



JULY 2014 / Vol. VI / No. 2



# NEWSLETTER FROM IIT PATNA *Impulse*

## From the Director's Desk

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Dear Friends



It gives me an added delight to address you through IIT Patna's bi-annual Newsletter, *Impulse* which is going to complete its sixth year. As Director of IIT Patna (Additional Charge), my interactions with students, faculty and staff have been really very fruitful. IIT Patna, besides functioning from a transit campus in Patliputra Colony is striving towards excellence as regards teaching and research. This is evident from the increasing strength of students and introduction of new courses and programme. I am all praise for IIT Patna fraternity whose indomitable will never deters

them from compromising with quality. I have found the young brigade of teachers sharing various responsibilities, apart from their teaching and research. This alone can help an institution grow and make its mark in the long run.

The thirst for knowledge cannot be quenched without the necessary drive and effort to expand focus beyond the scope of academics. I envisage immense creativity and literary sensibility in *Impulse*, the Newsletter of IIT Patna. It is believed that technical education is the most powerful tool to alter the world effectively; however, it cannot be realised without the humanistic connect, which has to do a lot with art, literature and culture. To shape young minds bubbling to march ahead with immense potential is what the institute envisions. The teaching methodology, procedures, systems, pedagogy, faculty and infrastructure are totally geared towards achieving our vision and mission. *Impulse* is, therefore, not only a platform to showcase our activities but also an instrument of enunciation and a sentinel of innovative people who are an integral part of IIT Patna. With a comprehensive view of all the activities ranging from academics to sports, culture and welfare activities going on in the institute and the achievements of its students and faculty members, I foresee a bright future for the Institute ready to become glorious and peerless. The challenges and opportunities ahead for IIT Patna are numberless, but to grab them, we have to move faster, though remaining vigilant always to transform and transcreate society in an innovative way.

I congratulate the editorial team of *Impulse* for their splendid efforts in its conceptualization and publication and wish everyone a happy and eventful semester ahead.

**Partha Pratim Chakrabarti**

## Editorial

*Impulse*, Vol VI, No.2 is in your hands. The editorial team of *Impulse* feels a sense of satisfaction in reaching its readers who happen to be faculty members, students and the world of academia watching several ups and downs round the globe. *Impulse* is a medium through which the IIT Patna fraternity evaluates its progress and prompts members to set new goals. The academic environment of IIT Patna, despite several hindrances of space and other amenities presently in its transit campus, has remained vibrant. Despite increasing strength of students and courses in our transit campus, IIT Patna continues to radiate through innovations and intelligence in various fields. As we excel in our teaching and research every day, our thirst for knowledge prompts us to vie for more space to translate further opportunities into real achievements. We are getting ready to shift to our permanent destination at Bihta where there will be adequate space to realize all our dreams and desires and to make IIT Patna a much sought- after institute for students as well as for prospective faculty. Movement to a new destination is full of challenges yet it is not devoid of inventions and discoveries. What a famous poet said of movement is true for all times to come- "In movement alone is rest". In fact, life is a continuous journey of moving on. Keeping this in mind, *Impulse* also takes a vow to move on with its readers in anticipation of yet another eventful semester of peace and progress on all fronts.

**Editors : Dr. Binod Mishra | Dr. Priyanka Tripathi, School of Humanities and Social Sciences**

## BoGs of IIT Patna



**Mr. Ajai Chowdhry**  
Chairman



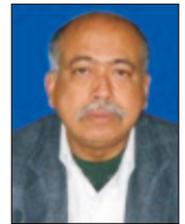
**Prof. Partha P. Chakrabarti**  
Director IIT Kharagpur  
(Additional Charge as Director IIT Patna)



**Prof. Amitabha Ghosh**  
Former Director  
IIT Kharagpur



**Prof. Sriman Kr. Bhattacharya**  
Director  
CBRI Roorkee



**Prof. Ajay Chakrabarty**  
Vice-Chancellor, BIT Mesra



**Dr. T. Mukherjee**  
Ex-Deputy M D  
Tata Steel, Jamshedpur



**Prof. Swapan Majumdar**  
Chairman  
IWC, IIT Patna



**Shri Sudhir Kumar**  
Principal Secretary,  
Department of Science & Technology,  
Government of Bihar



**Mr. Subhash Pandey**  
Registrar, IIT Patna



**Dr. Arvind Kumar Panday, IAS**  
Additional Chief Secretary  
Department of Science and Technology  
Government of Jharkhand

## New Appointments- Teaching



**Prof. J.N. Sinha**  
Senior Professor,  
Department of Electrical Engineering



**Dr. Abyayananda Maiti**  
Visiting Assistant Professor  
Department of Computer Science and Engineering

## New Appointments- Non-Teaching



**Mr. Pradip Maity**  
Assistant Registrar (F&A)



**Ms. Tanuja Kumari**  
Assistant Registrar (R&D)



**Dr. Vidhi Chaudhary**  
Scientific Officer (SAIF)



**Mr. Sandip Kishore**  
Scientific Officer,  
Department of Computer Science  
and Engineering



**Ms. Antara Garai**  
Scientific Officer,  
Department of Chemistry



**Dr. Ranjit Laha**  
Scientific Officer,  
Department of Physics



**Mr. Devanand Jha**  
Executive Engineer (Civil)



**Mr. Gunjan Kumar**  
Senior Accountant



**Mr. Samiran Maji**  
Junior Engineer (Civil)



**Mr. Kumar Ranvivek**  
Junior Technical Superintendent (Civil)



**Mr. Ved Prakash**  
Junior Technical  
Superintendent  
(Material Sci. Engg.)



**Mr. Birendra Kr. Mahto**  
Junior Technical  
Superintendent (Civil)



**Mr. KVS Girish**  
Junior Technical Superintendent  
Department of Chemistry



**Mr. Ajay Kumar**  
Junior Technical  
Superintendent (CSE)



**Mr. Sanjeev Kumar**  
Junior Technical Superintendent  
Department of Physics



**Mr. Santosh Kumar**  
Junior Assistant



**Mr. Ahmad Nishat**  
Junior Assistant



**Mr. Shailendra Kr. Chaturvedi**  
Junior Assistant



**Mr. Bhanu Prakash Gupta**  
Junior Assistant



**Mr. Nawab Ghosh**  
Junior Mechanic (EE)



**Mr. Mantu Kr. Sharma**  
Junior Attendant



**Mr. Rajeev Ranjan**  
Junior Attendant



**Mr. Rakesh Kumar**  
Junior Attendant



**Mr. Chandan Kumar**  
Junior Attendant



**Mr. Ashok Kr. Singh**  
Junior Attendant



**Mr. Navin Kr. Nayan**  
Junior Attendant



**Mr. P.C. Mandal**  
Junior Attendant

## Visits Abroad

- **Dr. Priyanka Tripathi** visited International Center for Research & Development, Colombo, Sri Lanka to present a paper entitled, "The Old Rules Aren't Always Right: Re-reading the Short Stories of Indian Diasporic Women Writers" in an International Conference on Asian Studies during July 14-15, 2014.
- **Dr. Neeladri Das** visited University of Houston, Texas, USA as part of an ongoing collaboration with Prof. R. Krishnamoorthi (Sponsor: IUSSTF, New Delhi) during June 18- July 4, 2014.
- **Dr. Anirban Chowdhury** visited Montecatini Terme, Tuscany, Italy, to present paper entitled, "Studies on the Compositional Anomalies in Lanthanum Zirconate System Prepared by Co-Precipitation," in CIMTEC 2014 (13th International Ceramics Congress) conference during June 8-13, 2014.
- **Dr. N. K. Nishchal** visited Kwangwoon University, Seoul, South Korea to present his paper entitled "Optical Techniques of Image Encryption, Watermarking, and 3D Target Identification," in 3D Display Research Centre, Department of Electronics Engineering, during June 28, 2014.
- **Dr. Binod Mishra** visited Thammasat University, Bangkok, Thailand and presented a paper entitled "Innovative Ways of English Language Teaching in Rural Areas through Technology" in TRI-ELE International Conference on English Language Education "Towards Global English Horizons" during June 20-21, 2014.
- **Dr. Ranjan Kumar Behera** visited Center for Energy Systems Research, Tennessee Tech University, Cookeville, TN, USA, May 21, 2014 and July 2, 2014.
- **Dr. Awalendra K Thakur** visited Department of Physics, The National University of Singapore as Visiting Professor under NUS – India Research Initiative (IRI) Program during May 10 – July 6, 2014.
- **Dr. Nalin Bharti** visited Hungary to present a paper co-authored with Satyarthi, Shaiwal, entitled, "Globalization and TK: Trade Complexities for Countryside Agriculture Products between Indian and Hungary" in 14th International Scientific Days conference entitled "Changing, Adapting Agriculture and Countryside", in Károly Róbert College, Gyöngyös, Hungary, during March 27-28, 2014.
- **Dr. Mohd. Kaleem Khan** visited New York City, NY, USA, for presenting a paper entitled, "Two-phase VOF Model for the Refrigerant flow through Adiabatic Capillary Tube" in ASHRAE 2014 Winter Conference during January 18-22, 2014.



Dr. Nalin Bharti with European Economists in Hungary



Dr. Binod Mishra in Tri-ELE Conference, Thailand

## Visitors to IIT Patna

Sr. No.	NAME OF THE SPEAKER AND AFFILIATION	TITLE OF TALK	DATE
1.	Dr. Kanadpriya Basu Research Faculty, Deptt. of Mathematical Sciences The University of Texas at El Paso, 500 W. University	Data Processing using Different Interpolation Techniques and Non-Parametric Regression Models.	June 30, 2014
2.	Dr. Biplab Sikdar Rensselaer Polytechnic Institute Troy, New York, USA	Energy Efficient Transmission Strategies for Sensor Networks with Energy Harvesting	June 20, 2014
3.	Dr. Stephanie Gottwal, Tufts University, USA & Dr. Tinsley Galyean, Massachusetts Institute of Technology, USA	Global Literacy Project: Issues and Challenges	June 19, 2014
4.	Dr. Pankaj Lal Montclair State University USA	Estimating Households Willingness to pay for Improved Solid Waste Disposal Services in Dominican Republic: A choice Experiments Approach	April 22, 2014
5.	Prof. G. S. Singh IIT Roorkee	Mathematical Beauty in Physical Laws	April 21, 2014
6.	Dr. Parimal Kar, Department of Biochemistry and Molecular Biology, Michigan State University	Multi Scale Modeling of Biomolecules: Surmounting the Challenge of Bridging the Scales	April 11, 2014
7.	Dr. Jai Prakash Department of Chemical Engineering, Technion Haifa, Israel	The Formation of a Stable Bubble Ring in a Couette Device with Taylor Vortices.	April 07, 2014
8.	Prof. Ajoy Ghatak, Former Professor of Physics, IIT Delhi	Einstein & his Year of Miracles	April 04, 2014
9.	Prof. Ramjee Prasad, Director, Center for TeleInfrastruktur (CTIF), Aalborg University, Denmark	Wireless Information and Multimedia Communications	March 18, 2014
10.	Dr. Nawal Kishore Paswan, Head, Department of Peace & Conflict Studies and Management Sikkim Central University, Gangtok, India.	Researches in Humanities and Social Sciences	February 07, 2014
11.	Dr. N. Kundan Kishor, Associate Professor, Department of Economics University of Wisconsin-Milwaukee	India's Volatile Inflation	February 07, 2014
12.	Dr. Pritam Ranjan ,Faculty Member of the Statistics Department in Acadia University, Nova Scotia, Canada	India's Volatile Inflation	February 07, 2014

## Invited Talks

- **Mishra Binod**, "Role of Soft Skills in Classroom Teaching and Management", Summer School, Magadh Mahila College, Patna University, Jul. 26, 2014
- **Parida S. K.**, "A Novel Hybrid Approach for Allocation of Renewable Energy Sources in Distribution System", Webinar conducted by Indo-US Collaboration for Engineering Education, Jul. 17, 2014
- **Behera Ranjan Kumar**, "Control of Active Dual Bridge Converter for Micro-Grid Application", Department of Computer Science and Electrical Engineering, Tennessee Tech University, Cookeville, Tennessee, USA, Jul. 2, 2014
- **Mishra Binod**, "Writing Effective Reports", Short Term Training Programme on Professional Communication, MANIT, Bhopal, Jul. 1, 2014
- **Mishra Binod**, "Enhancing Oral Presentation Skills", Short Term Training Programme on Professional Communication, MANIT, Bhopal, Jun. 30, 2014
- **Srivastava P. K.**, "Mathematical Models Using Ordinary Differential Equations", UG Training program under NPDE-TCA (DST India) at Maulana Azad National Institute of Technology, Bhopal, India, May 26–Jun. 14, 2014
- **Thakur Awalendra Kumar**, "NCL Behaviour and Ion Transport Property in Ion Conducting Polymers", 4<sup>th</sup> Asian Conference on Solid State Ionics, The National University of Singapore, Singapore, Jun. 24–27, 2014
- **Behera Ranjan Kumar**, "Modeling and Control of Efficient Solar Energy Converters", Center for Energy Systems Research, Tennessee Tech University, Cookeville, Tennessee, USA, May 21, 2014
- **Agrawal Jyotsna**, participated as a technical expert (Mental Health) in Action Contre la Faim/Action Against Hunger (ACF), New Delhi, an International NGO, for their research discussion meeting cum workshop, conducted on May 9, 2014 and Jul. 18, 2014
- **Behera Ranjan Kumar**, "Control of High Efficient Solar and Wind Power Converters", Shri Vishnu Engineering College for Women, Bhimavaram, Andhra Pradesh, India, Apr. 21, 2014
- **Behera Ranjan Kumar**, "Recent Advances in High Power Medium Voltage Converters and High Performance Drives", Department of Electrical Engineering, Aligarh Muslim University, Aligarh, India, Apr. 5, 2014
- **Nishchal N. K.**, "Digital Holography and its Applications", Seminar on Laser and its Applications, Department of Physics, B. R. A. Bihar University, Muzaffarpur, India, Mar. 31, 2014
- **Parida S. K.**, "Sustainable Electricity Supply Industries: A Transition", National Symposium on Complex Green Energy Management for Immediate Future, under the event Sangam - 2014, Mar. 29-30, 2014
- **Thakur Awalendra Kumar**, "Supercapacitors : Concepts, Design and State-of-the-art Status as an Energy Storage Device", 16<sup>th</sup> Conference of International Academy of Physical Sciences, PDPM Indian Institute of Information Technology, Jabalpur, Mar. 20-22, 2014
- **Mondal Samrat**, "Technology Enabled Teaching Learning", organized by ICFAI University Jharkhand at Patna, India, Mar. 4, 2014
- **Kumar Amit.**, "Exploration of Acid-Base Catalysis Concept in Glycosidation", International Society of Chemical Biology Conference-2014, New Delhi, India, Mar. 1-4, 2014
- **Behera Ranjan Kumar**, "Control of Electrical Drives for EV/HEV and Motors for EV/HEV", Raja Rajeswari College of Engineering, Bangalore, India, Feb. 9, 2014
- **Mishra Binod**, "Challenges and Remedies of Teaching English in a New Age", National Seminar on Innovative Practices in Teaching English Language and Literature, Sardar Patel Mahavidyalaya, Chandrapur, Maharashtra, Feb. 15, 2014
- **Prakash Om**, participated as one of panelists in the conference on Education Interfaces between Mathematics and Industry on the theme "Role of Technology in Mathematics", Institute of Chemical Technology, Mumbai, India, Jan. 23-24, 2014
- **Prakash Om**, "Congruence relation and some of its Applications", INSPIRE Science Camp at HNB University, Srinagar, Garhwal, India, Jan. 12, 2014

## Sponsored Projects

NAME OF PI	DEPARTMENT	TITLE	SPONSOR
Dr. Ranjan Kumar Behera	EE	Integrated Automatic Voltage Control of a High Efficient Solar PV System.	DST, INDIA
Dr. Mohd. Kaleem Khan, PI & Dr. Manabendra Pathak, Co-PI	ME	Influence of Hydrogen Content on Burst Characteristics of Zircaloy-4 Cladding Tube	BRNS
Dr. Utpal Roy	Physics	Coherent Control and Interferometry using Bose-Einstein Condensate	DST-SERB

## Workshops and Short Term Courses

### International Workshop on Reverse Engineering of Rubber Products and International Conference on Polymers and Allied Materials (ICPAM 2014)

Department of Materials Science and Engineering, IIT Patna in association with Hari Shankar Singhania Elastomer and Tyre Research Institute (HASETRI) organized an International Workshop on **Reverse Engineering of Rubber Products- Concepts, Tools and Techniques** from May 28-29, 2014 at Hotel Maurya, Patna. Dr. Dinesh K. Kotnees (Assistant Professor, Dept. of MSE, IIT Patna) co-ordinated the Workshop along with Prof. Anil K. Bhowmick (Former Director, IIT Patna). Forty eminent participants from various sectors of corporate divisions, industry and academics across the globe attended the workshop which was a grand success.



Participants of Workshop with Organizers



Prof. Anil K. Bhowmick (Former Director, IIT Patna) addressing Workshop Participants

Prof. Anil K. Bhowmick, Former Director, IIT Patna was the Chairman of the Conference and Dr. Dinesh K. Kotnees, Assistant Professor, Deptt. of MSE, IIT Patna was the Convener of ICPAM-2014. Eighteen invited lectures and seventy eight contributory lectures were delivered in this conference which witnessed an even distribution of papers from Industry and Academics. Interesting sessions on Polymer Composites and Nanocomposites, Polymers Blends, Polymer Processing, Carbon and Smart Materials, Advanced Analytical Characterization Techniques, Tyre, Sustainability, Recycling and Regulation, New Polymers and Fillers, Strategic Materials, Textile Materials, Rubber Products, Polymer Synthesis and Characterization and Modeling and Simulation attracted the attention of participants and created interactive discussions. The presence of eminent speakers and delegates from USA, Germany, Austria, South Korea, Sri Lanka and Japan made this conference a huge success.



Dr. R. P. Singhania (CMD, JK Tyre & Industries Limited) lighting the lamp



Inaugural Ceremony of ICPAM 2014



Prof. Anil K. Bhowmick (Former Director, IIT Patna) lighting the lamp during Inauguration



Dr. A.S. Radhakrishna (Director, Technical Affairs, SABIC) lighting the lamp during inauguration



Mr. Ajai Chowdhry (Chairman, BOG, IIT Patna) lighting the lamp during Inauguration

## Mini MTTTS Programme

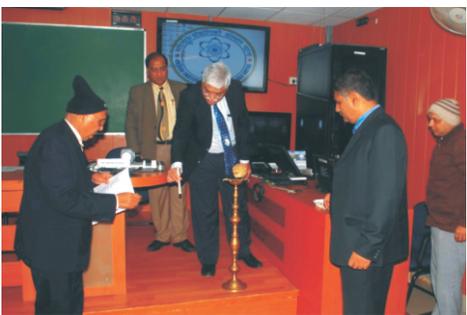
Dr. Om Prakash, Department of Mathematics, IIT Patna organised two weeks' **Mini Mathematics Training and Talent Search Programme (Mini MTTTS)** for undergraduate students of Mathematics, sponsored by National Board of Higher Mathematics during June 9-21, 2014.



Participants and Resource Persons of Mini MTTTS Programme

### Short Term Course on Employability Skills and Success at Workplace, January 10 – 12, 2014

The School of Humanities and Social Sciences organized three days' Short Term Course on **Employability Skills and Success at Workplace** during January 10 – 12, 2014. The Co-ordinators of the STC were Dr. M B Sharan, Ex-Senior Professor, IIT Patna and Dr. Binod Mishra, Associate Professor and Co-ordinator, School of Humanities and Social Sciences, IIT Patna. With a special emphasis on teaching soft skills essential for employability in contemporary workplaces, the topics addressed were communication skills, verbal and non-verbal communication, presentation skills, adaptability, workplace ethics, problem-solving skills and stress management. The course was attended by 24 participants from various educational institutes, banks, and other organizations, namely MANIT Bhopal, NIT Patna, IIT Patna, State Bank of India Patna and Punjab National Bank etc. The chief guest of the inaugural function was Mr. Vijoy Prakash, Principal Secretary, Department of Rural Development, Government of Bihar. The speakers comprised esteemed faculty members of the School of Humanities and Social Sciences, IIT Patna. The course was much appreciated by all the participants and was a grand success. Prof. Shamshad Hussain, former Vice-Chancellor, Magadh University who was the guest of the valedictory session distributed certificates to the participants.



The inaugural function of STC on Employability Skills



A bank employee receiving his certificate from Prof. Shamshad Hussain



Participants of STC on Employability Skills with Course Co-ordinators, Experts and Registrar

## Publications

### Department of Computer Science and Engineering

**Chakraborty Niles** and **Mondal Samrat**, SLASS: Secure Login Against Shoulder Surfing, 2nd International Conference on Security in Computer Networks and Distributed Systems (SNDS 2014), Thiruvananthapuram, India, 346-357, 2014

**Mishra Sumit**, **Saha Sriparna** and **Mondal Samrat**, Cluster Validation Techniques for Bibliographic Databases, IEEE TechSym 2014, Kharagpur, India, 93-98, 2014

**Chakraborty Niles** and **Mondal Samrat**, Color Pass: An Intelligent User Interface to Resist Shoulder Surfing Attack, IEEE TechSym 2014, Kharagpur, India, 13-18, 2014

### Department of Electrical Engineering

**Iqbal A.**, **Payami S.**, **Saleh M.**, **Abdallah A. A.**, **Behera R. K.**, and **Moinoddine S.**, Five-phase AC/DC/AC Converter with PWM Rectifier, Australian Journal of Electrical & Electronics Engineering, Vol. 10, No. 4, 428-438, 2014

## Publications

**Verma Sudhanshu and Kumar Preetam**, Printed Newton's Egg Curved Monopole antenna for Ultrawideband Applications, IET Microwave Antennas and Propagation, Vol. 8, No. 4, 278-286, 2014

**Verma Sudhanshu and Kumar Preetam**, Printed Egg Curved Slot Antennas for Wideband Applications, Progress in Electromagnetic Research PIER B, Vol. 58, 111-121, 2014

**Verma Sudhanshu and Kumar Preetam**, Printed inverted-L shaped Monopole Antenna with Parasitic Inverted-F Element for Dual band Applications, Microwave and Optical Technology Letters, Vol. 56, No. 5, 1163-1167, 2014

**Verma Sudhanshu and Kumar Preetam**, Compact Triple band Antenna for WiMAX and WLAN Applications, IET Electronics Letters, Vol. 50, No. 7, 484-486, 2014

**Ajmeri M. and Ali A.**, Direct Synthesis based Tuning of the Parallel Control Structure for Integrating processes, International Journal of Systems Science, DOI:10.1080/00207721.2013.871369, 2013

### Department of Mechanical Engineering

**Khan M. K., Pathak M., Suman S., Deo A., and Singh R.**, Burst Investigation on Zircaloy-4 Claddings in Inert Environment, Annals of Nuclear Energy, 69, 292-300, 2014

**Prajapati Y., Khan M. K. and Pathak M.**, Two-Phase VOF Model for the Refrigerant Flow through Adiabatic Capillary Tube, ASHRAE Transactions, 120(1), 60-67, 2014

**Khan M. K. and Pathak M.**, Ballooning Deformation of Zircaloy-4 Fuel Sheath, ASME Journal of Pressure Vessel Technology, 136, 031206-1-12

**Szalay T., Patra K. and Farkas B. Zs.**, Experimental Investigations of Tool Breakage in Micro Drilling of EN AW-5083 Aluminum, Key Engineering Materials, Vol. 581, 119-124, 2014

**Jamdagni P. P. and Patra K.**, Obstacle Avoidance for Mobile Robot Navigation in Unknown Environment using Geometrical Information of Mobile Camera Images, International Journal of Computational Vision and Robotics, Vol. 4, No. 1-2, 39-54, 2014

**Sahu R. K., Pramanik B., Patra K., Bhaumik S., Pandey A. K. and Setua D. K.**, Dissipation Factor of Acrylic Dielectric Elastomer – An Experimental Study, Journal of Nanoscience and Nanotechnology, Vol. 14, No.10, 7439-7444, 2014

**Anand R. S., Patra K. and Steiner M.**, Size Effect in Micro Drilling of Carbon Fiber Reinforced Plastic Composite, Production Engineering Research and Development, Vol. 8, 301-307, 2014

**Garg S., Patra K. and Pal S. K.**, Particle Swarm Optimization of a Neural Network Model in a Machining Process, Sadhana, Vol. 39, No. 3, 533-548, 2014

### Department of Material Science and Engineering

**Prusty Debadutta, Pathak Abhishek, Chintia Appa Rao, Mukherjee Bratindranath and Chowdhury Anirban**, Structural Investigations on the Compositional Anomalies in Lanthanum Zirconate System Synthesized by Coprecipitation Method Journal of the American Ceramic Society, 97(3), 718-724, 2014

**Chowdhury Anirban, Bijalwan Pavan Kumar and Sahu Ranjan Kumar**, Investigations on the Role of Alkali to Obtain Modulated Defect Concentrations for Cu<sub>2</sub>O Thin Films, Applied Surface Science, 289(1), 430-436, 2014

### Department of Chemistry

**Chakraborty S., Mondal S., Kumari R., Bhowmick S., Das P., and Das, N.**, Synthesis, Characterization and DNA Interaction Studies of New Triptycene Derivatives, Beilstein J. Org. Chem., 10, 1290-1298, 2014

**Mehta Radhika, Kumari Rina, Das Prolay and Bhowmick A K.**, "Synthesis and Characterization of Biocompatible Monotyrosine-Based Polymer and its Interaction with DNA", Journal of Material Chemistry B, 2014, DOI:10.1039/C4TB00854E.

**Khutia A., Shen W. Z., Das N., Sanz Miguel P. J., and Lippert B.**, Rationalizing the Formation and Versatility of Multinuclear Metal Complexes of bis (1-methyluracil-5-yl) Methane as Hybrids Between Classical Calix Arenes and Metallacalixaromatics, Inorg. Chim. Acta, 417, 274-286, 2014

**Chakraborty S., Mondal S. and Das N.**, Triptycene Based Chemosensors for Selective Detection of Mercury (II)/Iron (III) in Aqueous Medium, Inorg. Chim. Acta, 413, 214-220, 2014

**Singh Vandana, Kumari Bhavini, Maity Banibrata, Seth Debabrata and Das Prolay**, Direct Observation of Preferential Processing of Clustered Abasic DNA Damages with APE1 in TATA Box and CpG Island by Reaction Kinetics and Fluorescence Dynamics, Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 766-767, 56-65, 2014

**Chakraborty Sourav, Mondal Snehasish, Kumari Rina, Bhowmick Sourav, Das Prolay, and Das Neeladri**, Synthesis, Characterization and DNA Interaction Studies of New Triptycene Derivatives, Beilstein Journal of Organic Chemistry, 10, 1290-1298, 2014

**Kumari Bhavini, Banerjee Shib Shankar, Singh Vandana, Das Prolay and Bhowmick Anil K.**, Processing of a Basic Site Damaged Lesions by APE1 Enzyme on DNA adsorbed over Normal and Organomodified Clay, Chemosphere, 112, 503-510, 2014

**Chatterjee Aninda, Maity Banibrata and Seth Debabrata**, Photophysics of 7-(Diethylamino)Coumarin-3-Carboxylic Acid in Cationic Micelles: Effect of Chain Length and Head Group of the Surfactants and Urea, RSC Adv., 4, 34026, 2014

**Maity Banibrata, Chatterjee Aninda, Ahmed Sayeed Ashique and Seth Debabrata**, Supramolecular Interaction of a Nonsteroidal Anti Inflammatory Drug in the Nanochannels of Molecular Containers: Spectroscopic, Thermogravimetric and Microscopic Approach, ChemPhysChem, DOI: 10.1002/cphc.201402419, 2014

**Chatterjee Aninda, Maity Banibrata and Seth Debabrata**, Influence of Double Confinement on Photophysics of 7-(diethylamino)coumarin-3-Carboxylic Acid in water/AOT/Isooctane Reverse Micelles, RSC Adv., 4, 13989, 2014

**Maity Banibrata, Chatterjee Aninda and Seth Debabrata**, Solvents Effects on the Photophysics of a Coumarin in Different Solvents: Use of Different Solvatochromic Models, Photochem. Photobiol. 90, 734, 2014

**Maity Banibrata, Chatterjee Aninda and Seth Debabrata**, The Photophysics of 7-(diethylamino)coumarin-3-Carboxylic Acid N-succinimidyl Ester in Reverse Micelle: Excitation Wavelength Dependent Dynamics, RSC Adv., 4, 3461, 2014

**Karamthulla S., Pal S., Khan M. N. and Choudhury L. H.**, Synthesis of Pentasubstituted Pyrroles via Catalyst Free Multicomponent Reactions, Synlett, 25, 1926-1936, 2014

## Publications

**Karamthulla S., Pal S., Parvin T. and Choudhury L. H.,** L-proline Catalyzed Multicomponent Reactions: Facile Access to 2H-benzo[g]pyrazolo[3,4-b]-quinoline-5,10(4H,11H)-dione Derivatives, *RSC Adv.*, 4, 15319–15324, 2014

**Karamthulla S., Pal S., Khan M. N. and Choudhury L. H.,** On-Water, Synthesis of Novel Trisubstituted 1, 3-thiazoles via microwave-assisted catalyst-free domino reactions, *RSC Adv.* DOI: 10.1039/C4RA06239F, 2014

**Khan M. N., Pal S., Karamthulla S. and Choudhury L. H.,** Multicomponent Reactions (MCRs) for the Facile Access of Coumarin Fused Dihydroquinolines and Quinolines: Synthesis and Photophysical Studies, *New J. Chem.*, DOI: 10.1039/C4NJ00630E, 2014

**Gnanakumar Edwin S., Chokkapu Eswara Rao, Kunjir Shrikant, Ajithkumar T. G., Rajamohan P. R., Chakraborty Debashis and Gopinath Chinnakonda S.,** 9-Fluorene-methanol: an Internal Electron donor to fine tune Olefin Polymerization Activity, *Dalton Trans.*, 43, 9143–9151, 2014

**Rajashekhar Bijja and Chakraborty Debashis,** Co(II) and Mn(II) Catalyzed Bulk Ring-Opening Polymerization of Cyclic Esters, *Polymer Bulletin*, 71(9), 2185–2203, 2014

### Department of Mathematics

**Tripathi Yogesh Mani, Kumar S. and Petropoulos C.,** Improved Estimators for Parameters of a Pareto distribution with a restricted scale. *Statistical Methodology*, Vol. 18, 1–13, 2014

**Tripathi Yogesh Mani, Kumar S. and Petropoulos C.,** Estimation of the Parameters of an Exponential Distribution Under Constrained Location. *Mathematical Methods of Statistics*, Vol. 23, 66–79, 2014

**Majhi S. and Ting S.,** Blind Symbol Rate Estimation and Testbed Implementation of Linearly Modulated Signals, In Press of *IEEE Transactions on Vehicular Technology*, Vol. 99, 2014

### Department of Physics

**Rajput S. K. and Nishchal N. K.,** An Optical Encryption and Authentication Scheme Using Asymmetric Keys, *Journal of the Optical Society of America A* 31, 1233–1238, 2014

**Mehra I. and Nishchal N. K.,** Image Fusion Using Wavelet Transform and its Application to Asymmetric Cryptosystem and Hiding, *Optics Express* 22, 5474–5482, 2014

**Rajput S. K. and Nishchal N. K.,** Fresnel Domain Nonlinear Image Encryption Scheme Based on Gerchberg-Saxton Phase Retrieval Algorithm, *Applied Optics* 53, 418–425, 2014

**Mehra I. and Nishchal N. K.,** Asymmetric Cryptosystem for Securing Multiple Images Using Two Beam Interference Phenomenon, *Optics and Laser Technology* 60, 1–7, 2014

**Mehra I., Rajput S. K., and Nishchal N. K.,** Cryptanalysis of an Image Encryption Scheme Based on Joint Transform Correlator with Amplitude- and Phase-Truncation Approach, *Optics and Lasers in Engineering* 52, 167–173, 2014

**Roy Utpal and Nath A.,** Unified Model of External Confinements for a Cigar Shaped Bose-Einstein Condensate, Accepted for Publication in *J. Phys. A*, 101770, 2014

**Saha Surajit, Kahya Jaiswal, Orham, Manu, Srivastava Amar, Annadi Anil, Balakrishnan Jayakumar, Pachoud Alexandre, Toh Chee-Tat, Hong Byung-Hee, Ahn Jong-Hyun, Venkatesan T. & Özyilmaz Barbaros.** Unconventional Transport through Graphene on SrTiO<sub>3</sub>: A Plausible Effect of SrTiO<sub>3</sub> Phase-Transitions, *Scientific Reports*, (Available online,) DOI: 10.1038/srep06173

**Ghosh S. and Roy Utpal,** Enhanced Quantum Sensitivity in a Vibrating Diatomic Molecule Due to Rotational Amendment, *Phys. Rev. A*, Vol. 90, 022113, 2014

**Das Avirup, Thakur A. K. and Kumar K.,** Evidence of Low Temperature Relaxation and Hopping in Ion Conducting Polymer Blend Solid State Ionics, 262, 815–820, 2014

**Rai Atma, Sharma A. L. and Thakur A. K.,** Evaluation of Aluminium Doped Lanthanum Ferrite based Electrodes for Super capacitor Design *Solid State Ionics*, 262, 230–233, 2014

**Chakrabarti Shamik, Thakur A K and Biswas K.,** Experimental Evaluation of LiFeTiO<sub>4</sub> as an Electrode, *Solid State Ionics*, 262, 49–55, 2014

**Shukla Namrata, Thakur A. K, Shukla Archana and Chatterjee R.,** Dielectric Relaxation and Thermal Studies on Dispersed Phase Polymer Nanocomposite Films *Journal of Materials Science: Materials in Electronics*, 25, 2759–2770, 2014

**Panda M., Srinivas V., and Thakur A. K.,** Percolation Behaviour of Polymer/Metal Composites on Modification of Filler, *Modern Physics Letters B*, 28(7), 1450055(1-6), 2014

**Gargama H., Chaturvedi S. K. and Thakur A. K.,** Reliability Based Design of Multilayered Composites for Electromagnetic Shielding Applications, *International Journal of Performability Engineering*, 10(3), 251–262, 2014

**Balakrishnan Jayakumar, Wai Koon Gavin Kok, Avsar Ahmet, Ho Yuda, Lee Jong Hak, Jaiswal Manu, Baek Seung-Jae, Ahn Jong-Hyun, Ferreira Aires, Casalilla Miguel A., Castro Neto Antonio H. & Özyilmaz Barbaros.** Giant Spin Hall Effect in Graphene Grown by Chemical Vapour Deposition. *Nature Communications*, Available online, DOI: 10.1038/ncomms5748

**Gargama H., Chaturvedi S. K. and Thakur A. K.,** Reliability-based Design Optimization Scheme for Designing Electromagnetic Shielding Structures, *Journal of Electromagnetic Waves and Application*, 28(6), 765–776, 2014

**Namita Pandey and Thakur A. K.,** Relaxation Behaviour of Oxygen Deficient Strontium Manganite, *AIP Advances (Proceedings on 58<sup>th</sup> D.A.E. Solid State Physics Symposium)*, 1591, 1397–1399, 2014

### Department of Humanities and Social Sciences

**Bharti Nalin and Satyarthi Shaiwal,** Why TK Incompatible with IPR: Practical Implications and Illustrations, *Journal of Central European Green Innovation*, Vol 02, No. 2, 2014, 41–51

**Kumar Gaurav, Nalin Bharti and Priyanka Sinha,** Is India Back to the Hindu Growth Rate? *Yojana*, April 2014, Ministry of Information and Broadcasting, Govt of India, New Delhi 20–27

**Mishra Binod,** Dualism in Bibhu Padhi's *Migratory Days*, *The Indian Journal of English Studies*, 51, 174–83, 2014

**Mishra Binod,** Poetry as Power: Understanding Niranjana Mohanty's Poetic Art, *Journal of the Odisha Association for English Studies*, 4, 136–140, 2014

**Mishra Binod,** Cyber Space: A Site of Struggle and Release, *International Journal of Multidisciplinary Approach and Studies*, (online journal) 1, 15–26, 2014

**Tripathi Priyanka,** Understanding D R Nagaraj's Gargi Model of Feminism through Indian Women's Short Fiction in English, *Atlantic Literary Review*, XIV, No. 1, 81–104, 2013

**Tripathi Priyanka and Anupma Singh,** Supernatural Proximity: Fantasy and Fiction in Charles Dickens, *The Bagman's Story*, *The IUP Journal of English Studies*, IX, No. 2, 29–36, 2014

## Conference Presentations

### Department of Electrical Engineering

**Prakash R., Junaid A., Behera R. K., and Parida S. K.,** Design of a Squirrel Cage Induction Motor for Electric Propulsion System, in Proceedings of Third International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS-2014), Indian Institute of Technology (IIT) Kanpur, India, Mar. 13-15, 2014

**Behera R. K., Kumari M. and Parida S. K.,** Design of a Two Resonating Coil WPT System for Portable Electronics Loads, in proceedings of National Power Electronics Conferences (NPEC'13), IIT Kanpur, December 20-22, 2013

**Payami S., Behera R. K. and Iqbal A.,** Common Mode Voltage Elimination for Three- Level Five-Phase Neutral Point Clamped Inverter, in Proceedings of IEEE-IECON' 13, Vienna, Austria, pp. 1-6, Nov. 10-13, 2013

**Singh A. K. and Parida S. K.,** Benefits Associated with Distributed Generation to Remove Transmission Overloads, Proc. of International Conference and Utility Exhibition 2014 on Green Energy for Sustainable Development (ICUE 2014), at the Jomtien Palm Beach Hotel and Resort, Pattaya City, Thailand, Mar. 19-21, 2014

**Verma Sudhanshu and Kumar Preetam,** Printed Multiband Minkowski Fractal Curved Antenna, in IEEE National Conference on Communications (NCC), IIT Kanpur, India, Feb. 28–Mar. 2, 2014

**P. Nayak, Sudhanshu Verma and Preetam Kumar,** A Novel Compact tri-band Antenna design for WiMAX, WLAN and Bluetooth Applications, in IEEE National Conference on Communications (NCC), IIT Kanpur, India, Feb. 28- March 2, 2014

**Kumar Prashant, Mukati Vijay and Kumar Preetam,** Performance Evaluation of SFBC-SOFDM for Underwater Acoustic Channels, MTS/IEEE Oceans'14, Taipei, Taiwan, Apr. 7–10, 2014

**Kapoor Rajan, Sundar S. Shyam and Kumar Preetam,** CORDIC based Reconfigurable Architecture for DS-CDMA/CI Transmitter, IEEE Students' Technology Symposium (TechSym), IIT Kharagpur, pp. 126 - 131, Feb. 28–Mar. 2 2014

**Ajmeri M. and Ali A.,** PI Tuning for Integrating First Order Plus Time Delay Processes, presented at the IEEE International Conference on Industrial Technol. (ICIT), Cape Town, SA, Feb. 2013

**Ajmeri M. and Ali A.,** A Comparative Study of PI Tuning Methods for Integrating Processes, presented at International Conf. on Control, Automation, Robotics and Embedded Systems (CARE), Jabalpur, MP, Dec. 2013

### Department of Mechanical Engineering

**Prajapati Y., Pathak M. and Khan M. K.,** A Comparative Study of Subcooled Flow Boiling in Uniform, Diverging Cross-Section and Segmented Finned Microchannels, 12th International Conference on Nanochannels, Microchannels and Minichannels (ICNMM2014), Chicago, USA, Aug. 3-7, 2014

**Prajapati Y., Khan M. K., and Pathak M.,** Two-phase VOF Model for the Refrigerant flow through Adiabatic Capillary Tube, ASHRAE 2014 Winter Conference, New York City, USA, Jan. 18-22, 2014

**Sahu R. K., Sudarshan K., Patra K. and Bhaumik S.,** Evaluation of Area Strain Response of Dielectric Elastomer Actuator Using Image Processing Technique, Proceedings of SPIE 9056, Electroactive

Polymer Actuators and Devices (EAPAD) XVI, 90562C, San Diego, California Mar. 10-14, 2014

**Singh N., Patra K. and Bhaumik S.,** Modeling and Experimental Study of Dielectric Elastomer based Energy Scavenging System, International Conference on Polymer and Allied Materials (ICPAM 2014), Patna, India, May 30-31, 2014

### Department of Civil and Environmental Engineering

**Hussaini Syed K. K., Indraratna B. and Vinod J. S.,** An Experimental Investigation on the Deformation and Degradation Behaviour of Geogrid-Reinforced Ballast, in J. Pombo, (Editor), "Proceedings of the Second International Conference on Railway Technology: Research, Development and Maintenance", Civil-Comp Press, Stirlingshire, UK, Paper 125, 2014. doi:10.4203/ccp.104.125, 2014

### Department of Material Science and Engineering

**Chowdhury Anirban, Prusty Debadutta, Pathak Abhishek, Chintha Appa Rao and Mukherjee Bratindranath,** Studies on the Compositional Anomalies in Lanthanum Zirconate System Prepared by Co-Precipitation, CIMTEC 2014 (13th International Ceramics Congress), Montecatini Terme, Tuscany, Italy, Jun. 8-13, 2014

### Department of Mathematics

**Majhi S. and Xiang W.,** Blind Symbol Rate Estimation and Testbed Implementation for Linearly Modulated Signals, Vehicular Technology Conference (VTC Fall), IEEE 78th, 1-5, 2013

### Department of Chemistry

**Kumari Rina and Das Prolay,** DNA-Organic Hybrid Molecules-from Self-assembly to Nanostructures, in International Symposium on Nature Inspired Initiatives, ICT Hyderabad, India, Mar. 3-6, 2014

**Kumari Rina and Das Prolay,** DNA-Melamine Hybrid Molecules: From Self-Assembly to Nanostructures, in Recent Developments in Chemical Science & Technology, NIT Rourkela, India, Mar. 15-16, 2014 **Singh Vandana, Kumari Bhavini, Maity Banibrata, Seth Debabrata and Das Prolay,** Preferential repair of clustered abasic sites in TATA Box consensus sequence as compared to CpG island, in 16th CRSI, National Symposium in Chemistry, IIT Bombay, India, Feb 7-9, 2014

**Chatterjee Aninda, Maity Banibrata and Seth Debabrata,** Torsional Dynamics of Thioflavin T in Room-Temperature Ionic Liquids: An Effect of Heterogeneity of the Medium, 16th CRSI National Symposium in Chemistry (NSC-16), February 7-9, 2014 and 8th CRSI-RSC Joint Symposium in Chemistry, IIT Bombay, Feb. 6, 2014

**Maity Banibrata, Chatterjee Aninda and Seth Debabrata,** The Photophysics of 7-(diethylamino)Coumarin-3-Carboxylic Acid N-succinimidyl Ester in Different Solvents and in Reverse Micelle, 16th CRSI National Symposium in Chemistry (NSC-16), February 7-9, 2014 and 8th CRSI-RSC Joint Symposium in Chemistry, IIT Bombay, Feb. 6, 2014

**Chatterjee Aninda, Maity Banibrata and Seth Debabrata,** The Effect of Macrocyclic Hosts on the Photodynamics of a Hydrophilic Coumarin Dye, Light in Chemistry, Materials and Biology (LCMB 2014), IIT Kharagpur, Feb 24-25, 2014

## Conference Presentations

**Maity Banibrata, Chatterjee Aninda and Seth Debabrata**, The Structural Transition Dynamics of Lumichromein Anionic and Cationic Micellar Media, Light in Chemistry, Materials and Biology (LCMB 2014), IIT Kharagpur, Feb. 24-25, 2014

**Ahmed Aziz, Ahmad Imtiaz, Das Neeladri and Bhowmick Anil K.** Structural and Properties Elucidation of Thermally Stable Polyurethanes, International Conference on Polymers and Allied Materials, IIT Patna, May 30-31, 2014.

### Department of Physics

**Nishchal N. K.**, "3D optical information security, Collaborative Conference on 3D & Materials Research (CC3DRM-2014), Incheon, Seoul, South Korea [Invited paper], Jun. 23-27, 2014

**Kumar D. and Nishchal N. K.**, Identification of three-dimensional Objects using Nonlinear Joint Fractional Fourier Transform Correlator, XVI Annual Conference of International Academy of Physical Sciences on Physical Sciences and Technology for Sustainable Development, IIITDM Jabalpur, Mar. 20-22, 2014

**Kumar D. and Nishchal N. K.**, Identification of three-dimensional Objects using Nonconventional Joint Fractional Fourier Transform Correlator," International. Conference on Optics & Optoelectronics, Dehradun, Mar. 05-08, 2014

**Nishchal N. K. and Rajput S. K.**, Optical Asymmetric Cryptosystem, International Conference on Optics & Optoelectronics, Dehradun, Mar. 05-08, 2014

**Mehra I. and Nishchal N. K.**, Securing Image using Interference and Diffractive Imaging, International Conference on Optics & Optoelectronics, Dehradun, Mar. 05-08, 2014

**Rajput S. K. and Nishchal N. K.**, Optical Decryption of Asymmetric Cryptosystem based on Phase-truncated Fourier Transform, International Conference on Optics & Optoelectronics, Dehradun, Mar. 05-08, 2014

**Mehra I. and Nishchal N. K.**, Multiple Image Hiding based on Joint Transform Correlator and modified Gerchberg-Saxton Phase Retrieval Algorithm, International Conference on Optics-photonics Design & Fabrication, 13PSb-04, 287-288, Tokyo, Japan, Feb. 12-14, 2014

**Mehra I. and Nishchal N. K.**, A Novel Asymmetric Cryptosystem for Securing Multiple Images, International Conferences on Optics-Photonics Design & Fabrication, 13PSb-05, 289-290, Tokyo, Japan, Feb. 12-14, 2014

**Pandey Namita and Thakur A. K.**, Electrical Properties of Nanocrystalline Oxygen Deficient Barium Manganite, 14<sup>th</sup> Asian Conference on Solid state Ionics (ACSSI-2014), The NUS, Singapore, June 24-27, 2014

**Shukla Namrata and Thakur A. K.**, AC Conductivity Analysis and Dielectric Relaxation Behaviour of a Conducting Polymeric System Based on PMMA-LiClO<sub>4</sub>, 14<sup>th</sup> Asian Conference on Solid state Ionics (ACSSI-2014), The NUS, Singapore, Jun. 24-27, 2014

**Sharma A.L. and Thakur A. K.**, Relaxation Behaviour in Clay Reinforced Polymer Nanocomposites, 14<sup>th</sup> Asian Conference on Solid state Ionics (ACSSI-2014), The NUS, Singapore, Jun. 24-27, 2014

**Chakrabarti S., Thakur A. K. and Biswas K.**, DFT Study on Feasibility of Two Step Redox Process in Li Battery Electrodes, 14<sup>th</sup> Asian Conference on Solid state Ionics (ACSSI-2014), The NUS, Singapore, Jun. 24-27, 2014

**Rai Atma and Thakur A. K.**, Behaviour of La<sub>0.85</sub>Al<sub>0.15</sub>FeO<sub>3</sub> as an Electrode for Redox Super Capacitor Application, International Conference on Emerging Materials and Applications, IIT Roorkee, Apr. 5-6, 2014

**Gargama H., Chaturvedi S. K. and Thakur A. K.**, Electromagnetic Interference Shielding Structures Design : A Reliability-Based Design Optimization Scheme, International Conference on Quality Management", held at Raipur, India during Mar.22-23, 2014

**Upadhyay D. C. and Thakur A. K.**, Studies on Electrical Double Layer Capacitor with an Ionic Liquid as Electrolyte and MWCNT based Composite as Electrode for Applications in Electric Vehicles (EV), *Challenges & Opportunities for Technological Innovations in India (COTII-2014)*, AIMT, Lucknow, Feb. 22, 2014

**Roy Utpal**, Confining Trap for a Cigar shaped Bose-Einstein Condensate, International Conference on Recent trends in Computer and Computational Sciences (RETCOMP 2013), PES Institute of Technology, Bangalore, Jan 11-13, 2013

**Roy Utpal**, External Confinement: A Key Factor in the Dynamics of Bose-Einstein Condensate, International Seminar on Current Trend in Quantum Gases, BEC and Solitons, Punjab University, Chandigarh, Mar 3-6, 2014

### Department of Humanities and Social Sciences

**Kumar Gaurav, Bharti Nalin, and Sinha Priyanka**. ISFTA: Lessons for Bangladesh, Global Conference on Managing in Recovering Markets, MDI, Gurgaon India (in Association with Australian Centre for Asian Business, University of South Australia, Adelaide, Australia and Faculty of Economics & Business, University of Maribor, (Maribor) Slovenia) Mar. 5-7, 2014

**Tripathi Priyanka**, Communal Violence in India: A Reflection/Refraction of Hindu- Muslim Conflict and Confrontations in Amitava Kumar's *Husband of a Fanatic*, International Conference of South Asian Languages and Literature-11, BHU, Varanasi, Jan. 23, 2014

### Students' Visit and Participation

**Mondal Snehasish and Bhowmick Sourav** presented papers (oral presentation) at "Recent Developments in Chemical Science & Technology: Young Scientists' Meet (RDCST-2014)" sponsored by TEQUIP-II at NIT Rourkela during March 15-16, 2014.

**Yadav Anuradha and Srivastava Prashant K**, Models for Quitting Smoking via Determination and Education, 29th Annual Conference of the Mathematical Society-BHU on Recent Trends in Mathematical Modelling Simulations, Banaras Hindu University, Varanasi, Feb. 3-4, 2014.

**Kumar Anuj and Srivastava Prashant K.**, Global Analysis and Optimal Treatment Strategy for Infectious Disease Model under the Influence of Information and Vaccination, 29th Annual Conference of the Mathematical Society-BHU on Recent Trends in Mathematical Modelling Simulations, Banaras Hindu University, Varanasi, Feb. 3-4, 2014

**Kumar Anuj and Srivastava P. K.**, Global Stability and Impact of Information on Infectious Disease Model with Optimal Treatment, International Conference on Mathematical Sciences (ICMS-2014), Sathyabama University, Chennai, Jul. 17-19, 2014

**Kumar Chandan**, Role of Foreign Direct Investment in India's Agribusiness, IX International Conference on Finance and Business Management at Ranchi University, Ranchi on Jul. 11-12, 2014

**Singh Vikram, Arif Md. Khan and Ekbal Asif**, "Indian\_Institute\_of\_Technology-Patna: Sentiment Analysis in Twitter" in: Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014), Dublin, Ireland.

**Mukati Vijay**, Performance Evaluation of SFBC-SOFDM for Underwater Acoustic Channels, International Conference OCEANS'14 MTS/IEEE Taipei, TICC, Taipei, Taiwan (ROC) April 7-10, 2014.

## Awards/Fellowship and Honours

**Mohd. Kaleem Khan**, Department of Mechanical Engineering received DST-ITS full travel support for attending ASHRAE 2014 Winter Conference in New York City, Jan. 18-22, 2014.

**Utpal Roy**, Department of Physics is working as Associate Editor, World Research Journal of Applied Physics since Aug. 2013.

**Binod Mishra**, Department of HSS is working as elected Editor-in-Chief of Indian Journal of English Studies since January 2012.

**Ms. Isha Mehra** was selected for excellent student-paper presentation award for the paper entitled "Securing Image using Interference and Diffractive Imaging", authored by I. Mehra and N. K. Nishchal, International Conference on Optics & Optoelectronics, Dehradun, March 05-08, 2014.

**Prabhakaran S**, an undergraduate student of Computer Science and

Engineering branch has received prestigious DAAD internship 2014 in Germany.

**Rajan Kapoor**, B.Tech student (under the supervision of Dr. Preetam Kumar, Department of Electrical Engineering) has been selected for Gandhian Young Technological Innovation Awards 2014 for his project entitled "A Transceiver for Satellite based communication during Emergency using TV White Spaces". The award was given by Padmabhushan Dr. R. A. Mashelkar, President Global Research Alliance and Chairman, National Innovation Foundation in a ceremony at IIM-Ahmedabad on Mar. 29, 2014.

**Manoj Kumar Rastogi**, Research Scholar, Department of Mathematics, has been awarded the prestigious Dr. D. S. Kothari UGC Post-doctoral Fellowship for the year 2014.

## New PhD Students

SR.No.	NAME	DEPARTMENT	SR.No.	NAME	DEPARTMENT
1.	PRIYANSHU VERMA	CHEMICAL AND BIOCHEMICAL ENGINEERING	15.	ARINDAM GHOSH	MATHEMATICS
2.	YOGESH KUMAR	CHEMISTRY	16.	DEVENDRA PRATAP SINGH	
3.	VINEET KUMAR		17.	TANMAY SEN	
4.	LAKSHMI KANT	CIVIL AND ENVIRONMENTAL ENGINEERING	18.	ABHYENDRA PRASAD	MECHANICAL ENGINEERING
5.	AJAY PRATAP	COMPUTER SCIENCE AND ENGINEERING	19.	DEEPAK KUMAR PRAJAPATI	
6.	SHWETA		20.	MD. MOONIM LATEEFI	
7.	NILOTPAL CHAKRABORTY		21.	CHANDAN KUMAR	
8.	VINAY KUMAR TRIVEDI		22.	NITISH KUMAR	
9.	SAKRISHNA GUNDLURU	ELECTRICAL ENGINEERING	23.	MD. IRSHAD ALAM	
10.	PRITIRANJAN KHATUA		24.	SATHISH GP	
11.	SAURABH SINGH RAGHUVANSHI		25.	G UDAYA KUMAR	
12.	VIBHOOTI KUMAR SINHA		26.	BISWAJIT MANDAL	
13.	SANKAR KISKU	HUMANITIES AND SOCIAL SCIENCES	27.	ATUL KUMAR	
14.	ANUPAMA SINGH		28.	RABICHANDRA PANDEY	

## Training and Placement

Training and Placement Cell (TPC) of the Institute is actively engaged in developing relationship between various Industrial organizations and employers of technical and scientific manpower. The cell organizes summer internships for the pre-final year and placement activities for the final year B. Tech & M.Tech students. Out of 98 students' (2011 batch) registered for placement, 61 have got placed in 37 companies. The highest package was offered by Microsoft IDC of Rs. 17.05 LPA and they recruited 3 students. The highest numbers of offers were made by Amazon (7), Samsung SISO, Bangalore (6), IBM GBS Kolkata (6), Transweb Educational Services (6), CISCO Systems, Bangalore (5), DRDO (4), L&T Mumbai (4), Bank of America, Mumbai (3), Lucid India, Chennai (3), Bridgeizi, Bangalore (3). The other organizations and companies who recruited our graduates and M.Tech ranged from 1 to 3. About 62.24% of the B.Tech & M.Tech students have been placed through the placement. The average salary package is 7.56 lac per annum.

The summer internship for a period of 8 weeks is compulsory component of all the branches of B.Tech curricula for per-final year students. The cell has arranged summer internship for 114 pre- final year students to various private companies, public sector undertakings and R&D organizations. Some of these include Amazon, CISCO Systems, Aurus Networks, TIFR Mumbai, Tata Steel Jamshedpur, ONGC Mumbai, DRDO, Tata Motors Jamshedpur, Robert Bosch Bangalore, National Instruments, CMERI Durgapur, BARC, HAL Bangalore, GE Bangalore, IISc Bangalore, L&T Nagpur, Tata Hitachi, NTPC Barh, HP Kolkatta etc. Among the pre-final year students, 10 have been offered paid summer research internship abroad in DAAD Germany, MITACS Canada, Trinity College Dublin, INRS Canada, IRCICA, Institute of Material Research & Engineering Singapore, University of Wisconsin Madison and Caltech University USA.

## Events held at IIT Patna

IIT Patna Student chapter of OSA, The Optical Society was approved by the Society (Feb. 2014). Dr. N. K. Nishchal is the Advisor of the IIT Patna Student Chapter. Mr. Ajay Nath is the President of IIT Patna Student chapter. The chapter was inaugurated by OSA Fellow Prof. Ajoy K. Ghatak on April 04, 2014. Prof. Ghatak delivered the first inaugural lecture on "Einstein & his year of miracles".



Prof. Ajoy Ghatak with the participants of Optical Society



1<sup>st</sup> International Day of Sports and Physical Activity

IIT Patna celebrated the 1<sup>st</sup> International Day of Sports and Physical Activity by organizing some sports events under the supervision of Dr. Om Prakash, Chairman- Sports, IIT Patna on April 04, 2014. A large number of staff, faculty and students participated and enjoyed the spirit of sportsmanship and finally received medals and trophies. Om Prakash (Programme Co-ordinator NSS, IIT Patna) organised NSS Programme on "National Youth Policy and Rajiv Gandhi Khel Abhiyan- 2014" at IIT Patna on Feb. 24, 2014.



Blood Donation Camp organized by NSS, IIT Patna on Jan. 18, 2014



An awareness programme on World Cancer Day organised by IIT Patna on February 4, 2014

## Entrepreneurship Club

The Entrepreneurship Club of IIT Patna proudly organized management events in **Anwasha**, the annual techno-cultural extravaganza of IIT Patna for the very first time and witnessed a huge participation from various colleges. Some important events were: Stockmart (virtual stock-mart), B-Quiz, B-Debate, Six Thinking Hats (time-shift marketing competition). **Mr. Vikram Upadhyaya**, Board Member, Indian Angel Network Incubator gave insight into setting up global ventures and franchising during Anwasha'14.

E-Club carried its legacy of calling entrepreneurial tycoons from various fields to the campus through organizing the first ever "Entrepreneurship Week" scheduled from March 2-7, 2014. The week-long event included a series of guest lectures, workshops and panel discussions featuring eminent personalities from industry as well as academia. These events were organized with an aim to ignite the spirit of entrepreneurship amongst students by spreading awareness on the risks and opportunities involved in starting one's own company.

The Inaugural Guest lecture was delivered by Padma Shri Dr. Anil K. Gupta, Executive Vice Chairman of National Innovation Foundation. This was followed by a video conference with an IIT Patna alumnus Mr. Anandghan Waghmare, the developer of a Braille-based phone for the blind. Mr. Waghmare gave an insight on the need to build a prototype before an idea is materialized. He also threw light on his creation and briefly described his journey from zero to an innovation.

The lecture on the fourth day was a workshop by the Co-founder of Unocoin, Mr. Vikram Nikkam on the "Introduction to Bitcoins - the new face of entrepreneurship". Bitcoins is a very new concept of e-currency which is slowly gaining ground, and the students of IIT Patna got an understanding of this new concept through the enlightening lecture. The set of lectures that further took place includes a late night lecture and interactive session with Mr. Arjun Malhotra, Co-founder, HCL and Co-founder, TechSpan. Next, followed a Panel Discussion on "How to Bolster the Entrepreneurship Ecosystem in India?" by several intellectuals of this field, namely Mr. Arjun Malhotra, Co-Founder, HCL and Co-Founder, TechSpan Ms. Padmaja Ruparel, Founder President, Indian Angel Network, Mr. Anjan Raichaudhuri, Professor, IIM Calcutta and Dr. Prashant Jha, Consultant, AIIMS, New Delhi. Ms. Sneha Rao, Policy and Research Manager, Swaniti Initiative, gave a talk on working in unconventional sectors.

E-Club also launched its website during the E-Week which acts as one-point source of all information regarding various activities of e-club. The club also featured gallery and blog. Students found all the sessions really entertaining and informative. Entrepreneurship is no longer a far-fetched term for them. Such interactive sessions give them a fair idea of start-ups and challenges associated with it. The Entrepreneurship club of IIT Patna, since its inception, has always been organizing such guest lectures and panel discussions on various aspects of entrepreneurship. This buzzword of the century echoes in students' minds and they wish to go a long way with this.



Entrepreneurs' Week

## Research Scholars Day-2014

Research Scholars Day was celebrated on 08<sup>th</sup> March 2014 with an aim to provide a platform to discuss, share, and showcase the ongoing works of research scholars at IIT Patna and get feedback of the same from eminent faculty members and industry experts. **Prof. Braj M. Sinha, Former President, Shastri Indo-Canadian Institute and Professor, University of Saskatchewan, Canada was the chief guest for the event and subject experts included Prof. Asok De (Director, NIT Patna); Prof. Ujjawal Maulik (Jadhavpur University); Prof. D. Sinha (Patna University); Prof. B. Sahay (IIT Kanpur); Prof. D. R. Mal (IIT Kharagpur); Prof. S. K. Singh (NIT Patna); and Prof. J. N. Sinha (IIT Patna).** Winners from different schools were: School of Engineering- Sandeep Raj, School of Basic Sciences- Bhavini Kumari, School of Humanities and Social Sciences- Sadeqa Ghazal.

## Literary Events During Anwesh 14

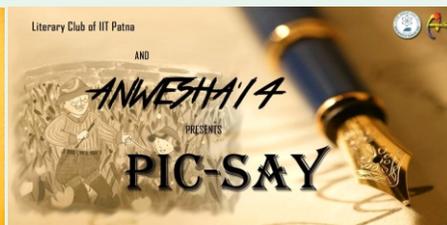
House of Literary and Fine Arts, (HoLFA), IIT Patna organized multifarious events varying from literary to artistic domains. The events included a general quiz: 'The Kwiz Wiz', online story submission: 'Once Upon A Time', The wall painting competition: 'Darpan', and a creative writing contest: 'Pic-Say'. Apart from these events, the Literary Club also organized a quiz competition based on television and movies, named 'Tamasha' and 'Asitente Literaria' which were quintessential mix-up of all typical literary events. These events were organized as a part of **Anwesh 14**, the annual techno-cultural fest of IIT Patna.



A general quiz : 'The Kwiz Wiz' event



The Wall Painting Competition : 'Darpan'



Pic-Say Event Poster during Anwesh 14

## Technical Events

Technical events are the most integral part of IIT Patna. Every year students organize **Celesta**, the annual techno-management week of IIT Patna, during autumn semester. There are various clubs which organize the events including NJACK, SPARKONICS and SCME. The events organized during Anwesh 14 included Aqua Soccer, Trebuchet, Catch Me If You Can, Romantronix, Matcode, Njath, Mind Benders, etc.

## National Events HPVC Event

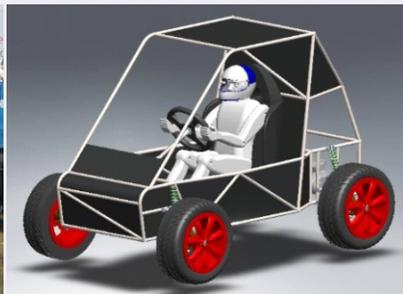
Human Powered Vehicle Challenge (HPVC) is a national event organised by American Society for Mechanical Engineers (ASME), held for the first time in India. The competition comprised three day events which included the design event, drag race and endurance race.

The *Tadpole trike* named 'Firefly' consisted of 18 gear combinations with a maximum attainable speed of 40kmph. A storage unit was also designed to extract and store a small portion of human energy spent in driving which was enough to reverse the vehicle and power the headlights. The vehicle was also equipped with front fairings to reduce the air drag. Apart from this the vehicle was very ergonomic.

The team included Md Sujaat Ali (Captain), Nakul Raj Bansal, Shashank Kushwaha, Sai Raviteja, Priyam Agarwal, Abhishek Rathore, Vitthal Pandey, Rahul Palani and Anpeksh Saxena.



IIT Patna team for HPVC with their tricycle.



IIT Patna Design for BAJA SAE India 2015

## Baja SAE India 2015

IIT Patna participated in BAJA SAE INDIA 2015 event and reached the virtual round held at Gujarat Technological University, Ahmedabad in which over 300 teams had participated all over India. The BAJA SAE assigns students tasks to design, fabricate and validate a single seater, four - wheeled off road vehicle to take part in series of events spread over a course of 3 days. Vehicle is tested for the sound engineering practices and agility of the vehicle in terms of gradability, speed, acceleration and manoeuvrability characteristics and also its ability to endure that back breaking durability test. IIT Patna happened to be the only team selected from Bihar. The team comprised 25 members from 2nd and 3rd year including faculty advisor Dr. Akhileendra Singh. IIT Patna students are gearing up for fabricating the vehicle to participate in the main event going to be held at Pithampur.

## SUPRA FSAE 2014

IIT Patna with its team of 25 students from various branches participated in SUPRA FSAE in 2014 from different academic demographics, comprising different branches and batches and stood 21<sup>st</sup> in the All India Competition. The team was mentored by Dr. Manabendra Pathak, Dept. of Mechanical Engineering at IIT Patna and was led by Aakash Tripathi, final year student of Mechanical Engineering. The team was one of the two IITs making into the top 30 along with IIT Delhi. SUPRA FSAE is a well-known annual conglomeration of formula racing teams affiliated to Society of Automotive Engineers. The aim of the event is to design and manufacture a formula styled racing car which has different qualities including being cost- efficient, agile, fuel efficient, environmental friendly, ergonomic, innovative and nevertheless, aesthetic. The participating teams are expected to design a car for a hypothetical car manufacturer which caters to needs of part time



CAD design of a formulae style racing car by SUPRA, IITP

racers. The event has two rounds, the first round being designing round in which detailed designs for a proposed vehicle is presented by the team and subjected to scrutiny. In the second round, the team has to manufacture the vehicle for racing and endurance events held at real racing tracks. The team is currently manufacturing the vehicle for the final round.



Frame for race car.

## ECOCLUB

Eco club of IIT Patna successfully organized several events under the leadership of Ujjwal Kant Niraj. These events included debate, quiz, and sketching etc. The debate was one of the most successful events of **Anwasha 14** with around 20 teams sharing their views on different sensitive topics related to environment. In addition, the club also organized sketching events where mesmerizing sketches on **Women Empowerment** were drawn. Eco club has also been instrumental in arranging some eco-awareness drives such as campus cleaning programme.



Mudooz event during Anwasha 14



A clay model prepared by a participant during Mudooz event.

## TECHNICAL EVENTS DURING ANWESHSA 14

Three major technical events, namely NJACK, SCME, and SPARKONICS were also organized during **Anwasha 2014**.

### NJACK

**Disassembly:** In this event, Disassembly of the program was given to the participant who was required to understand what it does and modify it. It tested whether the participant can see the program the machine does.

**NJATH:** It was an online treasure hunt where clues were given to participants in the form of pictures, name of level and in source of page and participants were expected to guess for the correct answers to clear a level. Hints and clues were anywhere and everywhere including URL of the page.

**Mindbenders:** It was an IQ event where participants were required to put on thinking hats and guess correct solutions to given logical and analytical questions.

**WYSIWYG:** What you see is what you get was a challenge for the minds who have honed the art of problem solving. This competition presented to the participants challenges to solve and code.

**Strategize:** "Strategize" gave the participant an opportunity to develop a strategy for a computer player and implement it in basic programming.

**Web Dev Challenge:** The participant was supposed to use HTML, CSS and JavaScript to build websites according to problem statement.



Participants from various colleges of Patna during Anwasha'14



FerraGo events by students of various colleges

## SPARKONICS

**ElectroConcurso:** "ElectroConcurso" was an offline event where questions regarding basic electronics and electrical topics were asked.

**FarraGo:** FarraGo was a circuit designing competition which consisted of two rounds. The participant had to design a specific electronics application by using the components provided by the organizers. The application used the concepts from basic Analog and Digital electronics and was to be designed on a Bread Board.

**Matcode:** Matcode was an online event. Participant had to write his program using MATLAB according to problem statement. The program was judged on the basis of algorithmic efficiency and ease of use.

**Verilog Reloaded:** Verilog Reloaded was an event where a problem statement was given on spot and participants had to code using VerilogHDL and implement on FPGA. **Seguace:** It gave the participant a chance to design an autonomous line follower robot without using micro-controller. **Romantronix:** A monochromatic LED dot matrix display had to be designed for displaying the characters and symbols which were in interface with microcontroller.



A participant calibrating his Bot for line following Seguace event.



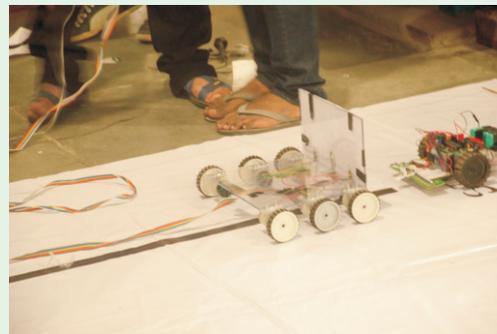
Floating Bot event.

## Rural Technology Development Club (RTDC):

Rural Technology Development Club, IIT Patna, in collaboration with Anweshas2014, organized its very first online Engineering solution event. Amongst many loop holes in the technical advancement of the country, RTDC, IIT Patna addressed one such loop hole that still threatens the irrigation system of rural India. The participant had to design a mechanism which can be used to pump out water from a flowing canal by using flow velocity of the water canal without using any external power supply.



Medieval warfare event in Trebuchet, Anweshas 2014



Robot following event.

**Aqua Soccer:** Anweshas'14 gave a platform to showcase the skills of robotics on the deepest of waters. Each team had to compete with the other team by collecting maximum number of balls floating randomly in the pool area and place them one by one in the specified region in the pool. Each boat had to drag the balls to the specified region placed in their half.

**Titans Unleashed:** The aim was to design and construct a remote controlled robot capable of fighting a one on one tournament (Robowarz).

**Trebuchet:** This year Anweshas gave a chance to experience Age of empires in the field of robotics. Each team had to design and construct trebuchet and fight a battle with other team destroying opponent's castle.

**Catch Me If You Can:** ANWESHAS'14, in association with SCME robotics, presented a championship giving the tech-savvy minds a chance to create their own autonomous bots that can follow a leader robot on prescribed path. The participants should build an autonomous robot that can follow the motion of the source robot on a given path without ever colliding with the source robot.

**Exergio:** The participant had to submit a Power point presentation, on the conversion of wasted energy of any form (vehicles, power-plant, heavy applications etc.) to higher grade utilisable energy. It was judged on various criteria.

## IIT Patna- Sports

IIT Patna provides a plethora of opportunities for students to excel in a variety of sports. The duration between January to April 2014 saw phenomenal achievements in sports by the students of IIT Patna. This includes the first position in the CNLU Basketball Tournament and first position in CNLU Table-Tennis Tournament held in the month of March 2014. There were several inter-hall and inter-branch matches conducted as a part of regular sports activities. This year girls' basketball team has been formed by enthusiastic team of girls who will be participating in the 50th Inter IIT Sports Meet for the first time.

## Republic Day

Like every year, Republic Day 2014 was celebrated at IIT Patna to commemorate the day when the Constitution of India came into effect. The Director, faculty members, security personnel and the students of the Institute were present to celebrate the occasion. A parade by the security guards led by their commander was held. The then, Hon'ble Director, Professor Anil K Bhowmick unfurled the National flag and the National Anthem was played, after which he addressed the audience with encouraging words. The cultural program for the morning began with the song "suno gaur se duniya walon" by a group comprising Ravneet, Ayushi, Dhruv and Saurav from the among the enthusiastic first year students. Followed closely was an unplugged song "yeh jo desh hai mera" by Abhijeet and Parikshit again from first year. Alok Patwal delivered a speech on the topic "The journey of India post "Independence". A street play was also orchestrated for spreading awareness on the issue "The misuse of the right to vote". A prize distribution ceremony was conducted to felicitate the winners of the technical and management events held at Celesta'13. The festivity of Republic Day concluded officially with a patriotic speech and vote of thanks, delivered by Mr. Subhash Pandey, Registrar, IIT Patna. He also appreciated the students for their enthusiasm in participating in the cultural program for the day. Sweets were distributed to all, which marked the end of the celebration.

## FORTHCOMING EVENTS

Department of Physics is organizing a Conference on **Recent Trends in Information Optics & Quantum Optics (IOQO-2014)** during Nov. 7-8, 2014. For more details please visit the conference website on <http://www.iitp.ac.in/ioqo-2014>

## Literary Corner

### तुम गुनगुना रही हो !

राज कुमार राजहंस  
शोधाधी, गणित विभागा

यह जो तुम गुनगुना रही हो,  
प्रकृति में हलचल मचा रही हो।  
वायु जो थी अचल निष्पाण,  
कपित हो छोड़ रही सुरिली तान।

झूम उठे इन वृक्षों के दल,  
कब से थे श्रवणोत्सुक, प्रतीक्षारत।  
नदी की अविरत धारा, जो थी शांत,  
प्रकम्पित तुम्हारे सुर से,  
छोड़ रही वीणा की तान।

गूँज उठे भ्रमर भी,  
पंछी करते कलख - गान।  
विस्मृत हुए दिवाकर,  
करें संगीत - सुधा - रस पान।

विकसित हो गई कुसुम - कली,  
सुरभित करें तेरा अलौकिक गान।

मुग्ध हुए परोधर भी,  
व्योम - स्थिर, सुने तेरा गान।  
सम्मोहित हो रहे मृग-झंड,  
श्रवण-सुख दें तेरा यह मान।

Aditya Jhalani

Civil & Infrastructure Engineering, B Tech-1301CE01

### The Awaited Spring

Ah! I feel desolate.  
My eye lashes seem desperate.  
..desperate to hug each other.  
And then close...a close probably forever.  
A close to the muck I witness often  
A close to problems which keep  
popping like bushes in the rainy season.  
Consolers yell – "Stop being crabby!"  
But, I can't help waiting in the lobby;  
For an angelic fairy to land,  
And rotate her magic wand;  
To give a torque to my life,  
And turn it soothing and light!  
I know, it's lunatic.  
I know, it's fake.  
I yearn to learn.  
But my oblivion,  
Causes me to fall...oh damn!  
I wonder,  
When this winter  
Would be over!  
An over with triumph of heavenly spring!  
But till then, oh Lord!  
Bless me with a Robert Frost  
To lead me out of this winter frost  
And remind my conscience and my desperate  
eye lashes with lines of his fame:  
"I have promises to keep!  
And miles to go before I sleep!"

Aditya Jhalani

Civil & Infrastructure Engineering, B Tech-1301CE01

### No Dream is Big

I never thought I could achieve it. Though I had the dream of it since my school days, I never considered myself to be a deserving one as all of my initial attempts to make it into reality failed, and consequently I thought it is beyond of my reach. I thought, perhaps that is why it is my dream as it cannot be realized in practice. And as the days gone by, I almost lost all hopes in ever getting it. But it was a charming Sunday evening, at a small gathering of friends in Bangalore that I regained my confidence and perhaps for the first time I thought I can actually make it. It was a friend of mine, who casually said, "If you can think about it, you can get it". And yes, that was the moment. Though it was very informal, the statement made a significant strike in my mind and heart. On my way back home that day, I was thinking about it again and again and felt a sheer urge to achieve my goal. For the first time, I felt passionate and I was so sure about it. But again, my attempts were turning out to be non-productive. But this time I had been much more confident, optimistic and desirous of getting it. I analyzed and understood the mistakes I committed and tried to rectify them for the next attempt. My mind had become goal-oriented and my thoughts started stimulating a positive mindset and I could clearly feel the impulse.

Finally, after a couple of more attempts, I got a call from the Phoenix Publishing house, just to know that my manuscript had been selected to be published as a book and the editor wanted to meet me. My happiness knew no bounds as I jumped up, which could have easily beaten the record in high jumping at the Olympics, at least in my thoughts. Today, I have six books to my name and have been a very happy and satisfied person as I have accomplished my dream of becoming a writer. I was reminded of what Swami Vivekananda had said "Arise, Awake and Stop not till the goal is reached".

Nilotpal Chakraborty

Center of Advanced Systems Engineering  
PhD Scholar, 1421CS10

### Unlikely Night (All events and persons in the following paragraphs are real)

There are nights that envelope you with unlikely realizations. They leave you reeling, filled with clouds of thoughts waiting to wash you down, and for some time, all you want to do is to lose yourself in the wind. We were sitting on the hostel terrace, Don, Karan and I. Engineering at an IIT comes with its downsides of stress and work. A few hours of random conversation on breezy nights is our way of unwinding. Don comes from Kottayam in Kerala, but he grew up in Delhi; and he is as much of a Delhite as you can expect.

Karan had written something a few days back, and that had set us thinking. Karan was the one talking. Moving from divinity to the seasons around us, he spoke of the nights in his home, in Rajasthan. Sometimes I always feel that when we talk about things we care for, we go into a feverish craze. Karan was softly silhouetted by a moon on the wane as another land came alive through his words. The cool courtyard where you could lie down and feel in your veins how tiny, insignificant you were; juxtaposed against the warm, dusty wind from the desert. Suddenly, he paused and looked up at the sky, and said, "You can't see stars in a city."

When I used to roam around the serpentine bylanes of Delhi, watching the dusk descend like the voice of a serenading lover; sometimes Don accompanied me. Then for a couple of weeks he went to his ancestral home in Kerala, after a long time. He invited me to come too but I couldn't. We hadn't talked about his trip after he returned. That night, when Karan was speaking, Don suddenly spoke up, "You can see stars in a city, but you can't feel them here." I was listening to him with eyes closed. "When I went back to Kerala, the days were out of some other world. They revolved around rains, rains, backwaters and the rains. A green misty hue covered the horizon. When I landed there after so many years, it felt like it was a scene from some movie on the Vietnam War." There were so many things I had seen when I was a kid there, but I appreciated them only now. Even waking up is a surreal experience every day! If you can wake up at dawn, you will walk out to the balcony with a steaming cup of tea to be greeted by a soft drizzle punctuated by a whistling thrush. As the dawn gives way to sunshine, you will hear the tranquillity replaced by a plethora of singing birds. But if you are a late riser, you only get to hear the cacophony of the crows...

"My uncle lives in the States, in that town of El Paso – the one in the Marty Robbins song. We were standing just outside our home, when he exclaimed that it was about to rain. I looked up at the sky, and I couldn't spot a cloud anywhere near. Seeing me puzzled, my uncle asked me, "Can't you hear it?" "I was taken aback. My uncle told me to concentrate on the sounds around. I listened hard, cupping my ears, but I couldn't hear a thing. My uncle chuckled. When they were kids, they had to walk miles to reach their school. So they listened to the rain, and could tell if the clouds were coming in. He laughed, as he remembered the times he had rushed under trees and strangers' homes listening to the rains...and before he could finish, the first drops fell on my hands. And then there is this old lady living down the row. She lives alone, her children live abroad. They come to visit her every three years. She wakes up every morning, and makes pickles. The next morning, she wakes up and makes wine. Sundays are for the church... her aim is to prepare enough pickles and wine so that when her children come here, she can send back enough to last them three more years..." As Don spoke, I suddenly felt a void within me. For us, who were born and brought up in cities, for us, for whom a friend going to a village is with an NGO, and for us, for whom the countryside is restricted to poetry and poignant art films. Can this void be ever filled?

I have no village home to fall back upon, I have no place I can roam and visualize myself walking inside the woods. I don't think even my father has anything but stories to remember them by. I have heard stories about our history in Kanauj, and the rivers and the soil of what is now Bangladesh..but they were nothing more than stories that could have been anyone's. I certainly could not call them mine. But then, what of my so-called roots? Do I have no folk music I can relate to? Do I have no *lok geet* I can call my own? Or is it the way urban, smart lifestyle is meant to be? Perhaps our minstrels are the urban troubadours, the Bob Dylans and the John Denvers; and our *bhatiyali*, *baul* and *lavani* are the Saturday night blues and the voice of Rahul Ram or Begum Akhtar on stereo at most.

On that night, I realized that we are all living in a self-imposed, pseudo-intellectual bubble. The rural countryside is not a part of my life, has never been. I was born in the heart of the City of Joy. I had an urban upbringing. My love surrounded the city streets, and my separation embraced the orange void of street lamps. All of my ups, downs and compromises are set in the backdrop of one city or another. Yet, we all pine for those greens. Even our poetry is filled with a strong escapist undercurrent that wants to go back to nature, in the premise world. As if there was some hidden pleasure in trying to escape the confines of a city, or perhaps there is nothing more romantic than the elegy of not being able to do so. What are we doing then, us--- people who like to think of ourselves as thinking men? We pine for what we can't have. We cry for a countryside home that we never had, and come to think of it, it's not like we have something in the city to attach ourselves to. I floated from one rented apartment to another, like I float now, from one end to another, without knowing why, what or how...

We are all living dangerously in a world that has no shape, that has no form, and that has no objective reality. We cling to our dreams and we find solace in them. For that night, for fifteen minutes, our dream was that countryside, that sky, those stars and that music of the wind, and that sound of the rain. When those fifteen minutes are over, we come back into the world of impending interviews and targets on the board. As our session faded into silence, I remembered another one of the nights like these, in Hyderabad, a line that suddenly came back into my mind. Someone was saying that people might call my city ruthless, fast and cold... but I prefer to call it dusty. I walked down the stairs from the terrace, all of it playing in my head. I will probably write this down someday, I thought. But for now it was time to debug the stack overflow.

Ritobroto Maitra, Computer Science and Engineering, B Tech- 1301CS50

## Glimpses of Construction Activities at IIT Patna, Main Campus, Bihta



Admin Block Front Side



Admin Block Part A & B Front Side



Block 3 Back Side



Block 3 Front Side



Block 4 Back Side



Block 4 Part B Lateral Part



Block 4 Front Side



Block 6 Back Side



Block 6 Front Side



Block 9 Back Side

**Editors :** Dr. Binod Mishra (Associate Professor & Co-ordinator) and Dr. Priyanka Tripathi (Assistant Professor), School of Humanities and Social Sciences.

**Technical Support :** Mr. Santosh Kumar (J.T.S, Deptt. of Physics) & Mr. Ahmad Nishat (J.A., School of Basic Sciences & HSS)

Information for Impulse can be sent throughout the semester to the editorial team on impulse @iitp.ac.in.

### ACADEMIC CALENDAR FOR AUTUMN SEMESTER 2014-15

	DATE	DAY
Welcome, Orientation and Registration Programme for all new UG and PG entrants	July 21, 2014	Monday
Registration for all continuing students	July 22, 2014	Tuesday
First day of Instruction for B.Tech. and M.Tech. programmes	July 23, 2014	Wednesday
First day of Instruction for Ph.D. programmes	July 28, 2014	Monday
Last date for late registration with fine	July 28, 2014	Monday
Last date for course adjustment for B.Tech. and M.Tech. programmes	July 30, 2014	Wednesday
Communicating the list of short attendance cases to respective Faculty Advisors/Supervisors	Sep 08 - 12, 2014	Monday to Friday
Mid Semester Examination (MSE)	Sep 15 - 20, 2014	Monday to Saturday
Last date for showing mid-semester answer copies to students	Sep 26, 2014	Friday
Mid Semester Review of UG projects (without affecting the regular classes)	Between Sep 22, 2014 and Sep 27, 2014	
Last date for Review of Mid semester performance of all students by Department UG & PG Program Committee and report of academically weak students to their Faculty Advisors/Supervisors	Sep 30, 2014	Tuesday
Mid Semester Break for students	Oct 01 - 06, 2014	Wednesday to Monday
Last date for sending list of courses to be offered in the next semester	Oct 27, 2014	Monday
Last date for General Time Table slot allocation for next semester	Nov 14, 2014	Friday
Course Evaluation Week, Course Pre-Registration Week, Communicating the final list of short attendance cases to Academic Section through their Faculty Advisors/Supervisors	Between Nov 17, 2014 and Nov 21, 2014	
Display of list of detained students in End Semester Examination due to short attendance by the Academic Section	Nov 21, 2014	Friday
Last day of Instructions	Nov 21, 2014	Friday
End Semester Examination (ESE)	Nov 24 - 29, 2014	Monday to Saturday
Last date for submission of Grades	Dec 04, 2014	Thursday
Last date for Department UG & PG Program Committee meeting for considering results of all students. Last date for submitting hard copies to the Institute UG & PG Program Coordinators	Dec 05, 2014	Friday
Last date for Make-up-Examinations for students having "I" and "X" grades and submission of letter grades to the Institute UG & PG Program Coordinators	Dec 07, 2014	Sunday
IAPC meeting	Dec 08, 2014	Monday
Declaration of Results	Dec 09, 2014	Tuesday
Submission of fee for Spring Semester 2014-15	Between Dec 10, 2014 and the day of Registration. for coming Spring Semester 2014-15	
Winter Break begins (Only for UG students)	Dec.01, 2014	Monday
Conduct of written Test/interview by Departments for PhD admissions	Dec 10-13, 2014	Wednesday to Saturday
Winter Vacation (Only for Teachers)*	Dec 10- 28, 2014	Wednesday to Sunday
<b>*Teachers can avail their vacation leave according to the Institute rules.</b>		
Registration for all existing UG & PG students and Registration for all new PG entrants for Spring Semester 2014-15	Dec 29, 2014	Monday
First day of Instruction for Spring Semester 2014-15	Dec 30, 2014	Tuesday