



Newsletter from IIT Patna

Impulse

July 2012 | Vol. IV | No. 2



From the Director's Desk



Dear Friends,

With the new academic session and new semester, I welcome the fifth batch of B.Tech. Students. Along with them we are in the process of creating history with the first batch of M.Tech. students joining

the portals of IIT Patna. With new faculty and staff, IIT Patna looks forward to climbing the steps of success and glory.

Academic activities are in full swing in the Institute. The last semester, the Department of Electrical Engineering organized the first International Conference and the Department of Chemistry organized a National Symposium on "Recent Trends in Chemical Science and Technology". There was a seminar on "Nuclear Power at Your Service – An Insight" intended to share and facilitate the basic understanding of safety for nuclear power plants including common nuclear terminology such as radioactivity, radiation, nuclear fission, reactor etc.

IIT Patna has completed four years and in such a short span of time, the Institute has successfully carved a niche for itself. With small and firm steps it is moving ahead and the placement of the first batch of B.Tech. students is symbolic of the work at IIT Patna.

Various distinguished visitors from the academia as well as the industry have added to our learning environment and the success of the students adds to our glory. This issue of the newsletter gives you a glimpse of the achievements and abilities of our students and faculty.

Wishing you a happy reading!

Anil K. Bhowmick

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Editorial

We begin by welcoming our new batch to the IIT Patna and wishing all a great new academic year ahead. It's a pleasure to bring you another volume of the *Impulse* - bi-annual newsletter of IIT Patna. It takes you through a journey of the growth of the Institute in the last six months. This presents a range of academic, cultural and, fun activities at the institute. The last semester was full of events at the IIT Patna. Our first batch of students graduated with wonderful overall performance in the summer. We had grand celebrations in the annual techno-cultural fest Anwesh12. Some new faculty and staffs have joined the IIT Patna family. The institute has grown in strength and visibility in the last six months as it has stronger relationship of academic partnership at global level and more physical developments on campus. It celebrated its first alumni meet too. At the local level, we have been committed for social outreach through engaged participation in various activities. Several of the members of the faculty have lectured in schools and colleges and interacted with the society at large. The research scholars are busy in their laboratories and offices. We hope that soon we will have path breaking news to share – we are planning a move to our new campus soon. This newsletter presents to you the commitment to the sustained academic growth of the students and faculty during the past semester. We sincerely acknowledge the cooperation of all the members of IIT Patna for sending relevant information.

Wishing you a good semester and a festive season of Id, Navaratra, Diwali and Chhath ahead!

Smriti Singh, Rajesh Kumar, Nalin Bharti, Aditya Raj, M. B. Sharan



Dr. Partha Ray
Visiting Professor
(Electrical Engineering)



Mr. Shailendra Kumar Verma
JTS (Computer Science & Engineering)



Dr. Debashree Guha Adhya
Assistant Professor
(Mathematics)



Mr. Tripurarai Sharan Sinha
Assistant Registrar (Academics)



Dr. Debasri Saha
Assistant Professor
(Computer Science & Engineering)



Mr. Sanjay Kumar Jha
Executive Engineer (Civil)



Dr. Subrata Hait
Assistant Professor
(Civil & Environmental Engineering)



Mr. Firoz Alam
Junior Engineer (Electrical)



Dr. Soumyajit Dey
Assistant Professor
(Computer Science & Engineering)



Mr. Dhiren Kumar Nayak
JTS (Electrical Engineering)



Dr. Pradipta Chakraborty
Assistant Professor
(Civil & Environmental Engineering)



Mr. Indrajeet Kumar
JTS (Mechanical Engineering)



Kumar Swapnil
JTS (Electrical Engineering)

Visits Abroad

- Prof. Anil K. Bhowmick, visited Jeju, Korea during 20th May to 24th May, 2012 to deliver a lecture in the International Rubber Conference 2012 (IRC 2012). He chaired a session in the same conference.
- Dr. Naveen K. Nishchal, visited Oulu Southern Institute, University of Oulu, FINLAND (May - June 2012) for collaborative research work on Digital Holography.
- Dr. S. K. Gupta visited Hong-Kong during March 14-16, 2012 to present a paper in the International Multi Conference of Engineers and computer Scientists 2012.

Awards

- Dr. S. K. Gupta, Best theoretical paper award at 44th Annual Convention of Operational Research Society of India held at Kolkata during January 6-8, 2012.

National Knowledge Network Activity

NKN at IIT Patna helped Bawanbutti weavers from Nalanda to showcase their products to a huge gathering at the Queen Elizabeth Hall in London.

NKN facility created at IIT Patna helped to organize video conferencing between Queen Elizabeth Hall in London and IIT Patna on April 13, 2012. At the Queen Elizabeth Hall, London, the following three panellists:

1. **Shri Rajeev Sethi**, Chairman & Founder Trustee, The Asian Heritage Foundation, New Delhi
2. **Prof. Amartya Sen**, Nobel Laureate 2009 in Economics, and
3. **Lord Nicholas Stern**, Former Chief Economist, World Bank & Professor London School of Economics interacted with the Bawanbutti weavers from Baswanbigha village from Nalanda district of Bihar. The weavers could show their products to the panellists and also to the audience present there in the Queen Elizabeth Hall in London.



Left: Mr. Rajeev Sethi, Centre: Prof. Amartya Sen, Right: Lord Nicholas Stern

Lectures and Visitors

- **Dr. Shahzada Ahmad**, Alexander von Humboldt Fellow (Max Planck Institute of Polymer Research, Mainz, Germany) and Ecole Polytechnique Federal de Lausanne, Switzerland gave a talk on "Electrical field assisted growth and surface manipulation of poly (thiophenes) in ionic liquids for Dye-sensitized solar cell applications" on January 11, 2012
- **Dr. M. Bhowmick**, Department of Physics, Virginia Tech, USA gave a talk on "Probe of Coherent States in Narrow-Gap Based Semiconductors" on January 13, 2012
- **Dr. Priti Singh**, Department of Chemistry, Pennsylvania State University, USA gave a lecture on "The Electron Transfer Chemistry of Nitrosyl Complexes" and "Metallocofactor Assembly in Class I Ribonucleotide Reductase" on January 16, 2012
- **Dr. Saurabh Mani Tripathi**, Post Doctoral Fellow, University of Quebec, Outaouais, QC, Canada gave a talk on "Pathogenic and Toxic Bacteria Detection using Fiber Optic Gratings" on January 31, 2012
- **Dr. Sukhsagar Kumar**, Consultant Clinical Psychologist gave a talk on "Personality Development & Counselling" on February 19, 2012
- **Rabin Banerjee**, Senior Professor, S.N. Bose National Centre for Basic Sciences, Kolkata delivered a lecture on "Conic Sections in Nature" on February 21, 2012
- **Satyajit Sahu**, Advanced Nano Characterization Unit, National Institute for Materials Science, Tsukuba, Japan delivered a lecture on "Synchrony based evolution of microtubule and its applications" on March 2, 2012
- **Prof. N. S. Vyas**, IIT Kanpur gave a talk on "MEMS and Its Applications to Mechatronics with Special Reference to Microsatellite JUGNU" March 23, 2012
- **Dr. Ajit Kumar Patra**, Department of Physics, NUS Singapore delivered a lecture on "Magnetism and spin dependent spin transport in nanoscale structures" on March 27, 2012
- **Dr. Atul Thakur**, Postdoctoral Research Associate, University of Maryland delivered a lecture on "Physics-Aware Planning in Robotics" on April 13, 2012
- **Dr. A.K. Varma**, General Manager, Hindustan Aeronautics Limited delivered a lecture on "Performance Prediction of Small Axial Flow Turbine with Low Aspect-Ratio Blades" on April 27, 2012
- **Prof. N. K. Kishore**, IIT Kharagpur gave a lecture on "Lightning Protection for Electronic Systems" on May 18, 2012
- **Commander Vijay Singh**, Deputy Director NRB gave a talk on Funding Opportunities in the naval Research Board (NRB), India on June 29, 2012

Invited Lectures

- **N. K. Nishchal**, "Optical information processing," Contact Programme for Talented +2 School Students, Mahavir Cancer Sansthan & Research Centre, Patna, April 26, 2012
- **N. K. Nishchal**, "Holography and its applications," INSPIRE (Innovation in Science Pursuit for Inspired Research) Internship Science Camp, Pre-Examination Training Centre, Patna University, Patna, Feb 27, 2012
- **Ranjan K Behera**, "Wireless Power Transfer: The Next Generation Power Transmission System" Orissa School of Mining Engineering (OSME), Keonjhor, Odisha, India May 11, 2012
- **Ranjan K Behera** was Keynote speaker in AICTE Sponsored Staff Development Program on "Soft Computing Application to Power System and Control MATLAB. Title of presentation is "Recent Advances on Wind and Solar Energy Technology," at Aditya Institute of Technology and Management, Tekkali, Srikakulam Andhra Pradesh, India, 28th April 2012.
- **Ranjan K Behera** was invited as guest of honor and speaker in UGC Sponsored National seminar on "Right to Information: A step towards good governance," at Department of Political Science, Govt. women's college, Gardanibagh, Patna-2, India, 17th March 2012.
- **Ranjan K Behera** was invited as guest of honor and speaker in National Workshop on Modeling Simulation and Analysis of Power Electronics Circuit System," at Department of Electrical Engineering, Geetanjali Institute Of Technical Studies, Udaipur, Rajasthan, India, 18th February 2012.
- **Ranjan K Behera** delivered a seminar on "Solar Power for Rural India" at Indian Institute of Business Management (IIBM), Patna, India on 12th February 2012.
- **Ranjan K Behera** was invited speaker in Seminar on "Nuclear Power at your service - An insight". Title of presentation is "Grid Integration of Nuclear Energy and Power Quality," at Indian Institute of Technology Patna, IIT Patna on 10th Jan 2012 in association with NPCIL.
- **Nalin Bharti** was invited for a workshop on 'Evaluating the Performance of the Kisan Credit Card Scheme in Bihar' By IGC India Bihar, Directed and organized by London School of Economics and University of Oxford at Asian Development Research Institute, Patna on May 29, 2012.
- **Nalin Bharti** was invited for a workshop on Women in the Informal Economy in Bihar, May-11-12, 2012, Organised by SEWA, A.N. Sinha Institute of Social Studies, Patna.
- **Nalin Bharti** was invited for Development Meet-2012, Hotel Patliputra, Patna, March 25, 2012.
- **Nalin Bharti** was invited for Strategies for Mainstreaming Less Developed Regions in the Inclusive Growth Process (with special reference to Bihar) Plenary -1, Global Bihar Summit, 17 February, 2012 S. K. Memorial Hall, Patna.

Publications

- **Nabarun Roy and Anil K. Bhowmick**, 'Nanohydroxyapatite / Polydimethylsiloxane Composites : Excavating the Role of Nanofiller Aspect Ratio, Amorphicity, and Noncovalent Surface Interaction' Journal of Physical Chemistry C, 116, 8763, 2012
- **Ganesh C. Basak, Abhijit Bandyopadhyay and Anil K. Bhowmick**, 'The role of tackifiers on the auto-adhesion behavior of EPDM rubber' Journal of Materials Science, 47(7), 3166, 2012
- **Nabarun Roy and Anil K. Bhowmick**, 'Novel in situ silica/polydimethylsiloxane nanocomposites: facile one-pot synthesis and characterization' Rubber Chemistry and Technology, 85(1),92, 2012
- **Mithun Bhattacharya, Subharanjan Biswas, Srikanta Bandyopadhyay and Anil K. Bhowmick**, 'Influence of the nanofiller type and content on permeation characteristics of multifunctional NR nanocomposites and their modelling' Polymers for Advanced Technologies, 23(3),596, 2012
- **Nabarun Roy, Rajatendu Sengupta, Anil K. Bhowmick**, 'Modifications of carbon for polymer composites and nanocomposites' Progress in Polymer Science, 10.1016/J.progpolymsci.2012.02.002
- **Titash Mondal and Anil K. Bhowmick**, '2-Methyl oxazoline-grafted carbon nanofibers: preparation, characterization and their role in elastomeric actuators' Journal of Materials Science, 47(9),4178, 2012
- **Bratati Pradhan, Suneel Kumar Srivastava, and Anil K. Bhowmick and Anubhav Saxena**, 'Effect of bilayered stearate ion-modified Mg-Al layered double hydroxide on

the thermal and mechanical properties of silicone rubber nanocomposites' *Polymer International*, 61, 458, 2012

- **Nabarun Roy and Anil K. Bhowmick**, 'Novel in situ carbon nanofiber/ polydimethylsiloxane nanocomposites, synthesis, morphology, and physico-mechanical properties' *Journal of Applied Polymer Science*, 123, 3675, 2012
- **Nabarun Roy and Anil K. Bhowmick**, 'In situ preparation, morphology and electrical properties of carbon nanofiber/polydimethylsiloxane nanocomposites, *Journal of Materials Science*, 47, 272, 2012
- **S. K. Rajput and N. K. Nishchal**, 'Image encryption and authentication verification scheme using fractional nonconventional joint transform correlator' *Optics and Lasers in Engineering* 50, 1474-1483, 2012
- **S. K. Rajput and N. K. Nishchal**, 'Image encryption based on interference that uses fractional Fourier domain asymmetric keys' *Applied Optics* 51, 1446-1452, 2012
- **S. K. Gupta, N. Kailey**, 'Multiobjective second-order mixed symmetric duality with a square root term' *Applied Mathematics and Computation*, 218, 7602-7613, 2012
- **S. K. Gupta, N. Kailey**, 'Second-order multiobjective symmetric duality involving cone-convex functions' *Journal of Global Optimization*, 10.1007/s10898-012-9878-3, 2012
- **S. K. Gupta, Debasis Dangar**, 'Duality for second-order symmetric multiobjective programming with cone constraints' *International Journal of Mathematics in Operational Research* 4, 128-151, 2012
- **Marchand, É., Jafari Jozani, M. and Yogesh Mani Tripathi**, 'On the inadmissibility of various estimators of normal quantiles and on applications to two-sample problems with additional information. Contemporary developments in Bayesian analysis and statistical decision theory: A Festschrift for William E. Strawderman, *IMS Collection*, 8, 104-116, 2012
- **Manoj Kumar Rastogi and Yogesh Mani Tripathi** 'Estimating the parameters of a Burr distribution under progressive Type II censoring' *Statistical Methodology*, 9, 381-391, 2012
- **Mithun Mukherjee, Preetam Kumar**, 'Variable Rate Transmission Schemes for CI/MC-CDMA systems' *IEEE Communications Letters*, 90, 1-3, 2012
- **Mithun Mukherjee and Preetam Kumar**, 'Design and performance of WH-spread CI/MC-CDMA with Iterative Interference Cancellation Receiver' *Elsevier Physical Communication*, 5 (III), 217-229, 2012, ISSN 1874-4907
- **Aneek Adhya and Debasish Datta**, 'Lightpath Topology Design for Wavelength-Routed Optical Networks in Presence of Four-Wave Mixing' *IEEE and OSA Journal of Optical Communications and Networking*, 4 (IV), 314-325, 2012
- **Smriti Singh**, 'Creating a Hyperreal World: Ghosh and Adiga in Abha shukla Kaushik (ed.) *Postmodern Indian English Fiction*' Aadi Publications, 2012
- **Smriti Singh**, 'Textualizing Postcolonial India: Gita Hariharan's *Siege* and Kiran Desai's *The Inheritance of Loss*' *The Criterion - An International Journal in English*, 3 (III), 2012
- **Sourav Chakraborty**, Pablo J. Sanz Miguel, Francisca M. Albertí, Neeladri Das 'Construction of preorganized uracil based polytopic tectons for hydrogen-bonded supramolecular architectures' *Journal of Molecular Structure*, 1015, 99-105, 2012
- **Dhiraj Dhane, Maheshkumar Kolekar and Priti Patil**, 'Adaptive Image Enhancement and Accelerated Key Frame Selection for Echocardiogram Images' Special issue of American Scientific Publisher's *Journal of Medical Imaging and Health Informatics*, 2012
- **Maheshkumar H. Kolekar**, 'Bayesian Belief Network based broadcast sports video indexing' *Springer Int. Journal on Multimedia Tools and Applications*, 54 (I), 27-54, 2011
- **R. K. Pandey**, 'On lower order extremal integral sets avoiding prime pairwise sums' *J. Integer Sequences*, 15, 12.6.1, 2012
- **Raj Rajesh, Sanjib Bordoloi and Nalin Bharti**, 'Assessing The Role of Trade in Transmission of Global Financial Crisis to the Indian Economy' *Indian Journal of Economics and Business*, 10 (IV), 2011

Conference Publications

- **S. K. Rajput and N. K. Nishchal**, 'Color image encryption based on phase-truncated fractional Fourier transform and interference' Int'l Conference on Laser Advances in Science Engineering and Research (ICLASER'2012), M S Ramaiah Institute of Technology, Bangalore, June 8-10, 2012
- **S. K. Rajput and N. K. Nishchal**, 'Optical colour image encryption based on phase truncation and amplitude modulation' Research Scholar's Day, IIT Patna, March 17, 2012
- **S. K. Gupta, N. Kailey**, 'Duality for a class of symmetric nondifferentiable multiobjective fractional variational problems with generalized (F, α , ρ , d) convexity' International Conference on Operations Research for Sustainable Development in Globalized Environment, Calcutta Business School, Kolkata, January 6-8, 2012
- **S. K. Gupta, Debasis Dangar**, 'Second-order duality for a nondifferentiable minimax fractional programming under generalized α -univexity' Proceedings of the International Multi Conference of Engineers and Computer Scientists, Hong Kong Vol II, 1501-1506, March 14-16, 2012
- **Yogesh Mani Tripathi, S Kumar and C. Petropoulos**, 'Estimation of a restricted location parameter of an exponential distribution' 99th Indian Science Congress, Bhubaneswar, January, 3-7, 2012
- **Prashant Kumar and Preetam Kumar**, 'DCT based OFDM for Underwater Acoustic Communication' 1st IEEE International Conference on Recent Advances in Information Technology (IEEE-RAIT), 170-176, ISM Dhanbad, India, March 15-17, 2012
- **Smriti Singh**, 'Narrating a Subaltern Consciousness: Bama's 'Sangati' Writings from the Margins, Gautam Buddha University, March, 23-24, 2012
- **Himanshu Pathak, Akhilendra Singh and I. V. Singh**, 'Numerical Simulation of Bonded Patch Repair Problem Using EFGM and XFEM' 4th International Conference on Structural Stability and Dynamics (ICSSD 2012), MNIT Jaipur, January 4 - 6, 2012
- **S. Jagdale, Maheshkumar H. Kolekar**, 'Computer Aided Diagnosis System for Breast Cancer Detection using Bayesian Network' Int. Conf. on Signal, Image and Video Processing, Jan 2012
- **Alok Kumar Verma, Somnath Sarangi, Maheshkumar H. Kolekar and Shreya Banerjee**, 'Oil Whip Detection Using Stator Current Monitoring' IEEE Symposium On Computers and Informatics, Penang, Malaysia, 2012

Conferences / Symposium Organized International Conference ICSIVP2012

The Department of Electrical Engineering, IIT Patna successfully organized first International Conference on **Signal, Image and Video processing (ICSIVP-2012)** during Jan 13-15, 2012. Prof. Ioannis A. Kakadiaris (University of Houston, USA) delivered keynote address on "*Research opportunities at University of Houston*". Air Marshal B. N. Gokhale, PVSM AVSM VM (Scientific Consultant, Govt. of India) delivered plenary speech on "*The role of Technology in Pursuance of India's Strategic Perspective for the 21st Century*". Prof. Somnath Sengupta (Dean, CEP, IIT Kharagpur and General Co-chair ICSIVP-2012), Prof. Sumantra Dutta Roy (IIT Delhi) delivered plenary speeches related to the conference theme.



Air Marshal B. N Gokhale presents a souvenir to our Hon. Director Prof. Anil K Bhowmick after his plenary talk



Hon. Director Prof. Anil Bhowmick presents a memento to prof. Ioannis A. Kakadiaris



Prof. Somnath Sengupta (General Co-Chair) during the inaugural function



Release of Conference Proceedings



Prof. Vikram Gadre during the tutorial session



Faculty Members, Invited Guests, Participants and Students

The conference was technically co-sponsored by IEEE Calcutta chapter and financially sponsored by DST New Delhi, DIT New Delhi, DRDO, DST Bihar, Edgate Technologies Bangalore, NI Bangalore and Agilent, New Delhi.

Nuclear Power at Your Service - An Insight

A seminar titled 'Nuclear Power at Your Service - An Insight' was organised on January 10, 2012 in association with Nuclear Power Corporation of India Limited to disseminate basic information on scientific and technological aspects of electricity generation using nuclear energy including overview of the activities at NPCIL.

National Symposium on Recent Trends in Chemical Science and Technology

The Department of Chemistry, Indian Institute of Technology Patna organized a National Symposium on "Recent Trends in Chemical Science and Technology" to celebrate the International year of Chemistry-2011 on 3rd and 4th of February 2012.



Director- BARC, Mumbai

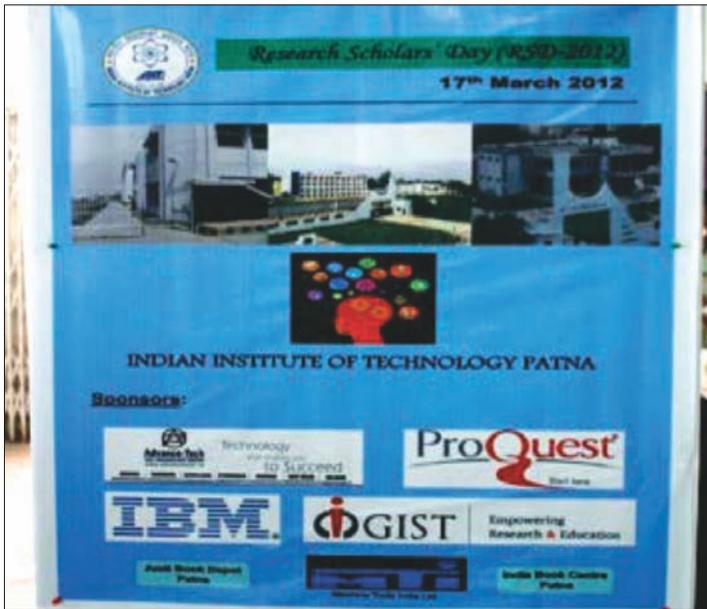
The main objective of the symposium was to provide a forum across India for the exchange of knowledge, experience, research findings and information on various aspects of Chemical Science and Technology.

The symposium received generous support from various government agencies like Department of Science and Technology, Department of Biotechnology, CSIR-New Delhi as well as business/corporate houses, GE, Reliance in the form of sponsorship. Shri Uday Chand Vice-President, Reliance Industries Limited graced the inauguration as the chief-guest. The list of speakers included scientists of repute from IACS Kolkata, BARC, Mumbai, GE Global Research, IITs, IISERs, and universities such as BHU, Patna University, etc.



Director, IACS

Research Scholars



Posters on Display



A Student explaining his Poster



Prof. Joseph W. Tedesco and Prof. Suresh Khato
Guests on Research Scholars' Day

Research Scholars of the Indian Institute of Technology Patna (IITP) celebrated their second Research Scholars' Day (RSD) on March 17, 2012 in the institute premises. It is a special event in the academic calendar of the IITP where research scholars display their research work (exclusively done at the institute) through poster presentation. Prof. Anil K. Bhowmick, Director, IIT Patna was assisted by faculties and research scholars of the institute in the organization of the entire event. Prof. Joseph W. Tedesco, Dean of the Cullen College of Engineering, University of Houston (as the chief guest) and Prof. Suresh Khator, Associate Dean of the Cullen

College of Engineering, University of Houston (as the guest of honour) graced the event. Several academic luminaries from IIT Patna, NIT Patna, Patna University and other prestigious academic institutions in the fields of Engineering, Science and Humanities and Social Sciences judged and evaluated the poster presented by the research scholars of IIT Patna. They were appreciative of the organisation of the event, which was a great success. Advance-Tech, ProQuest, IBM, GIST, Amit Book Depot, Machine Tools India Limited and India Book Centre Patna sponsored the event.

Training & Placement Cell

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 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 first batch admitted in the year 2008. Out of the 86 students registered for placement, 75 have got placed in 26 companies that visited our institute for campus recruitment. The highest package was offered by Microsoft IDC of Rs. 16.03 LPA and they recruited 3 students. The highest number of offers were made by Bank of India (11) followed by Infosys Development Center (10), DRDO (09), Headstrong (7) and Bharat Petroleum Corp. Ltd (6), Tata Motors (4), Flip Kart (4) and Masamb Electronics (4). The other technological, consultancy and financial companies who recruited our graduates ranged from 1 to 3. About 87 % of the graduating students have been placed through the campus placement process. The average salary package is 7.05 lakhs per annum.

A few students did not get placed due to low CGPA.

The summer internship for a period of 8 weeks is compulsory component of all the branches of B. Tech. curricula for pre-final year students. The cell has arranged summer internship for 89 pre-final year students to various private companies, public sector undertakings and R&D organizations. Some of these include Microsoft-IDC, Mentor Graphics, TCS, Wipro, EdGate, Dassault systems India Pvt. Ltd, Altair India, LG, GE, Tata Projects, Belzabar Software Design, Sicon Tech, Sonus Networks, L&T, Hero Moto Corp, Bangalore Metro, Tata Motors, Bajaj Auto, DRDO, TIFR, CMERI, NPCIL. During 2012, a total of 33 companies and organizations have offered summer training to our students and out of that 27 of them provided financial assistance. Among the pre-final year students, 19 have been offered paid summer research internship abroad in USA (University of Houston, Texas A and M University, Georgia State University, Washington State University), Canada (University of Saskatchewan), Australia (University of New South Wales), New Zealand (University of Auckland), Malasiya (Finisar Malaysia Sdn. Bhd), Singapore (Chloride Batteries S.E. Asia Pvt. Ltd).

Sponsored Projects

1st Sponsored Project from a Foreign Company

In order to tie up with industries both national and international and also to make engineering education more practical, IIT Patna is talking to various companies for sponsoring projects of mutual benefit. In this regard, 1st Sponsored Project on Rubber Nanocomposites by BRIDGESTONE CORPORATION, JAPAN was received by the institute in May, 2012.

It may be worth mentioning that we have two projects with national companies (NIC and NetApp India Pvt. Ltd.)

Project Title: Tailoring Magnetic Properties of Biomagnetic Core/Shell Nanoparticles for Soft Magnetic Application

PI: Dr. Manoranjan Kar, Department of Physics

Sponsoring Agency: Department of Atomic Energy

Project Title: Tuning of FM-AFM Exchange Interactions of Magnetic Nanocrystalline Materials for Soft Magnetic Applications

PI: Dr. Manoranjan Kar, Department of Physics

Sponsoring Agency: SERB

Project Title: Development and Evaluation of Novel Nanostructured Ion conductors for Low Temperature Solid State Secondary Battery Applications

PI: Dr. A. K. Thakur, Department of Physics

Sponsoring Agency: DRDO ARMREB

Project Title: A Classification of d-covered triangulations and Semi equivelar maps on surfaces

PI: Ashish K. Upadhyay, Department of Mathematics

Sponsoring Agency: SERB

Project Title: Rubber Nanocomposites

PI: Prof. Anil K. Bhowmick, Director

Sponsoring Agency: Bridgestone Corporation, Japan

Project Title: Study of clustered DNA-damage repair mechanism in nucleosome core particles

PI: Dr. Prolay Das, Department of Chemistry

Sponsoring Agency: SERB

Newly joined Research Scholars



Nemi Chandra Rathore
Computer Science & Engineering



Sumit Mishra
Computer Science & Engineering



Sumit Kumar Tetarave
Computer Science & Engineering



Mridula Verma
Computer Science & Engineering



Madhumita Mishra
Computer Science & Engineering



G. Lloyds Raja
Electrical Engineering



Abdul Basit Ahmad
Mechanical Engineering



Ravi Shankar Anand
Mechanical Engineering



Nibedita Kashyapi
Material Science & Engineering

Republic Day



Director, hoisting the National Flag



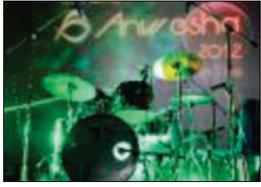
Director, delivering Republic Day Speech



Students singing the National Anthem



Guard of Honour



The Stage is Set

In literal terms, Anwasha means quest! The quest for knowledge, the quest for excellence and the quest for an eternal niche in the history of the world created a passion among us at IIT Patna to celebrate our annual fest as grand as any emperor's coronation! 'Cosmic Ecstasy' was the theme for this year's edition which in three days engulfed everyone who was present there in sheer excellence.

The first day started with a burst of events. There was a huge response to Sports Quiz and Painting events. The first venture in the sphere of management, 'Six Thinking Hats' was a huge success among the crowd. Scrabble was reintroduced in the form of 'Blanks and Mazes'. Creativity was at its best at 'Artysticks' where huge structures were made out of ice cream sticks and a bottle of glue.



An Event in Progress



Chief Guest and Guests of Honour Lighting the Lamp with the Director, IIT Patna

We had the inauguration ceremony in the evening which was started by the traditional lighting of the lamp. After 'Saraswati Vandana', the vice president of our Gymkhana, Mr. Kumar Shiladitya officially welcomed one and all. Our honourable director, Dr. A. K.

Bhowmick, addressed the crowd, which listened with rapt attention. Our guest of honour Mr. V. Narayanan, ADGP and Mr. K. P. Ramaiah shared their valuable experience with us. The chief guest of the evening Mr. Abhayanand, the Director General of Police Bihar, addressed the crowd and released the air balloons. It was followed by a vote of thanks by the fest coordinator Mr. Gourav Parihar.

Later in the evening, the classical talent, Spic Macay artists and then local folk artists took the crowd to the mystic realms of Indian Classical Music. Not a single leaf stirred during the performance as the music enthralled everybody!! Following this was the hugely awaited performance by Dr. Kumar

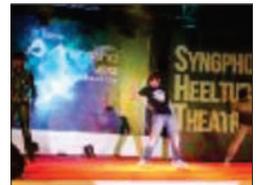


Evening of Classical Music

Vishwas, who was greeted with a huge applause even before he spoke a word. The people present thoroughly enjoyed the show and left the arena with a patriotic feeling in their heart.

The second day saw a series of lectures by eminent speakers like Dr. Prabhat Ranjan and Mr. Vinay Kumar. Coders were involved in their own binary world creating spectacular solutions to the twisted problems. At the same time, walls were being painted and the final outcome was an array of beautiful paintings which added to the beauty of the campus. 'Anziege', the ad making competition, saw ingenuity at its best while 'Astro Masters' the event showcasing our theme was a huge success.

As the sun started to set, the centre stage was brimming with excitement. The evening kicked off with 'Theatrix'. Four dramas were showcased one after the other, each one a masterpiece in its own respect. We had the finalist of 'Syngphony' gracing the evening with their melodious voices. The performers at the dancing competition 'Heel Turn' enthralled everyone with their poise and grace.



Students' Performance

We witnessed a string of performances from our college and also from reputed colleges of Patna like NIFT Patna, BIT Patna, NIT Patna etc. Such was the delight of the crowd that no one wanted the night to stop!!

Next day, the afternoon kick started with "Kicks Dont Lie", a football event in which the goal was at the helm of the Goal Rider. The power packed event attracted the crowd as a jar of honey would attract a swarm of bees. The whole world was a stage for the event 'Hades v/s Holmes'. Multiple Eco events were held, portraying our determination towards the betterment of environment.



Battle of Music

Last but not the least IIT Patna witnessed a battle of music! Eight bands fighting out an epic war, "SATANZ TANTRUM", to determine who the best among them is. The Valedictory ceremony was held at the centre stage to award those

who had won and to inspire others to try harder the next year. The finals of Mr. And Miss Anwasha were a treat to the eyes and ears as the contestants were put to a stringent test by the judges. Last but not the least, "FARIDKOT" the band from Delhi which had a nationwide fame, gave a fitting end to the fabulous fest. Hit track like 'Patjhad' and 'Laila' will always remain in our hearts. Such was their impact that people were humming their music long after they were gone!!!

Mayuresh Gadge
Cultural Secretary

Sports

Sports Gymkhana organized Intramural competition in February 2012, in which students got the chance to show their talent. Students Competed in different games and sports like Badminton, Table tennis, Basketball, Volleyball, Football and cricket. Girls also participated in different racket games. Patna premier league (PPL) a 20-20 cricket tournament was organized in which a large number of students participated. Students' gymkhana received new synthetic for Badminton court.

Literary Corner

“पथिक-मंजिल”

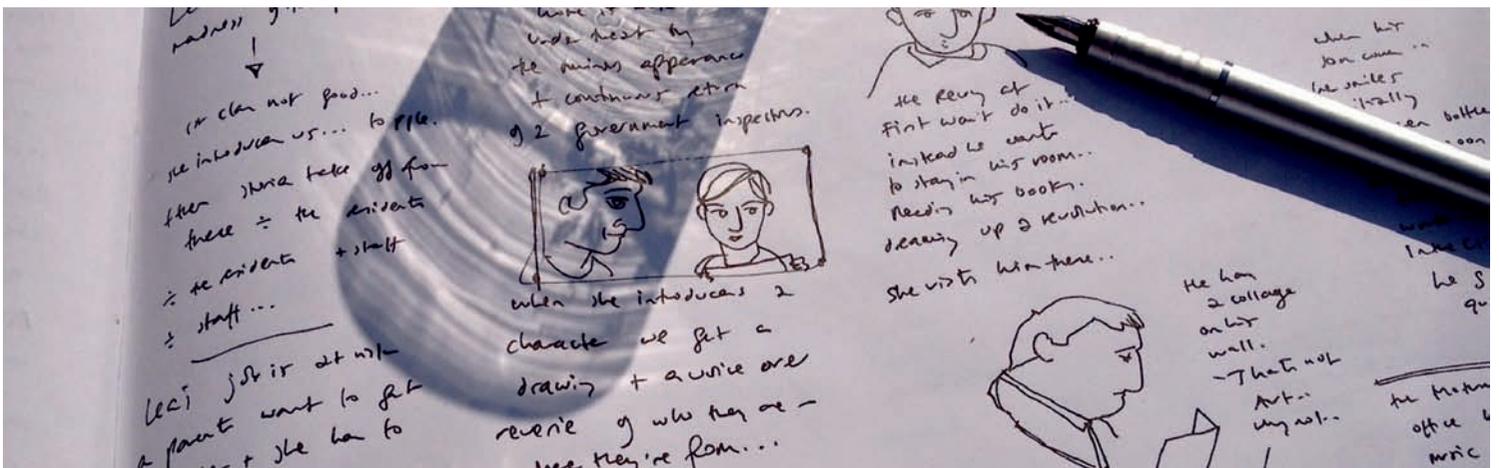
गर चला तू मंजिल की ओर
तो तुझे अवश्य मिल जायेगा छोर !
ऐ राही तुझे लहरों को चीर कर आगे चलना होगा
तुझे लहरों के नहीं, लहरों को तेरे अनुमान ढलना होगा
जब जब तु चलेगा अपनी मंजिल की ओर
तब तब नझे देखने को मिलेंगे ज़िन्दगी के कई मोड़
आरम्भ में तो लहरे तुझे मंजिल से विपरीत धकेलेंगी
अंत में वाही लहरे तुझे मंजिल की ओर सहेलेंगी
फिर भी तुझे हर परिस्थिति में बढ़ने रहना होगा मंजिल की ओर
मंजिल एक पतंगा है तेरे हाथ मे है बस उसकी हिम्मत रूपी डोर
लेकिन यदि तू बहता चला गया लहरों के साथ,
तो तेरे कभी नही लगेगा मंजिल रूपी किनारा हाथ
कुद ही गया जब तू संघर्ष रूपी मझधार में,
तो फिर बटोर ला कीमती मोती अपने दोना हाथ में
तब ही चारो ओर तेरी जय होगी
तेरी जिन्दगी की सही मायने में जय होगी !

Satyendra Singh Tanwar
1001ME31

“यादे”

मेरी याद आपगी तुझे, जब दूर चला जाउंगा
दूर इतना की, कभी लौटके नही आउंगा
अब तक मेरे दिल में रहता था,
फिर तेरी यादों में बस जाउंगा
याद आएँगी मेरी बाते और मुलाकाते,
मगर उस समय में तुझसे मिल नही पाऊँगा
नडपेगी तू भी मेरे बारे में सोचकर
मगर तब मैं नजर नही आउंगा
तुझे जान से ज्यादा चाहता हूँ
पर शायद साबिद नही कर पाऊँगा
“लोग कहते हैं प्यार अमर होता है।”
फिर तौ मैं खुद को अमर कर
आखिरी मंजिल पर मैं तुझे बूलाउंगा
मेरी याद आये तो रात कौ मकान से देखना
इक चमकता हुआ तारा बन जाउंगा
बहुत तूर जा चुका होउंगा तुझसे
पर दिल को यही छोड़ जाउंगा
अशक मत बहाना मुझे याद करके
वरना नाराज हो जाउंगा
सात जन्म मिलते हैं इन्सान को
वादा है बाकी छः जन्म तेरे साथ निभाउंगा !

Satyendra Singh Tanwar
1001ME31



MISTAKE

Have the fear of doing mistakes
 But never the fear of committing mistakes
 Learn from the mistakes committed
 And try not to do the same, never again.
 None does mistakes knowing that it is a mistake
 If does knowing, then is a mistake....
 Human as a humane has to avoid mistakes
 Being unable to avoid, thinking to avoid is weakness
 Having weakness is not a mistake
 Not trying to get rid of is a mistake
 Being unable to get rid of is 'weak will'
 'Weak will' itself is a weakness
 Not of yours
 But of your mind-set..
 Having a weak mind-set is a mistake,
 Not trying to improve it is your big mistake.
 These mistakes make your life problematic
 Leading to problems to u and all around..
 Remember! Creating problems
 is a worse mistake.
 The mistake, worst of all.
 Dear friend....
 Have the fear of doing mistakes.
 None on this planet is mistake-less
 But great are those who realise them...
 Having a strong will not to repeat again.
 So,
 My dear friend..
 Understand this by heart,
 Never fall into ditch of problems,
 Live a better life;
 And make your world a better place to live.

S.Ganesh Deekshith
 1001EE29

MOTHER

Oh my mother..
 Suffering all the pain
 Being drilled to depth
 As deep as your heart
 What a pity...!

 Remaining quiet..
 Seeing your children,
 Loving your children,
 Bonded to you
 by long strong roots.

 Bruising you all over,
 Damaging your eternal beauty,
 Recklessly heating you up
 Bringing your decorated ice-caps down.
 You still remain quiet
 Able to warn us, keep us under control.

 Whirling your wind,
 Raising your tide,
 Jerking your body with impatience.
 Oh God! what a might...!

 Still,
 Suffering all the strain;
 Bearing us on you,
 Disturbing you,
 Yet you remain patient and loving.

 Thank God, for such a patient mother
 Who bears all suffering for us,
 Rids our pains and troubles
 With the warmth of her love,
 You are aptly called
 The mother of mothers.

S.Ganesh Deekshith
 1001EE29

Change in Perspective

Over the past six months many of my friends turned twenty and over the next half year, most of the rest of us would join them. Twenty means stepping out of your teens and entering the youth. Taking upon you responsibility. I won't sit here and give lectures that it is time we started acting responsible and the like stuff. I won't because most of us are responsible. People of the past (as we call them) or the wise ones (the way they call themselves) think otherwise. Fortunately or unfortunately our parents are a part of these wise men and women. I am not saying that they don't think you are responsible, they do but not to the correct extent. Indeed we are responsible, we act responsibly. It's just a matter of different perspectives. The way we see responsibility and the way our elders do. We can't blame any one of them. The way we perceive things, the way we admire them is different from the way our parents do. The time now belongs to us, the youth. Time changes. People change. There must be a change in the idea or notion about responsibility. There must be a change in perspective. This is not the sixties or the seventies or the eighties, this is 2010. Laptops, mobiles, bikes are not a luxury but another basic necessity. Did you all call paper to be a luxury back then? Phones, music players or even personal transport, if they were never a luxury at your time, how could they be a luxury now? Your gramophones or radio became our i-pods. Your bullock carts and bicycles became our bikes. Your letters became our e-mails. Your booked trunk calls became our instant std. your old model phones became our new model mobiles. It takes the same effort to write a letter or an e-mail. The music is still the same; Beethoven remains to be Beethoven whether it's a gramophone or an i-pod. It is just that over these years the ease with which work can be done has improved. Life just got more comfortable. That doesn't mean it has become any easy. It is as tough for us as it has been for you all, just that when we go out there we have a sense of security in our hearts. A sense of security that you definitely missed. I whole- heartedly thank you all and am grateful to all of you for having provided us with this sense of security. But, we want to live our lives the way we want to. This was something you all could not afford to do back then. You led a cautious life. It was the need of the hour back then, but it is surely not anymore. We can afford to be ourselves.

We can afford to be experimental. We can afford to be foolish. We are not half your age. We won't say we know what we are doing because most of us honestly don't know what we are doing. We do it because we trust our instinct and our gut feeling. Be supportive not persuasive. You all say that, "It has worked out for us because we did things this way", but have you ever realized that you never knew how things would turn out to be. As the famous STEVE JOBS said, it is easy to connect the dots looking backwards and impossible to connect them looking forward. Guide us, don't try to influence us. When you show us people- successful people and ask us to take them as our role models, all of you forget one thing - those men were successful because they chose what they wanted to be. They chose the way they wanted it to be. They never chose from the paths the lie before them, they made their own path. A new path, a path they wanted to travel along and in this process they have created another path for us to choose from. Let us make our own path, if not at least let us choose our own path. Let us have things done our way. Let us have our own style; unprecedented and unique. Let us be unorthodox but effective and efficient. let us fail at things, so that we don't fail in life. Let us be true to ourselves and self satisfied before we are responsible. What is responsibility without meaning? Responsibility towards a society means acting as per the interests of the society and towards its development. What is the worth of being responsible towards the society when you cannot be responsible towards yourself? Why do you care for what others have to say about you when you are not wrong? If what they say is positive or for your good, then maybe it is fine else don't bother. Don't give attention to the guy who sits in the last row and whistles when you stammer on the stage. Mind you, that guy doesn't have the guts to go on stage and stand there and be laughed at. There is something special about the youth. There is a fire in them. Yes! It cools down with age. But before it does, it creates history. Yes! This fire may commit many mistakes, but at the same time it carries a potential to reach great heights, which the so called calm, cool and composed oldies cannot. Don't kill the fire. It's but natural that this fire will diminish, please do not be a catalyst to this process. Don't ask us to be more and more mature. Don't ask us not to be foolish. If we are as matured as you are and that means at one third your age then surely something is not right. Definitely! Let the fire inside us burn. Don't put out this fire. If you have already then its time you re-kindle it. It is surely this fire that would take us and with us the world forward.

Goutam Chalsani
0801EE17

How to Increase your Power of Concentration

A list of suggestions which can help a person to some extent in developing his/her mind and having good concentration:

1. Have an honest intention to increase your power of concentration.
2. Train your mind to have positive attitude, to calm down, and to focus.
3. Select a suitable (peaceful) place where you want to study.
4. Select the study material you want to concentrate on. In the beginning, it should be a short one (may be a small paragraph).
5. Follow the learning principles (learning should be followed by recitation and recall).
6. Make notes and summaries of the main points you have studied.
7. Take a break (relax) and then go for the next material or paragraph.
8. Work in short sessions of forty to fifty minutes with one/two breaks between the sessions.
9. Check your confidence and feel happy if you are doing better.

Prof. M.B. Sharan
Co-ordinator, HSS

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ACADEMIC CALENDAR FOR AUTUMN SEMESTER 2012-13

EVENT	DATE	DAY
Welcome, Orientation and Registration Programme for all new UG entrants	July 23, 2012	Monday
Registration for all continuing students and new PG Students	July 24, 2012	Tuesday
First day of Instruction	July 25, 2012	Wednesday
Last date for late registration with fine	July 30, 2012	Monday
Last date for course adjustment	Aug 01, 2012	Wednesday
Communicating the list of short attendance cases to respective Faculty Advisors	Sep 05 - 07, 2012	Wednesday to Friday
Mid Semester Examination (MSE)	Sep 10 – 15, 2012	Monday to Saturday
Last date for showing mid-semester answer copies to students	Sep 21, 2012	Friday

ACADEMIC CALENDAR FOR AUTUMN SEMESTER 2012-13

EVENT	DATE	DAY
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 28, 2012	Friday
Last date for sending list of courses to be offered in next semester	Oct 29, 2012	Monday
Last date for General Time Table slot allocation for next semester	Nov 01, 2012	Thursday
Course pre-registration and submission of fee for next semester (All students have to deposit their next semester fee but that does not mean the permission to register into next semester without qualifying the Institute rules of minimum CGPA in current semester.)	Nov 05 - 09, 2012	Monday to Friday
Last day of Instructions	Nov 16, 2012	Friday
Preparation leave for Examination	Nov 20, 2012	Tuesday
End Semester Examination (ESE)	Nov 21 – 24, and 26 – 27, 2012	Wednesday to Saturday, and Monday to Tuesday
Make-up-Examination Nov	29 - Dec 01, 2012	Thursday to Saturday
Last date for submission of Grades	Dec 06, 2012	Thursday
Last date for Department UG & PG Program Committee meeting for considering results of all students	Dec 07, 2012	Friday
IAPC meeting	Dec 10, 2012	Monday
Declaration of Results	Dec 11, 2012	Tuesday
Winter Break begins (Only for UG students)	Nov 28, 2012	Wednesday
Conduct of written Test/interview by Departments for PhD admissions	Dec 6-12, 2012	Thursday to Wednesday
Winter Vacation (Only for Teachers)*	Dec 13- 26, 2012	Thursday to Wednesday
* 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 2012-13	Dec 31, 2012	Monday
First day of Instruction for spring semester 2012-13	Jan 01, 2013	Tuesday