

Newsletter from IIT Patna

# Impulse



## Editorial

We are back with another issue of 'Impulse.' It gives us immense pleasure to bring to you the various events and activities the students and the faculty members of IIT Patna have been engaged in for the last six months. With short industrial tours and a three-day techno-cultural fest, 'Anwasha', the students of IITP have been actively engaged in curricular and co-curricular activities. The consent of the Hon'ble Chief Minister of Bihar, Shri Nitish Kumar for the inauguration of 'Anwasha' was an encouragement for the students. Apart from this, there have been other activities aimed at the overall development of the students. We are thankful to all the members of IIT Patna for sending information and other details on time. We solicit your co-operation for future issues as well!

We wish all of you a pleasant reading!

**Smriti Singh**  
**Rajesh Kumar**

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## From the Director's Desk



Dear Friends,

By the time this issue of 'Impulse' reaches your hands, IIT Patna will have a new batch of enthusiastic B.Tech. students as well as research scholars. To add to the bright and dynamic faculty strength, IIT Patna has recruited in new faculty in various disciplines. With such a group of hardworking professionals, IIT Patna looks forward to climbing the steps of success.

As a part of its development programme, IIT Patna has signed Memorandum of Understanding with the University of Houston and Louisiana State University. Under the MoU, six B.Tech. students (two each from CSE, EE and ME) have gone to UH for summer internship and three students from CSE and EE have gone to LSU for the summer program. An MoU was signed between IIT Patna and UNICEF to promote research on social issues.

For the development of the students, IIT Patna assigns them various responsibilities in the form of positions in hostel affairs. The first batch completed its term in February 2010 and fresh elections were held for a new set of office bearers who took charge after the annual fest. I wish the new General Secretary and his team a successful term in office and look forward to more activities and participation of students in various affairs.

There were important visitors in the campus. New laboratories have been developed. Science block and STPI building are ready for our activities. Many sponsored projects have been received. New guest house has been developed. Our students have won a few laurels.

Wish you a happy reading.

**Anil K. Bhowmick**



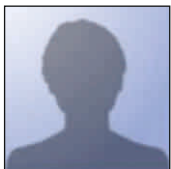
**Dr. G. Madhavan Nair**, Chairman, Secretary, Department of Space, Government of India



**Prof. Anil K. Bhowmick**, Director, Indian Institute of Technology Patna, Ex-Officio Member



**Mr. Ravi Kant**, Principal Secretary, Dept. of Science & Technology, Govt. of Bihar, Member



**Mr. N. K. Sinha**, Joint Secretary (Distant Learning), Dept. of Higher Education, Ministry of Human Resource Development, Govt. of India, Member



**Mr. Ashok Jaipuria**, Chairman & CEO, COSMO Films Ltd., New Delhi, Member



**Mr. R. Prasad**, Member, Competition Commission of India & Ex-Chairman, CBDT, New Delhi, Member



**Prof. K. K. Aggarwal**, President, Computer Society of India, Founder Vice – Chancellor, Indraprastha University, Member



**Prof. R. S. Ramakrishna**, Dept. of Computer Science & Engineering, Indian Institute of Technology Patna, Member



**Prof. Gautam Barua**, Director, Indian Institute of Technology Guwahati, Special Invitee



**Prof. A.T. Khan**, Professor, IIT Guwahati, Member



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

## Institute news

### New Faculty:

- Aditya Raj, Asst. Prof., Dept. of Humanities and Social Sciences, Ph.D., McGill University, Montreal, Canada
- Maheshkumar H. Kolekar, Asst. Prof., Dept. of Electrical Engineering, Ph.D., IIT Kharagpur
- Prolay Das, Asst. Prof., Dept. of Chemistry, Ph.D., Georgia Institute of Technology, Atlanta, U.S.A.
- Ram Krishna Pandey, Asst. Prof., Dept. of Mathematics, Ph.D., IIT Delhi
- Ranganathan Subramanian, Asst. Prof., Dept. of Chemistry, Ph.D., Wesleyan University, Middletown, CT, USA
- Sumanta Gupta, Asst. Prof., Dept. of Electrical Engineering, Ph.D., IIT Kharagpur
- Sumit Kumar, Asst. Prof., Dept. of Mathematics, Ph.D., IIT Roorkee
- K.C. Ray, Asst. Prof., Dept. of Electrical Engineering, Ph.D., IIT Kharagpur
- Sathya Peri, Asst. Prof., Dept. of Computer Science and Engineering, Ph.D., University of Texas at Dallas
- Utpal Roy, Asst. Prof., Department of Physics, Ph.D., Physical Research Laboratory, Ahmedabad
- Prabir Saha, Asst. Prof., Department of Mechanical Engineering, Ph.D., I.I.T. Kharagpur

## Visitors to IITP

05.02.2010: Dr. Manish Verma, Faculty of Business Administration, Memorial University of Newfoundland, Canada delivered a talk on '*A Tactical Planning Model for Railroad Transportation of Dangerous Goods*'

08.02.10: Lecture by Dr. Prabhakant Sinha, Founder & Co-Chairman, ZS Associates, USA on the topic 'Energy for the Powerless: *What will be the role of solar and bioenergy?*'



Dr. Prabha Kanta Sinha addressing the audience

08.02.10: Dr. Sudhanshu Rai, Faculty at Copenhagen Business School, Denmark addressed the students on '*In pursuit of scientific excellence, what can India offer, A Co-creation perspective*'

10.02.10: Dr. Anamika Prasad, Faculty at Stanford University and a graduate of MIT Boston delivered a lecture on '*Mechanics of Materials*'

18.02.10: Prof. Ambuj Singh of the University of California at Santa Barbara, U.S.A. delivered a lecture on '*Challenges in Bioimage and Graph Mining*'

04.03.10: Prof. Rabin Bannerjee from S.N. Bose National Centre for Basic Sciences, Kolkata delivered a lecture on '*Introduction to Black Hole Thermodynamics*'

29.03.10 – 09.04.10: Dr. Sukhmay Kundu, Faculty in Department of Computer Science, Louisiana State University, U.S.A. engaged classes on *Software Engineering*

01.04.10: Dr. Kaushal Ajitabh, Vice - President Royal Bank of Canada gave a talk on '*Mathematics and Money: A glimpse into the world of financial engineering*'



Prof. Kundu addressing the gathering

19.04.10: Dr. Bhaskar, Lecturer, University of Glasgow gave a talk titled '*Q = CV*'



04.06.10: Dr. Vishwanath Prasad, Professor of Mechanical Engineering and Vice- President for Research and Economic Development at the University of North Texas interacted with the faculty and research scholars at IITPatna.

## Book Publications and Release

The Department of Humanities and Social Sciences have to their credit two books published in 2010:

Nalin Bharti, *Privatization Unbound: Experiences in Bangladesh and India*, ISBN-978-81-89640-83-5, Bookwell, New Delhi, 2010

Smriti Singh, *Feminism and Postcolonialism in Krupabai Saththianadhan*, ISBN-978-93-80190-26-6, Satyam Publishing House, New Delhi, 2010

Dr. Smriti Singh's book was released on 08.02.10 by Dr. P.K.Sinha



The Director and Dr. Sinha with Dr. Smriti Singh's book



## Memorandums of Understanding

On January 21, 2010 **IIT Patna and UNICEF office for Bihar signed a Memorandum of Understanding** to address issues related to children in the state, conduct research on social issues, develop management information system for social programme and organise seminars and guest lectures on social issues. It was proposed that a resource hub would be set up at IIT Patna on issues related to women and children. While the Director, Prof. Anil K. Bhowmick represented IIT Patna and Mr. Rajiva Sinha, Officer-in-Charge of UNICEF signed on behalf of UNICEF.

On March 31, 2010, IIT Patna climbed another step on the ladder towards becoming an institute of excellence and research. On this day, IIT Patna signed a Memorandum of Understanding with Louisiana State University, United States of America for student and faculty exchange programmes. Dr. Sukhmay Kundu was the LSU representative for this MOU.

Three IIT-Patna students will travel to LSU this summer to participate in research projects. “Thanks to the proactive efforts of faculty in Electrical and Computer Engineering and in Computer Science, this MoU is now an active exchange program” said IIT Patna Director Professor Anil Kumar Bhowmick.

Professor Bhowmick was recently hosted by Dr. Jorge Aravena, Electrical & Computer Engineering Chairman, for further implementation of the MoU. “In addition to the educational and research benefits for LSU, this MoU opens the door to exchange programs that can be very useful for our industry partners, giving them access to quality engineers in a worldwide environment,” said Aravena.

In ECE, Professor Ashok Srivastava and Associate Professor Ramachandran Vaidyanathan were instrumental in negotiating this collaboration. Professor Sukhmay Kundu of LSU's Computer Science Department visited IIT Patna to document the agreement.



*The Director and Prof. Kundu signing the MOU while Dr. Naveen Nishchal looks on*



*ECE Chairman Jorge Aravena (left) shakes hands with IIT-Patna Director Professor Anil Kumar Bhowmick following the establishment of a collaborative Memorandum of Understanding*

### A Memorandum of Understanding (MoU) between LSU and Indian Institute of Technology Patna (IITP)

A Memorandum of Understanding (MoU) between LSU and Indian Institute of Technology (IIT) in Patna, India, has been signed with the intent of furthering international cooperation in research and education between the two institutions.

The MoU provides a necessary vehicle to establish exchange programs with one of the best academic institutions in India.



*Director and Prof. Kundu after signing the MoU*

## Foreign Visits

**Dr. N. K. Nishchal** visited Oulu Southern Institute, University of Oulu, Finland from May 17, 2010 - July 07, 2010

## Projects

Department of Humanities and Social Sciences hosted three students from India and Australia under a UNICEF programme. Dr. Darinka Souza from Goa, Ms. Georgina Heaslop from Australia and Mr. Udayan Rathore from Pune were at IIT Patna for the following case study: Reach of Urban Basic Services (Education, Health, WATSAN, Nutrition) in the slums of Patna City.

Sl No.	Name of PI	Name of Co-PI	Dept of PI	Project Title	Sponsoring Agency
1.	Dr. Naveen Kr. Nischal	Dr. Rajiv Mishra	PHYSICS	Virtual Class Room at IIT Patna Over NATIONAL KNOWLEDGE NETWORK	NIC
2.	Dr. Md. Lokman Hakim Choudhury	–	CHEMISTRY	Diversity-Oriented Synthesis of Privileged Heterocycles & Highly Functionalized Carbocycles by Multicomponent Reactions (MCRs)	DST
3.	Dr. MD. Kaleem Khan	Dr. Karali Patra	MECHANICAL	Evaluation of Burst Criterion of Zircaloy Clad	Atomic Energy Regulatory Board
4.	Dr. Neeladri Das	–	CHEMISTRY	Construction of Highly Porous 3-D Metal Organic Frameworks Derived from Triptycene-based Organic Linkers	DST
5.	Dr. Karali Patra	Dr. Shovan Bhaumik	MECHANICAL	Studies on Maxwell Stress and Hysteresis Characteristics of Poly Acrylic and Silicon based Elastomers	DRDO
6.	Dr. Sanjoy K. Parida	–	ELECTRICAL	Integration of distributed generation and renewable energy sources to improve the system reliability	DST
7.	Dr. Nalin Bharti	Dr. Smriti Singh Dr. Rajesh Kumar Dr. Aditya Raj	HUMANITIES AND SOCIAL SCIENCES	KCCI-UNICEF Internship	UNICEF

## Recent Publications

- P.K Maji, N.K Das., **A.K Bhowmick**, *Preparation and properties of polyurethane nanocomposites of novel architecture as advanced barrier materials*, Polymer (2010) 51 (5),1100-1110
- Mithun Bhattacharya and **Anil K. Bhowmick**; *Analysis of wear characteristics of natural rubber nanocomposites*; Wear (2010) 269(1-2), 152-166
- K. Dinesh Kumar, Andy H. Tsou and **Anil K. Bhowmick**; *Unique Tackification Behavior of Needle-like Sepiolite Nanoclay in Brominated Isobutylene-co-p-methylstyrene (BIMS) Rubber*; Macromolecules (2010) 43(9),4184-4193
- K. Dinesh Kumar, Andy H. Tsou and **Anil K. Bhowmick**; *Interplay between bulk viscoelasticity and surface energy in autohesive tack of rubber-tackifier blends*; Journal of Polymer Science, Part B: Polymer Physics (2010) 48(9), 972-982



- K. Dinesh Kumar, Andy H. Tsou and **Anil K. Bhowmick**; *Facile one-pot synthesis and characterization of maleated hydrocarbon resin tackifier for improved adhesion*; International Journal of Adhesion and Adhesives (2010) 30(4),200-207
- Ganesh C. Basak, Abhijit Bandyopadhyay and **Anil K. Bhowmick**; *Effect of tackifier compatibility and blend viscoelasticity on peel strength behavior of vulcanized EPDM rubber co-cured with unvulcanized rubber*; International Journal of Adhesion and Adhesives (2010) DOI: 10.1016/j.ijadhadh.2010.04.003
- Anusuya Choudhury, **Anil K. Bhowmick**, Christopher Ong, Matthias Soddemann; *Influence of molecular parameters on thermal, mechanical, and dynamic mechanical properties of hydrogenated nitrile rubber and its nanocomposites*; Polymer Engineering and Science (2010) DOI: 10.1002/pen.21680

- Suman Mitra, Santanu Chattopadhyay and **Anil K. Bhowmick**; *Preparation and characterization of elastomer based nanocomposite gels using a unique latex blending technique*; Journal of Applied Polymer Science (2010) DOI 10.1002/app.32389
- **S. K. Gupta**, N. Kailey, *A note on Multiobjective Symmetric Duality*, European Journal of Operational Research, (2010) 201. 649-651
- **S.K. Parida**, S. N. Singh and S. C. Srivastava, *An Approach to Promote Frequency Regulation Service in India*, International Journal of Energy Sector Management, Emerald Journals, (2010) 4 (1), 6-23
- T. R. Gulati, Himani Saini, **S. K. Gupta**, *Second-order Multiobjective Symmetric Duality with Cone Constraints*, European Journal of Operational Research, (2010) 205. 247-252
- N.K. Nishchal, *Wavelet-modified MACH filter and log-polar transform based wavelet-modified MACH filter for distortion invariant pattern identification: A Comparative Study*, Asian Journal of Physics, (2010) 19, 87-93

## Conference Participation, Presentations and Reviews

- **Akhilendra Singh** and I. V. Singh, presented a paper titled *Numerical Solution of Three-Dimensional Nonlinear Heat Transfer Problem Using EFGM*, at 54<sup>th</sup> Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM), NSIT Delhi, India, December 18-21, 2009
- Anil K. Bhowmick, *Polymer Nanocomposites*, APA – 2009, New Delhi, India, December 17-20, 2009
- Anil K. Bhowmick, *Rubber Nanocomposites: Some Recent Examples*, 12<sup>th</sup> The International Seminar on Elastomers (ISE) Bangkok, Thailand, 8-11<sup>th</sup> March, 2010
- Anil K. Bhowmick, *Nano Science and its applications* in 3<sup>rd</sup> Bihar Science Conference held at Gaya College, Gaya, on 11/02/2010
- **Ashok Singh Sairam** and Gautam Barua, presented a paper titled *Distributed Route Control Schemes to Load Balance Incoming Traffic in Multihomed Stub Networks*, Sixteenth IEEE National Conference on Communications, NCC 2010, at Chennai, January 2010

- M. Pathak, "Computational Investigation of Particulate Slurry Flow around a Square Shaped Obstruction in a Rectangular Duct", 20th National and 9th ISHMT-ASME Heat and Mass Transfer Conference, Mumbai, January 4-6, 2010
- Md.Kaleem Khan, presented a paper entitled '*Metastable flow inside capillary tubes: A critical review*' in 2010 ASHRAE Winter Conference at Orlando, FL, USA, 23-27 January 2010.
- Md. Kaleem Khan reviewed a research paper titled "A New Design Concept in Refrigerator Reversed Cycle Defrosting" for possible publication in ASHRAE Transactions
- R.K. Behera was the keynote speaker in a workshop on Technology Upgradation of GLS Lamp Cluster Patna City organised by Micro, Small & Medium Enterprises Development, Govt. of India and Bihar Bulb Manufacturer Association, Patna City, India, March 2010. He delivered lectures on the following topics: "CFL Technology" and "Light of Tomorrow".
- R.K. Behera delivered the invited lecture entitled "High Speed Locomotives" at Sri Venketeswar Institute of Technology, Srikakulam, Andhra Pradesh, India, December 2009
- S. K. Gupta, *Higher-order duality in multiobjective programming* (coauthored with N. Kailey) presented at 8th triennial conference of Association of Asian Pacific Operational Research Societies (APORS) held at Jaipuria Institute of Management, Jaipur, India during December 6-9, 2009
- Smriti Singh presented a paper *The Gendered Terrain – Dalit Writings* at XII International Conference: The Political Economy of Social Division: Race, Gender, Class, and Caste as Fetishized / Fetishizing Borders, Trivandrum, December 14-17, 2009
- Smriti Singh presented a paper on '*Charting New Borders – Postcolonial India in Fiction*' at the 19<sup>th</sup> British Commonwealth and Postcolonial Studies Conference at Savannah, Georgia, USA from February 26- 27, 2010
- Smriti Singh presented a paper on '*Purdah and Castration –An Examination of Indian Writings*' at the Veiled Constellations: the veil, critical theory, politics and contemporary society, Toronto, Canada from June 3-5, 2010
- Aditya Raj "*Diaspora and Education: Khalsa and Muslim School(s) in Surrey, BC*" Canadian Sociological Association (Sociology of Education) May 31-June 4, 2010, Concordia University, Montreal, Canada (presented by the research team)
- Papia Raj and **Aditya Raj** "*The labour-management dynamics of outsourced call centres in India*" Canadian Industrial Association (Employee Representation in the New World of Work) June 16-18 2010, Université Laval, Québec, Canada (presented by Danielle van Jaarsveld, Assistant Professor, Sauder School of Business, University of British Columbia, Vancouver)
- Nalin Bharti, *Is Dumping Laissez Un-faire?: An Exploratory Survey of the Cases and Law in India and Beyond*, International Law Association Regional Conference, 19th and 20th September 2009, Vigyan Bhawan, New Dehi 2009, pp-390-416
- Nalin Bharti, *Global Financial Crisis:A Comparative study of three representatives (US,India and Bangladesh)of three different worlds-developed, developing and least developed* in the conference proceedings, The Second International Conference of GBFM 2009 on World Financial Crisis and Global Business Challenges, Department of Finance, University of Dhaka
- **R. K. Behera**, W. Gao and J. Ojo, *Simulation and Analytical Study of Permanent Magnet Synchronous Machine Direct Drive Wind Power Generator using Three Level NPC Converter System*, in Proceedings of International Symposium on IEEE Power Electronics and Machines in Wind Applications, December, 2009, Lincoln, Nebraska USA.
- **R. K. Behera** and W. Gao, *Low Voltage Ride-through and Internal Performance Improvement of a Grid Connected DFIG System Using STATCOM*, in Proceedings of International Conference on Power System (ICPS-2009), Indian Institute of Technology Kharagpur, December-2009, India.





## STUDENTS' ACTIVITIES



### Research Scholars

**Anand Tiwari**, Department of Mathematics, presented a paper written with Dr. A.K. Upadhyay and titled '*On d-Covered Triangulation of Closed Surfaces*' in HPCA (High Performance Computing & Applications) conference at Banaras Hindu University, Varanasi, 8-11 Feb, 2010

**Nilu**, Department of Humanities and Social Sciences, presented a paper '*Comparitive Study of Adverbials in Magahi and Hindi*' at Ninth International Conference on South Asian Languages Punjabi University, Patiala in collaboration with Central Institute of Indian languages, Mysore (ICOSAL-9), from 7-9 January 2010

**Pooja**, Department of Humanities and Social Sciences, presented a paper titled '*Globalization in Kiran Desai's 'The Inheritance of Loss*' at the 14<sup>th</sup> National Workshop organised by the Forum on Contemporary Theory, Baroda from 5-7<sup>th</sup> March 2010

**Raj Rajesh**, Deptment of Humanities and Social Sciences, presented a paper titled '*Gender Discrimination in Education and Economic Development*', at the Annual conference of Indian Association for Research on National Income and wealth (IARNIW) organised at Centre for Development Studies, Trivandrum, 8-9 January 2010

Gunjeet kaur, Sanjiv Bordoloi, **Raj Rajesh**, '*An Empirical Investigation on the Inter-Sectoral Linkages in India*', Reserve Bank of India Occasional Papers, Vol. 31, No. 1, Summer 2009, Pp.29-72

Gagandeep Singh, Dhirendra Singh, Debjyoti Saha Roy from B.Tech. II participated in 'Kshitij' organised at IIT Kharagpur and were able to qualify for the finals of the "ANADIGIX-analog and digital circuit designing competition." In the final round they were one of the five contestants out of fifteen who were able to get their circuit evaluated.

IITP is situated. While the former was a great astronomer of ancient times, the latter was a great emperor who later converted to Buddhism. On this occasion, the Director inaugurated the wi-fi internet connection provided to the boys' hostel.

### 26.1.2010: Republic Day Celebrations

While the country was celebrating the 61st Republic Day, IITP showed no less fervour despite the chilly weather. The students put great efforts in creating floral designs and amidst the presence of the faculty and the students, the tri colour was hoisted reminding the audience of the sacrifice of our elders for this day!



Prof. Ramakrishna after hoisting the National Flag



Creative Students Braving the chill on Republic Day

## Activities Roundup

### 01.01.10: Naming of the Hostels

To begin the New Year, the boys' hostel at IIT Patna were named as Aryabhata Hall and Ashoka Hall. The choice of the names was on the grounds of cultural ethos of the land where

### 30.01.10-31.01.10: Robomerz

The first robotics workshop called Robomerz was organised by the Dept. of Mechanical Engineering, IITP in association with ARK Technosystems. The programme was managed by Dr. Karali Patra from the Dept. of Mechanical Engineering and Dr. Shovan Bhaumik from the Dept. of Electrical Engineering.



## 05.03.10-07.03.10: **IITP FEST**

Anwasha '10, the first techno-cultural festival of IITP was held amid high spirits and great enthusiasm from 5th – 7th March 2010. It was inaugurated by the Hon'ble Chief Minister of Bihar, Shri Nitish Kumar on 05th March 2010. The presence of Shri Kumar along with Shri Sahid Ali Khan, Minister for Science and Technology and Dr. Anil Kumar, Minister of Information Technology and other secretaries bolstered the spirit of the students. Later in the evening artists from All India Radio kept the audience enthralled. The next day saw various literary and technical events. There was a lecture by Dr. U.N. Singh, a scientist from NASA, USA and Dr. Padmanabh Mishra from Infosys, Bangalore interacted with the students. The evening brought the talented students of IIT Patna out on the stage. Amidst the cool breeze, the audience were entertained first through a quiz contest sponsored by IMS Patna and later through the dance performance of the students. The third day had technical and few literary events and the ended on a high note promising another fest in the coming year.



Hon'ble CM and other dignitaries at the Central Stage



Hon'ble CM, Shri Nitish Kumar with students and guests



Director welcoming the Hon'ble Chief Minister, Shri Nitish Kumar



Hon'ble CM, Shri Nitish Kumar in the Electrical Engineering Lab

### Sponsors giving away Prizes



## Environmental Club and **Anwasha**

by D. Vasu, B.Tech. 3<sup>rd</sup> year, Computer Science

Three eco events were organized by the environmental club of IIT Patna. One of them was a quiz show and the other two were offline events. The quiz tested visual aspects and the name visual quiz suited aptly. The other two events were Venture and Contrive.

### VQ

There was an overwhelming response to the event. The scheduled room 201 was completely packed and there were more people who were waiting outside. The entire force of the environmental club was present to ensure that the event went on smoothly. The first round was an elimination round where we picked up eight from an available eighteen teams. The questions in the first and the second rounds were all related to the environment and there were some really hard questions included so that we could select the required number of teams. The next round included a picture and a question related to it. Some pictures were included just to mislead. Later, we had a third round which included some really good puzzles. The winning team was from our institute itself and it was declared after the third round. Ideally, we would have wanted two more short rounds but the event had to be shortened because of a tight schedule.

### Venture

Venture was an online event where participants had to mail their answers and the best ones are invited to come to the Institute and give a presentation on the same. The topic was to design an environmental friendly house. Designing environment friendly houses could be our answer to most of the problems that loom large over us today. A while ago, an environmental house sounded like a distant dream mainly because of the cost but it has become a lot more affordable now. An ideal environment friendly house would take the advantage of most of the natural resources available to us like sunlight, wind and water and it would minimize harmful wastes by recycling, waste reduction and waste management. It was an informative event. A participant from Bhopal bagged away the prize.

### Contrive

The third event was an online event where the contestant had to build a city from scratch. He/She had to take strategic decisions like how many and where to have the houses, factories, farms, etc. The objective is to maximize profit and minimize pollution. It was a question related to strategy and optimization and of course, the environment. The winner was from our institute again.

## Alegra'09

By Harsha Vardhan, B.Tech. 3<sup>rd</sup> year, Electrical Engineering

It was the first ever technical competition to be held in IIT Patna, the Science and Technology Council of IIT Patna was responsible for the smooth conduction of this event. This event has witnessed participation from both the first years and the second years alike. The challenge was to create the circuit using the minimum number of circuit elements within the prescribed time of 3 hrs. The word Alegra is Spanish for welcome. The winning team was 'The Black Boxes' who had made it past the tough competition offered by the other participating teams.



Cultural Evening with artists from All India Radio, Patna



Director Welcoming Prof. U.N.Singh, Scientist from NASA, USA



**27.03.10: Industrial Tour of EE and ME students**

All the second year students of departments of mechanical and electrical engineering visited Electric Loco Shed, Mughalasarai for an industrial tour on 27th March 2010. The students had theoretical understanding of different aspects of electrical and mechanical engineering. With this foundation, they experienced practical knowledge. Along with this, there was very good opportunity to interact with expert system engineers of Indian railway. Dr. S. K. Parida, Dr. Ali and Dr. R. K. Behera accompanied the students.



Quiz in the evening



Festive Mood at IITP



The Spirited Students of IITP



Students Outside the Mechanical Engineering Lab



Students at Electric Loco Shed



## Visit to CIPET Hazipur, Bihar

The Department of Mechanical Engineering, IIT Patna arranged a one day industrial visit to CIPET Hazipur. All Students of 4th semester Mechanical Engineering went for this visit. Students, guided by the faculty members, visited different laboratories which were fully equipped with modern and automated equipments such as Non-Conventional Machine Laboratories, Ultra High tech workshop, Mechanical Testing Laboratories, Plastic engineering Laboratories. Discussing with students, it has been observed that they benefit from such visits in terms of the application and understanding of theory in reality.

### 03.04.10: D- Wars

There was a dance competition late summer evening on a weekend. This was one of the last activities before the commencement of the end semester exams and the high summer temperatures in Patna! An evening full of fun and frolic!

## Students involved in Hostel Affairs

### 2009-2010



**General Secretary**  
Krish Mangal



**Mess Secretary**  
Saurav Anand



**Cultural Secretary**  
Nishant Kumar



**Sports Secretary**  
T. Rohith Kumar Raja



**Maintenance Secretary**  
Devulapalli Vasu



**Welfare Secretary**  
R. Harsha Vardhan

### 2010-2011



**General Secretary**  
R. Harsha Vardhan



**Mess Secretary (Girls)**  
Amita



**Maintenance Secretary (Girls)**  
R. Spandana



**Mess Secretary (Boys)**  
Parmanand Premi



**Secretary- Technical affairs**  
M. Raghavendra



**Sports Secretary**  
Rohith K. Raja



**Cultural Secretary**  
Anil Kumar Nawal



**Maintenance Secretary**  
Devan Harikumar



**Environmental Secretary**  
A. Kashyap



**Welfare Secretary**  
Kumar Shiladitya



**Girls' Representative**  
Anusmita Kaushik

## Popular Culture and IIT Patna

Popular culture reflects the attitudes and concern of the students. Movies, television series, anime and *manga* (Comics) happen to be a part of our life. It is quite natural to see most of us watching a movie or a serial or an anime during leisure. In fact there are a sizeable number who spend most of their time on these and squeeze out some time at the last moment to do the academic stuff.

There are some dudes who manage to get a new movie (or two or more) a day and others who roam about moaning that they cannot find a new movie to watch as they had watched everything already. The *twilight saga* happens to be a very big hit here in sync with the rest of the world. In addition to these, there are a number of regional movies which are quite popular.

IIT Patna is a mini India in the sense that there are teenagers and professionals from almost all parts of the country (This is true with the other IITs as well). Music (especially Hip-hop and Punjabi) is very popular. Songs of *Akon*, *Taylor Swift*, *Avril*, etc are very popular along with *desi* hits. Most of us like to shake a leg to hot songs and occasionally, when a DJ comes, we are quite the unstoppable.

The influence of anime on the students of IIT Patna is Significant. The genre is wide with anime like *Deathnote*, *Naruto*, *One Piece*, *Bleach* and *Inuyasha* being the most viewed. Friendly brawls on say, whether *Naruto* is better than *Sasuke* or whether *Bleach* is better than *One Piece* are commonplace. There are friendly clashes on whether movies are better than anime and none is ready to give up so these arguments never cease.

It is not surprising that the famous tag "*The highest downloader of the week*" happens to go to an anime freak. In fact most of the top downloader's happen to be big time anime fans.

Most of the desktop backgrounds of the laptops have popular actors, singers or anime characters and everyone has a big collection of either movies, anime, songs or all three. Most of us spend a lot of time on social networking sites like *facebook* or *orkut* or in *mangafox*, *onemanga* or *twilight* forums.

*Counter-Strike* is the most popular PC game here. It is very rare to find someone who hasn't heard or played this game. Whenever an exam is completed, we storm to the computer centre to play a game of *counter strike*. Whether the exam felt like a bouquet or a brickbat, we just play for to refresh ourselves and get over with it.

- D. Vasu, B.Tech. 3<sup>rd</sup> year, Computer Science

## DREAMS.....

There is something inevitable about dreams. EVERYBODY DREAMS.

Chris Reeve's words still echo in my ears though it has been over 6 years that I first heard them, "So many of our dreams at first seem impossible, then they seem improbable, and then when we summon the will, they soon become inevitable."

What is so special about these dreams?

Everybody has dreams. Of course I do have dreams. It's the way we see them, the way we try to realize them.

Everybody dreams. Most of them tend to put those dreams away in a small box. Throw it away in the store room. As time goes by most of them forget the box. When nothing in the world is going right for them, they tend to bring the box out of the store room. They take a look into it. YES! My dreams are still there, while some get inspired by these dreams the others tend to ignore wondering how foolish they were to dream. Indeed these dreams are great, but they were never brought out of that box. They remain there forever, forgotten like the rest.

Then what happens.

They DREAM again. Why?

Because it costs them nothing.

Then what happens. Another small box finds its way into the store room.

Of course it is not easy to realize your big dreams. It's tough. It takes an uncommon amount of guts to put your dreams on the line, to stand up to them and say, "I will fight."

There is always failure in life. Defeats are always around the corner. But it is better to lose the battle, struggling for your dreams than to be defeated without ever knowing what you're fighting for.

Do not forget, it's only the human race that has been blessed with the capacity to dream and the capability to realize it. It's only man who can transform his thoughts into physical reality.

Why don't we try to realize our dreams? Because we are scared. It's not the defeat that scares us. It's

the aftermath of the defeat that scares us. It's the people around us which scare us. Because we are worried they would call us MAD for having dreamt big, for having failed. But just stop for a moment and think, why should we care for those people, they never helped one dream, never helped one realize them. They never paid one's college fee. They never cooked one's food, they never made up one's bed. Why then?

Just stop for a moment and think. Spread your dreams. Tread softly upon them with courage. We can often measure a person by his dreams but it's only the one who believes in the beauty of his dreams that will rule the future.

So my friends wake up next morning, go to the store room, bring your box out of the store room and your dreams out of the box and then summon the will to realize them.

*By: Goutam Chalsani,  
 B.Tech. 3<sup>rd</sup> year, Electrical engineering*



organic material can be used to create organic manures, the recyclable waste may be recycled.

**Emissions:** *Industrial Emissions, Vehicular Emissions and Urban Emissions* seem to top the list in Category. Though there are other emissions also the damage caused by them is much less when compared to the damage caused by these.

The governments can enforce strict regulations to check the *Industrial Emissions*, but the vehicular emissions are difficult to control, with millions on vehicles all over the globe. Any domestic user would not have interest in checking the pollution emitted by their personal vehicles. Consider our own country where pollution checks for Vehicles is mandatory at least in the bigger cities, but these regulations are not quite strict always. This is causing a grave damage to the current environmental situation.

*Urban emissions...* the most difficult to control, urbanization is leading to an increased need of energy, fuel, and other natural resources, we must develop water treatment facilities which can recycle used water, this definitely is unacceptable to a proportion of our population but this must be made mandatory. The use of greener energy must be encouraged, thermal power is not green but hydel power is comparatively greener.

The implementation of Renewable sources of energy like solar power will take a lot of time considering the costs and efficiency. The total amount of solar energy our earth receives in an hour would suffice the energy needs of the entire earths' population for over an year. The solar energy we receive is in the form of light and heat.

**Deforestation:** To match the needs of our ever growing population and industrialization we need more land, more land is generated out of deforestation most of the time,

## Mission Earth...

*by Harsha Vardhan, 3<sup>rd</sup> year, B Tech*

Most of us would know that 5th of June is the world environmental day, or it is perhaps the only day when most of us actually bother about our dear sweet planet called earth. On this day most of 'the educated people' try to save the environment by avoiding the use of plastic, or planting some plants in spite of the fact that we 'the educated ones' are perhaps responsible for the phenomenal rise in the pollution during the last 100 years . Even this effort in not in tune to the pollution, we are creating in our day to day life. The per capita of Pollution emitted is much higher than the per capita of efforts being put to save this planet. We must change the way we think to improve our planet. Our planet's green wealth is depleting, as we cannot move our civilization to another planet after we've exhausted resources here, we must save our dear sweet planet.

These are few of the challenges we face in our ride for a cleaner planet earth.

**Plastic & Other Wastes:** The use of plastic has become indispensable in our day to day lives. Not even a small toffee comes without a plastic wrapping. We must recycle our waste; Plastic must be recycled. This is a very easy task. All we have to do collect the organic, recyclable and non recyclable waste materials from households and industries separately. And these materials can be processed accordingly, the



affecting the carbon cycle in the environment, and this leads to Green House Effect, we must develop a habit to grow some plants around us, the students can encourage greener university campuses around the world. Longer Buildings must be encouraged around the world, as they suit the needs of the growing population the best.

### Afterword

So, now it's time we've woken up to the cause of our planet. We must not be environmentalists for a single day in an year rather we must be environmental in each and every action we perform. After all it is the only planet we have to live in. The way we live in our day to day lives is an important factor in reviving our planet. Our dependence on non-renewable sources of energy is inevitable at least for some more time before we have more efficiency in harnessing renewable energy, so judicious utilization of resources is quite essential, and all of this has to be done before it is too late....

### A withered rose...

The afternoon was quite sunny unlike the past few days. Droplets of water from the daybreak rain sparkled millions of tiny rainbows in the grassheads. I never loved plants much but today it seemed a bit soothing to walk amidst them. Disturbed by my presence though, two squirrels dashed through the grassy path in front of me. In a moment i felt life all over the weedy garden in front of where I sat for the last couple of minutes. I grasped a hold on to the willow and a hundred hesitant waterdrops fell wetting me all over....goosebumps.

Back to my room I did not feel like watching tv or chatting, both of what constituted my life for quite a while, by now. But there were no books too. I gave a thought to see the garage where we dump old books. It's been a while I read books. The corner where mom dumped these books was much of a museum by itself, all dusty and dirty with large empires of cobwebs. Feeling with my right hand, I perceived an old sack atop the cupboard. Holding tight to a ladder with one leg on a wooden stool I gave that old sack a pull. I lost my balance and tumbled over the stool, and the sack just missed me to hit the dusty floor with a thud. Dust from all over rose to cover me, and I looked like shit. My knee ached really bad from the fall, and I felt like fainting, but I wouldn't, after sneezing continually.

When the dust settled, an old book lying beside me caught my

eye. I stared at the cover page for a while, where it was written in big bold blue "Linn", for it wasn't just any ordinary book. It was my diary, it was my life once, when I resorted to telling Linn whatever I felt like telling him. Anne Frank once said that the best part of making a diary your best friend is that he wouldnt scold you back, neither would he beat you. That's indeed true. I ran through the pages of Linn, and a nostalgic fragrance rose and memories came flooding back, memories back from over four years....some flashed like light, but some lingered a little while longer. Linn is christened after my best friend. I am not much sure of how much one needs to have a friend like I did, in a residential school set up like mine. Rather the only thing I am sure of is that this silent friend of mine was a friend indeed. I can say that, a million times and the pages with ink blurred by my tear drops bear testimony to that. First fight, tense exam days, low marks, failures, first crush, parents' days, exam results, bunked PTs, sunday movies, mess food, night studies, unwashed clothes, monthly allowances, CCA, captancy, house fights and so on go the things he knows. Reading through the last few months of my life at Navodaya, I feel there are things i havent done yet, there are incidents for which i am still sorry, and there are persons whom i can never forgive.... And then there were the last days, the most beautiful ones at this heavenly place.

On 27 Feb, 2007 I wrote:

"Linn, heart becomes heavy with a sense of loss at the very thought that, every path I walk, every face I meet, everything I do with my friends is numbered. We are all on the count down. I wish nothing had changed"

I reflected...Friends are forever.

At this instant a withered rose fell on my lap from within the pages of this abandoned, silent, non-complaining friend of mine. From then on, for a few while nothing mattered, neither my aching knee nor that i was reclining my head on an old sack resting on an inch-thick layer of dirt.....

I was contented.

*By: Devan Harikumar,*

*B.Tech. 3<sup>rd</sup> year, Dept. of Computer Science & Engineering*

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## ACADEMIC CALENDAR FOR SPRING SEMESTER 2009-10

EVENT	DATE	DAY
Welcome and Orientation for new entrants	July 26, 2010	Monday
Registration for Autumn semester 2010-11 of new entrants (PhD)	July 26, 2010	Monday
Registration for Autumn semester 2010-11 of new entrants (UG)	July 27, 2010	Tuesday
Registration for Autumn semester 2010-11 (all old students)	July 28, 2010	Wednesday

## ACADEMIC CALENDAR FOR AUTUMN SEMESTER 2010-11

EVENT	DATE	DAY
Welcome and Orientation for new entrants	July 26, 2010	Monday
Registration of new entrants (PhD)	July 26, 2010	Monday
Registration of new entrants (UG)	July 27, 2010	Tuesday
Registration of all old students	July 28, 2010	Wednesday
First day of Instruction	July 29, 2010	Thursday
Last date of course adjustment	Aug 05, 2010	Thursday
<b>Mid semester Examination (MSE)</b>	<b>Sep 16-18, Sep 20-22, 2010</b>	<b>Thursday to Saturday and Monday to Wednesday</b>
<b>Mid semester Break ( for UG students only)</b>	<b>Sep 23-26, 2010</b>	<b>Thursday to Sunday</b>
Classes begin after the mid semester break	Sep 27, 2010	Monday
Last date for showing mid-semester answer copies to students	Oct 01, 2010	Friday
Last date for floating courses by all departments to be run in Spring Semester 2010-2011	Oct 29, 2010	Friday
Last date for General Time Table slot allocation for Spring Semester 2010-2011	Nov 08, 2010	Monday
Course pre-registration for Spring Semester 2010-2011	Nov 09-10, 2010	Tuesday and Wednesday
Last day of Instruction	Nov 19, 2010	Friday
<b>End Semester Examination (ESE)</b>	<b>Nov 22-27, 2010</b>	<b>Monday to Saturday</b>
Make-up-Examination	Dec 01, 2010	Wednesday
Last date for submission of Grades	Dec 06, 2010	Monday
Winter Break begins (Only for UG students)	Nov 28 -Dec 24, 2010	Sunday to Friday
Winter Vacation (Only for Teachers)*	Dec 08- Dec 22, 2010	Wednesday to Wednesday
<i>*Teachers can avail their vacation leave according to the Institute rules.</i>		
IAPC meeting	Dec 08, 2010	Wednesday
Declaration of Results of Autumn semester 2010-11.	Dec 10, 2010	Friday
Registration of all UG students for spring semester 2010-11	Dec 27, 2010	Monday
Registration of all PhD students (old and new entrants) for spring semester 2010-11	Dec 27, 2010	Monday
First day of Instruction for spring semester 2010-11	Dec 28, 2010	Tuesday