# Rhythm

The Newsletter

Indian Institute of Technology Bhubaneswar

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## From the Director's Desk... *TO NEW BEGINNINGS...*

Indian Institute of Technology Bhubaneswar celebrated its 'Ground Breaking' ceremony on 14th August 2011 at the Permanent Campus of the institute near Aragul (Jatni) to officially begin the construction of its campus. It was an honour and a proud moment for me, as the first Director of IIT Bhubaneswar, to be a part of this ground breaking ceremony along with my team of staff, faculty and students and of course the Chief Minister of Odisha, Hon. Sri Naveen Patnaik, who spared a few moments from his busy schedule to be a part of IIT Bhubaneswar's new beginning as its Chief Guest.

With every stroke of the trowel and each laying of the brick I envision the growth of an institute that will reflect the best of its lineage. Though it looks barren to the naked eye, the place holds the seeds of new horizons in its womb. The day is not far when this desolate land will be abuzz with 10,000 students, 1000 faculty members and 1,100 staff replete with an Administrative Building, Lecture Halls, Classrooms, Hostels, Faculty and Staff Residential complexes and a top-class Research Park.

As the opening ceremony plaque at Arugul was unveiled I realized the import behind the adage 'Rome was not built in a day' and IITBBS, like the mighty Roman Empire will build itself brick by brick and stone by stone to become a centre for world class education and techno hub of the state of Odisha.

I look forward to all the prayers, support and blessings of all its well-wishers, friends and most importantly from the people of Odisha. As the first Director of this august and infant institution I invite all of you to become a part of this dream of building an institute that will become the 'Bodhi Tree' of technical education, culture and wisdom.

**Prof. Madhusudhan Chakraborty**
Director

## In This Issue



# In Focus

## Ground Breaking Ceremoney

The foundation stone of the permanent campus of the Institute was laid on 12th February, 2009. On the eve of the 65th Independence Day, on 14th August 2011, Sri Naveen Patnaik, Hon'ble Chief Minister, Odisha formally launched the construction of the Phase-1 of the permanent campus of the Institute near Aragul (Jatni) in the presence of Director Professor M. Chakraborty, Deputy Director, Deans, Registrar, Faculty Members, Officers, members of the Staff and students of the Institute and other dignitaries including Hon'ble Member of Parliament Dr P. K. Patsani, and Hon'ble MLAs of Jatni and Khurda. This was preceded by a Bhumi Pujan Ceremony at the site by the Registrar. The Government of Odisha has allotted 936 acres of land for the purpose and 16 acres of private land is being acquired by the Government for making the land contiguous.

The Master Plan of the Campus has been designed for 10,000 students, 1000 teachers, and 1100 non-teaching employees besides 1000 plus outsourced support staff including security personnel. The Institute has also a plan for a Research Park. However, the initial construction in the first phase (Phase-1) would cater to 2500 students, 250 faculty members and about 300 other employees. The total investment for the phase-1 has been estimated to be about 800 crores. The construction would cover 2, 21,000 $m^2$ (63000 $m^2$ for academic complex and 1, 58,000 $m^2$ for residential complex) which would include Main Administrative Building, Lecture Hall and Class Room Complexes, Laboratory Complex, Four Academic Schools, Central Workshop and Students' Activity Centre in the Academic Complex whereas the Residential Complex shall consist of 800 capacity single seater boys' hostel, 200 capacity girls' hostel, 80 numbers of Grade A quarters for faculty members and officers and 40 numbers of Grade C quarters for supporting staff, Shopping and Community Centre, Guest House, service centre etc. The Main Building shall be a structure of 6 storeys and that of the other Academic Schools shall be of 4-storey construction. The hostels as well as the residential quarters shall be of G + 7 storey constructions. The Institute plans to start operating from its permanent campus by 2013-14.


## Professor S.K. Brahmachari
### Director General, CSIR Visits IIT Bhubaneswar

Professor Samir K Brahmachari, Director General of the Council of Scientific & Industrial Research (CSIR) and Member, Board of Governors (BOG), IIT Bhubaneswar visited the institute recently. Professor Brahmachari, a biophysicist, has made fundamental discoveries in demonstrating the structural flexibility of DNA and the role of repetitive sequences in DNA transactions much before the discovery of repeats association with genetic basis of several neurological disorders. He has made major contributions in molecular analysis of genetic disorders associated with trinucleotide amplification and repetitive sequence instability. He was the first to establish a close clinical network to address genetics of complex disorders and demonstrated association of two genes to Schizophrenia and Bipolar Disorder and identified several SNPs and other markers associated to various neurological disorders. He has pioneered functional genomics initiative in India and is currently leading the Indian Genome Variation Consortium project towards development of predictive markers for complex disorders and coordinating a national network project in In-Silico Biology for drug target development. He and his group have developed a novel software for genome analysis and identified several novel non-active site targets for bacterial pathogen. The finding that Human miRNA can target critical genes in HIV, thus preventing HIV proliferation by Professor Brahmachari and his associates has received wide international recognition.

Professor Brahmachari is the recipient of many awards and honors. These include Shanti Swarup Bhatnagar Award (CSIR) in 1990; FICCI Award in 1999; Millennium Medal (Indian Science Congress) in 2000; Ranbaxy Research Award in 2001; Professor B.R. Ambedkar Centenary Award for Excellence in Biomedical Research (ICMR) in 2005; J. C. Bose Medal (INSA) in 2007. Fellow member of the Human Genome Organization (1991) and HUGO Council, 2004. He is Fellow of all the three National Academies. He has been member/chair of many high-level national and international committees. Professor Brahmachari has also been involved in issues relating to Genomics research and Human Rights.

## Students' Registration (2011-12)

The Indian Institute of Technology Bhubaneswar has completed its fourth batch of admission this year, on 22nd July, 2011 with the registration of 113 students in the 1st year B.Tech in Civil, Electrical and Mechanical Engineering. As the the first batch students admitted in 2008 has stepped in to their final year, the Institute has B.Tech students in all its 4 years.

## Students' Internship

IIT Bhubaneswar scaled another height in its path of growth with the students of its first batch undertaking summer internships during May-July 2011. The Training and Placement Cell enabled internships for the students in various industrial domains across different locations all over India. Besides the industrial internships, as many as 26 of the total 94 students undertook research internships outside India, with WMG, University of Warwick and University of Massachusetts Dartmouth accounting for half of the foreign internships. GMR, Gammon India and Scott Wilson were the major recruiters in the School of Infrastructure. Texas Instruments, National Instruments, Tata CRL and TCS were the prominent companies recruiting from the School of Electrical Sciences, while the School of Mechanical Sciences had Hindustan Motors, All Cargo Logistics, Tata Motors and Zeus Numerix amongst others. In addition, a few students also had their internship stint at academic institutes like IIT Delhi and IISc Bangalore.

K. Vinod Kumar and Gouher Danish, presented a paper "Novel FEM formulation for Maxwell's equations" 13th Annual CFD Symposium, Aeronautical Society of India, Aug 7th- 9th, 2011, IISc Bangalore.

## Prof. P C Pandey Joins IITBBS

A doctorate in Physics (Microwaves) from Allahabad University, he is credited with the initiation of the satellite borne microwave remote sensing of Ocean Atmosphere and Cryosphere research in India. Professor Pandey was the Founder Director of National Centre for Antarctic and Ocean Research, Goa from 1997 to 2005. He has spent a major part of his career at Space Application Centre (ISRO), Ahmedabad, and has worked for about five years at the NASA's world famous Jet Propulsion Laboratory, USA.

Professor Pandey has carried out extensive research in the areas of satellite oceanography, atmospheric science, climate change and polar science. He has published more than 100 papers in reputed national and international peer reviewed journals and also written and edited many books. He has guided eleven Ph.D. students. Professor Pandey is a Fellow of the Indian Academy of Sciences (Bangalore) The National Academy of Sciences (Allahabad), Indian Society of Remote Sensing, Indian Geophysical Union, Geological Society of India and a host other societies.

Besides, Professor Pandey has been Member/Chairman of various Committees of Govt. of India from ISRO, DSTM CSIR and has led or participated as member of delegation to various international Forums, notably the International Polar Year (2007-09). He was also a member of the delegation led by Hon'ble Kapil Sibal to Antarctic, the first ever ministerial delegation to visit Antarctica. Professor Pandey has represented India in various International symposia related to Polar Science and Logistics such as Scientific Committee on Antarctic Research (SCAR), Antarctic Treaty Consultative Meeting (ATCM) etc.

Professor Pandey is the recipient of the prestigious Shanti Swarup Bhatnagar Award (1989), Professor Vikram Sarabhai Award and Gold Medal, Om Prakash Bhasin Award and Vigyan Ratna Samman Award of U.P. Council of Science and Technology as well as the NASA award.

# Visits by Persons of Eminence

| Name & Affiliation | Date of Visit | Remarks |
|---|---|---|
| **Professor Narendra K. Sharma** *Dept. of Industrial and Management Engg., IIT Kanpur* | *25.03.2011* | *Delivered a lecture on The Scientific Study of the Mind* |
| **Professor Ram H. Nagaraj** *Carl F. Asseff, M.D. Professor of Ophthalmology, Department of Ophthalmology and Visual Sciences, Case Western Reserve University School of Medicine, Cleveland, OH, USA* | *30.03.2011* | *Delivered a lecture on Small Heat Shock Proteins: Cellular Gatekeepers against protein damage and apoptosis* |
| **Mr. Vishal Khosla** *Manager, CETR Inc., USA* | *12.07.2011* | *Delivered a lecture on Trends in Characterizing Mechanical, Tribological and Surface topography of coatings, surfaces, thin film etc.* |
| **Professor Sukalyan Sengupta** *Professor and Chairperson, Department of Civil and Environmental Engineering, University of Massachusetts Dartmouth, MA, USA* | *11.08.2011* | *Delivered a lecture on Water Sustainability in India: Some Technologies to Enable Water Reuse* |

# Campus Bulletin

## Institute Day Celebration

The Institute celebrated its fourth Institute Day on 22nd July, 2011. Pending amendment in The Institutes of Technology Act, 1961, the Institute has been functioning under the aegis of IIT Bhubaneswar Society which was registered on 22nd July 2008 with the Registrar of Societies, Orissa, Cuttack. The first batch of students started their academic session on 23rd July 2008 at the campus of its mentor Institute, i.e. IIT Kharagpur on. Subsequently, the Institute shifted to the city of Bhubaneswar in July 2009. To mark the occasion, students, faculty, staff of the Institute led by the Director planted trees in the permanent campus being constructed near Aragul (Jatni).

Hon'ble Justice Mr. Umesh Chandra Banerjee, former Justice of Supreme

Court graced the occasion as Chief Guest. In his address he emphasized on technical education as requirement of the day, and lauded the role of IITs. "You should use your caliber and skills towards meeting the technical needs of the country," he advised the students of the Institute.

Professor Madhusudan Chakraborty, Director urged the students to bring innovation and values in their academic pursuit. A mesmerizing cultural programme was presented by such eminent artistes as Odissi vocalist Guru Ramahari Das and Bijay Kumar Jena; Professor Agnibha Bondopadhya and his group from Rabindra Bharati University, Kolkata, and Ms. Trupti Panda from Cuttack.

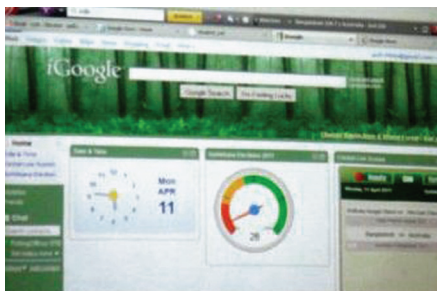
## A. N. Khosla Hall of Residence

A N Khosla Hall of Residence built by the mentor institute, IIT Kharagpur was inaugurated by Sri BK Patnaik, IAS, Chief

Secretary to the Government of Odisha on 23rd April 2011 in presence of Prof. Damodar Acharya, Director IIT Kharagpur, Prof. Madhusudan Chakraborty, Director IIT Bhubaneswar and others. The hostel, completed within appreciably short time, includes various student amenities. This Hall of Residence provides accommodation to the 3rd and 4th Year students of IIT Bhubaneswar.

## Green Election

The elections to the Student's Gymkhana was held on 11th April 2011 to elect student representatives for various student activities for the year 2011-12 was a shining example of the 'Go




Green' initiatives undertaken by IIT Bhubaneswar. Students of the Institute created a paperless, no-cost process for the election by adapting select features of Google® forms, iGoogle® and MATLAB®. The entire process was completed within 90 minutes ensuring transparency, accuracy and efficiency.

## IEEE Workshop

The student branch of IEEE was formed at IIT Bhubaneswar on 6th March, 2011. This branch, falling under Region 10 of IEEE, has over sixty active members at present. The hands-on workshop series '1081p' aimed at introducing students to cutting edge technologies, has evolved as one of its flagship programmes triggering tremendous enthusiasm. In keeping with the commitment of IEEE as declared in its motto, "Advancing Technology for Humanity", this student branch of IEEE also seeks to empower the community at IIT Bhubaneswar by imparting skills in evolving technology.

ieee bbs IIT
IEEE IIT BHUBANESEWAR STUDENT BRANCH

## Society of Automotive Engineers (SAE)

The SAE collegiate club of IIT Bhubaneswar was founded in late April 2011, adding the institute to the list of prominent colleges in eastern India who are a part of the reputed organization. The club currently has 105 members and has dedicated its goal to successful participation in upcoming SAE events and developing cutting edge technologies.

## Independence Day

With patriotic fervor in every single heart, IIT Bhubaneswar celebrated 64th Independence Day with multitude activities. The Institute witnessed unison of salutes as the Director Professor Madhusudan Chakraborty hoisted the tricolor in presence of its students, faculty and staff. Later in his address to the

gathering he focused on the importance of contribution of young engineers to the masses and the need for world-class institutions for the progress of the nation. The message of Independence was trumpeted through Music and Dance Society productions along with an intense debate on 'INDIA: VISION 2020' brought up by the Literary Society. As a whole, the day was commemorated with a silent oath towards the progress of the nation.

## Access for All

The School of Infrastructure, organized a workshop in collaboration with Aaina, Odisha and Samarthyam, New Delhi with the support of VSO, India and DFID on "Access for All" in the Institute Auditorium on 3rd September 2011. The objective was to sensitize the participants on physical accessibility including internal and external structure and interiors of the buildings. The participants were the final year and Ph. D. students, faculty members of School of Infrastructure, IIT Bhubaneswar, engineers of IIT Bhubaneswar and architects and engineers from CES and CPWD. The workshop was coordinated by Professor S.C. Dutta, Dr. D. Pasla, Dr. R.R. Dash, Dr. A. Sarkar, Dr. P.P. Dey, Dr. S. Haldar and Dr. P. Bhunia. The workshop was inaugurated by Professor M. Chakraborty, Director in the presence of Professor G. Panda, Deputy Director, Professor S.C. Dutta, Dean (AA, IR & CE), Sri B.K. Ray, Registrar, Dr. D. Pasla, HoS (School of Infrastructure), Ms. Anjali Agarwal, Executive Director, Samarthyam and Ms. Sneha Mishra, Secretary, Aaina, other Deans, members of teaching and non teaching staff and students and external participants. The day long workshop exposed the participants to the various aspects of design considerations, recent innovations, rule and regulations on accessibility through discussions and simulation exercises.


## From the Gymkhana

### Centre for Entrepreneurship

**TIE My Story Session:** 'My Story' was an inspiring event, held on 19th August 2011, where successful entrepreneurs from various domains shared the experiences of their entrepreneurial journey. TIE Bhubaneswar chapter in collaboration with CENTRE for Entrepreneurship, IIT Bhubaneswar organized it at IIT Bhubaneswar, where accomplished entrepreneurs like Mr J. K. Mohanty, CMD, Hotel Swosti (P) Ltd., and Mr. M. K. Gupta, MD, Gupta Power and Infrastructure Ltd., inspired the students with their brilliant talks.

### Robotics Society

The Robotics Society of IIT Bhubaneswar conducted a workshop on "Introduction to Robotics" in the institute auditorium. The introductory session covered the fundamentals of designing a Robotic System. It was a 3-Hour long session which was followed by live demo and Q&A. This session was broadly divided into the following categories:

1. Mechanical Design and FEM analysis using Solid works
2. Programmable Electronics and Embedded systems for Robotic applications
3. Demos on Computer Vision and Computer Motion Control

The students were distributed handouts containing instructions and resources for self study. The session witnessed a participation of 150 students from 1st, 2nd and 3rd years. It was designed to be a preliminary session that would help increase awareness of robotics among the students of IIT Bhubaneswar. The Society also conducted 1081p, a starter course on Digital Image Processing in association with the IEEE student branch at IIT Bhubaneswar. The students were given exposure to image processing using Matlab.

### Literary Society

The Literary society conducted debate and quiz competitions on the occasion of the 65th Independence Day. The competition along with a small literary orientation saw active participation of the students, especially from the first year. The students celebrations ended on a vibrant note with a song and dance production by members of the Music and Dance Society.

### The Dramatics Society

Dramatics workshops are held every weekend and sometimes also on weekdays, where the members honed their skills by engaging in various activities like Voice exercise training (Om Chanting and Underpitch), Personality developmental games (Mirror), Theatrical Skills (Random walking), etc. The Society also gave two Nukkad (Street Play) productions themed "My Tree" for the general awareness of the masses on Tree Plantation. The Nukkad performances were highly acknowledged by the mass and media.

## T&P Cell conducts Panel Discussion

Training and Placement Cell, IIT Bhubaneswar conducted Panel Discussion on "Managing Generation Y in the workplace a challenge to Indian Industries". Moderated by Prof. Bhaskaran, former Head, Training and Placement Cell, IIT Kharagpur. The event had Mr. Ranjan Bandyopadhyay, Global HR Head, TCS-BPO, Mr. Prasanjeet Pati, Founder, Afixi Technologies and an IIT Kharagapur alumnus, as well as Ms. Bobby Patnaik, Manager, Employee Relations,

Infosys, Mr. Dev Kumar, GM, HR, BSNL Orissa circle, Retd. Major General S D Mahanti AVSM and Mr. Devasis Sarangi, Mentor and Senior Consultant, Little Minds as the panelists. It also included HR executives from various companies such as Tata Group, HP, Cisco, Essar Steel and Mahindra Satyam. Overall, it was an excellent platform for the industry and the academia to brainstorm on a topic of high relevance to the student community, for the students to understand the expectations of the industry and for the company executives to gauge the potential at IIT Bhubaneswar.


# Faculty Forum

**Prof. S.C. Dutt – visits UC-Davis as the Fulbright-Nehru Senior Research Fellow**

Professor Sekhar Chandra Dutta visited University of California, Davis as a Fulbright-Nehru Senior Research Fellow from 14th December 2010 to 30th June 2011 on a research project on 'Study on Seismic Behaviour of Buildings using Bidirectional Hysteresis Models'. He worked along with his faculty associate Professor Sashi K. Kunnath. During his stay at UC Davis, Professor Dutta also attended a higher level course on 'Performance Based Seismic Design'. On invitation from Chair of the Department of Civil and Environmental Engineering, on 2nd May 2011, Professor Dutta delivered two lectures at the University of Massachusetts, Dartmouth which has collaborative link with IIT Bhubaneswar.

## Sponsored Research & Industrial Consultancy Projects

### Consultancy Project

Name of the Project: Proof Checking of design of the foundations for 220K transmission line crossing river

Agency: Orissa Power Transmission Corporation Limited

Consultant-in-Charge: Dr. Dinakar Pasla, School of Infrastructure

## Publications


1. Amardeep Singh, Srikanta Patra, Jeong-Ah Lee, Kang Hyun Park, Haesik Yang (2011). An artificial enzyme-based assay: DNA detection using a peroxidase-like copper-creatinine complex. Biosensors & Bioelectronics DOI:10.1016/j.bios.2011.06.009
2. Subrat Kumar Pattanayak, Nidhi Prashar, Snehasis Chowdhuri (2011). Effect of temperature and pressure on the structure, dynamics and hydrogen bond properties of liquid N-methyl acetamide: A molecular dynamics study. The Journal of Chemical Physics Vol. 134, pp. 154506.
3. Fayc-al Touti, Akhilesh Kumar Singh, Philippe Maurin, Laurence Canaple, Olivier Beuf, Jacques Samarut, and Jens Hasserodt (2011). An Electroneutral Macrocyclic Iron(II) Complex That Enhances MRI Contrast in Vivo. Journal of Medicinal Chemistry Vol. 54, pp. 4274-4278.
4. Pratihar, Sanjay; Roy, Sujit (2011). Reactivity and selectivity of organotin reagents in allylation and arylation: Nucleophilicity parameter as a guide. Organometallics, Vol. 30, pp. 3257-3269.
5. Pratihar, Sanjay; Roy, Sujit (2011). Nucleophilicity and Site Selectivity of Commonly Used Arenes and Heteroarenes Addition & Correction. Journal of Organic Chemistry Vol. 76, pp. 4219.
6. Chatterjee, Paresh Nath; Roy, Sujit (2011). Alkylation of 1,3-dicarbonyl compounds with benzylic and propargylic alcohols using Ir-Sn bimetallic catalyst: synthesis of fully decorated furans and pyrroles. Tetrahedron Vol. 67, pp. 4569-4577.
7. Sitanshu Sekhar Sahu and Ganapati Panda (2011). Efficient Localization of Hot Spot in Proteins Using A Novel S-Transform Based Filtering Approach IEEE/ACM. Transaction on Computational Biology and Bioinformatics Vol. 8, pp. 1235-1246.
8. Sitanshu Sekhar Sahu and Ganapati Panda (2011). Identification of Protein Coding Regions In DNA Sequence Using a Time-Frequency Filtering Approach. Journal of Genomics, Proteomics and Bioinformatics Vol. 9 (1-2), pp. 45-55.
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10. A Basu, M Mermillod (2011). Affective Priming in Visual-Field Superiority. Review of European Studies. Vol 3 (2), pp. 233-239.
11. Banerjee, R. and Dutta, S.C. (2011). Inelastic Seismic Behavior of Elevated Tanks Incorporating P-Δ Effect. The IUP Journal of Structural Engineering Vol. 4, pp. 7-19.
12. Mukhopadhyay, P., and Dutta, S. C. (2011). Strongest Cyclone of The New Millennium In The Bay of Bengal: Strategy o f Rvs For Non-Engineered Structures. Natural Hazards Review, In press.
13. Dutta, S. C. and Roy, R. (2011). Seismic Demand of Low-rise Multistory Systems with General Asymmetry. Journal of Engineering Mechanics, In press.
14. S. R. Samantaray, P. K. Dash (2011). Decision Tree based discrimination between inrush currents and internal faults in Power Transformer. International Journal of Electrical Power and Energy Systems, Elsevier

Science Vol. 33 (4), pp. 1043–1048.

15. I.Kamwa, S.R.Samantaray, G. Joos, (2011). "On the Accuracy vs Transparency Trade-off of Data-mining Models for Fast-response PMU-based Catastrophe Predictors". IEEE Transactions on Smart Grid. In press.
16. S.R.Samantaray, I.Kamwa, G. Joos (2011). Decision tree based fault detection and classification in distance relaying. International Journal on Engineering Intelligent Systems. In press.
17. S.R.Samantaray, Ankita Samui, B. Chttibabu (2011). "Time-Frequency Transform based Islanding Detection in Distributed Generation". IET Renewable Power Generation. In press.
18. Ankita Samui, S.R.Samantaray (2011). "Assessment of ROCPAD Relay for Islanding Detection in Distributed Generation". IEEE Transactions on Smartgrid Vol. 2 (2) pp. 391-398.
19. Dinakar, P (2011). "High reactive metakaolin for high strength and high performance concrete". Indian Concrete Journal Vol. 85 (4), pp. 28-34.
20. Yogesh Manjare and V. R. Pedireddi (2011). Co-crystals of 1,3-Adamantanedicarboxylic Acid with N-oxide and Aza compounds. Crystal Growth and Design. DOI. ORG/10.1021/CG 200987Z.
21. A.K. Verma, R.R. Dash, P.Bhunia (2011). A Review on Chemical Coagulation/ Flocculation Technologies for Removal of Colour from Textile Wastewaters. Journal of Environmental Management DOI: 10.1016/ j.jenvman. 2011.09.012.
22. Sahoo, D. (2011). "Relevance of β and σ Convergence: An Empirical Study of Indian Federation" The International Journal Vol. 01 (4) pp. 148-161.
23. Sahoo, D (2011). "Performance of the Indian Economy and the Global Financial Crisis" Research Journal of Social Sciences & Management Vol. 01 (5), pp. 81-96.
24. S.K.Mund (2011). Social Injustice and Suffering'. The Book Review, Spl. Issue on Progressive Literature Movement Vol. 35 (4), pp. 33-34.
25. A.K. Verma, R.R. Dash, P.Bhunia (2011). A Review on Chemical Coagulation/ Flocculation Technologies for Removal of Colour from Textile Wastewaters. Journal of Environmental Management. In press.
26. Triranjita Srivastava, Ritwick Das and Rajan Jha (2011). "Highly Accurate and Sensitive Surface Plasmon Resonance Sensor based on Channel Photonic Crystal Waveguides". Sensors and Actuators B, Vol. 157 (1), pp. 246-252.

### Book/Book Chapters

Amrita Satapathy, Shifting Images: England in Indian Writing in English, Lambert Academic Publishing, Germany, June 2011, ISBN 978-3-8443-3041-0

Punyashree Panda, Contemporary Native Fiction of the U.S and Canada: A Postcolonial study, Bauu press, Boulder, Colorado, USA, 2011.ISBN 13: 978-0-9820467-9-1

## Awards

Professor V.R. Pedireddi of School of Basic Science wins the Chemical Research Society of India (CRSI) Bronze Medal for the year 2011-2012

## New Avenues

### New Faculty Members joined

**Dr. Arun Ghosh** joined the School of Electrical Sciences in the month of April 2011. His research areas include Decoupling Control, Robust Control, Periodic feedback Control.

**Dr. Subhransu Ranjan Samantaray** joined the School of Electrical Sciences in the month of April, 2011. His research areas include Intelligent protection to transmission systems including FACTs, Microgrids with Distributed Generation and Dynamic security assessment in large power network.

**Dr. Neti V. L. N. Murty** joined the School of Electrical Sciences in the month of May 2011. His research areas include Semiconductor material & Device characterization, Wide Bandgap Semiconductor Devices, MMICs.

### New staff joined

**Mr Manas Kumar Behera** joined as Assistant Registrar on 10th August 2011.

## Showcase

CAD/CAM/CAE Laboratory

The CAD Lab of the institute was established under the School of Mechanical Sciences with a vision of infusing the art of creative and critical thinking among the students. This lab aims at harnessing the innovative skills in all stages of product realization in a digitally integrated environment. It provides all the tools and techniques to have hands-on experience in concept design, product simulation, functional analysis and prototype development. This facility caters to the needs of all the undergraduate and postgraduate students, research scholars and faculty members of the School. The CAD Lab has a total of 30 graphic-intensive 64-bit workstations (HP XW9400 with NVIDIA Quadro FX 3800) which are connected to a high-end sixteen blade Linux server through switched networking. This Server runs in an uninterrupted mode on a 24/7 three-phase DG back-up system. All the workstations are internetworked with LAN and following the active directory architecture. Additionally there is FTP and network drive architecture locally for a smoother data exchange and sharing purpose for

the user's convenience. The CAD Lab server is loaded with full-featured PBS Pro workload management and job scheduling system with capabilities that cover the entire Grid computing space. This server is hosting license managers for various applications like ANSYS and PBS Pro. One workstation is loaded with Microsoft Windows 2008 server standard edition to work as a Domain Controller with about 100 user accounts for students, research scholars, faculty members and guests. Besides, the lab has one more high-end workstations loaded with Microsoft Windows 2008 server standard edition and SQL Database for managing the database of CATIA, DELMIA and ENOVIA Software. The lab has also procured software like MD FEA Bundle, MD Motion Bundle, BRG Life Mod, VI Grade Rail, SolidWorks, Altair Hyperworks to cater to all the design and analysis needs of the students. The Rapid Prototyping source at the institute is a Fused Deposition Modeling (FDM) based RP system (Stratasys: FORTUS 400) located in the APDL lab of the School of Mechanical Sciences which can be accessed directly from the CAD lab. The CAD lab is also equipped with a High Definition Plotter (Canon-IPF8000s) which can produce high resolution CAD drawings of all sizes, ranging from A4 to A0. There is also a High Definition Scanner from (Contex HD4250) which has the ability to scan any sheet from A4 to A0 size range. The Laboratory is kept open 24x7 for the benefit of the users. Uninterrupted internet facility is also available in the laboratory for the better use of the software by the high-end users.

# Scribbles

## I DREAM OF A NEW HORIZON

**Ms Nibedita Patnaik**
(Junior Superintendent)

On a rain drenched early morning, with a cup of tea in my hand, I was preparing myself to start my morning chores, before getting ready for the office. Suddenly, the electricity went out, and I remembered, I had forgotten to run the pump to refill the over-head tank. Now, with no water, no electricity in my house, how could I finish my chores? Now a days we are so habituated to electricity that without it we cannot even think of living a moment. In an anguished mood I sat on my sofa. I felt very helpless. It was still raining. Suddenly, a thought struck me we face these problems owing to our dependence on electricity.

Not very long ago, we used to fill the tank of our cars at a cost of just one thousand rupees. Now, it is unimaginable. With the same amount we can have, at best, half a tank of petrol. Scarcity of natural resources and ever escalating price index, are problems which add on incessantly to interrupt our daily lives. Due to too much dependence on a particular source of energy, we are least bothered about its paucity, and forget that it will be lost in no time.

We must look beyond the obvious and find a new horizon of hope, a sustainable alternative. Nature is a storehouse of abundant sources of energy, which are non-perishable, renewable and everlasting. For example, 'Solar Energy'. By using it, we can conserve the conventional forms of energy. Please give it a thought if we could preserve vast sources of energy in a huge amount in a microchip or a similar thing by using our ultra-modern scientific techniques…. ! I can vision a pollution free environment with lots of greenery everywhere, with shiny days and brightest nights, with lots of glaze, glittering, and colourful lights, without any apprehension of powercuts or failures.

My reverie ended and I woke up in a jerk with the very basic question: "HOW?" But then, a smile of re-assurance crept onto my lips. I need not worry so much about the future, when so many budding talents are roaming all around me! I am working in such an institution, where there are so many shining students, from across the country, are studying. Surely, they must have a concrete thought and plan for the same. They will certainly work on it, i.e. how to make available this common alternative source of natural energy for each and every person, at the most affordable price and condition, for the betterment of socio-economic status of the people. It should be their promise, and our pride, for the future generations to come. Yes, they will certainly achieve success in their missions. Just then my internal deliberation came to an abrupt end with my son calling, "Mama, will you not go to office today?" "Yes, yes, I have to go", I replied. By then, the electricity had come back. Hurriedly, I got ready for my office. That day, I was a little late to my office. But, I resumed my work with a light-heart, by imagining that a new hope was lurking somewhere in the horizon…not far away.

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