

# IMPULSE July 2013 / Vol. V / No. 2

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## Director's Message



Dear Friends,

It gives me immense pleasure to welcome you all, particularly 2013 batch of B. Tech., M. Tech., and Ph. D. students, in a new academic session. Through *Impulse* – the bi-annual newsletter of this Institute – I give you a brief account of our success story.

We started from scratch in 2008 but planned in such a way that our infrastructural facilities and academic activities took us to this height of glory within five years time. Our students, faculty, and staff members have worked sincerely to reach this level which can be compared with any old IIT as far as teaching and research is concerned. This is the reason why many are attracted to this IIT. From this academic session, we have started the departments like Civil and Environmental Engineering, Material Science and Engineering, and Chemical and Biochemical Engineering. As a result, we are offering B. Tech. programmes also in Chemical and Civil Engineering from this academic session. At M. Tech. level, we have introduced two more programmes in Communication System Engineering and Computer Science and Engineering. At B.Tech. level, we have also introduced some new courses including Communication Skills for first year students, and Infotainment and Entrepreneurship for third year students.

To cater to the increasing needs of these programmes, we have hired a good number of qualified faculties in each department. In terms of infrastructural facilities, we have acquired more buildings to house classrooms, faculty rooms, and laboratories, and have set up National Knowledge Network classrooms. In addition, we have four boys' hostels with separate mess facilities. For girls, we have taken extra care by accommodating them in a girls' hostel housed within the boundary of the Institute Guest House which has 24- hour security arrangements. We have a plan to move to the permanent campus at Bihta in June, 2014. For this, construction work is rapidly progressing. This is going to be an eco-friendly campus which would be a treat to the eyes. We have also signed MoUs with various prestigious foreign universities where our students are going every year to gain experience as interns.

Our vision is that IIT Patna should be known for its perfection, innovative thoughts, high quality research, and as a centre of talented professionals. With small and firm steps we are moving forward every single day. Distinguished visitors from the academia and industries have also come forward to help us in various ways. We acknowledge their support and express our sincere thanks to them. We are going to have our second Convocation on 26<sup>th</sup> October, 2013 for which, Hon'ble President of India, Shri Pranab Mukherjee has given his kind consent to be the Chief Guest.

Wishing you all a very happy and fruitful academic year.

Anil K. Bhowmick

## Editorial Collective

It is the beginning of a new calendar year at IIT Patna. We welcome you all with a new vigour and promise. It is a pleasure to bring you another issue of IMPULSE- the bi-annual newsletter of IIT Patna. It will provide a glimpse of the academic, cultural and growth activities of the Institute. We continue to grow in quality and number at the transit campus in Patliputra Colony, while at the same time construction of our main campus at Bihta is in full swing. There are some photographs of construction activities at our upcoming campus at Bihta in this issue of the newsletter. We assure to keep you all updated with the construction activities in the forthcoming issues of this newsletter as well. The institute has grown in strength and visibility in the last six months with stronger relationship in academic partnership at the global and national level as well as social outreach with the local milieu. Our sustained efforts are beginning to bear fruits- the glimpse of which is shared with you all. We wish you a rewarding time ahead.

## BOGs of IIT Patna



**Mr. Ajai Chowdhry**  
Chairman



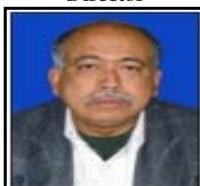
**Prof. Anil K. Bhowmick**  
Director



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



**Prof. Sriman Kumar Bhattacharya**  
Director, CBRI Roorkee



**Prof. Ajay Chakrabarty**  
Professor, IIT Kharagpur



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



**Prof. M. B. Sharan**  
Co-ordinator, HSS, IIT Patna



**Prof. Swapan Majumdar**  
CEE, IIT Patna



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

## New Appointments



Dr. Joydeep Chandra  
Asst. Prof., Computer Sc. and Engineering



Dr. Avik Samanta  
Asst. Prof., Civil Engineering



Dr. Syed Khaja K. Hussaini  
Asst. Prof., Civil Engineering



Dr. Anup Kumar Keshri (joining soon)  
Asst. Prof., Material Sc. and Engineering



Dr. Dinesh Kumar Kotnees (joining soon)  
Asst. Prof., Material Sc. and Engineering



Dr. Anirban Choudhury (joining soon)  
Asst. Prof., Material Sc. and Engineering



Dr. S. Sivasubramani  
Asst. Prof., Electrical Engineering



Dr. Rajib Kumar Jha  
Asst. Prof., Electrical Engineering



Dr. Joyoni Dey (joining soon)  
Assoc. Prof., Electrical Engineering



Dr. Sudhan Majhi  
Asst. Prof., Mathematics



Dr. Rishi Raj  
Asst. Prof., Mechanical Engineering



Dr. Sawan Suman  
Asst. Prof., Mechanical Engineering



Dr. Mayank Tiwari (joining soon)  
Assoc. Prof., Mechanical Engineering



Dr. Binod Mishra  
Assoc. Prof., Humanities and Social Sciences



Dr. Papia Raj  
Asst. Prof., Humanities and Social Sciences



Dr. Priyanka Tripathi  
Asst. Prof., Humanities and Social Sciences



Dr. Jyotsna Agarwal (joining soon)  
Asst. Prof., Humanities and Social Sciences



Mr. Ravikant Kumar  
Junior Mechanic, ME



Mr. Amit Kumar  
Junior Mechanic, EE



Mr. Pandit Ravi Sharma  
Junior Assistant



Mr. Abhishek Dixit  
JTS, CSE

### Sophisticated Analytical Instrument Facility (SAIF) at IIT Patna

Sophisticated analytical instruments are very important for carrying out cutting edge research in the emerging areas of Science and Technology. In this context, the Department of Science and Technology (DST), Govt. of India has already created this type of facilities in various parts of the country to cater to the need of researchers of that region in particular and of the entire country in general. In Bihar-Jharkhand region, there is no such facility. Thus, a proposal was prepared under the aegis of Prof. Bhowmick and the same was submitted to DST, Govt. of India for setting up a Sophisticated Analytical Instruments Facility (SAIF) at IIT Patna. In response to our application and a presentation (in DST, New Delhi) justifying our demand for SAIF at IIT Patna, DST has agreed to support a SAIF in IIT Patna initially for a period of five years.

Setting up a facility in this region (Bihar-Jharkhand) will benefit research community of IIT Patna as well as several other institutes of national importance, including ISM Dhanbad, NIT Patna, NIT Jamshedpur, IGIMS, RMRIMS Patna, NIPER Hajipur, Patna University, BIT Mesra, NML Jamshedpur and newly conceptualized Central Universities in Bihar and Jharkhand. In addition, the facilities of the SAIF can be used by industries and other organizations to carry out analysis of samples. The creation of a SAIF in IIT Patna for this region will definitely promote growth of research activities in Bihar and Jharkhand.

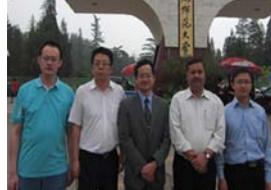
## Visits Abroad

**Dr. Aditya Raj** visited three prominent Canadian Universities during his trip from May 30- June 10, 2013. He was at the University of Calgary (Edmonton), the University of British Columbia and the University of Victoria (British Columbia) for presenting research papers at academic conferences & for research ties.

**Dr. Naveen Kumar Nishchal** visited Singapore (April 2013) and China (June 2013) for delivering lecture and other academic pursuit.

**Dr. Preetam Kumar** visited Budapest, Hungary (June 2013) to present paper in Institute of Electrical and Electronics Engineers, International Conference on Communications (ICC) 2013 conference.

**Dr. R. K. Behera** visited, Cape Town, South Africa to attend International Conference on Industrial Technology (ICIT 2013) from 25 to 27 February 2013.

	
<p>Dr. Aditya Raj &amp; Prof. T. Wotherspoon (Dept. of Sociology, University of Saskatchewan) at the Congress 2013 Humanities &amp; Social Sciences</p>	<p>Left to Right: Dr. X. Wang, Prof. Y. Zhang, Prof. M. Sato, Dr. N. K. Nishchal and Dr. J. Sheng Ye at Capital Normal University, Beijing, China.</p>
 <div data-bbox="303 1388 774 1467" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dr. Preetam Kumar (Right) with Mr. Vijay Bargav (Left), President of the IEEE</p> </div>	 <div data-bbox="869 1388 1428 1444" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dr. R.K. Behera discussing with session chair at ICIT 2013</p> </div>

## Visitors

SN.	Name of the Speaker, Affiliation	Title of Talk	Date
01	Dr. Rakesh Kumar Asst. Professor, Electrical & Computer Engineering Department, University of Illinois, Urbana Champaign	Stochastic Computing, Multi-modal Design, & power-Balanced Processors: Throwing Kitchen Sink at the Power Problem.	07 Jan 2013
02	Dr. Sumit Kumar Jha University of Central Florida	Exascale Algorithms for Synthesizing Parameters of Stochastic Computational Models from Qualitative & Semi-Quantitative Specifications.	08 Jan 2013

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03	Mr. Sachit Sinha, President, Sinha Company, Policy, Management, Technology & development Consultants, USA	How Engineering is intertwined with planning for a project and development of a policy for the project	11 Jan 2013
04	Dr. Eike F. Schwier An expert in Photoemission spectroscopy affiliated to the Hiroshima Synchrotron Radiation Center, Hiroshima University, Japan, and the Institute of Physics, University of Fribourg, Switzerland	Through the Metal-to-Insulator transition in NdNiO <sub>3</sub> thin films as seen by photoemission spectroscopy	17 Jan 2013
05	Mr. Timothy A. Gonsalves Director, IIT Mandi	Innovation and Design	30 Jan 2013
06	Ms. Bronwyn Steinberg University of Ottawa	The Art of Public Speaking	31 Jan 2013
07	Prof. Ajay K. Pandey Associate Professor, Centre for Organic Photonics and Electronics, The University of Queensland, St Lucia, Brisbane 4072, Australia	Energy conversion and storage at Nanoscale in organic optoelectronic devices.	04 Feb 2013
08	Mr. James Nickel Deputy High Commissioner, Canadian High Commission	India-Canada relations	07 Feb 2013
09	Prof. Shyam S. Pandey Department of Biological Functions and Systems, Kyushu Institute of Technology (Japan)	Prospects of Dye-Sensitized Solar Cells towards the solution of future energy needs	15 Feb 2013
10	Dr. Subrata Ghosh National Institute for Materials Science, Tsukuba, Japan	Nano-submarine - a non-chemical drug is an alternative to chemical drugs in unprecedented medical science: process brain like computing	18 Feb 2013
11	Prof. J. N. Singh Barry University, FL	Some Recent Advances & New Directions in Computational Complexity of Interior-Point-Methods in Conic Programming	25 May 2013
12	Mr. Pankaj Kumar Director, Corporate Applications at Yahoo	YAHOO Talk	17 June 2013

## Invited Talk

**Behera R. K.**, gave a talk at the International Renewable Energy Exhibition and Conference (RENERGY 2013) for panel discussion on “Large Solar Farm Integration Challenges and Rooftop Solar System”, Tamil Nadu Energy Development Agency (TEDA), 9-11 May 2013, Chennai Trade Centre, Nandambakkam, Chennai, India.

**Parida S. K.**, delivered a lecture on “Drivers for Ancillary Services in India”, The Need for Regulatory & Policy Framework for Ancillary Services & Alternative Energy Options in the Indian Power Sector at New Delhi, 10-11 April 2013.

**Parida S. K.**, delivered a lecture on “Power Engineering and its Multi-disciplinary Aspects”, at Tech Summit, A two day National level Workshop, Avanathi Institute of Engineering and Technology, Vishakhapatnam, 22-23 March 2013.

**Parida S. K.**, delivered a lecture on “Drivers for Ancillary Services in India”, The Need for Regulatory & Policy Framework for Ancillary Services & Alternative Energy Options in the Indian Power Sector at New Delhi, 10-11 April 2013.

**Singh Akhilendra**, delivered a talk on “FEM solution for Transient and Fracture problems”, at Gitanjali Institute of Technology, Udaipur, Rajasthan, 6-7 April 2013.

**Singh Akhilendra**, delivered a talk on “Simulation of Eigen value and dynamic problem by FEM” at NIT Jaipur, Jaipur, Rajasthan, 2-6 June 2013.

**Nishchal N. K.**, delivered a lecture on “Optical Watermarking Techniques”, at Room No. 321, Department of Physics, Capital Normal University, Beijing, CHINA, 24<sup>th</sup> June 2013.

**Nishchal N. K.**, delivered a talk on “Optical Image Encryption Techniques”, at Room No. 321, Department of Physics, Capital Normal University, Beijing, CHINA, 20<sup>th</sup> June 2013.

**Nishchal N. K.**, gave a talk on “Wave Optics”, In-service Course of PGT (Physics) at Kendriya Vidyalaya Sangathan, Kendriya Vidyalaya, Bailey Road, Patna, 22<sup>nd</sup> May 2013.

**Nishchal N. K.**, delivered a lecture on “Lasers and its Applications”, at INSPIRE (Innovation in Science Pursuit for Inspired Research) Internship Science Camp, Pre-Examination Training Centre, Patna University, 18<sup>th</sup> March 2013.

**Nishchal N. K.**, delivered a lecture on “Optical Pattern Recognition and Information Security”, at One Day Workshop on Optical Signal and Image Processing Techniques, 19<sup>th</sup> January 2013, VIT University, Chennai.

**Nishchal N. K.**, gave a talk on “Microscopes”, at Bihar INSPIRE Internship Science Camp, Jagdam College, Chapra, 16<sup>th</sup> January 2013.

**Thakur A.**, delivered a series of talk on “Latest Research in Department of Mechanical Engineering at IIT Patna”, at General Electric - JWFTC Bangalore, 18<sup>th</sup> February 2013; Aeronautical Development Agency (ADA) Bangalore, 19<sup>th</sup> February 2013; DRDO Centre for Artificial Intelligence and Robotics Bangalore, 21<sup>st</sup> February 2013; Micro Systems Technology Lab, Central Mechanical Engineering Research Centre, 1<sup>st</sup> April 2013; NIT Durgapur, 2<sup>nd</sup> April 2013.

**Das Prolay**, delivered a talk on “The Wonders of Nanotechnology”, at DST INSPIRE Internship Science Camp, Patna University, Patna, 18<sup>th</sup> March 2013.

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**Das Prolay**, delivered a talk on “Nanostructures and Nanoconstructions based on DNA”, at BIT Patna, Patna, 10<sup>th</sup> May 2013.

**Prakash Om**, delivered a lecture on “Algebra”, at Centre of Mathematical Sciences, Banasthali University, Banasthali for M. Phil. and PhD. students, 16-24 February 2013.

**Bharti Nalin**, gave a talk on “How Negative is the Negative list in SAFTA between India and Bangladesh”, 17<sup>th</sup> June 2013 at Centre for the Studies in International Relations and Development, Kolkata.

**Raj Aditya**, delivered a lecture on “Learning For and With our Youth”, at Bihar Veterinary College, Patna, 30 January 2013.

**Raj Aditya**, gave a talk on “Contemporary Indian Youth: Dynamics and Trends”, at Invitational National Conference on Critical Canadian Youth Studies, Faculty of Education, University of Calgary (Edmonton), 30-31 May 2013.

**Sharan M. B.**, delivered a talk on “Need of the Hour: Spirituality in Work Life and Family Life”, at the International Conference on HR-NEXT organized by IISWBM, Kolkata, 27-28 February 2013.

### Sponsored Projects

Name of PI	Deptt.	Title	Sponsor
Dr. Ranjan Kumar Behera	EE	High Power AC Drives for Electric Locomotive and General Purpose off Highway Applications	SERB(DST)
Dr. Yatendra Kumar Singh	EE	Design and analysis of high performance RF MEMS-based electronically reconfigurable filters for wireless communication applications	SERB(DST)
1. Dr. Preetam Kr. 2. Dr K.C.Ray Co-PI: Dr Arijit Mandal	EE	Design and FPGA prototyping of multicarrier multiple access schemes for variable rate multimedia satellite communication.	DEIT
Dr. Sathya Peri	CSE	Increasing Concurrency in Transactional Memory Systems	NetApp
Dr. Sathya Peri	CSE	Development of an Efficient Software Framework for Multi-Core Systems using Software Transactional Memory Systems	NRB
Dr. Samrat Mondal	CSE	Development of an efficient authentication scheme to be used in public domain	SERB(DST)
Dr. Subrata Hait (PI: Dr. Brajesh Dubey, University of Guelph, Canada)	Civil	Occurrence, Fate and Removal of Emerging Contaminants in Surface Water	Shastri Indo-Canadian Institute
Dr. Pradipta Chakraborty	Civil	Microzonation of Jaipur City Based on Shear Wave Velocity	SERB(DST)
Dr. Sudhansu Sekhar Panda Co-PI: Dr. Somnath Roy	ME	Monitoring of heat flow phenomenon of a low freezing material during continuous casting	DAE (Dept. of Atomic Energy)

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Dr. Probir Saha	ME	Development of a real time tool wear monitoring and compensation method for RuEDM and micro EDM drilling process	SERB(DST)
Dr. Prolay Das Co-PI: Dr. Sahid Hussain & Manoj K Singh (BRNS)	CHEMISTRY	DNA guided assembly of Quantum dot-Photosensitizer conjugate for photodynamic therapy	BRNS (Dept. of Atomic Energy)
Dr. Neeladri Das	Chemistry	Design and Synthesis of Triptycene Based Microporus Polymers	CSIR

### Publications

#### Computer Science and Engineering

**Matam R. and Tripathy Somanath**, Improved Heuristics for Multicast Routing in Wireless Mesh Networks, *Wireless Networks* (Springer), On-line Available, March, 2013

**Tripathy Somanath**, ESF: An Efficient Security Framework for Wireless Sensor Network, *Int. J. Communication Networks and Distributed Systems*, Vol. 10, No. 2, pp.176-194. 2013

**Saurabh Samant and Sairam Ashok S.**, The new YouTube stars: Education through Web 2.0 and Social Network, *The International Journal of Web Based Communities*, Inderscience, Special Issue on Social Networking and Web-based Communities for Education, vol. 9, no. 2, 2013

#### Electrical Engineering

**Kumar Prashant and Kumar Preetam**, Performance Evaluation of Modified OFDM for Underwater Communications", *IEEE ICC 2013*, Budapest, Hungary, June 2013

**Mukherjee Mithun and Kumar Preetam**, The Effect of Carrier Phase Jitter on Variable Rate CI/MC-CDMA Performance, *IEEE WCNC 2013*, Shanghai, China, April 2013

**Mukherjee Mithun and Kumar Preetam**, Multirate Schemes for WH-spread-CI/MC-CDMA Over Correlated Frequency Selective Channel, *NCC 2013*, IIT Delhi, February 2013

**Verma Sudhanshu and Kumar Preetam**, Pointed Egg Curved Monopole Antenna for Ultrawideband Applications, *NCC 2013*, IIT Delhi, February 2013

**Swati and Bhaumik Shovan**, Multiple Target Tracking Based on Homogeneous Symmetric Transformation of Measurements, *Aerospace Science and Technology*, Vol. 27, No. 1, pp. 32-43, June 2013

**Parida S. K.**, Drivers for Ancillary Services in India, *Power & Energy Solution*, MX Business Media, vol.1, Issue.5, March - April 2013

**Singh A. K. and Parida S. K.**, Congestion Management with Distributed Generation and its Impact on Electricity Market, *International Journal of Electrical Power and Energy Systems*, Elsevier Vol. 48 (2013) pp. 39-47. 2

**Singh A. K. and Parida S. K.**, A Multiple Strategic Evaluation for Fault Detection in Electrical Power System, *International Journal of Electrical Power and Energy Systems*, Elsevier Vol. 48 (June 2013) pp.21-30

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**Singh A. K. and Parida S. K.**, National Electricity Planner and Use of Distributed Energy Sources in India, Sustainable Energy Technologies and Assessments, Elsevier, vol.2, June 2013

## Mechanical Engineering

**Sahu Raj K. and Patra K.**, Estimation of Elastic Modulus of Dielectric Elastomer Materials using Mooney-Rivlin and Ogden Models, Advanced Materials Research, Vol. 685, pp. 331-335, 2013

**Pathak Himanshu, Singh Akhilendra and Singh I. V.**, Fatigue Crack Growth Simulations of Bi-material Interfacial Cracks under Thermo-Elastic Loading by Extended Finite Element Method, European Journal of Computational Mechanics, Vol. 22, Pg 79-104, 2013

**Pathak Himanshu, Singh Akhilendra, Singh I. V. and Yadav Saurabh Kumar**, A Simple and Efficient XFEM Approach for 3-D Cracks Simulations, International Journal of Fracture, Vol. 181 (2), Page 189-208, 2013

## Physics

**Yadav Anil K., Thakur Ajay D. and Tomy C. V.**, Growth, Characterization, Vortex Pinning and Vortex flow Properties of Single Crystals of the Iron Chalcogenide Superconductor FeCr<sub>0.02</sub>Se, Phys. Rev. B 87, 174524 (2013)

**Hirata K., Thakur Ajay D. and Ooi S.**, Vortex States in Superconducting Nanowires, Physica C (2013);<http://dx.doi.org/10.1016/j.physc.2013.03.019>

**Sanchela Anup V., Kyshwaha Varun, Thakur Ajay D., and Tomy C. V.**, Enhancement of Thermopower due to Deficiency of Sb in FeSb<sub>2</sub>, Adv. Mat. Res. 665, 179 (2013)

**Hirata K., Thakur Ajay D., Ooi S. and Mochiku T.**, Vortices in Superconducting Nano-networks with Antidots Array, Cent. Eur. J. Phys. 10, 576 (2012)

**Mehra I., Rajput S. K. and Nishchal N. K.**, Collision in Fresnel Domain Asymmetric Cryptosystem using Phase Truncation and Authentication Verification, Optical Engineering 52 (2013) 028202

**Rajput S. K. and Nishchal N. K.**, Image Encryption using Polarized Light Encoding and Amplitude and Phase-truncation in Fresnel Domain, Applied Optics 52 (2013) 4343-4352

**Rajput S. K. and Nishchal N. K.**, Known-plaintext Attack-based Optical Cryptosystem using Phase-truncated Fresnel Transform, Applied Optics 52 (2013) 871-878

## Chemistry

**Singh Vandana and Das Prolay**, Condensation of DNA—A Putative Obstruction for Repair Process in Abasic Clustered DNA Damage, DNA Repair, 12, 450, 2013

**Talukdar Bandana and Bhowmick Anil K.**, An Imidazolium-functionalized Isobutylene Polymer having Improved Mechanical and Barrier Properties: Synthesis and Characterization, Journal of Applied Polymer Science (2013), 128(5), 2911-2918

**Chakraborty Sourav, Snehasish Mondal, Quanjie Li and Neeladri Das**, Synthesis and Characterization of Triptycene based Tripods and Design of a Metalla Supramolecular cage, Tetrahedron Letters, Vol. 54, Issue 13, 1681-1685, 27 March 2013

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**Chatterjee A, Maity B. and Seth D.,** Torsional Dynamics of Thioflavin T in Room Temperature Ionic Liquids: An Effect of Heterogeneity of the Medium, Chem. Phys. Chem. (2013), DOI: 10.1002/cphc.201300433

**Chaudhary Vidhi and Bhowmick Anil K.,** Synthesis, Optical and Electrical Properties of RNA-mediated Ag/PVA nanobiocomposites, Journal of Nanoparticle Research (2013), 15:1508

**Choudhury Anusuya, Bhowmick Anil K. and Soddemann Matthias,** Influence of Nanofillers on the Sorption and Diffusion Characteristics of the Solvent in Vulcanized Hydrogenated Nitrile Rubber Nanocomposite, Journal of Applied Polymer Science (2013), 128(4), 2556-2562

**Kasyapi Nibedita, Chaudhary Vidhi and Bhowmick Anil K.,** Bionanowhiskers from Jute: Preparation and Characterization, Carbohydrate Polymers (2013), 92(2), 1116-1123

**Maity B., Chatterjee A. and Seth D.,** Effect of Nano-confinement on the Photophysics of Lumichrome, Chem. Phys. Let. 2013, 565, 108

**Maji Pradip K. and Bhowmick Anil K.,** Structure-property Correlation of Polyurethane Nanocomposites: Influence of Loading and Nature of Nanosilica and Microstructure of Hyperbranchedpolyol, Journal of Applied Polymer Science (2013), 127(6), 4492-4504

**Mondal Titash, Bhowmick Anil K. and Krishnamoorti Ramanan,** Synthesis and Characterization of Bi-functionalized Grapheme and Expanded Graphite using n-butyl Lithium and their use for Efficient Water Soluble Dye Adsorption, J. Mater. Chem. A (2013), DOI : 10.1039/C3TA11212H

**Pal Suman, Singh Vandana, Das Prolay and Choudhury L. H.,** PEG-mediated One-pot Multicomponent Reactions for the Efficient Synthesis of Functionalized Dihydropyridines and their Functional Group Dependent DNA Cleavage Activity, Bioorganic Chemistry, 48, 8, 2013

**Roy Nabarun, Dey Tuli, Kundu Subhas C. and Bhowmick Anil K.,** Biocompatible Composites of Fibrous Nanohydroxyapatite Embedded in a Polydimethylsiloxane, Journal of Materials Science (2013), 48(15), 5132-5139

**Hussain Sahid, Talukdar Dhrubajyoti, Bharadwaj Saitanya K. and Chaudhuri Mihir K.,** VO<sub>2</sub>F(dmpz)<sub>2</sub>: A new Catalyst for Selective Oxidation of Organic Sulfides to Sulfoxides with H<sub>2</sub>O<sub>2</sub>, Tetrahedron Let. 2012, 53, 6512-6515

**Hussain Sahid and Molla Aniruddha,** Boron Nitride: An Efficient Reusable Heterogeneous Catalyst for Hetero-Michael Reactions under Solvent-Free Condition, Curr. Catal. 2013, 2, 88-95

### Mathematics

**Shekhawat Nidhi and Prakash Om,** Generalization of a Result Involving Product of Generalized Hypergeometric Series due to Ramanujan, International Journal of Modern Physics: Conference Series, Vol. 22 (2013), 679-685

### Humanities and Social Sciences

**Sinha Priyanka, Bharti Nalin, Takacs Istvan, and Gyorgy Katalin T.,** Have Trade Policy Reforms Improved Indo-Hungarian Trade? Some Evidence from Agriculture Sector, ACTA AGRONOMICA ÓVÁRIENSIS, VOL. 55. NO. 2. Mosonmagyaróvár, 2013

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**Bharti Nalin** and **Kumar Chanchal**, Information and Economic Development, Bihar Development Report, Indicus Analytics, New Delhi (2012)

**Kumar Manish** and **Raj Aditya**, Development in Bihar: Predicaments and Prospects of Health Indices, Journal of Health Management Research (Sage Publications) Volume 15 No. 3, July-September 2013

**Raj Aditya**, Indian Diaspora in North America: The Role of Networks and Associations, Diaspora Studies (Routledge) 5: 2 (2013)

**Raj Papia** and **Raj Aditya**, Learning to Serve: An analysis of English Language Training in Call Centres of India, Language and Language Teaching, July 2013

## Patent

Chaudhuri K. Mihir, **Hussain Sahid**, Bharadwaj Saitanya, Sinha Upasana B., Talukdar Dhrubajyoti, Majumdar Subeer S., Bhattacharya Sushmita, Dasgupta Suman, Kundu Rakesh, Bhattacharya Samir and Bhattacharya Shelley, Insulin Mimetic Active Comprising Oxodiperovo Vanadates and a Pharmaceutical Composition Obtained thereof, Indian Pat. Appl. (2012), IN 2011KO00401 A 20121116; PCT Int. Appl. (2012), WO2012131689 A1 20121004

## Awards

**Thakur Atul**, won 2013 ASME Computers and Information in Engineering Division's Best Dissertation Award.

**Bharti Nalin**, selected for the Bharat Shiksha Ratan Award by Global Society for Health & Education Growth, New Delhi.

## Conference Presentation

### Computer Science and Engineering

**Roy Sangita**, **Singh Anurag** and **Sairam Ashok S.**, IP Traceback in Star Colored Networks, Communication Systems and Networks, COMSNETS 2013. Fifth International, IEEE Communication Society, Bangalore, India, 07-10 January 2013

### Electrical Engineering

**Ali Ahmad**, Session Chair, Control Systems, Robotics and Mechatronics-1, IEEE International Conference on Industrial Technology, Cape Town, South Africa, 25-27 February 2013

**Behera R. K.**, Session Chair, IEEE International Conference on Industrial Technology (ICIT 2013), Cape Town, South Africa, Session Title: Sensors, Actuators & Systems Integration-1, 25-27 February 2013

**Goyal R.**, **Gautam U. K.** and **Behera R. K.**, A Novel Design of Magnetically Coupled Circuits for Wireless Power Transfer with Improved Waveforms, Proceedings of IEEE International Conference on Industrial Technology (ICIT 2013), Cape Town, South Africa, 25-27 February 2013

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**Iqbal A., Payami S., Saleh M., Anad A. and Behera R. K.,** Analysis and Control of Five Phase AC/DC/AC Converter with Active Rectifier, Proceedings of 22<sup>nd</sup> Australasian Universities Power Engineering Conference (AUPEC), 2012 (IEEE), Bali Indonesia, 2012

**Iqbal A., Payami S., Behera R. K., Abdallah A. A. and Abu-Rub H.,** Analysis of a Field Oriented Controlled Five Phase Motor Drive with Active Front End Converter, Proceedings of IEEE International Conference Power and Energy, Malaysia, 2012

### Mechanical Engineering

**Pathak Himanshu, Singh Akhilendra and Singh I. V.,** Fracture Analysis of 3-D Orthotropic Composite by XFEM, ICRACM 2013, Goa (IIIT BHU), 18-21 February 2013

**Augustine Joji, Mishra Anand Kumar and Patra Karali,** Mathematical Modelling and Trajectory Planning of a 5 Axis Robotic Arm for Welding Applications, Proceedings of the 3<sup>rd</sup> International Conference on Production and Industrial Engineering (CPIE 2013), NIT Jalandhar, India, 29-31 March 2013

**Sahu R. K., Patra K., Bhaumik S., Pandey A. K. and Setua D. K.,** Development of Uniaxial Tensile Pre-straining Device for the Elastomeric Materials, Proceedings of the 3<sup>rd</sup> International Conference on Production and Industrial Engineering (CPIE 2013), NIT Jalandhar, India 29-31 March 2013

### Physics

**Rajput S. K. and Nishchal N. K.,** Opto-electronic Asymmetric Cryptosystem, Proc of Nat'l. Seminar on Recent Trends in Laser and Photonics (RTLTP) & 30<sup>th</sup> Convention of Orissa Physical Society, Ravenshaw Univ., Cuttack, 09-10 February 2013, pp. 21-26

**Rajput S. K. and Nishchal N. K.,** An Optical Cryptosystem with Key Generated using known Plaintext Attack, XXXVII Nat'l. Symp. of Optical Society of India, Pondicherry Univ., Pondicherry, 23-25 January 2013

**Rajput S. K. and Nishchal N. K.,** Color Image Encryption Based on Phase-truncated Fresnel Transform using Phase Retrieval Algorithm, The First Nat'l. Confer. on Trends & Applications in Laser Technology & Optoelectronics, Amity Univ., Gurgaon, 4 April 2013

**Rajput S. K. and Nishchal N. K.,** Multiple Image Encryption Based on known Plaintext Attack and Modified G-S Phase Retrieval Algorithm, Int'l. Confer. on Optics in Precision Engineering and Nanotechnology, SINGAPORE, 09-11 April 2013

**Rajput S. K. and Nishchal N. K.,** Fractional Domain Asymmetric Cryptosystem and Cryptanalysis, Int'l. Confer. on Optics in Precision Engineering and Nanotechnology, SINGAPORE, 09-11 April 2013

**Sanchela Anup V., Thakur Ajay D. and Tomy C. V.,** Improvement in the Thermoelectric Properties of  $Zn_4Sb_3$  Induced by Sb Deficiency, AIP Conf. Proc. 1512, 1058 (2013)

**Yadav Anil K., Thakur Ajay D. and Tomy C. V.,** Single Crystals of Iron Chalcogenide Superconductor  $FeCr_{0.02}Se$ : Growth, Characterization and Vortex Pinning Properties AIP Conf. Proc. 1512, 1158 (2013)

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**Yadav Anil K., Thakur Ajay D., Thamizhavel A., Tomy C. V., Ramakrishnan S. and Grover A. K.,** Vortex Pinning Mechanism in Single Crystal of Iron Arsenide Superconductor  $\text{SrFe}_{1.7}\text{Co}_{0.3}\text{As}_2$ , AIP Conf. Proc. 1512, 1174 (2013)

**Kumar Pawan, Kar M., Sanchela Anup V., Thakur Ajay D. and Tomy C. V.,** Nanostructured Zinc Oxide as a Prospective Room Temperature Thermoelectric Material, AIP Conf. Proc. 1512, 364 (2013)

**Mehra I. and Nishchal N. K.,** Image Encryption Based on Joint Transform Correlator using Amplitude and Phase Truncation, The First Nat'l. Confer. on Trends & Applications in Laser Technology & Optoelectronics, Amity Univ., Gurgaon, 04 April 2013

### Chemistry

**Singh Vandana and Das Prolay,** Lethargic Repair Process in DNA Condensates with Abasic Clustered Damage, Bangkok International Conference on Biological Engineering & Natural Science (BBENS), Bangkok, Thailand, 25-27 January 2013

**Hussain Sahid and Molla Annirudha,** Borax: An Innocuous Catalyst for One-pot Multicomponent Synthesis of 4H-pyrans and Polysubstituted Pyridine, 13th Tetrahedron Symposium Asia Edition, Taiwan, 27-30 November 2012

### Mathematics

**Kalpana and Prakash Om,** A Generalization of 2- primal Ideals in Near Rings, 15 Annual Conference of Society of Statistics, Computer and Applications organized at Banasthali University, 24-26 February 2013

**Prakash Om and Swati,** A Generalization on Prime Skew Rings, 15<sup>th</sup> Annual Conference of Society of Statistics, Computer and Applications organized at Banasthali University, 24-26 February 2013

**Suthar Sheela and Prakash Om,** A Note on Zero Divisor Graph of Polynomial Ring over  $\mathbb{Z} \diamond_n$ , 15<sup>th</sup> Annual Conference of Society of Statistics, Computer and Applications organized at Banasthali University, 24-26 February 2013

**Chowdhury S., Thakur A., Svec P., Wang C., Losert W. and Gupta S. K.,** Enhancing Range of Transport in Optical Tweezers Assisted Microfluidic Chambers using Automated Stage Motion, ASME International Conference on Micro and Nanosystems, Portland, Oregon, 04-07 August 2013

**Chowdhury S., Thakur A., Wang C., Svec P., Losert W. and Gupta S. K.,** Automated Indirect Manipulation of Irregular Shaped Cells with Optical Tweezers for Studying Collective Cell Migration, IEEE International Conference on Robotics and Automation (ICRA '13), Karlsruhe, Germany, 6-10 May 2013

### Humanities and Social Sciences

**Raj Aditya,** Contemporary Development in India: Case of MGNREGA, Canadian Sociological Association, Congress 2013 Humanities and Social Sciences, University of Victoria (British Columbia), 03-08 June 2013

**Raj Aditya,** MGNREGA Implementation in Bihar: Problems and Perspectives, International Conference on Contemporary Debates in Public Policy and Management, Indian Institute of Management Kolkata, 07-09 February 2013

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**Pooja and Raj Aditya**, Gendered Consciousness in Dalit Literature: A Case study of Bama's Narratives, International Conference on Literature and Marginality: Comparative Perspectives in African American Australian and Indian Dalit Literature, IGNOU, New Delhi, 20-22 February 2013

### Students' Visit and Participation

**Jain Ayush and Raj Saswat** did work on "Smartphone sensing for large data set collection of potholes", guided by Dr. Rajiv Misra during Jan-Feb 2013

**Mukherjee Mithun**, PhD student, Electrical Engineering Department visited Shanghai, China during 07-10 April 2013 to present paper in IEEE WCNC 2013 conference

**Kumar Prashant**, PhD student, Electrical Engineering Department visited Budapest, Hungary during 9-13 June 2013 to present paper in IEEE ICC 2013 conference

**Sahu Raj K.** has been selected as visiting scholar in University of Saskatchewan under Canadian Commonwealth Scholarship Programme. (Visiting period: 31<sup>st</sup> March to 30<sup>th</sup> September 2013)

**Mondal Titash**, has presented 'Modified Graphene as Potential Anti-Microbial Nanofiller for Polymer Nanocomposite', authored with Krishnamoorti Ramanan and Bhowmick Anil K. at IIT Kharagpur.

**Mondal Titash**, Research Fellow, received award in an International Conference ICRRM-2013 held at IIT Kharagpur during 06-09 March 2013.

**Mondal Titash**, Research Fellow, is visiting the University of Houston, USA. during July 2013 to March 2014 in connection with PhD program.

**Kumar Ramjit**, PhD student, Department of Humanities and Social Sciences participated in an International Conference on "Sociology Matters: Challenges and possibilities of Social Science Knowledge in Contemporary India", Jawahar Lal Nehru University, New Delhi, 18-20 December 2012

**Kumar Gaurav**, PhD student, Department of Humanities and Social Sciences has attended three-day workshop entitled, "National Workshop on Social Science Research Methodology: Quantitative Methods and Open Source Software", organised by The Department of Humanities, Indian Institute of Space Science and Technology (IIST) in Valiamala, Thiruvananthapuram, 27-29 June 2013

### New PhD Students

Sl. No.	Name of Student	Roll No.	Department
1	Jaishree Mayank	1321CS01	CSE
2	K. K. Soundra Pandian	1321EE03	Electrical Engineering
3	Kumar Gaurav	1321HS01	HSS
4	Sadeqa Ghazal	1321HS02	HSS
5	Pranay Ranjan	1321PH01	Physics
6	Rajnish Kumar	1321PH02	Physics
7	Sandeep Raj	1321EE02	Electrical Engineering
8	Md. Junaid Akhtar	1321EE01	Electrical Engineering

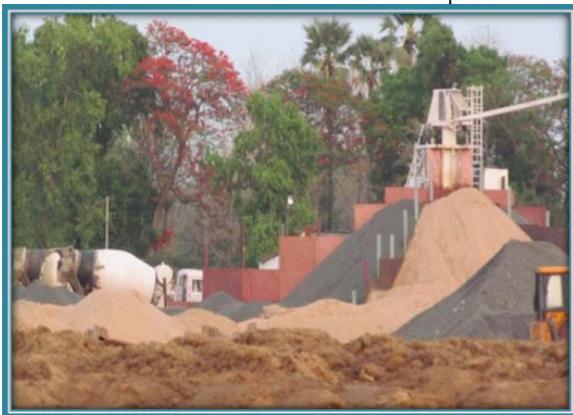
## Construction activities of IIT Patna at Bihta (as on June 20, 2013)



Foundation work of Theoretical Complex



Road work in progress



Batching Plant



Rigs machine at work for Boys' Hostel



Foundation work in Academic Block



Brick work at Academic Block in progress

## Training & Placement

Training and Placement Cell (TPC) of the Institute is actively engaged in developing relationship with various Industrial organizations and employers of technical and scientific manpower. The Cell is organizing summer internships for the pre-final year and placement activities for the final year B. Tech students. TPC organized placement of the final year graduating students of second batch admitted in 2009. Out of 87 registered students for placement, 71 have got jobs in 29 companies. The highest package was offered by Microsoft IDC of Rs. 16.30 LPA and they recruited 6 students. The other offers were made by Samsung SEL Noida(6), Infosys Bangalore(6), Bank of America (6), IOCL(6), Hero MotoCorp (5), CISCO Systems Bangalore (5),

Masamb Electronics Noida(5), HPCL (3), BPCL(3) and their like. About 81.60% of the graduating students have been placed through the campus placement and remaining students are in process. The average salary package is 8.37 LPA.

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 Microsoft IDC, Amazon Bangalore, CISCO Systems, DRDO, TIFR Mumbai, IOCL, Mecon Ranchi, Hero MotoCorp, Tata Motors, Rockwells Collins, MisraDhatu, AERB, BPCL, IBM, Power Grid Corporation, Tata Hitachi, ONGC, BHEL, HAL, Mahindra & Mahindra, DRDL, and out of them 41 of them provided financial assistance. Among the pre- final year students, 16 have been offered paid summer research internship abroad in University of Houston, University of South Australia, University of Wisconsin, Madison, University of Rice, University of Saskatchewan, University of South Wales, University of Auckland, MIT USA, and DAAD RWTH Aachen.

## Events Held at IIT Patna

### IIT Patna hosted the SAE INDIA East Zone Efficycle 2013 virtual round

The Department of Mechanical Engineering hosted the event SAEINDIA East Zone 'Efficycle 2013' virtual round on 15<sup>th</sup> June, 2013. The event was sponsored by SAE (Society of Auto Motive Engineers, India) northern section. 'Efficycle' is an intercollegiate design competition for undergraduate students where teams have to design and fabricate an energy efficient hybrid-human powered three-wheeled electric vehicle. In virtual round, students have to present their design concept and analysis. This year the virtual round has been organized in 6 zones nationwide including IIT Patna for eastern zone.

In eastern zone six teams from various engineering colleges from Assam, Bihar, Odisha, West Bengal and Jharkhand including two teams from IITs (IIT Patna and IIT Guwahati) have participated in the event held at IIT Patna. Mr.Alok Jaitly, General Manager, Body design division, Maruti Suzuki India Limited inaugurated the event. A group of engineers from Maruti Suzuki India Limited, headed by Mr.Jaitely was the judge of the event. It was indeed a good opportunity for IIT Patna team to interact with working engineers through their design concept and getting valuable feedbacks. The event 'Efficycle' provides an opportunity to engineering students for innovation, application of engineering theories and to generate consciousness towards environment friendly mobility solutions. At the end of the event Mr.Jaitly distributed the participation certificates to the teams. The qualifying teams of virtual rounds will be invited to bring their vehicle at UIET, Chandigarh in the end of September 2013, and compete each other fulfilling the 'GO GREEN' spirit of 'Efficycle'.



Mr. Alok Jaitly, General Manager, Body Design Division, Maruti Suzuki India Limited, giving the Participation Certificate



Participants attending the session

## Republic Day

Like past few years this year also Republic day was celebrated on 26<sup>th</sup> Jan 2013. Students, faculty members and staff of this institute participated in celebrating the Republic Day.



Director, IIT Patna hoisting the National Flag



Director, IIT Patna with students, staff and institute Security Officer accepting the Guard of Honour

## Research Scholars' Day - 2013

Indian Institute of Technology Patna celebrated the 3rd Research Scholars' Day on 2<sup>nd</sup> March 2013. The aim of this programme is to foster the research spirit for continuous development of research and innovative quality amongst all. The programme was of half a day and Institute invited eminent researchers from India and abroad. Prof. Dhananjay Pandey, Director, Indian Institute of Technology BHU chaired the occasion as Chief Guest and Prof. Debes Bhattacharyya, Director, Centre for Advanced Composite Materials, University of Auckland graced the occasion as Guest of Honour. Speakers shared their experience of research journey as lifelong research scholars and they motivated the young researchers with encouraging words.

Total forty seven research scholars from school of Basic Science, Humanities and Social Sciences and Engineering and Technology participated in the poster presentation session. Distinguished judges Prof. Asok De (Director NIT Patna), Prof. P. Ray (IIT Patna), Prof. D. Sinha (Patna University), Prof. R. Bhattacharyya (IIT Kharagpur), Prof. Maya Shankar Singh (BHU), Prof. S. K. Singh (NIT Patna), Prof. R. Ranjan (Patna University), Dr. Susmita Bhattacharjee (Director, Pushan Renewable Energy Pvt. Ltd.), Prof. S. V. Rao (IIT Guwahati) chose the best posters from the three different schools.



Director, IIT Patna being facilitated



Participant explaining to the Judge.

## Workshop on Patents and IPR

Indian Institute of Technology Patna organized the first workshop on “Patents and IPR” for the faculty, staff, and students of IIT Patna on 3rd March, 2013. This workshop focused on Intellectual Property Rights and its protection through patents, the types of innovations patentable, procedures of patent writing & patent filing and the process of granting patent. The day long workshop included a series of lectures by eminent experts in this field followed by a session for demonstration on patent filing. The speakers for this workshop were Dr. S. K Mitra, Assistant Controller of Patents & Designs, Patent office, Kolkata, Mr. P. D Gupta, Senior Patent Attorney, L. S. Davar & Co., Kolkata, Dr. Indira Banerjee, Senior Patent Attorney, Dr. Susmita Bhattacharjee, Managing Director, Pushan Renewable Energy, Indore and Dr. S. Sarkar, Leader, Intellectual Property Analysis Team for SABIC Research and Technology Pvt. Ltd., Bangalore.

The workshop was attended by a total 185 participants (46 faculty members, 120 students including B. Tech, M. Tech and PhD research scholars and 19 staffs and others). The workshop was inaugurated by Prof. Anil K. Bhowmick, Director, IIT Patna with a welcome address. Prof. Dhananjay Pandey, Director, IIT BHU, Varanasi and Prof. Deves Bhattacharyya, Director of the Centre for Advanced Composite Materials (CACM), University of Auckland, New Zealand were invited as Guest of Honour and as Chief Guest for this workshop, respectively.



Director, IIT Patna with Prof. Dhananjay Pandey (Director, IIT BHU) and Prof. Deves Bhattacharyya (Director, CACM, Univ. of Auckland)



Prof. Deves Bhattacharyya (Director, CACM, Univ. of Auckland) speaking in the IPR workshop

## Workshop on Cryptography

Workshop on Cryptography organized by Department of Computer Science and Engineering, IIT Patna in collaboration with Centre of Excellence in Cryptography, ‘Indian Statistical Institute Kolkata’. The Workshop is intended for young students, researchers from Mathematical Sciences and Computer Science who are interested in this field. The participants are desired to be familiar with the basic concepts of number theory.



The inaugural session of workshop



Participants at workshop

## Training Program for BCD Engineers

Indian Institute of Technology Patna organized a short-term training program for the engineers of the Building Construction Department (BCD), Government of Bihar (GoB) during May 20 to June 8, 2013. The training program was inaugurated on May 20, 2013 in the august presence of Prof. Anil K. Bhowmick, Hon'ble Director as Chief Guest; Shri Ganga Kumar, Special Secretary, BCD, GoB; Shri Girish Nandan Singh, Technical Secretary to E-in-C-cum-Director (M&P), BCD, GoB and Prof. Swapan Majumdar, Department of Civil and Environmental Engineering. The training program was jointly coordinated by Dr. Atul Thakur, Department of Mechanical Engineering and Dr. Subrata Hait, Department of Civil and Environmental Engineering. Dr. R. K Behera was also invited as guest speaker to lecture on 'Modern Electrical Wirings in Residential Buildings and The Future Building Power Supply & Innovation Challenges'. Thirty two engineers from the BCD attended the training program. The training program consisted of lectures and tutorials on three modules, namely, Engineering, Information Technology, and Administrative and Financial modules. Faculty members from Civil and Environmental Engineering, Mechanical Engineering, Electrical Engineering, and Computer Science and Engineering Departments delivered lectures in various training modules. Additionally, many eminent experts from industry, academia, and government departments were invited to deliver guest lectures on special topics. The training program was sponsored by the Building Construction Department (BCD), Government of Bihar (GoB).



Prof. Swapan Majumdar speaking on Inaugural function of the Program in presence of Director, IITP



Group photograph of Engineers of Building Construction Department, Government of Bihar

## ANWESHA - 2013

The most colourful event of the year Anwasha, the techno-cultural festival of IITP took place from 01-03 February 2013. The Pro-nites were the highlight of the weekend where students in hundreds teemed in to be spectators to the cultural extravaganza of IIT Patna. On the first night, which was advertised as the Classical Night the audience were enthralled by the spectacular dance performance by well-known Bharatnatyam dancer, Priya Venkataraman. This was followed by much awaited Verve, the fashion show.



Priya Venkataraman and Nitin Gupta during Anwesha 13



'The Local Train' performing live at IIT Patna on Day 3 of Anwesha' 13

Nitin Gupta aka Rivaldo, alumni IITB was invited to entertain the gathering with exhilarating remarks and caustic humor in his burlesque. The second night was a medley of musical singing and dance performances termed Syngphony and Heelturn, respectively. Upcoming bands like Local Train and Kaash performed various songs on the Rock Nite. Students swayed to the music and foot-tapping rhythmic beats.

## Literary Corner

### नववर्ष का प्रथम प्रभात !

नववर्ष का प्रथम प्रभात ,  
विहंगम - रश्मि का प्रथम प्रकाश !  
पुष्प कुसुमित द्विज कलरव गान,  
कल -कल ध्वनि मधुर सुरसरि तान !  
स्वच्छ नभ हरित नवधरणी तल,  
नवोत्साह नवजीवन आनंदमय मन !  
दुग्ध-सम श्वेत हिममंडित किरीट,  
सुगन्धित शीतल मंद समीर !

राज कुमार राजहंस  
शोध – छात्र , गणित विभाग , भारतीय प्रौद्योगिकी संस्थान पटना  
E-mail:[itsrajhans@gmail.com](mailto:itsrajhans@gmail.com), [rajkumar@iitp.ac.in](mailto:rajkumar@iitp.ac.in)

## Editorial Collective

Department of Humanities and Social Sciences, Indian Institute of Technology Patna

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## ACADEMIC CALENDAR FOR AUTUMN SEMESTER 2013-14

EVENT	DATE	DAY
Welcome, Orientation and Registration Programme for all new M.Tech. and Ph.D. entrants	July 23, 2013	Tuesday
Registration for all existing UG & PG students	July 24, 2013	Wednesday
Welcome, Orientation and Registration Programme schedule for all new UG entrants will be declared latter.		
<b>First day of Instruction for continuing B.Tech and new M.Tech Students</b>	July 25, 2013	Thursday
<b>First day of Instruction for Ph.D. Classes</b>	July 31, 2013	Wednesday
Last date for late registration with fine	July 31, 2013	Wednesday
Last date for course adjustment for B.Tech. and M.Tech. students	August 01, 2013	Thursday
Communicating the list of short attendance cases to respective Faculty Advisors/Supervisors	Sept 11-13, 2013	Wednesday to Friday
<b>Mid Semester Examination (MSE)</b>	<b>Sept 16 - 21, 2013</b>	<b>Monday to Saturday</b>
Last date for showing mid-semester answer scripts to students	Sept 27, 2013	Friday
<b>On Saturday, August 31, 2013 -Wednesday TT will be followed.</b>		
Mid Semester Review of UG projects (without affecting the regular classes)	Between Sept 28, 2013 and Oct 04, 2013	
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	Oct 04, 2013	Friday
<b>On Saturday, October 5, 2013 -Wednesday TT will be followed.</b>		
Last date for sending list of courses to be offered in next semester to the Institute UG/PG coordinators by the departments	Oct 10, 2013	Thursday
Mid-Semester Break for Students	Oct 11-16, 2013	Friday to Wednesday
Course Evaluation Week	Nov 11 - 15, 2013	Monday to Friday
Course pre-registration	Nov 11 - 15, 2013	Monday to Friday

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Last date for General Time Table slot allocation for next semester	Nov 19, 2013	Tuesday
Communicating the final list of short attendance cases to the academic section through their Faculty Advisors/Supervisors	Nov 18 - 21, 2013	Monday to Thursday
Display of list of detained students in End Semester Examination due to short attendance by the academic section	Nov 22, 2013	Friday
<b>Last day of Instructions</b>	<b>Nov 22, 2013</b>	<b>Friday</b>
<b>End Semester Examination (ESE)</b>	<b>Nov 25 -30, 2013</b>	<b>Monday to Saturday</b>
Last date for submission of Grades	Dec 05, 2013	Thursday
Last date for Department UG & PG Program Committee meeting for considering results of all students. Last date for submitting grades (in hard copy) to the Institute UG/PG Coordinators	Dec 06, 2013	Friday
Last date for Make-up-Examination for students having I and X grades and submission of letter grades to the Institute UG/PG Coordinators	Dec 08, 2013	Sunday
IAPC meeting	Dec 09, 2013	Monday
Declaration of Results	Dec 10, 2013	Tuesday
Submission of fee for next semester	Between December 11, 2013 and the day of registration for next Spring Semester	
Winter Break begins (Only for UG students)	Dec 01, 2013	Sunday
Conduct of written Test/interview by Departments for PhD admissions	Dec 10-13, 2013	Tuesday to Friday
Winter Vacation (Only for Teachers)*	Dec 14 -29, 2013	Saturday to Sunday
*Teachers can avail their vacation leave according to the Institute rules.		
Registration for all existing UG & PG students and Registration for all new PG entrants for spring semester 2013-14	Dec 31, 2013	Tuesday
First day of Instruction for spring semester 2013-14	Jan 01, 2013	Wednesday