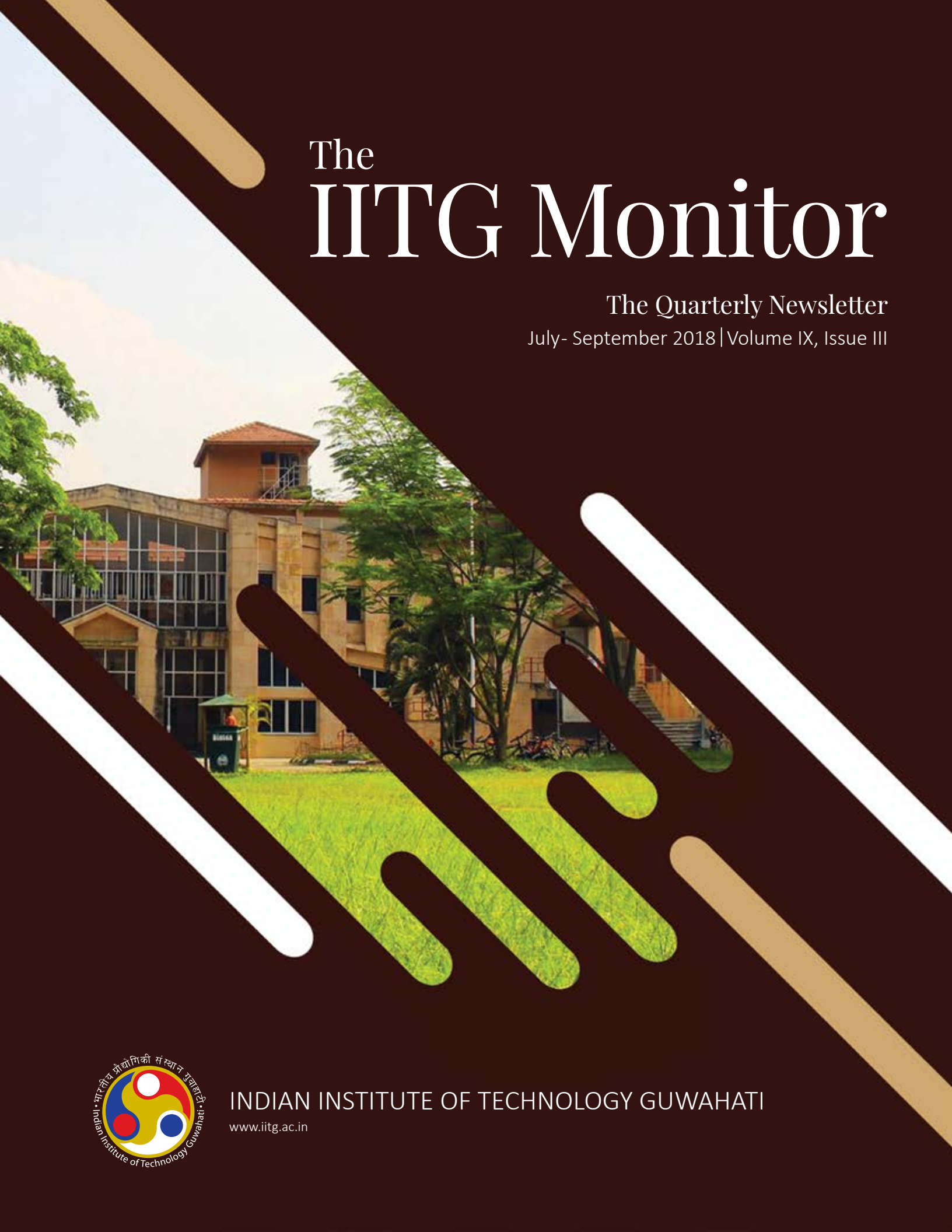

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Swachhata Rankings 2018

IIT Guwahati has been adjudged the second cleanest Institute among all technical institutions and universities (residential) in the country in Swachhata Rankings of the Union ministry of human resource development (MHRD).

The rankings were announced by Union Human Resource Development Minister (HRD) Prakash Javadekar under different categories. The rankings were introduced by MHRD last year to encourage educational institutions towards cleanliness.

Institutions were judged on the basis of a number of parameters of cleanliness like student / toilet ratio, kitchen hygiene, availability of running water, modernity of toilet and kitchen equipment, campus green cover, garbage disposal in hostels and academic buildings, disposal techniques, water supply systems and also a certain weightage to whether the institutions have adopted any neighboring locality or village to spread awareness & activities in Swachhta.

Prof. S. Kakoty, Dean, Infrastructure, Planning and Management, IIT Guwahati and Prof. P. K. Iyer, Prof. In-Charge, Peer Review and Institutional Ranking, IIT Guwahati, received the award on behalf of the Institute.

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J. Kainthola, M. Shariq, A. S. Kalamdhad, V. V Goud; Enhanced methane potential of rice straw with microwave assisted pretreatment and its kinetic analysis; Journal of Environment management; 2019; 232; 188-196.

Kamalesh Verma, Gundappa Saha, Lal Mohan Kundu, Vikash Kumar Dubey; Biochemical characterization of a stable azoreductase enzyme from Chromobacterium violaceum: Application in industrial effluent dye degradation; International Journal of Biological Macromolecules; 2019; 121; 1011-1018.

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Lalit Goswami, R. Vinoth Kumar, Kannan Pakshirajan, G. Pugazhenthi; A novel integrated biodegradation-microfiltration system for sustainable wastewater treatment and energy recovery; Journal of Hazardous Materials; 2019; 365; 707-715.

Lalit Goswami, R. Vinoth Kumar, Siddhartha Narayan Borah, N. Arul Manikandan, Kannan Pakshirajan, G. Pugazhenthi; Membrane Bioreactor and integrated membrane bioreactor systems for micropollutant removal from wastewater: A review; Journal of Water Process Engineering; 2018; 26; 314-328.

Narendra Naik Deshavath, Sushmita Mahanta, Vaibhav V. Goud, V. Venkata Dasu, Srinivasa Rao Pinnamaneni; Chemical composition analysis of various genetically modified sorghum traits: Pretreatment process optimization and bioethanol production from hemicellulosic hydrolyzates without detoxification; Journal of Environmental Chemical Engineering; 2018; 6; 5625-5634.

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Ashish A. Prabhu, Ravi Gadela, Biju Bharali, Narendra Naik Deshavath, V. Venkata Dasu; Development of high biomass and lipid yielding medium for newly isolated Rhodotorula mucilaginosa.; Fuel; 2019; 239; 874-885.

Nanotechnology

Manash Pratim Borthakur, Dipankar Bandyopadhyay, Gautam Biswas, Kirti Sahu; Dynamics of an arched liquid jet under the influence of gravity; European Journal of Mechanics / B Fluids; 2018; 74; 1-9.

Abir Ghosh, Dipankar Bandyopadhyay, Ashutosh Sharma; Influence of Curvature on the Contact Instabilities of Thin Viscoelastic Coatings on the Fiber Surfaces; Physics of Fluids; 2018; 30; 114101.

Serum, Nilanjan Mandal, Mitradip Bhattacharjee, Arun Chattopadhyay, Dipankar Bandyopadhyay; Point-of-Care-Testing of Amylase Activity in Human Blood; Biosensors and Bioelectronics; 2018; 124; 75-81.

Serum, Sagnik Middya, Mitradip Bhattacharjee, Nilanjan Mandal, Dipankar Bandyopadhyay; RGO-Paper Sensor for Point-of-Care Detection of Lipase in Blood accepted; IEEE Sensors Letters; 2018; 2; 2000404.

Sl. No.	Department/Centre	No. of Students
1	Computer Science and Engineering	0
2	Electronics and Electrical Engineering	4
3	Mechanical Engineering	6
4	Civil Engineering	7
5	Design	2
6	Biosciences and Bioengineering	4
7	Chemical Engineering	5
8	Physics	8
9	Chemistry	5
10	Mathematics	1
11	Humanities and Social Sciences	0
12	Centre for Energy	2
13	Centre for the Environment	1
14	Centre for Nanotechnology	1
15	Center for Rural Technology	0
16	Centre for Linguistic Science and Technology	0

PhD Completed July– September 2018

Sl. No.	Department/ Centre	No. of Students	No. of UG Students	No. of PG Students	No. of PhD Students	No. of Foreign Students
1	Computer Science and Engineering	558	358	89	111	6
2	Electronics and Electrical Engineering	833	509	118	206	3
3	Mechanical Engineering	781	340	209	232	8
4	Civil Engineering	731	309	205	217	9
5	Design	312	181	51	80	3
6	Biosciences and Bioengineering	498	200	85	213	2
7	Chemical Engineering	532	264	90	178	4
8	Physics	404	174	90	140	2
9	Chemistry	515	168	94	253	0
10	Mathematics	376	220	82	74	0
11	Humanities and Social Sciences	168	0	63	105	1
12	Centre for Energy	111	0	26	85	2
13	Centre for the Environment	57	0	0	57	0
14	Centre for Nanotechnology	37	0	0	37	0
15	Center for Rural Technology	38	0	17	21	0
16	Centre for Linguistic Science and Technology	8	0	0	8	0
	Total	**5959**	**2723**	**1219**	**2017**	**40**

Student Statistics

Conference/Seminar Abroad

BSBE

Dr. Rakhi Chaturvedi, Professor attended the conference at "International Association for Plant Biotechnology Congress (IAPB)" held at CCD, Dublin, Ireland from 19.08.18 to 24.08.18

Dr. Biman B. Mandal, Associate Professor was invited to speak at "5th TERMIS World Congress 2018" held at Kyoto International Conference Center, Kyoto, japan from 04.09.18 to 07.09.18

Dr. Latha Rangan, Professor attended the conference at "2nd Edition of Global Conference on Plant Science & Molecular Biology (GPMB 2018)" held at Rome, Italy from 20.09.18 to 22.09.18

Chemical

Dr. Senthilmurugan Subbiah, Associate Professor presented a Poster at "8th Singapore International Water Week- Water Convention", held at Sands Expo & Convention Centre, Marina Bay Sands, Singapore from 08.07.18 to 12.07.18

Dr. Ashok Kumar Dasmahapatra, Associate Professor presented a paper at the "Gordon Research Conference – 2018 (GRC), Polymer Physics" held at Mount Holyoke College, South Hadley, Massachusetts, USA from 22.07.18 to 27.07.18.

Dr. Vimal Katiyar, Associate Professor delivered an Invited talk at "15th International Symposium on Bioplastics, Biocomposites & Biorefining (ISBBB 2018)" held at Delta Hotel & Conference Centre, Guelph, Ontaria, Canada from 24.07.28 to 27.07.18.

Dr. Amit Kumar, Associate Professor presented a paper at "23rd International Congress of Chemical & Process Engineering CHISA 2018 & 21st Conference on Process Integration, Modelling & Optimisation for Energy saving & Pollution Reduction PRES 2018", held at Clarion Congress Hotel, Prague, Freyova 33, Prague 9-Vysocany, Czech Republic from 25.08.18 to 29.08.18.

Chemistry

Dr. Sumana Dutta, Associate Professor presented a Poster at the "2018 Gordon Research Conference on Oscillations & Dynamic Instabilities in Chemical Systems" held at Les Diablerets, Switzerland from 08.07.18 to 13.07.18 .

Dr. Manabendra Sarma, Associate Professor presented a Poster at "Gordon Research Conference on Computational Chemistry", held at Mount Snow, West Dover, Vermont, USA from 22.07.18 to 27.07.18.

Dr. Sandip Paul, Professor presented a Poster at the "54th Symposium on Theoretical Chemistry – STC 2018", held at Martin-Luther Universitat, Halle (Salle), Wittenberg, Germany from 17.09.18 to 20.09.18.

Civil

Dr. Rishikesh Bharti, Assistant Professor attended the Symposium "2018 IEEE International Geoscience & remote Sensing (IGARSS)" held at Valencia, Spain from 22.07.18 to 27.07.18.

Dr. Rishikesh Bharti, Assistant Professor presented a Poster at the Symposium "2018 IEEE International Geoscience & Remote Sensing (IGARSS)" held at Valencia, Spain from 23.07.18 to 27.07.18.

Dr. Adapa Murali Krishna, Associate Professor presented a Poster at the "Geo China 2108 – 5th International Conference Civil Infrastructures Confronting Severe Weathers & Climate Changes: From Failure to Sustainability, Hangzhou, China from 23.07.18 to 25.07.18.

Dr. Arup Kumar Sarma, Professor presented a paper at the "4th World Congress on Climate Change & Global Warming" held at Osaka, Japan from 06.08.18 to 07.08.18.

Dr. Sudip Talukdar, Professor presented a paper at the "14th International Conference on Concrete Engineering & Technology" to be held at University of Malaya, Kuala Lumpur, Malaysia from 07.08.18 to 10.08.18.

Dr. Budhaditya Hazra, Assistant Professor presented a paper at the "13th International Conference on Computational Structures Technology" to be held at Barcelona, Spain held from 04.09.18 to 06.09.18.

Computer Science

Dr. Shivashankar B. Nair, Professor delivered an Invited talk held at ETRI ICT Knowledge sharing Programme 2018, Daejeon, South Korea from 08.07.18 to 13.07.18.

Design

Dr. Supradip Das, Assistant Professor attended the "MECHATON 2018 International Student Workshop" held at Shamoon College of Engineering, Beer Sheva, Israel from 08.07.18 to 12.07.18.

Dr. Amarendra Kumar Das, Professor attended the "MECHATON 2018 International Student Workshop" to be held at Shamoon College of Engineering, Beer Sheva, Israel from 08.07.18 to 12.07.18.

Dr. Amarendra Kumar Das, Professor presented a paper at NordDesign'2018 conference held at Linkoping University, Sweden from 14.08.18 to 17.08.18.

Dr. Pradeep Yammiyavar, Professor attended the 5th Human Work Interaction Design held at Aalto University, Espoo, Finland from 20.08.18 to 21.08.18.

Dr. Debkumar Chakrabarti, Professor chaired a session at the "20th Congress of International Ergonomics Association (IEA 2018)" held at Firenze Fiera, Florence, Italy from 26.08.18 to 30.08.18.

Dr. Urmi Ravindra Salve, Assistant Professor chaired a session at the "20th Congress of International Ergonomies Association (IEA 2018)" held at Firenze Fiera, Florence, Italy from 26.08.18 to 30.08.18.

Electronics

Dr. Mahima Arrawatia, Assistant Professor attended the 2018 IEEE International Symposium on Antennas & Propagation & USNC - URSI Radio Science Meeting held at Boston, Massachusetts from 08.07.18 to 13.07.18.

Dr. Srinivasan Krishnaswamy, Assistant Professor presented a paper at the MTNS 2018 to be held at The Hong Kong University of Science & Technology, Hong Kong, China from 16.07.18 to 20.07.18

Dr. Prithwijit Guha, Assistant Professor attended the 24th International Conference on Pattern Recognition (ICPR 2018) held at Beijing, China from 20.08.18 to 24.08.18.

Humanities

Dr. Sambit Mallick, Associate Professor presented a paper at the "XIX ISA World Congress of Society" held at Toronto, Canada from 15.07.18 to 21.07.18.

Dr. Prabhu Venkataraman, Associate Professor presented a paper at the International Conference "Re-learning to Be Human for Global Times: Inculturation & the Shaping of Global Man" held at Tainan, Taiwan from 26.07.18 to 28.07.18.

Dr. Prabhu Venkataraman, Associate Professor presented a paper at the International Conference "Re-learning to Be Human for Global Times" held at Tunghai University, Taichung, Taiwan from 01.08.18 to 02.08.18.

Dr. Prabhu Venkataraman, Associate Professor presented a paper at the International Conference "Re-learning to Be Human for Global Times: The Role of Hermeneutics in Philosophy & Religious Studies" held at Ayutthaya, Thailand from 03.08.18 to 04.08.18.

Dr. Sambit Mallick, Associate Professor presented a paper at the "2018 Annual Meeting of the Society for Social Studies of Science (4S)" held at Sydney, Australia from 29.08.18 to 01.09.18.

Dr. Rajshree Bedamatta, Associate Professor presented a paper at the "Human Development & Capability Association (HDCA 2018 Conference)" held at Buenos Aires, Argentina from 30.08.18 to 01.09.18.

Dr. Ngamjahao Kipgen, Assistant Professor presented a paper at the "ASA2018: Sociality, matter, & the imagination: recreating Anthropology" held at University of Oxford, the UK from 18.09.18 to 21.09.18.

Dr. Sukanya Sharma, Associate Professor attended the "21st Indo-Pacific Prehistory Association Congress (IPPA)" to be held at Hanoi, Vietnam from 23.09.18 to 28.09.18.

Dr. Naveen Kashyap, Associate Professor presented a poster at the "24th Congress of the European Sleep Research Society (ESRS 2018) held at Basel, Switzerland from 25.09.18 to 28.09.18 at Basel, Switzerland from 25.09.18 to 28.09.18.

Mathematics

Dr. Anupam Saikia, Professor attended the "Celebration (50th Anniversary) of CICMA Post-Doctoral Program" held at Montreal, Canada from 02.07.18 to 06.07.18.

Dr. Swaroop Nandan Bora, Professor presented a paper at the "The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications" at National Taiwan University, Taipei from 05.07.18 to 09.07.18.

Dr. N. Selvaraju, Professor presented a paper at the "EURO 2018-29th European Conference on Operational Research" held at Valencia, Spain from 08.07.18 to 11.07.18.

Dr. Arup Chattopadhyay, Assistant Professor participated at the "29th International Workshop on Operator theory & its Applications (2018 IWOTA)", held at East China Normal University, Shanghai, China from 23.07.18 to 27.07.18.

Dr. K. V. Krishna, Associate Professor presented a paper at the '23rd International Conference on Implementation & Applications of Automata (CIAA 2018)", held at University of Prince Edward Island, Charlottetown, Canada from 30.07.18 to 02.08.18.

Mechanical

Dr. Debabrata Chakraborty, Professor attended the "9th International Conference on Computational Methods (ICCM 2018)" held at Rome, Italy from 06.08.18 to 10.08.18.

Dr. Anoop Kumar Das, Professor attended the "9th International Conference on Computational Methods (ICCM 2018)" held at Rome, Italy from 06.08.18 to 10.08.18.

Dr. Amaresh Dalal, Associate Professor attended the "16th International Heat Transfer Conference (IHTC16)" held at Chinese National Convention Center, Beijing, China from 10.08.18 to 15.08.18.

Dr. Balkishna Mehta, Assistant Professor attended the "16th International Heat Transfer Conference (IHTC16)" held at Chinese National Convention Center, Beijing, China from 10.08.18 to 15.08.18.

Dr. Arnab Kumar De, Associate Professor attended the "16th International Heat Transfer Conference (IHTC16)" held at Chinese National Convention Center, Beijing, China from 10.08.18 to 15.08.18.

Dr. Dipankar Narayan Basu, Assistant Professor attended the "16th International Heat Transfer Conference (IHTC16)" held at Chinese National Convention Center, Beijing, China from 10.08.18 to 15.08.18.

Dr. Karuna Kalita, Associate Professor presented a paper at "International Symposium on Magnetic Bearings (ISMB16)" held at Beijing International Convention Centre, Beijing, China from 13.08.18 to 17.08.18.

Dr. P. Muthukumar, Professor attended the "10th International Conference on Applied Energy (ICAE2018)" held at The Hong Kong Polytechnic University. Hung Hom, Hong Kong, China from 22.08.18 to 25.08.18.

Dr. Sachin Singh Gautam, Assistant Professor present a paper at the "1st International Conference on Numerical Modelling in Engineering, NME 2018" held at Congress Center, Het Pand Ghent University, Ghent, Belgium from 28.08.18 to 29.08.18.

Dr. Santosha Kumar Dwivedy, Professor attended the "14th International Conference on VIBRATION ENGINEERING & TECHNOLOGY OF MACHINERY (VETOMAC XIV)" held at Congress Centre, Alameda Campus of the Instituto Superior Technico, Lisbon, Portugal from 10.09.18 to 13.09.18.

Dr. Rajiv Tiwari, Professor attended the "International Conference on Rotor Dynamics" to be held at Windsor Barra Convention Centre, Rio de Janeiro, Brazil from 23.09.18 to 27.09.18.

Physics

Dr. Udit Raha, Assistant Professor attended the 22nd International Conference on Few-Body problems in Physics held at Caen, France from 09.07.18 to 13.07.18.

Dr. Pratima Agarwal, Professor attended the 10th International Conference on Hot Wire(Cat) & Initiated Chemical Vapour Deposition at Kitakyushu, Fukuoka, Japan from 03.09.18 to 06.09.18 & delivered a special talk & research meeting at Gifu University, Japan on 07.09.18.

Dr. Tarak Nath Dey, Associate Professor delivered a Invited talk at the "9th International Conference on Materials Science & Condensed Matter Physics (MSCMP 2018) to be held at Chisinau, Republic of Moldova from 25.09.18 to 28.09.18.

Department of Design in association with department of Mechanical engineering organized a Management Development Programme on Marketing Management during 24th - 28th September, 2018 at IIT Guwahati. The programme was sponsored by Ministry of Heavy Industries and Public Enterprises, Government of India. Altogether 42 senior managers and executives of Central Public Sector Enterprises (CPSE) and State Level Public Enterprises (SLPE) participated in the programme. The participants were from various CPSEs and SLPEs across the country.

The integration of marketing function with all other functions of the organization was discussed. The marketing issues and challenges of CPSE and SLPEs was discussed in details. Operations Management issues are very significant in the marketing function of CPSEs and SLPEs. Therefore the content of the programme was designed appreciating the relevance and interconnection of operations management and marketing management. Various issues of technology management in marketing perspective was also discussed in the programme.

Dr. Bhupati Kumar Das, Ex-MD of Numaligarh Refinery Limited and Bharat Oman Refinery Limited delivered a lecture elaborating some rare examples in the marketing annals in the world. He also urged the participants to prepare for the marketing challenges driven by rapid advancement of technology. Shri Shantikam Hazarika, a renewed management consultant discussed various marketing issues and challenges in the context of CPSE and SLPEs. Shri Amit Bakshi, Director Commercial Operations, Asia Pacific & Middle East, Flowserve Pvt Ltd, Singapore discussed global marketing issues. The programme was very well received and the participants opined that they could gather a holistic and integrative view of marketing management.

VIGYAN JYOTI PROGRAMME AT IIT GUWAHATI

(Funded by DST, New Delhi, India)

August 31 – September 14, 2018

Techniche 2018

Techniche is the annual Techno-Management festival of the Indian Institute of Technology Guwahati, India. Started in 1999, through its past nineteen editions, it has been witnessing a new zenith of techno-management events ranging from raging robotics to corporate module to inspiring lecture series to awe striking workshops to jubilant nites. It served as a distinguished platform for entrepreneurs, innovators and technocrats to showcase their abilities as every edition sought to take a leap forward in redefining and revolutionizing the technology.

The 20th edition of the annual techno-management fest of IIT Guwahati Techniche witnessed the presence of scientists from NASA and ISRO who chaired a discussion on the latest developments in space sciences and technology. This panel discussion was held on September 1 and the topic being "Space Colonization – Does a future await us light years away?". The discussion centred around mankind's attempts at setting up space colonies and the feasibility of such a venture.

Techniche 2018 was held from August 30 to September 2 at the IIT Guwahati campus. The events during Techniche included workshops, technical exhibitions, guest lectures, technical competitions, literary events including Model United Nations.

As a part of Techniche, the students of IIT Guwahati organizeed many events including a lecture series, industrial conclave, technical workshops, robotic competitions, technical exhibitions, pro-nites, the Guwahati Half Marathon, etc.

Guwahati Half Marathon

Ex-Dean of Student Affairs Dr. Chandan Mahanta, facilitating our guest of honors

Stepping into its 20th year of unflappable technical celebration, Techniche – IIT Guwahati organised its 10th edition of Guwahati Half Marathon, a running event organized to promote a better social and human interaction amongst the residents in and around Guwahati. One of the largest events of its kind to be organized by a student body, the Marathon has evolved coherently over the years since its inception in 2009 to become the largest half Marathon in North East India. The marathon was initiated to provide a platform for people from different walks of life to come and spread their cognizance and sense of concern for a better society. The 10th edition of the marathon was successfully organized on 26th August 2018 with its theme "Run for Digital India".

This Guwahati Half Marathon with its theme "Run for Digital India" appealed people to be a part of the change which was for the prosperity of society. It appealed the people to become more responsible towards the issues of society like poverty, illiteracy, hunger, lack of development, inflation amongst others. Guwahati Half Marathon 10th edition gave everyone a platform to think about these issues and brought a little bit of change in the perception of the general public.

Mr. Kamlesh Nagarkoti who was one of the lead seamers in World Cup winning U-19 Indian cricket team was the brand ambassador and coined flag of the marathon.

Keeping in mind the huge participation we get from various walks of life, The Guwahati half Marathon had been conducted as four events: –

Glory Run- The flagship race of the half marathon, it was a 21 km race which was meant mainly to quench professional runners' thirst. Participants from all around India participated in this category.

Spirit Run- It was a 6km race specially designed for the citizens of Guwahati. All age groups were participated in this event which encouraged all citizens to come together and run a race for the cause of their society.

General Championship-This was an event exclusive for schools and colleges, where they battle was out for that one trophy of the General Championship. The top three institutes carried home the trophy and exciting goodies.

Creativity Event–Many children, artists participated in a painting competition which was organized in tandem with the marathon. The competition was a theme based one.

The event started with the professional's marathon of 21KM run in the morning at the Bhogeswari Phukanani Indoor Stadium, GNRC Road, Dispur which soon followed by the 6KM run for the general public.

Book, Book Chapter

BSBE

P. Kumar (Ed.), J. Kumar Patra (Ed.), P. Chandra (Ed.); Advances in Microbial Biotechnology; Apple Academic Press, CRC Press Taylor & Fransis Group; 2018; 9781771886673.

N. M. Deori, R. Deb, R. Banerjee, Nagotu; Yest: A Multifaceted eukaruotic microbe and its Biotechnological application, In Book: Advanmces in microbial biotechnology current trends and future prospects; Applied academic press; 2018.

Chemical

Chandan Das, Kibrom Alebel Gebru; "Polymeric Membrane Synthesis, Modification, and Applications: Electro-Spun and Phase Inverted Membranes"; CRC Press; 1st Edition; 390; ISBN 9781138585799 - CAT# K377129; 2018.

Chandan Das, Sujoy Bose; "Advanced Ceramic Membranes and Applications"; CRC Press; 250; ISBN 9781138055407 - CAT# K33245; 2018.

Physics

Samir Mandal, I. Chattopadhyay, Anuj Nandi and Santabrata Das; Recent Trends in the Study of Compact Objects: Theory and Observation; Indian Academy of Sciences, Astronomical Society of Indian and Springer; 2018; 39 and 1; 120; ISSN 0250-6335.

Energy

Manoj Sharma, Pankaj Kalita, Kula Kamal Senapati and Ankit Garg; Study on Magnetic Materials for Removal of Water Pollutants; IntechOpen.; Emerging Pollutants-Some Strategies for the Quality Preservation of Our Environment; 2018; 18

Nanotechnology

Mitradip Bhattacharjee and Dipankar Bandyopadhyay; Optical Nanosensors for Water Quality Monitoring, Environmental Chemistry for a Sustainable World; Environmental Nanotechnology, Editors: Nandita Dasgupta, Shivendu Ranjan, and Eric Lichtfouse; X; 2018.

Mitradip Bhattacharjee and Dipankar Bandyopadhyay; Conductive Polymer Nanobiosensors, Environmental Chemistry for a Sustainable World, Shivendu Ranjan, and Eric Lichtfouse; Polymer Nanotechnology, Editors: Nandita Dasgupta; X; 2018.

Invited Lectures of Departmental Faculty

BSBE

Rakhi Chaturvedi; "In Vitro Technologies on Plant Bioresource Utilization and Propagation"; Vigyan Jyoti Programme, IIT Guwahati; Guwahati; 11th September 2018.

Sachin Kuma; "Life Sciences"; Vigyan Jyoti Programme, IIT Guwahati; Guwahati; 12th September 2018.

Ajaikumar B Kunnumakkara; "Role of Nanotechnology in the development of safe, efficacious and affordable drugs for the prevention and treatment of cancer"; Mahatma Gandhi University; Kottayam, Kerala; 11th July 2018.

Ajaikumar B Kunnumakkara; "Curcumin: The Indian Solid Gold for the Prevention and Treatment of Different Chronic Diseases"; NIPER Guwahati; Guwahati, Assam; 25th August 2018.

Ajaikumar B Kunnumakkara; "The potential of natural products in the prevention and treatment of oral cancer"; Swami Rama Himalayan university; Rishikesh; 14th September 2018.

Ajaikumar B Kunnumakkara; "The Role of Nutraceuticals in the Prevention and Treatment of Chronic Diseases"; Manipal Institute of Higher Education; Manipal, Karnataka; 24th September 2018

Kannan Pakshirajan; "Cost-Effective And Large-Scale Production Of Biosurfactants For Sustainable Agriculture"; North Eastern Hill University; Shillong; 10-12th September 2018

Kannan Pakshirajan; "Environmental Pollution: Causes, Effects and Control"; Vigyan Jyoti Programme, IIT Guwahati; Guwahati; 13th September 2018.

Kannan Pakshirajan; "GREEN SYNTHESIS OF NANOPARTICLES FOR ENVIRONMENTAL APPLICATIONS"; IIT Roorkee; Roorkee; 14th September 2018.

Kannan Pakshirajan; "COST-EFFECTIVE AND LARGE-SCALE PRODUCTION OF BIOSURFACTANTS FOR SUSTAINABLE AGRICULTURE"; North Eastern Hill University; Shillong; 10-12th September 2018.

Sanjukta Patra; "Biotechnology in Daily Life: Scope and Limitations"; Vigyan Jyoti Programme, IIT Guwahati; Guwahati; 12th September 2018.

Chemical

Dr. Vimal Katiyar; Sustainable Polymers and Nanocomposites; TEQIP III in the department of Chemical Engineering, IIT Guwahati; IIT Guwahati; 17th July, 2018.

Dr. Vimal Katiyar; Biodegradable Food Packaging, International Conference on Recent Advances in Food Processing Technology (iCRAFPT); Thanjavur; Thanjavur; 17-19 August 2018.

Computer Science

John Jose; "Advanced Computer Architecture"; Ilahia College of Engineering; Muvattupuzha, Kerala; July; 2018.

John Jose; "How to professionally manage your doctoral research days for a rewarding career?"; Alumi Talk; IIT Madras; August; 2018.

John Jose; "How to plan your engineering education for a professionally rewarding career?"; Government Engineering College; Trivandrum, Kerala; August; 2018.

Hemangee K. Kapoor; "Masters Vs. PhD"; ACM India Grad Cohort; IIT Bombay; July; 2018.

Shivashankar B Nair; "Bio Inspired Systems and Programming Agents in Tartarus"; TEQIP-III Design and Deployment of Cyber Physical Systems; NIT Silchar; September; 2018.

Viyaya Saradhi; "title: "Multiview Learning""; The 3rd Indian Workshop on Machine Learning (iWML 2018); IIT BHU; 1-3; July; 2018.

Visitors From Other Institutes

BSBE

Dr. Vinay Mandati, Scripps Research Institute, USA; Emerging Tumor Suppressor Mechanisms of Hippo Core Components; 14-09-2018.

Prof. K. Sreenivasan, Distinguished Professor from Central Institute of Technology Kokrajha; Stability of Multi Layered Vehicular & Clop Flow; 25-09-2018.

Chemical

Dr. R. K. Swari; Scientist, Mineral Processing Department, CSIR IMMT, Bhubaneswar; Tribo-Electrostatic and its Application in Fine Coal Preparation; 2nd July 2018.

Dr. Tarak Patra; Center for Nanoscale Materials, Argonne National Laboratory, USA; Molecular Design of Polymeric Ionic Liquids; 14th September 2018.

Mathematics

Dr. Kartick Adhikari; I.S.I., Kolkata; "Brown Measure and Asymptotic Freeness of Elliptic and Related Matrices"; 2 August 2018.

Dr. Anatharam Raghuram; IISER, Pune; "From Calculus to Number Theory"; 17 August 2018.

Dr. Gangotryi Sorcar; Ohio State University, USA; "Topological vs. smooth structures and exotic diffeomorphisms"; 4 September 2018.

Faculty Awards and Honours

BSBE

Ajaikumar B Kunnumakkara was awarded Honorary Chair Professor-ship by the Mahatma Gandhi University for his Outstanding Contribution to Science on 11 July 2018.

Chemical

Prof. K Mohanty was selected as the Fellow of the Royal Society of Chemistry, London, UK.

Computer Science

Dr. Hemangee K. Kapoor was Elected Council Member on ACM India.

Dr. Hemangee K. Kapoor was Member of Excutive Committee of Smart India Hackathon, MHRD

Mechanical

Mamilla Ravi Sankar received the Best Paper award (First Position) in International Conference on Manufacturing Technology and Simulation (ICMTS-2017) during 7 – 8 July, 2017 at IIT Madras, India

Mamilla Ravi Sankar received the Best Presenter Award in 2nd International Conference on Advanced Materials Research and Manufacturing Technologies (AMRMT-2017), during Aug., 2017, Phuket, Thailand (Hong Kong Society of Mechanical Engineers)

Student Awards and Honours

Bethsebie L. Sailo received the 1st Best Poster award from NIPER, Guwahati on 25 Aug 2018.

Kishore Banik received the 2nd Best Poster award from NIPER, Guwahati on 25 Aug 2018.

Khwairakpam Amrita Devi received the 2nd Best Poster award from SRHU, Dehradun on 16 Sep 2018.

Chemical

Dr. Prodyut Dhar received the Graduate Student Award for his PhD research work on 'Cellulose Nanocrystals' by American Chemical Society (Cellulose Division) at the ACS Spring Meeting 2019, in Orlando (USA).

Gourhari Chakraborty received the Best Poster Award at the Advanced Materials (KaSAM-18) for the paper titled "Development of Biobased Thim Film Sensor for Biochemicals" held from October 26-29, 2018.

Pankaj Boruah received Best Poster Award at the Advanced Materials (KaSAM-18) held at Nepal for the paper titiled "Enhanced Degradation of Oil Droplets Using Biopolymer as Dispersant for Oil Spill Treatment" held from October 26-29, 2018.

Computer Science

Bala Prakasa Rao Killi have received Best Paper Award from International Conference on COMmunication Systems & NETworkS of Cooperative Game Theory based Network Partitioning for Controller placement in SDN .

Energy

Dudul Das received the Bhaskara Advanced Solar Energy (BASE) Fellowship award from the Department of Science and Technology (DST), Govt. of India, and the Indo-U.S. Science and Technology Forum (IUSSTF) on September 2018.

1st Rural Dialogue - a voice of transformation

The Center for Rural Technology in association with Innovior and AIILSG organized a two-day event called 1st Rural Dialogue on 7th July. This was a first of its kind attempt to bring together representatives from rural communities, to understand their needs and their aspirations and leading policy makers, technocrats, village level entrepreneurs, financial institutions, district administration, village panchayats and renowned experts to discuss and exchange experiences and good practices on issues related to innovation in rural areas and provide awareness on various potential solutions. Former Principal Scientific Advisor to Government of India Dr. R. Chidambaram inaugurated the event and chaired a session on Innovation to Enhance Prosperity and Well-being of Rural Communities. Key officials from Indian Institute of Entrepreneurship, UNICEF, NEERI, MS Swamainathan Research Foundation etc. deliberated on customization and delivery models of various technologies for resource crunched areas. The Director of IIT Guwahati also shared his thoughts in the inauguration session that it is time that technologies developed in the technical institutes should go for the proper channels to reach the common mass. The event also showcased cutting-edge technologies, latest innovations, useful and replicable ideas and actions on various aspects of rural development. Prof. Sashindra Kumar Kakoty, Head of CRT concluded the event with an expectation to initiate series of synergistic activities between different governmental and non-governmental organizations to create an ecology of rural entrepreneurs. Such an ecology will finally catalyse positive changes in the lives of rural communities of Assam and entire NER.

Prof. R Chidambaram inaugurating Poster presention and model section of the event

New Research Projects

Title: Cleaner Technology & Waste Minimization for Prevention of Industrial Pollution and Four R,s-Reduce, Reuse, Recycle and Recover - Cse studies
Funding Agency: CPCB (Central Pollution Control Board)
Principal Investigator: Mihir Kumar Purkait

Title: Elucidating the role of Cas6, Cas7 and Cas8 in spirochetes CRISPR adaptive immunity against alien genetic elements
Funding Agency: DBT
Principal Investigator: Manish Kumar

Title: Defect and doping synergist in perforated graphene-aerogel nanohybrid for the development of efficient hydrogen generation catalyst

Funding Agency: CSIR
Principal Investigator: Uday Narayan Maiti

Title: Ground development work required at the project site for construction of substation at Amingaon under NERPSIP
Funding Agency: PowerGrid Corporation of India Ltd
Principal Investigator: Arindam Dey

Title: Proof checking of Design & Drawings of RCC retaining structure at Km.72+440 (LHS) of Contract package EW-II, AS-26 (Bal)
Funding Agency: SMEC
Principal Investigator: Darun Kumar Singh

Title: Vetting for cross-checking of RCC retaining Wall project at Agia-Medhipara-Phulbari-Tura (AMPT) Road at 130th km under PWD (Roads)
Funding Agency: APS Corporations Pvt Ltd
Principal Investigator: Arindam Dey

Title: Experimental and Computational Analyses of Flow-induced Heat Transfer Deterioration in Supercritical Natural Circulation Loop
Funding Agency: SERB
Principal Investigator: Dipankar Narayan Basu

Title: Request for Job Mix Formula for Cementitious subbase layer with cement (OPC 43 Grade), evocrete and soil available along the stretch of teh road
Funding Agency: M/s CCL International Ltd.
Principal Investigator: T. L. Ryntathiang

Title: Optimisation and scale up trials of Plant Meristem cells through Bioreactors
Funding Agency: Himalaya Drug Company
Principal Investigator: Debasis Das

Title: Proof checking of Design & Drawings of Well Foundation for the bridge over river Kapili on Jagiroad-Morigaon Road
Funding Agency: PWD
Principal Investigator: Darun Kumar Singh

Title: Investigation of Statistical Aspects of Step-stress Life Testing
Funding Agency: SERB
Principal Investigator: Ayon Ganguly

Title: Proof Checking of Bridges in North-East Region
Funding Agency: Alliance
Principal Investigator: H. Sharma

Title: H. Sharma
Funding Agency: RIMS
Principal Investigator: Retrofitting of Earthquake Damaged Buildings of RIMS, Imphal

Title: Proof Checking of Structural Design for Proposed R.C.C. Residential Apartment Buildings at Niribili Path, Borsajai
Funding Agency: Protech
Principal Investigator: H. Sharma

Title: Proof Checking of Structural Design and Drawing for Proposed ?Basement+G+7?-R.C.C. Teaching Block with Mini Auditorium Building at TRIHMS? Campus, Naharlagun, Arunachal Pradesh
Funding Agency: KCC
Principal Investigator: H. Sharma

Title: Novel rationally designed DNA gyrase inhibitors as antibacterials
Funding Agency: DBT
Principal Investigator: S. Chandra Pan

Title: NIRMAN 3D- Novel minimally invasive implants for reconstructive surgery using materials providing mechanical instruction and prepared by 3D printing

Funding Agency: DBT
Principal Investigator: Biman B Mandal

Title: Coupled ψ-v and immersed interface method for incompressible viscous flows
Funding Agency: SERB
Principal Investigator: J. C. Kalita

Title: Bioinspired green catalysts for water purification
Funding Agency: DST-UKIERI
Principal Investigator: C.V Sastri

Title: DBT-AIST International Center for Translational and Environmental Research (DAICENTER)
Funding Agency: DBT
Principal Investigator: A. B. Kunnumakkara

Title: Fabrication of Prosthetic Implants and further Nanofinishing Using Magnetic Field Assisted Finishing (MFAF) Process
Funding Agency: SERB
Principal Investigator: Manas Das

Title: Development of enatiomenric-Lactic acid Polymer based Pilot Plant
Funding Agency: K P TECH MACHINE PVT IIMITED
Principal Investigator: Vimal Katiyar

Title: Non-Directed Remote sp3 C-H Functionalizations
Funding Agency: SERB
Principal Investigator: B. K Patel

Title: Research project for understanding structure and function of several IDPs and mechanism of HBV capsid formation using ProCharTS
Funding Agency: PurplePatch Services, USA
Principal Investigator: R. Swaminathan

Title: Quantitative analysis of wastewater for Nonylphenol and baby products for Bisphenol-A
Funding Agency: The Just Enviornment Charitable Trust
Principal Investigator: Kaustabh Mohanty

Title: Proof checking of Design & Drawings of RCC RBG Building (including Toilet Block) at Kalaigram, N. F. Railway
Funding Agency: AKB
Principal Investigator: Amit B Shelke

Title: Proof checking of Design & Drawings of Module Mounting Structure (MMS) for the project ?PROVN OF SOLAR POWER PLANT OF 1 MWP INCL OPERATION & MAINTENANCE AT RAYANG UNDER GE 872 EWS, CA. No. CESZ/RAYANG/03 of 2018-19
Funding Agency: PSC
Principal Investigator: Amit B Shelke

Title: Ultrafast Joule heating induced defect healing and in-situ activation of spontaneously assembled graphene network for wearable energy storage
Funding Agency: DRDO
Principal Investigator: Uday Narayan Maiti

Title: Development of high power density solid state transformer using direct AC to AC power electronic conversion
Funding Agency: SERB
Principal Investigator: Shabari Nath

Title: An advanced integrated process for the treatment of sewage plant effluent using bio-based antimicrobial metal biosorbents and photocatalytic materials
Funding Agency: DST
Principal Investigator: Lalit Mohan Pandey

Title: Integrated Production of Advanced Biofuels and Biocommodities under 'Center Of Excellence (COE) Proposal'
Funding Agency: DBT
Principal Investigator: Vimal Katiyar

Title: Mechanistic insights into IAPP self-assembly ? targeting early intermediates for therapeutics
Funding Agency: SERB
Principal Investigator: Nitin Chaudhary

Title: Mix design of M-25 and M-30 for work of CA No. CCE (Army) No. 02/05 of 2017-18: Augmentation of Central Sewage System at Misamari and Investigation of Cement
Funding Agency: Mecgal Pneumatics Pvt Ltd
Principal Investigator: L. Boeing Singh

Title: Characterization of water samples for drinking purpose
Funding Agency: POWER GRID CORPORATION OF INDIA
Principal Investigator: Mihir Kumar Purkait

Title: Mix design of concrete M-25 and M-30 for the construction of Power Grid Vishram Sadan at Guwahati Medical College campus and investigation of cement
Funding Agency: M/S Sanwar Mal Khetawat
Principal Investigator: G. Indu Siva Ranjani

Title: Electrocoagulation Techniques for the Treatment of Rejected Stream of Nanofiltration
Funding Agency: TATA STEEL
Principal Investigator: Mihir Kumar Purkait

Title: Thermal fatigue and creep training programme
Funding Agency: FCA-CAE
Principal Investigator: Nelson Muthu

Title: Proof Checking of Structural Design and Drawings for "Proposed Construction of ROB at Araria-Araria court at KM 68.91 in place of LC No-KJ-45"
Funding Agency: BIPL
Principal Investigator: Amit B Shelke

Title: Re-purposing of FDA approved drugs for Tuberculosis treatment
Funding Agency: DBT
Principal Investigator: Vishal trivedi

Title: Chemical Biology Approaches to exploit FIKK KInase (s) from plasmodium falciparum to develop potent antimalarials
Funding Agency: SERB
Principal Investigator: Vishal trivedi

Title: Structural Assessment of KV Building and Boundary Wall at Tura (Meghalaya)
Funding Agency: KV Sangathan
Principal Investigator: H.B Kaushik

Title: National Centre of Clean Coal Research and Development
Funding Agency: DST
Principal Investigator: Amaresh Dalal

Title: Design, Operation and Control of Smart Transformer-based Microgrid System
Funding Agency: SERB
Principal Investigator: Chandan Kumar

Title: Rural Technology Action Group (RuTAG)- at IIT Guwahati
Funding Agency: PSA - GoI
Principal Investigator: Sashindra Kumar Kakoty

Title: Verification of Estimates of the work ? Construction of Road from Bijni Kuklung road to Boripara No.2 in Chirang District (L=3.00Km) under Chirang (R&B) Division?
Funding Agency: PWD
Principal Investigator: Darun Kumar Singh

Title: Evaluation of TMT bar samples to be used in the ?Construction of Bongaigaon Refinery, Indian Oil Corporation Limited, Dhaligaon, Chirang, Assam?, for chemical compositions
Funding Agency: IOCL
Principal Investigator: Amit B Shelke

Title: Development of Biodegradable Polymer based Controlled Release Fertilizers and Pesticides for Sustainable Agro-economy ? BioPolyCRF?
Funding Agency: DBT
Principal Investigator: Vimal Katiyar

Title: Strengthening of research facilities in the Department
Funding Agency: DST
Principal Investigator: BSBE/HOD

Patents

Inventor: Rajaram Swaminathan, Saumya Prasad
Title: Transforming protein sequence and composition into numbers: A BIG DATA analysis tool for proteomes

Inventor: Biman B Mandal, Jadi Praveen Kumar
Title: Silk sericin for skin care and related applications

Inventor: Swati Pal, Jitesh Singh Chauhan, Chirapriya Mondal,K. C. P. Paraasaram
Title: Ergonomically modified hedge scissor with various working height

Inventor: M. K. Purkait, Deepti Nair
Title: Separation of Chloride And Sulphate Ions From Nanofiltration Reject Stream Generated in Steel Industry Using Precipitation Method

Inventor: Senthilkumar Sivaprakasam, Subbi Rami Reddy Tadi, Ganesh Nehru
Title: Methods for the increased production of D (-) pantothenate in Bacillus megaterium

Inventor: Chandan K. Jana, Ajaikumar B. Kunnumakkara, Md Ashraful Haque, Bethsebie Lalduhsaki Sailo, Padmavathi Ganesan
Title: Novel Carbotetracycles Having Anti-Cancer Properties and its Method of Synthesis thereof

Ecosystem Approaches to Water and Food Security for Rural Wellbeing

Ecosystem Approaches to Water and Food Security for Rural Wellbeing- a certificate training workshop on Integrating Ecosystem Services and Rural Livelihoods was organized by Centre for Rural Technology (CRT), IITG in collaboration with Ashoka Trust for Research in Ecology and the Environment (ATREE), Bengaluru from 10-14 September, 2018 here at IIT Guwahati campus. This workshop was attended by 30 participants who were carefully selected among hundreds of applicants from all North Eastern states and Darjeeling district of West Bengal. The workshop discussed various natural and social concepts and practices in the field of ecosystems services and wellbeing. The workshop attempted to link ecosystem services, food and water security, environmental changes and the dynamics of rural system to understand and enhance the rural wellbeing of the rural communities of the North Eastern Himalayan region mainly. Training was imparted through lectures, discussions, field exercises and intensive group exercises. This five days training program was inaugurated by the honourable Director of IIT Guwahati, Prof Gautam Biswas. The valedictory session was graced by Dr Akshilesh Gupta Adviser & Head, Strategic Programs, Large Initiatives and Coordinated Action Enabler (SPLICE) and Climate Change Program Head, DST, Government of India; Dr. Nisha Mendiratta, Scientist-G & Associate Head, SPLICE Div.; Prof SK Kakoty, Head, CRT

Swasthyaa Project (Dr. Keyur Sorathia, Design)

"Swasthyaa (meaning health)" is an ICT based platform that tracks initial and retreatment TB defaulters, monitors health progress and DOTS intake in real-time. It complements the government's existing TB care process in order to increase the adoption and acceptance among the users. This means that the responsibilities of each health administrator and administrative forms remain the same, where Swasthyaa augments the TB care through real-time patients' progress to take preventive measures in case of any default.

It has 4 major components - (i) web-based software for health administrators/RNTCP executives that can be accessed on desktop, tablet and mobile phones (ii) Newly designed low-cost sticker for TB medicine blister packet to monitor DOTS intake in real-time (iii) IVR based system to register DOTS intake for TB positive patients and (iv) innovative incentive scheme to persuade patients and health administrators to consume DOTS regularly and ensure completion of DOTS course respectively.

Swasthyaa is used by two-user groups – (i) Health administrators/RNTCP executives (ii) TB positive patients. The web based software is accessed by various health administrators that allows to perform multiple tasks, e.g. creation of referral forms, reporting lab tests, reporting lab results, updating TB status, DOTS enrolment, treatment card generation, tracking of presumptive patients and monitoring DOTS intake for TB positive patients. The TB positive patient has minimum technology usage considering the low-technology literacy among the rural patients. They are asked to enter a 1-digit code on a toll-free number. The 1-digit code is written on the sticker of the blister. This results in real-time registration of the DOTS intake

Swasthyaa is currently under field trials in Kamrup and Darrang. It has more than 1000 presumptive patients enrolled and successfully completing their DOTS course.

Swasthyaa can be accessed on www.swasthyaa.com

The Android application can be downloaded by search "Swasthyaa" on Google Play Store

Assam E-Budget 2018 (Dr. Keyur Sorathia, Design)

We have designed and developed the e-budget 2018 application along with Finance Department, Government of Assam. The e-budget is an Android based application that enables citizen to view budget specific details including the budget allocation to specific areas such as health, education etc., location specific government initiatives and overall distribution of all the finances for the year 2018.

The application can be downloaded by searching E-Budget Assam on Google Play Store or https://play.google.com/store/apps/details?id=com.kran.egufinassam&hl=en

The 20th Congress of International Ergonomics Association (IEA) held from 26th August to 30th August, 2018 in Florence, Italy. IEA is one of the most important international organizations dealing with the domain of Human Factors and Ergonomics (HF/E) from all aspects. The congress held by IEA, thus, is always an interesting platform for researchers and practitioners to interact with their counterparts from different corners of world. In turn, this ensures the flow of exchanging knowledge in this domain, inspiring new ideas for research and practice. This year's theme of the congress is "Creativity in Practice". The topics include any contribution to the construction of HF/E approach across a variety of methodologies, domains and productive sectors.

As the theme and topics imply, this year's congress aimed to correlate between analytic knowledge and creative approach to form practical solutions. In today's aspect this approach is very necessary for widespread practice of ergonomic science. Humans are becoming more and more technology/tool dependent at present. So the interaction among 'man-machine-environment' is also increasing in occurrence. To be a part of this great event and represented our activities in such extremely honored international platform I organized a special session titled "Health and Welfare of Female Workforce: Ergonomics and Occupational Health Perspective". This session had seven scientific oral paper presentations from across various fields of Human Factors/Ergonomics.

Urmi R. Salve, Design

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