



# ANNUAL REPORT 10- 11

**BIRLA INSTITUTE OF TECHNOLOGY**  
(Deemed University)

Mesra, Ranchi - 835 215, Jharkhand, India



## INSTITUTE PRAYER

### प्रार्थना

यं शैवाः समुपासते शिव इति ब्रह्मेति , वेदान्तिनो  
बौद्धाः बुद्ध इति प्रमाण पटवः कर्तेति नैयायिकाः ।  
अर्हन् नित्यथ जैन शासनताः कर्मेति मीमांसकाः  
सोऽयं नो विदधातु वाञ्छित फलं त्रैलोक्य नाथो हरिः ॥

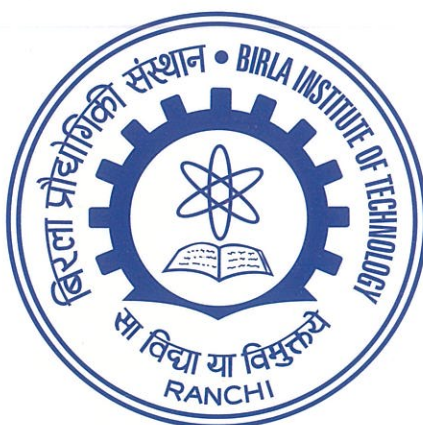
"May the Lord of the Universe, the remover of evil, whom devotees of Shiva worship as Shiva, the Vedantins as Brahman, the Buddhists as Buddha, the followers of the Nyaya philosophy who are clever in logic as Agent, those devoted to the Jaina doctrines as Arhat, the ritualists of the Mimamsa School as Karma – grant us all our hearty desire."

हे जग त्राता, विश्व विधाता, हे सुख शांति निकेतन हे ।  
प्रेम के सिन्धु, दीन के बन्धु, दुःख दरिद्र विनाशन हे ।  
नित्य अखण्ड अनन्त अनादि, पूरन ब्रह्म सनातन हे ।  
जगआश्रय जगपति जगवन्दन, अनुपम अलख निरंजन हे ।  
प्राण सखा त्रिभुवन प्रतिपालक, जीवन के अवलम्बन हे ।

You are the saviour and the creator of the Universe, the abode of peace and happiness, the ocean of love, the friend of the helpless, the reliever of sorrows and afflictions. You are the external, the indivisible and the infinite. You are the complete universe and the prime Being. You are the shelter, the lord and worshipped of world. You are unparalleled, unseen and blissful. You are friend of the living, the preserver of the universe and the support of our life.



## THE INSTITUTE EMBLEM



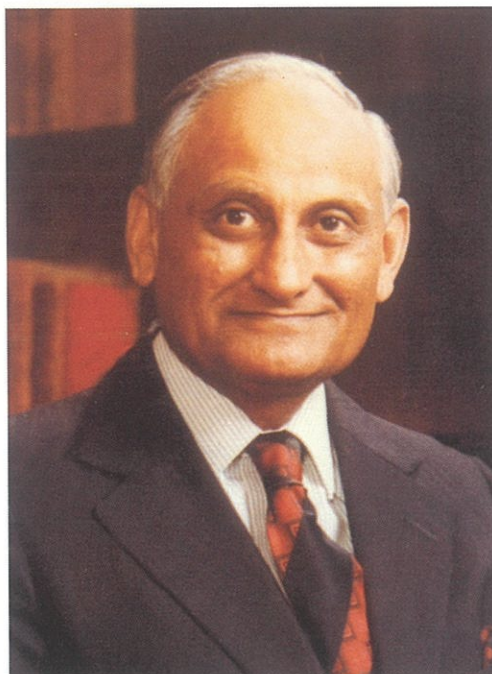
The Institute Emblem elucidates that Truth (Symbolized by the Star) can be realized only by Education through learning resources (Symbolized by the Book). The six wings of the Star represent a synthesis of Architecture, Engineering, Humanities, Management, Pharmacy and Science & Technology.

### **The Motto is –**

“Only Education liberates one from Ignorance and leads to the attainment of Truth”



**Shri B. M. Birla**  
Founder of the Institute



**Shri G. P. Birla**  
Former Chairman of the Board of Governors

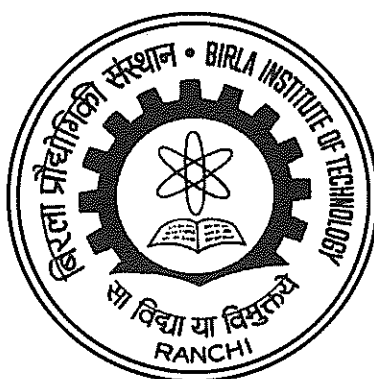




**Shri C. K. Birla**  
Chairman of the Board of Governors

# **ANNUAL REPORT**

**2010-11**



**BIRLA INSTITUTE OF TECHNOLOGY**

**(DEEMED UNIVERSITY)**

**MESRA, RANCHI, JHARKHAND  
INDIA**



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## THE VICE CHANCELLOR'S REPORT

Birla Institute of Technology, Mesra, Ranchi founded by the industrialist and philanthropist Late Shri B.M. Birla in 1955, attained the status of a Deemed University as early as in 1986. The rich legacy of the founder was carried forward by Late Shri. G P Birla. Under the dynamic leadership of the Chairman, Board of Governors, Shri C K Birla, the Institute renews its commitment of providing high quality education in diverse domains.

The Institute, in conformity with the vision of its distinguished founder has grown from strength to strength and has indeed spread its wings both in terms of the number of programmes as well as the geographical spread. The Institute has been fortunate to have blessings and support from our present Chancellor, His Excellency Hon'ble Dr Syed Ahmed, the Governor of Jharkhand and former Chancellors as well.

BIT, by virtue of the quality of its academic programmes, has consistently been ranked amongst the leading technical Institutes in the country. The total faculty strength of the institute at present stands at 660 and students' strength above 13,000 including those at the extension centers both in India and abroad. Academic programmes are offered in as many as 22 academic disciplines.

The institute has initiated many schemes to assure quality education to the students, career development of faculty members, progression of students towards higher education and generating career opportunities through the campus placement programme in reputed organizations across the globe. The Institute is working dedicatedly towards the vision of producing quality technical graduates, competent teachers, scientists and leaders in academics, research, industry and administration under the guidance and dynamic leadership of its Chairman.

The multi dimensional activities of the Institute during the year 2010-11 are as follows:

### 1.1 ACADEMIC ACHIEVEMENTS

#### ***R&D, PUBLICATIONS AND PATENTS***

The high level of research conducted by its Faculty members, Scientific Officers and Research Scholars has led to recognition by the State and National/International agencies like UGC, CSIR, DST, DAE, BRNS, ISRO, DRDO, ARDB, DBT, AICTE, NAMPET, C-DAC, ICAR, Govt. of Jharkhand, BMBF etc. in the form of sponsored projects and consultancies.

Some key ongoing projects of the institute are the following :

- Investigation of Flow Field Interaction around Protrusions at Supersonic speeds, ISRO (RESPOND)
- Measurement of Unsteady Pressures in the Region of Body-Fence Junction at Supersonic Speed Ministry of Defence DRDL
- Development of Cryo - Hybrid Rocket Propulsion, UGC (SAP)
- Propellant Technology and Combustion Facility, DST (FIST)
- Investigation of Flow Field around Double Delta Wing at Subsonic Speed, CSIR, New Delhi
- Axial Force Measurement Cone with Spike at Supersonic Speed, DRDL, Ministry of Defence
- Augmentation of Supersonic Tunnel AR&DB Ministry of Defence

- Glacial Retreat and Mass Balance studies in Zaskar Valley, J&K Himalayas, SAC. Phase I of this project is already completed and Phase II is in progress.
- ALOS-RA: Evaluation of Polarimetric, Interferometric and Differential Interferometric Techniques for subsurface features of parts of Desertic Rajasthan - Space Applications Centre.
- ALOS-RA: Evaluation of Polarimetric, Interferometric and Differential Interferometric Techniques for vegetation and land subsidence study - Space Applications Centre, (ISRO), Dept. of Space, Govt. of India.
- Entire wasteland mapping and 5 Cities National Urban Mapping Mission (NUIS), State of Bihar has been accomplished by BIT.

A Centre of Excellence in Climatology is currently being established by the Department of Mathematics, BIT. Another such Centre is proposed in the field of Disaster Management, Climate Change & Sustainable Livelihood.

The Institute's research achievements are reflected by the following statistics for the current academic session:

Publications in International Journals	:	451
Publication in International Proceedings	:	145
Publication in National Journals	:	78
Publication in National Proceedings	:	141
Project Granted	:	53
Ongoing R&D Projects	:	124
Project Completed	:	19
Patent Granted	:	1
Patent Filed	:	1
Books Published	:	28

### **Research Scholars Activity**

The first Research Scholars' Day was held on 26th & 27th, March' 2011, at BIT, Mesra and some of its extension centres like BIT Extension centre, Patna and BIT Extension centre, Noida to motivate the research scholars to show case their research works. The research scholars across all the departments shared their Research work through oral & poster presentations. It has been decided to make the Research Scholar's Day an Annual event.

### **TEQIP (Technical Education Quality Improvement Programme)**

Birla Institute of Technology, Mesra, Ranchi has been declared as eligible in Fifth National Steering Committee (NSC) meeting held on 29th June 2011 at MHRD, New Delhi on Technical Education Quality Improvement Programme (TEQIP) Phase-II for signing of MoU under sub-component 1.2

Under sub-component 1.2 the Institute will receive Rs. 12.5 crore for Scaling-up Post Graduate Education and demand driven Research & Development and Innovation. The Project is expected to be completed by 2014.



## 1.2 INFRASTRUCTURE DEVELOPMENT

Keeping in line with the expansion of its academic programmes, the Institute continues its efforts to consolidate academic and infrastructural support in the form of equipment, learning resources and space. A few of them are as follows:

- Department of space engineering and Rocketry upgraded and renovated liquid test facilities and has augmented its supersonic wind tunnel.
- Department of Pharmaceutical Science upgraded its labs through addition of value added equipments like the Operon Lyophilizer, Agilent Preparative HPLC, Buchi Rotary Evaporator, Rectangular Maze, Stanford Precision Melting Point apparatus and Flex x Molecular Modeling Software.
- Department of Applied Physics has added Electro-ceramic laboratory, high energy ball milling unit for synthesis of nano particles, nano device laboratory, plasma and device characterization unit like DSO, function generator and Keithely IV measurement system.
- Department of Applied Chemistry has developed state of the art Synthesis lab for Postgraduate & Research Students.
- A language lab has been established at the BIT Patna Centre for improving the communication skills of the students.
- Department of Mechanical Engineering has installed an Acoustic Meter.

## 1.3 NEW PROGRAMMES

The University has started the following new programmes:

- M. Tech (Information security) in the department of IT
- M. Pharm in Quality assurance and drug regulatory affairs in collaboration with LCRA, Bangalore
- M. Tech in Nano Science and Nanotechnology
- M. Tech. In Biotechnology
- BIT Jaipur centre started B.E. in Electrical & Electronics Engineering
- M. Tech. Programme in Energy Technology.
- 5 Year Integrated MSc in Applied Physics
- 5 Year Integrated MSc in Applied Chemistry
- 5 Year Integrated MSc in Applied Mathematics
- 5 Year Integrated MBA

## 1.4 RESEARCH COLLABORATIONS

The University has always strived to establish research collaborations with leading Institutes and Universities both at the National and International level through sustained efforts of its faculty members.

1. Department of Space Engineering & Rocketry has initiated collaboration with R&D Laboratories VSSC-ISRO, DRDL, DRDO, Research Centre Imarat, High Energy Materials Research Laboratory (HEMRL), Liquid Propulsion Systems centre (LPSC), Aeronautical Development (ADA) and Hindustan Aeronautics Limited (HAL). It has been recognized as a Centre for Training of the Scientists from DRDO and ISRO.

2. Department of Applied Physics, BIT, Mesra has established research collaborations with the University of Duisburg, University of Luebeck Germany, University of Amsterdam, International Centre for Theoretical Physics (ICTP), Italy, University of New South Wales, Institute of High Pressure Physics of Russian Academy of Sciences, Troitsk, Moscow, Department of Physics, University of Padova, Italy, Indira Gandhi Centre for Atomic Research Kalpakkam, Department of Material Science and Engineering, Korea University, Seoul, National Taipei University of Technology, Taiwan, University of Technology of Mara, Malaysia and University of Michigan, USA.
3. Department of Pharmaceutical Sciences has collaborated with the University of Lubeck, Germany to work in the area of antiviral drug discovery. The process was initiated in October 2010.
4. Prof. S. S. Hassan, Mathematics Department, University of Bahrain, Kingdom of Bahrain and Dr. A. S. Majumdar, S. N. Bose National Centre, Kolkata.
5. Dept. of Applied Chemistry established Research Collaboration with Indira Gandhi Centre for Atomic Research, Kalpakkam, India, ICMR Institute, Virus Unit, Kolkata, IIT Guwahati, Assam & NCCS, Pune.
6. Department of Mechanical Engineering has been identified by National Program for Materials and Smart Structures (NPMASS), an initiative by GOI, to establish a Micro Electro Mechanical Systems (MEMS) Design Centre.

#### **1.5 VISITS TO UNIVERSITIES/INSTITUTES/ RESEARCH LABORATORIES/ INDUSTRIES FOR CONFERENCE, WORKSHOPS ETC. IN INDIA & ABROAD**

1. Prof. S K Ghorai of the Dept. of ECE presented a paper in EEE Sensor 2010 in Hawali, USA during 1-5th November, 2010
2. Dr. Sanjay Kumar of the Dept. of ECE presented a tutorial and was also a panelist in International Conference ISABEL in Rome Italy held during 4-10 November, 2010
3. Dr. R. Bandopadhyaya and Dr. P. Shukla of the Dept. of Biotechnology have been deputed as team members for the 5th Southern Ocean Expedition, 2011 held from January to March 2011.
4. Prof. Gopal Pathak of the Department of Civil Engineering participated and presented a paper at 26th Annual International Conference on Contaminated Soils, Sediments, Water and Energy, held at University of Massachusetts AMHERST, USA during 18th - 21st October, 2010. He has also been appointed a member of the Scientific Advisory Board for 21st International Conference on contaminated Soils, Sediments, Water and Air, to be held at San Diego, California during 14th - 17th March, 2011.
5. Dr. A K Sen of the Department of Polymer Engineering delivered lecture at short term courses on Alternative engineering Materials & fuel (09-MAMF-01) organized at IRIMEE 8-9th March 2010 on the topic "Nanotechnology in Composites in relation to Railway applications".
6. Dr. P. K. Barhai, Dean Collaborative Research Programmes, attended the Academic Advisory Council meeting of Centre for TeleIn Frastuktur (CTIF), Aalborg University, Aalborg, Denmark on June 2, 2010. Prof. Barhai also chaired the Second Session at the Joint CTIF Workshop on "Green Energy" with focus on "Cognitive Networks and Spectrum Management" held during May 31 - June 1, 2010. Dr. Barhai visited the University of Duisburg under DST-BMBF Indo-German Bilateral Cooperation in Science & Technology. He also visited University of Luebeck Germany for discussion



on research collaboration in the areas of Pharmaceutical Science and Medical Physics during Feb 10-11, 2010. He further visited the University of Amsterdam, Amsterdam for discussion on Research collaboration in the areas of Nanotechnology during Feb 08-09, 2010.

7. Dr. S. Konar, Department of Applied Physics visited International Center for Theoretical Physics (ICTP), Italy, as a Senior Associate during May, 2010.
8. Dr. B. N. Sinha, Professor at the Dept. of Pharmaceutical Sciences, attended the 9th International Conference on Antivirals for Neglected and Emerging Viruses at Univ. of Lubeck, Germany during October 10-15, 2010 and delivered an invited talk. He also visited the Institute of Pharmacy at University of Bonn, Germany to deliver an Interactive lecture on Research areas of mutual interest.
9. Mr. D. Biyani of the Dept. of Pharmaceutical Sciences attended National Seminar on Nanotechnology as Resource Person at Agnihotri College of Pharmacy, Wardha on 7th June 2010.
10. Mr. J. Venkatesan of the Dept. of Pharmaceutical Sciences attended and presented a paper at 9th International Conference on Antivirals for Neglected and Emerging Viruses at Univ. of Lubeck, Germany during October 10-15, 2010. He along with Mr. Arijit Basu attended the Conference cum Workshop on Practical Applications of Modern Tools in Organic Synthesis and Purification held at IICT, Hyderabad during November 25-29, 2010
11. Prof. SP Bhatnagar, Prof. D. Sasmal and Prof. BN Sinha and Dr. R N Gupta of Pharmaceutical Sciences attended IPA Convention at Chennai during March 12-14, 2010 to receive Special Recognition Award for their IPA Jharkhand State Branch.
12. Dr. S. Medhekar delivered a Talk in National Seminar on Photonics and Materials (NASPAM) at ISM Dhanbad during 25-27 March 2010.

## **2. CAMPUS PLACEMENTS**

The efforts placed towards teaching and training find their true reflection in the acceptance by the Industry. BIT has a good track record of campus placements. This year was even better. A total of 1808 offers have been generated so far through the campus visit of 107 premier organizations representing all sectors of the Industry. This number is the highest ever and reflects well on the quality of the students from Mesra and all the centres as well as the effort towards their preparation, training and nurturing of relationships by the Training & Placement Division.

## **3. VISIT OF NBA, UGC TEAM AND OTHER EMINENT PERSONALITIES**

1. Dr. B. C Majumdar, Chairman, NBA visited the Institute on Dec 01, 2010
2. Dr. R. Krishnan, Dean, Indian Institute of Space Science and Technology, Trivandrum, delivered a talk at the Department of Computer Science & Engineering on 'High Resolution Image Analysis' on 20th December 2010.
3. Prof. Michael Greenspan, Head of the Department of Electrical and Computer Engineering at Queen's University, Canada. Visited the institute on 01-02-2011 Prof, Michael Greenspan, also presented a seminar on 'Computer Vision and Robotics'.
4. Dr. Swapan Datta, DDG (CS), ICAR, New Delhi visited the Department of Biotechnology, on 9th October 2010.
5. Dr. Lalji Singh, Bhatnagar Fellow and Former Director, CCMB Hyderabad visited the Department of

Biotechnology on the 23rd December 2010.

6. The Pharmaceutical Council of India (PCI) experts visited the department of Pharmaceutical Science on 15th January 2010.
7. Prof. S.L. Nasa, Ex Professor, DIPSAR, New Delhi and President, IPA and IHPA delivered a lecture on "Development of Hospital Pharmacy" on 19th July 2010.
8. Dr. A K Dorle, Retired Prof. Emeritus, Nagpur University delivered a lecture on "Death-A friend" on December 2010.
9. Prof. Sibu Chakroborty, from Pharma Formulations Inc., New York, NY 10075, USA delivered a lecture on "So, you want to open a Biotech Company?" on 2nd February 2011.
10. Dr. S. Kailas, Director, Physics Group and Dr. A.K. Das, Head, L&P T Division, (BARC), Mumbai visited the Department of Physics,
11. Dr. A. Bhattacharya, Former Director, M. P. Birla Planetarium, Dr. B. B. Bhattacharya, Dist Professor, SNBNC and former director ISM, Kolkata and Dr. P Ghosh, Associate Professor, Indian Association for Cultivation of Sciences, (IACS), Kolkata visited the Institute on occasion of the DST Inspire Programme.
12. Renowned Space Scientist Dr. Surendra Pal, Senior Advisor – ISRO and Professor Satish Dhawan Chair, visited BIT Jaipur Campus on September 15, 2010. He interacted with students and faculty and suggested some important area of technology innovation and research in field of communication technology.

#### **4. AWARD/ DISTINCTION/ FELLOWSHIP/ MEMBERSHIP/ HONORS RECEIVED**

I take this opportunity to highlight some of the achievements of our faculty members and students.

- Dr. A K Chatterjee has been nominated Chairman, Aerospace Engineering Division Board, The Institution of Engineers (India). He has also been nominated Chairman, Bihar & Jharkhand Section, Indian Society for Technical Education and Reviewer for the Indian Journal of Technical Education.
- Dr. J. K Prasad has been elected Member, Executive Committee, National Society of Fluid Mechanics and Fluid Power. He has been nominated Member of Executive Committee, National Wind Tunnel Society of India and was also appointed Reviewer for AIAA Journal.
- Prof. P. K. Barhai, Dean Collaborative Research Programmes is continuing as President of Plasma Science Society of India . He is also Member of the Centre for TeleIn Frastuktur (CTIF), Denmark.
- Dr. Ashok Misra has been appointed Reviewer for the International Journal: "Polymer and Polymer Composites"
- Dr. N. Nayak, Principal Scientific Officer & Adjunct Faculty, was Visiting Professor at the S. N. Bose National Centre, Kolkata.
- Dr. S. Konar has been selected as a Senior Associate of International Center for Theoretical Physics (ICTP), Italy (2006-2012).
- Dr. S. K. Mahapatra acted as Coordinator, DST INSPIRE CAMP held at BIT, Mesra sponsored by DST, New Delhi (Dec. 21-24, 2010).
- Dr. I. Banerjee acted as the Director, Nurturance programme for NTS awardees at BIT, Mesra

sponsored by NCERT, New Delhi (Feb. 1-5, 2011)

- Dr. R. K. Choubey has been awarded a Post Doctoral fellowship at National Taiwan University, Taipei, Taiwan by National Science Council of Taiwan for the duration 01.06.2010 – 31.05.2011.
- Dr. Deepshikha, Department of Applied Chemistry received the Young Scientist Award under DST SERC Fast Track Scheme.
- Dr. A. Sharon received the International Young Scientist Travel Grant Award from DST, Delhi to deliver oral lecture in International Conference, Busan, South Korea. July 31 – Aug 03 2010.
- Dr. Bimal Kumar Mishra has been appointed as Editor-in-chief of International journal of Mathematical Modeling, Simulation and Applications.
- Dr. S. Chakraborty has been appointed as an Associate Editor of Ninad- (Journal of ITC Sangeet Research Academy).
- Dr. B. K. Singh and Dr. Vinay Sharma, Department of Production Engineering have become Fellow of Institution of Engineers India.
- Mr. Ritesh Kumar Keshri, Asst Professor, has been selected for Erasmus Mundus Fellowship in the year of 2010.
- Department of Remote Sensing & Geoinformatics of BIT Mesra is selected for interpretation of Chandrayaan-I data by SAC ISRO and PRL Ahmadabad along with IIT Bombay and IIT Roorkee in the country. Experience gained in this mission will be used in future CHANDRAYAAN-II and MARS mission.
- Dr. N. Patel has been awarded Visiting scholarship by University of Nova, Lisbon, Portugal during September – December, 2010
- The Department of Pharmaceutical Science was awarded 5 UGC BSR Fellowships in January 2011. The Department was also awarded three CSIR Senior Research Fellowships in February 2011.
- Ms. Neha Hura, a student of Pharmaceutical Science, was awarded IDMA G.P. Nair award by the Indian Drug Manufacturer's Association for 2010 .
- Dr. R. N. Gupta of the Department of Pharmaceutical Science has been elected the Vice President of Indian Pharmaceutical Association, Head Quarters, Mumbai. He is also nominated as a member in Pharmacy Council of India Bridge Course Group.
- Dr. U. C. Sahoo of the Department of Civil Engineering, is Coordinator, STA for technical approval of projects for construction of rural roads under Pradhan Mantri Gram Sadak Yojna (PMGSY) for State of Jharkhand, India
- BIT Jaipur faculty member Anand Kumar Srivastava was awarded the PSSI Best Paper award in the 25th National Symposium on Plasma Science and Technology (Plasma-2010) held at IASST, Guwahati during 8-11 Dec, 2010. Other faculty members Jalaj Jain, Gheesa Lal Vyas, Ravindra Kumar, R. Manchanda and Ram Prakash received best poster paper award.
- Dr. Dheeraj Bhardwaj, BIT Jaipur faculty member won the Second Prize for poster presentation of National conference on "Recent Advances in Modern Communication Systems and Nanotechnology NCMCN-2011" organized by Centre for Converging Technologies, University of Rajasthan, Jaipur January, 06th to 08th 2011



- BIT Patna has been identified for Central Assistance under TEQIP (Phase-II) this year.
- Dr. A Jain selected as Co Editor of Journal on Computing Global Science and Technology forum Singapore, 2nd International Conference on Information Technology Security Thailand. She has also been appointed as a reviewer of ACTA Press Journal, Central European Journal on Computing, ICCCS-2011, NIT, Rourkela.
- Dr G P Singh & Dr I Banerjee from the department of Applied Physics received the BOYSCAST Fellowship from DST, New Delhi.

## **5. SEMINAR / SYMPOSIA / SHORT TERM COURSES ORGANIZED**

The Institute and its Extension / International Centres organized as many as 38 Seminars / Symposia / Workshops:

1. The 51st Annual Conference of Association of Microbiologists of India (AMI) 2010 was held at B.I.T Mesra this year (14th – 17th December 2010), which was organized by Department of Biotechnology.
2. One Day Workshop on Plasma Nitriding organized by the Department of Applied Physics was held on 20th August 2010.
3. Dept. of Applied Chemistry organized invited lecture of Dr. P. R. Maulik, Central Drug Research Institute, Lucknow, Dr. D. Chattopadhyay, ICMR Virus Unit, Kolkata, Dr. R. Bandichhor, Dr. Reddy's Lab, Hyderabad
4. Dept. of Hotel Management and Catering Technology in association with department of Tourism, Jharkhand organized a seminar "Tourism & Biodiversity" on the occasion of World Tourism Day held on 27th September 2010.
5. Mission10X Faculty Development Workshop was conducted by Wipro at the BIT Mesra Campus where faculty members from two other Institutions also participated. This program is oriented towards building continuous professional development of teachers of engineering education. It is primarily designed to shift the paradigm from teaching to learning and transform the learning cultures in the institutions of engineering education. This was facilitated by the Training & Placement Division.
6. The Department of Management celebrated the 175th Birth Anniversary of Shri Ramakrishna and 150th Birth Anniversary of Swami Vivekananda on 9th February, 2011.
7. The department of Computer Science and Engg and Information Technology has jointly organized a Symposium on "Computer Education: Needs and Expectations "on 19-20, Nov, 2010. Leading academicians and Industry representatives participated in this symposium.
8. The department of Information Technology facilitated training programme on "Ethical Hacking" during 11.2.2011 to 18.02.2011 for the students.
9. The department ECE is organizing a two day International Conference on Devices & Communications (ICDeCom-11) during February 24 – 25, 2011 with a theme on: "Research Directions in Wireless and Mobile Communications"
10. Department of Pharmaceutical Science, BIT hosted Pharmacon-2010 (Eastern Regional Conference of Indian Pharmacological Society), during April 9-10, 2010.

11. Department of Pharmaceutical Science conducted AICTE sponsored Staff Development Programme on Novel Drug Delivery System (May 11th - 25th 2010); QIP on Recent Advances in Safety Pharmacology (August 1 – 14, 2010) , QIP on Lead discovery Approaches from Natural and Synthetic Resources, (August 29 – 11 September, 2010) and QIP on Advances in Clinical Pharmacy, Need of the Hour, (November 29 –11th December 2010)
12. The Central Executive Council (CEC) meeting of Indian Pharmaceutical association was hosted by IPA Jharkhand State Branch at the Department of Pharmaceutical Sciences on 3rd to 4th October 2010. 14 CEC members from different parts of the country attended the meeting.
13. DST – INSPIRE CAMP on basic Science was organized during Dec. 21-24, 2010.
14. Department of applied Physics, organized two NCERT programs during March 22-26, 2010 and Feb 01-05 2011. The NCERT programme is an innovative national programme for the awardees of National Talent Search (studying in IX STD). The objective of this programme is to nurture and attract these young talents. The entire schedule of this programme is divided into popular level lectures, small experiments and scientific visits.
15. Three days Punjabi food festival “ Rang De Basanti” was held on 04 to 06 October’

## 6. STUDENT ACTIVITIES

1. A team of 58 students of the Department of Architecture participated in ZONASA meet held at IIT Kharagpur during September 2010. The Department emerged overall 1st amongst all colleges of Eastern India imparting architectural education.
2. Ms. Ishanie Niyogi, a 9th semester student of the Department won the First Prize of the prestigious international Berkeley Essay Competition -2010 held by the University of Berkeley, California, USA on the topic “ The story of a Prison Cell” It is worth mentioning that this is the second time in a row our Department has bagged this prize.
3. Young scientist Award to Vinit Sehgal for presenting a paper on ‘Development of a novel fly ash based zeolite for treatment of waste water’ under the supervision of Dr. Sumit Mishra and Dr. Gautam Sen, at 29th Convention of Indian Council of Chemists held during 19th to 21st Dec.2010, at Punjab University, Chandigarh
4. In the event of 34th National Games the entire HMCT students are actively participating in the Food & Housekeeping committee.
5. Ms. Susmita Sinha and Maharshi Bhattacharyya, students of the Department of Architecture secured all India 3rd position out of 450 students from different parts of India in the Archumen Championship trophy titled ‘Archumen and Bending Moment 2011’ organized by ETHOS and supported by Young Architects committee of The Institute of Architects.
6. Vrashank Jain of BE 6th Semester (CS) stood 2nd in a technical quiz organized in NIT, Allahabad sponsored by IBM.
7. Suresh Shrivastava of 6th Semester BE (CS) got his paper published in an International Journal of Computer Application.
8. Shahzor Khan 8th Semester BE (CS) and Pratyush Verma 6th Semester BE (CS) ranked 1381 and 1766 in round 2 of Google Code Jam 2010 among top 17% of all participants.

9. Many students of 6th Semester and 8th Semester BE (CS) are selected for Asia level on- site ACM International Collegiate Programming in Jan 2011.
10. P. Vishal (student of 8th Sem, EEE) was team member of the band that was Eastern Zone champions for the competition – “Aspire – Music to Money Challenge”, sponsored by ICICI Direct. They were selected as one of the top 5 bands of the country to perform live at the Zee Business studio.
11. Abhishek Sharma (student of 8th Sem, EEE) was funded by the UGC to perform student research at IISc Bangalore during May-July 2010.
12. Arpan Kumar Patra and Ankit Kumar (Students of 6th Sem, EEE) has secured 2nd position in all India competition on Research paper presentation at NIT, Rourkela on 30th January 2011. They secured an opportunity for funding & summer intern at IIM –A to accomplish the project work.
13. Utsav Raghuvanshi (student of 6th Sem, EEE) has secured 2nd position in Tech Quiz & 3rd position in Business Quiz, NIT Allahabad Gnosiomania 2011
14. Sumit Kumar & Saurabh Kesari (Students of 6th Sem, EEE) has secured 3rd position in short film making competition, Spring Fest 2011, IIT Kharagpur.
15. Dipanjan Saha, Band Member-Schism (Student of 6th Sem, EEE) has secured 1st place in ZEE aspire sponsored by ICICI Direct in zonal round held at XLRI, Jamshedpur.
16. Several UG and PG students have presented papers in International and National Conferences and seminars and won prizes.
17. Shalini Damani, Purva Waskale and Arpit Goyal, UG students won prize in Spring Fest 2011 in IIT Kharagpur.
18. Mr. Prakhar Goel (B. E. 2007 Batch) was one of the five youths of the world selected as Young Sustainability Champions at “The 3rd Amsterdam Global Conference on Sustainability and Transparency” held from May 26-28, 2010.
19. Vikas Kumar, Abhijit Badve, Saibal Das (M.Sc. Bioinformatics 2008 batch) contributed in paper published in International Journal of Applied Biology and Pharmaceutical Technology.
20. Abhijit Badve (M.Sc. Bioinformatics 2008 batch) and Krishna Kanhaiya (M.Sc. Bioinformatics 2009 batch) contributed in paper published in International Journal of Pharma and Bio Sciences.
21. R. Ramprasad (BE Biotechnology 2007 batch) contributed in paper published in Current Science.
22. Abhinav Mathur (BE Biotechnology 2006 batch) contributed in paper published in Journal of Molecular Modelling.
23. Devang Odedra and Medhavi Mallick (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Online Journal of Bioinformatics.
24. M. Sc. Bioinformatics (08) and B. E. Biotechnology students (08) participated in poster presentation in National Seminar on Applications of Biotechnology and development of Bihar, BIT Patna campus, Patna. March 22-24, 2010.
25. M. Sc. Bioinformatics Students participated in PHARMACON 2010, Dept of Pharmaceutical Sciences, BIT Mesra, Ranchi. April 9-10, 2010.
26. M. Sc. Bioinformatics and B. E. Biotechnology students participated in 2nd Indian Youth Science Congress- 2010, SRM University, Chennai and MSSRF, Chennai. June 26-28, 2010.

27. M. Sc. Bioinformatics Students participated in 3rd International Rice Congress- 2010, Hanoi, Vietnam from November 8-12, 2010.
28. B.E. Biotechnology students participated in National Conference of Plant Physiology on Physiological and Molecular Approaches for Crop Improvement under Changing Environment at B.H.U., Varanasi from November 25-27, 2010.
29. M. Tech. Biotechnology students (09) participated in poster presentation in the 51st AMI Annual Conference at Birla Institute of Technology, Mesra, Ranchi, 14-17, December, 2010
30. B. E. Biotechnology Students (18) participated in poster presentation in the 51st AMI Annual Conference at Birla Institute of Technology, Mesra, Ranchi, 14-17 December, 2010
31. B.E. Biotechnology students participated in National symposium on biotechnological perspectives of plants, microbes and their interactions. UGC SAP-(DRS Phase-1), Dept. of Botany, B. R. A. Bihar University, Muzaffarpur, Jan 15- 17, 2011.
32. Mr. Prem Chandra Pandey, M.Tech. Remote Sensing (Roll No MT/RS/1005/07) is awarded INSPIRE fellowship under AORC scheme by Department of Science and Technology, Government of India in Earth Science Stream in year 2010 to peruse doctoral research in Remote Sensing. He is also nominated for Commonwealth fellowship plan-2011 by Ministry of Human Resource and Development, Government of India for perusing doctoral programme in United Kingdom.
33. Mr. Vinit Sehgal (Roll No.BE/1263/09) : Awarded the Young Scientist Award for the Best Oral Presentation of his Paper in the Analytical and Environmental Chemistry Section in The 29th Annual Conference of the Indian Council of Chemists held at Punjab University, Chandigarh on 19th – 21st December, 2010.
34. Mr. Neeraj Kumar Sharma (BE/1119/08) made oral presentations of two Papers: "Water Resource Potential of Jharkhand State" and "Run-off Determination for Subarnarekha Basin" at the International Conference ICON-GSECCES 2010 held at IT BHU, Varanasi from 21-23 December, 2010
35. Mr. Soumik Mitra (Roll No.BE/1078/08) also made an oral presentation on his Paper "Correlation of Physical Properties of Coal Combustion Residues and their Potential Utilization Aspects" in the same Conference
36. Mr. Prithviraj Jain (BE/1251/08), Mr. Kumar Saurav (BE/1223/08), Mr. Abhishek Tulsian (BE/1208/08), Mr. Saurabh Sharma (BE/1453/08) and Mr. Nishant Gaurav (BE/1453/08) secured the 1st position in the event 'Fly-ash' in the Annual Technical Festival MEGALITH- 2011 at I. I. T., Kharagpur on January 15, '11 for their presentation on "Fly-Ash A Resource Material : improvement of soil properties using fly ash"
37. Mr. Kumar Saurav, Mr. Abhishek Tulsian and Mr. Nishant Gaurav secured 1st position also in the event 'Atlantis' in the above Technical Festival.
38. Mr. Prithvi Raj Jain and Mr. Saurabh Sharma presented a Paper "Discharge Estimation of Tidally Affected River using Artificial Neural Network" at the International Conference on Sustainable Water Resources and Climate Change Adaptation held at N. I. T., Durgapur from 17th to 19th February, 2011
39. BIT Jaipur center organized following students activities both technical (TechVibes) as well as cultural (Vibrations). Cavorts, a sports festival encouraged students towards participation in various sporting events.

40. A group of students from BIT Patna has been selected by NASA to participate in the International Lunabotics Competition 2011, to be held during May 23-28, 2011 at the Kennedy Space Centre, Florida.
41. BITOTSAV, the Annual Techno-Cultural Festival of BIT Mesra was organized this year 16th to 20th February 2011 with the usual gusto and fervor.

## **7. SPORTS**

- East Zone Inter-University Football Tournament (Men) 25-30 September 2010
- 19th Chetan Devraj Memorial East Zone Inter Technical Institute Cricket Tournament -22nd-26th Jan 2011
- 25th Annual Athletics meet 28th-30th Jan 2011
- All Inter Hostel tournaments for various games were organized successfully for the session 2010-11.

## **8. THE 21ST CONVOCATION OF THE INSTITUTE**

The 21st Convocation was held on 24th February, 2011. Dr. APJ Abdul Kalam, Hon'ble Former President of India graced the occasion.

His Excellency the Governor of Jharkhand and the Chancellor of the Institute, Shri M.O.H. Farook presided over the programme. In this convocation a total of 3366 students were awarded degree & diploma in various disciplines, out of which 88 students received Post matriculation 3 years diploma, 2371, graduate degree, 883 post graduate degree and 24 PhD degree.



## INTRODUCTION



Birla Institute of Technology, Mesra-Main Building

The Institute was established as an All India Institute of Technical Education by renowned philanthropist and visionary industrialist, Late Sri B. M. Birla in July 1955. Initially it was stated as an affiliated college of the erstwhile Bihar University and later in 1960 upon creation of new universities in the state, its affiliation was transferred to Ranchi University. In pursuance of the recommendation of the Education Commission, Government of India (1964 – 1966) and on the basis of the report of a joint Selection Committee of the UGC and AUDIT, in March 1972, the institute was granted the status of an 'Autonomous' College by making special provision in Bihar State University Act. The chancellor of the University of Bihar made the rules for its governance.

The achievement of the Institute in terms of research and excellent academic programme led to its attaining the status of a Deemed University in August 1986 under section 3 of the UGC Act 1956.

The Institute has constantly improved on its technical facilities as well as academic performance in order to keep pace with the fast changing technological scenario, thereby acquiring a pride of place amongst the institutions offering technical education in the country.



## ADMINISTRATION

BIT Mesra is a “Deemed University” under Sec. 3 of the UGC Act 1956. The Governor of Jharkhand is the Chancellor of the University. It functions under the overall supervision, direction and control of a high power Board of Governors, comprising representatives of the Ministry of Education, Government of India, UGC, State Government, AICTE, The Hindustan Charity Trust and the Institute Faculty. Shri C.K. Birla is the Chairman of the Board of Governors. Composition of the Board of Governors is given in Annexure – II.



Department of Pharmaceutical Science

The Finance Committee advises the Institute on financial matters. Building & Works Committee extends its advice to the Institute in all the matters related to building and construction. The composition of these committees is given in annexure – III and IV.



At the entrance of R & D Building

The Technical council decides the academic policy of the Institute. It approves the curriculum, courses and the examination results. It appoints committees like Regulation Committee for Under – Graduate and Post – Graduate Courses, Semester Programme Coordination Committee, Admission Committee, Scholarship Committee, and Students Welfare Committee etc. Departmental Board of Studies looks into specific academic matters arising from time to time. The teaching, training and research activities of various departments at the Institute are regularly reviewed. The Vice – Chancellor of the Institute is the Chairman of the

Technical Council. Members of the Technical Council have been listed in Annexure – V.

## INSTITUTE CAMPUS

The Institute is fully residential and extends over 780 acres. The main building of the Institute covers an area of 30,000 sq. mtrs. which accommodates the various research and training laboratories, administrative offices and lecture rooms.

The workshop annexure has covered area of 4,000 sq. mtrs. The laboratories and offices of the Department of Space Engineering & Rocketry are situated in a sub – Campus, about half a Kilometer away from the main building, for security reasons. As a part of continuing education programme, Part –Time courses in Engineering and Management are conducted in city at our BIT Lalpur Extension Center which was established in 1976.

The campus is self - contained having well – laid lawns, sports complex, protected water supply, shopping centre, dispensary, bank, ATMs, post-office and school.

<b>Institute Building</b>		<b>(Sq. Mtrs.)</b>
• Main building & Administration block	-	3700
• Class room & laboratory, Drawing halls, Staff room's etc	-	19300
• Library block	-	2600
• Mini – Auditorium	-	450
• Services & Circulation area	-	3950
• Space Engg.& Rocketry block (Including Explosive, Fuel cell & Cryogenic laboratory)	-	2490
• Workshop sheds, General stores, Garage/ Godown	-	4880
• Gymnasium	-	850
• Indoor Badminton Stadium	-	1000
• Animal House	-	400
• R & D Building	-	7200
• Multi – Purpose Halls	-	785
• Biotechnology Centre	-	3477
• Polymer Engineering	-	744
• Lecture Theatre – I	-	1143
• Lecture Theatre – II	-	1535
• Hotel Management Building	-	2835
• Pharmacy Building	-	3220
• Golden Jubilee Auditorium	-	3280
<b>Residential Complex</b>		
• Staff quarters in different categories	-	422
• Residential complex for supporting services (Guards, Dairy Shopkeepers, Washer man etc.)	-	116
<b>Hostel Accommodation</b>		
• Eleven Boy's Hostel	-	2552
• Four Girl's Hostel	-	338 Rooms (Double) & 196 Rooms (Single)
• Research Scholar Hostel	-	112 Rooms (Single)
<b>Others</b>		
• Consumer's co-operative stores	-	375 Sq. Mtrs.
• NCC Block	-	400 Sq. Mtrs.
• Rifle Firing Range	-	1 No.
• NCC Parade ground	-	1 No.
• Community Hall	-	1 No.
• Canteen	-	2 Nos.

## **GUEST ACCOMMODATION**

The Institute has two Guesthouses with 38 well-furnished rooms besides one VIP Guest house with 3 deluxe bedrooms to accommodate the Institute's Guests.

## **AUDITORIUM**

The Institute has two auditoriums. There is a small auditorium attached to the main building having seating capacity of about 500. Another one is Golden Jubilee auditorium, having seating capacity of approximately 3000, is used for convocation and other large scale functions of the Institute.

## **GAMES & SPORTS COMPLEX**

The Institute has Sports Complex which is spacious enough to arrange indoor and outdoor games having following facilities:

• Gymnasium including Multi – Gym	-	1
• Stadium for Track & Fields for Sports/ Athletics	-	1
• Cricket ground including net	-	2
• Football grounds	-	2
• Hockey grounds	-	2
• Basket Ball courts	-	4
• Volley Ball courts	-	6
• Tennis courts	-	6
• Badminton courts (three indoor & five outdoor)	-	8
• Kho – Kho ground	-	1
• Kabaddi ground	-	1

## **DISPENSARY – CUM – HEALTH CENTRE**

### **Facilities Available**

• O.P.D Services	-	8 A.M to 12 .00 Noon 4.00 P.M. to 8.00 P.M.
• Emergency Services	-	Round the clock
• Total No. Beds	-	12 (Male -8, Female – 4)
• X – ray		
• E. C.G		
• Oxygen Facility		
• Suction Machine Facility		
• Speciality Services		
• Pathological Test Facility		
• Medical Officers	-	05

• Pharmacists	-	03
• Dressers	-	03
• X – ray Technician	-	01
• Pathological Technician	-	01
• Staff Nurse	-	01
• Visiting Physician	-	05
• Lady Attendant	-	03
• Male Attendant	-	03
• Sweeper	-	01

### Special Services (Part – Time)

• Physiotherapist	-	10.00 A.M. to 12.00 Noon (Monday to Saturday)
• Dentist	-	8.00 A.M to 11.30 A.M., 4.00 P.M. to 7.00 P.M.
• Child Specialist	-	Every Tuesday, Thursday & Saturday of the week(2.00 P.M. to 4.00 P.M.)
• Homeopathic Physician	-	8.00 A.M to 11.30 A.M., 4.00 P.M. to 7.00 P.M.
• Skin Specialist	-	Wednesday and Saturday of the week 8.30 A.M. to 10.30 A.M.
• Eye Specialist	-	Every Sunday 10.00 A.M. to 12.00 Noon
• Gynaecologist	-	Wednesday and Saturday 4.00 P.M. to 6.00 P.M., Sunday 10.00 A.M. to 11.00 A.M.
• Anti Natal Clinic	-	During OPD Timing except Sunday and Institute's Holidays
• Ambulance Facilities	-	Round the Clock
• Pathological Lab Facility	-	8.00 A.M to 12.00 Noon & also during emergency (Institute has three ambulances for this purpose)
• Pathological Lab. facility	-	8.00 A.M. to 12.00 noon and also during emergency (Also samples are collected and sent to Dr. J. Sharan's Clinic / or any Path. Lab. As per patient's desire)
• Immunization	-	8.00 A.M to 12.00 Noon( Every Wednesday)

Besides this, Institute has dispensaries at University Polytechnic, BIT Extension Centre Lalpur for their staffs and students. A Rural Dispensary is functioning for villagers residing near BIT Mesra under Community Health Services Scheme of the Institute.



## **OTHER RELATED ACTIVITIES**

- Blood donation camp, Eye camp, Gynaecological camp are organized frequently.
- Pulse Polio immunization, T.B. eradication programme, Leprosy eradication programme, Blindness removal programme etc. are regularly organized under National Services Scheme.
- During emergency, patient is referred either to RIMS or to any private Nursing Home including APOLLO HOSPITAL depending upon the situation as per desire of the patient / Attendants of patients
- Permanent faculty and staff members are covered under Group Mediclaim Policy in case hospitalization.
- Community Health services are also carried out by organizing Medical camp in villages.

## **SHOPPING CENTRE**

A well-maintained Cooperative store serves the daily requirements of the campus of nearly 5,000 residents. Additional Shopping Complexes situated at strategic locations within the campus serve the sundry needs of the residents.

## **THE STUDENTS' HALLS OF RESIDENCE**

The Institute is completely residential and all the students are provided with rooms in one of the hostels or Halls of Residence. The campus has thirteen hostels for boys and four separate hostels for girls. All the hostels are spacious with beautiful lay out in the serene and pleasant campus. The front portion has well maintained lawns with flowerbeds, elegant bushes and strategically planted ornamental trees. The interior of the hostels includes spacious dining halls, common rooms, and reading rooms. Rooms located on both sides of the entrance. The rooms are constructed in a row with a wide veranda in all along the length with air gaps and balconies well set for common use.

The students are provided with a single – seats rooms furnished with steel cot, table chair and a built – in almirah. The girl students avail a shared furnished room which is quite spacious and airy. Each room has a cupboard, wardrobe and a sizeable rack. Indoor games like table tennis carom and chess etc. are available in the common rooms of each hostel. The reading room subscribes to a large no of magazines, periodicals and newspapers covering wide taste of reading of the residents. The entertainment hall, in each hostel, has also been provided with colour television set. Inter-hostel tournament in indoor and outer games quizzes, competitions and adventure trips are very attractive features of the hostel life.

The hostel night organized by the inmates is a memorable yearly event where students interact with the faculty members amidst culture and music programmes fun and frolic, in festive mood. The halls are tastefully decorated to marks the occasion.

Each hostel has an independent Mess, completely managed by the students through Mess committee members elected from the residents themselves. The committee looks after the billing under the supervision of the Superintendent/ Assistants Superintendents of the hostels

**STUDENT INTAKE:****COURSES & DEGREE PROGRAMMES:**

Currently the Institute is offering a variety of Programmes as detailed below

**MAIN CAMPUS**

Programme	Year of Introduction of the Courses	Duration of the Course	Intake Capacity
<b>Bachelor of Engineering</b>			
Electrical & Electronics Engineering	1955	4 Years	60
Mechanical Engineering	1955	4 Years	90
Civil Engineering	1957	4 Years	60
Electronics & Communication	1964	4 Years	120
Production Engineering	1964	4 Years	30
Computer Science	1983	4 Years	120
Polymer Engineering	1995	4 Years	30
Information Technology	2001	4 Years	60
Biotechnology	2002	4 Years	60
<b>Bachelor of Pharmacy</b>	1972	4 Years	60
<b>Bachelor of Architecture</b>	1993	5 Years	40
<b>Bachelor of Hotel Management &amp; Catering Technology</b>	2002	4 Years	60
<b>Bachelor of Food Processing Technology</b>	2009	3 Years	30
<b>Master of Engineering</b>			
Electrical & Electronics Specialization – 1. Control system 2. Power system 3. Power Electronics	1964	2Years	24
Mechanical Specialization 1. Heat Power Engineering 2. Design of Mech. Equipment	1964	2Years	12
Civil Specialization 1. Soil Mechanics 2. Structure & Foundation Engineering	1964	2Years	24
Electronics & Communication Specialization 1. Instrumentation 2. Microwave 3. Wireless Communication	1965	2Years	24

Space Engineering & Rocketry Specialization 1. Rocket Propulsion 2. Aerodynamics	1965	2Years	24
Computer Aided Design & Drafting Specialization 1. Comp. Aided Analysis & Design 2. Tribology	1999	2Years	18
Automated Manufacturing System	1996	2Years	25
Software Engineering	2000	2Years	15
Quality Engineering & Management	2002	2Years	25
<b>Master of Technology Programme</b>			
Remote Sensing	1997	2 Years	18
Fuel & Combustion	2002	2Years	25
Computer Science	1994	2Years	16
Scientific Computing	2002	2Years	16
New Material & Processing Technology	2002	2Years	18
Bio Technology	2010	2 Years	18
Energy Technology	2010	2 Years	18
Information Security	2010	2 Years	18
Nano Science and Nano Technology	2010	2 Years	18
Polymer Science and Technology	2010	2 Years	18
Transportation planning and Management	2010	2 Years	25
Environmental Science & Engineering	2002	2Years	18
<b>Master of Pharmacy Specialization</b> 1. Pharm. Chemistry 2. Pharmaceutics 3. Pharmacology 4. Pharmacognosy 5. Clinical Research 6. Quality Assurance and Regulatory Affairs	1983 1983 2004 2002 2010 2010	2 years	36 + 8(QIP)  18
<b>Master of Urban Planning</b>	2006	2Year	12
<b>Master of Science Programme</b>			
Biomedical Instrumentation	1992	2 Year	20
Information Science	1993	2Years	30
Bioinformatics	2006	2Years	30
Geo Informatics	2006	2Years	10
Applied Physics	2008	2 Years	

Applied Chemistry	2008	2 Years	
Applied Mathematics	2008	2 Years	
<b>Master of Business Administration</b> Specialization 1. Marketing 2. Finance 3. System 4. Human Resource Management	1980	2 Years	120
<b>Master of Computer Application</b>	1984	3 Years	60
<b>5 year Integrated Programmes</b>			
Integrated MSc Applied Physics Applied Chemistry Applied Mathematics	2011	5 years	

### CONTINUING EDUCATION (PART TIME) POST – GRADUATE PROGRAMME:

To enable working Engineers to update their technologies, the part – time Post – graduate Programme offers 3 levels

1. A certificate of Merit after Completing 6 units.
2. A diploma after completing 12 units.
3. Degree after completing 20 units.

### EXTENSION CENTRES

Course*	Allahabad	Jaipur	Lalpur	Kolkata	Noida	Patna	Deoghar
BE		80				300	270
BCA	100	80	200	90	80		
BBA	40	80	200	90	80		
BSc (A&M)		60			80		
MCA	45	45	105	45	60		
MBA		45	60		60		
MBA(PT)			30				
MCA(PT)			30				
MTech (CS), PT			30				
MSc (IT)			30				
MSc Bioinformatics				30			
Integrated MBA	60	60	200	60	60		

\* Courses are offered subject to availability of minimum number of candidates for the programme and approval of the department.

### DOCTOR OF PHILOSOPHY PROGRAMME:

The Institute offers Research Programmes leading to Ph. D. Degrees in all above disciplines.

**TOTAL NUMBER OF STUDENTS ENROLMENT (2010-11) :**

During the academic year 2010 – 2011, total of 10406 students were registered in various courses. The branch – wise enrolment is given below.

Sl.No.	Course	No. of Students
1.	Bachelor of Engineering	4251
2.	Bachelor of Architecture	171
3.	Bachelor of Pharmacy	186
4.	Bachelor of Hotel Management & Cat. Tech.	109
5.	Bachelor of Computer Application	1165
6.	Bachelor of Business Administration	1332
7.	Bachelor of Technology	50
8.	B. Sc. ( A & M)	0
9.	B. Sc. (I. T.)	0
10.	B. Sc. (M.L.T.)	72
11.	B. Com (E. Comm)	77
12.	Integrated Engineering	0
13.	Diploma in Technology	0
14.	Master of Business Administration	550
15.	Master of Business Administration - PT	97
16.	Executive( Master of Business Administration)	0
17.	Master of Computer Applications	1065
18.	Master of Pharmacy	130
19.	Master of Engineering	276
20.	Master of Technology	168
21.	M. Sc. ( Information Science)	13
22.	M. Sc. (Bio Medical Instrumentation)	30
23.	M. Sc. (IT)	45
24.	M. Sc. ( Bio-informatics )	30
25.	M. Sc. (Geo-Informatics)	30
26.	M.Sc. (Applied Physics)	14
27.	M.Sc. (Applied Chemistry)	21
28.	M.Sc. (Applied Mathematics)	08
29.	Inst. Of Engg.	0
30.	MUP	08



31.	PGPMI	0
32.	Non Formal Diploma	0
33.	Diploma in Engg.	0
34.	B.Sc. (MLT)	0
35.	B.E. (Marine)	0
36.	B.Sc. (N.Sc.)	0
37.	MBA(SLM)	0
38.	BAM	313
39.	MS((CR&P)	14
40.	M.Sc(A&D)	43
41.	Bio Tech.	114
42.	Food processing & Technology	24
	<b>Total</b>	<b>10406</b>

### ADMISSION DURING (2010-11)

In the academic year 2010-11, 3316 fresh students were admitted in various disciplines. The branch – wise break-up is given below.

Sl.No.	Course	Total
1.	B. E.	1125
2.	B. Pharm.	53
3.	B. Architecture	40
4.	B. H. M. C.T.	23
5.	B. B. A.	401
6.	B. C. A.	367
7.	B. Com.( E. Commerce)	50
8.	Bio- Tech.	32
9.	B. Tech.	0
10.	B. Sc. (A & M)	0
11.	B. Sc. (IT)	0
12.	B. Sc. (MLT)	34
13.	B. A. M.	82
14.	M. B. A.	274
15.	M. B. A. – Part time	33
16.	M. C. A	371
17.	M. Sc. (BMI)	06

18.	M. Sc. Geo- informatics	15
19.	M. Sc. Bio- informatics	15
20.	M. Sc. Information Science (MIS)	04
21.	M. Sc. Information Technology (MIT)	22
22.	M. Sc. (Applied Physics)	09
23.	M. Sc. (Applied Chemistry)	08
24.	M. Sc. (Applied Mathematics)	04
25.	ME-Civil	03
26.	ME- Electrical (EEE)	34
27.	ME-Electronics (ECE)	38
28.	ME- CAAD	07
29.	ME- AMS	07
30.	ME-Mechanical	11
31.	ME-Software Engg.	15
32.	ME-S.E.R	23
33.	M. Tech. (Comp. Sc.)	15
34.	M.Tech (Polymer)	05
35.	M. Tech (R. S)	15
36.	M. Tech (F.C.)	00
37.	M. Tech (Sc. Compt.)	00
38.	M. Tech (NMPT)	00
39.	M. Tech (E.S.E)	14
40.	M. Tech Biotechnology	15
41.	M. Tech Energy Technology	06
42.	M. Tech Information securities	17
43.	M. Tech Nano-Science & Nanotechnology	12
44.	M. Pharm	80
45.	MUP	07
46.	BFPT	03
47.	M.Sc. (A&D)	13
48.	MS (CR&P)	02
49.	ME (POLIMER)	0
50.	ME (QEM)	06
	<b>Total</b>	<b>3316</b>

**ENROLLMENT IN PH D. PROGRAMME DURING 2010-11**

Sl.No.	Name of Scholar	Ph.D. Topic
<b>Department of Applied Chemistry</b>		
01.	Mr. Tuniki Balaraju	"Insilico design & synthesis of Pyrrolo (2,3-d) pyrimidine based pseudo nucleotide Inhibitor (NI) as an anti HCV agent"
02.	Mr. Mohan Kasula	"Synthesis of cyclopentene analogs as pseudo nucleotide for antiviral activity"
03.	Mr. Sushil Kr. Pandey	"Synthesis of cyclic 1-3 propanyl phosphate esters of 1H-pyrazolo (3, 4-d) Pyrimidine nucleoside analogs as Hep Direct anti viral agents"
04.	Mr. Rahul	"Studies on Environmental Evaluation & Characterization of Coal Combustion Residues with respect to their utilization aspects"
<b>Department of Applied Mathematics</b>		
05.	Ms. Moujhuri Patra	"Some Studies in North Indian Ragas with special Emphasis in Stochastic process, Fractals and Neural Networks"
<b>Department of Applied Physics</b>		
06.	Ms. Moumita Ganguly	"Effect of rare earth elements on structural, dielectric and optical properties of BaTiO <sub>3</sub> "
07.	Mr. Man Mohan Gupta	"Investigation of light propagation through photonic crystals (PCs) for all optical devices"
<b>Department of Biotechnology</b>		
08.	Mr. Ajar Nath Yadav	"Bacterial Diversity of Cold Deserts and Mining of Genes for Low Temperature Tolerance"
09.	Mr. Jahangir Imran	"Study of Plant fungus interactions in relation to pathogenic variation in Magnaporthe grisea and diversity at Pi9 locus in rice (Oriza sativa L.)"
10.	Ms. Bharati Pandey	"Structural and functional analysis of wheat genome based on expressed sequence tags in relation to abiotic stress"
11.	Mr. Ajay Kumar	"Development and validation of nucleo- diagnostic tools for the causative agent of tapping panel dryness of rubber tree"
<b>Department of Biomedical Instrumentation</b>		
12.	Mr. Nishant Singh	"Electrooculogram and Brain Wave Assisted Brain-Computer Interface"
<b>Department of Civil Engg.</b>		
13.	Mr. Somesh Sengupta	"Influence of Geological Discontinuation in Assessing the Instability of Slopes of Jhingurda Opencast Mines, Singrauli Coalfields"
14.	Mr. Sachin Sharma	"Development of Guideline for Safe Dragline Dump Profile under Varying Geo-Engineering Condition in Opencast Coal Mines of Coal India"

Sl.No.	Name of Scholar	Ph.D. Topic
15.	Ms. Pallavi Chatterjee Adhikari	"Cyclic Sedimentation of Barakar Formation in Jayant Opencast Mines of Singrauli Coalfield, its resultant Rock Formations and the Subsequent Impact on Angle of Internal Friction of the Dump Mass"
16.	Mr. Mali Santosh Sambhaji	"Hydrological Modeling of Watershed using Artificial Neural Networks and Process based Models for Assessing Climate Change Impact on Stream Flow"
<b>Department of Electronics &amp; Comm. Engg.</b>		
17.	Mr. Ritesh Kumar Badhai	"Design and Development of Reconfigurable Sinc Shaped Printed Antennas for Portable Wireless Devices"
18.	Ms. Qurratulain	"Design and Development of Band notched UWB Antennas"
19.	Ms. Sakshi Kumari	"Design and Development of Patch Antenna on Unconventional Substrate"
20.	Mr. Kalyan Samanta	"Studies on electromagnetic radiation from mobile base stations in Indian perspective"
<b>Department of Electrical &amp; Electronics Engg.</b>		
21.	Mrs. Madhwi Kumari	"A Study on Some Aspects of Hybrid Electric Vehicles"
<b>Department of Env. Sc. &amp; Engg. Group</b>		
22.	Mrs. Nidhi Singh	"Environmental Impact assessment of Ranchi urban wetlands using Geoinformatics approach"
<b>Department of Information Technology</b>		
23.	Mr. Sounak Paul	"Design and Analysis of Defense Mechanism against Malicious Codes in Networks"
<b>Department of Management</b>		
24.	Mr. Prashant Pai	"Impact of Outsourcing on Jobs Mobility and Firm Performance"
25.	Mr. V. Raghavendiran	"A Study on Produce Lifecycle Management Framework for Pharmaceutical Industries"
26.	Ms. Sanobar Quraishi	"Studies on Competency Management Practices in Indian Organization"
27.	Mr. Vilachoor Srinivasan Kumar	"A Study of Dealership Network Location and Retailer Efficiency in Indian Automobile Industry within the Framework of Central Place Theory"
28.	Mr. S. Sivaram Vishnu Kumar	"A Study on Organizational Effectiveness of Customs House Agent Organizations"
29.	Ms. Prabha S. Pardeshi	"Factors Affecting Emotional Intelligence and Life Skills of Teachers and Students in Indian Schools"
30.	Mr. Sree Raj N.T.	"Spirituality Based Management Practices in Indian Business"

Sl.No.	Name of Scholar	Ph.D. Topic
31.	Mr. Shyam Sundar Mandal	"Impact of Employer Branding on Employee Attrition : An Empirical Study of Insurance Sector in India"
32.	Mrs. Debjani Banerjee (Chakraborty)	"An Empirical Study of Consumption Through Retail and it's Impact on Economic Development"
33.	Ms. Nalini Ravindran	"A Study of Emotional Intelligence of Women Managers"
34.	Ms. Akanksha Mittal	"Design, Development and Validation of Decision Support System for the Textile and Apparel Industry Supply Chain"
35.	Mr. Shivnaresh R. Sinha	"Study of Perception Value of Students and Parents From Institutes of Higher Education"
36.	Mr. Sayyed Mohd	"Analysis of Online Shopping Awareness Echelons and Satisfaction levels in India vis-à-vis various online shopping sites with special reference to Maharashtra and Gujarat"
37.	Ms. Nupur Gupta	"An Empirical Study of Interrelationship Between Stock Indices, Economic Indicators and Quality of Life"
38.	Ms. Amutha D.	"A Study on E-Commerce Readiness Index for Selected Self Help Groups in Chennai"
39.	Mr. Ajitabh Kr. Dubey	"Positioning Strategies of Stores Brand in the Food Sector"
40.	Mr. Kishlay Bhattacharjee	"Evaluation of Management Development Programmes : A Study in Coal Industry"
41.	Ms. Sujata Priyambada Dash	"The Role of Human Capital Management in Economic Value Addition of Large Organization"
42.	Ms. Annita Kumari	"Management of Government Programmes for Tribal Development : A Study of Pakur District in Jharkhand"
43.	Mr. Chhanda Charan Mishra	"Bancassurance in India : Customer Satisfaction"
44.	Mr. Girish P. Joshi	"Community Based Health Care Insurance in India"
45.	Mr. Pradip Kumar Mitra	"Developing Sustainability Reporting Framework for the Chemical Industry"
46.	Mr. Jignesh Sanghvi	"Price Risk Management of Agricultural Commodities : An Indian Study"
47.	Ms. Pratima Shukla	"A Study of Socio-Psychological Satisfaction of Urban Mall Shoppers"
48.	Mr. Somnath Debnath	"Green Management Accounting System-Improving Eco-efficiency"
49.	Mr. Mahesh S. Kavathekar	"Impact of DTCA (Direct to Consumer Advertising) for Prescription Drugs : On Patients, Doctors & Pharmacist"
50.	Mr. Prasun Accharya	"Advertising of Financial Services in India : Concepts, Models and their Effectiveness"
51.	Mr. B.M. Bhandarkar	"Servant Leadership of Teachers of Engineering Colleges : An Empirical Study"

Sl.No.	Name of Scholar	Ph.D. Topic
52.	Mr. Salil Jandyal	"Evaluation of the Effectiveness of Technology Programmes in the Field of Disability Management"
53.	Mr. Siddharth Ramchandra	"Employee Value Proposition It's Impact on Employee Attraction, Engagement and Retention"
54.	Mr. Gautam Barai	"Impact of India's Foreign Trade Policy Reforms on it's International Trade"
55.	Mr. R.G. Ratnawat	"A Study of Effectiveness of Employee Performance Management System in Selected Indian Organizations"
56.	Mr. Samir S. Pathak	"Sustainability Supply Chain Management Concepts, Models and Algorithms"
<b>Department of Mechanical Engg.</b>		
57.	Mrs. Ranjana Kumari Singh	"Some Studies on the Correlation between Mechano-Emissions and Plastic Deformation in Metals and Composites"
58.	Mr. Pankaj Kumar Singh	"Study of Phase formation microstructure and Mechanical properties of plasma nitrided austenitic stainless steels for automotive fuel cell application"
<b>Department of Pharmaceutical Science</b>		
59.	Mr. Jagdish Kumar Sahu	"Synthesis and Study of Some Fused Triazole Analogs"
60.	Ms. Amrita Mishra	"Standardization of an Ayurvedic Polyherbal Formulation – Brahmi Vati – A Medhya Rasayan"
61.	Mr. Umesh Nandkumar Khataavkar	"Novel Approaches for Development of Oral Controlled Release Drug Delivery System for Some Selective Central Nervous System Acting Drugs"
62.	Ms. K.R. Sini	"Phytochemical and Pharmacological Investigations on Selected Species of Genus "Capparis" from the tribal Areas of Palakkad, Kerala"
63.	Mrs. Tiewlasubon Uriah	"Isolation, Physicochemical Characterisation and Pharmaceutical Applications of Some Natural Polysaccharides of Meghalaya"
64.	Mr. Bhupendra Shrestha	"Analytical Method Development for some Cephalosporin Drugs In combination with $\beta$ -lactamase inhibitors in Pharmaceutical Dosage form"
65.	Ms. Rashmi Karki	"Designing, Development, Synthesis and Studies on Peptide Based Thermally Responsive Polymers for Anticancer Drugs"
66.	Mr. Naresh Panigrahi	"Synthesis and study of some novel oxazolidinone analogs"
67.	Ms. Ladli Kumari	"Investigation of some Indigenous Medicinal Plants for Attenuating Diabetic Nephropathy"
68.	Mr. Arun Mittal	"A Comparative Evaluation of few Jasminum species for their wound healing activity"



Sl.No.	Name of Scholar	Ph.D. Topic
69.	Mr. M.P. Raghunath	"Comparative Study of Isoxsuprine and Nifedipine in Suppression of Preterm Labour in human Volunteers"
70.	Ms. Arti Sah	"Design, Fabrication and Evaluation of Controlled Porosity Osmotic Pump-Based Drug Delivery System of Few Drugs"
71.	Mr. Shaswat Kansal	"Surface Modified Polyelectrolyte Reservoir Bearing Chemotherapeutic Agent for Effective Management of Visceral Leishmaniasis"
72.	Mr. Sandeep Kumar	"Design and Development of Solid-amorphous Dispersions Based Controlled Drug Delivery Systems for Poorly Soluble Drugs"
73.	Ms. Pooja Srivastava Banerjee	"Design, synthesis and study of some NIDDM based antidiabetics linear and cyclic peptides and non peptides"
74.	Mr. Shailesh Kr. Singh	"Studies on Lac resins and their acid derivatives obtained from Kerria lacca, Kerr"
75.	Mr. Jagannath Behera	"Design and Synthesis of some newer Histone Deacetylase (HDAC) Inhibitors as Anticancer Agents"
76.	Mohd. Neyaz Ahsan	"Lipid Based Drug Delivery System of Some Poorly Water Soluble Drugs"
77.	Mrs. Neeru Singh	"Evaluation of Antimicrobial Activity of Cationic Lipidic Emulsions"
78.	Mr. Puspendra Kumar	"Standardization of an Ayurvedic Formulation : Shatavaryadi Churna"
79.	Mr. Mahendra Pratap Chopra	"Antidiabetic Studies of Some Medicinal Plants of Jharkhand Region"
80.	Mr. Alok Shiomurti Tripathi	"Study of Drug Interaction of an Anti diabetic Agent (Sulphonyl urea) with a Selective ACE Inhibitor in diabetic Nephropathy"
81.	Ms. Ananya Malgope	"A Nanoemulsion Approach towards Transdermal Drug Delivery System of Poorly Water Soluble Drugs : Formulation Development, Evaluation and Optimization"
82.	Mr. Chandan Kr. Pradhan	"Pharmacognosy, Phytochemistry and Pharmacology of Pongamia pinnata Pierre Leaf"
83 .	Ms. Hema Basnett	"Pharmacognostical, Phytochemical and Pharmacological Study of Tubers of Orchis latifolia Linn."
84.	Ms. Shivani Agarwal	"Pharmacognostical Studies on Commelina Benghalensis Linn. & Commelina Obliqua, Buch-Ham, Family Commelinaceae"
<b>Department of Production Engg.</b>		
85.	Mr. Thakur Abhinav Amar	"Eco Design System for Achieving Excellence in Material Processing Industries"
86.	Mr. Subodh Kumar	"Investigation on the Process Variables of Laser Based Direct Metal Deposition Technique" Dept. of Remote Sensing
87.	Mr. Prem Chandra Pandey	"Analysing Impact of Climate Change on Land Use Patterns and Sustainable Livelihood using Integrated Geo-spatial Approach"

Sl.No.	Name of Scholar	Ph.D. Topic
88.	Ms. Arunima Dasgupta	"Desertification Vulnerability Risk Assessment & Prediction Model using Fuzzy Algorithm"
89.	Ms. Varunika Jain	"Formulation of a Crop Information Retrieval System based on Biophysical and Weather Parameters"
90.	Mr. Chandra Prakash Singh	"Modelling Dynamics of the Alpine Ecotone in Response in Bio-climatic Scenario"
91.	Ms. Anamika Tirkey	"Watershed Prioritization for Sustainable Agriculture under Changing Climatic Conditions in drought prone Regions of Jharkhand State"
92.	Mr. Anish Mohan	"Study the Influence of Moraine cover slope and mass balance on Glacier velocity with reference to glacier dynamics using Geospatial approach"
93.	Mr. Suresh Kr. Singh	"Analysis of Crop Condition Assessment with Emphasis on Pest Effect using Geospatial Technique"
<b>Dept. of Space Engg. &amp; Rocketry</b>		
94.	Mr. Santosh D. Solanke	"Behaviour of aircraft control surface aerodynamics and structural analysis using finite element method"
<b>BIT Ext. Centre, Deoghar</b>		
95.	Ms. Amrita Kumari	"Experimental Investigation and mathematical modeling of corrosion – erosion damage mechanisms in Coal Fired Power Plant Components"
<b>BIT Ext. Centre, Jaipur</b>		
96.	Mr. Madan Mohan Agarwal	"Optimization of Energy in Mobile Ad-Hoc Networks"
97.	Mr. Abhishek Gautam`	"Studies on Effects of Municipal Solid Waste on Characteristics of Soil & Water in Dumping Areas Around Jaipur"
98.	Ms. Ekta Pandey`	"Analysis of the Emerging Concept of Work Life Balance in Indian Banks and its Impact on Competitive Performance of Employees"
99.	Mr. Subhash Chand Gupta	"Finger print analysis and recognition"
100.	Mr. Vikas Sangwan	"Design of Layout for Cellular Manufacturing Systems"
101.	Mr. Ravindra Kumar	"Studies on low pressure plasma nitriding of steels with various alloying concentrations"
<b>BIT Ext. Centre, Lalpur</b>		
102.	Mrs. Madhuri Mahato	"A study of emotional labor & its effects on organizational role stress & life satisfaction in services sector organization"
103.	Mr. Soumitro Chakravarty	"A Study of the Effectiveness of Microfinance as a Motivational Tool for the Self Help Groups in the Jharkhand State"
104.	Mr. Niranjan Kumar	"Expenditure Planning and Management: Institutionalization of Programme and Performance Budgeting (PPB) in the State with Special Reference to the State of Jharkhand"

Sl.No.	Name of Scholar	Ph.D. Topic
<b>BIT Extension Centre, Noida</b>		
105.	Mrs. Vibha Kaw Raina	"Design and Development of New Mobile Transactions Model of Payment in Mobile Commerce Environment"
106.	Ms. Garima Srivastava	"Customer's Perception towards Private and Public sector Banks : (Management) Exception Gap Analysis"
107.	Ms. Sonali Mathur	"Security Techniques & Testing of Data Warehouse in Banking Sector"
<b>BIT Extension Centre, Patna</b>		
108.	Mrs. Sona Kumari	"Studies of Structural and Electrical Properties of some Rare Earth and Alkaline Modified Lead Titanate Nanoceramics"
<b>BITIC, RAS Al Khaimah (UAE)</b>		
109.	Mr. Bobby George Jacob	"Optimal Decision Models for Maximizing Customer Satisfaction Using Rosis Theory"
110.	Mr. Rajesh V.	"A Critical Evaluation of Corporate Social Responsibility Practices in Dubai"
111.	Mr. Santosh John	"Extended Software Engineering Tools to Ontology Engineering with Model Driven Architecture"

#### DEGREES & DIPLOMAS AWARDED BY THE INSTITUTE DURING 1955-2010

S. NO.	NAME OF DEGREE	NUMBER
1	Doctor of Philosophy	122
	<b>PG Degrees</b>	
2	Master of Pharmacy	450
3	Master of Business Administration	2966
4	Master of Computer Application	3369
5	Master of Engineering	1168
6	Master of Technology	1273
7	Master of Science	847
8	Diploma in Computer Application	550
9	Post Graduate Diploma	16
	<b>Sub Total I (Phd &amp; PG Degrees)</b>	<b>10761</b>
	<b>UG Degrees</b>	
10	<b>Bachelor of Science(Engineering) ,Bachelor of Engineering, Bachelor of Technology</b>	
	Mechanical	4664

	Civil	1790
	Computer	3214
	EEE	3378
	ECE	2162
	Production	886
	Polymer	105
	Biotech	160
	Information Technology	226
	Marine	775
11	Bachelor of Pharmacy	893
12	Bachelor of Architecture	319
13	Bachelor of Hotel Management & Catering Technology	117
14	Bachelor of Computer application	3499
15	Bachelor of Business Administration	3060
16	Bachelor of Science	944
17	Bachelor of Medical Lab Technology	84
18	Bachelor of Commerce	27
19	Diploma in Technology	703
	Sub Total II (UG Degrees)	27111
	Grand Total	37872

**DEGREE/DIPLOMA AWARDED IN THE 21<sup>ST</sup> CONVOCATION:**

I	Ph.D.	Branch	Total			
	Doctor of Philosophy	Architecture	1			
	Doctor of Philosophy	Engineering	5			
	Doctor of Philosophy	Management	4			
	Doctor of Philosophy	Pharmacy	5			
	Doctor of Philosophy	Science	5			
	Doctor of Philosophy	Technology	4			
<b>Total</b>			24			
II	Post-Graduate	Branch	ID	I	II	Total
	Master of Engineering	Automated Manufacturing System	2	1	0	3
	Master of Engineering	Computer Aided Analysis & Design	2	0	0	2
	Master of Engineering	Civil	1	2	0	3
	Master of Engineering	Electrical	10	4	0	14

	Master of Engineering	Electronics & Communication	15	2	0	17
	Master of Engineering	Mechanical	6	2	0	8
	Master of Engineering	Polymer	0	1	1	2
	Master of Engineering	Quality Engineering Management	4	0	0	4
	Master of Engineering	Software	2	1	1	4
	Master of Engineering	Space Engineering & Rocketry	4	2	0	6
	Master of Pharmacy		23	13	0	36
	Mater of Technology	Computer Science	10	12	1	23
	Mater of Technology	Environmental Science & Engg.	4	0	0	4
	Mater of Technology	Fuel & Combustion	1	0	0	1
	Mater of Technology	New Materials & Processing Technology	1	0	0	1
	Mater of Technology	Remote Sensing	6	0	0	6
	Mater of Technology	Scientific Computing	0	4	0	4
	Master of Science	Biomedical Instrumentation	0	1	0	1
	Master of Science	Bioinformatics	21	10	0	31
	Master of Science	Geoinfromatics	1	2	0	3
	Master of Science	Information Science	2	0	0	2
	Master of Science	Information Technology	19	5	0	24
	Master of Science	Applied Physics	1	0	0	1
	Master of Science	Applied Chemistry	1	1	0	2
	Executive Master of Business Administration		6	17	7	30
	Master of Business Administration		105	224	21	350
	Master of Computer Applications		127	158	15	300
	Master of Urban Planning		2	0	0	2
Total						883
III	Under-Graduate Degree	Branch	ID	I	II	Total
	Bachelor of Engineering	Biotechnology	25	10	0	35
	Bachelor of Engineering	Civil	34	15	0	49
	Bachelor of Engineering	Computer	93	60	4	157
	Bachelor of Engineering	Electrical & Electronics	59	39	1	99
	Bachelor of Engineering	Electronics & Communication	120	100	3	223
	Bachelor of Engineering	Information Technology	26	14	0	40
	Bachelor of Engineering	Mechanical	50	28	2	80
	Bachelor of Engineering	Marine	64	27	0	91

	Bachelor of Engineering	Marine Technology	131	1	0	132
	Bachelor of Engineering	Polymer	9	10	0	19
	Bachelor of Engineering	Production	9	5	0	14
	Bachelor of Pharmacy		39	10	0	49
	Bachelor of Architecture		27	11	0	38
	Bachelor of Science	Animation & Multimedia	81	8	0	89
	Bachelor of Science	Medical Lab. Technology	13	14	0	27
	Bachelor of Science	Nautical	37	12	0	49
	Bachelor of Science	Information Technology	35	7	0	42
	Bachelor of Commerce		23	16	4	43
	Bachelor of Hotel Management & Catering Technology		11	18	2	31
	Bachelor of Business Administration		386	143	5	534
	Bachelor of Computer Application		323	162	10	495
	Bachelor of Business Management		10	10	2	22
	Bachelor of Technology	Civil	3	1	0	4
	Bachelor of Technology	Electrical & Electronics	3	3	0	6
	Bachelor of Technology	Mechanical	1	2	0	3
<b>Total</b>						<b>2371</b>
<b>IV</b>		<b>Branch</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Diploma in Technology		11	7	0	18
	Diploma in Technology		10	16	0	26
	Diploma in Technology		15	11	0	26
	Diploma in Technology		6	10	1	17
<b>Total</b>						<b>87</b>
<b>Grand Total</b>						<b>3366</b>

**FACULTY POSITION (Including India and Abroad)****SUMMARY OF THE FACULTY POSITION**

Sl. No.	Category	No. (As on 30.06.11)
1.	Professor	52
2.	Associate Professor/Reader	75
3.	Assistant Professor/Associate Lecturer	485
4.	Others *	48
	Total	660

\* Others include Scientific Officer, Research Associate Visiting Professor, Animator, Editor, Cinematographer, Designer, Sport Officers, Programmer etc.

**Department Wise Details of Faculty Position : Main Campus (as on 30/06/2011)****DEPARTMENT OF APPLIED CHEMISTRY**

S. No.	Name	Designation
1	Dr. U. Jha	Professor, HOD
2	Dr. B. Verma	Associate Professor
3	Dr. J. P. Pandey	Associate Professor
4	Dr. R. P. Bhatnagar	Principal Scientific Officer
5	Dr. A. Sharon	Assistant Professor
6	Dr. C. Bal	Assistant Professor
7	Dr. R. U. Islam	Assistant Professor
8	Dr. S. Naskar	Assistant Professor
9	Dr. Deepshikha	Assistant Professor
10	Dr. S. Mishra	Assistant Professor
11	Dr. G. Sen	Assistant Professor
12	Dr. A. Priyam	Assistant Professor
13	Mr. Rahul	Assistant Professor

**DEPARTMENT OF APPLIED MATHEMATICS**

S. No.	Name	Designation
1.	Dr. N C Mahanti	Prof. & Head
2.	Dr. S. K. Jain	Professor
3.	Dr. S. S. Roy	Associate Professor
4.	Dr. S.K. Chakraborty	Associate Professor
5.	Dr. Bimal K. Mishra	Associate Professor
6.	Dr. S. Padhi	Associate Professor
7.	Dr. Soubhik Chakraborty	Associate Professor

8.	Dr. Anjana P. Ghorai	Assistant Professor
9.	Dr. S. K. Sunanda	Assistant Professor
10.	Dr. Prabhjot Kaur	Assistant Professor
11.	Dr. Anurag Jaiswal (On Leave)	Assistant Professor
12.	Dr Manoj Kumar	Assistant Professor
13.	Dr. Swati Pandey	Associate Lecturer

#### **DEPARTMENT OF APPLIED MECHANICS**

S.No.	Name	Designation
1	Mr. A. K. Ray	Professor & Head
2	Mr. U. S. Prasad	Associate Professor
3	Mr. Sankha Bhaduri	Assistant Professor
4.	Mr Manish Ranjan	Assistant Professor
5	Mr. Shaikh Himauddin	Teaching cum Research Fellow

#### **DEPARTMENT OF APPLIED PHYSICS**

S. No.	Name	Designation
1.	Dr. P. K. Barhai	Professor, Dean Faculty and Sponsored Research
2.	Dr. D. Jairath	Professor & Head
3.	Dr. N. Nayak	Principal Scientific Officer
4.	Dr. S. Konar	Professor
5.	Dr. S. Medhekar	Professor
6.	Dr. (Mrs.) S. Keshri	Associate Professor
7.	Dr. S. K. Sinha	Associate Professor
8.	Mr. M. K. Sinha	Sr. Scientific Officer
9.	Dr. S. K. Rout	Assistant Professor
10.	Dr. S. K. Mahapatra	Assistant Professor
11.	Dr. (Mrs.) I. Banerjee	Assistant Professor
12.	Dr. S Mukherjee	Assistant Professor
13.	Dr. K. Bose	Assistant Professor
14.	Dr. R. K. Choubey	Assistant Professor
15.	Dr. G. P. Singh	Assistant Professor
16.	Mr. Rishi Sharma	Scientific Officer
17.	Dr. (Mrs.) Ela Sinha	Assistant Professor
18.	Mr. Balendu Pathak	Assistant Scientific Officer
19.	Mr. S. K. Mukherjee	Jr. Research Officer



**DEPARTMENT OF ARCHITECTURE**

S. No.	Name	Designation
1.	Dr. Manjari Chakraborty	Professor & Head
2.	Dr. N.R. Mandal	Associate Professor
3.	Dr. Satyaki Sarkar	Reader
4.	Dr. S.P. Bhattacharya	Assistant Professor
5.	Mrs. Ritu Agrawal	Assistant Professor
6.	Mrs. Harshit Lakra	Assistant Professor
7.	Mr. Sanmarga Mitra	Assistant Professor
8.	Mrs. Smriti Misra	Assistant Professor
9.	Mrs. Parama Mitra	Assistant Professor
10.	Mr. Anuj Toppo	Assistant Professor
11.	Mr. Bimal Chandra Roy	Assistant Professor
12.	Mr. Rajan Chandra Sinha	Assistant Professor
13.	Mr. Sashi Kant Pandey	Assistant Professor
14.	Mrs. Nayana R. Singh (on deputation)	Assistant Professor
15.	Mr. Janmejey Gupta	Assistant Professor
16.	Mr. Biswajeet Chakraborty	Junior Teacher cum Research Fellow
17.	Mrs. Sangita	Associate Lecturer

**DEPARTMENT OF BIO TECHNOLOGY**

S. No.	Name	Designation
1	Dr. Ambarish S. Vidyarthi	Professor & Head
2	Dr. Kunal Mukhopadhyay	Professor
3	Dr. Pratyosh Shukla	Associate Professor
4	Dr. Ramesh Chandra	Associate Professor
5	Dr. Dev Mani Pandey	Associate Professor
6	Dr. Vinod Kumar Nigam	Reader
7	Dr. Rajib Bandopadhyay	Assistant Professor
8	Dr. Manish Kumar	Assistant Professor
9	Dr. Raju Poddar	Assistant Professor
11	Dr. (Mrs.) Shashwati Ghosh Sachan	Assistant Professor
12	Mr. Santosh Kumar Jha	Assistant Professor

13	Dr. Ashish Sachan	Assistant Professor
14	Dr. (Mrs.) Sheela Chandra	Assistant Professor
15	Dr. Hare Ram Singh	Assistant Professor
17	Dr. (Mrs.) Shubha Rani Sharma	Assistant Professor
18	Mr. Saswata Goswami	Scientist
19.	Ms. Sneha Singh	Associate Lecturer
20	Mr. Shankaracharya	Associate Lecturer

**DEPARTMENT OF CHEMICAL & POLYMER ENGINEERING**

1	Dr. Mandira Mukherjee	Professor & Head
2	Dr. Sudipta Goswami	Associate Professor
3	Dr. Gautam Sarkhel	Associate Professor
4	Dr. Akhil Kumar Sen	Reader
5	Dr. Sushanta Sinha Mahapatra	Assistant Professor
6	Mr. Sudeepan J	Assistant Professor
7	Mrs. Debasree Ghosh	Assistant Professor
8	Dr. Pulak Dutta	Assistant Professor
9	Dr. Amar Nath Mishra	Assistant Professor
10	Dr. Sumit Kumar Jana	Assistant Professor
11	Dr. Pradip Kar	Assistant Professor
12	Dr. Arup Choudhary	Assistant Professor
13	Dr. Suman Dutta	Assistant Professor
14	Dr. G.T. Mohanraj	Assistant Professor

**DEPARTMENT OF CIVIL ENGINEERING**

Sl. No.	Name	Designation
1	Dr. Balram Singh	Professor & Head
2	Dr. Anand Kumar Sinha	Professor
3	Dr. Arun Kumar	Associate Professor
4	Dr. Rajiv Ranjan Sahay	Associate Professor
5	Dr. Sudeshna Chakravarty	Associate Professor
6	Dr. Indrajit Roy	Associate Professor
7	Dr. Bindhu Lal	Associate Professor
8	Dr. Birendra Kumar Singh	Reader
9	Dr. Siddhartha Sengupta	Reader

10	Dr. Umesh Chandra Sahoo	Assistant Professor
11	Mr. Avijit Burman	Assistant Professor
12	Mr. Koushik Paul	Assistant Professor
13	Mr. Jitu Kujur	Assistant Professor

**DEPARTMENT OF COMPUTER SCIENCE**

S. No.	Name	Designation
1	Dr. R. Sukesh Kumar	Prof. and Head
2	Dr. D.K.Mallick	Assistant Professor
3	Mr. S.K.Chatterjee	Assistant Professor
4	Mr. I. Mukherjee	Assistant Professor
5	Mr. Kishore Kumar Senapati	Assistant Professor
6	Mr. Abhijit Mustafi	Assistant Professor
7	Ms. Itu Snigdh	Assistant Professor
8	Mr. P.Paul	Assistant Professor
9	Dr. K.Sridhar Patnaik	Assistant Professor
10	Ms. Shruti Garg	Assistant Professor
11	Ms. Sanchita Paul	Assistant Professor
12	Ms. Amiritanjali	Assistant Professor
13	Mr. Sudip Kumar Sahana	Assistant Professor
14	Mr. Shashank Pushkar	Assistant Professor
15	Dr. Sujan Kumar Saha	Assistant Professor
16	Mr.Satish Ch Panigrahi	Assistant Professor
17	Mr. Abul Aula Jasser	Associate Lecturer

**CREATIVE ARTS**

S No	Name	Designation
1.	Mr. Mrinal Pathak	Associate lecturer

**ELECTRONICS AND COMMUNICATION ENGINEERING**

S. No.	Name	Designation
1.	Dr Nisha Gupta	Professor & Head
2.	Dr. S. K Ghorai	Professor
3.	Dr. S. Pal	Associate Professor
4.	Mr. Madhukar Puri	Associate Professor
5.	Mr. K. K. Masand	Associate Professor

6.	Mr. B. B. Pal	Associate Professor
7.	Mr. N. Poddar	Associate Professor
8.	Dr. Vibha Rani Gupta	Associate Professor
9.	Dr. Sanjay Kumar	Associate Professor
10.	Mr. S.S. Solanki	Associate Professor
11.	Dr. Mahesh Chandra	Reader
12.	Dr. S Srivastava	Reader
13.	Dr. N Chattoraj	Reader
14.	Dr. Bharat Gupta	Assistant Professor
15.	Mr. Vishal H Shah	Assistant Professor
16.	Mr. Sukanta K Dash	Assistant Professor
17.	Mr. K. Mahto	Assistant Professor
18.	Mr. Sanjeet Kumar	Assistant Professor
19.	Mr. Janardan Sahay	Assistant Professor
20.	Dr. R.K.Lal	Assistant Professor
21.	Mr. S.S Tripathy	Assistant Professor
22.	Mrs. Annapurna S. M.	Assistant Professor
23.	Mr. D.K Upadhyay	Assistant Professor
24.	Mr. G. K. Mishra	Assistant Professor
25.	Mr. Priyank Saxena	Assistant Professor
26.	Mr. Somnath sengupta	Assistant Professor
27.	Dr. Vijay Nath	Assistant Professor
28.	Dr. Mrinal Mishra	Assistant Professor
29.	Mr. A. K. Tiwary	Assistant Professor
30.	Mr. P. K. Upadhyay	Assistant Professor
31.	Mr. Manoj Mukul	Assistant Professor
32.	Mr. A. Islam	Assistant Professor
33.	Ms. Swati Prasad	Assistant Professor
34.	Mr. R. P. Sinha	Associate Lecturer
35.	Ms. S. Firdous	Associate Lecturer
36.	Mr. Santashraya Prasad	Associate Lecturer
37.	Mrs. S. Sidheshwari	Associate Lecturer
38.	Mr. Jitendra Kr. Saini	Associate Lecturer

**ELECTRICAL AND ELECTRONICS ENGINEERING**

S. No.	Name	Designation
1.	Dr. R. K. Narayan	Professor
2.	Dr. T. Ghose	Professor
3.	Dr. R. C. Jha	Professor
4.	Dr. D. K. Mohanta	Professor
5.	Dr. P. R. Thakura	Reader
6.	Dr. R.K.Sinha	Associate Professor
7.	Mrs. S. Chakraborty	Assistant Professor
8.	Dr. (Mrs.) Vijaya Laxmi	Assistant Professor
9.	Mr. Prem Prakash	Assistant Professor
10.	Dr. Subhojit Ghosh	Assistant Professor
11.	Mr. K. C. Jana	Assistant Professor
12.	Mrs. Debomita Ghosh	Assistant Professor
13.	Mr. G. S. Gupta	Assistant Professor
14.	Ms. Aparna Gautam	Assistant Professor
15.	Mr. B M Prasad	Assistant Professor
16.	Dr. B. M. Karan	Visiting Faculty
17.	Mr. N. Neogi	Visiting Faculty
18.	Mr. Surender Kumar	Assistant Professor
19.	Dr. Yogender Aggarwal	Associate Lecturer
20.	Ms. Anjana Dwivedi	Associate Lecturer
21.	Mr. Supriyo Kr. Das	Associate Lecturer

**ENVIRONMENT SCIENCE AND ENGINEERING GROUP**

Sl.No.	Name	Designation
1	Dr.Gopal Pathak	Professor
2	Dr. Kirti Avishek (On Lien)	Assistant Professor
3	Dr. Amit Kumar Gorai	Assistant Professor
4	Ms. Neeta Kumari	Assistant Professor
5	Mr. Jawed Iqbal	Associate Lecturer

**FOOD PROCESSING TECHNOLOGY**

S. No.	Name	Designation
1	Mr. M. P. Chopra	Senior Scientific Officer
2	Mr. Amit Kumar Tiwari	Food Technologist

### **HOTEL MANAGEMENT AND CATERING TECHNOLOGY**

<b>S. No.</b>	<b>Name</b>	<b>Designation</b>
1.	Dr. Sitesh P. Srivastava	Professor
2.	Mr. Praveen Srivastava	Assitant Professor
3.	Mr. Abhinav K. Shandilya	Assitant Professor
4.	Mr. Abhishek Jana	Assitant Professor
5.	Mr. Nishikant Kumar	Assitant Professor
6.	Mrs. Snigdha Priya	Assitant Professor
7.	Mr. Sanjeev Srivastava	Assitant Professor
8.	Ms. Rajeshwari	Assitant Professor
9.	Dr. Amit Saran	Assitant Professor
10.	Mr. Gautam Shandilya	Assistant Professor
11.	Mrs. Pratima Ekka	Associate Lecturer
12.	Mr. Pranjal Kumar	Associate Lecturer
13.	Mr. Rajesh Langiya	Bakery Chief

### **INFORMATION TECHNOLOGY**

<b>S. No.</b>	<b>Name</b>	<b>Designation</b>
1	Dr. G. Sahoo	Professor & Head
2	Mr. S. Dutta	Associate Professor
3	Dr. A. Jain	Reader
4	Dr. Bhaskar Karn	Reader
5	Mr. R.Jha	Assistant Professor
6	Mr. B.K.Chanda	Assistant Professor
7	Mr. B.K.Sarkar	Assistant Professor
8	Mr. I.D.Ram	Assistant Professor
9	Mr. V.K.Jha	Assistant Professor
10	Mr. V.S.S.Sriram	Assistant Professor
11	Mr. A.K.Keshri	Assistant Professor
12	Ms. Sabina Priyadarsini	Associate Lecturer
13	Ms. Debjani Mustafi	Associate Lecturer
14	Mr. Kalyan Samanta	Senior Scientific Officer

**MANAGEMENT**

S No	Name	Designation
1	Dr S K Bose	Professor
2	Dr Utpal Baul	Professor
3	Dr Manju Bhagat	Professor
4	Dr S.Shivani	Professor
5	Dr R N Bhagat	Professor
6	Mr. S.C. Mishra	Associate Professor
7	Dr Vijay Agrawal	Assistant Professor
8	Dr P C Jha	Assistant Professor
9	Dr J B Daavid	Assistant Professor
10	Dr Rohit Pande	Assistant Professor
11	Mr Anand Kumar	Assistant Professor
12	Ms Shelly Shrivastava	Assistant Professor
13	Mr Amitabh Verma	Assistant Professor
14	Ms. Rohini Jha	Assistant Professor
15	Dr Dharmendra Chand	Assistant Professor
16	Mr Shailendra Singh	Assistant Professor
17	Mr Nitesh Bhatia	Associate Lecturer
18	Ms Sujata Priyamvada Dash	Associate Lecturer
19	Mr Anand Pd. Sinha	Associate Lecturer

**MECHANICAL ENGINEERING**

S.No.	Faculty members	Designation
1.	Dr. Ashok Misra	Emeritus Professor
2.	Dr. Arbind Kumar	Professor and Head
3.	Dr. P.K. Choudhary	Associate Professor
4.	Dr. R.P. Sharma	Associate Professor
5.	Dr. A.K.Roy	Associate Professor
6.	Dr. Rajeev Kumar	Reader
7.	Mr. S.K.Sinha	Assistant Professor
8.	Mr. D.B. Lata	Assistant Professor

9.	Mrs. Richa Pandey	Assistant Professor
10.	Mr. J. Singh	Assistant Professor
11.	Mr. S.K.Dhiman	Assistant Professor
12.	Mr. P. Mishra	Assistant Professor
13.	Mr. Sabin Kumar Mishra*	Assistant Professor
14.	Mr. Sandip Kumar	Assistant Professor
15.	Mr. B.S.Choudhary	Assistant Professor
16.	Mr. O. P. Pandey	Assistant Professor
17.	Mr. B.K.Prabhakar	Assistant Professor
18.	Mr. Sujeet Kumar Mishra	Assistant Professor
19.	Mr. Arun Dayal Udai*	Assistant Professor
20.	Mr. L.S. Brar	Teaching cum Research Fellow
21.	Mr. A. Bhaumik	Scientific Officer

#### PHARMACEUTICAL SCIENCE

S. No.	Name	Designation
1	Dr. D. Sasmal	Professor
2	Dr. P.R.P. Verma	Professor
3	Dr. B.N. Sinha	Professor
4	Dr. S. Samanta	Professor
5	Dr. S. Jha	Professor
6	Mrs. S.G. Panpalia	Associate Professor
7	Dr. R. N. Gupta	Associate Professor
8	Dr. (Ms.) S. Ganguly	Associate Professor
9	Dr. Jayaram Kumar	Associate Professor
10	Dr. (Mrs.) P. Mitra Mazumder	Associate Professor
11	Dr.(Mrs.)S. M. Verma	Associate Professor
12	Mr. Ashok Pattanaik	Assistant Professor
13	Dr. J. Venkatesan	Assistant Professor
14	Mr. D. Biyani	Assistant Professor
15	Mr. Manik	Assistant Professor
16	Mr. A. Basu	Assistant Professor
17	Mr. N. Mishra	Assistant Professor
18	Mr. S.P. Pattanayak	Assistant Professor
19	Mr. A. Dev	Assistant Professor



20	Mr. B. Sarkar	Assistant Professor
21	Ms. T. Bal	Assistant Professor
22	Dr.(Mrs.) A. Pandey	Assistant Professor
23	Dr.(Mrs.) Neelima Sharma	Assistant Professor
24	Dr. Sandeep Kumar Singh	Scientific Officer
25	Dr. Animesh Ghosh	Assistant Professor

**PRODUCTION ENGINEERING**

S. No.	Name	Designation
1.	Dr. B.K. Singh	Prof. & Head
2.	Mr. Atul Anand	Associate Professor
3.	Mr. A. K. Thakur	Associate Professor
4.	Dr. Vinay Sharma	Associate Professor
5.	Dr. Alok Varma	Associate Professor
6.	Dr. Sanjay Kumar Jha	Associate Professor
7.	Dr. L.N. Pattanaik	Associate Professor
8.	Dr. Ritesh Kumar Singh	Associate Professor
9.	Dr. Vijay Pandey	Reader
10.	Dr. S. C. Srivastava	Reader
11.	Mr. Rajeev Agrawal	Assistant Professor
12.	Mr. Joyjeet Ghose	Assistant Professor
13.	Mr. Binay Kumar	Assistant Professor

**SPACE ENGINEERING AND ROCKETRY**

S. No.	Name	Designation
1.	Dr. A. K. Chatterjee	Professor and Head
2.	Dr. P. C. Joshi	Professor
3.	Dr. J. K. Prasad	Professor
4.	Mr. Sudip Das	Assistant Professor
5.	Mr. Priyank Kumar	Assistant Professor

**PHYSICAL EDUCATION AND SPORTS**

SI No.	Name	Designation
1.	Dr. Rama Shankar Singh	Sr. Sports Officer
2.	Dr. Mahendra Kumar	Assistant Professor

**BIT EXTENSION CENTRE, ALLAHABAD**

Sl. No.	Name	Designation
<b>Mechanical Engineering</b>		
1.	Dr. Rampal Singh	Professor & Director
2.	Mr. D. Mahto	Assistant Professor
<b>EEE</b>		
3.	Mr. K. Nikhil	Assistant Professor
<b>Civil</b>		
4.	Mr. B.N.Singh	Associate Lecturer
	Mr. S.S. Kumar	Assistant Professor
<b>Computer Science Engineering</b>		
6.	Mr. S. Kanungo	Assistant Professor
7.	Mr. R.S. Pandey	Assistant Professor
8.	Ms. A.Kushwaha	Assistant Professor
9.	Mr. S.C.Pandey	Assistant Professor
10.	Mr. K.N.Mishra	Assistant Professor
11.	Mr. A.K.Keshri	Assistant Professor
12.	Dr. P.C. Srivastava	Assistant Professor
13.	Mr. R.Mishra	Assistant Professor
14.	Ms. A. Shukla	Associate Lecturer
15.	Mr. N. Trivedi	Associate Lecturer
<b>Management</b>		
16.	Dr. A.K. Mahanty	Assistant Professor
17.	Dr. S.K. Pandey	Assistant Professor
18.	Mr. P. Munda	Associate Lecturer
19.	Ms. Sweta	Associate Lecturer
20.	Ms. N. Tiwari	Associate Lecturer
21.	Mr. A.M.Dubey	Associate Lecturer

**BIT EXTENSION CENTRE, DEOGHAR**

Sl. No.	Name	Designation
1	Col. Mukteshwar Prasad	Incharge
2	Dr. P.K . Srivasatava	Professor
3	Dr. Ratan Kumar Paul	Associate Professor
4	Mr. Ritesh Kumar Upadhyay	Assistant Professor

5	Mr. G. Srinivasa Rao	Assistant Professor
6	Dr. Ram Krishna Sarkar	Assistant Professor
7	Dr. Soumen Karmakar	Assistant Professor
8	Dr. Arshad Kamal	Assistant Professor
9	Dr. A. C. Singh	Assistant Professor
10	Mr. S. S. Majhi	Associate Lecturer
11	Dr. Mainak Mukhopadhyay	Assistant Professor
12	Mr. Babulal Shahu	Assistant Professor
13	Mrs. Sutapa Mandal	Assistant Professor
14	Mr. Sridhar Chintala	Assistant Professor
15	Mr. P. K. Manoharan	Assistant Professor
16	Mr. Abhishek K. Singh	Assistant Professor
17	Dr Saumya Banerjee	Assistant Professor
18	Mr. Pankaj Mishra	Assistant Professor
19	Mr. B M Jha	Assistant Professor
20	Mr. Deep Shankar Acharya	Assistant Professor
21	Mr. Srihar Gude	Assistant Professor
22	Mr. Nishikant Kumar	Associate Lecturer
23	Mr. Swapan Kumar Borat	Associate Lecturer
24	Mr. Mahendra Kumar Das	Associate Lecturer
25	Mr. Shiv Kumar Choubey	Associate Lecturer
26	Mr. T. K. Baug	Scientific officer

**BIT EXTENSION CENTRE JAIPUR**

Sl. No.	Name	Designation
1.	Dr. Abhinav Dinesh	Director
<b>Computer Science Department</b>		
2	Dr. Madhavi Sinha	Associate professor
3	Mr. P. K. Sharma	Assitant Professor
4	Mr. Bimalendu Pathak	Assitant Professor
5	Mr. Shripal Vijayvargiya	Assitant Professor
6	Mr. Piyush Gupta	Assitant Professor
7	Mr. Madan Mohan Agarwal	Assitant Professor
8	Mr. Alok Pandey	Sr. System Manager
9	Mr. Vivek Gaur	Assitant Professor
10	Mr. Subhash Chand Gupta	Assitant Professor
11	Ms. Archana Bhatnagar	Assitant Professor
12	Ms. Seema Gaur	Assitant Professor
13	Ms. Anju Sharma	Assitant Professor
14	Mr. Santosh Kumar Sharma	Assitant Professor

15	Ms. Nidhi Agarwal	Assitant Professor
16	Mr. Santhosh Kumar Agarwal	Associate Lecturer
17	Mrs. Sneha Shastri	Associate Lecturer
18	Mr. S.K. Sharma	Programmer
<b>Electronics &amp; Communication Engineering Department</b>		
19	Mr. Jankiballabh Sharma	Assitant Professor
20	Mr. Deepak Chaturvedi	Assitant Professor
21	Mr. Jogananda Goswami	Assitant Professor
22	Ms. Jyoti Sharma	Assitant Professor
23	Mr. Gaurav Jain	Assitant Professor
24	Mr. Puneet Sharma	Associate Lecturer
<b>Electrical &amp; Electronics Engineering Department</b>		
25	Mr. Prashant Singh Rathore	Assitant Professor
26	Ms. Aparajita Pandey	Assitant Professor
<b>Management Department</b>		
27	Dr. Roopali Sharma	Associate Professor
28	Dr. Ritu Arora	Assitant Professor
29	Ms. Pankaj Sharma	Assitant Professor
30	Ms. Aditi Sharma	Assitant Professor
31	Mr. Sumit Kulshrestha	Associate Lecturer
32	Mr. Priyanshu Sharma	Associate Lecturer
33	Ms. Purvi Mathur	Associate Lecturer
<b>Animation &amp; Multimedia Department</b>		
34	Dr. Vibhuti Pandya	Assitant Professor
35	Mr. Vivek Sharma	Assitant Professor
36	Mr. Gautam Kumar Goswami	Assitant Professor
37	Mr. Bidyut Jyoti Baruah	Assitant Professor
38	Mr. Manish Kumar	Associate Lecturer
39	Ms. Rishika Sharma	Associate Lecturer
40	Ms. Neeraja Sharma	Scientific Officer
<b>Applied Chemistry Department</b>		
41	Dr. S.K. Sharma	Professor
42	Dr. (Mrs) Ranjana Agarwal	Assitant Professor
43	Ms. Rajni Agrawal	Jr. Scientific Officer

<b>Applied Physics Department</b>		
44	Dr. Ram Prakash	Reader
45	Mr. Anand Kumar Srivastava	Assitant Professor
46	Dr. Dheeraj Bhardwaj	Assitant Professor
47	Mr. Ravindra Kumar	Associate Lecturer
<b>Applied Mathematics Department</b>		
48	Dr. Anuj Kumar Jhankal	Assitant Professor
49	Dr. Gurminder Singh Malhotra	Assitant Professor
50	Mr. Indra Kumar Dadheech	Assitant Professor
51	Dr. (Mrs.) Bhawna Agarwal	Assitant Professor
<b>Mechanical Department</b>		
52	Mr. Abinash Pankaj	Scientific Officer
53	Mr. Vikas Sangwan	Assitant Professor
<b>Humanities Department</b>		
54	Ms. Ritu Pareek	Associate Lecturer
<b>Biotechnology Department</b>		
55	Dr. M. Krishna Mohan	Professor
56	Mr..P.S.Solanki	Assitant Professor
57	Dr. R.K. Gothwal	Assitant Professor
58	Ms. Shivani Chandra	Associate Lecturer

**BIT EXTENSION CENTRE, KOLKATA**

S. No.	Name	Designation
1	Mr. R T Goswami	In Charge
2	Mr. S Chaudhuri	Associate Professor
3	Dr S Mukhopadhyaya	Associate Professor
4	Dr A De Sarkar	Reader
5	Mr. A Dutta	Assistant Professor
6	Mr. Rohit Kamal Chatterjee	Assistant Professor
7	Dr Sandip Kumar Sengupta	Assistant Professor
8	Ms. Sanchita Ghosh	Assistant Professor
9	Dr Ruchira Mukherjee	Assistant Professor
10	Dr Sraboni Dutta	Assistant Professor
11	Mr. Soumendra Bhattacharjee	Assistant Professor

12	Mr. Ranadeep Mukherjee	Associate Lecturer
13	Mrs. Sohini Ghosh	Associate Lecturer
14	Mr. Khalid Ashraf	Associate Lecturer
15	Mr. Soumya Ray	Associate Lecturer
16	Ms. Keka Das	Associate Lecturer

**BIT EXTENSION CENTRE LALPUR**

Sl. No.	Faculty Name	Designation
1.	Dr. A.N. Jha	Professor
2.	Dr. Vandana Bhattacharjee	Associate Professor
3.	Ms. Anupma Sahai	Assistant Professor
4.	Mr. Arun Kr. Singh	Assistant Professor
5.	Dr. Pranab Kumar	Assistant Professor
6.	Mr. A.R. Srivastava	Assistant Professor
7.	Mr. Somnath Mukherjee	Assistant Professor
8.	Mr. S.N. Sah Deo	Assistant Professor
9.	Mr. Ashutosh Mishra	Assistant Professor
10.	Mr. Syed Anis Haider	Assistant Professor
11.	Mr. Amitabh Chandan	Assistant Professor
12.	Mrs. Mili Dutta	Assistant Professor
13.	Mr. J. Bhagat	Associate Lecturer
14.	Mrs. Amrita Priyam	Assistant Professor
15.	Mrs. Onima Tigga	Assistant Professor
16.	Mr. N.P. Tiwari	Assistant Professor
17.	Ms. Jaya Pal	Assistant Professor
18.	Mr. Sanjay Kumar	Assistant Professor
19.	Mr. Amar Kumar	Assistant Professor
20.	Mr. Partha Sarathi Bishnu	Assistant Professor
21.	Mr. Binod Kumar Sharma	Assistant Professor
22.	Mr. Kuntal Mukherjee	Assistant Professor
23.	Mr. D.K. Mishra	Associate Lecturer
24.	Mr. Umesh Prasad	Associate Lecturer
25.	Ms. Shamama Anwar	Associate Lecturer
26.	Mr. Soumitro Chakravarty	Associate Lecturer
27.	Mr. Satrajeet Choudhury	Associate Lecturer
28.	Mr. Avinash Sinha	Associate Lecturer
29.	Ms. Swati Priyadarshani	Associate Lecturer

**BIT EXTENSION CENTRE, NOIDA**

S. No.	Name	Designation
<b>Computer Science</b>		
1.	Col. Balwant Sharma	Director
2.	Mr. C.S. Suryanarayan	Assistant Professor
3.	Mr. S.P. Singh	Assistant Professor
4.	Dr(Mrs) Ila Sahay	Assistant Professor
5.	Mr. Anil Kumar	Assistant Professor
6.	Mr. Pankaj Gupta	Assistant Professor
7.	Ms. Mrinalini Mehta	Assistant Professor
8.	Ms. Vibha Kaw	Assistant Professor
9.	Ms. Soma Sircar	Assistant Professor
10.	Ms. Shruti Kohli	Assistant Professor
11.	Mr. Aruna Malik	Assistant Professor
12.	Mr. Rayees Ahmed	Assistant Professor
13.	Ms. Sheetal Dhir	Assistant Professor
14.	Ms. Pramila Joshi	Assistant Professor
15.	Ms. Muntaha Ahmad	Assistant Professor
16.	Ms. Smitha Jha	Assistant Professor
17.	Mr. Anurag Joshi	Assistant Professor
18.	Ms. Priti Sharma	Assistant Professor
19.	Ms. Siba Mitra	Assistant Professor
20.	Ms. Charu Wahi	Assistant Professor
21.	Ms. Seema Sharma	Sr. Software Engineer
22.	Ms. Vijaya Lakshmi	Jr. Scientific Officer
23.	Ms. Lipika Jha	Associate Lecturer
24.	Mr. Rakesh Singh	Associate Lecturer
<b>Management</b>		
25.	Dr. S.L. Gupta	Professor
26.	Dr. Munish	Professor
27.	Dr. Asha Prasad	Associate Professor
28.	Dr. Vandana Sharma	Associate Professor
29.	Ms. Rachana Pratik	Assistant Professor
30.	Ms. Meenakshi Sharma	Assistant Professor
31.	Ms. Harpreet Charanjit	Assistant Professor
32.	Ms. Ritu Jain	Assistant Professor
33.	Ms. Preety Bajaj	Assistant Professor



34.	Mr. Arun Mittal	Assistant Professor
35.	Mr. K.B. Singh	Assistant Professor
36.	Dr. Monika Bisht	Assistant Professor
37.	Dr. Abhishek Singh	Assistant Professor
38.	Dr. Suparna Dutta	Assistant Professor
39.	Mr. Prashant Kumar	Assistant Professor
40.	Ms. Anupama Sharan	Associate Lecturer

**Animation & Multimedia**

41.	Mr. Kiran A. Shetti	Sr. Animation Trainer
42.	Mr. Lalit Mohan Bhatt	Editor
43.	Mr. Rahul Dora	Sr. Animator
44.	Mr. Partha Acharya	Faculty
45.	Mr. Niket Mehta	Assistant Professor
46.	Mr. Das Mohan Singh	Designer (Backgr. Layout)
47.	Mr. Aroop Kerketta	Faculty
48.	Mr. Obed H. Longvah	Cinematographer
49.	Mr. Manoj Kumar	Animator
50.	Mr. Amit K. Singh	Animator

**BIT EXTENSION CENTRE, PATNA**

S.No.	Name of the Faculty	Designation
1.	Prof. B. N. Giri	Director
2.	Dr. S. P. Lal	Deputy Director
3.	Dr. K. K. Shrivastava	Professor
4.	Prof. D. P. Singh	Visiting Professor
5.	Dr. B. N. Jha	Visiting Professor
6.	Prof. S. K. Sinha	Visiting Professor
7.	Dr. A. K. Singh	Associate Professor
8.	Dr. Pradeep Choudhary	Associate Professor
9.	Dr. S. K. Sinha	Assistant Professor
10.	Dr. K. P. Tiwary	Assistant Professor
11.	Dr. Binay Bhushan	Assistant Professor
12.	Dr. K. Sharma	Assistant Professor
13.	Dr. Trishna Paul	Assistant Professor
14.	Dr. Neelam Kumari	Assistant Professor

15.	Mr. Girish Pathak	Assistant Professor
16.	Mr. Kanhaiya Lal	Assistant Professor
17.	Mr. Ashish Ranjan	Assistant Professor
18.	Mrs. Sheel Shalini	Assistant Professor
19.	Mr. Shridhar Kumar	Assistant Professor
20.	Mrs. Anubha Singh	Assistant Professor
21.	Mrs. Subha Sinha	Assistant Professor
22.	Mr. Prashant Kumar	Assistant Professor
23.	Mr. Shahiruddin	Assistant Professor
24.	Ms. Poonam Priyadarshini	Assistant Professor
25.	Ms. Megha Dadel	Assistant Professor
26.	Mr. Sudhanshu Verma	Assistant Professor
27.	Mr. Atul Kumar Pandey	Assistant Professor
28.	Mr. Ritesh Kumar Badhai	Assistant Professor
29.	Ms. Shipra	Assistant Professor
30.	Ms. Nirmala Soren	Assistant Professor
31.	Mr. Sanjay Kumar -I	Assistant Professor
32.	Mr. Sanjay Kumar -II	Assistant Professor
33.	Mr. Rajesh Babu Mallela	Assistant Professor
34.	Mr. Mayank Singh	Assistant Professor
35.	Mr. S. K. Pradhan	Assistant Professor
36.	Mr. Soumen Mandal	Assistant Professor
37.	Mr. M. A. Hassan	Assistant Professor
38.	Mr. Anand Kumar	Assistant Professor
39.	Mr. Sharan Chandran M.	Assistant Professor
40.	Mr. Ravi Shankar Anand	Assistant Professor
41.	Mr. Kapildeo Prasad	Assistant Professor
42.	Mr. Bimal Nathniel Aind	Assistant Professor
43.	Mr. Thakur Abhinav Amar	Assistant Professor
44.	Mr. Anish	Associate Lecturer
45.	Mr. Mayank Kr. Singh	Associate Lecturer
46.	Mr. Abhilash Shukla	Associate Lecturer
47.	Md. Shams Tabrez	Associate Lecturer

48.	Mr. Madhup Kumar	Associate Lecturer
49.	Ms. Smita Srivastava	Associate Lecturer
50.	Mr. Adnan Mahmood	Associate Lecturer
51.	Mr. Raghav Mallik	Associate Lecturer
52.	Mr. Vijay Kr. Mandal	Associate Lecturer
53.	Mr. Prashant Prakash	Associate Lecturer
54.	Mr. Raj Kumar Mishra	Associate Lecturer
55.	Mr. Piyush Shankar Priya	Associate Lecturer
56.	Mr. Raj Kumar Mishra	Associate Lecturer
57.	Mr. Piyush Shankar Priya	Associate Lecturer
58.	Mrs. Paramjit Kour	Associate Lecturer
59.	Mr. Suresh Singh Yadav	Associate Lecturer
60.	Mr. Abu Nasar Ghazali	Teaching-cum-Research Fellow
61.	Mrs. Sweta Kumari	Teaching-cum-Research Fellow
62.	Mrs. Smita Pallavi	Jr. Teaching-cum-Research Fellow
63.	Mr. Ram Kumar Karsh	Jr. Teaching-cum-Research Fellow
64.	Mrs. Somali Fouzadar	Yoga Instructor
65.	Mr. K. C. Bajpai	Visiting Faculty
66.	Mrs. S. Bajpai	Visiting Faculty
67.	Mrs. Sudha Thakur	Visiting Faculty
68.	Mrs. Debashree Guha	Research Associate

**BIT INTERNATIONAL CENTRE, MUSCAT**

S.N.	Name	Designation
1	Dr. Mohan Varma	Director & Dean
<b>MANAGEMENT DEPARTMENT</b>		
2	Dr. Ganesh Prasad Mishra	Associate Professor
3	Mr. Jyoti K Chandel	Assistant Professor
4	Mr. Iftekhar Ahmad	Assistant Professor
5	Mr. Mithun Srivastava	Assistant Professor
6	Mr. Sayeed Aulia	Assistant Professor
7	Mr. Niraj Mishra	Assistant Professor
8	Mr. Sushil Kumar	Assistant Professor
9	Ms. Srilekha Goveas	Assistant Professor
10	Dr. Seema Varshney	Assistant Professor

11	Ms. Nupur Sen	Assistant Professor
12	Ms. Blossom Christina	Assistant Professor
13	Ms. Neelufer Aslam	Assistant Professor
14	Mr. A. Prakash	Assistant Professor
15	Ms. Soofi Asra Mubeen	Assistant Professor
16	Dr. Sheeba Khan	Assistant Professor
17	Ms. Sameena Begum	Assistant Professor
18	Mr. Arvind Hans	Assistant Professor
19	Mrs. Kusum Lata Mishra	Associate Lecturer
20	Mr. Sultan Khan	Assistant Professor

**COMPUTER SCIENCE**

21	Ms. P. Vijaya	Assistant Professor
22	Mr. Satish Chander	Assistant Professor
23	Mr. Sanjay Kumar	Assistant Professor
24	Mr. Shahid Ali	Assistant Professor
25	Ms. Vallikannu R. M.	Assistant Professor
26	Ms. S. B. Sinyamol	Assistant Professor
27	Dr. Santosh Kumar Ray	Assistant Professor
28	Mr. Arbind Kumar Choudhary	Assistant Professor
29	Ms. Anu Manchanda	Assistant Professor
30	Ms. Cimi Thomas	Assistant Professor
31	Dr. Rajnish Kumar	Assistant Professor
32	Ms. Alycia Edwin	Assistant Professor
33	Mrs. Akrti Kaul	Assistant Professor
34	Mr. Sounak Paul	Assistant Professor

**ELECTRONICS & COMMUNICATION**

35	Mr. Akhilesh Roy	Assistant Professor
36	Mr. Vikash Sharma	Assistant Professor
37	Ms. Anasuya Patil	Assistant Professor
38	Mr. Shyam Sunder Purohit	Assistant Professor
39	Ms. Smitha Felix	Assistant Professor
40	Mr. Rajeev Ranjan	Assistant Professor
41	Mrs. Priya C Rajan	Assistant Professor
42	Dr. Rajeev Kumar	Assistant Professor
43	Mrs. Mallika Sadhu	Assistant Professor

<b>ELECTRICAL ENGINEERING</b>		
44	Dr. Nutanlata Nath	Associate Professor
45	Mr. Mohd Mohatram	Assitant Professor
<b>MECHANICAL ENGINEERING</b>		
46	Mr. Anil Kumar Sharma	Assistant Professor
47	Mr. Praveen James Sanga	Assistant Professor
<b>MATHEMATICS</b>		
48	Dr. Prabal Datta	Assistant Professor
49	Dr. Neeraj Kumar Pandey	Reader
50	Mrs. P.K. Jayalakshmi	Assistant Professor
<b>BIOTECHNOLOGY</b>		
51	Dr. Padmini Padmanabhan	Professor
52	Dr. Sadaf Zahra	Assistant Professor
53	Ms. Atiya Tabassum	Assistant Professor
54	Ms. Sharmila Queenthly	Assistant Professor
55	Dr. Avneesh Pareek	Assistant Professor
56	Ms. Koel Mukherjee	Associate Lecturer
<b>ENGLISH</b>		
57	Ms. Indrani Basu	Assistant Professor
58	Mr. David Manohar	Assistant Professor
59	Mr. El Amin El Nur	Assistant Professor
60	Ms. Smita Prasad	Assistant Professor
61	Ms. Sara Mubarek Al-Hedabbi	Assistant Teacher
62	Ms. Nejma Muhammed	Assistant Professor
63	Mr. Khalid Humaid Al-Gharibi	Assistant Teacher
64	Mr. Roby Varghese	Assistant Professor

***BIT INTERNATIONAL CENTRE, RAK, UAE***

<b>S. No.</b>	<b>Name</b>	<b>Designation</b>
1.	Dr. Debajyoti Biswas	Reader
2.	Dr. Peeyush Tewari	Reader
3.	Mr. Gaurav Singh	Assistant Professor
4.	Mr. Vishwambhar Pathak	Assistant Professor
5.	Mr. Ayaz Ahmed Shariff	Assistant Professor
6.	Mr. KN Murugavel	Assistant Professor
7.	Dr. Prabhat Kumar Upadhyay	Assistant Professor
8.	Ms. Indu Nair	Assistant Professor

9.	Mrs. Thaseen Fatima	Assistant Professor
10.	Mr. Ranjeet Ranjan	Assistant Professor
11.	Dr. K. Durga Prasad	Assistant Professor
12.	Mr. CT Sunil Kumar	Assistant Professor
13.	Mr. V. Rajesh	Assistant Professor
14.	Mrs. A.S. Padmasree	Assistant Professor
15.	Mr. D. Ravikumar	Assistant Professor
16.	Mr. Anuj Kumar Toppo	Assistant Professor
17.	Mrs. Nayana R. Singh	Assistant Professor
18.	Mr. Sanjay Kumar	Assistant Professor
19.	Mrs. Gisha George	Assistant Professor
20.	Mrs. Girija Srikanth George	Assistant Professor
21.	Mrs. Sowmiya Seenath	Assistant Professor
22.	Mrs. Tina Francis	Assistant Professor
23.	Mrs. Veena Vinod	Assistant Professor
24.	Mrs. Reshma Gopi	Assistant Professor
25.	Mrs. Vidya Ragesh	Assistant Professor
26.	Mrs. Deepthy Manikantan	Assistant Professor
27.	Mrs. Pampa Nandi	Assistant Professor
28.	Mrs. Bincy Charls	Assistant Professor
29.	Mrs. Annie Threse Edwis	Assistant Professor
30.	Ms. Shimna Shafeeq	Assistant Professor
31.	Mr. Soofi Anwar	Assistant Professor
32.	Ms. Shalini Bedi	Assistant Professor
33.	Mrs. Divya Sunny	Assistant Professor
34.	Mrs. Mincy Oommen	Assistant Professor
35.	Mrs. Sathya Pramod	Assistant Professor
36.	Mr. Sambath Kumar	Associate Lecturer
37.	Mrs. B. Rajani	Associate Lecturer

## DEPARTMENT OF APPLIED CHEMISTRY

The Department of Applied Chemistry was established in 1956 and supports the Institute's undergraduate, postgraduate and Ph.D. programmes in pure and applied chemistry including a multidisciplinary programme M. Tech in Environmental Science & Engineering.

The Department offers following courses :

M.Sc. In Applied Chemistry -2 Year (4-Semester)

M.Sc. Chemistry (INTEGRATED)-5 Year (10-Sem)

Ph.D. (in Pure & Applied Chemistry)

The post graduate programmes of the department are interdisciplinary in nature, designed to provide an in-depth knowledge in various aspects of basic and applied chemistry relevant to current academic and research prospects in **Organic & Medicinal Chemistry, Environmental & Inorganic Chemistry, Materials & Computational Chemistry**. The aim is to prepare students for entry into Ph.D. programs, academics and careers in R & D laboratories. Several R & D Laboratories and Pharmaceutical Industries (Dr. Reddy's Lab, Ranbaxy, Sphaera, Fresenius etc) are in collaboration with us to promote our educational and research environment. Laboratory courses are designed to provide hand-on experience of working with various sophisticated instruments like ICP-AES, AAS, FTIR, GC, UV-Vis, GC-MS, HPLC, HPTLC, DSC, TGA, SEM, AFM and Electrochemical Analyzer.



Applied Chemistry Research Laboratory

The department has quality research programs supported by UGC, DST, DBT, UNICEF and the World Bank. The Department has developed as a nodal centre to answer problems related to Qualitative and Quantitative Analysis of Various Environmental Pollutants and Engineering Materials. Faculty members of the department have actively participated in the "INSPIRE" programme which was an initiative of the DST to induct & encourage students to enter into the realms of basic science education & research. The Department is actively involved in promoting environmental awareness amongst the tribal and rural population in Jharkhand

### Innovative R&D Efforts :

Development of novel materials for detection & removal of toxic pollutants.

Development of functionalized polymeric biomaterials

Molecular Modeling & Drug Design

### Introducing Green-Chemistry Practices

Replacement of hazardous chemicals by non toxic substitutes.

Waste Minimization by introduction of semi micro/micro methods of analysis.

An introduction to computational chemistry, molecular modeling & virtual chemistry lab.



**SPONSORED PROJECTS****Projects Sanctioned during July 2010- June 2011**

S. No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Duration of the Project	Sanctioned Amount
1	Synthesis and Evaluation of Carbocyclic Nucleoside Analogs with Exocyclic Double Bond as Anti-HBV HepDirect Prodrug.	Dr. C. Bal	UGC	Feb 2011	3 Yrs	4.40
2	Microwave Assisted Synthesis of Polyacrylamide Grafted Agar, Characterizations and Applications as flocculant for waste water treatment	Dr S. Mishra Dr. G. Sen	UGC	Feb 2011	3 Yrs	5.97
3	Winged Helix domain-oligonucleotide recognition as an axis to develop PfRIO-2 specific inhibitor: implication in anti-malarial drug development.	Dr. C. Bal Dr. A. Sharon	DBT	Jan 2011	3 Yrs	36.85
4	Structure Based Discovery of novel antiviral molecules with potential to inhibit drug resistance viruses	Dr. A. Sharon	DBT	Dec 2010	3 Yrs	21.00
5	Deciphering the mode of antiviral action of isolated phytoconstituents and their synthetic analogues/ counterparts combining structure and analogs-based approach to develop a therapeutic anti-viral candidate.	Dr. A. Sharon	DBT	Dec 2010	3 Yrs	11.55

**Ongoing Projects Sanctioned before July 2010**

SI No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	The target based discovery of carbocyclic nucleosides as an anti-HCV agent through computer assisted drug design and synthesis.	Dr. A. Sharon	DST	Jan 2010	17.0 L	3 Year
2	Computer Assisted Design and Synthesis of carbocyclic nucleosides as an anti-hepatitis agent.	Dr. A. Sharon	UGC	Feb 2010	5.9 L	3 Year
3	Discovery of HepDirect Nucleotide Prodrug as Anti-Hepatitis B Agent	Dr. C. Bal	DST	March 2010	18.8 L	3 Year
4	A Bio-mimetic Approach to get renewable source of Energy	Dr. S. Naskar	DST	2008	18.50	3 Year

### Seminar / Conferences / Short – term Courses Conducted by the Department

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Convenor/ Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Workshop on Water Quality Monitoring & Control	Convener: Dr Usha Jha Coordinator: Dr Sumit Mishra	BIT-Mesra	24-25 May'2011.

### Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, Year
1	Dr. C. Bal	HRMS Training Workshop	Waters	Bangalore	18-20 May, 2011
2.	Dr J.P Pandey, Dr A Sharon, Dr C.Bal, Dr S Mishra Dr G Sen Dr Amiya Priyam	Mission Kyaat	Internal Quality Assurance Cell	BIT-Mesra	June-2011

## PUBLICATIONS

### Publications in International Journals

1. N. C. Bal, N. Jena, D. Sopariwala, T. Balaraju, S. Shaikh, C. Bal, A. Sharon, S. Gyorke, M. Periasamy, Probing cationic selectivity of Cardiac Calsequestrin and its CPVT mutants , Biochemical Journal, 2011, In Press.
2. S. Yasmin, S. Karampuri, A. Sharon, C. Bal Integrase Strand Transfer Inhibitors as potential anti-HIV agent. GEF Bulletin of Biosciences. 2 (2011) 18-25.
3. S. Gadthula, R. K. Rawal, A. Sharon, D. Wu, B. Korba, C. K. Chu Synthesis and antiviral activity of cyclopropyl-spirocarbocyclic adenosine, (4R,5S,6R,7R)-4-(6-amino-9H-purin-9-yl)-7-(hydroxymethyl) spiro[2.4]heptane -5,6-diol against hepatitis C virus. Bioorg. Med. Chem. Lett. 21 (2011) 3982-5.
4. S. Ghosh, U. Jha, S. Pal, 2011 High performance polymeric flocculant based on hydrolyzed polyacrylamide grafted tamarind kernel polysaccharide (Hyd. TKP-g-PAM) Bioresource Technology 102 (2011) 2137–2139.
5. A. K .P.Singh, M.T. Raju, U. Jha; Lab study of the addition of BOF sludge to the sinter blend Steeltimes International, 35, 2011.
6. A. K. P. Singh, M.T. Raju & Usha Jha Recycling of Basic Oxygen Furnace (BOF) sludge in iron and steel works Int. Journal Environmental Technology and Management, 14 (2011) 19.
7. S. K. Swain, U. Jha et al. Development of new Inorganic-Organic Hybrid Ion Exchanger of Zirconium(IV)-Propanolamine for Effluent Removal of Fluoride from Drinking Water. Ind.Eng.Chem. Res. 2011
8. S. Mishra and G. Sen, Microwave initiated synthesis of polymethylmethacrylate grafted Guar (GG-g-

- PMMA), Characterizations and Applications, International Journal of Biological Macromolecules, 48 (2011), 688-694.
9. G. Sen, S. Ghosh, U. Jha, S. Pal, Hydrolyzed polyacrylamide grafted carboxymethylstarch (Hyd CMS-g-PAM): an efficient flocculant for the treatment of textile industry wastewater, Chem. Engg. Journal, 171(2011) 495-501.
  10. S. Mishra, G. Sen, Microwave initiated synthesis of polymethylmethacrylate grafted guar (GG-g-PMMA), characterization and applications, Int.J.Biol. Macrol. 48(2011) 688-694.
  11. S. Ghosh, G. Sen, U. Jha, S. Pal, Novel biodegradable polymeric flocculant based on polyacrylamide grafted tamarind kernel polysaccharide, Bioresource Technology, 101(2010) 9638-9644.
  12. R. Ul Islam, M. J Witcomb, E. van der Lingen, M. S Scurrrell, W. Van Otterlo, K. Mallick, In-situ synthesis of palladium-polyaniline hybrid catalyst for Suzuki coupling reaction, Journal of Organometallic Chemistry, (2011), Accepted.
  13. R. Ul Islam, M. J Witcomb, E. van der Lingen, M. S Scurrrell, W. Van Otterlo, Kaushik Mallick, Conjugated polymer stabilized palladium nanoparticles as a versatile catalyst for Suzuki cross-coupling reactions for both aryl and heteroaryl bromide systems, Catalysis Science & Technology, Accepted.
  14. S. Mishra, A. Mukul, G. Sen, U. Jha, Microwave assisted synthesis of polyacrylamide grafted starch (St-g-PAM) and its applicability as flocculent for water treatment, International Journal of Biological Macromolecules, 48 (2010) 106-111.
  15. S. Naskar, S. Naskar, H. M. Figgie, W. S. Sheldrick, S. Kumar Chattopadhyay, 2011, Synthesis, X-ray crystal structures, spectroscopic and cyclic voltammetric studies of Cu(II) Schiff base complexes of pyridoxal, Polyhedron, 30(2011) 529-534.
  16. R. U. Islam, M. J. Witcomb, M. S. Scurrrell, W. Van Otterlo, K. Mallick, *In situ* synthesis of a Pd-poly(1,8-diaminonaphthalene) nanocomposite: An efficient catalyst for Heck reactions under phosphine-free conditions Catalysis Communication 12 (2010) 116-121.
  17. R. Ul Islam, M. M. Johnson, R. Mohammed, J. Hean, P. Arbuthnot, C. B. De Koning, W. A. L. Van Otterlo, The synthesis of substituted piperazine cholesterol conjugates for use as components of nucleic acid transfection lipoplexes" S. Afr. J. Chem., 63 (2010) 88-94
  18. J. Hean, C. Crowther, A. Ely, R. Ul Islam, S. Barichievy, K. Bloom, M. S. Weinberg, W. van Otterlo, C. de Koning, F. Salazar, P. Marion, E. Roesch, M. LeMaitre, P. Herdewijn, P. Arbuthnot, Inhibition of hepatitis B virus replication in vivo using lipoplexes containing altitol-modified antiviral siRNAs" Artificial DNA: PNA & XNA, 1 (2010), 1-10.
  19. S. Naskar, S. Naskar, Ray J. Butcherb and S. Kumar Chattopadhyay, 2010, Synthesis and spectroscopic properties of Ni(II) complexes of some aroyl hydrazone 2 ligands with 2,6-diacetyl pyridine monooxime. X-ray crystal structure of the 3 salicyloylhydrazone Ni(II) complex, Inorganica Chimica Acta, 363, 14, 3641-3646
  20. Deep Shikha, Usha Jha, S. K. Sinha, P. K. Barhai, K. G. M. Nair, D. C. Kothari, 2010 "A comparative study of corrosion resistance in Ringer solution of nitrogen implanted alumina at different energies for orthopedic implants", Int. J. Appl. Ceram. Technol., 7 (2010), 156-163.
  21. N. C. Bal, A. Sharon, S. C. Gupta, N. Jena, S. Shaikh, S. Gyorlke, M. Periasamy The CPVT mutation R33Q disrupts the N-terminus structural motif that regulates reversible calsequestrin polymerization, J. of Biological Chemistry, 285 (2010), 17188 .

22. Y. Kim, R. K. Rawal, A. K. Jha, A. Sharon, C. K. Chu, R. H. Rais, O. N. Al Safarjalani, F. N. M. Naguib, M. H. el Kouni, C. K. Chu, Structure-Activity Relationships of Carbocyclic 6-Benzylthioinosine Analogues as Subversive Substrates of *Toxoplasma gondii* Adenosine Kinase. *Bioorg Med Chem Lett.* 18 (2010), 3403.
23. J. R. Rao, A. K. Jha, R. K. Rawal, A Sharon, C. W. Day, D. L. Barnard, D. F. bSme, C. K. Chu, (-)-Carbodine: Enantiomeric synthesis and in vitro antiviral activity against various strains of influenza virus including H5N1 (avian influenza) and novel 2009 H1N1 (swine flu). *Bioorg Med Chem Lett.* 20, (2010) 2601-4.
24. M. Karuppasamy, M. Mahapatra, S. Yabanoglu, G. Ucar, B. N. Sinha, A. Basu, N. Mishra, A. Sharon, U. Kulandaivelu, V. Jayaprakash, Development of selective and reversible pyrazoline based MAO-A inhibitors: Synthesis, biological evaluation and docking studies. *Bioorg Med Chem*, 18 (2010) 1875-81.
25. S. Mishra and G. Singh, "A Study on Particle Size Distribution Profile of Coal Combustion Residues from Thermal Power Plants of India", *Asian Journal of Research in Chemistry*, 3 (2010) 386-388.
26. G. Sen, S. Mishra, U. Jha, Sagar Pal, Microwave initiated synthesis of polyacrylamide grafted guar gum (GG-g-PAM) – characterizations and application as matrix for controlled release of 5-amino salicylic acid" *International Journal of Biological Macromolecules*, 47 (2010) 164-170.
27. A. A. Deshmukh, R. U. Islam, M. J. Witcomb, W. A. L. van Otterlo, N. J. Coville Catalytic Activity of Metal Nanoparticles Supported on Nitrogen-Doped Carbon Spheres, *ChemCat Chem*, 2 (2010) 51-54.
28. S Naskar, S Naskar, H. M. Figgie, W.S. Sheldrick, S. K. Chattopadhyay. 2010, "Synthesis, crystal structures and spectroscopic properties of two Zn(II) Schiff's base complexes of pyridoxal" *Polyhedron*, 29 (2010), 493-499.
29. S. Naskar, S Naskar, R. J. Butcher, S. K. Chattopadhyay., "Synthesis, X-ray crystal structure and spectroscopic properties of two Ni(II) complexes of pyridoxal Schiff's base of diamines. Importance of steric factors in stabilization of water helices in the lattices of metal complex" *Article, Inorganica Chimica Acta*, 363 (2010) 404–411.
30. A. Priyam, D.E. Blumling and K.L. Knappenberger, Jr., 2010, "Synthesis, Characterization and Self-organization of Dendrimer-encapsulated HgTe Quantum Dots", *Langmuir*, 26 (2010), 10636-10644.
31. Usha Jha , R. K. Dey ,G. S. Tiwari , 2010, Controlled release of 5-aminosalicylic acid from a new pH responsive polymer derived from tamarind seed polysaccharide, acrylic acid and polyamidoamine, *Polymer Bulletin* 66 (2010), 583-598
32. S. Ghosh, U. Jha ,S. Pal; 2010. High performance polymeric flocculant based on hydrolyzed polyacrylamide grafted tamarind kernel polysaccharide (Hyd.TKP-g-PAM); *Bioresource Technology* 2010.

#### Papers/Abstracts in Conference Proceedings

1. Vinit Sehgal, Sumit Mishra, Gautam Sen, Preeti Rani, Studies on Development of a Novel Fly Ash Based Zeolite for Waste Water Treatment, March, 2011. *World Forum for advanced Materials*, pp 129, Polychar-19, 20-24 March, Tribhuvan University, Kathmandu, Nepal.
2. Gautam Sen, Sumit Mishra, Shweta Sinha, Vinit Sehgal, Microwave Initiated Synthesis and Characterization of Polyacrylamide Grafted Guar (Guar-g-PAM) and its Applications, *World Forum for advanced Materials*, pp129, Polychar-19, 20-24 March, Tribhuvan University, Kathmandu, Nepal, 2011.
3. T. Balaraju, C. Bal, A. Sharon, A molecular dynamics study of HIV-integrase towards anti-HIV drug

discovery, 15<sup>th</sup> ISCB International Conference at Dept. of Chemistry, Saurashtra University, Rajkot, 4<sup>th</sup> – 7<sup>th</sup> Feb, 2011.

4. R. Kuhu, T. Balaraju, A. Kesharwani, S. Ganguly, Ashoke Sharon; Targeting drug discovery catalyzed by 3D HIV-Integrase model. BIT's 1<sup>st</sup> World Congress of Virus and Infections 2010 (WCVI-2010) July 31-Aug 03, 2010. Busan, South Korea.
5. S. Mishra, G. Sen, V. Sehgal and Preeti Rani, 19-21 Dec 2010, "Development of a Novel fly ash based Zeolite for treatment of Waste Water", Annual Convention of Indian Council of Chemists, Panjab University, Chandigarh, Vol.29, pp 229.
6. G. Sen, S. Mishra, N. Sharma, S. Mitra and P. Pradhan, 19-21 Dec 2010, "Studies on Co-relation of Physical Properties of Coal Combustion Residues and their Utilization Aspects", Annual Convention of Indian Council of Chemists, Panjab University, Chandigarh, Vol.29, pp.229.
7. Sanjay Swain, Usha Jha Sulagna Mishra "The occurrence & geochemistry of fluoride in ground water of Boiragaon panchayat, Orissa. Accepted for oral presentation at ICEC 10, Jalandhar, ct 2010
8. S. Swain, U. Jha S. Mishra "Monitoring the fluoride contamination status of ground water : Correlation with physicochemical parameters" IIT Kanpur, 2010
9. S. Swain, U. Jha S. Mishra "Removal of fluoride using Aluminium impregnated chitosan" NCRAS, University of Bikaner, 2010

#### Chapter contributed to Edited Volume

1. G. Sen, A. Sharon, S. Pal, Grafted polysaccharides: Smart Materials of the Future. Their Synthesis and applications. Editors: Susheel Kalia & Luc Averous : Wiley – Scrivener Publishing ( in press).

#### Award / Recognition Bestowed on Faculty ( State / National / International )

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr. A. Sharon	International Young Scientist Travel Grant Award	DST, Delhi	July 2010

#### Departmental Students' Activities

S. No.	Name of the Activity	Student's coordinator	Date/Duration
1.	Workshop on water Quality Monitoring & Control	Ankita Mukul	24-25 May'2011
1	DST Inspire program	Ranjana Jha	Dec 20-24 2010
2	DST Nurturance program for National talent search Awardees (IX-X standard)	Preeti Rani	Feb 1-5, 2011
3	Young scientist award for oral presentation of the paper 'Development of a novel fly ash based zeolite for treatment of waste water' at 29 <sup>th</sup> Convention of Indian Council of Chemists, held at Punjab University, Chandigarh.	Vineet Sehgal Preeti Rani	19 <sup>th</sup> to 21 <sup>st</sup> December 2010.

## Members on Board of Studies

Chairman: Dr. Usha Jha, Head of the department

Members :

- |                          |                   |                         |
|--------------------------|-------------------|-------------------------|
| 1. Dr. J P Pandey        | 2. Dr. A. Sharon  | 3. Dr. S. Mishra        |
| 4. Dr. S. Naskar         | 5. Dr. Deepshikha | 6. Dr. Rafique ul Islam |
| 7. Dr. Mandira Mukherjee |                   |                         |

Panel of experts from outside the institute

1. Dr. M.K. Bannerjee: Professor Dept. of Chemistry NIT Jamshedpur
2. Dr. N.M. Mishra : Associate Professor ISM Dhanbad
3. Dr. Sanjay Mishra  
Professor & Head  
Ranchi University, Ranchi
4. Dr. Ashok Kumar  
Head, Medicinal Chemistry  
IPCA Lab Ltd.
5. Dr. Ian Cliffe  
Director- Head, Medicinal Chemistry  
New Drug Discovery Research  
Ranbaxy laboratories Ltd. R & D Centre  
R & D 111, Plot No 20 Sect 18  
Udyog Vihar Industrial Area  
Gurgaon 122015 Haryana  
Ph. 91-124-2397759, 91-124-4194400  
Email: ian.cliffe@ranbaxy.com
6. Dr. S. K. Dubey  
CEO, Fresenius Kabi India Pvt. Ltd.

## DEPARTMENT OF APPLIED MATHEMATICS



Radiosonde observations for upper boundary layer

and GIS softwares. Department has its own Departmental Library supported by the National Board for Higher Mathematics, Dept. of Atomic Energy which fulfils the requirements of faculty as well as students.

The Department of Applied Mathematics has been offering the courses on (i) M.Tech. in Scientific Computing, and (ii) M.Sc. in Applied Mathematics. From the current academic session Department has introduced a new course on Five Years Integrated M.Sc. in Mathematics and Computing. Department has established strong R & D group on Music and Speech Therapy using Statistical software and modeling, differential equations, Differential epidemic model of virus and worms in computer network Cyber crime and defense. Department has strong computational facility with different mathematical as well as statistical

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
01	Analyzing the structure and performance of Hindustani Classical music through Statistics	Dr. Soubhik Chakraborty	UGC	17 Feb 2011	Rs. 4,85,200	Two years wef 01/02/2011 to 31/01, 2013 (as a Major Research Project in Humanities and Social Sciences)

#### Ongoing Projects Sanctioned before July 2010

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Green's function, existence and asymptotic behavior of periodic solutions of functional differential equations	Dr. Seshadev Padhi	National Board for Higher Mathematics, Dept. of Atomic Energy, Govt. of India	As per letter no 48/5/2006-R&DII/ 1350 dated 26.02.2007	12,75000/- approx.	2007-2012

2.	NBHM - Library Grant to strengthen the Departmental Library		National Board of Higher Mathematics, DAE, GOI		4.0 Lakhs has recvd.	
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**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date, Month, Year
1	Dr. Soubhik Chakraborty	National Symposium on Acoustics (NSA) 2010	Pt. LMS Govt. P.G. College, Rishikesh and Acoustical Society of India	Pt. LMS Govt. P.G. College, Rishikesh, Uttarakhand, India	Nov 11-13, 2010
2	Dr. Soubhik Chakraborty	International Symposium Frontiers of Research on Speech and Music and Computer Music Modeling and Retrieval (FRSM/CMMR-2011)	ITC SRA, Kolkata ABV IITM, Gwalior AIISH, Mysore CVRCMP, Jadavpur univ Aalborg univ, Denmark CNRS, France	Deptt. of Computer Sc. & Appln, Utkal Univ, Bhubaneswar, Orissa, India	Mar 09-12, 2011
3	Dr. Seshadev Padhi	National Conference on Recent Trends in Mathematical Analysis and Applications (chaired a session and Invited Speaker)	Berhampur University	Dept. of Maths., Berhampur Univ.	22-23 December, 2010
		International Conference on Mathematics of Date (chaired a session and Invited Speaker)	Puspa Publishing House	Allahabad	31 December 2010-04 January 2011
		National Seminar on Differential Equations and Their Applications (Invited speaker and felicitated)	Kandaswami Kandar's College	Vellur, Tamilnadu	10-11 February 2011
		6 <sup>th</sup> International Conference on Dynamic System and Application (Chaired 3 sessions and Invited speaker)	Morehouse College, Atlanta	Atlanta	25-28 May 2011



		Delivered 1hr 30 mins special lecture in a Seminar in Dept. of Mathematics,	University of Tennessee at Chattanooga	Chattanooga, Tennessee	31 May 2011
		9 <sup>th</sup> Colloquium on Qualitative Theory of Differential Equation (contributed speaker and chairing a session)	Bolyai Institute, University of Szeged	Szeged, Hungary	28 June -01 July 2011
4	Ms. Smita Pati	International Congress of Mathematicians (attended)	International Mathematical Union	HICC, Hyderabad	19-27 August, 2010
		National Conference on Recent Trends in Mathematical Analysis and Applications (paper presented)	Berhampur University	Dept. of Maths., Berhampur Univ.	22-23 December, 2010
		International Conference on Mathematics of Date (Paper presented)	Puspa Publishing House	Allahabad	31 December 2010-04 January 2011
		National Seminar on Differential Equations and Their Applications (Invited speaker)	Kandaswami Kandar's College	Vellur, Tamilnadu	10-11 February 2011
		Research Scholars Day (Paper presented)	BIT, Mesra	Ranchi	26-27 March 2011
		School and Conference on Mathematics and Physics of Soft and Biological Matter	International Center for Theoretical Physics	Trieste, Italy	2-13 May 2011
		9 <sup>th</sup> Colloquium on Qualitative Theory of Differential Equation (contributed talk)	Bolyai Institute, University of Szeged	Szeged, Hungary	28 June -01 July 2011

## PUBLICATIONS

### Published in International Journals

1. Bimal Kumar Mishra, Samir Kumar Pandey, DYNAMIC MODEL OF WORMS WITH VERTICAL TRANSMISSION IN COMPUTER NETWORK, Applied Mathematics and Computation, 217(2011)8438-8446
2. Bimal Kumar Mishra, Aditya Kumar Singh, TWO QUARANTINE MODELS ON THE ATTACK OF MALICIOUS OBJECTS IN COMPUTER NETWORK, Mathematical problems in Engineering, In Mathematical Problems for Complex Networks, Hindawi Publishing Corporation, doi:10.1155/2012/407064

3. Bimal Kumar Mishra, G.M.Ansari, Differential epidemic model of virus and worms in computer network, International Journal of Network Security, Accepted
4. Bimal Kumar Mishra, Hemraj Saini, T.C.Panda, Computing the Spreading Power of a Business Portal to Propagate the Malicious Information in the Network, International Journal of Web Portals, 3(2), 14-22, April-June 2011
5. Bimal Kumar Mishra, Upendra Kumar, and G. Sahoo, An E-Epidemic Model for Developing a Defense Mechanism against Computer Worms, CiiT International Journal of Networking and Communication Engineering, Vol 4, Issue 4, April 2011, DOI: NCE042011027, pp 433-435
6. Bimal Kumar Mishra, Samir Pandey, Fuzzy epidemic model for the transmission of worms in computer network, Non Linear Analysis: Real World Applications, 11 (2010) 4335-4341
7. Bimal Kumar Mishra and Aditya Kumar Singh, A Quarantine Model for Malicious Objects in Computer Network, CiiT International Journal of Networking and Communication Engineering, Vol 4, Issue 4, April 2011, DOI: NCE042011028, pp 436-440
8. Bimal Kumar Mishra Samir Kumar Pandey, and Prasanna Kumar Satpathy, A Distributed Time Delay Model of Worms in Computer Network, CiiT International Journal of Networking and Communication Engineering, Vol 4, Issue 4, April 2011, DOI: NCE042011029, pp 441-447
9. Bimal Kumar Mishra, Hemraj Saini, T. C. Panda, Minaketan Panda, Dynamics for Proactive Defense through Self-hardening in the Presence or Absence of Anti Malicious Software, International Journal of Computer Applications, No. 14, article # 16, 81-85, 2010
10. Bimal Kumar Mishra, Aditya Kumar Singh, Global Stability of worms in computer network, Applications and Applied Mathematics: An International Journal, Volume 5, Issue 10, 2010, pp 1511-1528
11. Bimal Kumar Mishra, Hemraj Saini, H.N.Pratihari, T.C.Panda, EXTENDED HONEY POT FRAMEWORK TO DETECT OLD/NEW CYBER ATTACKS International Journal of Engineering Science and Technology, 3(3), March 2011, pp 2421-2426
12. Bimal Kumar Mishra, Samir Pandey, Fuzzy e-epidemic SEIRS model for the transmission of worms in computer network –International Journal of Mathematical Modeling, Simulation and Applications, Vol 4, Issue 1, 2011, pp 19-29
13. D. N. Modi and S. Chakraborty, A Statistical Analysis of Gauss-Seidel Algorithm, Annals Computer Science Series, Vol. VIII, Fasc. 2, 2010, 169-181
14. Dutta, S., S. Chakraborty and N C Mahanti. 2010. A novel method of hiding message using musical notes. Int. J. of Computer Applications, Vol 1(16).
15. For Weibull inputs, International Journal of Computational Cognition, Vol. 9(1), March, 2011
16. John R Graef, Seshadev Padhi, Shilpee Srivastava; Dynamics of a Fishing Model, Accepted for publication in Journal of Neural, Parallel & Scientific Computations
17. Julio G.Dix, S. Padhi, Smita Pati; Multiple positive periodic solutions for a nonlinear first order functional difference equation, Journal of Difference Equations and Applications, 16(9), September (2010), 1037-1046.
18. Julio G.Dix, Seshadev Padhi, S. Pati; Multiple positive periodic solutions for a nonlinear first order functional difference equation, Journal of Difference Equations and Applications, 16(9), September (2010), 1037-1046.

19. Julio G.Dix, Seshadev Padhi;Existence of multiple positive periodic solutions for delay differential equation whose order is a multiple of 4, *Applied Mathematics and Computations*, 216(2010),2709-2717.
20. Lal, Kanhaiya, N C Mahanti. 2010. Mining Association rules for clustured domains by separating disjoint sub-domains in large databases. *J. of Global Research in Computer Sciences*, Vol.1:2, 31-34.
21. Lal, Kanhaiya, N C Mahanti. 2010. Mining Association rules in large database using localized pattern. *Int. J. of Advanced Res. In Computer Science*, Vol. (1)-3, 90-94.
22. Lal, Kanhaiya, N C Mahanti. 2010.Role of Soft computing as a tool in data mining. Paper accepted in *Int. J. of Computer Science & Information Technology*.
23. M. Pal, S. Chakraborty and N. C. Mahanti, How does the Shift-insertion Sort behave when the sorting elements follow a Normal distribution?, *Annals Computer Science Series*, Vol. VIII, Fasc. 2, 2010, 93-98
24. M. Pal, S. Chakraborty and N. C. Mahanti, Shift-insertion sort revisited: another Statistical case study on parameterized complexity using factorial experiments, *International Journal of Computational Cognition*, Vol. 9(1), March 2011
25. M. Patra, S. Chakraborty and D. Ghosh, Predicting raga notes through an ARIMA model: A case study in raga Bhupali, *Annals Computer Science Series*, Vol. IX, Fasc. 1, 2011, 39-50
26. S. Chakraborty and K. K. Sundararajan, A fast sampling algorithm that takes order into account, *International Journal of Mathematical Modeling, Simulation and Applications*, Vol.3(3), 2010
27. S. Chakraborty, M. Kalita and N. Kumari, Semi-Natural Composition, An Experiment with North Indian ragas, *International Journal of Computational Cognition*, Vol. 9(1), March 2011
28. S. Chakraborty, On identifying a common goal between musicians and scientists, *Georgian Electronic Scientific Journal: Musicology and Cultural Science*, 2010, No.1(5), 3-11
29. S. Chakraborty, S. Sundareisan, S. Kashyap and M. Pal, A Simple Fractal Analysis of a North Indian Raga, *International Journal of Computational Cognition*, Vol. 9(1), March 2011
30. S. Chakraborty, S. Tewari and G. Akhoury, What do the fractals tell about a raga? A case study in raga Bhupali, *Consciousness, Literature and the Arts*, Vol. 11, No. 3, Dec 2010, 1-9
31. S. Dutta, S. Chakraborty and N. C. Mahanti, Fingerprint Based Cryptography Technique for Improved Network Security, *International Journal of Computer Science and Engineering*, Vol. 5(2), 2011, 11-18
32. S. K. Chakraborty and S.P Bhattacharya, "Performance based Architectural Design Guideline for Multi-storied Buildings in Seismic zones", *Disaster Advances*, Vol.3, No.1, 2010, (pp.24-31), 2010.
33. S. K. Sourabh and S. Chakraborty, Empirical Study on the Average Time Complexity of Shell Sort Algorithm: Historical perspective, Robusness and Parameterized Complexity, *International Journal of Mathematical Modeling, Simulation and Applications*, Vol. 3(2), 2010
34. S. P. Bhattacharya and S. K. Chakraborty, "Seismic Performance Based Architectural Design Guideline for Multi-Storied Apartment Housing" , *ABACUS, A Bi-Annual Internationally Journal on Architecture, Conservation and Urban Studies*, Vol. 5, No.1, Spring 2010.
35. S. Padhi, Smita Pati; Positive periodic solutions for a nonlinear functional differential equation, *Memoirs on Differential Equations and Mathematical Physics*, 51(2010),109-118.
36. S.P. Bhattacharya and S. K. Chakraborty, "Estimation of Storey Shear of a Building with Mass and Stiffness variation due to Seismic Excitation" , *International Journal of Civil and Structural Engineering*, Vol. 1, No. 3, 2010(ISSN 0976 – 4399).

37. S.P. Bhattacharya and S. K. Chakraborty, "Seismic Resistant Investigation of Multi-storey Building by Response Spectrum Method", *Int. Journ. Acoustics and Vibration*, Vol. 16, No.1, (pp.17-22), 2011.
38. S.Padhi, S. Srivastava, Smita Pati; Positive Periodic Solutions for First Order Functional Differential Equations, *Communications in Applied Analysis*, 14(4), (2010),447-462.
39. S.Padhi, Smita Pati; Positive Periodic Solutions for a Nonlinear Delay Difference Equation, *Pan. American Mathematical Journal*, 21(1), (2011), 37-47.
40. Samal, S K, R. Chattaraj, and N C Mahanti. 2010. Propagation of torsional surface wave anisotropic poroelastic medium under initial stress. *Wave Motion*, Elsevier.
41. Seshadev Padhi, S. Srivastava and P.K. Kar; Existence of Multiple Positive Periodic Solutions of State-Dependent Delay Differential Equations with Applications to Population Dynamics, accepted for publication in *J. Differential Equations*.
42. Seshadev Padhi, S. Srivastava, S. Pati; Positive Periodic Solutions for First Order Functional Differential Equations, *Communications in Applied Analysis*, 14(4), (2010),447-462.
43. Seshadev Padhi, M.Trivedi; Global Attractivity of Solutions of Lasota-Ważewski Model, accepted for Publication in *Electronic J. Qualitative Theory of Differential Equations*.
44. Seshadev Padhi, S. Pati; Positive periodic solutions for a nonlinear functional differential equation, *Memoirs on Differential Equations and Mathematical Physics*, 51(2010),109-118.
45. Seshadev Padhi, S. Pati; Positive Periodic Solutions for a Nonlinear Delay Difference Equation, *Pan. American Mathematical Journal*,21(1),(2011),37-47.
46. Seshadev Padhi,Chuanxi Qian; On asymptotic property of solutions of higher order functional differential equations, *Fasciculi Mathematici*,46(2011),87-104.
47. Verma, Ajay, Rakesh Verma and N C Mahanti. 2010. A new approach to fuzzy uncapacitated facility location problem, *Int. J. of Soft Computing*, Vol. 5(3), 149-154.
48. Verma, Ajay, Rakesh Verma and N C Mahanti. 2010. Multicriteria facility location problem with hyperbolic membership function. *Int.J. of Operation and Qualitative Management*, To appear.
49. Verma, Ajay, Rakesh Verma and N C Mahanti. 2010. Facility location selection: An interval valued intuitionistic fuzzy topic approach. *J of Modern Mathematics and Statistics*, Vol 4(2), 68-72.
50. Verma, Ajay, Rakesh Verma and N C Mahanti. 2010. Multicriteria non-linear facility location problem: A fuzzy approach. *Int. J. of Mathematical Modeling, Simulation and Application*, Vol.3(3), 328-333.

#### **Published in National Journal**

1. S. Chakraborty, S. Tewari, G. Akhoury, A note on the problem of finding similarity between melodies of unequal length, *Ninad, Journal of ITC Sangeet Research Academy*, Vol. 24, Dec 2010.
2. S. Chakraborty, S. Tewari, G. Akhoury, S. K. Jain and J. Kanaujia, Raga Analysis using Entropy, *Journal of Acoustical Society of India* (accepted).

#### **Papers/Abstracts in Conference Proceedings**

1. S. Chakraborty, S. Tewari, G. Akhoury, S. K. Jain and J. Kanaujia, Raga Analysis using Entropy, *National Symposium on Acoustics 2010* (published in the proceedings) held on Nov 11-13, 2010 at Rishikesh, India

2. S. Chakraborty, S. Tewari, G. Akhoury and M. Patra, Simulating Raga Notes: A Case Study in Raga Bhimpalashree, Proceedings of the International Symposium Frontiers of Research on Speech and Music and Computer Music Modeling and Retrieval, (FRSM/CMMR – Mar 9-12, 2011), 108-112, (Utkal University, Bhubaneswar, India)
3. M. Patra, S. Chakraborty and D. Ghosh, Optimized Neural Architecture for time series prediction using raga notes, Proceedings of the International Symposium Frontiers of Research on Speech and Music and Computer Music Modeling and Retrieval, (FRSM/CMMR – Mar 9-12, 2011), 12-16(Utkal University, Bhubaneswar, India)
5. S. B. Singh, S. Chakraborty and K. M. Jha, Assessment of Level of Recovery of Cognitive Impairment in the Cerebrovascular Accident and Head Injury Cases: Therapeutic Effect of North Indian Ragas, Proceedings of the International Symposium Frontiers of Research on Speech and Music and Computer Music Modeling and Retrieval, (FRSM/CMMR – Mar 9-12, 2011), 60-63(Utkal University, Bhubaneswar, India)
6. Upendra Kumar, Bimal Kumar Mishra, G.Sahoo, Defending against Computer worms: A Mathematical Model, Proceedings of the National Conference on Recent Developments in Mathematics and its Applications, SRM University Chennai, 2011, pp 183-186
7. Aditya Kumar Singh, Bimal Kumar Mishra, SEIQS e-epidemic model on the attack of malicious objects in computer network, Proceedings of the National Conference on Recent Developments in Mathematics and its Applications, SRM University Chennai, 2011, pp 187-193
8. Samir Kumar Pandey, Bimal Kumar Mishra, SIRS e-epidemic model of worms with anti-virus software and distributed time delay using vertical transmission in computer network –Proceedings of the National Conference on Recent Developments in Mathematics and its Applications, SRM University Chennai, 2011, pp 1194-204

#### Books – Authored

1. S. K. Chakraborty. A Text Book of Discrete Mathematics is published in OXFORD UNIVERSITY PRESS INDIA LIMITED, New Delhi.
2. Bimal Kumar Mishra, Lecture Notes in Calculus, I.K. International Publishing (P) Ltd., New Delhi

#### Award / Recognition Bestowed on Faculty ( State / National / International )

S. No.	Name of the Faculty	Title of the Award/ Honors	Organization	Year / Duration
1	Dr. Seshadev Padhi	Felicitated in the "UGC National Seminar on Differential Equations and their Applications" on 10 Feb. 2011 for his contributions to the study on Differential Equations	Kandars College, Velur, Tamilnadu	23rd March 2005-27th May 2006. 10-11 Feb' 2011

#### Members on Board of Studies (UG/PG)

1. Head of the Department - Chairman
2. Dr. S.S. Roy - Member

- |    |                      |   |        |
|----|----------------------|---|--------|
| 3. | Dr. S.K. Chakraborty | - | Member |
| 4. | Prof. Suresh Kumar   | - | Member |
| 5. | Prof. S. Konar       | - | Member |

**External Members**

- |    |  |
|----|--|
| 1. | Prof. A. R. Roy<br>Department of Mathematics<br>IIT, Kharagpur                             |
| 2. | Prof. K. S. Chaudhuri<br>Dept. of Mathematics<br>Jadhavpur University<br>Kolkata – 700 032 |
| 3. | Prof. Satyajit Roy<br>Dept. Mathematics<br>IIT, Madras, Chennai                            |
| 4. | Prof. K.C. Prasad (Retd.)<br>Ranchi University<br>Ranchi                                   |

**Any other important information**

Dr. Bimal Kumar Mishra has been nominated as the member of the editorial board of following journals:

- |    |  |
|----|--|
| 1. | Far East Journal of Electronics and Communications |
| 2. | Australian Journal of Basic and Applied Sciences   |
| 3. | Research Journal of Applied Sciences               |
| 4. | Journal of Modern Mathematics and Statistics       |

**Departmental Academic Committee (PG & R)**

- |     |                              |   |                       |
|-----|------------------------------|---|-----------------------|
| 1.  | Head of the Department       | - | Chairman (Ex-Officio) |
| 2.  | Prof. N C Mahanti            | - | Member                |
| 3.  | Prof. S. K. Jain             | - | Member                |
| 4.  | Dr. S.S. Roy                 | - | Member                |
| 5.  | Dr. S.K. Chakraborty         | - | Member                |
| 6.  | Dr. Bimal Kumar Mishra       | - | Member                |
| 7.  | Dr. Seshadev Padhi           | - | Member                |
| 8.  | Prof. G. Sahoo (I.T.)        | - | Member                |
| 9.  | Prof. A. K. Chatterjee (SER) | - | Member                |
| 10. | Guide(s) of the Candidate    | - | Member                |

## DEPARTMENT OF APPLIED MECHANICS

The Department of Applied Mechanics was established in 1995 as a service department for all BE programmes that BIT, Mesra offers for its various branches of engineering. However the department has added its own post-graduate programme in Computer-Aided Analysis and Design and Ph.D programme later. It is continuing its added programme along with its previous commitment of serving other engineering programmes at BIT, Mesra. The post-graduate degree programme got its approval from AICTE in 2004 for the first time and consequently the programme got its accreditation in 2008 by NBA.

The department has the expertise in the areas like System Dynamics, Neural Network, System Design, Vibration, Composite Materials, System Modelling & Design, and Signature Analysis of Machinery etc.

The department uses the most recent state of the art softwares in the central CAD lab to aid the research and learning process of its post-graduate students and conduct meaningful design projects and research.

Recently the department organized a training programme for the teachers of extension centres of BIT. The aim of this training programme is to improve the teaching and evaluation standards of the subject 'Engineering Mechanics'.

### PUBLICATIONS

#### Published in International Journals

1. Bhaduri, S., Neogy, S., Nandi, A., "Analysis of a Lorentz force based vibration exciter using permanent magnets mounted on a piezoelectric stack", Sadhana – Academy Proceedings in Engineering Science (accepted).

#### Papers/Abstracts in Conference Proceeding

1. Bhaduri, S., Ghosh, R., Saha, A., Neogy, S., Nandi, A. "Response of Rotors Excited by Piezoelectrically Supported Magnetic Actuators", proceedings of 'Emerging Trends in Rotor Dynamics', IUTAM, IIT, Delhi (23-26<sup>th</sup> March, 2010).

#### A chapter in an edited book:

1. Nelson, "System of Forces and Resultant-I, System of Forces and Resultant-II, Friction", Prof. A. K. Ray, Engineering Mechanics Statics & Dynamics, Tata McGraw Hill P. Ltd. New Delhi, 2009

#### Members of the Board of Studies

Name of the programme: ME (CAAD)

##### Internal Members:

1. Head of the Department	Chairman
2. Dr. R. P. Singh Professor, Dept. of Applied Mechanics	Member
3. Prof. U.S. Prasad Associate Professor, Dept. of Applied Mechanics	Member
4. Prof. Sankha Bhaduri Assistant Professor, Dept of Applied Mechanics	Member
5. Dr. J. K. Prasad Professor, Dept. of Space & Rocketry	Member
6. Dr. Indrajit Roy Associate Professor, Dept. of Civil Engineering	Member
7. Dr. R. P. Sharma, Associate Professor, Dept. of Mechanical Engineering	Member

**External Experts:**

- |    |  |                 |
|----|--|-----------------|
| 1. | Dr. Ranjan Bhattacharya Professor, Dept. of Mechanical Engineering,<br>IIT, Kharagpur            | External Member |
| 2. | Dr. Dilip Kumar Pratihara, Assoc. Professor, Dept. of Mechanical Engineering,<br>IIT, Kharagpur, | External Member |
| 3. | Dr. Gautam Pohit, Professor, Dept. of Mechanical Engineering,<br>Jadavpur University, Kolkata,   | External Member |
| 4. | Dr. K. P. Roy Sarkar, Director Gr. Scientist, CMERI, Durgapur                                    | External Member |
| 5. | Dr. Sibnath Maiti, Director Gr. Scientist, CMERI, Durgapur,                                      | External Member |



## DEPARTMENT OF APPLIED PHYSICS

The Department of Applied Physics was established in 1955 and initially offered undergraduate courses in Physics for the B.E. programmes. The Department now also offers the following postgraduate programmes:

- M. Tech. in New Materials & Processing Technology
- M. Tech. in Nano Science and Nano Technology
- M. Sc. in Applied Physics
- Integrated M. Sc. in Physics (5- year course)
- Ph. D. Programmes

The Integrated M. Sc. in Physics programme is a new programme with course structure and syllabus approved by the Board of Studies of the Department.



Physics Laboratory

The Department has received support under "Fund for Improvement in Science & Technology Infrastructure" (FIST) programme, Level-I, of the Department of Science and Technology, New Delhi. Support under "Special Assistance Programme" (SAP) of the UGC has also been recently approved and sanction is awaited.

During the past fifty five years of its existence, the students and faculty members of the Department have made themselves recognized nationally as well as internationally through excellence in research and teaching. At present the Department has nineteen faculty members (including scientific officers) and sixteen research scholars. The Department is engaged in research in the frontier areas of experimental and theoretical Plasma Physics, Plasma Processing of New Materials, Thin Films, Diamond-Like Carbon films, Nano and Ultrananocrystalline Diamond Films, Carbon Nanotubes, Solar Cells, Condensed Matter Physics, Lasers and Quantum Optics, Nonlinear Optics.

The Department has well-equipped laboratories and computing facilities with software such as MATLAB, Maple, Lab VIEW, FullWAVE, BandSOLVE, BeamPROP, etc. The Department is equipped with sophisticated facilities like RF/DC magnetron co-sputtering, RF magnetron sputtering system, anodic vacuum arc deposition unit, nitriding system, plasma enhanced chemical vapour deposition systems (DC, RF and Microwave), salt spray chamber, metallurgical microscope (Leica Microscope). The Department also has a real time holography laboratory for non-destructive testing of materials. In addition, it has facility for optical coherence tomography, facilities for fabrication of fiber composite plates and optical characterization of materials. The Department has cryogenic, materials science and plasma thin films laboratories where different research works on advanced materials like high temperature superconductors, colossal magneto-resistive materials, dilute magnetic semiconductors, piezoelectric materials, electronic composites, diamond-like carbon films, nano and ultrananocrystalline diamond films, graphene, photo-catalytic coating of  $\text{TiO}_2$ , tribological coatings like CN, TiC, TiN, SiC Ti (Al) N, HfC, etc. are being conducted. The optics laboratory also has an Nd-YAG laser.

Currently, the Department has sponsored projects funded by UGC, DST, AICTE, BRNS, ISRO and DRDO. The Department regularly organizes seminars and symposia and maintains a nationally and internationally recognized academic level. During the last one year, Department has completed one project and received nine new projects, and has forty-nine international and national publications to its credit.

Mr. S Mukherjee visited University of Duisburg Essen-Germany and worked there for six months. Dr. R K.

Choubey was post-doctoral fellow at National Taiwan University for one year. Dr. S. Konar worked as a Senior Associate of International Centre for Theoretical Physics (ICTP) Italy. Dr. G. P. Singh and Dr. I Banerjee have been awarded BOYSCAST fellowships for 2011-2012 of the Department of Science & Technology, Govt. of India.

## SPONSORED PROJECTS

### Projects Sanctioned during July 2010 - June 2011

Sl. No.	Project Title	Principal Investigator (PI) / Co- PI / Collaborator	Fun-ding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project (Years)
1.	FIST-2010	<b>Program Coordinator:</b> Dr. P. K. Barhai <b>Co-Coordinator:</b> Dr. S. Konar Dr. S. Medhekar Dr. S. K. Rout Mr. R. Sharma	DST, New Delhi	Oct 2010	200.00 L	5 yrs
2.	In vivo, noninvasive 3D imaging of posterior segment of human eye by using high speed ultra-high resolution 1 $\mu$ m swept source optical coherence tomography (SSOCT)	<b>PI:</b> Dr. R. Poddar (Dept of Biotech) <b>Co-PI's:</b> Dr. K. Bose & Dr. P. K. Barhai	DST, New Delhi	Dec 2010	23.00 L	3 yrs
3.	Study of plasma instability and its correlation with deposited species during TiN and TION deposition.	<b>PI:</b> Dr. S. K. Mahapatra <b>Co-PI:</b> Dr. I. Banerjee <b>Collaborator:</b> Dr. A. K. Das (BARC, Mumbai)	BRNS	2010	19.41 L	3 yrs
4.	Synthesis, dielectric and optical properties of rare earth doped lead free BZT ceramics	<b>PI:</b> Dr. S. K. Rout	UGC	06/01/11	9.828 L	3 yrs
5.	Simulation of Highly Nonlinear Photonic Crystal Fibers and Study of Nonlinear Optical Phenomena in These Fibers	<b>PI:</b> Dr S. Konar	DST, New Delhi	June 2011	12.87 L	3 yrs

6.	Special Assistance Programme-UGC (SAP-UGC)	<b>Coordinator:</b> Dr. S. Konar <b>Co-Coordinator:</b> Dr. Mrs. S. Keshri	Approved by UGC (Yet to start)	2011	57.00 L	5 yrs
7.	Development of Atmospheric pressure plasma jet sources and their characterization	<b>PI:</b> Dr. P. K. Barhai	DAE, BRNS	2011		3 yrs
8.	Facile synthesis & characterization of magnetically modulated luminescent nanocomposites.	<b>PI:</b> Dr. Samrat Mukherjee <b>Co-PI:</b> Dr. P. K. Barhai	AICTE	2011	8.50 L	2 yrs
9.	Measurement of plasma temperature and identification of species useful during re-entry of Space Shuttle, using plasma emission spectroscopy	<b>PI:</b> Dr. V L Mathe (Pune Univ) <b>Co-PI:</b> Prof. Mrs. S. V. Bhoraskar, (Pune Univ) <b>Collaborator:</b> Dr. Indrani Banerjee	ISRO	July 2011	12.16 L	2 yrs

#### Ongoing Projects Sanctioned before July 2010

Sl. No.	Project Title	Principal Investigator (PI) / Co- PI /Collaborator	Fun-ding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project (Years)
1.	Developments of nanocrystalline high permittivity lead free materials for microwave applications.	<b>PI:</b> Dr. S. K. Rout <b>Co-PI:</b> Dr. P. K. Barhai	DST, New Delhi	2007	23.354 L	3 yrs
2.	Synthesis of Ultra nano crystalline Diamond films for Field Emission Applications using Microwave Plasma Enhanced Chemical Vapour Deposition	<b>PI:</b> Dr. P. K. Barhai <b>Co-PIs:</b> Mr. Rishi Sharma & Dr. S. K. Sinha	DST, New Delhi	26/09/08	33.144 L	3 yrs
3.	Investigation of Optical Beam Propagation in Nonlinear Media: Spatial Soliton Formation and Their Interaction for All-Optical Devices	<b>PI:</b> Dr. S. Medhekar	UGC	30/12/08	8.278 L	3 yrs

4.	Development and Characterization of multilayer thermal barrier coatings of Hafnium carbide (HfC) and Silicon carbide (SiC) for Aerospace Applications	<b>PI:</b> Dr. P. K. Barhai <b>Co-PI:</b> Mr. M. K. Sinha	ISRO	2008	12.09 L	3 yrs
5.	Modeling and Analysis of Mach-Zhender Interferometer based Nonlinear Waveguide Devices for All-Optical Switching and Logic Gates	<b>PI:</b> Dr. S. Medhekar	DST, New Delhi	10/02/09	24.68 L	3 yrs
6.	Study of Photocatalytic activity of nano-structured TiO <sub>2</sub> thin films produced by plasma assisted process and correlation with plasma parameters.	<b>PI:</b> Dr. P. K. Barhai <b>Co-PI:</b> Dr. I. Banerjee	BRNS	2009	18.53 L	3 yrs
7.	Studies on ferromagnetic-ferroelectric composites and their electronic applications.	<b>PI:</b> Dr. S. Keshri <b>Co-PIs:</b> Dr. N. Gupta & Dr. V. R. Gupta (Dept of ECE)	DST, New Delhi	2009	17.67 L	3 yrs
8.	Effect of ion implantation and gamma irradiation on wide band gap semiconductors	<b>PI:</b> Dr. S. Keshri	UGC-DAE CSR- Kolkata Centre	2009	4.31 L + TA	3 yrs

#### Projects Completed during the period July 2010-June 2011

Sl. No.	Project Title	Principal Investigator (PI) / Co- PI /Collaborator	Fun-ding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project (Years)
1.	Development of nanostructured Carbon nitride coatings for Nano-tribological applications	<b>PI:</b> Dr. P. K. Barhai <b>Co-PI:</b> Dr. S. K. Rout	AICTE	05/03/08	5.75 L	2 yrs

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	One Day Workshop on Plasma Nitriding	<b>Convener:</b> Dr. P. K. Barhai <b>Coordinator:</b> Dr. G. P. Singh	DST, New Delhi	Aug 20, 2010
2.	DST - INSPIRE program for Basic Sciences	<b>Coordinator:</b> Dr. S. K. Mahapatra <b>Co-Coordinator:</b> Dr. I. Banerjee	DST New Delhi	Dec 20-24, 2010
3.	NCERT Program for NTS Awardees	<b>Coordinator:</b> Dr. I. Banerjee <b>Co-Coordinator:</b> Dr. S. K. Mahapatra	NCERT	Feb 1-5, 2011
4.	National Conference cum Workshop on Recent Developments in Engineering Materials	<b>Convener:</b> Dr. S. K. Sinha <b>Coordinator:</b> Dr. G. P. Singh	BRNS, DST, New Delhi, ISRO, BIT Mesra	May 12-14, 2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended:**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date , Month, Year
1.	Dr. S. Keshri	Invited talk at 6 <sup>th</sup> International Workshop on Nanomagnetism & Superconductivity		Barcelona, Spain	Jun 30 – July 4, 2010
2.	Dr. S. Konar	International Workshop on Cutting-Edge Plasma Physics, SMR NO: 2155,	International Center for Theoretical Physics (ICTP), Trieste, Italy	Italy	Jul 5- 16, 2010
3.	Dr. P. K. Barhai	Indo-German workshop on Cooperation in Biomass and Plasma Technologies	BIOMATEG, and Federal Ministry of Education and Research, Germany	Lavasa, Pune	Oct 31 – Nov 2, 2010
4.	Dr. S. K. Mahapatra	7 <sup>th</sup> International Conference on Industrial Tribology (ICIT 2010) (Invited Talk)	SAIL, Ranchi	SAIL, Ranchi	Dec 2-4, 2010

5.	Dr. P. K. Barhai	25 <sup>th</sup> National Symposium on Plasma Science and Technology (Plasma 2010)	Plasma Science Society of India	IASST Guwahati (Assam)	Dec 8 – 11, 2010
6.	Dr. P. K. Barhai	Emerging Directions in Global Education 2011	EDGE 2011	India Habitat Center New Delhi, India	March 9 – 11, 2011
7.	Dr. I. Banerjee	2 <sup>nd</sup> World Conference on Nano Medicine (Invited Talk)	Institute for Holistic Medical Sciences, Kottayam	Kottayam, Cochin	Mar 11-13, 2011
8.	Mr. Rishi Sharma	National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM-2011)	Birla Institute of Technology, Mesra, Ranchi, India	BIT, Mesra India	May 12 -14, 2011.
9.	Dr. S. Konar and other faculty members	Mission _KYaaT Workshop	Birla Institute of Technology, Mesra, Ranchi, India	BIT, Mesra	May 31- June 02, 2011
10	Dr. S. K. Rout	European meeting on Ferro electricity	University of Bordeaux, France	Bordeaux, France	Jun 26 - Jul 2, 2011

## PUBLICATIONS

### Published in International Journals

1. R. K. Choubey P. K. Barhai , S. Kar, P. Sen and K. S. Bartwal, Growth and Study of OH Absorption Band in Doped LiNbO<sub>3</sub> Crystals, Nonlinear Optics and Quantum Optics, Vol. 41, pp. 343–350, 2010
2. Hasina Khatun, A.K. Sharma, P. K. Barhai, Experimental Study of Low-Pressure Nitrogen Dielectric Barrier Discharge, Brazilian Journal of Physics, vol. 40, no. 4, 2010
3. R. Sharma, N. Woehrl, P. K. Barhai, V. Buck, "Nucleation density enhancement for nanocrystalline diamond films" Journal of Optoelectronics and Advanced Materials, 12 (2010) 1915.
4. Rishi Sharma, Alok K Pandey, Neelima Sharma, D Sasmal and P K Barhai, Diamond like Carbon films as a protective surface on PMMA for biomedical applications, , Surface and Coatings Technology 205 (2010) 2495-2502.
5. I. Banerjee, Neelam Kumari, Ashis K. Singh, Mukesh Kumar, Pinaki Laha, A.B. Panda, S.K. Pabi, P. K. Barhai, S.K. Mahapatra, Influence of RF power on the electrical and mechanical properties of nano-structured carbon nitride thin films deposited by RF magnetron sputtering, Thin Solid Films 518 (2010) 7240–7244.
6. Indrani Banerjee, N. K. Joshi, Soumen Karmakar, Naveen V. Kulkarni, S. N. Sahasrabudhe, S. K. Mahapatra, P. K. Barhai S. V. Bhoraskar and A. K. Das, Effect of Ambient Pressure on the Axial Behaviour of Ar-H<sub>2</sub> Transferred Thermal Arc-Plasma Column, IEEE Transactions on Plasma Science, Vol. 38, No. 4, April 2010.



7. S. K. Mukherjee, M.K. Sinha, B. Pathak , S.K. Rout, P. K. Barhai, A.K. Balamurugan, A. K. Tyagi , F.L. Ng, Investigations on the structure, composition and performance of nanocrystalline thin film thermocouples deposited using anodic vacuum arc, *Thin Solid Films* Volume 518, Issue 20, 2 August 2010, Pages 5839-5854.
8. S. K. Rout, P. K. Barhai, Ela Sinha, Ali Hussain, I. W. Kim, Anisotropic Dielectric and Electrical properties of hot-forged SrBi<sub>4</sub>Ti<sub>4</sub>O<sub>15</sub> ceramics, *Intl. Journal of Applied Ceramic Technology* 7(S1) E114-E123 (2010).
9. Pinaki Laha, A.B. Panda, S. Dahiwalé , K. Date , K. R. Patil , P. K. Barhai , A.K. Das , I. Banerjee, S. K. Mahapatra, Effect of leakage current and dielectric constant on single and double layer oxides in MOS structure, *Thin Solid Films* (2010), doi:10.1016/j.tsf.2010.08.089.
10. A. B. Panda, P. Laha, K. Harish, B. Sarkar, S. Chaure, W. Sayyad, V. S. Jadav, G.R Kulkarni, D. Sasmal, P. K. Barhai, A. K. Das, S. K. Mahapatra, I. Banerjee, Study of bactericidal efficiency of magnetron sputtered TiO<sub>2</sub> films deposited at varying oxygen partial pressure, *Surface & Coatings Technology* (2010), doi: 10.1016/j.surfcoat.2010.07.101.
11. P. K. Barhai, Neelam Kumari, I. Banerjee, S. K. Pabi, S. K. Mahapatra, Study of the effect of plasma current density on the formation of titanium nitride and titanium oxynitride thin films prepared by reactive DC magnetron sputtering, *Vacuum* 84 (2010), 896-901.
12. P. K. Barhai, Rishi Sharma, B. B. Nayak, Deposition of wide band gap DLC films using R.F. PECVD at very low power, *Intl. Journal of Modern Physics B* (2010 in Press).
13. S. K. Rout, S. Parida, E. Sinha, P. K. Barhai, I. W. Kim, Frequency-temperature response of CaBi<sub>4</sub>Ti<sub>4</sub>O<sub>15</sub> ceramic prepared by soft chemical route: Impedance and modulus spectroscopy characterization, *Current Applied Physics* 10 (2010) 917-922.
14. Deep Shikha, Usha Jha, S. K. Sinha, P. K. Barhai, K. G. M. Nair, D. C. Kothari; A comparative study of corrosion resistance in Ringer solution of nitrogen implanted alumina at different energies for orthopedic implants; *Int. J. Appl. Ceram. Technol.*, 7 [2] (2010) 156–163.
15. S. Konar, Z. Jovanoski and I. N. Towers; Two Color Bright-Bright Vector Solitons in Three Level Cascade Atomic Systems, (IC/2010/040 Pre Print of International Center For Theoretical Physics (ICTP), Italy, 2010).
16. S. Konar, Z Jovanoski and I. N. Towers; Incoherent Spatial Optical Solitons in Photorefractive Crystals, IC/2010/046 (Pre Print of International Center For Theoretical Physics (ICTP), Italy, 2010).
17. G. P. Singh, S. Ram; Optical and electron paramagnetic resonance properties if native Cr<sub>2</sub>O<sub>3</sub> surface over CrO<sub>2</sub>, *Journal of Magnetism and Magnetic Materials* 322 (2010) 1484.
18. S. Mukherjee, D. Das, S. Mukherjee and P. K. Chakrabarti, Magnetic and Mossbauer effect study of Co<sub>0.5</sub>Zn<sub>0.4</sub>Cu<sub>0.1</sub>Fe<sub>2</sub>O<sub>4</sub>)(Al<sub>2</sub>O<sub>3</sub>-PVA)<sub>x</sub> (x = 0 and x = 0.3) by sonochemical route, *J. Magn Magn Mater*, 114 (2010) 14763-14771
19. Leena Joshi, Shailendra Singh Rajput and Sunita Keshri, Phase Transitions; Structural and magneto-transport properties of LCMO-STO composites, *Phase Transitions* (Taylor & Francis Publication) 83, 482-490 (2010).
20. Sunita Keshri, Leena Joshi, Sanat Kumar Mukherjee and V. F. Kraidenov; LabVIEW measurement and analysis of enhanced CMR properties of sintered at different temperatures, *Journal of Electromagnetic* 26. Analysis and Applications (Scientific Research Publishing, Inc. USA) 2 (2010) 372-375.

21. "Study of the effect of plasma-striking atmosphere on Fe-oxidation in thermal dc arc- plasma processing"; I. Banerjee, Y. B. Kholam, S. K. Mahapatra, A. K. Das, S. V. Bhoraskar; J. Vac. Sci. Technol. A 28, Nov/Dec 2010
22. "Optical Emission Spectroscopic Study During the Evaporation of Aluminium in the Thermal Plasma Reactor"; I. Banerjee, N. V. Kulkarni, S. Karmaker, V. L. Mathe, S. V. Bhoraskar, A. K. Das; Plasma Science and Technology, Vol.12, No.1, Feb. 2010
23. Leena Joshi and Sunita Keshri; Enhanced CMR properties of  $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$  sintered at different temperatures, Phase Transitions (Taylor & Francis Publication) 83 (2010) 263-275.
24. S.K. Mukherjee, L. Joshi, P.K. Barhai, A comparative study of nanocrystalline Cu film deposited using anodic vacuum arc and dc magnetron sputtering, Surface & Coatings Technology 205 (2011) 4582–4595.
25. C.C. Wu, W.T. Hsu, Z.B. Chen, R. K. Choubey and C.W. Lan "Crystal Growth, VTE Treatment, and Characterizations of Nd-doped  $\text{LiTaO}_3$ " Journal of Crystal Growth 318, (2011) 649-652.
26. S. K. Sinha, Amit Kumar Sinha, P. Kour and P.K. Barhai, Nickel doped PZT ceramics by a spray dried-PVA assisted method, Journal of Ceramic Processing Research. Vol. 12, No. 1, pp. 93–95 (2011)
27. S. Konar, Z. Jovanoski, I. N. Towers; Incoherent Spatial Optical Solitons in Photorefractive Media; Optics and Laser Technology 43, 1466 (2011).
28. Arpita Srivastava, S. Medhekar, Switching of One Beam by Another in a Kerr Type Nonlinear Mach-Zehnder Interferometer, Optics & Laser Technology, 43 (2011) 29-35.
29. Punya Prasanna Paltani, S. Medhekar, Optimally Stabilized Beam Pairs", OPTIK, Volume 122, (2011) 70-75.
30. Switching Behaviour of a Nonlinear Mach-Zehnder Interferometer; Saturating Nonlinearity" Arpita Srivastava, S. Medhekar Optics & Laser Technology 43 (2011) 1208–1211
31. S. Shwetanshumala and S. Konar, "Modulation Instability of Plane Electromagnetic Beams in Centrosymmetric Crystals due to Two-Photon Photorefractive Effects", Physica Scripta 83, 025401(2011).
32. Punya Prasanna Paltani, S. Medhekar, All-optical Circulator Based on Cross Phase Modulation in a Nonlinear Mach-Zehnder Interferometer, OPTIK, 122, (2011) 464-466.
33. Shraddha Prasad, Ram Krishna Sarkar, Arpita Srivastava, S. Medhekar, Coupled Propagation in Electromagnetically Induced Transparent Medium; Thirring Type Soliton Pairs and Breather Pairs" Journal of Electromagnetic Waves and Application, J. of Electromagn. Waves and Appl., 25, (2011) 923–933.
34. Sunita Keshri, Leena Joshi and Shailendra Singh Rajput, Studies on  $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ - $\text{SrTiO}_3$  composites using two-phase model, Journal of Alloys and compounds (Elsevier Publication) 509, 5796-5803 (2011).
35. Leena Joshi and Sunita Keshri; Magneto-transport properties of Fe- doped LSMO Manganites, Measurement (Elsevier Publication) 44, 938-945 (2011).
36. "Synthesis of magnetically active interpenetrating polymer network for drug release"; S. Goswami, K. Kiran, A. B. Panda, P.P.Sharma, S. K. Mahapatra, S. V. Bhoraskar, and I. Banerjee; Int.J. Nano.Dim. 1(4): 279-285, 2011
37. H.L. Yadav, R.K. Jayaswal and P.K. Barhai, Design and Analysis of Double-Aperture Holo-speckle Interferometer Using Compact Holographic Lenses, International Journal of Pure and Applied Physics (IJPAP), (in press).



38. Rishi Sharma, Nicolas Woehrl, Milan Vruini, Monika Timpner, Volker Buck, P.K. Barhai, Effect of microwave power and  $C_2$  emission intensity on structural and surface properties of nanocrystalline diamondfilms, Thin Solid Films, (in press).
39. S Shwetanshumala, S.Konar, N.Asif and Anjan Biswas; The Deflection of bright spatial soliton in a biased noncentrosymmetric two-photon photovoltaic photorefractive crystal due to first order diffusion and higher order drift; Physica Scripta 84, 025402 (2011).
40. S. Konar, Z Jovanoski and I. N. Towers; Two-color bright solitons in a three-level atomic system in the cascade configuration; Journal of Modern Optics ( in press).
41. S. Konar, Optical Spatial Solitons and Modulation Instabilities in Photorefractive Media, Physics Express (in Press)
42. H Khatun, A K Sharma and P K Barhai, "Characterization of VUV radiation from coaxial xenon excimer source using red phosphor", Plasma Science and Technology, 2011 (accepted).
43. Y. S. Lo, R. K. Choubey, W.C. Yu, C.W. Lan "Shallow bath chemical deposition of CdS thin film" Thin Solid films (Accepted).
44. S. Dey, D. Das and S. Mukherjee, Quantum Confined ZnO Nanoparticles: Structural and Optical Studies, P. Amer Ins. Phys. (Accepted 2011).
45. "6 MeV electron irradiation effects on electrical properties of Al/TiO<sub>2</sub>/n-Si MOS capacitors"; P Laha, S S Dahiwal, I Banerjee, S K Pabi, V N Bhoraskar, P K Barhai, S Mahapatra, Nuclear Inst. and Methods in Physics Research, B,2011(Accepted)
46. P. Laha, A. B. Panda, P. K. Barhai, A. K. Das, S. K. Mahapatra and I. Banerjee, Development of rf plasma sputtered Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> multilayer broad band anti reflecting coatings and its correlation with Plasma parameters, Applied Surface Science, 2011 (Accepted)
47. S. K. Mukherjee, P. K. Barhai, S. Srikanth, Comparative evaluation of corrosion behaviour of type K thin film thermocouple and its bulk counterpart, Corrosion Science (2011)doi:10.1016/j.corsci.2011.05.024.
48. Arpita Srivastava, Ram Krishna Sarkar, Shraddha Prasad, S. Medhekar, Coupled tapered / uptapered optical beams OPTIK, DOI:10.1016/j.jileo.2010.12.034

#### Papers/Abstracts in Conference Proceedings

1. S. Keshri and L. Joshi, Structural, Magnetotransport and Electron Spin Resonance Studies on Fe-doped LCMO& LSMO manganites, in the proceeding of the 6th International Workshop on Nanomagnetism & Superconductivity, held in Barcelona, Spain, during June 30 – July 4, 2010
2. Sunita Keshri and Shailendra Singh Rajput and Leena Joshi, Effect of divalent ion substitution on structural and transport properties of lanthanum manganites; in the proceeding of National Conference on Experimental Tools for Materials Science Reserach, held in Banaras Hindu University, Varanasi during 3-4 Dec. 2010.
3. Sunita Keshri (Shaw)\* and Leena Joshi, Structural and Magneto-transport Studies on Fe- doped LSMO Manganites, in the proceeding of National Conference on Solid State Ionics, held at Dr. Hari Singh Gour University, Sagar, MP, India, 7-9 Dec., 2010.
4. Rishi Sharma, Vijay Chatterjee, N. Woehrl, Volker Buck and P. K. Barhai, Growth of nanocrystalline diamond films for field emission applications (Poster), 25<sup>th</sup> National Symposium on Plasma Science and Technology (Plasma 2010) at IASST Guwahati (Assam), 8 – 11 December, 2010.

5. Shraddha Prasad, Ram Krishna Sarkar, Arpita Srivastava, S. Medhekar, Thirring type breather pairs and solitons, PHOTONICS 2010: 10th International Conference on Fiber Optics & Photonics, IIT Guwahati, Guwahati December 11 to 15, 2010.
6. S. Medhekar, Arpita Srivastava, Punya Prasann Paltani, Pulse switching in a Mach-Zehnder Interferometer, PHOTONICS 2010: 10th International Conference on Fiber Optics & Photonics, IIT Guwahati, Guwahati December 11 to 15, 2010.
7. Arpita Srivastava, Man Mohan Gupta, S. Medhekar, Signal amplification using a Mach-Zehnder Interferometer, PHOTONICS 2010: 10th International Conference on Fiber Optics & Photonics, IIT Guwahati, Guwahati December 11 to 15, 2010.
8. P.P. Paltani, S. Medhekar, C. Senel, F.O. Ilday, Accurate gain modeling for Er/Yb doped fiber amplifier, PHOTONICS 2010: 10th International Conference on Fiber Optics & Photonics, IIT Guwahati, Guwahati December 11 to 15, 2010.
9. Sunita Keshri, Shailendra Singh Rajput, Structural and dielectric properties of  $(1-x) \text{Mg}_{0.95}\text{Zn}_{0.05}\text{TiO}_3$ - $x(\text{Ca}_{0.8}\text{Sr}_{0.2})\text{TiO}_3$  dielectric composites; in the 12th International Conference of National Academy of Physical Sciences held in University of Rajasthan, Jaipur during 22-24 Dec., 2010.
10. Sunita Keshri, Ashutosh Kumar, Debdulal Kabiraj, Effect of Annealing on Structural, Optical and Electrical Behaviours of  $\text{WO}_3$  Thin Films Prepared by Physical Vapour Deposition Method, in the proceeding of Vadodora, during 28-30 Jan. 2011.
11. Sunita Keshri, Ashutosh Kumar, Debdulal Kabiraj, Effect of argon ion implantation on structural and optical properties of  $\text{WO}_3$  thin films, in the proceeding of National Workshop on Nuclear and Atomic Techniques Based Pure and Applied Sciences, held at Tezpur University, Assam, during February 1-3, 2011
12. K. Mohit, S. K. Rout, G. P. Singh, P. K. Barhai, Synthesis and structural characterization of NiZn Ferrite nanoparticles, National Seminar on Nanomaterials and their applications (NANOMAT 2011), February 10-11, 2011, at ISM Dhanbad, Jharkhand.
13. G. P. Singh, P. K. Singh, and P. K. Barhai, Study of mechanical properties of plasma nitrided AISI 304 stainless steel, 4<sup>th</sup> National Workshop on Precision Forming, February 21<sup>st</sup> -22<sup>nd</sup>, 2011 at Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India.
14. R. Sharma, N. Woehrl, P. K. Barhai and V. Buck, Influence of pretreatment methods on the nucleation of nanocrystalline diamond films (Oral), National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM-2011) at Birla Institute of Technology, Mesra, Ranchi, India, 12 -14 May, 2011.
15. Abhilash Bajpai, Vijay Chatterjee, Rishi Sharma and P. K. Barhai, Deposition and study of electrical properties of ultrananocrystalline diamond films (Poster), National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM-2011) at Birla Institute of Technology, Mesra, Ranchi, India, 12 -14 May, 2011.
16. Kumar Gourav, Vijay Chatterjee, Rishi Sharma and P. K. Barhai, Preparation, characterization and study of electrical property of carbon nitride thin films deposited by RF magnetron sputtering (Poster), National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM-2011) at Birla Institute of Technology, Mesra, Ranchi, India, 12 -14 May, 2011.
17. Vijay Chatterjee, Rishi Sharma and P. K. Barhai, Effect of biasing on the deposition of Ultrananocrystalline diamond films using microwave plasma enhanced chemical vapour deposition (Poster), National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM-2011) at Birla

Institute of Technology, Mesra, Ranchi, India, 12 -14 May, 2011.

18. Shreoshi Das Gupta, Harendra Satyapal, Vijay Chatterjee, Rishi Sharma and P. K. Barhai, Synthesis of graphene using microwave plasma enhanced chemical vapour deposition system (Poster), National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM-2011) at Birla Institute of Technology, Mesra, Ranchi, India, 12 -14 May, 2011.

#### Award / Recognition Bestowed on Faculty (State / National / International)

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1.	Dr. P. K. Barhai	President, Plasma Science Society of India	Plasma Science Society of India	Jan 2009 to Dec 2010/ One year
2.	Mr. Sanat Kr Mukherjee	Post Doctoral Fellowship	University of Duisburg, Germany	2010 / Six months
3.	Dr. Ravi Kant Choubey	Post Doctoral Fellowship	National Taiwan University	2010 / One Year
4.	Dr. G. P. Singh	BOYSCAST Fellowship	DST New Delhi	2011 / One Year
5.	Dr. I. Banerjee	BOYSCAST Fellowship	DST New Delhi	2011 / One Year

#### Development of Learning Materials

Learning materials	Name of Subject/Course /Programme	Where and When used
e- contents	Manuals for Physics and Materials Science Laboratory	During Lab Experiments
	Soft copy of Physics Notes	During Theory Classes

#### No of summer trainees trained in the Department during July 2010 to June 2011.

Mr. Pankaj Kumar Baitha, ISM Dhanbad, 20/5/2011 to 15/7/2011 under Dr. S. K. Mahapatra

#### Members of Board of Studies (UG/PG)

##### Internal Members

- |   |                   |
|---|-------------------|
| 1. Dr. P. K. Barhai, Professor & Head                       | - Chairman        |
| 2. Dr. D. Jairath, Professor                                | - Member          |
| 3. Dr. S. Konar, Professor                                  | - Member          |
| 4. Dr. S. Medhekar, Professor                               | - Member          |
| 5. Dr. (Mrs.) S. Keshri, Associate Professor                | - Member          |
| 6. Dr. S. K. Rout, Assistant Professor                      | - Member          |
| 7. Dr. N. C. Mahanty, Professor & Head, Applied Mathematics | - Special Invitee |
| 8. Dr. (Mrs.) Usha Jha, Prof. & Head, Applied Chemistry     | - Member          |
| 9. Dr. (Mrs.) Nisha Gupta, Prof. & Head, ECE                | - Member          |

### **External Members**

1. Dr. Subhendu Kumar Ghatak, Professor, Physics and Meteorology, Indian Institute of Technology, Kharagpur-721302, India. Ph:03222-278125 (R), 283818 (O), Fax: 03222-255303/277190, Email: skghatak@phy.iitkgp.ernet.in
1. Dr. P. S. Gupta, Professor, Department of Physics, Indian School of Mines, Dhanbad, Fax: 0326-2203042.
3. Dr. B. S. Murty, Professor, Dept. of Materials and Materials Engineering, IIT, Madras, Chennai-600036, India. Ph: 044-22574754, email: murty@iitm.ac.in
4. Dr. V. Subramanian, Professor, Dept. of Physics, IIT, Madras, Chennai-600036, Ph: 044-22574883, email: manianvs@iitm.ac.in
5. Dr. S. R. Kumar, Associate Professor Department of Materials and Metallurgical Engineering, NIFFT, Ranchi
6. Dr. S. Panigrahi, Professor, Department of Physics, NIT Rourkela. Odisha.
7. Dr. N. C. Mishra, Professor, Department of Physics, Utkal University, Banivihar, Bhubneshwar.

### **Any other important information**

1. The Department has designed a new postgraduate programme, M. Tech. in Materials Science & Engineering, and it is proposed to start this programme in Spring 2012. The course structure and syllabus have been approved by the Board of Studies (BOS).
2. The BOS has also approved revisions in course structure and syllabus of all postgraduate programmes.
3. Book chapter: "Study of drug transport properties of acrylic based iron (III) oxide filled IPN" in "Recent advances in Nanomedicine and Drug Delivery": Apple Academic Press, (AAP), Canada, S. Goswami, K. Kiran, A. B. Panda, P.P.Sharma, S. K. Mahapatra, S. V. Bhoraskar and I. Banerjee

## DEPARTMENT OF ARCHITECTURE



Architectural Design Studio

The Department of Architecture was established in BIT Mesra in the year 1993. Architecture is primarily the art and science of designing spaces for serving the multifarious activities of human beings and for meeting their specific needs in a meaningful built environment. Architecture calls for originality, creativity, conceptualization, perception, aesthetic values and a holistic judgment of people, places, objects and events. Imparting these values, our thirteen batches of architecture students have graduated till now and they have found gainful employment in planning, design and construction sector. Many of our students have opted for

higher studies in India and abroad in the disciplines of Urban Design, City Planning, Landscape Architecture, Conservation and Construction Management. Our students have also opted for diversified fields such as Visual Design, Product Design, Fashion Design, Management and Software Development related with architecture.

The department has attained a rare feat of being the first ever department of Architecture in the country to be awarded research grants under the **Department Research Support (DRS) level of the Special Assistance Programme (SAP) of University Grants Commission (UGC)**. The department acquired latest computers and software with the help of this support and is involved in quality research now.

Considering the needs of urban development in the new state, the department has started offering the Master in Urban Planning degree course from January 2007 with a maximum intake capacity of 12. The first batch of ten students has passed out as Planners in December 2008, and is suitably placed. Total 18 students have attained their Master's degree and gained fruitful employment in Planning organization, in teaching, and other related activities.

The Department was **ranked the fifth best department** as per survey conducted by Outlook. It is also the first in the country as an Architecture Department to publish an internationally refereed bi-annual research journal named ABACUS since August 2006. Ten issues of the journal have been published.

The department offers following courses-

UG Course: 5-Year B. Arch degree course in Architecture

PG Course: 2-year Master in Urban Planning degree course.

Doctoral degree in Architecture and Planning (Eight scholars registered)-

Three scholars have obtained PhDs by now.

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Redevelopment of Ranchi Hill and Pahari Mandir, Ranchi	Dr. Manjari Chakraborty Dr. N.R. Mandal Er.S.P. Bhattacharya	Govt. of Jharkhand	December 2010	Rs. 16.00 lakhs	years

## Ongoing Projects Sanctioned before July 2010

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	NMEICT Project on "Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning"	Dr. Manjari Chakraborty, Dr.N.R. Mandal, Dr. S.P. Bhattacharya, Dr. S. Sarkar, Ritu Agrawal, Harshit Lakra, S. K. Pandey, Smriti Mishra, Sangita, Sanmarga Mitra, Parama Mitra, B.C.Roy, R.C. Sinha	MHRD via IIT Kharagpur	September 2009-ongoing	22 Lacs	2 Years
2.	Research support grant under DRS at level 1 of SAP, UGC. Projects undertaken: a) Formulating a Planning Approach for some of the Newly Made District Head Quarters at Ranchi, the Capital of Jharkhand state. b) GIS Mapping of Heritage Sites in Jharkhand c) Prototype Designs for Rural Infrastructure Buildings.	Prof. (Dr.) Manjari Chakraborty  &  Prof. N.R. Mandal, (Project Coordinator)	DRS scheme of the Special Assistance Programme (SAP), UGC	26th February 2007	33 Lacs. for 3 projects	5 years

**Projects Completed during the period July 2010-June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	"Development of Megalith area for tourist purpose" at Hazaribagh	Dr. Manjari Chakraborty, Dr. S. Sarkar Dr. S.P. Bhattacharya	NTPC Hazaribagh	July 2010	Rs. 2.90 lakh	October 2010

**Workshops Conducted by the Department**

- Workshop on Photography on 31<sup>st</sup> January, 2011 by French photographer Mr. Gautham Bothrel
- Workshop on Wall Painting on 11<sup>th</sup> March, 2011 by Artist Shashi Sekhar.
- Workshop on Making an Eco-Archi Park on 25<sup>th</sup> March, 2011 by Prof. Mrinal Pathak & Prof. Harshit Lakra.
- Workshop on Painting on 4<sup>th</sup> April, 2011 by Mrs. Shweta Dubey.
- Workshop on Set Designing on 11<sup>th</sup> April 2011 by Mr. Ajay Malkhani.

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date , Month, Year
1.	Dr. Manjari Chakraborty	"Train the Trainer" Workshop on Building Physics and Simulation	USAID ECO – III project	Infosys Campus, Mysore	1 <sup>st</sup> -5 <sup>th</sup> August, 2010
2.	S. P. Bhattacharya	Short Term Course on "Earthquake Resistance Design & Construction Practices"	C.B.R.I. Roorkee	C.B.R.I. Roorkee	21 <sup>st</sup> – 24 <sup>th</sup> September, 2010.
3.	Ritu Agrawal Harshit Lakra Sanmarga Mitra Smriti Mishra Parama Mitra Bimal C. Roy Rajan C. Sinha	Mission KYaat (Know Yourself as a Teacher)	Internal Quality Assurance Cell. BIT, Mesra	BIT, Mesra	28.4.11-30.4.11

The Department of Architecture published the following two issues of ABACUS, A Bi-Annual Internationally refereed Journal on Architecture, Conservation and Urban studies (ISSN: 0973-8339).

- a) **Housing**, Volume 05, Number 01  
Editor-in-chief: Dr. Manjari Chakraborty  
Issue Editor: Dr. N.R. Mandal
- b) **Disaster Management**, Volume 05, Number 02  
Editor-in-chief: Dr. Manjari Chakraborty  
Issue Editor: Dr. S. P. Bhattacharya

## **PUBLICATIONS**

### **Published in International Journals**

1. M. Chakraborty, Natural Inheritance : Hilltop Heritage, A Bi-Annual Internationally refereed Journal on Architecture, Conservation and Urban Studies, ABACUS, 5(2), (2010), 81-82.
2. S. P. Bhattacharya, S. K. Chakraborty, Seismic-Resistant Investigation of Multi-Storey Building by Response Spectrum Method, International Journal of Acoustics and Vibration, 16(1), (2011), 17-22.
3. S. P. Bhattacharya, S. K. Chakraborty, Estimation of Storey Shear of a Building with Mass and Stiffness variation due to Seismic Excitation, International Journal of Civil and Structural Engineering, 1(3), (2010), 635-643.
4. S. P. Bhattacharya, S. K. Chakraborty, Seismic Performance Based Architectural Design Guideline for Multi-storied Apartment Housing, A Bi-Annual International Journal on Architecture, Conservation and Urban Studies, ABACUS, 5(1), (2010), 23-29.
5. Satyaki Sarkar, Restructuring Urban Concentration: An Approach Towards Future Urbanisation for the Newly Constituted State of Jharkhand, International Journal of Emerging Technologies and Application in Engineering, Technology and Sciences [IJ-ETA-ETS], Volume 3, Issue 2, July '10 – December '10, pp. 177-182.
6. Bimal Chandra Roy & Satyaki Sarkar, Impact of Industries on Urbanisation Process of the Resource Based State of Jharkhand, International Journal of Emerging Technologies and Application in Engineering, Technology and Sciences [IJ-ETA-ETS], Volume 4, Issue 1, January '11 – June '11, pp. 83 - 87.

### **Published in National Journal**

1. Satyaki Sarkar, Infill Proposals for Revival of Historic Urban Core of Kolkata, IUP Journal of Architecture, Vol. III, No. I, February 2011, pp. 33-43.

### **Papers/Abstracts in Conference Proceedings**

1. Satyaki Sarkar, Managing Land for Urban Poor – The Inside Story, Proceedings of 59th National Town & Country Planners Congress, Panchkula, Haryana 11th – 13th January, 2011.

### **Books Authored**

1. Satyaki Sarkar, Urban Development Strategy For A Newly Constituted State - Jharkhand, India, VDM Verlag Dr. Müller e.K. publisher, Saarbrücken, Germany, ISBN 978-3-639-35348-8, Paperback, 232 pages, 2011.



2. Satyaki Sarkar, Integrated Conservation of the Historic Urban Core - The Portrait of B.B.D. Bag Kolkata, LAP Lambert Academic Publishing, Saarbrücken, Germany, ISBN 978-3-8443-3240-7, Paperback, 164 pages, 2011.

### Departmental Students' Activities

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	ZONASA	Dominic Matthew	September 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> 2010
2.	Student's Tour - Orissa	Arunav Nandy and Alisha Sinha	December 9 <sup>th</sup> – 15 <sup>th</sup> 2010
	South India	Subhomoy and Gauri Mathur	December 10 <sup>th</sup> – 25 <sup>th</sup> 2010

### Development of Learning Materials

Learning materials	Name of Subject/Course /Programme	Where and When used
e- contents		
Pedagogy	<p>National Mission Project on Education through ICT, "Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning". The study material are being developed for the following subjects –</p> <ul style="list-style-type: none"> <li>• Architectural Sociology,</li> <li>• Building Economics, Real Estate Management &amp; Marketing,</li> <li>• Energy Efficient Buildings,</li> <li>• Housing &amp; Settlement Systems,</li> <li>• Structural Systems,</li> <li>• Vernacular Architecture</li> </ul>	To be used for teaching B Arch Courses

### Members on Board of Studies (UG/PG)

#### Internal

Dr. Manjari Chakraborty, Prof. & Head, Department of Architecture.

Dr. N.R. Mandal, Associate Professor, Department of Architecture.

Dr. S.P. Bhattacharya, Senior Lecturer, Department of Architecture.

Dr. K.V. Krishnamurthy, Prof. & Head, Department of Civil Engineering.

Dr. M.S. Nathawat, Prof. & Head, Department of Remote Sensing.

## External

Prof. B.K. Sengupta, Prof. & Head, Department of Architecture, IIT Kharagpur.

Prof. S.S. Roy, Prof. & Head, Department of Architecture, CET Bhubaneswar.

Mr. Amit De, Deputy General Manager, Architecture Division, MECON, Ranchi.

Mr. Rajiv Chadda, Professional Architect, Ranchi.

## Any other information

1. The Department of Architecture, BIT Mesra has been ranked 5th position in All India Ranking of architecture colleges, conducted by the Outlook India, with a perceptual score of 728.1.
2. Students of the Department added further laurels to its crown by winning the All Round Trophy at the Eastern Zonal meet of the National Association of Students of Architecture (ZONASA) 2010 hosted by IIT Kharagpur. Participants were students' teams from architectural institutes of Eastern India, which included Bengal Engineering and Science University Shibpur, Jadavpur University, NIT Patna, CET Bhubaneswar, ABIT Cuttack and many more.
3. *Susmita Sinha and Maharshi Bhattacharyya of the department secured 3rd position in the All India Quiz Competition titled Archumen and Bending Moments 2011 organized by ETHOS with the support of Young Architects Committee of the IIA. They emerged as the 2nd runner up from a teeth gritting competition among 450 students of architecture, flocking from different nooks and corners of the country.*
4. Under the Regional Chapter Cincinnati, USGBC, a team comprising of Suryabala Sah & Ashwina Luiz (7th semester students of Architecture, BIT Mesra ) were declared the winners. The duration of the competition was 15th Jan 2010 – 31st May 2010. The team received a prize money of \$500 US Dollars. The objective was To Design Cyclone Resistant Platinum ( LEED ) Rated Residence for an Elderly, in the Broadmoor Neighborhood at New Orleans, Client United States of America.
5. Suryabala Sah (7th semester student of Architecture, BIT Mesra), was ranked the 1st position in Workshop on Earthquake Resistant Design of Structures by NICEE (National Information Centre For Earthquake Engineering.), 11th July – 17th July, 2010, IIT Kanpur. The workshop was to emphasize the role of Architects in Earthquake Resistant Design. Top 3/4 students from top architecture colleges in India were selected for the 1 week workshop-cum- design competition. Total of 52 students from 16 architecture colleges had participated.
6. In Berkley Essay Competition, two students – Richa Girdhar and Dhruv Batra (7th semester students of Architecture, BIT Mesra), have been short listed for the finals.

## DEPARTMENT OF BIOTECHNOLOGY



Biotechnology Laboratory

The department has received magnificent financial supports from both Union and State Government for establishing state-of-the-art facility for academic and research activities since its inception in the year 2002. Well planned department building situated on the bank of Suverna Rekha River has attracted almost every visitor of the Institute. The visitors composed of government officials, diplomats, technocrats, scientists and industrialists have recognized the department as centre of excellence for research based academics and expressed their desire to participate in and propel the scientific and technological endeavor with BIT.

Department's unique culture, in which the staffs & students are treated as assets and stakeholder of the scientific achievement, provides a congenial environment to apply multidimensional approaches to solve the scientific problems. Students of this department are well placed in company jobs and also admitted in MS and Ph.D. programmes of foreign Institutions.

Presently, B.E. Biotechnology, M. Sc. Bioinformatics and M. Tech Biotechnology are the courses offered by the department. Fourteen students enrolled in the Ph.D. programme in various fields of biotechnology such as Genomics, Proteomics and Transcriptomics, Industrial biotechnology, product development and biotechnology Management in the department and eight candidates have submitted Ph.D. thesis in this year. The PhD degree was awarded to three scholars. Fifteen students completed their projects on Bioinformatics at BTISnet Centre (DBT, GOI, New Delhi) of the department. A super critical fluid extraction unit has been recently added to the list of instrumentation facility in the department.

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project
1.	Potential assessment of CBM harvesting in non-extractable coal/ lignite	Dr. A.S. Vidyarthi (P.I.)	OIDB	June 2010 [No.G-34026/5/ 2010-FIN.II]	169.05	Jul 10 to Jul 13
2.	Indigenous development of 1 $\mu$ m swept source optical coherence tomography (SSOCT) setup for noninvasive imaging of posterior segment of animal eye	Dr. R. Poddar (P.I.)	Department of Science & Technology	June 2010 [No.IDP/ MED/2010/10]	25	Sep 10 to Sep 12

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project
1.	Establishment of Bioinformatics Centre under BTIS Net scheme	Dr. A.S. Vidyarthi (PI)	Department of Biotechnology, Govt. of India	February 2004 BT/BI/04/065/04	68.0	Feb 05 to Mar 12
2.	Overproduction of anthocyanin, the plant derived natural colourant, for food processing industries	Dr. K. Mukhopadhyay (PI) Dr. A.S. Vidyarthi (Co-PI) Dr. R. Bandopadhyay (Co-PI)	Ministry of Food Processing Industries	47/FMPI/ R&D/2006 Dt. 04.02.2008	45.00	Feb 08 to Feb 10
3.	Study of Antioxidative and DNA protective properties of Anthocyanins	Dr. K. Mukhopadhyay (PI)	University Grants Commission	31-1 (JH) SR Dt. 10.01.2009	15.13	Jan 09 to Jan 12
4.	To understand the nature of diversity in lac insects of <i>Kerria</i> spp. in India and the nature of insect x host interaction	(Network Project) Dr. A.S. Vidyarthi (Co-Investigator) Dr. K. Mukhopadhyay (Co-Investigator) Dr. B.N. Sinha (Dept. of Pharm Sciences)	NAIP, ICAR	NAIP/Comp-4/ C3007/ 2008-09 Dt. 10.01.2009	BIT Share 66.50	Apr 09 to March 12
5.	Development of Protocols for Micropropagation, elicitation and Hairy root culture Techniques for the conservation of critically endangered medicinal plant – <i>Swertia chirayita</i> : a potential source of Xanthone	Dr. S. Chandra (PI)	University Grants Commission	37-111/2009 (SR) Dt. 19.12.2009	7.82	Feb 10 to Feb 13

6.	Functional genomics approach towards validation of biologically important consensus promoter motifs in rice ( <i>Oryza sativa</i> L.) under submergence	Dr. D.M. Pandey	University Grants Commission	37-113/2009 (SR) Dt. 19.12.2009	10.31	Feb 10 to Feb 13
7.	Production of Natural Flavour Compounds from Ferulic Acid by Microbial Transformation	Dr. S. Ghosh (Sachan) (P.I.) Dr. A.S. Vidyarthi (Co-P.I.)	University Grants Commission	37-115/2009 (SR) Dt. 19.12.2009	8.26	Feb 10 to Feb 13
8.	The culture of local mosses for production of glycosylation enzymes for use in in vitro post translational modification of mammalian proteins expressed in prokaryotes	Dr. R. Chandra (P.I.)	University Grants Commission	37-116/2009 (SR) Dt. 19.12.2009	11.31	Feb 10 to Feb 13
9.	Enhanced production of L-Asparaginase by Extractive Fermentation using aqueous two phase system	Mr. S.K. Jha (P.I.) Dr. H.R. Singh (Co-P.I.)	University Grants Commission (Minor research project)	37-625/2009 (SR) Dt. 12/01/10	1.80	Feb 10 to Feb 12

**Projects Completed during the period July 2010-June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Date of completion of the Project
1.	Development of Probes for early detection of micro organisms responsible for food spoilage during food processing and preservation	Dr. A.S. Vidyarthi (PI) Dr. K. Mukhopadhyay (Co-PI) Dr. P. Shukla (Co-PI)	The Ministry of Food Processing Industries, Govt. of India	45/MFPI/ R&D/ 2000/254 Dt. 29.03.2005	80.00	Jan 06 to Dec 08 (Extended till Dec 09)
2.	Analysis of Host-Pathogen interaction in leaf rust infection of wheat: A transcriptomic approach.	(Network Project) Dr. K. Mukhopadhyay (PI) Dr. A.S. Vidyarthi (Co-PI) Dr. R. Bandopadhyay (Co-PI)	Dept. of Biotechnology, Govt. of India	Oct 2008 BT/PR6037/ AGR/02/ 308/05	BIT Share 16.05	Oct 07 to Nov 10

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	The 51 <sup>st</sup> Annual Conference of Association of Microbiologists of India (AMI) 2010	Dr P. Shukla	DST/CSIR/MoFPI/JREDA/ CUJ, Jharkhand/ICMR	14 – 17 December 2010

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended,**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date, Month, Year
1.	Dr. A. Sachan, Dr. M. Kumar, Dr. (Mrs.) S. Ghosh Sachan	Refresher Course in Life Sciences	Academic Staff College, Ranchi University, Ranchi	Academic Staff College, Ranchi University	06-26 August, 2010

2.	Dr R. Bandopadhyay	IPNI research co-operattor's meet and National symposium on Future strategies for nutrient management research	Birsa Agricultural University	Krishak Bhawan, Birsa Agricultural University	17-19 August, 2010
3.	Dr R. Bandopadhyay	Workshop on Biosystematics	CEMDE, School of Environmental Studies, University of Delhi	Delhi University	6-15 September, 2010
4.	Dr R. Bandopadhyay	National symposium on Genomics Research and Impact in Plant System	Centre of Advanced Study, Department of Botany, University of Calcutta, supported by UGC-CAS programme & DBT-programme support	Dept of Botany, CU	21 March, 2011
5.	Dr R. Bandopadhyay, Dr. R. Chandra, Dr. S. Chandra	Workshop on Know your Mission Kyat	IQAC, BIT Mesra, Ranchi	BIT Mesra	10-12 May, 2011
6.	Dr. H.R. Singh, Mr. S.K. Jha	Workshop on Know your Mission Kyat	IQAC, BIT Mesra, Ranchi	BIT Mesra	18-20 May, 2011
7.	Dr. A. Sachan, Dr. R. Poddar	Workshop on Know your Mission Kyat	IQAC, BIT Mesra, Ranchi	BIT Mesra	24-26 May, 2011
8.	Mr. Shankaracharya	Workshop on Know your Mission Kyat	IQAC, BIT Mesra, Ranchi	BIT Mesra	31 May- 2 June, 2011

## PUBLICATIONS

### Published in International Journals

1. B.A. Sadanand, K. Kanhaiya, R. Poddar, Molecular Evolution of Virulence Genes of Swine Influenza Virus Subtype-A H1N1 : an analysis of host radiation, International Journal of Pharma and Bio Sciences, 2 (2010) 169-180.
2. N. Singh, T.T.M. Dang, G.V. Vergara, D.M. Pandey, D. Sanchez, C.N. Neeraja, E.M. Septiningsih, M. Mendiolo, E.M. Tecson-Mendoza, A.M. Ismail, D.J. Mackill, S. Heuer, Screening for novel sources of submergence tolerance using gene-based *Sub1* molecular markers, Theoretical and Applied Genetics, 121(2010) 1441-1453.
3. A.K. Khandelwal, V.K. Nigam, A.S. Vidyarthi, P. Ghosh, Evaluation of various ions and compounds on nitrilase produced from *Streptomyces sp.*, Artificial Cells, Blood substitutes & Biotechnology, 38 (2010) 13-18.

4. A. Rizal, A. Kumar, A.S. Vidyarthi, Prevalence of Pathogenic Genes in *Campylobacter jejuni* Isolated from Poultry and Human, Internet Journal of Food Safety, 12 (2010) 29-34.
5. Shankaracharya, S. Das, D. Prasad, A.S. Vidyarthi, Theoretical Investigations on Structure and Function of Human Homologue hABH4 of E. coli ALKB4, IBC Interdisciplinary Bio Central, (2010) doi:10.4051/ibc.2010.2.3.0008.
6. Shankaracharya, Priyamvada, A.S. Vidyarthi, *In silico* prediction of D-HSCDK2 structure and its docking study with Flavopiridol analogues, Journal of Chemical and Pharmaceutical Research, 2 (2010) 329-337.
7. K. Mukherjee, A.K. Bothra, A.S. Vidyarthi, Comparison of global and local motional properties of human telomere repeat binding factor (hTRF2) in vacuum and water, Journal of Chemical and Pharmaceutical Research, 2 (2010) 587-592.
8. Shankaracharya, Priyamvada, A.S. Vidyarthi, Pharmaco-informatics: Modeling of Human CDCP2 homolog structure and its docking study with Flavopiridol analogs, International Journal of Pharmaceutical Sciences Review and Research, 4 (2010) 1-6.
9. Shankaracharya, Priyamvada, A.S. Vidyarthi, Structural Modeling of Human CDK4 and its Docking Study With Flavopiridol Analogues, Pharmabit, 21(2010) 99-105.
10. Shankaracharya, D. Odedra, S. Samanta, A.S. Vidyarthi, Computational Intelligence in Early Diabetes Diagnosis: A Review, The Review of Diabetic Studies, 7 (2010) 248-258.
11. A. Mathur, Shankaracharya, A.S. Vidyarthi, Swift Modeller: A java based GUI for molecular modeling, Journal of Molecular Modelling, (2011) DOI: 10.1007/s00894-011-0960-4.
12. Shankaracharya, S. Das, A.S. Vidyarthi, Structure and function prediction of human homologue hABH5 of E. coli ALKB5 using in silico approach, Nature Precedings, (2011) doi | 10.1038/npre.2011.5597.1
13. Shankaracharya, S. Das, A.S. Vidyarthi, Molecular modelling and Function Prediction of hABH7, human homologue of E. coli ALKB7. Nature Precedings, (2011) hdl:10101/npre.2011.5841.1.
14. Shankaracharya, S. Das, A.S. Vidyarthi, Homology Modeling and Function Prediction study of hABH1, Involve in repair of alkylation-damaged DNA, Interdisciplinary Sciences: Computational Life Sciences, 3 (2011) 1-7.
15. P. Jyoti, A.S. Vidyarthi, Shankaracharya, *In-silico* discovery of Inhibitors against telomerase associated proteins, Online Journal of Bioinformatics, 12 (2011) 243-254.
16. P. Parashar, S.K. Singh, A.K. Dubey, H.R. Singh, G.N. Trivedi, Changes in salivary and seminal ascorbic acid level in men of different Body Mass Index (BMI) range groups, Journal of Experimental Zoology, India, 14 (2011) 249-251.
17. D. Odedra, M. Mallick, A.S. Vidyarthi, Shankaracharya, Comparative Evolutionary Analysis of Metallo- $\beta$ -Lactamases with Reference to NDM1, Online Journal of Bioinformatics, 12 (2011) 18-33.
18. D. Prasad, Shankaracharya, A.S. Vidyarthi, Gold nanoparticles (GNPs) based colorimetric assay for rapid detection of *Salmonella* species in food samples, World Journal of Microbiology and Biotechnology, (2011) DOI: 10.1007/s11274-011-0679-5.
19. A.K. Singh, P. Shukla, *In silico* analysis of antibiotic producing actinomycetes communities and their relatedness towards antimicrobial activities, Journal of Advanced Bioinformatics Applications and Research (ISSN 0976-2604), 2 (2011) 130-134.
20. P. Shukla, J. Bhagat, S. Shrivastava, Oil cakes as substrate for improved lipase production in solid state



- fermentation, International Journal of Microbiology Research (ISSN: 0975-5276 ; E-ISSN: 0975-9174), 3 (2011) 71-73.
21. S. Vijayvargiya, P. Shukla, Identification of transcription factor binding sites in biological sequences using genetic algorithm, International Journal of Research and Reviews in Computer Science (IJRRCS), 2 (2011) 561-565.
  22. S. Vijayvargiya, P. Shukla, A Structured Evolutionary Algorithm for Identification of Transcription Factor Binding Sites in Unaligned DNA Sequences, International Journal of Advancements in Technology (ISSN 0976-4860), 2 (2011) 100-107.
  23. M.V.K Karthik, P. Shukla, Rational enzyme design towards substrate stabilization in family 11 xylanases from *Thermomyces lanuginosus*, Online Journal of Bioinformatics (OJB), 12 (2011) 107-114.
  24. R. Bandopadhyay, S. Rustgi, R. K. Chaudhuri, P. Khurana, J.P. Khurana, A.K. Tyagi, H.S. Balyan, A. Houben, P. K. Gupta, Use of methylation filtration and Cot fractionation for analysis of genome composition and comparative genomics in bread wheat, Journal of Genetics and Genomics, 38 (2011) 315-325.
  25. S. Kumar, J. Pathak, Asha, R. Bandopadhyay, Inhibition of Farnesyl pyrophosphate by allosteric site drug binding, Online Journal of Bioinformatics, 12 (2011) 57-65.
  26. S. Chandra, R. Chandra, Engineering secondary metabolite production in hairy roots, Phytochemistry Reviews, (2011) DOI 10.1007/s11101-011-9210-8.

#### **Published in National Journals**

1. R. Ramprasad, R. Bandopadhyay, Future of *Ricinus communis* after the completion of draft genome sequence, Current Science, 99 (2010) 1316-1318.
2. S. Kumar, C.K. Singh, R. Bandopadhyay, Wheat genome sequence: challenges and success. Current Science, 100 (2011) 455-457.
3. R. Sinha, A.S. Vidyarthi, Shankaracharya, A Molecular Docking study of Paclitaxel and its Analogues, Indian Journal of Biochemistry and Biophysics, Nisclair Journal, 48 (2011) 188-195.
4. A.K. Singh, A.S. Vidyarthi, Shankaracharya, Codon Usage pattern of differentially expressed genes in *Leishmania* species. Indian J. Biotechnology, 10 (2011) 101-105.

#### **Papers/Abstracts in Conference Proceedings:**

##### **International**

1. M.V.K Karthik, P. Singh, P. Shukla, An overview of efficacy of various integrases against some drug molecules used for treatment of HIV, 6th ISCB Student Council Symposium, Hynes Convention Center Boston, USA, July 09, 2010
2. M.V.K Karthik, P. Singh, P. Shukla, Molecular docking studies on integrase inhibitors and their role in drug delivery for designing therapeutic targets of HIV, International Conference on Cellular & Molecular Bioengineering, Nanyang Technological University, Singapore, August 2- 4, 2010.
3. K. Mukherjee, D.M. Pandey, A.S. Vidyarthi, In Silico characterisation of TBP1 in Rice (*Oryza sativa* L.), International Conference on Bioinformatics, KIIT, Bhubaneswar, Orissa, September 3-5, 2010.

4. N. Kumari, M.V.K Karthik, P. Singh, P. Shukla, Molecular docking of industrial chitinase from *Trichoderma harzianum*, International Conferences in Bioinformatics, KIIT University, Bhubaneswar, Orissa, September 4-5, 2010.
5. M.V.K Karthik, P. Singh, P. Shukla, Molecular protein docking of an endogenous human blood peptide  $\alpha 1$  antitrypsin (VIRIP) towards understanding the role of natural HIV-1 fusion inhibitor as future target molecule for drug discovery against HIV, International Conference on Frontiers in Biological Sciences, InCoFIBS, 2010, NIT Rourkela, October 1-3, 2010. (Awarded as best poster award)
6. P. Kumar, V. Kumar, A. Kumar, A.S. Vidyarthi, D.M. Pandey, Identification of retented introns, weak splice sites and their mechanism in rice (*Oryza sativa* L.) genome: an in silico approach, 3rd International Rice Congress- 2010, Hanoi, Vietnam, November 8-12, 2010.
7. V. Kumar, R. Bandopadhyay, M.M. Sharma, S. Chandra, *Agrobacterium rhizogenes*: Biotechnological tool for transformation of medicinal plant *Swertia chirayita* (Roxb. ex Fleming. H. Karst.), International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
8. S. Singh, A.S. Vidyarthi, S. Banerjee, S. Tikariha, Biosynthesis of gold nanoparticles using *Bacillus licheniformis*, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
9. N. Panjiar, S. Ghosh Sachan, A. Sachan, Isolation and screening of biosurfactant producing microorganisms, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
10. S. Mishra, A. Sachan, A.S. Vidyarthi, S. Ghosh Sachan, Production of natural flavours: A microbial approach, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
11. R. Laik, V. Nath, A.S. Vidyarthi, S.P. Songca, R.N. Gupta, C.B. Sahay, Chandrakant, Detection of brain tumor using modalities like MRI as a biomedical instrumentation system and correlation of neural disorders predicted in human with other organism, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
12. V.G. Malathi, A. Kumar, P. Ramachandran, J. Mathew, T. Abraham, D.M. Pandey, Detection of viroids in tapping panel dryness disease affected rubber trees by Return-Polyacrylamide gel electrophoresis (R-PAGE) and RT-PCR, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
13. A. Mishra, A. Kumar, N.C. Gupta, D.K. Sahi, S. Ghosh Sachan, D.M. Pandey, Dynamics of Plant Growth Promoting Rhizobacteria in Maize Crop of Jharkhand, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.

14. K. Mehta, P. Singhal, A. Kapoor, R. Poddar, Study of HIV Dynamics Using Fuzzy Discrete Event System (FDES) Theory, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
15. R. Poddar, P. Ranjan, D. Pasrija, P. Pushp, S. Shalini, In silico structural modifications of Tipranavir drug: An implication on HIV-1 protease, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
16. P. Sarkar, M. Kullu, R. Poddar, Study of Putative Therapeutic Targets of Genistein , Baicalin and Ginsenoside : A Pharmaco- Informatics Approach, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
17. A.K. Singh, S. Soy, A. Roy, S. Chandra, Endophytic fungi: new hopes for plant secondary metabolite, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
18. K.L. Melgandi, K. Barjo, N. Uraon, R. Chandra, S. Chandra, Isolation of potential fungal endophytes from catharanthus roseus (white) for novel secondary metabolites production, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
19. D. Jabin, Shankaracharya, Drug design approach for ndm-1, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
20. P. Barak, R. Mohan, S. Mishra, S. Ghosh Sachan, A. Sachan, Biotransformation of eugenol to value-added compounds, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
21. S. Bhargava, R. Kumari, N. Panjiar, S. Ghosh Sachan, A. Sachan, Isolation, screening and characterization of biosurfactant producing microorganisms, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
22. S. Shekhar, S.K. Deo, A. Sachan, Production of ferulic acid from sugarcane bagasse, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
23. D. Parikh, S. Thareja, N. Panjiar, A. Sachan, Production of biosurfactants by potential actinomycetes, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
24. D. Smiita, N. Panjiar, A.S. Vidyarthi, S. Ghosh Sachan, A. Sachan, Microbial solubilisation and transformation of ferulic acid into value-added product through production of biosurfactants, International Symposium on

- Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
25. S.K. Jha, P. Kumari, N.K. Chaudhary, H.R. Singh, A.S. Vidyarthi, Purification of L-Asparaginase from *Cicer arietinum* by three phase partitioning system, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  26. K. Mukherjee, A. Kumar, M. Mallick, D.M. Pandey, Comparative Study of *Burkholderia* and *Pseudomonas* Genomes for Panicle Blight Syndrome in Rice (*Oryza sativa* L.): An In Silico Approach, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  27. S. Saba, A.A. Swarup, B. Singh, S.R. Sharma, Study of Microflora of gall bladder and their role in gallstone formation, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  28. R. Ramprasad, J. Srinivas, K. Mukhopadhyay, M. Kumar, Development of molecular toolbox for endosulfan degradation, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  29. A. Sharma, P. Shukla, Screening for antimicrobial peptides and their role in plant microbe interaction, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  30. U. Tripathi, M. Agarwal, A. Sahay, P. Shukla, Substrate specific molecular docking studies towards improvement in catalytic site binding of industrial chitinases from *Trichoderma harzianum*, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  31. J. Imam, S. Alam, M. Variar, P. Shukla, Genetic structure of Indian *Magnaporthe oryzae* populations based on REP-PCR fingerprinting, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  32. S. Vijayvargiya, P. Shukla, An evolutionary algorithm for finding variable length regulatory motifs in DNA sequences, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
  33. A. Sharma, S. Jalan, S. Shrivastava, P. Shukla, Purification, enzyme immobilization and technological advantages for xylanase suitability for pulp and paper fibres, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.

34. M.V.K Karthik, P. Singh, P. Shukla, Molecular docking studies towards understanding anti-cancer properties of triterpene saponins from *Medicago truncatula*, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
35. M.V.K Karthik, P. Singh, P. Shukla, Understanding structure function relationship of angptl4 protein towards development of effective probiotic diet for obesity control, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010. (Awarded as Best Poster Award-Danisco India Award in Probiotics & Enzyme Technology 2010)
36. C. Banerjee, R. Bandopadhyay, P. Shukla, R. Chandra, Studies of scanning electron microscopy and growth of hydrogen producing indigenous green micro algal species, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010. (Awarded as Best Poster Award).
37. K. Sudha, Amrita Shree, M.V.K Karthik, P. Shukla, Phylogenetic analysis of neuraminidase for evaluating conservation among subtypes of Influenza A viruses, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
38. T. Raj, S. Goyal, P. Shukla, Isolation and screening of antibiotics sensitivity and antibacterial properties of some probiotic microorganisms from various curd and chili sauce samples, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
39. G. Kumar, R. Chandra, In vitro culture of local moss, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
40. A. Khandelwal, V. K. Nigam, A.S. Vidyarthi, M. K. Mohan, P. Ghosh, Studies on the enantio-selectivity of nitrilase produced from a new isolate *Streptomyces*, International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues Challenges (AMI-2010-CMAC), 51<sup>st</sup> AMI Annual Conference, Birla Institute of Technology, Mesra, Ranchi, December 14-17, 2010.
41. D. Singh, R. Bandopadhyay, G. Bhagnagre, K.V. Prabhu, K. Mukhopadhyay, Differential gene expression of some defense genes in susceptible and resistant wheat plants during leaf rust infection, 3<sup>rd</sup> International Group Meeting on "Wheat Productivity Enhancement Under Changing Climate", UAS Dharwad, Karnataka, February 9-12, 2011.

## National

1. A. Sharma, S. Jalan, S. Shrivastava, P. Shukla, Overview of enzyme based modification of pulp and paper fibers through SEM studies, 2nd Annual National Biotechnology Conference, International Institute of Information Technology (I2IT), Pune, November 13-14, 2010.
2. A. Kumar, K. Yadav, V. Kumari, D. Prasad, G.K. Prajapati, V. Sahu, A.S. Vidyarthi, D. M. Pandey, Molecular biology approaches on geraniol dehydrogenase encoding gene in *Cymbopogon winterianus*, National Conference of Plant Physiology on Physiological and Molecular Approaches for

Crop Improvement under Changing Environment, B.H.U., Varanasi, 25-27 November, 2010.

3. S. Chandra, Bioprospecting Hairy Roots for Plant Secondary Metabolites Production, National symposium on biotechnological perspectives of plants, microbes and their interactions, UGC SAP-(DRS Phase-1), Dept. of Botany, B. R. A. Bihar University, Muzaffarpur, January 15- 17, 2011.
4. K.L. Melgandi, K. Barjo, N. Uraon, S. Chandra, Screening of potential fungal endophytes from *Catharanthus roseus* and their phytochemical analysis for alkaloid production, National symposium on biotechnological perspectives of plants, microbes and their interactions, UGC SAP-(DRS Phase-1), Dept. of Botany, B. R. A. Bihar University, Muzaffarpur, January 15- 17, 2011.
5. R. Laik, V. Nath, R.N. Gupta, P. Shukla, A.S. Vidyarthi, H.R. Singh, B. Kumar, V.K. Tyagi, T.N. Tripathi, Design of Diagnostic Pathological System for Early Stage Detection/Screening of Cancer Biomarker with Nano-informatics, 16th National Seminar On Physics & Technology Of sensors (NSPTS - 16), February 11 - 13, 2011.

### Books

1. R. Katam, D. Panathee, E. Y. Basenko, R. Bandopadhyay, S. M. Basha, K. Eswaran, Arabidopsis Genome Initiative. Principles and Practices of Plant Genomics, Principle and Practices of Plant Genomics (Volume 3 Advanced Genomics), Science Publishers, Inc., New Hampshire, Jersey, Plymouth, 2010. (ISBN 978-1-47808-683-2)
2. R. Bandopadhyay, Levels and Stability of Expression of Transgenes, Development and Deployment of Transgenic Crop Plants, Transgenic Crop Plants (Volume 1 Principles and Development), Springer-Verlag, 2010. (ISBN: 978-3-642-04808-1)
3. N. Kumari, M.V.K Karthik, P. Singh, S. Vijayvargiya, P. Shukla, Molecular docking approaches for improvement in catalytic site binding of industrial chitinases from *Trichoderma harzianum*, Ed. Vivek Bajpai, Recent Trends in Microbial Biotechnology, Lambert Academic Publishing, Germany, 2010. (ISBN : 3843390029, ISBN-13: 9783843390026)

### Chapter contributed to Edited Volume-Published by National Level Publishers (With ISSN/ISBN Numbers.)

1. H.R. Singh, D.M. Pandey, A.S. Vidyarthi, Biotechnological Interventions for Sustainable Rural Development and Upliftment. In Biotechnology for Rural Development, Tata McGraw Hill, New Delhi, 2010.
2. P. Shukla, R. Bandopadhyay, Development in social and legal issues in biotechnology: A comparative overview on the present scenario and future prospects of bioethics, Ed. Seyed E. Hasnain, Rashmi, Bhavnath Jha, R.N. Sharan, Biotechnology for sustainable Development, Tata McGraw Hill, New Delhi, 2010.
3. R. Bandopadhyay, K. Mukhopadhyay, Productivity Enhancement and Value Addition of Bamboos, Excel India Publishers, New Delhi, 2011. (ISBN 9380692708)

### Award / Recognition Bestowed on Faculty ( State / National / International )

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1.	Dr. R. Bandopadhyay and Dr/ P. Shukla	Selected for Southern Ocean Expedition 2011	MoES/NCAOR	Jan-March , 2011

**Patents (Applied / Granted)**

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. A. S. Vidyarthi Mr. Dinesh Prasad	Colorimetric method and kit for the detection of specific nucleic acid sequence using non functionalized GNP nano particle and unmodified short DNA oligonucleotides	1228/KOL/2010 (Published in gadget)	2010
2.	S.K. Ranjan, Dr. A.S. Vidyarthi, Dr. R. Ramani	Group-specific primers for identification of Kerria Apecies	580/KOL/2011 (Applied)	2011

**Development of Learning Materials**

Learning materials	Name of Subject/Course /Programme	Where and When used
e- contents		
Pedagogy	Genetic Engineering and rDNA Technology Enzyme Technology	Development in progress

**No of summer trainees trained in the Department during July 2010 to June 2011: 13**

**Members on Board of Studies (UG/PG)**

BOS (M Tech Biotechnology)

- |    |                         |   |                 |
|----|-------------------------|---|-----------------|
| 1. | Dr. A. S. Vidyarthi     | - | Head & Chairman |
| 2. | Dr. (Mrs.) M. Mukherjee | - | Member          |
| 3. | Prof. D. Bhagat         | - | Member          |
| 4. | Dr. P.R.P. Verma        | - | Member          |
| 5. | Dr. K. Mukhopadhyay     | - | Member          |
| 6. | Dr. D.M. Pandey         | - | Member          |
| 7. | Dr. A. Sachan           | - | Member          |

**Panel of Experts from outside of the Institute: (Any two)**

- |    |  |    |   |
|----|--|----|---|
| 1. | Prof. P. Ghosh<br>BISR Jaipur,   | 3. | Dr. T. Madhan Mohan<br>Director<br>Dept. of Biotechnology, GOI<br>CGO Complex, New Delhi. |
| 2. | Dr. Z. A. Haider<br>Coordinator<br>College of Biotechnology<br>Birma Agricultural University | 4. | Dr. R. Sen<br>Dept. of Biotechnology<br>IIT Kharagpur                                     |

- |   |  |
|---|--|
| 5. Dr. A. K. Panda<br>Scientist<br>Product Development Cell<br>NII, New Delhi   | 8. Dr. R. Ramani<br>Director<br>IINRG, Namkum<br>Ranchi  |
| 6. Dr. S. K. Srivastava<br>Deputy Director & Head<br>Professor & Head<br>School of Biochemical Engg.<br>IT, BHU, Varanasi | 9. Dr. B. N. Mishra<br>Professor & Coordinator<br>Biotechnology Programme<br>Institute of Engg. & Technology<br>Lucknow-226021 |
| 7. Mr. G. K. Sharma<br>GM (Production)<br>Ranbaxy Pvt. Limited<br>Poanta Sahib<br>Himachal Pradesh                        |  |

**BOS (M Sc Bioinformatics)**

- |                        |                   |
|------------------------|-------------------|
| 1. Dr. A. S. Vidyarthi | - Head & Chairman |
| 2. Dr. R. Sukesh kumar | - Member          |
| 3. Dr. G. Sahoo        | - Member          |
| 4. Dr. S. Padhi        | - Member          |
| 6. Dr. K. Mukhopadhyay | - Member          |
| 7. Dr. D.M. Pandey     | - Member          |
| 8. Dr. A. Sachan       | - Member          |
| 9. Mr. Shankaracharya  | - Member          |

**Panel of Experts from outside of the Institute:**

- |   |   |
|---|---|
| 1. Prof T. Ghosh<br>Emeritus Prof., IIT Delhi   | 6. Dr. Ranjana Srivastava<br>Deputy Director & Head<br>Gene cloning Laboratory<br>Central Drug Research Institute<br>Lucknow – 226001 |
| 2. Dr. Z. A. Haider<br>Coordinator, College of Biotechnology<br>Birsa Agricultural University, Ranchi       |   |
| 3. Dr. T. Madhan Mohan<br>Advisor, Dept. of Biotechnology, GOI<br>CGO Complex, New Delhi.                   | 7. Mr. G. K. Sharma<br>GM (Production)<br>Ranbaxy Pvt. Limited<br>Poanta Sahib<br>Himachal Pradesh                                    |
| 4. Dr. Debbrata Das<br>Dept. of Biotechnology<br>IIT Kharagpur  | 8. Dr. R. Ramani<br>Director<br>504, Delphi, Orchard Avenue<br>IINRG, Namkum, Ranchi  |
| 5. Dr. B.N. Mishra<br>Professor & Coordinator<br>Biotechnology Programme<br>Institute of Engg. & Technology |   |



**BOS UG**

1.	Dr. A. S. Vidyarthi	Head & Chairman
2.	Dr. P. Ghosh	Member
3.	Dr. K. Mukhopadhyay	Member
4.	Dr. P. Shukla	Member
5.	Dr. D. Sasmal	Member
6.	Dr. (Mrs.) M. Mukherjee	Member
7.	Dr. V. P. Gupta	Member (Advisor DBT, GOI)
8.	Mr. G. K. Sharma	Member (Ranbaxy)

**Any other important information**

- Department of Biotechnology participated in hosting, DST Inspire Camp on Basic Science, a 5 day workshop sponsored by DST, GOI which was held during 20-24<sup>th</sup> December 2010.
- Dr. P. Shukla has been nominated as member of Editorial Board International Journal of the Bioflux Society, ELBA Bioflux, Romania.
- Dr. P. Shukla has been nominated as Member (2<sup>nd</sup> Term), National Executive Council of Association of Microbiologists of India (2010-2013).
- Dr. R. Bandopadhyay was invited as resource person at CRURRS, Hazaribagh on "Wheat Genome Character", 25<sup>th</sup> June, 2011.
- Dr. R. Bandopadhyay delivered a talk on "Challenges & Exploration of Research Opportunities in Southern Ocean Antarctic Region", as resource person on research scholar day, 26-27 March, 2011. Birla Institute of Technology, Mesra, Ranchi and presented a talk on (During NBA visit & Research Scholar Day Celebration)
- Dr. R. Bandopadhyay delivered a talk on "A voyage to discovery" in the Department of Biotechnology, BIT Mesra, 26<sup>th</sup> March, 2011.
- Dr. R. Bandopadhyay has been nominated as Associate Editor in Journal of Medicinal Plants Research [www.academicjournals.org/JMPR](http://www.academicjournals.org/JMPR).
- Dr. R. Bandopadhyay has been nominated as Editorial Board Member in Ten International Journals.
- Ms. Sneha Singh delivered a talk on "Nanotechnology in composites in relation to railway application" as Resource person in a workshop on Alternate Fuel and Engineering Materials at Indian railway Institute of Mechanical and Electrical Engineering (IRIMEE), Jamalpur on 24<sup>th</sup> January, 2011.
- Ms. Sneha Singh was invited as visiting faculty to conduct lectures on Nanobiotechnology, Marwari College, Ranchi for postgraduate studies in Biotechnology, 10-24 November, 2010.

**Students contribution in Journal**

- Vikas Kumar, Abhijit Badve, Saibal Das (M.Sc. Bioinformatics 2008 batch) contributed in paper published in International Journal of Applied Biology and Pharmaceutical Technology.

- Abhijit Badve (M.Sc. Bioinformatics 2008 batch) and Krishna Kanhaiya (M.Sc. Bioinformatics 2009 batch) contributed in paper published in International Journal of Pharma and Bio Sciences.
- R. Ramprasad (BE Biotechnology 2007 batch) contributed in paper published in Current Science.
- Abhinav Mathur (BE Biotechnology 2006 batch) contributed in paper published in Journal of Molecular Modelling.
- Devang Odedra and Medhavi Mallick (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Online Journal of Bioinformatics.
- Devang Odedra (M.Sc. Bioinformatics 2009 batch) contributed in paper published in The Review of Diabetic Studies.
- Abhiimanyu Kumar singh (M.Sc. Bioinformatics 2007 batch) contributed in paper published in Indian Journal of Biotechnology and Journal of Advanced Bioinformatics Applications and Research.
- Ruma Sinha (M.Sc. Bioinformatics 2008 batch) contributed in paper published in Indian Journal of Biochemistry and Biophysics.
- Saibal Das (M.Sc. Bioinformatics 2008 batch) contributed in paper published in IBC Interdisciplinary Bio Central, Nature Precedings and Interdisciplinary Sciences: Computational Life Sciences
- Priyamvada (M.Sc. Bioinformatics 2008 batch) contributed in paper published in Journal of Chemical and Pharmaceutical Research, International Journal of Pharmaceutical Sciences Review and Research and Pharmabit.
- Purnima Jyoti (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Online Journal of Bioinformatics.
- M.V.K Karthik (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Online Journal of Bioinformatics.
- Neha Kumari (M.Sc. Bioinformatics 2008 batch), M.V.K Karthik, Puneet Kumar Singh (M.Sc. Bioinformatics 2009 batch) contributed in book chapter published in Recent Trends in Microbial Biotechnology, Lambert Academic Publishing, Germany.
- Satish Kumar, Chandan.Kumar Singh (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Current Science.
- Satish Kumar, Jyoti Pathak, Asha (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Online Journal of Bioinformatics.

#### **Students contribution in conference proceedings**

- M. Sc. Bioinformatics (08) and B. E. Biotechnology students (08) participated in poster presentation in National Seminar on Applications of Biotechnology and development of Bihar, BIT Patna campus, Patna. March 22-24, 2010.
- M. Sc. Bioinformatics Students participated in PHARMACON 2010, Dept of Pharmaceutical Sciences, BIT Mesra, Ranchi. April 9-10, 2010.
- M. Sc. Bioinformatics and B. E. Biotechnology students participated in 2<sup>nd</sup> Indian Youth Science Congress-2010, SRM University, Chennai and MSSRF, Chennai. June 26-28 2010.

- M. Sc. Bioinformatics Students participated in 3rd International Rice Congress- 2010, Hanoi, Vietnam from November 8-12, 2010.
- B.E. Biotechnology students participated in National Conference of Plant Physiology on Physiological and Molecular Approaches for Crop Improvement under Changing Environment at B.H.U., Varanasi from November 25-27, 2010.
- B.E. Biotechnology, M. Sc. Bioinformatics and M. Tech. Biotechnology students participated in poster presentation in the 51<sup>st</sup> AMI Annual Conference at Birla Institute of Technology, Mesra, Ranchi, 14-17 December, 2010
- B.E. Biotechnology students participated in National symposium on biotechnological perspectives of plants, microbes and their interactions. UGC SAP-(DRS Phase-1), Dept. of Botany, B. R. A. Bihar University, Muzaffarpur, Jan 15- 17, 2011.

## DEPARTMENT OF CHEMICAL & POLYMER ENGINEERING



Injection Moulding Machine

The Department of Polymer Engineering established in 1994, has been renamed as Department of Chemical and Polymer Engineering from the present academic year. The Department of Chemical and Polymer Engineering offers an undergraduate programme B.E (Chemical and Polymer Engineering), and two post graduate programmes ME (Polymer Engineering) and M.Tech. (Polymer Science and Technology). The Department also provides facilities for Doctoral Research in Engineering and Technology in the areas related to Polymer Science and Engineering, Chemical Engineering. The Department has designed a new programme BE (Chemical Engineering) to be

introduced from Academic year 2011-12.

The undergraduate programme BE (Chemical Engineering) to be introduced will impart high standard training, emphasizing on Chemical Engineering fundamentals - Heat Transfer, Mass Transfer, Fluid Mechanics, Process Control, Reaction Engineering, Computer Aided Engineering etc to groom them to carry out economic and environment friendly design, technology development and operation of a wide range of chemical plants – Industrial chemicals, petroleum, polymers, pharmaceuticals, cement, fertilizer, fuel, processed food etc. The core curriculum is complemented by electives in the important emerging areas like NanoTechnology, BioTechnology, Molecular Simulation, Food Technology, Colloidal Science and Engineering etc.

In addition to the core chemical engineering subjects, students of BE (Chemical and Polymer Engineering) programme are exposed to courses in Polymer Materials Technology, Polymer Processing, Polymer Product Design and Development in order to serve industries involved in polymer manufacture, polymer processing and conversion industries, polymer processing machinery manufacturing industries and advanced level research in the field of polymer science and engineering.

The M.E. programme deals with advanced topics in the field of polymer science and engineering including simulation of Polymer Processing, Specialty Polymers, Nano-science and Nanotechnology. The M. Tech programme aims to groom students for research in Polymer Science. The Department also offers facilities for Ph. D. programme in fields of polymer science, polymer engineering and chemical engineering.

The Department has modern and sophisticated Laboratories and workshop facilities such as Chemical Engineering Unit Operation laboratory, Chemical Reaction Engineering, Synthesis Laboratory, Polymer Characterization Laboratory, Polymer Processing Workshop and Product Development Laboratory including a mould design and manufacturing facility. The facilities in the Polymer Characterization Laboratory include HAAKE Torque Rheometer with Mixer and Extruder, Oscillating Disc Rheometer, RIGAKU Miniflex X-ray Diffractometer, Instron Tensile Testing machine, ATLAS accelerated weathering system, Dynamic Mechanical Thermal analyzer (TA), Ultrafiltration unit, Injection Moulding machines - 80 ton L&T Ergotech and 25 ton Windsor, Extrusion Blow moulding machine with parison programming, Kolsite Single screw extruder, Kolsite Film blowing plant and PVC pipe Extrusion plant, Two roll mixing mills, Thermoforming, Compression moulding, Welding facilities – Ultrasonic and Hot air, PVC compounding mixer etc. The product testing laboratory is well equipped with testing facilities for various plastics products like films, sheets, pipes etc. The facilities in the

Plastics Product Development laboratory includes Fused Deposition Modeling system, Stratasys, for rapid prototyping, MCP-HEK vacuum casting machine for prototyping and Mold Flow Software with Flow, Warp, and Stress Modules, 3 axis CNC EDM machine, Mould Wizard of NX Manufacturing Bundle etc. E-learning facility has been created with Paulsons Training Basic Injection Moulding, Simtech, Single Screw Extrusion, and Compounding with Twin Screw Extruder. The students are trained in various CAE applications in the field of product and process design with various software such as Accelerys, Material Studio for molecular simulation, MATLAB, PROENGINEER, ANSYS, CATIA, FLUENT, POLYFLOW, and MOLDFLOW.

The research areas in the Department include Nanotechnology, Advanced Polymer Composites, Alternative Energy, Pollution Control, Water Treatment Technologies, Polymer Blends and Interpenetrating Polymer Networks, Nano filtration Membrane, Recycling of Polymer Waste, Specialty Polymer, Colloids and Interfacial Science, Tissue Engineering, Sensors, and Fuel Cell Membrane.

Faculty members have ongoing collaborative research with various organizations as well as various Departments of the Institute. They also participated in conducting several courses in other Departments like Pharmaceutical Sciences, BioTechnology, Management, Applied Chemistry, Mechanical Engineering, Environmental Science & Engineering, Food Technology etc.

**INTEGRATED INDUSTRIAL TRAINING PROGRAMME:** In collaboration with BIT Extension Centre Muscat, the Department is conducting an integrated industrial training programme for a company Amiantit Oman, at Muscat. The Certificate courses offered are: Polymer Technology- Rotomoulding, Polymer Technology – PVC Pipe Production, and Polymer Technology – HDPE Pipe Production.

**DESIGN DEVELOPMENT AND TRAINING CENTRE IN PLASTICS ENGINEERING:** Department of Polymer Engineering also coordinates the activities of “Design Development and Training Centre in Plastics Engineering”, a joint venture of Department of Industries, Government of Jarkhand and BIT Mesra. The ongoing programmes are one year Certificate Programme in Plastic Processing Machine Operator for matriculates, one year Certificate Programme for Mould Making Technician for ITI qualified machine operator and one year course on Plastics Processing for graduates. All the courses are aimed at manpower development for the Plastics Processing Industries of Jharkhand. Apart from the training programmes the Centre provides consultancy and product testing facilities to the Industries. The Centre conducts short and long term courses in Polymer Processing, Quality Control, CAE, etc. Apart from manpower development the Centre provides consultancy and testing facilities to the plastics industries.

## SPONSORED PROJECTS

### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount, Rs Lacs	Duration of the Project
1	Development of Non-fluorinated hybrid membrane for direct methanol fuel cell	Dr. G. Sarkhel/ Dr. Arup Choudhury	Ministry of New and Renewable Energy Govt. of India	8.10.10	15.40	3 years
2	Toughening of Epoxy for PAN carbon composite	Dr. G. Sarkhel/ Dr. (Mrs.) S Goswami Mr. P. Datta	DRDL, Hyderabad Govt. of India	12.11.10	9.47 l	3 years

3	Enhancement of thermal resistance properties of Epoxy adhesive by adding nano filler	Dr. A. K. Sen/ Dr. G. Sarkhel	DRDL, Hyderabad Govt. of India	12.11.10	3.50	1 years
4	Characterization of thermal protection primer and thermal protection coating	Dr. A. Choudhury/ Dr. A. K. Sen Dr. P. Kar	DRDL, Hyderabad Govt. of India	12.11.10	3.70	1 years
5	Erosion resistance studies	Dr. (Mrs.) M. Mukherjee/ Dr. A. Choudhury Dr. G. Sarkhel	DRDL, Hyderabad Govt. of India	12.11.10	3.42	1 years
6	Modernization and removal of obsolescence in Polymer Rheology laboratory	Dr. (Mrs.) M. Mukherjee	AICTE	31.3.11	15.00	1 year

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co- PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount Rs lacs	Duration of the Project
1.	Design and development of coir fibre based low cost air cooler	Dr. A. K. Sen	Coir Board, Govt. of India	2009	9.79	3 Years
2.	Interpenetrating networks based on hydrophilic-hydrophobic acrylics	Dr. S. Goswami	DST	2009	10.23	3 Years
3.	Development of infrastructure for polymer blends and nanocomposite laboratory	Dr. (Mrs.) M. Mukherjee Dr. G. Sarkhel Dr. S. Goswami Dr. A. Choudhury	DST-FIST	2009	65.0	3 Years

**Projects Completed during the period July 2010-June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount, Rs lacs	Date of completion of the Project
1	Development of hybrid polymeric membrane for heavy metal separation from water	Dr. G. Sarkhel	DST, Govt. of Jharkhand	2007	4.88	3 Years



**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	Quality Control for PVC pipe and rotomoulded products	Dr Kaushik Kumar	Nirmala Rotoplast,	13.1.11 to 23.1.11

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended:**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date , Month, Year
1	Mr. S.Jana, Mrs D Ghosh, Dr Kaushik Kumar, Dr Akhil Sen Mr Pulak Datta Dr S.S.Mahapatra	Mission KYaaT	BIT Mesra	BIT Mesra	May – June 2011

**PUBLICATIONS****Published in International Journals**

1. Arup Choudhury, Synthesis and characterization of poly(o-toluidine)/ functionalized multi-walled carbon nanotubes nanocomposites with improved electrical conductivity, Materials Chemistry Physics (2011) (doi:10.1016/j.matchemphys.2011.06.034).
2. Pradip Kar, Arup Choudhury, Chloroform vapor sensing by functionalized multi-walled carbon nanotube doped polyaniline, Sensors and Actuators B: Chemical (2011) (Accepted)
3. Arup Choudhury, Pradip Kar, Doping effect of carboxylic acid group functionalized multi-walled carbon nanotube on polyaniline, Composites: Part B 42(6), (2011) 1641-1647.
4. Sudhir K. Saw, Gautam Sarkhel, Arup Choudhury Dynamic mechanical analysis of randomly oriented short bagasse/coir hybrid fibre-reinforced epoxy novolac composites, Fibers and Polymers 12, (4), (2011), 506-513
5. Sanjay Manjhi, Gautam Sarkhel, Effect of maleic anhydride grafted ethylene propylene diene monomer (MAH-g-EPDM) on the properties of kaolin reinforced EPDM rubber, Journal of Applied Polymer Science, 119, (2011) 2268-2274.
6. B.Bharaniraja, Jayaram Kumar K, C.M. Prasad, A.K. Sen, Modified Katira gum matrix tablet for colon targeted drug delivery of Ibuprofen, J.Appl.Pol.Sci. 119, (2011), 2644-2651.
7. Bharaniraja, K. Jayaram Kumar, C.M. Prasad, A.K. Sen, Different approaches of katira gum formulations for colon targeting, Int. J. Bio. Macromolecules (2011) (Accepted).
8. Gautam Sarkhel, Arup Choudhury, Dynamic Vulcanisation of Polyethylene-Based Thermoplastic Elastomer Blends, Journal of applied Polymer science 115,(2010) 376-384.

9. Sudhir K. Saw, Gautam Sarkhel, Arup Choudhury, Surface modification of coir fibre involving oxidation of lignins followed by reaction with furfuryl alcohol: characterization and stability, *Applied Surface Science*, 257, (2011)3763-3769.
10. S.S. Mahapatra, A. Dutta, J. Dutta, Temperature Effect on the Electrode Kinetics of Ethanol Oxidation on Pd modified Pt Electrodes and the Estimation of intermediate formed in Alkali Medium". *Electrochimica acta*, 55,(2010) 9097-9104.
11. S.S. Mahapatra, A. Dutta, J. Dutta, Temperature dependence on Methanol Oxidation and product formation on Pt and Pd modified Pt Electrodes in alkaline medium, *International Journal of Hydrogen Energy* (DOI:10.1016/ijhydene.2010.11.085).
12. K. Sen and Sandeep Kumar, Coir fiber based fire retardant nano filler for epoxy composites, *J. Thermal Analysis and Calorimetry*, 101, (2010), 265-271.
13. Anu Anna and A. K. Sen, Thermal and swelling studies of poly(acrylamide) hydrogel, *Journal of applied Polymer science* 117, (2010), 2795-2802.
14. Arup Choudhury, Dielectric and Piezoelectric properties of polyetherimide/BaTiO<sub>3</sub> nanocomposite, *Materials Chemistry and Physics* 121(2010), (1-2), 280-295.
15. B.Bharaniraja, Jayaram Kumar K, C.M. Prasad, A.K. Sen, "Modified Katira gum matrix tablet for colon targeted drug delivery of Ibuprofen" *J.Appl.Pol.Sci.* 119, (2011), 2644-2651.
16. Abhijit Dutta, Susanta Sinha Mahapatra, Jayati Datta, High performance PtPdAu nanocatalyst for ethanol oxidation in alkaline media for fuel cell applications, *Int. Journal of Hydrogen Energy* (2011) (doi:10.1016/j.ijhydene.2011.02.101).
17. S. Goswami, S. Maji, Sequential Interpenetrating Polymer Networks of Novolac Resin and Poly (2-ethylhexylacrylate)-thermal, mechanical and morphological study, *Journal of Applied Polymer Science*, DOI#34960, In press, 2010
18. S. Goswami, K. Kiran, Application of Kissinger analysis to the glass transition and study of the thermal degradation kinetics of Phenolic-Acrylic IPNs, *Bulletin of Material Science*, Ms.No. BOMS-D-11-00160, accepted May, 2011
19. S. Goswami, K. Kiran, A. B. Panda, P. P. Sharma, S. K. Mahapatra, S. V. Voraskar, I Banerjee, Synthesis of magnetically active interpenetrating polymer network for drug release, *International Journal of Nanodimension*,IJND-A-11-5-65,accepted May, 2011.

#### **Papers/Abstracts in Conference Proceedings:**

1. Archana Kumari, Arup Choudhury, Gautam Sarkhel, Effect of tetraethyleneorthosilicate (TEOS) on structural, thermal and morphological properties of CA membrane. *Polymer Science & Engineering*, PSE-10 Asian Polymer Association (APA) Punjab University, Chandigarh. Chandigarh (Punjab). November 26-27 2010.
2. Kalpana Kiran and S. Goswami, Synthesis & characterization of ipn hydrogel for biomedical application. *Polymer Sci. & Engg.*, PSE-10 Asian Polymer Association (APA) Punjab University, Chandigarh. Chandigarh (Punjab). November 26-27 2010.
3. S. Gupta, S. Goswami, A. Sinha: Structural and mechanical stability of transparent physical gel of polyvinyl alcohol, "4th Indo-Australian Conference on Biomaterial, Tissue Engineering and Drug Delivery Systems" 2011, February 10-12, organized by Sardar Patel University, Gujarat.



**Award / Recognition Bestowed on Faculty ( State / National / International )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr Pradip Kar	Post Doctoral Fellowship	University de Cergy-Pontoise, France	2010/1year
2	Dr Arup Choudhary	Post Doctoral Fellowship	Kyungpook National University, South Korea	2011/2years
3	Dr Kaushik Kumar	PhD,	Jadavpur University	March 2011

**MoUs / Collaborations with Academia/Industry**

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1.	National Metallurgical Laboratory, Jamshedpur	Joint research guidance in the area of Biomaterials with Dr S Goswami	2009 onwards
2.	Central Coir Research Institute, Kerala	Development of low cost water cooler, with Dr A.K.Sen	2008
3.	Indian Institute of Natural Resin and Gums, Ranchi	Joint research guidance in the area of coating materials based on natural resin	2009
4.	Rubber Technology Centre, IIT Kharagpur	Collaborative research on with Dr Gautam Sarkhel in the area of Thermoplastic elastomer	2010
5.	United Technology Research Centre, CT, USA	Joint Research in the area of Direct Contact Membrane Distillation	2007
6.	University of Houston, TEXAS, US	Dual Degree Programme	2009
7.	Shalimar Paints, Mumbai	Collaborative Research with Dr Akhil Sen	2010

**Departmental Students' Activities**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1	Poster Presentation at National Conference cum workshop on recent Developments in Engineering Materials	Ankita Singh, UG student	12th to 14th May 2011
2	-do-	Neha Kumari, UG students	12th to 14th May 2011
3	-do-	Himangshu Kumar, M.Tech student	12th to 14th May 2011
4	Oral Presentation in National Conference cum workshop on recent Developments in Engineering Materials	Kapil Yadav, M.Tech. student	12th to 14th May 2011
5	-do-	Vibhashree, M.Tech Student,	12th to 14th May 2011
6	-do-	Archana Kumari, Research Scholar	12th to 14th May 2011

7	Poster Presentation in Research Scholars day at BIT Mesra	Mr Suman Shekhar, Research Scholar	26th, 27th March, 2011
8	Oral presentation in Research Scholars day at BIT Mesra	J Rahaman, research Scholar	-do-
9	Visit to Nirmala Rotoplast	All students of the Department	August 2010
10	National Workshop on Recent Advances in Thermal analysis of polymers and composites, IIT, Khargpur	Seikh Jiyaar Rahaman, Research Scholar	March 31-April 02 2011
11	Visit to DRDL Laboratories	Vasanth Thota, Vibhashree, Varun Agarwal, MTech students	March 2011
12	Attended DELNET Training	J.S. Rahaman, Archana Kumari, Suman Shekhar, Research Scholars	21st April 2011

### Development of Learning Materials

Learning materials	Name of Subject/Course /Programme	Where and When used
e- contents	MacroMolecular Science I	I V programme
	Polymer NanoComposites	VIII Semester
	Total Quality Management	MEQuality Engg Management
	Total Productive Maintenance	-do-
	NanoTechnology	UG teaching
	Surface Coating and Adhesion Technology	UG teaching
	Elastomer Technology	UG teaching
	Polymer composite	PG Teaching

No of summer trainees trained during July 2010 to June 2011: 4

### Members on Board of Studies (UG/PG)

#### Board of Studies (Undergraduate)

Chairman     Dr. (Mrs.) M. Mukherjee, Head Dept. of Chemical & Polymer Engg.  
                   Dr. G. Sarkhel  
                   Dr. (Mrs.) S. Goswami  
                   Dr. A.K. Sen  
                   Prof. Ashok Misra  
                   Prof. Usha Jha

Panel of expert from outside the Institute

1. **Prof. A.K. Ghosh**  
Centre for Polymer Science and Engineering, IIT, Delhi,
2. **Prof. N. Bhatnagar**  
Dept. of Mechanical Engg., IIT, Delhi.
3. **Prof. P. Sarkar**  
Dept. of Polymer Sc. And Tech. University of Kolkata
4. **Prof. Parthapratim Gupta**  
Dean, Research and Consultancy,  
Dept. of Chemical Engg. NIT. Durgapur

**Board of Studies (Post-Graduate)**

Chairman      Dr. (Mrs.) M. Mukherjee, Head Dept. of Chemical & Polymer Engg.  
                    Dr. G. Sarkhel  
                    Dr. (Mrs.) S. Goswami  
                    Dr. A.K. Sen  
                    Prof. Ashok Misra  
                    Prof. Usha Jha

Panel of expert from outside the Institute

1. **Prof. B. Adhikari**  
Material Science Centre, IIT, Kharagpur
2. **Prof. N.C. Pradhan**  
Chemical Engineering Department, IIT, Kharagpur
3. **Prof. A.Banthia**  
Material Science Centre, IIT, Kharagpur
4. **Dr. D.D. Kale**  
Reliance Industries Ltd.,
5. **Dr. S.K. Nayak**  
Director General, CIPET, Chennai

**Any other important information**

1. Department of Chemical and Polymer Engineering, along with Department of Electronics and Communications Engineering participated in Mock Accreditation Drill conducted by National Board of Accreditation, New Delhi. Expert committee consisted of Prof S.N. Maiti, Head, Centre for Polymer Science and Engineering IIT Delhi, Prof D.V. Gupta, and Prof Uttam Pati, Deptt of BioTechnology JNU, New Delhi. The committee highly appreciated the Department. The score was >75%, leading to accreditation for five years.
2. Mr. John Lefas, Founder & Dr. Sushanta D. Roy, Technical Manager, Ingenia Polymers Group, London visited the Department in connection with collaborative research and recruitment of our students.

3. Prof (Mrs) M. Mukherjee, as Dean Development Programme successfully completed the TEQIP I project and prepared the Institutional Developmental Proposal for Scaling up Post Graduate education and Demand Driven R&D and I of TEQIP Phase II. The Proposal has been selected.
4. Dr Akhil Sen, was responsible for management of the Central Instrumentation Facility of the Institute.
5. The final year students were recruited by IOCL, TATA Autocomponent, SONY, L&T, IBM, and INFOSYS,
6. Dr. Siddhartha G. Chatterjee, Associate Professor Department of Paper and Bioprocess Engineering, New York, SUNY-ESF Syracuse, US, visited the Department and delivered a series of seminars in July 2010. The topics of his lectures were: Production of Biodiesel from Crude Tall Oil, Submerged Packed Bed Bioreactor for Wastewater Treatment and Surface Renewal Model for Cross Flow Ultra Filtration.
7. Prof A.K.Ghose, Centre for Polymer Science and Engineering and Assoc Dean Industrial R&D, IIT Delhi, and Prof P.P.Gupta, Dean Research and Consultancy NIT Durgapur visited the Department on 8. 10.10. to attend Board of Studies meeting for approval of BE (Chemical Engg) and BE (Chemical and Polymer Engg) programmes
4. Dr. B. K. Sahu, BIT Sindri, Dept., of Chemical Engineering invited for guest lecturer on Jan 20-22, 2011 & March 09-12, 2011.
5. Dr. P. P. Kundu, Prof & head, Dept of Polymer science & Tech, University of Calcutta invited for BE viva voce on May 12 – 13, 2011.
6. Dr. B. K. Chakraborty, Dept of Materials & Metallurgical Engineering, NIFFT, Ranchi invited for ME & MTech project viva voce on May 21, 2011.

## DEPARTMENT OF CIVIL ENGINEERING

Focus on rapid growth envisaged and being undertaken by our country and the world in general, has once again propelled the demand for Civil Engineers. For the fresh aspirants, Civil Engineering this year has become one of the topmost preferred disciplines for study.

In line with the restructured Course from the year 2011, Civil Engineering branch also offers besides electives, breadth subjects for other disciplines.



Digital Triaxial Test Equipment

Students of the Department take breadth courses offered by other Departments, based on their interest and professional requirement. Having evolved from the process of human race fulfilling basic requirements, viz. shelter, drinking water and transport, the focus of the discipline in continuing its service to mankind continues to keep pace with increasing requirements and quality of service through infrastructure development, natural hazards mitigation, managing water resources and the like.

The Department has been actively involved in Projects with Industry, especially CIL, Railways, MES, JPHCL, Power Grid and a number of other Public Sectors, Corporate and Private Sector Organizations. In collaborative Projects with CIL, the Department Laboratory has been equipped with and has commissioned on August 26 & 27, 2010 respectively, a digitally controlled Triaxial shear testing system and a mechanized and computer controlled large direct shear box (400 mm square) test equipment, the latter being the largest in the eastern region of the country.

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Slope Stability Study of Chatti- Bariatu Opencast project under NTPC	Dr. Indrajit Roy	ACMM, N. Delhi	Dec, 2010	Rs 2.7 Lakhs	9 months
2.	Study of structural geology and its effect in safe highwall design of Jhingurdah opencast project(Phase-II).	Dr. Indrajit Roy	NCL	May 2011	Rs 4.7 Lakhs	5 months
3.	Slope Stability Study of dumps,old benches and working benches at Lignite project, Tadkeshwar, near Surat under GMDC	Dr. Indrajit Roy	GMDC	March 2011	Rs 5 lakhs	6 months
4.	Influence of stress path on the behaviour of clayey soils under plane strain condition	Dr. Siddhartha Sengupta	UGC	01/02/11	Rs.1.68 lakhs	2 years

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Flood Modeling of North Bihar Rivers Using Soft Computing Techniques	R. R. Sahay	AICTE	March 08	5.5 lakhs	2 years
2.	Flood Estimation and Forecasting across multiple sites in Kosi river using ANN	R. R. Sahay	UGC	March 08	1 lakh	2 years
3.	Study of climate changes due to global warming in Jharkhand and a new intelligent model for air pollutant concentration prediction	Bindhu Lal	UGC	March 08	1 lakh	2 years
4.	Development of guidelines for safe dump profile of dragline mines of Coal India.	Dr. Indrajit Roy	Coal India through Ministry of Coal	01/02/'11	59 lakhs	3 years
5.	Slope Stability Study of Bhurkunda and Tapin mines of Central Coalfield Ltd .	Dr. Indrajit Roy	CMPDI	July 2009	2.5 lakhs	2 years
6.	Slope Stability Study of Dhudichua Opencast project of Northern Coalfield Limited	Dr. Indrajit Roy	NCL	Jan 2010	Rs 3.5 lakhs	1 year
7.	Slope Stability Study of Chatti-Bariatu Opencast project under NTPC	Dr. Indrajit Roy	ACMM, N. Delhi	Dec, 2010	Rs 2.7 lakhs	9 Months
8.	Study of structural geology and its effect in safe highwall design of Jhingurdah opencast project (Phase-II).	Dr. Indrajit Roy	NCL	May 2011	Rs 4.7 lakhs	5 Months
9.	Slope Stability Study of dumps,old benches and working benches at Lignite project,Tadkeshwar, near Surat under GMDC..	Dr. Indrajit Roy	GMDC	M a r c h 2011	Rs 5 lakhs	6 Months
10.	Slope analysis of cutting for new B.G. railway line in Barkakana - Ranchi section	Dr. Indrajit Roy	MG C P L	Dec 2010	Rs 0.5 lakhs	3 months

**Projects Completed during the period July 2010-June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Slope Stability Study of Jhingurdah opencast mines of Northern Coalfield Limited for submission to DGMS.	Dr. Indrajit Roy	NCI	Jan 2010	Rs 4.00 lakhs	1 year
2.	Stability study of fly ash embedded in the back-filled dump of Opencast mines of Coal India.	Dr. Indrajit Roy	CMPDI	Sep 2009	Rs 5.50 lakhs	2 years
3.	Slope analysis of cutting for new B.G. railway line in Barkakana Ranchi section	Dr. K. V. Krishnamurthy & Dr. Indrajit Roy	MG C P L	Dec 2010	Rs 0.5 lakhs	3 months

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Mix Design Workshop	Dr. Arun Kumar	Ultratech Cement	March 12, 2011

**Guest Lectures in the Department:**

Sl. No.	Speaker	Topic of Lecture	Delivered on
1.	Mr. Susmit Roy AGM, CET, SAIL	Industrial Building Structures – an Overview	April 10, 2010
2.	Er. Ram Chand Chief Project Manager M. G. Contractors Pvt. Ltd.	Quality Assurance in Concrete Structures	January 12, 2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

Sl. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by & Venue	Date, Month, Year
1.	Dr. Indrajit Roy	Slope Stability Study of an waste dump of India	Polytechnique university, Hongkong	May, 2011
2.	Dr. U. C. Sahoo	Highway and Airport Engineering : Challenges and Opportunities	I. I. T., Kharagpur	30-31 July,'10

## PUBLICATIONS

### Published in International Journals

1. R.R. Sahay, "Prediction of longitudinal dispersion coefficients in natural rivers using artificial neural network" *Environ Fluid Mech* 11(2011), 247-261.
2. Sahoo, U. C. and Reddy K. S. "Subgrade Strength Characterization for Low Volume Roads in India," *International Journal of Pavement Engineering & Asphalt Technology*, 11(2010), pp. 47-58.
3. Sahoo U. C. and Reddy K. S. "Effect of Nonlinearity in Granular Layer on Critical Pavement Responses of Low Volume Roads", *International Journal of Pavement Research and Technology* 3(2010), 320-325
4. A. Burman, D. Maity and S. Sreedeeep, "Interactive analysis of concrete gravity dam – nonlinear foundation interaction" *International Journal of Engineering, Science and Technology*, 2(2010), 85-89

### Published in National Journal

1. R.R.Sahay, "Optimal sizing of a multiple reservoir system using simulation linked dynamic programming" *Journal of Soil and Water Sciences*, III (2010)

### Papers/Abstracts in Conference Proceedings

1. R.R.Sahay, Discharge Estimation in Tidally Affected Rivers Using ANN, Int. Conf. on Sustainable Water Resources Management, NIT, Durgapur, February 17-19, 2011.
2. R.R.Sahay, Neural Networks for Real Time flood modeling and prediction, Int. Conf. on Sustainable Water Resources Management, NIT, Durgapur, February 17-19, 2011
3. R.R.Sahay, Well Parameter Estimation using Genetic Algorithm, National Conf. on Groundwater Drinking : Issues and options, BHU IT, Varanasi , February 11-13, 2011
4. Sahoo U. C., Kalpana Rani M. G. and Bisht A. S., Effect of Gradation, Index Properties and Compaction Characteristics on Subgrade Strength, International conference on Developments in Road Transportation, NIT, Rourkela, India October 8-10, 2010

### Members on Board of Studies (UG/PG)

- |                                  |   |   |
|----------------------------------|---|---|
| 1. Head of the Department        | - | Chairman                                  |
| 2. Prof. K. R. Roy Chowdhury     | - | Member                                    |
| 3. Dr. Balram Singh              | - | Member                                    |
| 4. Dr. Anand Kumar Sinha         | - | Member                                    |
| 5. Dr. Arun Kumar                | - | Member                                    |
| 6. Dr. Ashok Mishra              | - | Member<br>Professor, Mechanical Engg.     |
| 7. Dr. (Ms.) Manjari Chakraborty | - | Member<br>Professor, Architecture         |
| 8. Dr. Ashok Kumar Khan          | - | Member<br>Professor, N. I. T., Jamshedpur |
| 9. Dr. R. P. Sharma              | - | Member<br>Professor, B. I. T., Sindri     |



## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Computer Laboratory

The Department of Computer Science and Engg. was established in the year 1983. Now the department is recognized as one of the leading departments in the country with infrastructure and facilities to match the very best in the country. The department remains committed towards its mission which is twofold. One is to provide students with the fundamental knowledge and problem solving skills in Computer Science required for a fulfilling carrier. The other goal is to create and disseminate knowledge to improve Computer Science research, education and practice.

The department is vibrant and growing and has changed substantially in recent years in many ways. The number of faculty has significantly increased in the last four years. This was followed by a massive up gradation of the departmental infrastructure in an effort to keep pace with the rapidly changing needs of the industry. The department has successfully deployed the COLAMA University Edition to carry out UG and PG lab courses on an experimental basis.

The department currently offers the following programmes, all of which are approved by the All India Council for Technical Education (AICTE).

The department offers following courses :

B.E in Computer Science (4 years :8-semesters)

M.E. in Software Engineering (2 years: 4-semesters)

M.Tech in Computer Science (2 years:4-semesters)

Ph.D. Programmes

### Seminar / Conferences / Short – term Courses Conducted by the Department

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Coordinator/Speakers	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	“Symposium on Computer Education : Needs and Expectations”	Dr. K. Sridhar Patnaik	BIT, Mesra	19th – 20th Nov, 2010
2	“National Workshop on Testing of Object Oriented Software-TOOS-2011”	Dr. K. Sridhar Patnaik	MCIT-DIT, GOI	11th -13th March, 2011
3	“Object Recognition in Range Data”	Prof. Michael Greenspan, Queen’s University	BIT, Mesra	2nd Feb, 2011
4	“Free/Open Source Software (FOSS)”	1) Dr. Mukul K Sinha (TIFR, Mumbai) 2) Prof. C. N Krishnan (Anna University, Chennai)	BIT, Mesra	3rd-4th April,2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes attended:**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Month Date, Year
	Shruti Garg	Distributed Operating System	IUCEE	IUCEE	JIIT, Noida	June 28-July 01,2010

**PUBLICATIONS:**

**Publications in International Journals:**

1. P.Paul, S.Sinha," Routing and Wavelength Assignment Problem in WDM mesh network using limited Grooming resources". IJAST vol-19, 23-42, June -2010.
2. P.Paul, S.Shrivastava, "Traffic Grooming in WDM network using ILP", IJCA(0975-8887),vol-4, No-3,1-8, July 2010.
3. K.K Senapati, G. Sahoo, Soumen Kumar Dey "Priority Based Multidimensional Data Pattern" International Journal of Computer Science and Engineering, Vol-5, Issue 1, P 21-24, January 2011.
4. K.K Senapati and G .Sahoo and D.Bhaumik "Algorithm for Predicting Protein secondary structure" International journal of Computer Science and Engineering, Vol-1, Issue 1, P 68- 71, August 2010.
5. S.S. Tripathy and R.Sukesh Kumar, "Content Based Colour Image Retrieval using Hierarchical Similarity Measurement", International Journal of Computational Intelligence Research, Volume 6, pp.697-706, Number 4 (2010).

**Proceedings of International/ National Conferences/Seminars**

1. Nagendra Kumar, Rajeev Kumar, D. K. Mallick , P. K. Jana, "The Hamiltonicity of General OTIS Network," , Lecture Notes on Computer Science, LNCS 5935, (Springer), Heidelberg, 459-465, 2010.
2. Kishore Kumar Senapati, G.Sahoo, S.Sahana "Efficient Pattern Matching Algorithm for Biological Sequences " International Conference on Image Processing, Computer Vision and Pattern Matching, IPCV 2010, Los Vegas USA, July 12-15 2010, Vol-II ,P 755-759, July 2010
3. Sanjaya Shankar Tripathy, Ravi Sekhar, R Sukesh Kumar, " Texture Retrieval System using Intuitionistic Fuzzy Set Theory" Proceedings of the International Conference on Devices and Communication, Birla Institute of Technology, Mesra, Ranchi, February 2011.

**MoUs / Collaborations with Academia/Industry**

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
01	Mannheim University of Applied Sciences, Germany	Academic Exchange Program	2011 / 5 years

**Members on Board of Studies (UG/PG)**

- |    |                        |          |
|----|------------------------|----------|
| 1. | R. Sukesh Kumar        | Chairman |
| 2. | Prof. A. Mustafi       | Member   |
| 3. | Prof. D. K. Mallick    | Member   |
| 4. | Prof. S. K. Chatterjee | Member   |

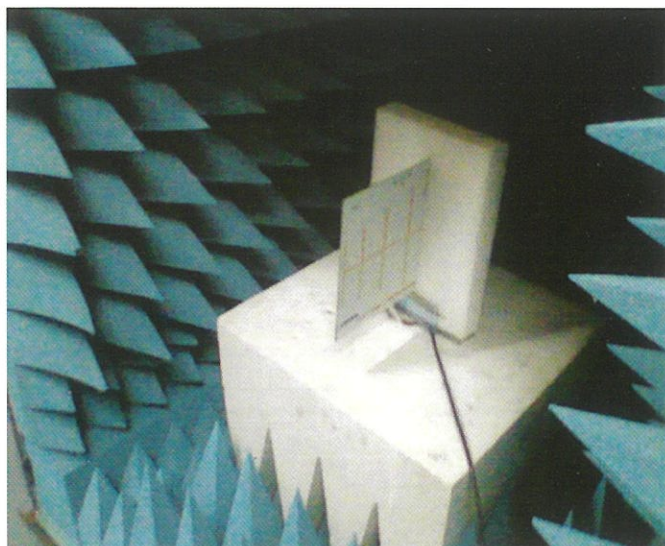
5.	Prof. S. Saha	Member
6.	Prof. K. K. Senapati	Member
7.	Prof. I. Mukherjee	Member
5.	Prof. G. Sahoo	Member
6.	Prof. Dr. Nisha Gupta	Member

#### **External Experts**

1. Dr. Rajib Mall  
Dept. of Computer Science  
IIT, Kharagpur
2. Dr. Aditya Bagchi  
Dean of Studies  
ISI, Kolkata
3. Dr. Atal Chaudhuri  
Dept. of Computer Science and Engineering  
Jadavpur University, Kolkata
4. Dr. Swapan Bhattacharya  
Dept. of Computer Science and Engineering  
Jadavpur University, Kolkata
5. Kushal Banerjee  
Academic Relationship Manager, India- East  
Tata Consultancy Services.



## DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



Antenna Measurement in anechoic chamber

The Department of Electronics and Communication engineering established in the year 1955, currently offers BE degree in Electronics and Comm. Engg. with an intake of 120 students per year. It also offers PG programs with the specializations in Instrumentation, Microwave and Wireless Communication. It has collaborative Academic and Research Programs with Aalborg University (Denmark), University of Leeds (UK), and University of Roma Tor Vergata (Italy). The department has established an International Centre for wireless and mobile Communications (ICWMC) on March 28, 2004, under EAGER Netwic project of ASIA-Link program, which is actively engaged in carrying out R & D in several aspects of wireless communications.

The doctoral programmes of the department are mainly in the fields of Wireless Communications, Fiber Optic Instrumentation and Communication, Printed RF and Microwave Circuits/Antennas for various applications, Computational Electromagnetics, VLSI and Embedded Systems and Image Processing, Signal Processing and Speech Processing.

Currently, more than 50 scholars are enrolled in the dept. for Ph. D. programme while three have received Ph. D. degree in the year 2010-2011. Department has currently a strength of 38 faculty members and enrollment of more than 500 UG and PG students. Four faculty members are pursuing the doctorate program in various IITs and abroad. The faculty members of the department have more than 60 journal publications to their account over the last five years.

External Agencies such as DST, UGC, CSIR, ISRO, AICTE and World Bank through TEQIP have continuously supported the department through various research projects and schemes.

Apart from funding through several research projects, the department received financial support of Rs. 52.5 Lacs under the DRS programme of UGC under SAP II. A further support of Rs.5 lacs was received from UGC for student's projects.

The department has well equipped Fibre Optic Research lab., VLSI design Lab., Antenna Lab., Advance Instrumentation Lab, Advanced Communication, and Wireless Networking lab. for carrying out research work at ME and Ph. D. levels. Some of the equipments worth mentioning here are Optical Spectrum Analyzer, Optical Time Domain Reflectometer, Vector Network Analyzer, Signal Generators, Spectrum Analyzers, etc. and softwares such as Cadence, Beampro, Labview, System view, Multisim, Ultiboard, Commsim, Sonnet, AWR, IE3D, MD Spice, Fidelity, etc.

**SPONSORED PROJECTS****Project Sanctioned during July 2010- June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Design of Ultra Low Power CMOS Cell for Temperature Sensors in VLSI	Dr. Vijay Nath	DST New Delhi& DRDL Hyderabad	13-June-2011	26.7 lakhs	Years

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Embedded Fiber Optic Sensor Based Instrumentation System for Structural Health Monitoring	<u>PI</u> Dr. S. K. Ghorai <u>Co-PI</u> 1. Dr. R. K. Lal 2. Sri S. Sengupta	ISRO	July 21,2009	Rs. 15.49 lakhs	2009-11
2	Microstrip Antenna for Wearable Applications	<u>PI</u> Dr. Vibha Rani Gupta <u>Co-PI</u> Dr. Nisha Gupta	AICTE	July 2009	Rs. 6.00 Lacs	2009-2012
3	Special Assistance Programme-2 (SAP-2) at the level of Department Research Support (DRS)	Dr. Nisha Gupta	UGC	2009	52.50 lacs	5 years

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	ICDeCOM 2011	Dr. Nisha Gupta	UGC (SAP II) , Jindal Power & Steel Corporation Ltd., BSNL	24-25 February 2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date , Month, Year
1.	Dr. S. K. Ghorai	IEEE- SENSORS 2010	IEEE SENSORS Council	Waikoloa, Hawaii, USA	Nov. 1-4 ,2010
2.	Dr. S. K. Ghorai	Workshop, NPTEL	IIT, Kharagpur	IIT, Kharagpur	Jan. 18-19, 2011
3.	Dr. Sanjay Kumar	In Pursuit of Excellence in Engineering Education through Innovation, Mission 10X	Wipro & BIT, Mesra	BIT, Mesra	Nov. 22-26, 2010
4.	Dr. Sanjay Kumar	Computer Education Needs and Expectations (scene-10)	BIT, Mesra	BIT, Mesra	Nov. 19-20, 2010
5.	Vishal H. Shah	Short Term Training Program on Fiber Optics Sensors and its Applications	ISM Dhanbad	ISM Dhanbad	January 10 – 12 2011
6.	Soumya Sidhishwari	PHOTONICS – 2010 International Conference on Fiber Optics and Photonics	IIT Guwahati	IIT Guwahati	12-15 Dec-2010
7.	Somnath Sengupta	Short Term Course on "Fibre Optic Sensors & Their Industrial Application" under Executive Development Programme	Indian School of Mines, Dhanbad	Indian School of Mines, Dhanbad	January 10-12, 2011
8.	S. Srivastava	Mission KYAAT	BIT	BIT	3-5 <sup>th</sup> May, 2011
9.	Dr. Vijay Nath	NSPTS-16 (National Seminar on Physics & Technology of Sensors	Dept. of Physics, Lucknow University Lucknow	Dept. of Physics	11-13 Feb.2011

## PUBLICATIONS

### Published in International Journals

1. S. Nigar Sulthana, Mahesh Chandra, Image Compression with Adaptive Arithmetic Coding, International Journal of Computer Applications, 1 (2010), 35-37.
2. Omar Farooq, S. Datta, M. C. Shrotriya, Wavelet Sub-Band Based Temporal Features for Robust Hindi Phoneme Recognition, International Journal of Wavelets, Multiresolution and Information Processing, 8 (2010), 847–859.
3. Avireni Srinivasulu, "A novel current conveyor based Schmitt trigger and its application as a relaxation oscillator", International Journal of Circuit Theory and Applications (Wiley Inter-Science). DOI: 10.1002/cta.669. ISSN: 0098-9886.

4. Avireni Srinivasulu, Krishna, Sanhita Manna and Sweta Kaundilya "Square Wave Generator Using Twin CCII+," African Journal of Science and Technology (AJST- UNESCO), Science and Engineering Series, ISSN: 1607-9949.
5. Horia Cornean, Sanjay Kumar and Nicola Marchetti, "Power Consumption Optimization Strategy for Wireless Networks", Special issue of the International Journal of 'Green Engineering', River Publisher.
6. Sanjay Kumar, J. Sahay, G. K. Mishra and Sanjeet Kumar, "Cognitive Radio Concept and Challenges in Dynamic Spectrum Access for the Future Generation Wireless Communication Systems", Wireless Personal Communications, <http://www.springerlink.com/content/v11254w344163879/>.
7. Bharat Bhushan Agrawal, Priyadarshani Suraj, Vibha Rani Gupta "Printed Monopole antenna for UWB application" International Journal of Microwave and Optical Technology, 5 (2010), 207-211.
8. Leena Varshney, Vibha Rani Gupta, Harish kumar, Priyadarshi Suraj, "CPW-Fed Broadband Microstrip Patch Antenna," IJAEA: An International Journal of Advanced Engineering & Applications, 2 (2011), ISSN : 0975 – 7783
9. Tanushree Bose, Nisha Gupta, Design of Rectangular Monopole Antenna using Radial Basis Function Networks, International Journal of Applied Engineering Research, 5 (2010), 2435-2440.
10. Tanushree Bose, Nisha Gupta, Design of Aperture Coupled Microstrip Antenna Using Radial Basis Function Networks, Wireless Engineering and Technology, 1 (2010), 64-68.
11. Vikram Kumar, Mrinal Mishra, N K Joshi, "Study of a Fluorescent Tube as Plasma Antenna," Progress in Electromagnetic Research Letters, 24 (2011), 17 – 26.
12. Abhay Srivastava, Ankhuri Dubey, Shradha Shekhar, Mrinal Mishra, "Computation of Protection Zone of a Lightning Rod using Method of Moments and Monte Carlo Integration Technique," Journal of Electromagnetic Analysis and Applications, 3 (08 April 2011), 118 – 121.

#### **Published in National Journal:**

1. Anjini Kumar Tiwary, Nisha Gupta, Performance of Microstrip Low-Pass Filter on Electromagnetic Band Gap Ground Plane, IETE Journal of Research, 56(2010), 230-234.
2. Vijay Nath, K.S. Yadav, L.K. Singh, "Modeling, Simulation and Layout design of CMOS Signal Conditioning Circuit with M/NEMS Sensors in VLSI" Lucknow National Journal of Science, 8 (2011) 59-69.
3. R. Laik, V. Nath, R.N. Gupta, P. Shukla, A. S. Vidyarthi, H.R. Singh, "Design of Diagnostic Pathological System for Early Stage Detection of Cancer Biomarker with Nanoinformatics" Lucknow National Journal of Science, 8(2011), 565-573.

#### **Papers/Abstracts in Conference Proceedings**

1. S.K. Ghorai, S. Sengupta, Soumya Sidhishwari, D.R.Roy, A Hybrid Fiber Optic Sensing System for Structural Health Monitoring, Proceedings of The IEEE SENSORS CONFERENCE - 2010, Hawaii, November 1-4, 2010.
2. Soumya Sidhishwari, S.K.Ghorai, Simultaneous Measurement of Strain and Temperature using Modal Interference in Birefringent Fiber, Proceedings of The International Conference on Fiber Optics and Photonics, PHOTONICS-10, Indian Institute of Technology Guwahati, India December 11-15, 2010.
3. Abhijit Mustafi, S. K. Ghorai, A Genetic Algorithm Approach to Image Separation in the Fractional Fourier Domain, Proceedings of The International Conference on Fiber Optics and Photonics, PHOTONICS-10, IIT, Guwahati, India December 11- 15, 2010.

4. Charushila Axay Patel & Sanjay Kumar, "Enhancing Throughput Efficiency of Adhoc Wireless Networks using Cognitive Radio Approach", International Conference on Devices and Communications (ICDeCom-11), Birla Institute of Technology, Mesra, Ranchi, India, February 24-25, 2011.
5. Sanjay Kumar, J. Sahay, G. K. Mishra and Sanjeet Kumar, "Spectrum Allocation Options for Next Generation Wireless Communications Systems", International Conference on Wireless Communications, Vehicular Technology, Information Theory and Aerospace & Electronic Systems (Wireless VITAE 2011), Chennai, India, February 28 - March 03, 2011.
6. Sanjay Kumar, Yuanye Wang and Nicola Marchetti, "Self-organized Spectrum Chunk Selection Algorithm for Local Area LTE-Advanced", International Conference of ITU-T, Kaleidoscope 2010, Pune, December 13-15, 2010.
7. Pallavi Panini, Namita Agrawal, Ankita, Sweta Kumari and Avireni Srinivasulu, "Switched capacitor charge pump circuit using modified current source inverter", in proceedings of the 4<sup>th</sup> International Conference on Advanced Computing and Communication Technologies, (ICACCT-2010), Panipat, India, October 30<sup>th</sup>, 2010, pp. 826-829.
8. Akash Gupta, Sanjeet Kumar, "VHDL Implementation of different Turbo Encoder using SOVA Decoder", International Conference on Communications, Computers & Devices, IIT Kharagpur, Dec 10 - 12, 2010.
9. Abhisek, Sanjeet Kumar, Saswat Chakrabarti, "Performance Evaluation of Asymmetric Turbo Codes using Log-MAP decoding Techniques", International Conference on Devices and Communications (ICDeCom-2011), BIT Mesra, Ranchi, February 24-25, 2011.
10. T. K. Parasar, Brajesh Gupt, R K. Lal, "Modeling of Quantum Well Infrared Photodetectors (QWIPs)", International Conference on Advances in Electronics and Electronics Engineering (ICAEET) to be held on 25 – 26, February, 2011 at Moradabad Institute Technology (MIT), Moradabad, Uttar Pradesh, 2011.
11. R. K. Lal, Brajesh Gupt, Mahendra Das, "Proposed generalised numerical model for energy sub band calculation of quantum well photodetectors (QWIPs)", Proc. of 10th International Conference on Fibre Optics and Photonics: PHOTONICS-2010, held at IIT Guwahati, Guwahati during December, 12-15, 2010, pp. 352.
12. Rajesh Laik, Vijay Nath, A.S. Vidyarthi, S.P. Songca, C.B. Sahay Chandrakant "Detection of Brain Tumor using modalities like MRI as a Biomedical Instrument System and correlation of Neural disorders predicted in human with other organism" 51<sup>st</sup> Annual Conference of Association of Microbiologists of India & International Symposium on Cross disciplinary Microbiology: Avenues and Challenges [AMI 2010-CMAC], organized by Dept. of Biotechnology BIT Mesra, AMI Ranchi Unit Jharkhand Chapter, Central University of Jharkhand, and Birsa Agriculture University Ranchi, Ranchi, December 14-17, 2010.
13. Vijay Nath, K.S. Yadav, L.K. Singh, "Modeling, Simulation and Layout design of CMOS Signal Conditioning Circuit with M/NEMS Sensors in VLSI" 16<sup>th</sup> National Seminar on Physics & Technology of Sensors (NSPTS-16) organized by Department of Physics, University of Lucknow, Lucknow, February 11-13, 2011.
14. R. Laik, V. Nath, R.N. Gupta, P. Shukla, A. S. Vidyarthi, H.R. Singh, "Design of Diagnostic Pathological System for Early Stage Detection of Cancer Biomarker with Nanoinformatics" 16<sup>th</sup> National Seminar on Physics & Technology of Sensors (NSPTS-16) organized by Department of Physics, University of Lucknow, Lucknow, February 11-13, 2011.



15. Priyadarshi Suraj, Vibha Rani Gupta, Leena Varshney, "Design of CPW-Fed Microstrip Slot Antenna for Ultra Wideband Communication", International conference on microwaves, antenna, propagation & remote sensing (ICMAR-2010), International Centre For Radio Science, Jodhpur, 14-17 December 2010.
16. Leena Varshney, Vibha Rani Gupta, Priyadarshi Suraj "Analysis of the Behavior of EBG Structure with Different Vias Diameter", International conference on microwaves, antenna, propagation & remote sensing (ICMAR-2010), International Centre For Radio Science , Jodhpur, 14-17 December 2010.
17. Priyadarshi Suraj, Vibha Rani Gupta, Simrat Singh Gill, Pradeep Gupta, "Design of Microstrip Slot Antenna for Ultra Wideband Communication using CPW Feed", International Conference on Advances in Electrical & Electronics Engineering, (ICAEEE-2011), Moradabad Institute of Technology (MIT) Moradabad, U.P, India, February 25-26, 2011.
18. Sakshi Kumari, Vibha Rani Gupta, "Patch Antenna on Defective Ground Plane", in the proceeding of National Conference on Microwave, Antenna & Signal Processing (NCMASP-2011), I.T.S. Engineering College, Greater Noida, Uttar Pradesh, India ,April 22-23, 2011.
19. Nisha Gupta, Vibha Rani Gupta, Smit Garg, Priyanshu\_Agarwal, Shobhit Budhia, "Experimental Investigations on Characteristics of Textile Microstrip Antennas for Wearable Applications" in proc. of National Symposium on Antennas and Propagation APSYM 2010, Cochin, 14-17 December 2010.
20. Nisha Gupta, Parvathi Ajith Kumar, Moina Ajmeri, "Simulation Study of Effect of Interference on Non-autonomous Chaotic Circuits," in National Symposium on Antennas and propagation, " in proc. of National Symposium on Antennas and Propagation APSYM 2010, Cochin, 14-17 December 2010.

### Books Authored

1. V. Nath, K.S. Yadav, L.K. Singh, Fundamental of Embedded System Design and Applications, Edition-1, ACM Learning, New Delhi, 2010.

### Award / Recognition Bestowed on Faculty (State / National / International )

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr. Sanjay Kumar	Panel Speaker	Third International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL), Rome, Italy	November 10, 2010.
2	Dr. Nisha Gupta	Invited Speaker and Session Chair	National Symposium on Antennas and Propagation APSYM 2010, Cochin	December 14-17, 2010.
3	Dr. Nisha Gupta	Invited Speaker	National Conference cum Workshop On Recent Developments in Engineering Materials, RDEM 2011), BIT, Mesra	May 12 – 14, 2011.
4	Dr. S. Pal	Honorary Research Fellow	Univ. of Birmingham, UK	June 1-30, 2011

**Departmental Students' Activities**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1	Paper contributed in conference ICCCD2010	Akash Gupta	10 <sup>th</sup> -12 <sup>th</sup> Dec. 2010
2	Paper presentation in conference ICDeCom-11	Manu Raj, Ajay Kumar Kunwer, Ashish singhania, Rajesh Kumar, Ajeet Kr. Raut, Abhisek	24 <sup>th</sup> -25 <sup>th</sup> Feb. 2011
3	Paper published in Progress in Electromagnetic Research Letters	Vikram Kumar	Vol. 24 , 2011
4	Paper published in Journal of Electromagnetic Analysis and Applications	Ankhuri Dubey, Shradha Shekhar	8 <sup>th</sup> April 2011

**Development of Learning Materials**

Learning materials	Name of Subject/Course /Programme	Where and When used
e- contents	1. VLSI Design 2. Intelligent Instrumentation	Still in process of development.

**No of summer trainees trained in the Department during July 2010 to June 2011:** Summer School on VLSI Design: 25

**Members on Board of Studies (UG/PG):**

Panel for Board of Studies:

- |    |                       |   |          |
|----|-----------------------|---|----------|
| 1. | HOD, ECE (Ex-officio) | - | Chairman |
| 2. | Dr. S. K. Ghorai      | - | Member   |
| 3. | Dr. Vibha Rani Gupta  | - | Member   |
| 4. | Mr. S. S. Solanki     | - | Member   |
| 5. | Dr. Shweta Srivastava | - | Member   |
| 6. | Mr. S. S. Tripathy    | - | Member   |
| 7. | Dr. R. Sukesh Kumar   | - | Member   |
| 8. | Dr. R. C. Jha         | - | Member   |

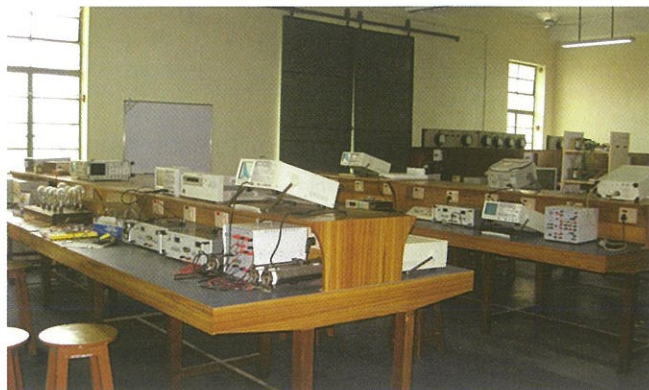
**External Experts**

- Dr. G. Panda  
Deputy Director & Dean Academics  
IIT, Bhubaneswar-751 013
- Dr. V. Kumar  
Head, Dept. of Electronics Engineering  
Indian School of Mines University (ISMU)  
Dhanbad – 826004

3. Dr. S. Sanyal  
Professor  
Dept. of E & ECE  
IIT, Kharagpur 721 302
4. Dr. S. Chakravarty  
Professor  
G.S. Sanyal School of Telecommunication  
Dept. of E & ECE  
IIT, Kharagpur 721 302
5. Dr. S. K. Patra  
Professor  
Dept. of Electronics & Communication Engineering  
NIT, Rourkela -769008 (Orissa)
6. Dr. Tapas Chakravarty  
Head, Medical Electronics, EIS - MD & P  
Tata Consultancy Services  
Plot A2,  
M2 & N2, Sector V, Block GP,  
Salt Lake Electronics Complex  
Kolkata - 700091, West Bengal

## DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

The Department of Electrical and Electronics Engineering offers courses in B.E. in Electrical and Electronics Engineering; M.E. in Electrical Engineering with three different specializations namely Power system, Control system and Power electronics. The Centre for Biomedical Instrumentation under this department offers a M.Sc. course in Biomedical Instrumentation. The department also offers Ph.D. programmes in various specializations. The department is working towards introducing M.Tech. course in Biomedical Instrumentation in next academic year. Departmental library is established to cater to the



Power Electronics Lab

needs of students and faculties for ready reference. The power system laboratory has been renovated and new experiments like load sharing between transformers, transformer protection scheme and over current protection scheme have been introduced. A Lab view based distribution system protection scheme is setup in virtual instrumentation lab. The Biomedical Instrumentation Lab has newly introduced Behavioral Analysis Unit for the analysis of emotional behavior of rats after psychophysiological events. Electromagnetic radiation workbench has been installed to give simulated leakage EM exposure of 2450 MHz cooking microwave. Hardware implementation of boost, multilevel converter for hybrid electric vehicles is in progress.

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Electroencephalogram and Electrooculogram based hand-eye coordination system for hybrid Brain Computer Interface	Dr. Yogender Aggarwal	UGC Minor	June 2011	1.10 lakhs	2 years

#### Ongoing Projects Sanctioned before July 2010

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Design and development and characterization of magneto-optic material based current sensor for industrial application	Mrs. S.Chakraborty (PI) Dr. S.C. Bera & Dr. S.K. Ghorai (Co-PI)	Dept. of Science and Technology, Ministry of Science and Technology, Govt. of India, New Delhi, under IDP scheme	Nov.,2009	Rs. 25.982 lakhs	2 years

2	Soft Computing and Phonocardiogram Based Automated System for Diagnosis of Heart Valve Diseases	Dr. R. K. Sinha/ Mr. Y. Aggarwal	AICTE	April, 2009	6.5 lakhs	3 years
3	Voluntary event related brain signal classification	Dr. R. K. Sinha/ Mr. Y. Aggarwal	UGC	May 2009	11.478 lakh	3 years
4	Design and Development of Lightning Prediction and Protection system	Mr. Prem Prakash	DST	2008	61.66 lakhs	3 years

#### Seminar / Conferences / Short – term Courses Conducted by the Department

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	Workshop on DSP based Real Time Control	Dr. S. K. Kadwane	Departmental	September 13-16, 2010

#### Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date , Month, Year
1	Dr. Subhojit Ghosh	ICBMS 2010	IIT Kharagpur	IIT Kharagpur	16-18 Dec., 2010
		International Conference On Devices and Communications	BIT Mesra	BIT Mesra	24-25 Feb., 2011
		International Conference on Emerging Trends in Soft Computing and ICT	GGU University, Bilaspur	GGU University, Bilaspur	16-17 March, 2011
		Know Yourself As A Teacher	BIT, Mesra	BIT, Mesra	31 <sup>st</sup> May- 2 <sup>nd</sup> June 2011
2	Dr. P. R. Thakura	Int. Conf.on Electrical Energy Systems -2010	SSN College Chennai	SSN College Chennai	December 2010
		IEEE IICPE-2010 ,	IEEE Delhi Chapter	NSIT New Delhi.	28-30 Jan 2011
		IEEE , IICPE-2010	IEEE Delhi	NSIT New Delhi	28-30 Jan 2011
		Know Yourself As A Teacher	BIT, Mesra	BIT, Mesra	31 <sup>st</sup> May- 2 <sup>nd</sup> June 2011
3	Dr. R. C. Jha, Mr. K.C. Jana, Mr. G. S. Gupta	Know Yourself As A Teacher	BIT, Mesra	BIT, Mesra	31 <sup>st</sup> May- 2 <sup>nd</sup> June 2011

## PUBLICATIONS

### Published in International Journals

1. S. Ghosh and S.Maka, "Genetic Algorithm Based NARX model Identification for Evaluation of Insulin Sensitivity", *Applied Soft Computing* (an Elsevier publication), Vol. 11, Issue 1, pp. 221-226, 2011.
2. S.Ghosh and S.Maka, "A Fuzzy Clustering Based Technique for Piecewise Affine Approximation of a Class of Nonlinear Systems", *Communications in Nonlinear Science and Numerical Simulation* (an Elsevier publication), Vol. 15, Issue 9, 2010, pp. 2235-2244.
3. S.Chakraborty , S.C.Bera and A.K.Chakraborty, "Simulation of a polarization pupil filter with magneto-optic lens under elliptically polarized illumination", *Optik*122(2011) 549-552, Elsevier Publication.
4. A. K. Keshri, B. N. Das, D. K. Mallick, R. K. Sinha (2011) "Parallel algorithm to analyze the brain signals: application on epileptic spikes", *Journal of Medical Systems*, 35, 93-104.
5. S. Shahid, R. K. Sinha, G. Prasad (2010) "Mu and beta rhythm modulations in motor imagery related post-stroke EEG: A Study under BCI framework for poststroke rehabilitation", *BMC Neuroscience*, 11.
6. Y. Aggarwal, B. M. Karan, B. N. Das, R. K. Sinha (2010) "Mechanistic electronic model to simulate and predict the effect of heat stress on the functional genomics of HO-1 system: Vasodilation", *Computers in Biology and Medicine*, 40: 533-542.
7. P. K. Upadhyay, R. K. Sinha, B. M. Karan (2010) "Predicting Heat-Stressed EEG Spectra by Self-Organising Feature Map and Learning Vector Quantizers", *Journal of Biomedical Science and Engineering*, 3: 529-537.
8. P. K. Upadhyay, R. K. Sinha, B. M. Karan (2010) "Detection and analysis of the effects of heat stress on EEG using wavelet transform", *Journal of Biomedical Science and Engineering*, 3: 405-414.
9. Dwivedi, A., Karan, B. M., and Sinha, R. K. (2010), A Fuzzy Automata Model for the Analysis of Eukaryotic Heat Shock Response, *International Journal of Mathematical Modeling Simulation and Applications*, Vol 4, Issue 2, Apr 2011.
10. V. Laxmi, D. K. Mohanta, B. M. Karan, 2011 (Accepted), "Selection of wavelet for Automatic Identification of Vehicles", *IET Intelligent Transportation systems*.

### Published in National Journal

1. S. Chakraborty and S.C. Bera "Over-Current Detection by Optical Null Method", accepted for publication in the "Journal of Instrument Society of India.", presently in press

### Papers/Abstracts in Conference Proceedings:

1. Sandip Kr. Gupta, Deepak Kr., T. Ghose, "Effect of automatic generation controller of participating generators under frequency linked Indian tariff system". IEEE Indian conference held at Jadavpur, INDICON 2010, 17<sup>th</sup> to 19<sup>th</sup> Dec.
2. T. Ghose, Deepak Kr. Sandip Kr. Gupta, Ravi S. Pandey, "Effect of droop characteristic of participating generators under frequency linked Indian tariff system". International conference, held at Maulana Azad National Institute of Technology, Bhopal.
3. Susmita Kar, Ch. Murthy, R.C. Jha, D.K. Mohanta. International Conference on Device and Communication (ICDecom-11), Feb 24-25, 2011, BIT Mesra, Ranchi.

4. Ranjan Saurabh, P. R. Thakura, P. Prakash, R. C Jha, "The next generation grid smart-grid & aspects", National Conference on Recent Advances in Electrical Power & Energy System Management (RAEPESM-2011), march 25-26, 2011, Gorakhpur.
5. Aishanou Osha Rait, "Automatic Language Independent Indexing of Documents using Image Processing", International Conference on Control, Robotics and Cybernetics (ICCRC-2011), March 21-23, 2011.
6. S. Ghosh and S. Maka, "On the Properties of a Piecewise Affine Model for Glucose Regulation", ICBMS 2010, 16-18 December, 2010, IIT Kharagpur.
7. S. Ghosh, Asmini Ray, Deepak and B. M. Karan, "A Genetic Algorithm Based Clustering Algorithm for Piecewise Linearization of Nonlinear Functions", International Conference On Devices and Communications, 24-25 February, 2011, BIT Mesra.
8. S. Ghosh, Prateek Puri and Padm Kant, "A Hybrid Evolutionary Optimization Approach for PI Controller Tuning Based on Gain and Phase Margin Specifications", International Conference on Emerging Trends in Soft Computing and ICT, GGU University, Bilaspur, 16-17 March, 2011.
9. G. Buja, R. Keshri, R. Menis, "Comparison of DBI and ZSI Supply for PM Brushless DC Drives Powered by Fuel Cell", [Accepted for Proceedings and presentation for ISIE 2011, Gdansk, Poland, 27<sup>th</sup>-30<sup>th</sup> June 2011].
10. S. Umamaheswari, P. R. Thakura and R. K. Keshri, "Hardware development of Voltage Source Inverter for Hybrid Electric Vehicle", Proceedings of the 1<sup>st</sup> International conference on Electrical Energy Systems, 2011, pp. 67-71, January 3-5, 2011, Chennai, India.
11. R. Keshri, M. Bertoluzzo, A. Kumar, P. Thakura and G. Buja, "Generation of Possible Switching Patterns for VSI Using Micro-controller for the Control of PM BLDC Motor", Proceedings of the Indian International Conference on Power Electronics, 2010, January 28-30, 2011, New Delhi, India.
12. G. Buja, R. Keshri, R. Manis, "Performance of Z-source Inverter Feeding PM Brushless Motor", Proceeding of IECON '09, pp. 1230-1235, 3-5 November 2009, Alfandega Congress Center, Porto, Portugal.
13. M. Bertoluzzo, G. Buja, R. Keshri, "Brushless DC Drive Operation during Phase Commutation under Various Switching Patterns", The 7th IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives, 2009, SEDEMPED '09, pp 1-7, August 31-September 3, 2009.
14. R. K. Keshri, S. G. Kadwane, B. M. Karan, "Power Factor Correction With Neural Network Based Zeta Converter", Proceedings of The IEEE Region 10 Colloquium and Third IEEE Conference on Industrial and Information System 2008, 8<sup>th</sup>– 10<sup>th</sup> December, IIT Kharagpur, Paper ID 399.
15. S. Shahid, R. K. Sinha, G. Prasad (2010) "A Biospectrum based feature extraction technique for devising a practical Brain-Computer Interfacing system", European Signal Processing Conference (EUSIPCO)-2010, 23-27 August 2010, Alborg, Denmark.
16. S. Shahid, R. K. Sinha, G. Prasad (2010) "A biospectrum approach to feature extraction for a motor imagery based brain-computer interfacing system", BCI Meeting 2010, 30-31 May 2010, Albany, New York, USA.
17. S. Shahid, R. K. Sinha, G. Prasad (2010) "Mu and beta rhythm modulations in motor imagery related post-stroke EEG: A Study under BCI framework", Nineteenth Annual Computational Neuroscience Meeting CNS\*2010, 24-30 July 2010, San Antonio, Texas, USA.

18. Uma Maheshwari, P. R. Thakura, and Ritesh Keshri, "Hardware Development of Voltage Source Inverter for Hybrid Electric Vehicles" Int. Conf.on Electrical Energy Systems -2010 SSN College of Engg. Chennai, December 2010.
19. Madhwi Kumari, P. R. Thakura , and D.N. Badodkar; "Role of High Power Semiconductor Devices on Hybrid Electric Vehicles" IEEE IICPE-2010 , 28-30 Jan 2011 NSIT New Delhi.
20. A. K. Verma, P., R. Thakura, K.C. Jana and G. Buja; "Cascaded Multilevel Inverter for Hybrid Electric Vehicles " IEEE IICPE-2010 , 28-30 Jan 2011 NSIT New Delhi.
21. R.K. Keshri, Abhishek Sharma, P.R. Thakura M. Bertoluzzo, G. Buja; "Generation of Switching Patterns for VSI Using Microcontroller for the Control of PMBLDC Motor" IEEE IICPE-2010 , 28-30 Jan 2011 NSIT New Delhi.
22. Ranjan Saurabh, P.R.Thakura, P.Prakash, and R.C.Jha; "The Next Generation Grid-Smart Grid& Aspects"National Conf.on Recent Advances in Electrical Power and Energy System Management (RAEPESM-2011) 25-26 March,2011

**Award / Recognition Bestowed on Faculty ( State / National / International )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr. T. Ghose	Member of Jharkhand State Advisory Committee on Reduction of Transmission and Distribution losses	Jharkhand State Electricity Regulatory Commission (JSERC)	21.12.2010
2	Dr. T. Ghose	Executive Director	STEP	December 2010
3	Dr. S. Ghosh	Appointed assistant director STEP	BIT, Mesra	December 2010
4	Dr. P.R. Thakura	Worked as an Expert in Mechatronics Workshop for Indian Railway Officers	Indian Railways, Jamalpur	29-30 March, 2011
5	Dr. P.R. Thakura	Member of Expert Committee for Selection of Teachers	Nilai Educational Institute Thakurgaon, Ranchi	07 July, 2010
6	Mr. Ritesh keshri	Erasmus Mundus Fellowship for Ph.D. from University of Padova	Italy	2010-2013

**MoUs / Collaborations with Academia/Industry**

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1	Intelligent Systems Research Laboratory, University of Ulster, UK	Human-Machine Interface	2010
2	RINPAS, Ranchi	Behavioral analysis	2011
3	University of Padova, Italy	To facilitate and promote scientific and academic exchanges/ Electrical engineering	2011



**Departmental Students' Activities (Please arrange chronologically)**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1	IET Drishtant 2010, BIT Mesra	P. Vishal	2010
2	Aspire 2011	P. Vishal	2011
3	UGC Summer Internship Fellowship for Summer Internship at Indian Institute of Science, Bangalore	Abhishek Sharma	May-July 2010
4	Conference paper- "MobLP: A CC-based approach to vehicle license plate number segmentation from images acquired with a mobile phone camera,"	Abhishek Sharma	17-19 Dec. 2010
5	"Generation of possible switching patterns for VSI using micro-controller for the control of PMBLDC motor," Power Electronics (IICPE),	Abhishek Sharma	28-30 Jan. 2011
6	International Conference on Electrical Power and Energy Systems	Kumar Deepak	08/26/2010 To 08/28/2010
7	Green Energy, Computing, & Communication IEEE Indian Conference 2010	Sandeep Gupta	12/17/2010 To 12/19/2010

**Development of Learning Materials**

Learning materials	Name of Subject/Course /Programme	Where and When used
Technology- enhanced Learning	Written material and experimental kit developed for DSP and Labview based applications	Dept of EEE, BIT, Mesra, 2010-2011

**No of summer trainees trained in the Department during July 2010 to June 2011**

07 students of other institutes have attended summer training programme.

**Members on Board of Studies (UG/PG)****Internal Members**

1. Prof. R. K. Narayan
2. Prof. (Dr) R. C. Jha
3. Prof. (Dr) D. K. Mohanta
4. Dr. R. K. Sinha
5. Dr. P. R. Thakura
6. Dr. S. Ghose
7. Prof. (Dr) N. Gupta
8. Prof. (Dr) G. Sahoo

**External Experts**

1. Dr. J. Pal, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
2. Dr. A. K. Sinha, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
3. Dr. D. Das, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
4. Dr. S. K. Biswas, professor, Dept. of EE, Jadavpur University, Kolkata
5. Dr. S. K. Goswami, professor, Dept. of EE, Jadavpur University, Kolkata
6. Dr. S. C. Bera, Professor Dept. of Applied Physics, Calcutta University, Kolkata
7. Dr. S. Basu, Mg. Director, Electronics Res. & Dev. Centre. Bose Res. (P) Ltd. Bangalore
8. Mr. S. B. Prasad, GM, MECON, Ranchi
9. Mr. Sandeep Dhir, Chief Employee Training & Development, TISCO, Jamshedpur

## DEPARTMENT OF FOOD PROCESSING TECHNOLOGY

The Department of Food Processing Technology was established in 2006, and is offering the B.Sc. in Food Processing Technology programme from January 2009. The Department has a food Processing Laboratory and Quality Control Laboratory. The Food Processing Laboratory is equipped with: all the basic / necessary machines & equipments like sealing Machines, Homogenizer, Can Body Reformer, Hand Can Flanger, Exhaust Box 6' x 1.5', S.S. Vacuum Evaporator, Baby Boiler, Can Seamer, Steam Jacketed cooking Pan, Vacuum Bottle Filling Machine, Fill Pack Machine, Bottle Washing Machine, Canning Retort, Fruit Mill, Pulpur, Juicer, Twin Screw Extruder, etc. The Quality Control Laboratory is equipped with: Lyophilizer, Polarimeter,



Food Processing Laboratory

Laminar flow clean Air workstation, Autoclave, Hot Air Oven, Lab. Centrifuge, Melting Point apparatus, Digital Colorimeter, Flame Photometer, UV-VIS Spectrophotometer, Precision Balance, Seven Easy pH Meter, Muffle Furnace (1050°C), Water Bath, BOD Incubator, Compound Microscope, HPLC, MP based Conductivity Meter, Digital Photoflurometer, etc. Other required equipments are available in the allied Departments of Pharmaceutical Sciences, Biotechnology and Central Instrumentation Facility. Apart from basic subjects such as Chemistry, Mathematics, Electrical & Electronic Engineering, Energy, Ecology & Environment Science, Material Science, Heat & Mass Transfer, the students are taught about Food Plant Sanitation, Food Microbiology, Food Composition & Chemistry, Food Bio Chemistry & Human Nutrition, Storage Engineering, Food Preservation, Food Analysis, Fruits & Vegetables Processing, Packaging Technology, Waste Management, etc, with corresponding laboratory courses, and Industrial Tour and Project in final semester. Electives include Dairy Technology, Instrumentation Methods of Food Analysis, Post Harvest Technology, Food Biotechnology and Oil Seed & Pulses Technology. The laboratory of the department is a registered unit under F.P.O. Act. Some of the food items prepared at the centre are being sold at B.I.T.C.C. Stores and are well accepted by the residents.

Currently faculty are drawn from allied departments (Departments of Applied Chemistry/Applied Physics/Applied Mathematics/Computer Science/Polymer & Chemical Engg./Management/ Humanities/ Environment Sc.& Engg. to run the programme. Recruitment process to recruit other suitable number of faculties in appropriate subject has been initiated.

### PROGRAMME OFFERED:

B.Sc. Food Processing Technology – 3 – year (6- semester). First batch of students were admitted in January 2009 and second batch of students in July 2009. Thereafter students are admitted in July every year. The Department plans to start B.Tech. and M.Tech /M.Sc. level programmes in future.

## SPONSORED PROJECTS

### Ongoing Projects

Sl. No.	Project Title	PI / Co-PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakh)
1.	Setup of Quality Control Laboratory for Food Products in Jharkhand	Prof. S. P. Bhatnagar	Govt. of India Ministry of Food Processing Industries, New Delhi	MFPI/Labs/ 2004/150 Dated: 14.10.2009	50

### No of summer trainees trained in the Department during July 2010 to June 2011- 2

Member on Board of Studies (UG/PG)

Sl. No.	Name of the Faculty	Name of Board of Studies	Universities / Organization
1.	Amit Kumar Tiwari (Expert member)	Board of Studies for the Department Food Processing	B.I.T. Mesra, Ranchi



## HOTEL MANAGEMENT & CATERING TECHNOLOGY

The Department of Hotel Management & Catering Technology was established in January-2003. In a very short span of time the Department has acquired a worthy reputation in the field of hospitality in the state of Jharkhand. Department of Hotel Management at BIT Mesra was declared the 16th best Hotel Management Institute in terms of Excellence in a survey conducted by CSR - GHRDC in 2008. The department has a well-qualified team of faculty members with a blend of industry experience and academic excellence who are consistently involved in various training, consultancy and research activities. The faculty members put in immense effort for both academic and practical training of the students.



Students at work in Kitchen

The Department of Hotel Management & Catering Technology presently offers a four-year (8 Semester) Bachelor's Degree in Hotel Management & Catering Technology (BHMCT). This programme is approved by AICTE. The program lays emphasis on practical application of theoretical lessons through training, laboratory work, hands on workshops, theme parties, projects and study tours. To have a real life experience of Industry students go on "Industrial Exposure Training" for 6 months in various Star Hotels.

The Department provides Training & Consultancy services in various aspects of Hospitality & Tourism. Various Short term Training programmes and Seminars are organised from time to time.

### Seminar / Conferences / Short – term Courses Conducted by the Department

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Tourism and Biodiversity	Prof. Sitesh P Srivastav	Dept. of Tourism, Govt. of Jharkhand and BIT Mesra	27 <sup>th</sup> Sept. '10
2.	Seminar on Classical Italian Cuisine	Prof. Sitesh P Srivastav	BIT Mesra	13 <sup>th</sup> Oct. '10
3.	Seminar on Facing an Interview – The right approach	Prof. Sitesh P Srivastav	BIT Mesra	07 <sup>th</sup> Nov. '10
4.	Seminar on Key Issues in Hospitality Industry	Prof. Sitesh P Srivastav	BIT Mesra	21 <sup>st</sup> Nov. '10

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date , Month, Year
1.	Prof. Sitesh P Srivastav	Role of Local Tourist Guide (Paryatak Mitr) in Tourism Promotion	Dept. of Tourism, Govt. of Jharkhand	Johna Fall, Ranchi	3 <sup>rd</sup> September '10
2.	Mr. Praveen Srivastava	Role of Local Tourist Guide (Paryatak Mitr) in Tourism Promotion	Dept. of Tourism, Govt. of Jharkhand	Johna Fall, Ranchi	3 <sup>rd</sup> September '10
3.	Praveen Srivastava, Abhinav Kumar Shandilya	Refresher course in Financial Management	UGC	Academic Staff College, Ranchi University, Ranchi	10 <sup>th</sup> -30 <sup>th</sup> June '11
4.	Prof. Sitesh P Srivastav, Mr. Abhinav Kr. Shandilya, Mr. Rajesh Langiya, Mr. Gautam Shandilya, Mrs. Pratima Ekka	Classical Italian Cuisine	Dept. of HMCT, BIT Mesra	Dept. of HMCT	13 <sup>th</sup> Oct. '10
5.	Mr. Abhinav Kr. Shandilya, Mr. Rajesh Langiya, Mr. Amit Saran, Ms. Rajeshwari Chatterjee	Facing an Interview – The right approach	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	07 <sup>th</sup> Nov. '10
6.	Mr. Sitesh P Srivastav	Key Issues in Hospitality Industry	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	21 <sup>st</sup> Nov. '10
7.	Mr. Abhinav Kr. Shandilya	Key Issues in Hospitality Industry	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	21 <sup>st</sup> Nov. '10
8.	Mr. Amit saran	Key Issues in Hospitality Industry	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	21 <sup>st</sup> Nov. '10
9.	Mr. sanjiv Kr. Srivastava	Key Issues in Hospitality Industry	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	21 <sup>st</sup> Nov. '10
10.	Mr. Abhishek Jana	Key Issues in Hospitality Industry	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	21 <sup>st</sup> Nov. '10
11.	Mrs. Snigdha Priya	Key Issues in Hospitality Industry	Dept. of HMCT	Seminar Hall, R & D Building BIT Mesra	21 <sup>st</sup> Nov. '10

## PUBLICATIONS

### Published in International Journals

1. Rajeshwari Chatterjee . Municipal Solid Waste Management in Kohima. Iranian Journal of Environmental Health Science & Engineering. Vol 7(2), 173-180. Spring 2010.
2. Rajeshwari Chatterjee, Vinay Sharma, Surendra Kumar : Resource Utilization and Environmental Impact of Biodiesel Produced from Jatropha curcas. Manufacturing Technology and Research, Vol. 7, No. 1. (Paper Accepted), Jan-June 2011 issue

### Papers/Abstracts in Conference Proceedings

1. Rajeshwari Chatterjee . Evaluation of Resource Utilization and Environmental impact of biodiesel produced from Jatropha curcas by life cycle assessment. Eco-friendly Manufacturing for Sustainable Development. GLA University, Mathura.19-21, Nov 2010.

### Departmental Students' Activities

S. No.	Name of the Activity	Students' Co-coordinator, if any	Date/Duration
1.	Participation as Volunteer in 34 <sup>th</sup> National Games	Prof. Sitesh P Srivasatv	12-26 Feb.'11
2.	Punjabi Food Festival "Rang de Basanti"		4 <sup>th</sup> -6 <sup>th</sup> Oct. '10

No of summer trainees trained in the Department during July 2010 to June 2011 - 27 (Twenty Seven)

### Members on Board of Studies

The following are members of Board of studies:

- |   |           |
|---|-----------|
| 1. Prof. Sitesh P Srivastav Head, Dept of H.M.C.T.                                      | Chairman. |
| 2. Sh. Praveen Srivastav, Assistant Professor, HMCT, BIT Mesra.                         | Member    |
| 3. Sh. Nishikant Kumar, Assistant Professor, HMCT, ,BIT Mesra                           | Member    |
| 4. Dr. S. K. Bose, Prof. & Head, Dept of Management, BIT, Mesra.                        | Member    |
| 5. Dr. B.N. Sinha, Prof. & In-charge, Department of Pharmaceutical Science, BIT Mesra   | Member    |
| 6. Dr. Shaswati Ghosh Sachan, Asst. Professor, Department of. Biotechnology, BIT, Mesra | Member    |

### External Members

- |   |         |
|---|---------|
| 1. Dr. B.K. Chakravarti Ex-Principal IHM, Patna   | Member  |
| 2. Mr. Tarun Dacha, Corporate Chief, Sarovar Park Plaza, New Delhi.   | Member  |
| 3. Mr. Ranjit Chaudhury, Principal, Institute of Hotel Management Catering Technology & Applied Nutrition Taratola Road, Kolkata. | Member, |

### Student Members

1. Two students' member from Final year



## DEPARTMENT OF INFORMATION TECHNOLOGY

The Department of "Information Technology" is a personification of the Institute's vision in the field of IT and its applications. The department is committed to producing professionals who will be up to the challenges of implementing viable and sound IT oriented solutions to various emerging domains. With a rapidly increasing demand for such professionals, the department is gearing up to the challenge of introducing its students to the demands of the industry from the very outset of their technical education program.

### PROGRAMMES OFFERED

The Department of Information Technology currently offers following programmes:

B.E. Information Technology – 4 year  
(8-semester)

Master of Computer Applications  
(MCA) – 3 year (6-semester)

M.Sc. Information Science – 2 years  
(4- Semester)

M.Tech. Information Security – 2 Years  
(4 – Semester)

Ph.D. Programmes



R & D Building

### FACILITIES

The Department has state of art laboratory facilities, at par with the best in the country, with three fully equipped laboratories and a host of software and hardware platforms. The students are free to make use of the additional resources at the Central Computing Facility, and also have access to advanced laboratories of the Department of Computer Science, Electrical & Electronics and Electronics & Communication Engineering. The PARAM 10000 parallel computing super computer (courtesy C-DAC) is also available to students for implementing their projects.

The available platforms are Windows, UNIX and its clones, Solaris etc. The Department has an array of application software suites from all leading developers (including Microsoft, Oracle, Adobe, Rational etc.) The Department plans to upgrade its laboratory facilities with new laboratories in network simulation, multimedia, biometric analysis etc.

### SPONSORED PROJECTS

Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Need and Use of UGC- INFONET Consortia in Universities of Eastern India	Dr. Bhaskar Karn	UGC	February –2011	Rs. 5.66 Lakhs	3 Years
2.	Local Rainfall Prediction using hybrid system	Prof. B.K. Sarkar	UGC	February -2011	Rs. 1.45 Lakhs	1.6Years



**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/Seminar.....	Organized by	Venue
1.	Dr. (Mrs.) A. Jain	"High Impact Teaching Skills." Dale Carnegie & Associate. Inc.Trainer & Wipro.	WIPRO	BIT, Mesra
2.	Prof. VSS Sriram	"High Impact Teaching Skills." Dale Carnegie & Associate. Inc.Trainer & Wipro.	WIPRO	BIT, Mesra
3.	Prof. V.K. Jha	"High Impact Teaching Skills." Dale Carnegie & Associate. Inc.Trainer & Wipro.	WIPRO	BIT, Mesra
4.	Prof. A.K. Keshri	"High Impact Teaching Skills." Dale Carnegie & Associate. Inc.Trainer & Wipro.	WIPRO	BIT, Mesra

## PUBLICATIONS

### Published in International Journals

1. Amritanjali and G. Sahoo, "Parallel Algorithm For Sorting A Signed Permutation By Reversals On MOT Interconnection Network", International Journal of Computer Applications Vol-1, No-10, pp- 121-125.Feb. 2010.
2. Tapas Kumar and G. Sahoo " A Novel Method Of Edge Detection Using Cellular Automata "International Journal Of Computer Applications pp- 38-44, 2010.
3. Tejbanta S. Chingtham, G. Sahoo, and M. K. Ghose " An Artificial Immune System Model For Multi Agents Resource Sharing In Distributed Environment", International Journal on Computer Science and Engineering, Vol-2, No- 5, 2010 pp- 1813-1818.
4. Tejbanta S. Chingtham, G. Sahoo, M. K. Ghose, " Artificial Immune Privileged Sites as an Enhancement to Immuno-Computing Paradigm" International Journal of Intelligent Information Technology Application (IJIITA), Dec 2010, Vol3, No 3.
5. Tejbanta S. Chingtham, G. Sahoo, M. K. Ghose, " Optimization of Path Finding Algorithm using CLonal Selection: Application to Traveling Salesman Problem" International Journal of Computer Theory and Engineering,VOL 2,NO 2,2010
6. Md. Amir Khusru Akhtar, G.Sahoo, "Fuzzy Set Theoretic Approach To Detect Selfish Nodes In Manets",International Journal of Fuzzy set and Rough set- 2011.
7. T.N. Shankar,M. Maheswara Rao, D. Sudha, K. Sirisha, K. Anil Kumar and G. Sahoo,"Image Compression by Using Back Propagation",International Journal of Computer Science and Applications,Vol.3,No.2,2010
8. Tarun Narayan Shankar and G. Sahoo," Cryptography by Karatsuba Multiplier with ASCII Codes", International Journal of Computer Applications (0975 – 8887), Volume 1 – No. 12,2010.
9. A.Priyam, B.M.Karan And G.Sahoo," Design Of A Novel Algorithm For Dna Sequence Analysis", International J.Of Multidispl.Research & Advcs. In Engg.(Ijmrae), Issn 09757074, Vol. 2, No. 1, April 2010, Pp 157165

10. A.Priyam, B.M.Karan And G.Sahoo," A Probabilistic Model For Sequence Analysis", (IJCSIS) International Journal of Computer Science and Information Security, Vol. 7, No. 1, 2010.
11. A.Priyam, B.M.Karan And G.Sahoo," Application of Fuzzy Composition Relation for DNA Sequence Classification", (IJCSIS) International Journal of Computer Science and Information Security, Vol. 8, No. 6, 2010.
12. Rajesh Kumar Tiwari and G. Sahoo, "A Novel Steganographic Methodology for High Capacity Data Hiding in Executable Files", International Journal of Internet Technology and Secured Transactions, Inderscience Publisher., U.K, Vol. 3, No. 2, 2011, pp- 210-222.
13. Rajesh Kumar Tiwari and G. Sahoo "Microsoft Excel Files: A Steganographic Carrier File", International Journal of Digital Crime and Forensics, IGI Publications, USA, Vol. 3 No. 1, 2011, pp- 37-52.
14. Rajesh Kumar Tiwari and G. Sahoo, "A Novel Methodology for Data Hiding in PDF File", Information Security Journal: A Global Perspective, Taylor & Francis Publication, Vol. 20, No. 1, 2011, pp- 1-13.
15. Rajesh Kumar Tiwari and G. Sahoo, "A New Methodology for Data Coding and Embedding for High Capacity Transmitting", International Journal of Electronic Security and Digital Forensics, Inderscience Publisher. Vol. 3, No. 1, 2010 pp- 27-40.
16. G. Sahoo and Rajesh Kumar Tiwari, "A Secure Image Transmission using Steganographic Methodologies". International Journal of Multimedia Intelligence and Security (IJMIS) ", Inderscience Publisher., U.K Vol. 1, No. 2, 2010, pp-169-190
17. K. K Senapati, G. Sahoo and D. Bhaumik," Algorithm for Predicting Protein Secondary Structure", Journal Of Computer Science And Engineering, Volume 1, Issue 1, May 2010.
18. K.K. Senapati, G. Sahoo and Soumen Kumar Dey," Priority Based Multidimensional Data Pattern", Journal Of Computer Science And Engineering, Volume 5, Issue 1, January 2011.
19. K.Mukherjee, G.Sahoo, Development of Mathematical Model for Market Oriented Cloud Computing , International Journal of Computer Applications (0975- 8887), Foundation of Computer science, New York, USA, Vol. 9, No. 11, November 2010.
20. K.Mukherjee, G.Sahoo, Green Cloud: An Algorithmic Approach, International Journal of Computer Applications (0975- 8887), Foundation of Computer science, New York, USA, Vol. 9, No. 9, November 2010.
21. K.Mukherjee, G.Sahoo, Cloud Computing: Future Framework for e-Governance, International Journal of Computer Applications (0975- 8887), Foundation of Computer science, New York, USA, Vol. 7, No. 7, October 2010
22. K.Mukherjee, G. Sahoo, Performance Analysis of Cloud Computing using Multistage Ant System, International Journal on Futuristic computer Applications, Volume 20 (2010), 75-80
23. Sudip Kumar Sahana, Dr (Mrs) Aruna Jain, A.Mustafi," A Comparative Study on Multicast Routing using Dijkstra's, Prims and Ant Colony Systems", "International Journal of Computer Engineering &Technology (IJCET)", Vol-2, No-2, Aug-Sep(2010), pp301-310, ISSN Print: ISSN 0976 – 6367, ISSN Online: ISSN 0976 – 6375.

24. Sudip Kumar Sahana, Dr (Mrs) Aruna Jain, "An Improved Modular Hybrid Ant Colony Approach for Solving Traveling Salesman Problem", "International Journal on Computing (JoC) ,Feb-11,Vol-1,Number-2,pp123-127,ISSN: 2010-2283, doi: 10.5176-2010-2283\_1.249.
25. Sudip Kumar Sahana, Dr (Mrs) Aruna Jain," A modular hybrid Ant Colony Approach for solving travelling salesman problem",2010 Annual International Conference on Infocomm Technologies in Competitive Strategies (ICT 2010), October 25-26, 2010, Mandarin Orchard, Singapore, pp 978-981, ISBN: 978-981-08-7240-3,doi:10.5176/978-981-08-7240-3\_1-43.
26. Sabina Priyadarshini and Gadadhar Sahoo, 2010. Pixel Scratching Algorithm for Edge Detection of Monochrome Image Objects, International Journal of Computational Vision and Robotics, Inderscience Publications, Vol. 1, No. 3, pp. 325-334.
27. Sabina Priyadarshini and Gadadhar Sahoo, 2010. A New Lossless Chain Code Compression Scheme based on Substitution, International Journal of Signal and Imaging Systems Engineering, Inderscience Publications, Vol. 4, No. 1, pp. 50-56.
28. Sabina Priyadarshini and Gadadhar Sahoo, 2010. A New Edge Detection Method Based on Additions and Divisions, International Journal of Computer Applications, New York, USA, Vol. 9, No. 10, Article-4, November Issue, pp.10-13.
29. Sabina Priyadarshini and Gadadhar Sahoo, 2010. A Modified and Memory Saving Approach to B+ Tree Index for Search of an Image Database based on Chain Codes, International Journal of Computer Applications, New York, USA, Vol. 9, No. 3, Article-2, November

#### **Papers/Abstracts in Conference Proceedings**

1. Amritanjali and G. Sahoo" Efficient Algorithm For Sorting A Signed Permutation By Reversal", International conference on Intelligent system & Data processing,-2011.
2. Tejbanta S. Chingtham, G. Sahoo, M. K. Ghose, " An Unmanned Aerial Vehicle As Human-Assistant Robotics System", IEEE International Conference on Computational Intelligence and Computing Research,2010,pp 72-77.DOI 10.1109/ICCIC.2010.5705731
3. Tejbanta S. Chingtham, G. Sahoo, M. K. Ghose, " Robot Design as a Convenient Recycler of E- Wate", In the proceedings of National Conference on sustainable Management of E- Waste, Dec 2010.
4. T. N.Shankar, Dr.G.Sahoo and Dr.S. Niranjana," Image Encryption For Mobile Devices", Icccct'10
5. K.K. Senapati, S. Sahana, and G. Sahoo, "An Efficient Pattern Matching Algorithm for Biological Sequences", in Proc. IPCV, 2010, pp.755-759
6. Bal Ram and Dr. Bhaskar Karn "Needs Of Electronic Resources, Their Management Through Consortia And Impact On Society" International Conference on the Convergence of Libraries, Archives and Museums "User Empowerment through Digital Technologies" NIFT-February 15-17, 2011

#### **Book Authored**

1. Prof. B.K. Sarkar " Discrete Mathematics" 1<sup>st</sup> Edition, Oxford University Press, New Delhi- 2011

**Award / Recognition Bestowed on Faculty (State / National / International )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr. (Mrs.) A. Jain	Co-Editor/Reviewer In-Charge:	GSTF International Journal on Computing (ISSN:2010-2283)	2010 till Date
2		Co-Editor/Reviewer In-Charge:	Annual International Conference on Information technology Security(ITS2010)	2010
3		Reviewer	Acta Press International Journal on Computers and Applications	2010 till Date
4			Journal of Computing and Information Technology.(ISSN:1330-1136)	2010 till Date
5			Central European Journal of Computer Science.(ISSN:1896-1533)	2010 till Date
6			Annual International Conference on Communication, Computing and Security (ICCCS2011)organized by the department of Computer Science and Engineering, NIT Rourkela.12 <sup>th</sup> Feb.2011	2010

**Members on Board of Studies (UG/PG)**

- |                          |          |
|--------------------------|----------|
| 1. Dr.G.Sahoo            | Chairman |
| 2. Mr. S. Dutta          | Member   |
| 3. Dr. (Mrs). Aruna Jain | Member   |
| 4. Mr.V .S. S. Sriram    | Member   |
| 5. Mr. B. K. Sarkar      | Member   |
| 6. Dr. N. C. Mahanti     | Member   |
| 7. Dr. R. Sukesh Kumar   | Member   |

**External Experts**

1. Dr. C. Majumdar, Department of Computer Science & Engg Jadavpur University, Kolkata
2. Dr. A. Mishra Department of MCA NIT, Jamshedpur
3. Dr. Rajib Mall, Department of Computer Science & Engg. IIT, Kharagpur
4. Dr. B. Majhi, Department of Computer Science & Engg. NIT, Rourkela

**Any other important information**

A press note on the paper entitled "A novel steganographic methodology for high capacity data hiding in executive files" written by Dr. Rajesh Kumar Tiwary and Dr. G. Sahoo , published in International Journal of Technology ad Secured Transaction ( Vol. 3, No. 2, 2011) has been released by Inder Science Publication, Washington, USA.

## DEPARTMENT OF MANAGEMENT

The Department of Management was founded in 1979 to impart holistic management education to potential young managers and has completed more than 30 glorious years of its existence. The programmes offered by the department lay special emphasis on nurturing personal integrity and social responsibility among the students. With its massive infrastructure base of well-equipped library and computer labs, seminar and conference rooms, the Department of Management strives to impart better contemporary education to the students.

The bi-annual journal of the department 'The Alternative' and quarterly newsletter, 'Manage-a-Bit' have gained in popularity in the management community. Many new institutions have shown their interest for subscription as well as in obtaining the journal on exchange basis.

**Degree/Diploma offered :** The following programmes are being offered by the department-

1. Ph. D in Management
2. Master of Business Administration (2 years Full- Time / 3 years Part- Time)
3. M.E. (Quality Engineering & Management )
4. M.E. Quality Engineering & Management in collaboration with the Institute of Engineers

### Proposed new Courses :

The department proposes to launch a 5 year Integrated MBA programme from the next academic year.

## SPONSORED PROJECTS

### Ongoing Projects Sanctioned before July 2010

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Pedagogy Project, NMEICT	S Shivani	MHRD, GOI	October, 2009	Rs 22 lacs	2 yrs

### Projects Completed during the period July 2010-June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Making of an Entrepreneur	S Shivani	ICSSR, New Delhi	10/01/08	Rs 5.42 lacs	10 <sup>th</sup> July, 2010

### Seminar / Conferences / Short – term Courses Conducted by the Department

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	Colloquium on doctoral research	Dr. U Baul	BIT Mesra	31-08-2010 to 02-08-2010

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date , Month, Year
1.	Dr.Vijay Agarwal	UGC Refresher Course on 'Financial management'	UGC ACADEMIC STAFF College, Ranchi	UGC ACADEMIC STAFF College, Ranchi	10/06/2011-30/06/2011
2	Dr.Vijay Agarwal, Dr.P.C. Jha Dr.Rohit Pande, Anand Kumar, Dr. Dharmendra Chand, Shailendra Singh, Shelly Srivastava, Amitabh Verma, Sujata Priyambada Dash, Anand Pd. Sinha, Nitesh Bhatia, Niharika Srivastava	"Mission_KYaat"	Internal Quality Assurance Cell, BIT-Mesra	B.I.T. Mesra	10/05/11 – 12/05/11
3	Dr.Rohit Pande	Orientation	UGC ACADEMIC STAFF College, Ranchi	UGC ACADEMIC STAFF College, Ranchi	03/05/2011-31/05/2011
4	Dr.Rohit Pande	UGC Refresher Course on 'Financial Management'	UGC ACADEMIC STAFF College, Ranchi	UGC ACADEMIC STAFF College, Ranchi	10/06/2011-30/06/2011
10	Shelly Srivastava	UGC Refresher Course on 'Financial Management'	UGC ACADEMIC STAFF College, Ranchi	UGC ACADEMIC STAFF College, Ranchi	10/06/2011-30/06/2011
12	Amitabh Verma	UGC Refresher Course on 'Financial Management'	UGC ACADEMIC STAFF College, Ranchi	UGC ACADEMIC STAFF College, Ranchi	10/06/2011-30/06/2011
16	Nitesh Bhatia	UGC Refresher Course on 'Financial Management'	UGC ACADEMIC STAFF College, Ranchi	UGC ACADEMIC STAFF College, Ranchi	10/06/2011-30/06/2011

**PUBLICATIONS**
**Published in International Journals**

1. V.V.Ravi Kumar ,P.V.Raghavan, S.K.Bose, "Extension of Technology Adoption Model (TAM) Intention to use Internet Banking : Evidence from India". International Journal of Finance and Policy Analysis,Vol. 3. No.1. Spring 2011, Brown Walker Press;USA
2. Purnendu Paul, Rizwan Dhalla, S.K.Bose, "Efficiency Measurement of Indian Public Sector Banks: Non-Performing Assets as Negative Output", Asia Pacific Journal of Finance and Banking Research,Vol. 5 No. 5 Issue 2011,Published by Global Business Investments and Publications LLC, PO Bos 292, Mansfield Center, CT, 06250. USA

3. V.Kannan, N.G.Kannan, S.K.Bose, "An evaluation of ocean container carrier selection criteria: an Indian shipper's perspective". Management Research Review, Vol. 34 No. 7, pp. 754-772. Issue: 2011. Emerald Group, Publishing Ltd., UK
4. Tanmay Chattopadhyay, S Shivani, Rudrendu Datta, "Media mix elements affecting select dimensions of brand equity" published in IIMB Management Review, edited by IIM Bangalore published by Elsevier, Vol. 22, No. 4, Dec. 2010, pg. 173 – 185.
5. Tanmay Chattopadhyay, S Shivani "Marketing mix elements influencing brand equity and brand choice" published in Vikalpa, the Journal of Decision Makers, Publisher: IIM Ahmedabad, July – Sept. 2010, Vol. 35, (3), pg. 67 – 84

#### **Published in National Journal**

1. V.Kannan, S.K.Bose, N.G.Kannan "Ocean container carrier selection criteria and their perceived importance in the Indian environment: a shipper-only study". The IUP Journal of Operations Management, Vol. 9 No. 4, pp. 35-51. Issue Nov., 2011. ICFAI University Press, Hyderabad, India
2. V.V.Ravikumar , S.K.Bose, "Deal with your Customer". Indian Management Vol. 50 Issue 3 March, 2011. All India Management Association.
3. Ela Goyal, Manju Bhagat " Factors that affect Information and Communication Technology usage: A case in management education" Journal of Technology and Management, Vol. XXI no. 4, 2010 Pg. no. 38.
4. R.N. Singh, Manju Bhagat, R.P. Mohanty "Pay Satisfaction and Organizational commitment: Moderating role of employee's cultural values" XIMB Journal of management ,Vilakshan, ISSN 0973-1954 Vol. VIII, issue no. 1, March 2011 Pg. no. 37.

#### **Papers/Abstracts in National Conference Proceedings**

1. U Baul "Methodology to optimize performance attribute of the product through modularization during concept development phase" National conference on engineering management, BSA College of Engg. & Technology, Mathura. 25-26 March 2011.

#### **Papers/Abstracts in International Conference Proceedings**

1. Sujata Priyambada Dash, "The Importance of Human Capital in Economic Value Addition for Corporate Sustainability" , Conference on "Achieving Sustainable Constant Growth: Exploring New Frontier in Technology & Mgt.", MTI SAIL Doranda , Ranchi 08-09 April 2011.
2. Anand Pd. Sinha, R.N. Bhagat , "Impact of coal mining on Environment and its Effective management: A case study of Piparwar Coal mining in Jharkahand state." , Conference on , "Achieving Sustainable Constant Growth: Exploring New Frontier in Technology & Mgt" , MTI SAIL Doranda , Ranchi 08-09 April 2011.

#### **Chapter contributed to Edited Volume-Published by International Level Publishers**

1. Sujata Priyamvada Dash, Chapter on "Importance of Human Capital in Economic Value Addition for Corporate sustainability: A perspective", Book titled Technology and Competence, volume 1, published by National HRD Network Ranchi (India) with ISBN: 978-93-80697-94-9

## Members on Board of Studies (UG/PG)

### **I MBA**

Dr S K Bose – HOD, Deptt of Management – Chairman (ex-Officio)

Dr S Kumar, Professor, Deptt of Pdtm Engg- Member

Dr U Baul, Professor, Deptt of management – member

Dr S Shivani , Associate Professor, Deptt of management- Member

Dr V Agrawal, Senior Lecturer, Deptt of management – Member

Dr A S Sarkar, Professor, XLRI Jamshedpur – External Member

Dr Hariharan, Sr DyGM MTI, SAIL , Ranchi – External Member

### **II ME QEM**

Dr S K Bose – HOD, Deptt of Management – Chairman (ex-Officio)

Dr S Kumar, Professor, Deptt of Pdtm Engg- Member

Dr U Baul, Professor, Deptt of management – Member

Mr S C Mishra, Associate Professor, Deptt of management- Member

Dr Anjani Kumar, Prof. Deptt of Production Engineering, NIT Jamshedpur

Dr R K Srivastava, Prof. Deptt of Production Engineering, BIT Sindri



## DEPARTMENT OF MECHANICAL ENGINEERING

Since its inception in 1955, the Department of Mechanical Engineering has earned a good reputation for its quality of teaching and research. During the preceding year it has been awarded the top grades for both teaching and research activities from independent and government bodies. The excellent laboratory facilities, modern computer clusters, systematically designed curriculum, and dedicated faculty members make this Department a dynamic place to study. Graduates from the Department of Mechanical Engineering are highly employable and sought after by many prestigious companies. There is also an excellent careers centre on campus, which helps the students to get entry into Multinational companies.



Mechanical Engineering Laboratory

The Department of Mechanical Engineering offers the following programmes at undergraduate/postgraduate and Doctoral level:

- i. B.E. (Mechanical Engineering)
- ii. M.E. (Mechanical Engineering)
- iii. Specialization: Heat Power /Design of Mechanical Equipment.
- iii. M.Tech. (Energy Technology)
- iv. Ph.D. in Mechanical and Interdisciplinary field of research.

A Micro-Electro Mechanical Systems (MEMS) Design Centre has been established in the Department of Mechanical Engineering under National Program for materials and Smart Structures (NPMASS), an initiative by Government of India.

Under the joint Research Programme (Global Clinic Programme at Harvey Mudd College, USA) on "A Low Cost Solar Thermal Storage Mechanism for Rural Villages in India", Mechanical Engineering students, Sri Siddharth Menon, Sri Siddharth Murarka and Sri Abhishek Sadany, visited Harvey Mudd College, USA and successfully completed the projects.

### SPONSORED PROJECTS:

#### Ongoing Projects:

S. No.	Project Title	PI/Co-PI/ Collaborator if any	Funding Agency	Date of sanction	Sanctioned Amount	Duration of the project
1.	Design and Development of Hydrogen Assisted Dual Fuel Engine (2009-11)	Sri D.B. Lata Dr. Ashok Misra	Deptt. of Industries, Govt. of Jharkhand	2009	Rs. 10.00 Lakhs	Two years

2.	Development of New Heath Care Monitoring system for Elderly using Emerging Communication Technologies (Vide letter No. SSD/NI/026/2008/ TIE dated Nov. 24, 2009 (December 2009-2012)	Mrs. Richa Pandey Dr. R.P. Sharma, Dr. Rajeev Kumar	DST	2009	Rs. 12.059 Lakhs	Three years
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**Conferences/Seminars/Workshops/Staff Development Programmes attended:**

S.No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, Year
1.	Sri S.K. Dhiman, Dr A K Roy, Sri B S Choudhary	KYAAT	B.I.T., Mesra	B.I.T., Mesra	28 April 2011

**PUBLICATIONS:**

**International Journals:**

1. U.C. Singh, Anant Prasad & Arbind Kumar (2011) "Integral Model for Development of Instant Interface Temperature of Cylindrical Additive Bath System", International Journal of Metallurgical and Materials Transactions B (in press).
2. J.P.Roy, M.K. Mishra, Ashok Misra (2011) "Parametric Optimization and Performance Analysis of a Regenerative Organic Rankine Cycle using Low Grade Waste Heat for Power Generation" International Journal of Green Energy, **8**, (2) 173-196.
3. D.B.Lata and Ashok Misra (2011) "Analysis of Ignition Delay Period of a Dual-Fuel Diesel Engine with Hydrogen and LPG as Secondary Fuels" International Journal of Hydrogen Energy, **36**, 3746-3756.
4. D.B. Lata and Ashok Misra (2010) "Experimental Analysis of Dual Fuel Diesel Engine with Hydrogen and LPG as Secondary Fuels" International Journal of Hydrogen Energy. (Under Review).
5. V.S. Chauhan, Ashok Misra (2010). "Electromagnetic radiation during plastic deformation under unrestricted quasi-static compression in metals and alloys". Int. J. Materials Research (Formerly: Zeitschrift für Metallkunde) **101**, 855 – 864.
6. V.S.Chuhan, Ashok Misra. "Assessment of lattice parameters and grain size in titanium alloy through electromagnetic radiation technique." Int. J. Microstructures and Mater. Prop. (2010) (in press).
7. Arbind Kumar, (2010) "Manufacture and Study of Physico-Chemical Properties of Karanja Bio-diesel", World Applied Sciences Journal (WASJ. org) June 21.
8. Ashok Misra, R.C. Prasad, V.S.Chauhan, Rajeev Kumar" Effect of Peierls' stress on the electromagnetic radiation during yielding of Metals". Mechanics of Materials **42** (5), (2010), 505-521.
9. Richa Pandey, S. Kumar, L.N.Pattanaik, "A Reverse Engineering based process for Contextualizing and digitizing ancient technical objects", J. Mamuf. Tech. Res. – an International Journal, **6** (2010) 1-2.

**Proceedings:**

1. Arbind Kumar & S.K.Dhiman "Bio-fuel Plant for Rural Electrification" International Conferences on Advances in Renewable Energy, MANIT, Bhopal, June 24-26, 2010.
2. Richa Pandey, S. Kumar, "A RE based Process for Retrival of Ancient Technical Objects" International conferences on CAD, UAE, June 21-25, 2010.
3. Richa Pandey, S. Kumar, "Application of Reverse Engineering and CAD tools to revive inventions of the past and to improve precision and accuracy" proceeding of National Seminar on Precision forming: Modeling, Analysis and System Development, B.I.T., Mesra, February 15-16, 2010.
4. Richa Pandey, "Life in Balance – A challenge for Optimizing safety and minimizing un-intended consequences", Globalization and Human Rights, BSA College, Mathura, June 9-10,2010.
5. K.K.Srivastava, B.G. Shankar " Optimization of Steady State Distributed Pumping Systems for Sychrotron Beam Lines", Proceeding of the Indian Vacuum Society National Symposium, Pilani, November 11-13,2009.

**Award/Acknowledgement Bestowed on Faculties**

S. No.	Name of the Faculty	Title of the Award/Honours	Organisation	Year/Duration
1.	Dr. Ashok Misra	Reviewer	International Journal on "Polymers and Polymer Composites"	2010
2.	Mrs. Richa Pandey	Reviewer	International Conference on Science & Social Research	June 2010

**Departmental Students' Activities**

1. Three students from the Department of Mechanical Engineering, Sri Siddharth Menon, Sri Siddharth Murarka, and Abhishek Sadany (All Final year Mechanical Engineering students) successfully completed the project on "A Low Cost Solar Thermal Storage Mechanism for Rural Villages in India" under collaboration with Harvey Mudd College, U.S.A.
2. Mr. Rishabh Jain, a third year Mechanical Engineering Student of B.I.T., Mesra, Ranchi presented a paper on "Identifying the Hotspots of Solar Energy in India" in the International Conference "Lake 2010" held during December 2010 at IISC. Bangalore. This paper also appear in the quarterly magazine "The Solar Quarterly" published by TERI. The paper has also been submitted to an International Journal "Renewable and Sustainable Energy Reviews" Elsevier.
3. A group of Final year and pre-final students participated in the competition "BAJA India" held in January 2011 at Indore where a Racing Car fabricated by them was showcased and qualified in the Racing Event.

**Members on Board of Studies (UG/PG)**

1. Dr. Arbind Kumar
2. Prof. P.K. Choudhary
3. Dr. R.P. Sharma
4. Sri O.P. Pandey

**Member from Allied Departments:**

1. Professor A.K.Chatterjee (SE & R)
2. Professor B.K.Singh

**External Experts:**

1. Professor B.N. Prasad, N.I.T Jamshedpur
2. Mr. V.K. Singh (Former EAC), Ministry of Environment & Forest, Government of India, Ranchi.
3. Dr. Rakesh Dwivedi, Sr. Manager (ESM), CMPDIL, Ranchi.

**Any other important information**

1. Dr. V.S. Chauhan and Dr. Ashok Misra have reported an additional phenomenon in Metal Physics, viz. Electromagnetic Emission during Quasi-static Compression in Metals, which has been published in Int. J. Materials Research (Formerly: Zeitschrift für Metallkunde) 101 (2010), by the Max Planck Research Institute, Germany.



## DEPARTMENT OF PHARMACEUTICAL SCIENCE

The Department of Pharmaceutical Sciences was established in 1972, recognizing the potential of this emerging field of Technology. The Department has a lively, stimulating and a robust scientific community with highly qualified and competent faculty and a large number of postgraduate students, research fellows and visiting scientists. It is well equipped for both teaching and research activities, which are undertaken across the whole spectrum of Pharmaceutical Sciences. The Department encourages and supports studies involving a range of research strategies and have expertise and experience towards quality and innovative research.



Pharmaceutical Chemistry Laboratory

The Department runs both B.Pharm. and M. Pharm in Pharmaceutical Sciences- Specializations offered are Pharmaceutics, Pharmaceutical Chemistry, Pharmacology and Pharmacognosy. The courses are recognized by both Pharmacy Council of India and AICTE. The Department also provides facilities for Doctoral Research in various fields of Pharmaceutical Sciences and has state of the art Instrumental Analysis and Molecular Modeling laboratories for this purpose.

The Department is supported by two major projects namely FIST of DST and SAP of UGC. The Department received 5 UGC BSR Fellowships and three CSIR Senior Research Fellowships in the current year.

The Department has also started a "Centre for Bioavailability, Toxicity, Isolation and Spectral Studies (CBTISS)" in May 2011.

### INFRASTRUCTURE DEVELOPMENT

#### Addition of equipment:

1. Operon Lyophilizer
2. Agilent Preparative HPLC
3. Buchi Rotary Evaporator
4. Rectangular maze
5. Stanford Precision Melting Point Apparatus
6. Flex X Molecular Modeling software
7. Recore software

#### NEW PROGRAMMES:

#### Additional Courses Started:

1. M. Pharm in Quality Assurance and Drug Regulatory Affairs in collaboration with LCRA, Bangalore
2. PG Diploma courses in Clinical Data Management and Clinical Research have been approved to be introduced from Monsoon 2011 session.

**SPONSORED PROJECT****Project Sanctioned during July 2010 to June 2011**

Sl. No.	Project Title	PI / Co- PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Structure based Design of Dengue Virus Protease Inhibitors (Indo German Collaboration)	Dr. B.N. Sinha, BIT, Mesra, Dr. Rolf Hilgenfield, University of Leubeck, Germany and Dr. D. Velmurugan, University of Madras	DBT	Nov 2010	24.518 lacs	3 years
2.	Evaluation of antidiabetic potential of the indigenous medicinal plants of chotanagpur region	Dr. P. M. Mazumder	UGC	Feb2011	11.08 lacs	3 years
3.	Structure based Discovery of Antivirals for the treatment of Chikenguniya virus infections(ANTICHICK)	Dr. B.N. Sinha, BIT, Mesra, Dr. Rolf Hilgenfield, University of Leubeck, Germany and Dr. D. Velmurugan, University of Madras	DBT	Feb 2011	31 lacs	2 years
4.	Studies on immunotoxic profile and proteomics of deltamethrin in murine thymocytes and splenocytes: Attenuation by herbals	Dr. N. Sharma	UGC	Feb2011	9.29 lacs	3 years
5.	Development of some selective Monoamine oxidase B inhibitors against alzheimer's disease.	Mrs. N. Misra	UGC	Feb 2011	1.65 lacs	2 years
6.	Formulation and evaluation of herbal antiwrinkle gel and its invitro studies	Dr. A. Pandey	UGC	Feb 2011	1.35 lacs	2 years
7.	Standardization of ayurvedic preparations containing ghee	Mr. D. Biyani	UGC	Feb 2011	1.55 lacs	2 years

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	Principal Investigator	Funding Agency	Date of Sanction	Sanction Amount	Duration of the project
1.	SAP :Improvement of Infrastructure for Total Quality Management (TQM) and Good Laboratory Practice (GLP)	Head, Department of Pharm. Scs., BIT, Mesra	UGC	Feb 2007	65 lacs	5 years
2.	Identification and optimization of some Anticancer lead molecules as Ribonucleotide reductase- Histone deacetylase dual inhibitors	Dr. B. N. Sinha, and Mr. Arijit Basu	UGC	Dec 2009	10.063 lacs	3 years
3.	Design, Synthesis and study of some NIDDM based antidiabetics linear and cyclopeptides and non peptides	Dr.S. Samanta	UGC	Dec 20-09	10.818 lacs	3 years
4	Gastroretentive floating drug delivery systems of antiretroviral drug-formulation and invitroevaluation	Mrs. T. Bal	UGC	Feb 2010	1.30 lacs	2 years
5	Design and development of AChE and MAO inhibitors possibly as dual inhibitors : A new insight for Alzheimer's disease treatment	Dr. D. Sasmal, and Mrs. N.Mishra	UGC	Jan 2010	1.3Lakhs	2 years

**Ongoing Research Projects in collaboration with other Departments of the institute and other National Level Institutes:**

Sl. No.	Project Title	Principal Investigator	Funding Agency	Date of Sanction	Sanction Amount	Duration of the project
1.	Study of Anti-oxidative and DNA protective properties of Anthocyanins	Dept. of Pharm. Scs. + Dept. of Biotechnology	UGC	Jan 2009	15.13 lacs	3 years
2.	To understand the nature of diversity in lac insects of <i>Kerria</i> spp. In India and the nature of insect and host interaction	Dr. B. N. Sinha, Department of Pharm. Scs., BIT, Mesra	ICAR	Jan 2009	66.5 lacs	3 years

## Projects Completed during the period July 2010-June 2011

Sl. No.	Project Title	Principal Investigator	Funding Agency	Date of Sanction	Sanction Amount	Duration of the project	Project completion date
1.	Staff Development Programme	Dr. D. Sasmal, Dr. R.N. Gupta and Mr. D. Biyani	AICTE	Dec 2009	3.5 lacs	1 year	Dec 2010
2.	FIST: Advancement of Facilities for Undergraduate and Postgraduate Teaching and Research	Head, Department of Pharm. Scs., BIT, Mesra	DST	Feb 2006	38 lacs	5 years	Feb 2011
3.	Synthesis, Evaluation and Molecular Modeling studies of Some Imidazole analogs as potential Non Nucleoside Reverse Transcriptase Inhibitors	Dr. Swastika Ganguly	UGC	May 2009	01.40 lacs	2 years	May 2011
4.	Formulation and characterization of multiparticulate pulsatile delivery of methotrexate based on chronotherapy for rheumatoid arthritis and its in vitro studies	Mr. A. Dev	UGC	May 2009	01.50 lacs	2 years	May 2011
5.	Causes of depression, length of inpatient stay, hospital re-admissions and the prescription patterns in psychiatric hospitals: proposition of community psychoeducation in Jharkhand.	Mr. S.P. Pattanayak	UGC	May 2009	1.25 lacs	2 years	May 2011



**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	AICTE sponsored Quality Improvement Programme on Recent Advances in Safety Pharmacology	Chief Coordinator : Dr. B. N. Sinha Programme coordinators : Dr. P.M. Mazumder and Mr, A. K. Patnaik	AICTE	August 1 – 14, 2010
2	AICTE sponsored Quality Improvement Programme on Lead discovery Approaches from Natural and Synthetic Resources	Chief Coordinator : Dr. B. N. Sinha Programme coordinators : Dr. S. Ganguly and Dr. K.Jayaram	AICTE	August 29 – 11 September, 2010)
3	AICTE sponsored Quality Improvement Programme on Advances in Clinical Pharmacy, Need of the Hour	Chief Coordinator : Dr. B. N. Sinha Programme coordinators : Dr. R. N. Gupta and Mr. D. Biyani	AICTE	November 29 – 11 <sup>th</sup> December 2010
4	Central executive Council (CEC) meeting of Indian Pharmaceutical association	Dr. B. N. Sinha	IPA Jharkhand State Branch	3 <sup>rd</sup> - 4 <sup>th</sup> October 2010

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme / Refresher course attended:**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date , Month, Year
1.	Dr. B. N. Sinha	9 <sup>th</sup> International Conference on Antivirals for Neglected and Emerging Viruses	University of Lubeck, Germany	University of Lubeck, Germany	10-15 October 2010
2.	Dr .R. N. Gupta	QIP (as Guest Speaker)	Jadavpur University	Kolkata	July'2010
		Mission KYAAT	BIT Mesra, Ranchi	Ranchi	June'2011
3.	Dr. S. Ganguly	Mission KYAAT	IQAC, BIT, Mesra	BIT, Mesra	3 <sup>rd</sup> -5 <sup>th</sup> May 2011
4.	Dr. P Mitra Mazumder	Mission KYAAT	IQAC, BIT, Mesra	BIT, Mesra	3 <sup>rd</sup> -5 <sup>th</sup> May 2011
5.	Dr. J. Venkatesh	9 <sup>th</sup> International Conference on Antivirals for Neglected and Emerging Viruses	University of Lubeck, Germany	University of Lubeck, Germany	10-15 October 2010

6.	Mr. Arijit Basu	Modern Tools in Organic Synthesis and Purification	Indian Institute of Chemical Technology, Hyderabad	Indian Institute of Chemical Technology Hyderabad	21-25 <sup>th</sup> Nov 2011
7.	Mr. Manik	Research Scholars' Day	BIT Mesra , Ranchi	BIT Mesra , Ranchi	Mar 26-27, 2011
		National Conference on Biotechnology,:	Central University of Jharkhand(CUJ), Brambe, Ranchi	(CUJ), Brambe, Ranchi	Feb 25, 2011
8.	Mr. Biswatrish Sarkar	Annual Conference of Association of Microbiologists of India (AMI-2010).	Dept. of Biotechnology, B.I.T, Mesra, Ranchi	B.I.T, Mesra, Ranchi	14-17 <sup>th</sup> December, 2010
		National Conference on Biotechnology	Central University of Jharkhand (CUJ), Brambe, Ranchi	CUJ, Brambe, Ranchi	Feb 25, 2011
		UGC Summer School on "Chromatographic Techniques for Pharmaceutical Research"	UGC Networking Resource Centre UIPS, Panjab University, Chandigarh	UIPS, Panjab University, Chandigarh	23 May to 4 June 2011
9.	Dr. Anima Pandey	Mission KYAAT	IQAC, BIT, Mesra	BIT, Mesra	31 May 2011

## PUBLICATIONS

### Published in International Journals

1. Verma Rajkumar, Mishra Vikas, Gupta Konica, Sasmal Dinakar, Raghubir Ram, Neuroprotection by Rosiglitazone in a Transient Focal Cerebral Ischemia may not be mediated by Glutamate Transporter-1, accepted in Journal of Neuroscience Research.
2. Manoj Goyal, D. Sasmal, B.P.Nagori, Salvadora persica (Meswak): Chewing stick for complete oral care, International Journal of pharmacology (Accepted)
3. Sandeep Kumar Singh, P.R.P.Verma, B.K. Razdan. Structural transitions of self-nanoemulsifying drug delivery system of glibenclamide, carvedilol and lovastatin upon progressive aqueous dilutions, Journal of Dispersion Science and Technol., 32 (2011) 771-777.
4. Sandeep Kumar Singh, P.R.P.Verma, B.K. Razdan. Atomic force microscopy, transmission electron microscopy and photon correlation spectroscopy: three techniques for rapid characterization of self-nanoemulsifying drug delivery system of carvedilol, lovastatin and glibenclamide, Journal of Dispersion Science and Technol., 32 (2011) 538-545.
5. Sandeep Kumar Singh, P.R.P.Verma, B.K. Razdan. Glibenclamide-loaded self-nanoemulsifying drug delivery system: development and characterization, Drug Development and Industrial Pharmacy, 36 (2010) 933-945.

6. Sandeep Kumar Singh, P.R.P.Verma, B.K. Razdan. Development and characterization of lovastatin loaded self-microemulsifying drug delivery systems, *Pharmaceutical Development Technology*, 15(2010) 469-483.
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9. S. K. Bansal, B. N. Sinha, R. L. Khosa, A. J. Olson. "Novel GABA-AT inhibitors: QSAR & docking based virtual screening of phenyl substituted  $\beta$ -phenylethylidene hydrazine analogs" *Medicinal Chemistry Research*, 19(S1)( 2010) S114.
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11. S. K. Bansal, B. N. Sinha, R. L. Khosa, A. J. Olson. "Novel GABA-AT inhibitors: QSAR & docking based virtual screening of phenyl substituted  $\beta$ -phenylethylidene hydrazine analogs" *Medicinal Chemistry Research*, 2010, (DOI 10.1007/s 00044-010-9390-6).
12. B.N. Sinha, S. K. Bansal, A.K. Pattnaik, " Phytochemical and Antimicrobial Activity of Extracts, Fractions and Betulin, 7- Methyl Juglone Obtained from Diospyros paniculata". *Journal of Natural Remedies*, (9), 2009.
13. Abhishek Kumar and B.N. Sinha, " Ayurvedic Processings of nux vomics : qualitative and quantitative determination of total alkaloidal contents and relative toxicity " *Malayasian Journal of Pharmaceutical Scs*, 2009, 7(2), 80-94.
14. Manik Ghosh, B.N. Sinha, GC-MS Studies on the Bark Extracts of Litsea polyantha Juss. *Mid. East J. Sci. Res.* 5(2010) 441-444.
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19. Saiko, P., Graser, G., Giessrigl, B., Lackner, A., Grusch, M., Krupitza, G., Basu, A., Sinha, B. N., Jayaprakash, V., Jaeger, W., Fritzer-Szekeres, M., and Szekeres, T. *Biochem. Pharmacol.* 81(2011), 50-59
20. Jagrat, M., Behera, J., Yabanoglu, S., Ercan, A., Ucar, G., Sinha, B. N., Sankaran, V., Basu, A., and Jayaprakash, V. *Bioorg. Med. Chem. Lett.* 21(2011), 4296-4300.
21. Sini, K.R, Rajasekaran A., Sinha, B.N. Free radical scavenging potential of leaf extracts of *Cappris grandiflora* wall.ex Hook. *Der. Pharmacia Lett.* 2(5) (2010), 49-53.

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28. Rathore Garvendra, Gaur Ajay, Rathore Shashi, Shekhawat Madhu and Gupta Roop N, Validation of Fluidized Bed Processor(Mini Glatt) Int.J.Drug Dev. & Res., July-September, 2(3)(2010)453-458
29. Ashutosh Mishra and Shivesh Jha Invitro Postprandial Lowering effects of Dietary Fibres isolated from *Tamaridus indica* and *cassia fistula* seeds, American Journal of Food Technology 6(5) (2011) 435-440.
30. P. Sunita, S. Jha and S. P. Pattanayak. Antiinflammatory and In-vivo antioxidant activities of *Cressa cretica* Linn; a halophytic plant. Middle-East Journal of Scientific Research 8 (1) (2011) 129-140 (ISSN 1990-9233)
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35. Garvendra Singh Rathore, Manish Suthar, Anil Pareek, R. N. Gupta. Nutritional antioxidants: A battle for better health. Journal of Natural Pharmaceuticals 2 (2011) 2-14
36. V. K. Suhagiya\*, A. N. Goyani and R. N. Gupta ,Taste Masking By Ion Exchange Resin And It's New Applications: A Review, International Journal of Pharmaceutical Sciences and Research, 1( 2010), 21-37
37. S.Murugesan, S. Ganguly, G. Maga, Synthesis, evaluation and molecular modeling studies of some novel 3-(3, 4-dihydroisoquinolin-2(1H)-yl)-N-(substituted-phenyl) propanamides as HIV-1 non-nucleoside Reverse Transcriptase Inhibitors, J. Chem. Sci., 122(2)( 2010) 169-176..
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46. S. Murugesan and Swastika Ganguly, 3D QSAR - Comparative Molecular Similarity Indices Analysis of 2-Heteroarylquinoline-4-amines as Possible Anti-HIV-1 Agents, *International Journal of Drug Design* (accepted).
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### Publications in National Journals

1. B.L.Das, R.N.Gupta, A.K.Dorle, Evaluation of withdrawal of Drugs Sample as per Drugs & Cosmetics Acts 1940 in Light of Criminal Law Jurisprudence , Pharma Review , Mar-Apr'2011, 164-168.
2. Jagdish K.Sahu, Amit Jain , L.Banerjee , R.N.Gupta , Synthesis of Ketoprofen Glucopyranoside Conjugates & Study of their Biological Properties, Pharma Review , Nov.-Dec,2010.,
3. Swastika Ganguly and S. Murugesan, Synthesis and In vitro Antimicrobial Activities of Novel Tetrahydroquinoline and Tetrahydroisoquinoline Analogues, J.Ind. Chem Soc. 87(2010)1-7.
4. Poonilavarasan Ilangoan, Swastika Ganguly and Vijay Pandi, Design and Synthesis of Novel Quinazolinone derivatives as broad spectrum anticonvulsant and antimicrobial agents, Journal of Pharmacy Research 3(4) (2010) 703-706.
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6. Ganguly S, Mishra R, Comparative Molecular Similarity Indices Analysis of 1-(Naphthylalkyl)-1H-imidazole Analogs with Antiepileptic Activity, Journal of Young Pharmacists, 2( 4) ( 2010)388-392.
7. Swastika Ganguly, Pankaj Kumar Gupta and Abhimanyu Dev, Synthesis and antimicrobial evaluation of some 1-substituted 2-methyl-5-nitroimidazoles, Pharmbit, XXI(1) (2010) 29-31.
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9. S. Ganguly, N. Panigrahi, S.N. Cremer and A. Dev, Microwave Assisted Synthesis and Evaluation Of Some 1-{2-(Hydroxyethyl)-2-Methyl-5-Nitroimidazole Analogs, Journal of Institution of Chemists (accepted).
10. Shakti Prasad Pattanayak, Papiya Mitra Mazumder, Phytochemical screening and Safety evaluation of hydroalcoholic extract of *Dendrophthoe falcata* Ettingsh: Summary of acute and subacute toxicological data, Der Pharmacia Lettre, 2(5) (2010) 127-138.
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13. Papiya Mitra Mazumder, Archana Kumari, Biopesticides: a Safer alternative to Chemical Pesticides, Pharmbit, XXI (1) (2010) 16 – 20.
14. Sailesh Narayan, D. Sasmal, Papiya Mitra Mazumder, Evaluation of the wound healing effect of herbal ointment formulated with *salvia splendens* (scarlet sage), International Journal of Pharmacy and Pharmaceutical Sciences, 3(3) (2011) 195 – 199.
15. Subham Banerjee, Gaurav Chaurasia, Dilip Kumar Pal, Ashoke Kumar Ghosh, Animesh Ghosh; Investigation on cross linking density for the development of novel interpenetrating polymer network (IPN) based formulation; *Journal of Scientific & Industrial Research (JSIR)*; 3(2010)777-784.

### Papers/Abstracts in Conference Proceedings

1. Manik & B. N. Sinha. "Antimicrobial activities of the bark extract of *Litsea polyantha* Juss. (Lauraceae)", 62nd Indian Pharmaceutical Congress, Manipal: Dec 17-19, 2010 (D-140).
2. Boppana K., Aslan A. Y., Yabanoglu S., Behera J., Dubey P. K., Vadivelan S., Sinha B. N., Basu A., Venkatesan J., Uçar G. Pyrazoline based MAO inhibitors: Synthesis, biological evaluation and SAR studies. International symposium on Drug Research & Development- From Chemistry to Medicine & New Horizons and Job opportunities for young scientists, Hacettepe University, Antalya, Turkey, 27<sup>th</sup> -29<sup>th</sup> May 2011.
3. Uçar G., Venkatesan J., Baysal I., Yabanoglu S., Monika J., Sinha B. N., Basu A., Aryl Pyrazoline Analogs as Selective MAO-A Inhibitors: Further Structural Modification by Switching the Aaromatic Substituents. 36<sup>th</sup> FEBS Congress- Biochemistry for Tomorrow's Medicine, Torino. Italy, 25<sup>th</sup> -30<sup>th</sup> June 2011.
4. Sinha B. N., Venkatesan J., Basu A., Molecular docking study of 4-(4-chlorophenyl)-2-(3,5-diaryl-4,5-dihydro-1H-pyrazol-1-yl)-1,3-thiazole derivatives as dengue viral envelop protein inhibitors. ICAV 2010, Leubeck, Germany. October, 2010
5. Venkatesan J., Sinha B. N., Ramesh G. Virtual screening of dengue viral envelop protein inhibitors: 4-(biphenyl-4-yl)-2-(3,5-diaryl-4,5-dihydro-1H-pyrazol-1-yl)-1,3-thiazole derivatives). ICAV 2010, Leubeck, Germany. October, 2010
6. Venkatesan J., Sinha B. N., Ramesh G. Virtual screening of dengue viral envelop protein inhibitors: 4-(aryl)-2-(3,5-diaryl-4,5-dihydro-1H-pyrazol-1-yl)-1,3-thiazole derivatives. In the proceedings of International Conference cum Workshop on Practical Applications of Modern Tools in Organic Synthesis and Purifications, IICT, Hyderabad, India, 21<sup>st</sup>-25<sup>th</sup> November 2010.
7. Sahani, V., Masand, N., Samanta, S., Patil, V., Gupta, S.P., Khosa, R. L. docking directed KNN MFA study of Pyrrolo (2,3-d)pyrimidine nucleosides as HCV.N55B inhibitors. 62<sup>nd</sup> Indian Pharmaceutical Congress, 2010.
8. S.C.Patel, M. Dubey, Dinesh,Biyani, R. N. Gupta, OTC Medicines vs Prescription Drugs in Jharkhand state IPA Convention, Indore, Feb'2011.
9. Veena Vijan, A.K.Patnaik, Pratiksha Das, R.N.Gupta , Development of Obesity in Mice , IPA Convention, Indore, Feb'2011
10. R.Kuhu, T. Balaraju, A. Kesharwani, S. Ganguly and A. Sharon, Targeting Drug Discovery by catalyzing 3D HIV Integrase model , Proceedings of BIT's 1st World Congress of Virus and Infections -2010 (WCVI-2010), page 462.
11. Swastika Ganguly and B.S. Nagaraj, In-silico design of 1,2-disubstituted imidazoles as possible antiHIV with broad spectrum chemotherapeutic agents, Proceedings of 62nd Indian Pharmaceutical Congress, 2010, B272.
12. Swastika Ganguly and Shweta Sinha, Modelling studies of novel bisimidazoles as possible anti-HIV and antimycobacterial agents, Proceedings of 3rd Indian Pharmaceutical Association Convention, 2011, 62.
13. Saumya Das, Papiya Mitra Mazumder, Sanjita das, Manas Kumar Das, Non ulcerogenic *Calotropis gigantea* with Ibuprofen – better efficacy and less toxicity, Proceedings of 62<sup>nd</sup> Indian Pharmaceutical Congress, Manipal, December 17<sup>th</sup> – 19<sup>th</sup> ,2010, D - 398.



14. Pratiksha, Nibha Mishra, Arijit Basu, "Inhibition of arginase isoenzymes by a newly synthesized molecule: A selective inhibition study", Proc in Indian Pharmaceutical Association, Indore, January, 2011.
15. Manik Ghosh. "Phytochemical & Pharmacological Studies on *Litsea polyantha* Juss. with special reference to Molecular Modeling and Docking Studies on its Phytoconstituents", Research Scholars' Day, Birla Institute of Technology, Mesra, Ranchi: Mar 26-27, 2011 (100)
16. Bina K Mehta, Manik Ghosh, Neha Sinha & Ravikant Kumar. "Phytochemical and HPTLC studies on leaf extract of *Psidium guajava* for identification of Flavonoids", 3rd IPA Convention-2011, Abhay Prashal, Indore: Feb 19-20, 2011 (519: 15)

#### Award / Recognition Bestowed on Faculty ( State / National / International )

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1.	Dr. B. N. Sinha	Nominated as Indian Executive Member of the International Consortium on Antivirals,	ICAV ,Toronto, USA	2010
1.	Dr.R.N. Gupta	Vice President of Indian Pharmaceutical Association, Head Quarters, Mumbai.	IPA	2010
2.	Dr.R.N. Gupta	Member in Pharmacy Council of India Bridge Course Group.	PCI	2010
3	Dr.R.N. Gupta	Member in Core Expert Committee of Indian Pharmacopeia Commission, Govt. of India, Min. of Health and Family Welfare.	Min. of Health and Family Welfare	2011

#### MoUs / Collaborations with Academia/Industry

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1	University of Lubeck, Germany	Collaboration in the field of antiviral drug discovery	2011 (3 years)

#### Departmental Students' Activities

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	Welcome Function 2010	-	September 2010
2.	Farewell 2011	-	May 2011

#### No of summer trainees trained in the Department during July 2010 to June 2011:

The Department of Pharmaceutical Sciences, Birla Institute of Technology, Mesra, Ranchi organized "Summer School - 2011 on Quality Control and Quality Assurance" from May 30 – June 11, 2011. 17 Students including B. Pharm., M. Pharm. & Research Scholars attended this program.

**Members on Board of Studies (UG/PG)**

Dr. B.N.Sinha	-	Chairman
Dr. P.R.Vavia	-	Member
Dr. Arup Mukherjee	-	Member
Dr. D. Sasmal	-	Member
Dr. (Mrs.) Usha Jha	-	Member
Dr. K. Mukhopadhyay	-	Member
Dr. P.R.P. Verma	-	Member
Dr. S. Samanta	-	Member
Dr. S. Jha	-	Member
Mrs. S. G. Panpalia	-	Member
Mr. A. K. Patnaik	-	Member

**Any other important information**

1. Prof. S.L. Nasa, Ex Professor, DIP SAR, New Delhi and President, IPA and IHPA delivered a lecture on "Development of Hospital Pharmacy" on 19<sup>th</sup> July 2010.
2. Dr. A.K. Dorle, Retired Prof. Emeritus, Nagpur University delivered a lecture on
3. Prof. Sibu Chakroborty, from Pharma Formulations Inc., New York, NY 10075, USA delivered a lecture on "So, you want to open a Biotech Company?" on 2<sup>nd</sup> February 2011.
4. Mr. Shekhar Bose, Manager (Production, Planning and Control) and Mr. Susanta Ganguly, Works manager, Bengal chemicals and Pharmaceuticals delivered a lecture on "Current Good Manufacturing Practices and its Validations" on 12<sup>th</sup> February 2011
5. An Award for the Best Outgoing student of Bachelor of Pharmacy (B. Pharm) has been constituted by Lotus Clinical Research Academy, Bangalore.
6. Ms. Neha Hura was awarded IDMA G.P. Nair award by the Indian Drug Manufacturer's Association for 2010 for standing first in final year B. Pharm examination.

## DEPARTMENT OF PRODUCTION ENGINEERING



FMS Laboratory

Since its inception in 1964, The Department of Production Engineering has been imparting quality education to under graduate and post graduate students by training them to meet the demands of the manufacturing industry. The department has established links with the industry, R&D organizations, consultancy organizations and academic institutes of the nearby area in furtherance of the cause of manufacturing engineering. The department sees itself as the pathfinder of emerging technologies and techniques in the area of production engineering, develops students to be technologically and managerially sound to meet

the challenges of the rapidly changing manufacturing scenario.

The major long- range goal of the Department is to develop itself as a centre of excellence in teaching, consultancy and research in various aspects of Production Engineering. An increasing number of institute-industry collaborations are shaping through sandwich training programmes, short term courses, workshops, and live projects for UG, PG and Doctor Level. In this respect, the Department has been able to establish well-equipped laboratories, upgrades the syllabi on regular basis and carries out its teaching and academic programme through its qualified and experienced faculty and visiting professors. Both our graduates and post-graduates have been doing well in industry and other Universities of higher learning in India and abroad.

### SPONSORED PROJECTS

#### Ongoing Projects Sanctioned before July 2010

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Creating infrastructural facilities for training and research in precision forming.	Dr. B.K. Singh	UGC (SAP)	1.04.07	(32+20) lakhs	5 years
2.	FIST-II	Dr. B.K. Singh	DST	2007	110 lakhs	5 years

#### Projects Completed during the period July 2010-June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Deformation and Fracturing Behaviour of Metallic Foams	Dr. S.Kumar / Dr. Vinay Sharma	AICTE (NCP)	2006	20 lakhs	2010

2.	Enhancing productivity and competitiveness of brassware manufacturing units of Jharkhand	Dr. S.K. Jha	Ministry of MSME Gov. of India	2008	3.4 lakhs	2010
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**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	4 <sup>th</sup> National Workshop on Precision Forming: Tools & Techniques	Dr. B.K. Singh	UGC	Organized by Department of Production Engineering, B.I.T Mesra, Ranchi, 21 <sup>st</sup> -22 <sup>nd</sup> Feb -2011.

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date, Month, Year
1.	Vinay Sharma	International Manufacturing Science and Engineering Conference MSEC2010	ASME	Bayfront Convention Center, Erie, Pennsylvania, USA	October 12-15, 2010
2.	R.K.Singh	7 <sup>th</sup> International Conference on Intelligent Computation in Manufacturing Engineering (ICME) Capri, Naples, Italy, 2010.	CIRP	Capri, Naples, Italy	23 - 25 June 2010
3.	Rajeev Agrawal	Design Workshop "Leading-edge Theories and Practices in Design"	PDPM Indian Institute of Information Technology, Design & Manufacturing, Jabalpur,	PDPM Indian Institute of Information Technology, Design & Manufacturing, Jabalpur,	11-15 October 2010.
4.	Rajeev Agrawal	3 <sup>rd</sup> International & 24 <sup>th</sup> All India Manufacturing Technology Design & Research – 2010 (AIMTDR – 2010)	Department of Mechanical Engineering, AU College of Engineering (A), Andhra University, Visakhapatnam – 530 003, Andhra Pradesh, India,	Department of Mechanical Engineering, AU College of Engineering (A), Andhra University, Visakhapatnam – 530 003, Andhra Pradesh, India	13-15 Dec. 2010

5.	Rajeev Agrawal	Mission Kyaat	IQAC, BIT, Mesra	BIT, Mesra	31 <sup>st</sup> May,2011- 02 <sup>nd</sup> June,2011
6.	Vijay Pandey	Mission Kyaat	IQAC, BIT, Mesra	BIT, Mesra	3-5May, 2011
7.	Binay Kumar	Eco-friendly conference for sustainable development, GLA Mathura	GLA University, Mathura	Mathura	Nov 19-21, 2010
8.	Binay Kumar	Mission KYAAT	B.I.T Mesra	Ranchi	30,31 May & 01June, 2011
9.	Ritesh Kumar Singh	Mission Kyaat	IQAC, BIT, Mesra	BIT, Mesra	31 <sup>st</sup> May,2011- 02 <sup>nd</sup> June,2011
10.	Joyjeet Ghose	National Conference on Recent Advances in Manufacturing (RAM- 2010)	BIT, Mesra	Sardar Vallabhbhai National Institute of Technology, Surat	19-21 JULY, 2010
11.	L N Pattanaik	4 <sup>th</sup> National Workshop on Precision Forming	UGC	BIT, Mesra	Feb 21-22, 2011

## PUBLICATIONS

### Published in International Journals

1. Vijay Pandey, "Standard for Exchange of Products (STEP) based feature Recognition System for Prismatic Parts", International Journal of Production Research & Management, Volume 1, Issue 1, April, 2011, Pages 19-37.
2. Vinay Sharma, Somnath Chattopadhyaya, Sergej Hloch, "Multi response optimization of process parameters based on Taguchi—Fuzzy model for coal cutting by water jet technology", International Journal of Advanced Manufacturing Technology, Springer- Verleg, (March 2011) Published online,
3. Vinay Sharma, Minakshi Kumari, Santosh Kumar, "Reliability Improvement of Modern Aircraft Engine through Failure Modes and Effects Analysis of Rotor Support System", Emerald, International Journal of Quality & Reliability Management, Vol 28, Issue 6
4. V N Sundharam, Vinay Sharma, I S Stephan Thangaiah "Reengineering of Manufacturing Industries Operation using Balanced Scorecard - A Case Study" International Journal of Advanced Operations Management (IJAOM), Inderscience Publication ,accepted for publication in Special Issue
5. Joyjeet Ghose, Vinay Sharma, Surender Kumar, "Compressive Behavioural Analysis of Al-MMC Foam", International Journal of Industrial & Production Engineering & Technology,(2011) Volume 1, Number 1, pp35-43
6. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma "Environmental Management for small Sized Indian Enterprises in Manufacturing", Annals of Faculty Engineering Hunedoara – International Journal of

- Engineering - Journal of Manufacturing Engineering (ISSN 1335-7972), (2011), no 2, Vol X, , pp 54-56
7. Rajeshwari Chatterjee, Vinay Sharma, Surender Kumar "Resource Utilization and Environmental Impact of Biodiesel Produced from Jatropa Curcas", International Journal of Manufacturing Technology and Research' 'Jan-June 2011,(ISSN: 0973-0281), Vol. 7, No. 1,pp 81-91
  8. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma "Performance of Sustainable Logistic Practices of SMES in Delhi" International Journal of Research In Computer Application & Management (ISSN 2231-1009), 2011, Volume No: 1 Issue No. 3 (May) pp 85-89
  9. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, " Performance of Eco Procurement Practices and Green Supply chain Performance of SMEs in Delhi, B Shastra- International Journal of Management" (ISSN 2229-2010), March 2011, Vol 2 Issue 1, pp 43-46
  10. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "Approaching Green Supply Chain Management Through Reusing & Recyclable Packing Method", International Journal of Retailing and Marketing, (ISSN 0976-318X), October 2010, special issue, pp 98-102
  11. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "Role of Environmental conscious design and manufacturing for implementation of green supply chain" International Journal of Management Research and Technology, (ISSN 0974-3502) serial publications, 2010, vol 4 no 2, pp533-539
  12. Rajeev Agrawal, S.Kumar, Design Issues for Automatic Guided Vehicles In Material Handling Operations" in International Journal of Manufacturing Technology and Research, Vol. 6/No 2 (2010) 55-60.
  13. M K Pandey, R K Singh, S Venkataramanaiah, and M K Tiwari, Sequential metamodelling application to improve porthole die design, J. Engineering Manufacture, 2010, Vol. 224 (2), 279-294.
  14. R.K. Singh and Lyes Benyoucef, A fuzzy TOPSIS based approach for e-sourcing, Eng. Applications of Artificial Intelligence, 2011, 24, 437-448.
  15. Anoop Verma, Nishikant Mishra and R. K. Singh, Effect of machine flexibility on the performance of FMS subjected to frequent breakdowns, Int. J. Services Operations and Informatics, 2011, Vol. 6, Nos. 1/2, 45-70.
  16. R.K. Singh and Lyes Benyoucef, A Fuzzy Logic Based Approach for Resolving Multi-Issue Reverse Auction Problem of e-procurement, International Journal of Manufacturing Technology and Research, 2010, Vol. 6/No 2, 42-50.

#### **Published in National Journal**

1. V N Sundharam, Vinay Sharma, I S Stephan Thangaiah, "Business Process Reengineering and Value Chain Analysis" Crescent Journal of Business, (ISSN 2231-2994) 2011, vol1, No.1, pp 74-87
2. Joyjeet Ghose, Vinay Sharma, Surender Kumar, "AI-MMC FOAM: Synthesis and Characterisation", STM Journal, Journal of Materials & Metallurgical Engineering, February, 2011, Volume 1, Issue 1, pp 1-10
3. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "What role can green supply chain management play in mitigating global warming", Journal of chemistry in Asia ( ISSN 0975-9468) Sept 2010, vol 1, no2 &3, pp179- 192
4. Joyjeet Ghose, Vinay Sharma, Surender Kumar, "Manufacturing and Characterisation of AL-MMC Foam for Industrial Applications. Technoinsight (ISSN 0975-4946), 2010. Vol II, No. 1, A national journal published by Rajiv Gandhi Forum, Orissa.

5. S. Chattopadhyaya, P. Sehgal, Vinay Sharma, Aniruddha Ghosh, "Industrially robust ND: YAG lasers for cutting, drilling and welding steels, OEM Update for efficient manufacturing" Welding Special, B2B Purchase, National Magazine for Project Procurement, Vol. 1 , Issue 09, pp. 40-42. Feb. 2010,
6. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma "Green Manufacturing;: Green Value Chain Practices for the Indian Enterprises", ISST journal of Mechanical Engineering,(ISSN-0976-7371) Vol. 1 Jan-June 2010 pp73-75
7. Gopal Verma, Sanjeev Kumar, Somnath Chattopadhyaya, Vinay Sharma "Energy Management In Small & Medium Indian Enterprises: An Approach", , ISST Journal of Electrical & Electronics Engineering Vol. 1 No.1, (January - June 2010), p.p. 11-15

#### **Published in International Conferences/Proceedings**

1. Vinay Sharma, Somnath Chattopadhyaya, Sergej Hloch, "Multi response optimization of cutting coal through water jet", International Seminar on Recent Advances in Geosciences, ISM Dhanbad, January 11-13 2011, pp- 208-216, ISBN NO- 1-30-31808-39
2. Joyjeet Ghose, Vinay Sharma and Surendra Kumar, "Measurement of interfacial frictional forces during compressive deformation of Al-MMC foam" International Conference on Industrial Tribology 2010 02-04 Dec, 2010, RDCIS, SAIL, Ranchi
3. Manish Oraon, Vinay Sharma," Sheet Metal Micro Forming: Future Research Potentials" , Proceeding of International conference on Advance Mechanical Engineering (AMAE) 2010, Dec 21-22 2010, Trivandrum
4. Joyjeet Ghose, Vinay Sharma and Surendra Kumar, Morphological Characterization of Aluminium Foam by Image Processing Technique, 3rd International & 24th AIMTDR (All India Manufacturing Technology, Design and Research) Conference A.U. College of Engineering (A), Andhra University, Visakhapatnam,, December 13-15, 2010.
5. V N Sundharam, Vinay Sharma, I S Stephan Thangaiah "Quality Functional Deployment in Liquor Manufacturing Industry – A case Study", XIV Annual International Conference of the Society of Operations Management Management SOM 2010, organized by the National Institute of Industrial Engineering (NITIE), Mumbai, in partnership with The School of Managements (The University of Texas at DALLAS, Shailesh J Mehta School of Management IIT Bombay, Insead Social Innovation Centre France and S.P.Jain Institute of Management & Research SPJIM) 17-19, December 2010.
6. J Ghose, Vinay Sharma, S. Kumar, "Multi Functional Behavioural Analysis Of AL-SiC Metal Matrix Composite Foam Produced By (TiH<sub>2</sub>-CaCO<sub>3</sub>) Dual Foaming Agent", Proceedings of the ASME 2010 International Manufacturing Science and Engineering Conference MSEC2010, Bayfront Convention Center, Erie, Pennsylvania, USA, October 12-15, 2010
7. Sanjeev Kumar, Somnath Chattopadhyaya, Vinay Sharma, "Environmental Management for Small Sized Indian Enterprises in Manufacturing" Advanced topics in Manufacturing and Management, University of Czestochowa, faculty of Management, Poland, 2010, (ISBN- 978-83-61118-30-5), pp-103-106
8. Rajeev Agrawal, L.N.Pattnaik, S.Kumar, Scheduling of a Flexible Job-Shop using a Multi Objective Genetic Algorithm, 3<sup>rd</sup> International & 24<sup>th</sup> All India Manufacturing Technology Design & Research - 2010 (AIMTDR – 2010) ,Organised by Department of Mechanical Engineering, AU College of Engineering (A), Andhra University, Visakhapatnam – 530 003, Andhra Pradesh, India, 13-15 Dec. 2010. Page 809-814.



9. S.C Srivastava, Binay Kumar, Dr. Ritesh Kumar Singh, Pankaj Bhardwaj (2010) "A Petri-Net based Methodology for Establishment of AGVs fleet size in FMS", 24th AIMTDR conference Dec. 2010 at Visakhapatnam .
10. R.K.Singh and Lyes Benyoucef, Improved Decision Neural Network Based Approach For Multi-Criteria Supply Chain Coordination Problems, 7th CIRP ICME, Capri, Naples, Italy, 2010.
11. R.K.Singh and Lyes Benyoucef, A Fuzzy Multi Attribute Decision Making Method for E-Sourcing, IMS'2010, The 7th International Symposium On Intelligent & Manufacturing Systems, IUS , Sarajevo, Bosnia-Herzegovina.
12. Pathak P, Jha. Sanjay Kumar, Singh A P, and Mondal N, "Study on effect of roll bite lubrication on rolling parameters of hot strip mill" Poster presentation on 7<sup>th</sup> International conference on Industrial Tribology, R&D SAIL, Ranchi, 2<sup>nd</sup> -4<sup>th</sup> Dec -2010.

#### **Published in National Conferences/ Proceedings**

1. Sanjeev Kumar, Somnath Chattopadhyaya, Vinay Sharma, "Implementation of cleaner production towards environmental quality improvement of SMEs in India" National conference in mechanical engineering for new generation industry, (EFME 2011), Industry- Institute partnership cell (AICTE sponsored) Ideal Institute of Technology in association with Ministry of New and Renewable Energy, Government of India, 12-13 March 2011, Allied Publishers pvt Ltd. (ISBN no 978-81-8424-667-4) pp 93-99
2. Thakur Abhinav Kumar, Vinay Sharma, Bijay Kumar Singh, "Eco Friendly Material Processing And its Important Relevance in Indian Context", Eco-friendly conference for sustainable Development, GLA Institute Mathura, 19-21 November 2010
3. Joyjeet Ghose, Vinay Sharma, Surender Kumar "Synthesis of AL-MMC Foam and its Potential Industrial Applications, Proceedings of National Conference On Recent Advances in Manufacturing (Ram-2010) S. V. National Institute of Technology Surat, 19-21 July, 2010, pp 39-44, (excel publication ISBN: 93-80697-05-8)
4. Subodh Kumar,, Vinay Sharma, A. K. S. Choudhary, "A Review of Laser Based Direct Metal Rapid Prototyping Technology", Proceedings of National Conference On Recent Advances in Manufacturing (Ram-2010) S. V. National Institute of Technology Surat, 19-21 July, 2010, pp 186-191(excel publication ISBN: 93-80697-05-8)
5. Rajeev Agrawal, Review of Variables Describing Robotic Arc Weld Seam Quality, National conference on Advances in Materials and Product Design, Organised by Dept of Mech. Engg. S.V.N.I.T, Surat, 22-23 Nov. 2010. Page 110-116, ISBN-978818465293-2
6. Binay Kumar, Surender Kumar (2010) "The impacts of product modularity to support green life-cycle Engineering" Eco-friendly conference for sustainable development, GLA Mathura ( Nov 19-21, 2010).

#### **Book Authored**

1. Vinay Sharma, "Water Jet System for Mining under Indian Environment", VDM Verlag Publishing House Germany , ISBN 978-3-8443-9506-8,



**Departmental Students' Activities**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	One day Industrial Visit to ALCAST	Raghvendra Purwar	30 September 2010
2.	Technical talk on metal foam	Sumit Kr. Jha	Jan 27, 2011
3.	Two day Industrial visit to Usha Martins Ltd.	Karanveer Singh Bindra	Feb. 4&5, 2011
4.	A technical talk on "6 Sigma, Tool & Technique & Case Study"	Chandrashekhar Meena	Feb 11, 2011
5.	One day Industrial Visit to TATA MOTORS Ltd, Jamshedpur	Raghvendra Purwar	April 3 <sup>rd</sup> , 2011

**Members on Board of Studies (UG/PG)**

1. Head of the Production Engineering Department-Chairman
2. Dr. Vinay Sharma, Associate Professor
3. Dr. S.K. Jha, Associate Professor
4. Dr. J.K. Prasad, Professor, Department of SE & R
5. Dr. Ashok Mishra, Head, Mechanical Engineering Department

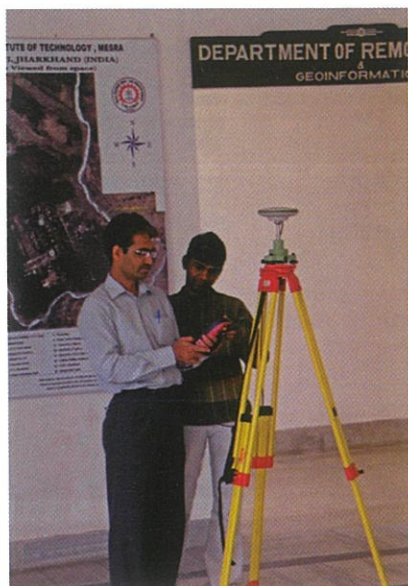
**External**

1. Dr. A.K. Jha, Professor, Mechanical Engineering Department, IT, BHU, Varanasi
2. Dr. A.K.S. Choudhary, Professor & Head, Production Engineering Department, B.I.T., Sindri, Dhanbad

**Any other important information**

1. Dr. B. K. Singh has become Fellow of Institution of Engineers India
2. Dr. Vinay Sharma has become Fellow of Institution of Engineers India
3. Dr. R.K. Singh, Post Doctoral research at INRIA Nancy Grandest, France from 01 Nov 2009 to 31<sup>st</sup> Oct 2010
4. Dr. R.K. Singh, Guest edited special issues of Int. J. Services Operations and Informatics, Vol. 6, Nos. 1/2, 2011.
5. Dr. Vinay Sharma, Member of international advisory board of the International Journal entitled "Manufacturing Technology and Research: an International Journal" ISSN NO: 0973-0281
6. Mr. Rajeev Agarwal, Advisor, All India Representative of Advisor All India Student's Committee (AISC), The Institution of Engineer's (IEI), India, 2010-11.

## DEPARTMENT OF REMOTE SENSING



Global Positioning System

The Department of Remote Sensing has made significant achievements during the last year in terms of research collaboration, sponsored research projects, visiting foreign assignments, and awards and honours bestowed upon the faculty members. The department is undertaking several collaborative research projects with the Space Applications Centre (ISRO), Ahmedabad on Lunar Surface Characterization, Glacier Retreat Assessment studies in Himalayas and Polarimetric and Radargrammetric studies. In addition, the department is also involved in the Rajiv Gandhi Drinking Water Mission Project and Irrigation Potential Assessment of different parts of India sponsored by the National Remote Sensing Centre (ISRO), Hyderabad. Most significantly, the department is involved as a vital member in a national level project worth Rs.5.94 crores (Integrated Watershed Management Plan) sponsored by the Ministry of Rural Development, Govt. of India and the Jharkhand State Government.

Dr. Nilanchal Patel, Prof. & Head visited the University of Nova, Lisbon, Portugal as a Visiting Scholar in Remote Sensing during September-December, 2010. He was also invited to join the editorial board of three international journals namely the Journal of Forestry Research (Springer), the STM Journal of Remote Sensing and GIS and the Academic Journal of Geology and Mining Research. Dr. A. P. Krishna, Professor was invited as the Abjudication Committee Member for Bi-lateral Indo-Canadian collaborative proposals under 'Partnership Development Seed Grant (PDSG)', SICI/ Canadian International Development Agency (CIDA), University of Calgary.

### SPONSORED AND COLLABORATIVE RESEARCH PROJECTS

#### Projects Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Understanding Lunar Volcanism and Tectonism on Moon using Chandrayaan-1 data (Collaborative)	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore (Co-PI), Dr. Mili Ghosh (Co-PI)	DOS,SAC (ISRO), Ahmedabad	01-04-11	4.4	2 years
2	Hybrid polarimetric signatures study under desertic environment (Collaborative)	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore (Co-PI), Dr. Mili Ghosh (Co-PI)	DOS,SAC (ISRO), Ahmedabad	August, 2010	13	2 years

3	RGNDWM PH-IV (Collaborative)	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore(Co- PI) , Dr. A. C. Pandey(Co-PI), Mr. Nitish Sinha (Co-PI)	NRSC, DoS, Gol, Hyderabad	June, 2011	45.25	20 months
4	Irrigation Potential Assessment under AIBP (Collaborative)	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore(Co-PI)	NRSC, DoS, Gol, Hyderabad	July, 2011	1.95	6 months
5	NUIS Thematic Mapping Allahabad and Dharamshala (Collaborative)	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore(Co- PI) , Dr. A. C. Pandey(Co-PI),	NRSC, DoS, Gol, Hyderabad	July, 2010	20	1 year
6	Development of Forest Fire Management System in Shimla Forest Division in Himachal Pradesh (India) Using Geospatial Information System	Dr.L.K.Sharma	MoEF, Gol	July,2010	17,83,440	03 year
7	Geoinformatics based glacier retreat study in parts of Great Himalayan Range (J&K) with field validation in Pensilungpa glacier' (PI)	Dr. A.C. Pandey	DST, Gol	March 2011	Rs. 21 Lakhs	2 years
8	ERWONAM Campaign activity and MBWL analysis under PRWONAM (Collaborative)	Dr. A.C. Pandey (Co-PI)	ISRO	April 2011	Rs. 21.76 Lakhs	3 years
9	Glacial Retreat and Mass Balance studies in Zaskar Valley, J&K Himalayas. Phase 2 (Collaborative)	Dr. M.S. Nathawat (PI), Dr. A.C. Pandey (Co-PI)	ISRO	December 2010	Rs 38 Lakhs	4 years

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	FIST Level-I grant for Setting up Digital Photogrammetry Lab. of Remote Sensing Dept., BIT Mesra	Dr. M.S. Nathawat, Dr. A.P. Krishna	DST, Gol	March 2006	Rs. 38 Lakhs	May 2011
2	ALOS RA (Collaborative)	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore(Co-PI)	DOS,SAC (ISRO), Ahmedabad	April, 2010	7.10	2 Years
3	ALOS RA: Evaluation of Polarimetric, Interferometric and Differential Interferometric Techniques for Vegetation and Land Subsidence Study (Collaborative)	Dr. M.S. Nathawat (PI), Dr.L.K. Sharma (Co-PI)	SAC,ISRO	2008	7.10	03 years
4	COSMO Skymed A.O.: Polarimetric, Radargrammetric, Interferometric and Differential Interferometric Techniques Study (Collaborative)	Dr. M.S. Nathawat (PI), Dr.L.K. Sharma (Co-PI)	SAC,ISRO	2010	6.00	year

**Projects Completed during the period July 2010-June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	NUIS Thematic Mapping Bihar	Dr. M.S. Nathawat (PI), Dr. V. S. Rathore(Co-PI)	NRSC, DoS, Gol, Hyderabad	July, 2009	27	1 year

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
1	Dr. V. S. Rathore	Chandrayaan-1 workshop on Lunar Geoscience	DOS,SAC (ISRO), Ahmedabad	SAC (ISRO), Ahmedabad	March 30-31, 2011
2.	Dr. Mili Ghosh Nee Lala	Chandrayaan-1 workshop on Lunar Geoscience	DOS,SAC (ISRO), Ahmedabad	SAC (ISRO), Ahmedabad	March 30-31, 2011
3.	Mrs. R.N.K. Sharma	Internal quality Assurance Cell	BIT, Mesra, Ranchi	BIT, Mesra, Ranchi	April 28-30, 2011

## PUBLICATIONS

### Published in International Journals

1. Nilanchal Patel and Arnab Majumdar, Biomass Estimation of Shorea Robusta through Principal Component Analysis of Satellite Data, *Journal of Forestry Research* (Springer), 21 (4), pp. 469-474, 2010.
2. Nilanchal Patel and Brijesh Kaushal, Improvement of User's Accuracy Through Classification of Principal Component Images and Stacked Images, *Geo-spatial Information Science* (Springer), 13 (4), pp. 243-248), December 2010.
3. Nilanchal Patel and Brijesh Kaushal, Classification of Features Selected Through OIF for Improving Classification Accuracy, Paper accepted for publication in the *Journal of Forestry Research* (Springer), July 2010.
4. Pammi N. Sinha, N. Patel, A. T. Jeyaseelan and Vivek Kr. Singh, Quantification of Urban Landscape Dynamics Using Patch Parameters and Landscape Indices: An Analytical Study of Ranchi, *Journal of Indian Society of Remote Sensing* (Springer), 39 (2), pp.225-233, June 2011.
5. L. P. Sharma, Nilanchal Patel, M. K. Ghosh and P. Debnath, Influence of Shannon's Entropy on Landslide Causing Parameters for Vulnerability Study and Zonation - A Case Study in Sikkim, India, *Arabian Journal of Geosciences* (Springer), September 2010.
6. L. P. Sharma, Nilanchal Patel, M. K. Ghosh and P. Debnath, Landslide Vulnerability Assessment and Zonation through Ranking of Causative Parameters Based on Landslide Density-Derived Statistical Indicators, *Geocarto International* (Taylor & Francis), Accepted for Publication June 2011.
7. L. P. Sharma, Nilanchal Patel, M. K. Ghosh and P. Debnath, Assessing landslide vulnerability from soil characteristics—a GIS-based analysis, *Arabian Journal of Geosciences* (Springer), January 2011.
8. A.C. Pandey, Swagata Ghosh and M. S. Nathawat, 2011. Evaluating patterns of temporal glacier changes in Greater Himalayan Range, Jammu & Kashmir, India. *Geocarto International*, Vol.26, No.4, 321-338.
9. A.C. Pandey, Swagata Ghosh and M. S. Nathawat and Reet Kamal Tiwari, 2011. Area change and thickness variation over Pensilungpa glacier (J&K) using Remote Sensing. *Journal of the Indian Society of Remote Sensing*. DOI: 10.1007/s12524-011-0134-y.
10. A.C. Pandey, Suraj Kumar Singh and M.S.Nathawat, 2010. Waterlogging and flood hazards vulnerability and risk assessment in Indo Gangetic plain. *Natural Hazards*, 55, 273-289. DOI: 10.1007/s11069-010-9525-6.
11. A.C. Pandey, Suraj Kumar Singh and M.S.Nathawat, 2010. Analysing the impact of anthropogenic activities on waterlogging dynamics in Indo-Gangetic plains, Northern Bihar, India. *International Journal of Remote Sensing* (Article in press).
12. M.S. Nathawat, V.S. Rathore, A.C. Pandey, Suraj Kumar Singh and G. Ravi Shankar, 2010. Monitoring & analysis of wastelands and its dynamics using multi-resolution and temporal satellite data in part of Indian state of Bihar. *International Journal of Geomatics and Geosciences*, Vol.1, No.3, 297-307.
13. Suraj Kumar Singh, A.C. Pandey and M.S. Nathawat, 2010. Rainfall variability and Spatio temporal dynamics of flood inundation during the 18th August 2008 Kosi Flood in Bihar, India. *Asian Journal of Earth Sciences*, 4, 9-19

14. Amit Kumar, A.C. Pandey, Najmul Hoda and A.T. Jeyaseelan, 2010. Evaluation of urban sprawl pattern in tribal dominated cities of Jharkhand state, India in International Journal of Remote Sensing. (Article in press).
15. Amit Kumar, A.C. Pandey, Najmul Hoda and A.T. Jeyaseelan, 2010 Evaluating the Long-term Urban Expansion of Ranchi Township, India using Geospatial Technology, Journal of Indian Society of Remote Sensing. Journal of Indian Society of Remote Sensing (JISRS), DOI 10. 1007/s12524-011-0089-z.
16. Rathore, V.S., Nathawat, M.S. and Champatiray, P.K., 2010. Palaeochannel detection and aquifer performance assessment in Mendha River catchment, Western India. J. Hydrol., 395 pp. 216–225, doi:10.1016/j.jhydrol.2010.10.026,
17. Sharma L.K., Pandey P.C., Nathawat M.S. Assessment of Land Consumption Rate with Urban Dynamics Change using Geospatial Techniques, Journal of Land Use Science. Taylor & Francis, *iFirst*: 2<sup>4th</sup> February, (2011)1-14. DOI: 10.1080/1747423X.2010.537790.
18. Pandey P.C., Sharma L.K., Nathawat M.S. Geospatial Strategy for Sustainable Management of Municipal Solid Waste for Growing Urban Environment. Environmental Monitoring and Assessment. Online 10<sup>th</sup> June. (2011) DOI: 10.1007-s10661-011-2127.2
19. Kanga S., Sharma L.K., Pandey P.C., Nathawat M.S., Sinha S. Geospatial Approach for Allocation of Potential Tourism Gradient Sites in A Part of Shimla District in Himachal Pradesh, India. *Journal of GIS Trends*. Academy Science Journals, North America, 2(1) (2011):1-6.
20. Sinha S., Sharma L.K., Nathawat M.S. Retrieving Tiger Habitat: Conserving Wildlife Geospatially. *Applied Remote Sensing Journal*. North America, 2(1) (2011): 1-5.
21. Sharma L.K., Kanga S., Nathawat M.S., Sinha S., Pandey P.C. Fuzzy AHP for Forest Fire Risk Modeling. *Disaster Prevention and Management*. Emerald publication, (2011). MS ID: DPM-Oct—2010- 0078.R1 (In press).
22. Kanga S., Sharma L.K., Pandey P.C., Nathawat M.S., Sinha S. Forest Fire Susceptibility Mapping with GIS Modeling. *International Journal of Earth Science and Engineering*. Spl. Issue on Remote Sensing and GIS. 4(2) (2011): 80-87.
23. Sinha S., Sharma L.K. Pandey P.C., Kanga S., Nathawat M.S. Assessing Human Intrusion on Tiger Habitat and Conservation using Integrated Geospatial Techniques. *International Journal of Earth Science and Engineering*. Spl. Issue on Remote Sensing and GIS. 4(3) (2011):39-45.

#### **Published in National Journal**

1. Kanga S., Sharma L.K., Nathawat M.S., Sharma, S. Forest Fire Risk Assessment in Taradevi Range of Shimla Forest Division in Himachal Pradesh (India) using RS & GIS, *Indian Forester*. 137(3) (2011): 296-303.

#### **Papers/Abstracts in Conference Proceedings:**

1. A.C. Pandey, Anamika Shalini Tirkey, Shashank Shekhar and M.S.Nathawat, 2010. Groundwater level and rainfall variability trend analysis in parts of Jharkhand for sustainable management of water resources. Proceedings International conference on environmental challenges: A global concern, Oct. 15-16, 2010, Jalandhar.
2. Swagata Ghosh, A.C. Pandey, M.S. Nathawat, 2011. How fast the glaciers are changing in the western

Himalaya: A satellite based temporal assessment. Proceedings of 2<sup>nd</sup> National conference on geospatial technologies and applications (Geomatrix'11), 26-27 Feb., 2011, CSRE, IIT-Bombay, Mumbai.

3. V. S. Rathore\*, Mili Ghosh Lala\*, Phani RajShekhar\*\*, S Bhattacharya\*\*, A. S. Arya\*\*, Prakash Chauhan\*\*, M. S. Nathawat\* ,Ajai, Study of lava flows and associated Domes in Marius Hills complex using TMC and HySI images, Proceedings of Chandrayaan-1 Workshop on Lunar Science, SAC-ISRO, Ahmedabad, March 30-31<sup>st</sup>, 2011.
4. A. K. Jha, A Chakraborty , P. Kumar, V.S Rathore, M.S.Nathawat, Geoinformatics based Geo-Structural and Geomorphological Study of Lower Ajay Catchment, West Bengal, India; proceedings of Geomatrix'11, IIT-B, Mumbai, March 25-25<sup>th</sup>, 2011.
5. A Chakraborty, A. K. Jha, P. Kumar, V. S. Rathore, M. S. Nathawat, Urban Sprawl in Ranchi and Associated Hazards : A case study, Proceedings of IGF-ASI conference, IGF-ASI-UGC, Kolkata, February 12-14<sup>th</sup> , 2011.

### Book

1. A.P. Krishna, Characteristics of snow and glacier fed rivers in mountainous regions with special reference to Himalayan basins (Peer-reviewed invited contribution category 'A'), In: V.P. Singh, P. Singh, U.K. Haritashya (Eds.), Encyclopedia of Earth Sciences Series - Snow, Ice and Glaciers (ISBN 978-90-481-2641-5), pp. 128-133; Springer, The Netherlands, 2011.

### Chapter contributed to Edited Volume-Published by national Level Publishers

1. Mili Ghosh Lala, S.K Ghosh, Normative Analysis for Educational Infrastructure Planning in Rural Area, Rudra P Pradhan, Infrastructure, The Key to Development, Macmillan Publishers India Ltd.( ISBN-9780230332140), 2011.

### Award / Recognition Bestowed on Faculty (State / National / International)

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1.	Dr. N. Patel	Visiting Scholar	University of Nova, Lisbon, Portugal	Sept– Dec 2010
2.		Editor	Journal of Forestry Research (Springer)	2010 onwards
3.			STM Journal of Remote Sensing & GIS	2010 onwards
4.			Academic Journal of Geology and Mining Research	2010 onwards
5.		Asia's Who's Who	Rifacimento International	2010
6.	Dr. A.P. Krishna	Abjudication Committee Member for Bi-lateral Indo-Canadian collaborative proposals under 'Partnership Development Seed Grant (PDSG)'	SICI/ Canadian International Development Agency (CIDA), University of Calgary	2 Years (2009-2011)

7.	Dr. A.P. Krishna	Programme Committee Member (Additional Reviewer), 3rd International Symposium on Academic Globalization (AG 2010)', Florida, USA	International Institute of Informatics and Systemics	July 2010
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**MoUs / Collaborations with Academia/Industry**

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1.	CGWB, Patna	Joint research	2011

**Members on Board of Studies (PG):**

1. Dr. N. Patel, Professor & Head
2. Dr. A. C. Pandey, Reader
3. Dr. N. C. Mahanti, Professor & Head, Applied Mathematics
4. Dr. G. Pathak, Prof. & Head, Environmental Engineering & Science Group
5. Dr. J. R. Sharma, Head, RRSSC, Jodhpur (ISRO), (External Member)



## DEPARTMENT OF SPACE ENGINEERING & ROCKETRY

The Department introduced two- year Post Graduate Degree Programme in 1968, leading to M. E. in Space Engg. and Rocketry with two specializations, namely Aerodynamics and Rocket Propulsion. In the year 2002, another Post Graduate Programme was introduced, leading to M. Tech. in Fuels and Combustion.

The Department has its own administrative building, having Class Rooms and Seminar Halls, besides various Laboratories, which are housed in separate buildings around the main Administrative Building.

The various Divisions under the Department are:

1. Aerodynamics Division
2. Rocket Propulsion Division
3. Propellant Technology Division
4. Combustion Division



Laboratory

The Department has endeavored to develop a state-of-art infrastructure to train post graduate students and to support R & D work for Doctoral and Post- Doctoral levels, as also to carry out Grant- in- Aid Projects, sponsored by various Agencies.

The Department has taken up sponsored R & D Projects from premier Agencies, like UGC, AICTE, DST, Ministry of HRD, ISRO, DRDO, CSIR, AR & DB (Min of Defence), etc. It has successfully completed as many as 35 Projects and another 8 are currently under progress. The Department has also been recognized under Special Assistance Programme of UGC and has been working on development of a Cryogenic and Cryo- Hybrid Rocket Propulsion System. The Department has also got support from DST under FIST to augment Propellant Technology and Combustion Facility.

The notable current research activities of the Department include:

1. Development of Reaction Control System using Gelled UDMH & RFNA
2. Development of Cryogenic Propulsion System
3. Combustion Studies on Eco-friendly Composite Solid Propellants
4. Droplet Combustion Studies on Selected Fuels
5. Development of Flight Hybrid Propulsion Systems
6. Investigation of Flow Field around Supersonic Air Intake
7. Investigation of Flow Field around Slender Bodies at High angles of Attack.
8. Flow Field Studies on Blunt & Conical Bodies at Supersonic Speeds.
9. Measurements of Unsteady Pressures on HRV & Conical Bodies at Supersonic Speeds.
10. CFD Studies of Subsonic/Supersonic Flow Field around Protrusions, Slender Bodies and Intakes.
11. Software Development for 2- D Incompressible Flow Studies.
12. Development of Cro- Hybrid Rocket Propulsion System.

**SPONSORED PROJECTS****Project Sanctioned**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in lakhs)	Duration of the Project
1.	Measurement of unsteady pressure on conical region of a missile at supersonic speeds	Dr. J. K. Prasad	ASL, Hyderabad	Jan 2011	8.20	1 year
2.	Study of flow field inside air intake with flow control	Dr. J. K. Prasad Prof. Sudip Das Prof. Priyank Kumar	RESPOND ISRO	Jan 2011	18.59	3 years

**Ongoing Projects**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in lakhs)	Duration of the Project
1.	Augmentation of Supersonic Tunnel	Dr. J. K. Prasad Prof. Sudip Das Prof. Priyank Kumar	AR&DB Ministry of Defence	Jun 2009	19.38	3 years
2.	Axial Force Measurement Cone with Spike at Supersonic Speed	Dr. J. K. Prasad	DRDL Ministry of Defence	Dec 2009	10.80	1 year
3.	Investigation of Flow Field around Double Delta Wing at Subsonic Speed	Dr. J. K. Prasad Prof. Priyank Kumar Prof. Sudip Das	CSIR, New Delhi	Nov 2009	7.51	3 years

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended:**

Sl. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Month Date, Year
1	Dr. A. K. Chatterjee	23 <sup>rd</sup> National Convention of Aerospace Engineering	Jaipur State Centre, IE(I)	Jaipur	Nov 13-14, 2010
2	Dr. J. K. Prasad	37 <sup>th</sup> National & 4 <sup>th</sup> International Conference on Fluid Mechanics and Fluid Power	IIT, Madras	Chennai	Dec 16-18, 2010
3	Mr. Sudip Das	37 <sup>th</sup> National & 4 <sup>th</sup> International Conference on Fluid Mechanics and Fluid Power	IIT, Madras	Chennai	Dec 16-18, 2010

## PUBLICATIONS

### International Journal

1. M. Kumari, P. Kumar and S. S. Solanki "Classification of North Indian Musical Instruments using Spectral Features" Georgian Electronic Scientific Journal, 6 (29) 2010, 11-24.
2. N. Yadav, P. K. Srivastava "Growth and forms of spherulitic crystal pattern in a Belousov- Zhabotinski type reaction system" Cryst Res. Technology, 3 (46) 2011, 277-286.
3. N. Yadav, P. K. Srivastava "Growth of spherulitic crystal pattern in a Belousov- Zhabotinski type reaction system" Cryst Res. Technology, 35 2011, 1080-1087.
4. N. Yadav, P. K. Srivastava " Growth of Diffusion Limited Aggregation (DLA)- Like Branched Patterns in a Belousov- Zhabotinski type reaction system" Bull. Chem. Soc. Jpn. 5 (84) 2011, 482-490.

### International Proceedings

1. Epuri, S. K., Kumar, P., Das, S and Prasad, J. K., "Flow Field over a Reusable Launch vehicle at Subsonic Speed", Proceedings of the 37<sup>th</sup> National & 4<sup>th</sup> International Conference on Fluid Mechanics and Fluid Power, FMFP 2010, December 16-18, 2010, IIT Madras, Chennai, India.
2. Das, S and Prasad, J. K., "Behaviour of Flow Unsteadiness in a Supersonic Air-Intake with Throttles", Proceedings of the 37<sup>th</sup> National & 4<sup>th</sup> International Conference on Fluid Mechanics and Fluid Power, FMFP2010, December 16-18, 2010, IIT Madras, Chennai, India.
3. Madhav Sen, R., Kumar, P., Das, S and Prasad, J. K., "Effect of angle of attack on slender body at subsonic speed", Proceedings of the 37<sup>th</sup> National & 4<sup>th</sup> International Conference on Fluid Mechanics and Fluid Power, FMFP2010, December 16-18, 2010, IIT Madras, Chennai, India.

### Award / Recognition Bestowed on Faculties

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. A. K. Chatterjee	Chairman, Bihar & Jharkhand Section,	ISTE, New Delhi	2010-11
2.	Dr. A. K. Chatterjee	Member, Aerospace Engineering Division Board	The Institution of Engineers (India)	2010-11
3.	Dr. A. K. Chatterjee	Reviewer of the Indian Journal of Technical Education	ISTE	2010-11
4.	Dr. J. K. Prasad	Member, Executive Committee,	National Society of Fluid Mechanics Fluid Power	2010-11
5.	Dr. J. K. Prasad	Member of Executive Committee	National Wind Tunnel Society of India	2010-11
6.	Dr. J. K. Prasad	Reviewer for AIAA Journal	AIAA	2010-11

**Members on Board of Studies (PG)**

**Internal Members**

- |    |                      |   |          |
|----|----------------------|---|----------|
| 1. | Dr. A. K. Chatterjee | : | Chairman |
| 2. | Dr. P. C. Joshi      | : | Member   |
| 3. | Dr. J. K. Prasad     | : | Member   |
| 4. | Prof. Sudip Das      | : | Member   |
| 5. | Dr. Ashok Misra      | : | Member   |
| 6. | Dr. B. K. Singh      | : | Member   |

**External Members**

1. Dr. Kunal Ghosh, IIT, Kanpur
2. Dr. B. Mazumdar, Jadavpur University, Kolkata
4. Shri A. K. Chakraborti, DRDL, Hyderabad
5. Shri M. C. Dattan, SDSC, Shriharikota, Nellore



## DEPARTMENT OF PHYSICAL EDUCATION & SPORTS



Multigymnasium

Department of physical education and sports is well equipped with good facilities for track and field's events, gymnasium, weight training hall, yoga hall, table tennis boards in all hostels, badminton (Indoor courts), basketball, football, hockey, kabadi, kho-kho, tennis, handball, cricket oval etc. of national / International level. Physical Training and Games is a part of curriculum from 1st to 4th semester. The Department is actively involved in developing the sportsmanship of the students. The Department is regularly organizing training camp & course work for various sports & games. Following incentives are given to the students who are proficient in sports:

1. Students representing Institute team for any sports activity is provided extra grades in PT & Games, Classes.
2. When students represent our Institute / University in other Institute / University their total expense, travel, food, uniforms, tracksuits etc. are borne by the Institute.
3. During inter hostel tournaments the participants are provided with extra nutritious diet as prescribed by sports medical practitioner.
4. Every year we organize events of Association of Indian University. (Inter University Tournament/ Inter Zonal)
5. Every year we organize East Zone Inter technical Chetan Devraj memorial Cricket tournament



Athletic Meet '2010

### Events Organized During the Year 2010-2011

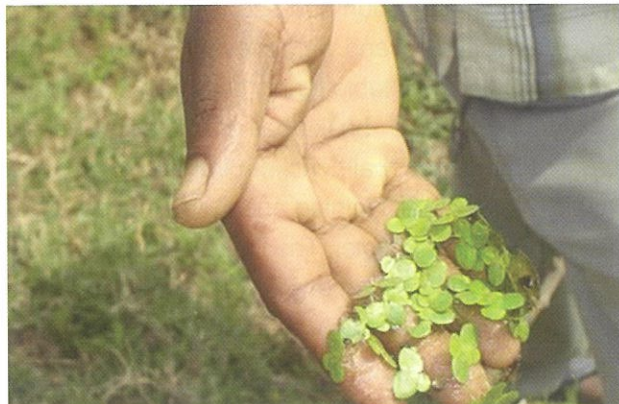
1. AIU sponsored East Zone Inter University Football Tournament (Men) was organized during 25.09.2010 to 30.09.2010. 37 teams from different part of E.Z. participated in the said tournaments.
2. 19th Chetan Devraj Memorial Inter Technical East Zone Cricket Tournament was organized from 22.01.2011 to 26.01.2011. BIT Mesra won the tournament.
3. 25th Annual Athletic Meet 2010-2011 was organized during 28.01.2011 to 30.01.2011.
4. All Inter Hostel tournaments for various games were organized successfully for the session 2010-11.

### Award / Recognition Bestowed on Faculty ( State / National / International)

SI No.	Name of the Faculty	Title of the Award / Honours	Organization	Year/ Duration
1.	Dr. Rama Shankar Singh	Vice President	Jharkhand Volleyball Association	2011-12
2.		Joint Secretary	Jharkhand Women's Hockey Association	2010-12
3.		Chairman	Youth Hostels Association of India Ranchi Unit	2010-12
4.		Member	34 <sup>th</sup> National Games Organizing Committee 2011	2011



## ENVIRONMENTAL SCIENCE & ENGINEERING GROUP



Duckweeds

The Environmental Science & Engineering Group (ESEG) was established in the year 2002. It offers a full time 2 years programme in M-Tech Environmental Science & Engineering. The intake student strength in the Department is 18 and the GATE qualified candidates are awarded Fellowship as per the AICTE norms. It has adequate number of highly qualified faculty strength in each specialization like Air pollution, Water pollution, Noise Pollution, Solid Waste Management, Ecology, and Environmental Modeling. They are also involved in different activities like design of course structure, administrative work of the Department etc. Many faculties appointed as an external examiner, question setter

and reviewer of various National & International Journals. The laboratory assignments of the Department are conducted in the allied Departments (Department of Applied Chemistry, Department of Remote Sensing, and Department of Polymer Engineering and CAAD Laboratory).

The thrust areas of research are air & water quality, environmental modeling, GIS and ecology. Faculties are also involved in various research activities on water treatment, modeling and waste management. The Department has completed many research projects and in the past and current one UGC sanctioned project is going on.

The past students of this course are well established in different organization like SESA Goa (SESA Groups), Metallurgical Engineering Consultants (MECON, Ranchi) and Tata Consultancy Services (TCS, Hyderabad) etc. and few have continued their research work to pursue the PhD. The students are allowed to carry out their thesis work in other industries or research organizations as per their suitability. During the next five years, ESEG plans to expand and get established as a Department with its own laboratories. The ESEG is also planning to start an M-Tech Programme on Sustainable Development Engineering.

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI/Co-PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Prediction of Ground-water vulnerability to pollution for Ranchi District using Fuzzy Technique.	Dr. Amit Kr. Gorai	UGC	01.02.2011	1 Lakh	2 years

#### Conference/ Seminar / Workshops/Staff Development Programmes attended

Sl. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Month Date, Year
1.	Prof. Gopal Pathak	Annual International conference on soils, sediments, water and energy	AICTE	University of Massachusetts, Amherst, USA	University of Massachusetts, Amherst, USA	Oct. 18-21, 2010

2.	Prof. Gopal Pathak	Annual International conference on soils, sediments, water and energy	AICTE	San Diego, California, USA	San Diego, California, USA	March. 14-17, 2011,
3.	Miss Neeta Kumari	Solid and Hazardous Waste Management	AICTE	Dept. of Civil Engg., IIT Kharagpur	IIT Kharagpur	12-19 <sup>th</sup> Nov. 2010
4.	Mr. Jawed Iqbal	Solid and Hazardous Waste Management	AICTE	Dept. of Civil Engg., IIT Kharagpur	IIT Kharagpur	12-19 <sup>th</sup> Nov. 2010

## PUBLICATIONS

### International Journals:

1. Gorai, A. K., Application of Fuzzy Expert System to Determine the Degree of Sustainable Development of Mineral Resources, Asian Journal of Water, Environment and Pollution, Vol. 7, No. 2, pp 15-21, April 2010.
2. Hazra, M., Avishek, K., Pathak, G., Nathawat, M.S., Water Stress Assessments in Jharkhand State using Soil Data and GIS. Journal of Applied Sciences and Environmental Management. ISSN: 1119-8362, March, 2011. Vol. 15 (1), 63-67.
3. Hazra, M., Avishek, K.(2010): Water Resource Evaluation through Water Accounting: A Means to Achieve Sustainable Development. Bioscan – An International Quarterly Journal of Life Sciences. Volume 1: 2010, 43-50.

### Conference Proceedings

1. Pathak, Gopal, Flourisis Mitigation: An integrated approach, 26<sup>th</sup> Annual International conference on soils, sediments, water and energy, Oct. 18-21, 2010, University of Massachusetts, Amherst, USA.
2. Pathak, Gopal, Arsenic Contamination in Groundwater: A Serious Threat, 21<sup>st</sup> Annual International conference on soils, sediments, water and energy, March. 14-17, 2011, San Diego, California, USA.
3. Gorai, A. K., Carbon Emission and Climate Change: A Comparative Study of Developed and Developing Nation, ICER-10, 16-18 September 2010, University of Mauritius.
4. Hazra, M., Avishek, K., Shalu (2010): Water Resource Evaluation through Water Accounting: A Means to Achieve Sustainable Development. Proceedings of the International Conference on Energy, Environment and Development at Orissa, India, December 2010.

### Book:

1. Gorai, A. K., A Guide for Mining Engineers. Lovely Prakashans, Dhanbad (In Press).

**Award/Award/Recognition Bestowed on Faculties (State/National/International)**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year/ Duration
1	Dr. Gopal Pathak	Member of Scientific Advisory Board	26th Annual International Conference on Contaminated Soils, Sediments and water held at University of Massachusetts, AMHERST, USA during Oct. 2010.	Oct. 2010.
2	Dr. Gopal Pathak	Visiting Scholar	Stanford University	May – July (2 months)
3	Dr. Kirti Avishek	Young International Scientist	Chinese Academy of Sciences	July 2011 to June 2012.

**Development of Learning Materials**

Learning Materials	Name of Subject/ Course/ Programme	Where & When used
e-contents	1. Air Pollution Quality & Control 2. Environmental System Engineering	In class room and for distributing to students

**Members on Board of Studies (UG/PG)**

- |                          |  |
|--------------------------|--|
| 1. Dr. Gopal Pathak      | - Professor & Coordinator, ESEG and Chairman BOS.          |
| 2. Dr. Gurdeep Singh     | - External Member, Prof. & Head, CESE, ISM, Dhanbad        |
| 3. Dr. S.K.Gupta         | - External Member, Prof. & Head, CESE, I.I.T, Mumbai.      |
| 4. Dr. (Mrs.) R.S.Patil  | - External Member, Professor, CESE, I.I.T, Mumbai.         |
| 5. Dr. Mukesh Khare      | - External Member, Professor, CESE, I.I.T, Delhi.          |
| 6. Dr. Usha Jha          | - Prof. & Head, Dept. of Applied Chemistry, B.I.T, Mesra.  |
| 7. Dr. Mandira Mukherjee | - Prof. & Head Dept. of Polymer Engineering, B.I.T, Mesra. |
| 8. Dr. M.S.Nathawat      | - Prof. & Head, Dept. of Remote Sensing, B.I.T, Mesra.     |
| 9. Dr. Bindu Lal         | - Reader, Dept. of Civil Engineering                       |



## NATIONAL CADET CORE JHARKHAND COMP TECH COY NCC BIT MESRA RANCHI



NCC Activities

NCC- NATIONAL Cadet Core of BIT Mesra is one of the important components of the institute which imparts Technical training and Physical as well as other programmes of NCC for 4 semesters. We have 200 cadets strength enrollment for EME, Engg. and Signals. In this session 2011-12 we imparted training for Drill, Firing and other lecturer classes for all enrolled cadets of NCC. This year the cadets took part in Republic Day parade & Independence Day parade. The army band gave supportive music during the celebration parades. Dignitaries & guest from the campus attended tea party organized at NCC Unit after the celebration parade and appreciated parade performed by the cadets.

Cadets also took part in organizing and conduction of

1. BIT clean and green drive to make campus residents aware of the misuse of polythene bags & products.
2. The cadets also took drive for tree plantation and gardening in the campus and NCC premises.
3. 2010-11 Rs. 30,000/- each of 07 cadets of "Sahara Scholarship".
4. 2010-11 Rs. 6,000/- each to 11 cadets of Scholarship from "Cadet Welfare Society".
5. 2010-11 Blood donation camp was organized by 3 Jharkhand Comp Tech Coy NCC, Mesra, Ranchi. Cadets, Officers & Staff in the BIT Dispensary donated blood.

This unit is officiated by Lt Col A. K. Mishra and ANO, Major Subir Samanta, Caretaker Prof. Kishore Kumar Senapati & other staff of army and civil staff.



## NATIONAL SERVICE SCHEME

### CALENDAR OF NSS ACTIVITIES

- 15 August 2010 - Prabhat Pheri
- 22 August 2011 - Blood Donation Camp
- 17 September 2011 - Volunteering for Vishwakarma Puja
- 12-19 January 2011 - Youth Week Celebration
- 16 January 2011 - Volunteering for Langar
- 6 February 2011 - Blood Donation Camp
- 8 February 2011 - Volunteering for Sarswati Puja

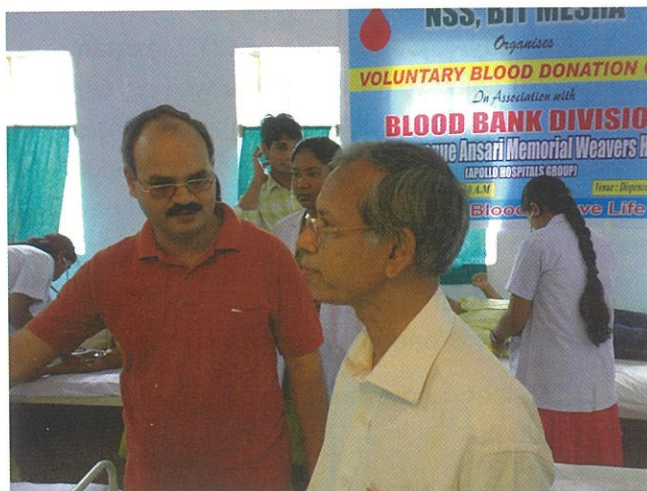


Prabhat Pheri on Independence Day

Special Weakly Projects of I & II years students teaching in BIT +2 School, BIT High School, Middle School , Primary School and Kishlay Vidya Mandir in allotted periods.

### A New Step by NSS Students for the Development of Village Youth

A coaching programme has been started with the help of NSS volunteers for the 10th pass students who reside in the NSS adopted village of BIT Mesra. The students have been enrolled for the above said programme via a test conducted by the NSS volunteers in the month of December'10. The programme has commenced since January'11 and is being carried out every Saturday from 2:00 pm to 4:30 pm and every Sunday from 9:30 am to 12:30 pm, month after month.



NSS and Leo Club – Blood Donation Camp

The programme envisages guiding the needy students through this tough phase of academic choices and hurdles and getting the deserving ones admitted in some prestigious Engineering/Medical/Polytechnic/Army/Agriculture college for further studies, as suits them. The

NSS volunteers who have themselves cleared many entrances before entering the college are well versed with the studying methods and tricks and hence can prove to be a great help to the otherwise stranded.

For the programme, the NSS students are required to teach the admitted students Physics, Chemistry and Mathematics. They shall also make a database of all admitted students based on their family income, so that they're easily able to go for their desired course without any financial bottlenecks. The initiative has been implemented with full vigour and enthusiasm on part of both the NSS volunteers and the students and it is being hoped that this shall prove to be milestones in helping the students increase sound knowledge of science, so that they develop their skills and are better able to give their contribution to the society. With the aim of making the students capable enough of being self dependent later on in their life, the programme shall be followed through for the upcoming four years, till the students pass out class 12th.

### **Blood Donation Camp**

A blood donation camp was organised in BIT Mesra campus on February 6th, 2011. The camp was conducted by R.I.M.S, Ranchi. An appreciable amount of students turned up to support the cause. NSS students enthusiastically participated in the event. NCC cadets and other volunteers too came forward to help the organisation.

The procedure for blood sample collection was extensive but simple. A form was provided to each volunteer, which included queries about health conditions. Their weight was measured, followed by blood pressure check and haemoglobin tests. Then depending on the weights, 300 ml of blood sample was collected from those weighing (45-50) kg and 350 ml from those weighing above 50 kg. The donors were provided with energy drinks and light snacks and monitored for few minutes after the entire procedure.

The local staff along with the R.I.M.S staff played a vital role in the event. Thus, the event hosted by NSS was a great success. In total, \_\_\_ units of blood were donated to the organisation.

### **Saraswati Puja organised by the NSS**

On the 8th of February'11, the NSS volunteers organised Saraswati Puja in the Institute Lawn here at Mesra. In Hinduism, Saraswati is the goddess of knowledge, music and the arts. In the eastern part of India, Saraswati Puja is celebrated in the Magha month (January–February), coinciding with Vasant Panchami or Shree Panchami i.e. the 5th day of the bright fortnight of the lunar month of Magha. People place books near the Goddess' statue or picture and worship the Goddess. Book reading is not allowed on this day. The preparations began two days before the festival. On the first day, the NSS and non-NSS volunteers showed up to make boxes for the purpose of "Prasad" distribution. On the next, they volunteered to fill the boxes with sweets and fruits, which were to be distributed as the blessings of the goddess Saraswati after the puja. The pandal was set up with the help of the working staff of the college and the idol of the goddess placed for worship. On the day of the puja itself, again the NSS students helped around with the final preparations for the event and stayed around till the ceremony was over. The various mantras were recited and the puja carried out for the entire BIT to witness, including the staff, the students, and all people residing in the campus. The enthusiasm of the NSS students in extending a helping hand was commendable. The boys from NSS also helped with the "Visarjan" of the deity's idol the next day.



**EXTENSION CENTRES  
OF  
BIRLA INSTITUTE OF TECHNOLOGY  
MESRA, RANCHI  
IN  
INIDA**





## ALLAHABAD

### INTRODUCTION

The Extension Centre at Allahabad is located at the Raymond Crossing on Allahabad-Mirzapur Road. This Centre was established in the session 1997-98 with a view to start B. Tech. Degree Programme in Civil, Mechanical and Electrical & Electronics Engineering for the working Engineering Diploma holders on part time basis. The first batch of students of B. Tech programme was admitted in January 1998 and so far, six batches of students have passed out.



Main Building

In view of demand of trained computer and management personnel at National level and as also to provide job-oriented professional education and training to youth of the area, the Institute introduced (3-years) full-time courses like Bachelor of Computer Applications (BCA), Bachelor of Business Administration (BBA), 5 year Integrated Master of Computer Application, 5 year Integrated Master of Business Administration and Master of Computer Applications (MCA).

The computer laboratory of this centre has over 100 computers connected through LAN network and Internet connectivity is available through out the day. The centre is Wi-Fi enabled. The Institute Library has a reasonably good number of text books and Technical Journals are being regularly subscribed by it. The library currently provides access to e-journals like ScienceDirect and other resources to the faculty, students, and staff under internet environment. The centre has its own website where relevant information regarding the centre are available throughout the year.

Some of the engineering laboratories developed by the centre are Electrical Machines laboratory, Basic Electrical & Electronics laboratory, Microprocessor laboratory, Digital Electronics laboratory, Control Engg. laboratory, Power Electronics laboratory, Digital Signal Processing laboratory, IC Engines laboratory, Manufacturing Processes laboratory, Non-conventional Energy laboratory, Hydraulics Laboratory, Surveying and Geotechnical Engg. Laboratory.

The centre has a moderate play ground, Volleyball Court and Badminton Court. The centre encourages students to organize co-curricular and extra curricular activities such as Games and Sports meet, Cultural meet, Quiz, Debates & Essay competition, Painting & Photographic competition etc at periodic intervals.

Keeping in view the requirements of the region, the following full time programmes are being planned to be added in near future at Allahabad Centre.

- (I) 4-years (Full Time) BE in Electronics and Communication Engineering
- (II) 4-years (Full Time) BE in Computer Science & Engineering
- (III) 2-years (Full Time) Master of Business Administration (MBA)
- (IV) 2-years (Full Time) M.Sc. Information Technology

### (A) Full time Programmes Offered

- (i) Master of Computer Applications (MCA)
- (ii) 5 year Integrated Master of Computer Applications (IMCA)

- (iii) 5 Year Integrated Master of Business Administration (IMBA)
- (iv) Bachelor of Computer Application (BCA)
- (v) Bachelor of Business Administration (BBA)

**(B) Part Time Programme**

- (i) B.Tech in Civil Engineering
- (ii) B.Tech in Electrical & Electronics Engineering
- (iii) B.Tech in Mechanical Engineering.

**Seminar / Conferences / Short-term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences/ Short-term Courses	Name of the coordinator	Date of Seminar / Conferences / Short-term courses
1	National Conference on Advance Computing	Prof. S. Kanungo Prof. R.S. Pandey	20 <sup>th</sup> August, 2011

**4. Conferences/Seminars/Workshops/Staff Development Programmes/ Orientation Programme/ Refresher Course etc. Attended**

Sl. No.	Name of the Faculty	Title of the conference/ seminar	Organized by	Venue	Date, Month, Year
1	Ratnesh Mishra	National Conference on ICT	Ewing Christian College, Allahabad	Ewing Christian College, Allahabad	5-6 March, 2011
2	Ratnesh Mishra	National Conference on ICT	BIT Noida Campus	BIT Noida	4-5 February, 2011
3	Ratnesh Mishra	National Conference on E-government & E-society	Computer Society of India	Hotel Regency, Allahabad	11-12 Dec., 2010
4	Ratnesh Mishra	International Conference on Computer & Communication Technology	MNNIT, Allahabad	MNNIT, Allahabad	17-18 September, 2010
5	Ratnesh Mishra	FDP on "Teaching Methodology"	Federation of University	Allahabad	4 September, 2010
6	Shambhu Sharan Kumar	QIP Orientation Programme for Technical Teachers	National Institute of Technology, Hamirpur	NIT, Hamirpur	28 June – 02 July, 2010
7	Shambhu Sharan Kumar	Industrial Engineering in Current Business Paradigm -Issues and Challenges	N.I.T. Jalandhar	N.I.T. Jalandhar	12-16 July, 2010
8	Shambhu Sharan Kumar	Environment Management in Process Industries	N.I.T. Jalandhar	N.I.T. Jalandhar	05-09 June, 2011



## PUBLICATIONS

### Published in International Journals

1. S.C. Pandey, G.C. Nandi, Memory Convergence Analysis for Different Iterative Procedures in RNN, IMECS, Vol. 1, 2010, March17-19, Hong Kong.
2. S.C. Pandey, G.C. Nandi, Genetic Algorithm based Comparison of Different SVM, International Journal of Computer Application, Vol. 6, Issue 8, pp. 34-41, 2010 Impact Factor=0.835.
3. K.N. Mishra, Artificial Neural Network Based Technique Compare with "GA" Technique for Web Page Classification, Springer 2nd International Conference on Networked Digital Technologies Prague, Czech Republic, July 2010, 699-705.
4. Dhaneshwar Mahto, Performance increases for twin spool and three spool turbojet engines with afterburner, ISST Journal of Mechanical Engineering, vol. 1 No. 2 p.p. 9-18.

### Papers/Abstracts in Conference Proceedings

1. Shambhu Sharan Kumar, Nanotechnology for Environmental Protection and Sustainable Development, National Seminar on Impact of Environmental Changes on Human Life at SS Khanna Degree College, Allahabad, Sponsored by UGC, 20-21 Nov. 2010.
2. Shambhu Sharan Kumar, Comparative Study of Industrial Stoving Paint and Nano Pigment Particles Modified Paint, National Seminar on Interface of Industry, Biology and Chemistry Research in 21st Century (Feb. 2011)- sponsored by CSIR, Indian Chemical Society & Allahabad University, Allahabad, 5-7 February, 2011.

### Students' Activities

#### (a) Games & Sports Activities:

The Annual Sports & Athletic Meet-2011 was held at the centre during the month of January-February 2011

#### (b) Technical Activities:

The students of technical committee organized Techno-Management fest-2011 at the centre from 17th to 18th March 2011.

#### (c) Placement Activities:

- (i) The outgoing students of MCA have been selected in different companies like Infosys, TCS, IBM, HP, Birlasoft, iGate etc.
- (ii) The centre through its placement cell has initiated steps towards placements of BCA and BBA students. So far some students of BCA have been selected in WASE programme of Wipro Technologies, Aricent etc.
- (iii) The Placement Cell is already running Personality Development Program for MCA students.
- (iv) The Placement Cell arranges test series, GD and Interview Sessions at periodic intervals for all outgoing students of full time programmes.

## DEOGHAR



Main Building

In the quest to set up a pioneer institution for diversified and advanced technical education and research, the Government of Jharkhand setup an Institute of repute in collaboration with BIT Mesra. Thus was the exorsus of BIT, Deoghar Campus in the year 2007 under the support of the Government of Jharkhand which subsequently allotted 25 acres of land for the establishment of the Deoghar Campus.

As per the provision of MOU with the Government of Jharkhand, the intake from the academic year 2008-09 at BIT Deoghar campus has been 270 seats and

the admission is made through AIEEE 2008, and Central Counseling conducted by the Central Counseling Board. The capacity of students being 60 each in CSE, ECE, EEE, ME and 30 in PE.

The following disciplines of BE Programme are currently being run at the Deoghar Campus:

1. Computer Science Engineering
2. Electronics & Communication Engineering
3. Electrical & Electronics Engineering
4. Mechanical Engineering
5. Production Engineering

New courses likely to be introduced from the session 2012 are BBA/MBA, BCA/MCA and Civil Engineering Programme.

**As a leap forward PhD programme has since been started at B.I.T. Deoghar Campus with 5 fulltime research scholars joined in CSE and Applied Chemistry Department.**

### Institute Campus

The institute is fully residential and extends over an area of 25 acres.

**Open Air Theatre** and seminar halls are there to cater to the growing needs of academic and student activities. **Wi-Fi** facility keeps the BIT community technically updated and developed.

**The Dispensary** provides for the medical needs of the students and staff of the institute. Three compounders and one nurse are on round-the-clock duty. One general physician and one lady doctor provide medical services/consultation everyday from 5.pm to 7.pm. The dispensary has its own ambulance to cater to emergency needs.

**The Library** covers an area of 4800 sq.ft in the main building of the institute. The mission of our library is to provide comprehensive information to fulfill the needs of the BIT community in its pursuit of education, learning, teaching and research. The library maintains a huge collection of books to assist academic pursuit.

Volume of Books	10,998
Titles	1200
E-Journals	600(Science direct)

Magazine	04 (more to be included)
Newspaper	06 (more to be included)
Working hours	Monday to Friday – 8.20 am – 4.30 pm. Saturday-8.20 am -12.30 pm. During Examination-8.30am-7.30pm.

### **Library automation using LibSys is in progress.**

Clubs/Societies of the institute- There are nine clubs/societies which is instrumental in bringing out the latent potentials of the students apart from technical knowledge.

### **Publications:**

Newsletter BIT-IN-NUCE	Half Yearly (Spring and Monsoon editions)
Magazine PRISM	Annual
Souvenir	Annual
Compendium-Research Scholar Day	Annual
Compendium of Projects -	Annual

### **Sports and Games:**

The aim is to keep the students mentally, physically and psychologically fit and to impart latest skills in sports and games. The department has: Two Volleyball grounds, a multipurpose sports complex which includes provisions for Track and field events, Football, Cricket and Basketball.

Indoor games include Table Tennis, Carrom, Badminton and Chess.

Inter-hostel Badminton tournaments

Birla Cup Cricket tournament conducted in the campus.

### **Training and Placement Division:**

The Training and Placement Division caters for the most effective employment support and career development services to its student's community. The T&P Cell co-ordinates for Industrial training. Regular sessions on soft skill training, presentations and group discussions are conducted for the communicative development of the students. The students are groomed for technical as well as soft skill awareness. 81% of eligible students were placed in campus selection conducted at BIT, Mesra in reputed companies like Infosys. Branch wise offer and placements as under.

### **R&D Efforts at B.I.T. Deoghar Campus**

Birla Institute of Technology is developing very fast, accurate convenient and viable methods of research in various technological fields which has immense applications and implications. BIT Deoghar, being as an established centre of technical education of this region connects with this world with extremely enhanced communication system and communication network. A wide variety of scientific research and engineering design for the development and scope in applications of Alternate fuels, Fluid transportation, Manufacturing industries, Bio-medical instrumentation, Electronics equipment manufacturing, Experimental high energy physics, Power system and non-conventional energy, has been initiated at BIT Deoghar. The institute provides never to be seen academic fervor with the aim of providing a platform for research in all departments of engineering viz., Electrical & Electronics Engineering, Electronics & Communication Engineering, Computer Science, Mechanical and Production Engineering and Department of Applied Physics, Applied Chemistry and

## Projects and Research :

### *Projects on the Anvil*

- Sentiment and opinion mining at Panchayat Level – submitted to DST (CSI), GOI.
- Focus on research activities in the area of soft computing techniques, with formation of a research group in this field.
- Activities are being launched in the emerging fields of computational materials engineering, high strength steel, aluminum alloys and bio-materials.
- Some activities are already being pursued in the field of non-linear optics, plasma physics, high energy physics and plasma based nano materials processing.

## PUBLICATIONS:

### International Journals

1. P. K. Srivastava, and N. Yadav, Growth and forms of spherulitic crystal pattern in a Belousov-Zhabotinski type reaction system Cryst. Res. Technol. 46, No. 3, 277 – 286 (2011)
2. P. K. Srivastava and Narendra Yadav, Growth of spherulitic crystal patterns in a Belousov–Zhabotinskii type reaction system. This journal is c The Royal Society of Chemistry and the Centre National dela Recherche Scientifique 2011 New J. Chem. (in press).
3. P. K. Srivastava and N. Yadav, Growth of Diffusion Limited Aggregation (DLA)-Like Branched Patterns in a Belousov-Zhabotinski Type Reaction System, Bull. Chem. Soc. Japan. 2011 (in press)
4. P. K. Srivastava, S. S. Majhi, B. K. Sarkar, Frontal Polymerization in Acrylic Acid System, Material Research India (in press) 2011.
5. S. Mukhopadhyay and Roushan Kumar, Solution of a problem of infinite elastic medium with a cylindrical cavity under two-temperature thermoelasticity with thermal relaxation parameters, Proceeding of National Academy of Science, 2010.
6. S. Kothari, Roushan Kumar and S. Mukhopadhyay, On the fundamental solutions of generalized thermoelasticity with three phase lags, Journal of Thermal stress (2010).
7. S. Mukhopadhyay, S. Kothari and Roushan Kumar, On the representation of the theory of generalized thermoelasticity with three phase lags, Acta Mechanica (2010)
8. Roushan Kumar, S. Kothari, S. Mukhopadhyay, Variational and Reciprocal Principles in Generalized thermoelastic diffusion, Acta Mechanica (2010)
9. Soumya Banerjee An Intelligent Hybrid Scheme for Optimizing Parking Space: A Tabu Metaphor and Rough Set Based Approach, Egyptian Informatics Elsevier, Final version published online: 6-May-2011, pp.9-17.
10. Soumya Banerjee Minimizing Ripple Effect of Web Centric Software Using Pheromone Extension, Information Science, Elsevier, (In press)
11. Soumya Banerjee, Abhijit Mustafi, Hameed Al-Qaheri and Aboul- ella Hassanien Digital Watermarking using Ant Colony Optimization in Fractional Fourier Domain, Journal of Information Assurance and Security (JIAS) ISSN 1554-1010, vol.05, 2010, Dynamic Publishers Inc. USA.

12. Soumya Banerjee, Aboul Ella Hassanien, Virus detection of E-mail Network Using Non-Uniform Pheromone Learning in Neural Network World Journal, 2010.

### Conference Proceedings

1. Mahendra Das, Brajesh Kr. Gupta, R. K. Lal "Energy Sub band Calculation for Quantum Well Photodetector(QWIP)", Photonics -2010, held at IIT Gohati.
2. Sayak Bhattacharya, Bhaskar Vaish, and Ajay Chakrabarty, "Accurate RCS Determination of Electrically Large 2-D Targets Using Wire-grid Model and Method of Moments", International Conference on Microwave, Antenna, Propagation & Remote Sensing, 2010.
3. Shiv Kumar Choubey, K P Tiwary, "Preparation and characterization of binary semiconductor material Cadmium Sulphide and Zinc Sulphide" National conference Cum workshop on Recent Development in Engineering Material held during 12th -14th May 2011 at BIT Mesra, Ranchi .
4. Soumya Banerjee, H.R. Tizhoosh Hidden Structure Visualization in Corporate Failure Prediction using Opposite Pheromone per Node Model , 2010 IEEE World Congress on Computational Intelligence (IEEE WCCI 2010), July 18-23, Barcelona Spain.
5. Soumya Banerjee, Hameed Al-Qaheri, Monica Chis Aboul Ella Hassanien, Exploring Measurable Impacts in Viral Marketing Using Social Coordination Games and Fuzzy Logic in AMS 2010, Malaysia. IEEE Explore

### Peer Reviewed Book Chapters

1. Soumya Banerjee, Monica Chis, Aboul Ella Hassanien, Time series Data Mining in Foundations of Computational Intelligence Volume 6 Data Mining Series: Studies in Computational Intelligence, Springer-Verlag, Vol. 206 Abraham, A.; Hassanien, A.-E.; Carvalho, A.P. de L.F. de; Snášel, V. (Eds.) 2010, Approx. 300 p., ISBN: 978-3-642-01090-3.
2. Soumya Banerjee, Aboul Ella Hassanien, Ultrasound Biomicroscopy Glaucoma Images Analysis Based on Rough Set and Pulse Coupled Neural Network in Foundations of Computational Intelligence Volume 2: Approximation Reasoning: Theoretical Foundations and Applications, Springer Berlin / Heidelberg 2010 1860-949X (Print) 1860-9503 (Online) 275-293.

### National / International Conference/ Seminar/ Workshop Participation

Name of The Faculty	Conference/ Seminar/ Workshop Participation
Dr. A.C. Singh	Soft computing operations in research and engg. (SCORE) BIT, Deoghar September 3 <sup>rd</sup> to 4 <sup>th</sup> 2010
Mr. S.S. Majhi	Soft computing operations in research and engg. (SCORE) BIT, Deoghar September 3 <sup>rd</sup> to 4 <sup>th</sup> 2010
Piyush Kumar Ojha	Fundamentals of Soft Computing, BIT Deoghar 2011
Pankaj Mishra	Fundamentals of Soft Computing, BIT Deoghar 2011
Bishnu Mohan Jha	Fundamentals of Soft Computing, BIT Deoghar 2011
Deep Shekhar Acharya	Fundamentals of Soft Computing, BIT Deoghar 2011
Srihari Gude	Fundamentals of Soft Computing, BIT Deoghar 2011

**Ongoing Projects**

Sl. No.	Research Project Topic	P.I./Co-P.I	Funding Agency	Amount Sanctioned
1.	A research and development project entitled "Establishing the conditions for Maximum Material Removal Rate During Electrochemical Machining	Dr. P.K. Srivasatava	AICTE	Rs 5.00 Lakhs
2.	A research Project entitled "Enhancing Material Removal Rate Through Control of Valence (Transition) in Multivalent Metals While Electrochemical Machining of Metal alloys"	Dr. P.K . Srivasatava	AR&DB	Rs 9.674 lakhs
3.	Augmentation of Jamming Resistance Global Positioning System for Space Borne Application using Smart Antenna	Dr. Mainak Mukhopadhyay	DST, GOI	9.60 Lakhs

**Projects Completed**

Sl. No.	Research Project Topic	P.I./Co-P.I	Funding Agency	Amount Sanctioned
1.	Soft Modeling of Group Dynamics: A Cognitive Psychology Perspective	Dr Saumya Banerjee	DST, GOI	15.4 Lakhs

**Awards/Honours Bestowed:**

Name of the Faculty	Awards/Citations/Members
Dr. P. K. Srivastava	1. Fellow of the Indian Chemical Society, India. 2. Member of the Indian Society for Technical Education, India. 3. Member, High Energy Material Society of India,

**Member in Editorial Bords:**

Name of the Faculty	Awards/Citations/Members
Dr. P. K. Srivastava	1. "Material Science Research" India 2. Journal of Indian Chemical Society <b>Physical Chemistry Section</b> Kolkata, India. 1998-1



## JAIPUR

BIT Jaipur Centre was established in 1995. The focus of the institute is to provide quality education in Engineering, Applied Sciences and Management with technology and professional exposure through innovative programmes & practices. Driven by the mission that the technology and innovative management practices will be the gateway to the future growth, it is today one of the leading institutes of Rajasthan in the field of Engineering, Applied Sciences and Management.

The sprawling and aesthetically built campus is well located in the southern-east part of the city which is an upcoming hub of important installations and development activities in residential, institutional and business areas.

### DEVELOPMENT VISION:

Development is a never ending process, undoubtedly, knowledge spread, innovative concepts and practices and technology breakthroughs are at core of this process. In the professional education domain, it is a two dimensional need for upgradation of knowledge and infrastructure - one to understand the fast happening conceptual and technology breakthroughs and second to facilitate new such breakthroughs with more knowledge inputs and basic research. In the present competitive environment, it is now a willing compulsion for a capable and growth oriented organization to be a part of contemporary development process.



Main Building

With excellent performance, progressive mind set and good will earned, the Jaipur center has a long term vision to consolidate the strength and excel in high end engineering and management education and research in emerging areas. The center has good potential to be one of the leading technical institutes in western part of the country as the BIT main center in eastern part.

### ACADEMIC PROGRAMMES:

#### Undergraduate:

B.E. in following branches of Engineering :

- i) Computer Science (CS)
- ii) Electronics and Communication Engineering (ECE)
- iii) Electrical & Electronics Engineering (EEE)

BBA, BCA & B.Sc. (Animation & Multimedia)

#### Postgraduate:

MBA , MCA, Masters in Animation Design

New Programmes introduced from session 2010-11

- i) B.E. in Electrical & Electronics Engineering (EEE)

**Sponsored projects****Project Sanctioned during July 2010- June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Feasibility study of setting-up of Food Processing Zone (FPZ) near by the irrigated Region of Sri Ganganagar District of Rajasthan and its Socio Economic Implications Discipline : Management Studies	1. Dr Roopali Sharma 2. Dr Ritu Arora	Ministry of Food Processing Industry, Govt. of India	27.01.11	Rs. 3.0 lacs	1 year
2.	Development of two short animation film for social awareness; i). The Animated Spot Film on Patient Councilor ii). The Animated Spot Film on Health care waste Management Discipline : Animation & Multimedia	1. Dr.Vibhuti Pandya 2. Vivek Sharma 3. Bidyut Jyoti Baruah	Rajasthan Health Systems Development Project, Govt. of Rajasthan Ministry of Rajasthan-Jaipur	July 8, 2010	Rs. 3,70,608/-	6 Months

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Duration of the Project
1	Development of a microcontroller based technology of a pressure sensitive bed for immovable patients to reduce the risk of bed sore Discipline : Engineering (Electronics)	1. Mr. S.P. Sarkar 2. Mr. J.B. Sharma 3. Mr. P.S. Rathore 4. Mrs Aparajita Pandey 5. Mr Avinash Pankaj	Indian Council of Medical Research, Govt. of India	23-03-2009	8.30888 Lacs	2 years



2.	Soft modeling of group dynamics : A cognitive psychology perspective Discipline : Engineering (Computer Science)	1. Dr. Madhavi Sinha 2. Dr. Somya Banerjee 3. Dr. G.S. Malhotra	Department of Science & Technology, Ministry of Science & Technology, Government of India.	12-11-2008	11.2944 Lacs	2 Years
3	Oil Exploration in the District of Barmer of Rajasthan: Employment Generation And Sectoral Mobilization of Working Force - Some Projections Discipline : Management	1. Dr. Roopali Sharma 2. Dr. Ritu Arora 3. Mr. P.N. Gupta 4. Mrs. P. Sharma	Ministry of Labour & Employment, Government of India.	6-11-2008	4.97145 Lacs	2 years
4	Development of Penning Discharge Source For Establishment of a Novel Calibration Technique for VUV Spectrometer-Detector System Based on this Source and ADAS code. Discipline : Applied Physics	Dr. Ram Prakash Mrs. Ranjana Manchanda (IPR, Ahmedabad)	Board of Research in Fusion Science & Technology (BRFST), Govt. of India	23-11-2009	102.32 Lacs	3 years

#### Projects Completed during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Date of completion of the Project
1.	Promotion of Environment friendly Plasma Nitriding Process for Surface Hardening of Industrial Components	Dr. Ram Prakash, Prof. P. K. Barhai (BIT Ranchi) , Dr. S. Mukherjee & Mrs. Alphonsa Joeshep, (FCIPT, Gandhinagar)	Department of Science & Technology (DST), Govt. of India & National Engineering Industries Ltd. Jaipur	March 15, 2007	68.63242 Lacs	September 15, 2010

#### Seminar / Conferences / Short – term Courses Conducted by the Centre

The institute was selected by Department of Science & Technology, Govt. of India for conducting following short term training programmes for entrepreneurs. The training programmes were jointly organized by Engineering, Workshop and Management Departments. Mr. P.S. Rathore, Asst. Prof. EEE and Mr. Abinash Pankaj, Scientific Officer, Workshop were the coordinator of the training programme.

Sl. No.	Name of the short term training programme	Funded by	Duration	Sanctioned Amount (Rs.)	Total Entrepreneurs Trained in the Programme
1	Technical Entrepreneurship Development Programme	Department of Science & Technology, Govt. of India	13-12-2010 to 29-01-2011	2.00 Lacs	26
2	Entrepreneurship Development Programme	Department of Science & Technology, Govt. of India	13-12-2010 to 29-01-2011	1.30 Lacs	25
3	Entrepreneurship Awareness Camp	Department of Science & Technology, Govt. of India	23-01-2011 to 25-03-2011	54,000	305

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

Sl. No.	Name of Faculty	Title of The Conference / Seminar	Organized by	Venue	Date, Month, Year
1	Dheeraj Bhardwaj	Orientation Programme for Technical Teachers	AICTE/ MHRD, NIT, Hamirpur	Hamirpur (Himachal Pradesh)	28 June - 2 July, 2010
2	Dheeraj Bhardwaj	Faculty Development Program	IIMET	IIMET, Sitapura, Jaipur	29- 31 July, 2010
3	Dheeraj Bhardwaj	National Conference on Advances in Wireless and Optical Communication Technologies	Poornima college of Engineering, Jaipur	Poornima college of Engineering, Jaipur	7-8 August, 2010
4	Anuj Kumar Jhankal, Gurminder Singh, I. K. Dadheech, Bhawna Agarwal	"National Seminar on Recent Development in Fluid Dynamics and 14th P.D. Verma Memorial Lecture"	University of Rajasthan, Jaipur	University of Rajasthan, Jaipur	7-8 August, 2010
5	Anuj Kumar Jhankal, Gurminder Singh	International Congress of Mathematicians, 2010	International Mathematical Union and University of Hyderabad	University of Hyderabad, Hyderabad	19-27 August, 2010

6.	Roopali Sharma	International Workshop on "International Business Practices"	PHD Chamber of Commerce & Industry & Konrad Adenauer Foundation Germany	PHD Chamber of Commerce & Industry , Jaipur	7 September, 2010
7.	Dheeraj Bhardwaj	workshop/FDP on Microwave Integrated Circuits (MIC)	IEEE MTT-S, VIT, Jaipur	VIT, Jaipur	25 September, 2010
8.	Ritu Pareek	Workshop on The Importance of Using Language in between when teaching ESL.	ELTAI Rajasthan	Subodh P.G. College, Jaipur	29 September, 2010
9.	Vivek Sharma	Workshop on Film Screen play Writing, Acting and Film Appreciation	Jaipur International Film Festival Board	Jawahar Kala Kendra, Jaipur	11-16 October, 2010
10.	Ram Prakash	National Scientific Meet on Plasma Assisted Devices (SMPAD-2010)	VEDAS & CEERI, Pilani	CEERI, Pilani	22 October, 2010
11.	Ritu Arora & Roopali Sharma	International Conference on Sustainable Decision-Making in a Time of Crisis: Public and Private Perspectives	United Nations University, and Asia Pacific Academy of Business in Society (APABIS)	UN University, Tokyo, Japan	4-5 November, 2010
12.	Shripal Vijayvargiya	International conference on computer engineering and technology ICCET-10	Jodhpur Institute of Engineering and Technology	Jodhpur Institute of Engineering and Technology, Jodhpur	13-14 November, 2010
13.	Shripal Vijayvargiya, Madhavi Sinha	Symposium on computer education-needs and expectations SCENE-2010	Birla Institute of Technology, Mesra	Birla Institute of Technology, Mesra	19-20 November, 2010
14.	Ravindra Kumar, Anand Kumar Srivastava, Ram Prakash	National symposium on Plasma Science and Technology, PLASMA-2010	PSSI & IASST, Guwahati	IASST, Guwahati	8-11 December 2010

15.	Shripal Vijayvargiya	51st Annual Conference of Association of Microbiologists of India AMI-2010	Birla Institute of Technology, Mesra	Birla Institute of Technology, Mesra	14 – 17 December, 2010
16	S.K. Sharma, Rajni Agrawal, Ranjana Agrawal, Anirudh Sahni, Abhishek Gautam	National Conference on Role of Green Chemistry for Risk Free Environment	Poornima College, Jaipur	Poornima College, Jaipur	18 December, 2010
17	Anju Sharma, Gurminder Singh, Dheeraj Bhardwaj, Archana Bhatnagar, Ranjana Agrawal	12th International conference of International academy of Physical Sciences on Emerging Interfaces of Physical Sciences	International academy of Physical Sciences	Jaipur	22-24 December, 2010
18	Ravindra Kumar	FICCI – India Innovation Growth Programme 2011	FICCI, Rajasthan	Jaipur	22 December, 2010
19	Anirudh Sahni, Abhishek Gautam	National conference on Heavy Metal Assessment in Leachates of Municipal solid Waste Dumping Site - Jaipur	SRM University Chennai	SRM University Chennai	3-7 January, 2011
20	Alok Pandey, Aparajita Pandey , B. Pathak, Dheeraj Bhardwaj	National Conference on Recent advances in Modern Communication Systems And Nanotechnology	Center of Converging Technologies, University of Rajasthan & IETE	University of Rajasthan, Jaipur	06-08 January, 2011
21	Roopali Sharma	National Seminar on Agribusiness and Food Processing (IPF-2011)	Federation of Rajasthan Trade & Industry and Ministry of Food Processing Industries, Government of India	Federation of Rajasthan Trade & Industry, Jaipur	7 January , 2011
22	Ritu Arora	International Finance Conference (FINCON-2011)	Management Development Institute (MDI) Gurgaon and School of Business, University of Connecticut, USA.	Management Development Institute, Gurgaon	7-8 January, 2011

23	Ram Prakash	DST-SERC School on "Theoretical Techniques in Atomic & Molecular Collision Physics"	ISAMP & DST Govt. of India	BITS, Pilani	10-28 January, 2011
24	Gurminder Singh, I. K. Dadheech	National Symposium on Application of various techniques in fluid dynamics (UGC Sponsored)	B.S.N.V. PG College, Lucknow	B.S.N.V. PG College, Lucknow	11-13 February, 2011
25	Roopali Sharma	National Seminar on Strengthening Cooperation in SAARC: In the Context of Non-Traditional Security Threats	University of Rajasthan & Indian Council of World Affairs, New Delhi	University of Rajasthan, Jaipur	11-12 February, 2011
26	Vibhuti Pandya	Comic Con-2011 (The First National Conference on Comics)	Indian Institute of Cartoonists, Bangalore	Delhi Haat, New Delhi	20 February . 2011
27	Dheeraj Bhardwaj	International conference on adaptive computer technologies in various engineering applications	Poornima college of Engineering, Jaipur	Poornima college of Engineering, Jaipur	24- 26 February, 2011
28	Ranjana Agrawal	National conference on "Sustainable Development of Water Resources and Environmental Management" SDWEM2011,	Shri Balaji College of Engg. And Technology, Jaipur	Shri Balaji College of Engg. And Technology, Jaipur	25 - 26 February, 2011.
29	Dheeraj Bhardwaj	National Conference on Micro and Nano Electronic Systems and Devices -2011	Vivekananda Institute of Technology, Jaipur	Vivekananda Institute of Technology, Jaipur	11- 12 March, 2011
30	Gurminder Singh, I. K. Dadheech	National workshop on Challenges before applied mathematician: Fluid Dynamics & Optimization Techniques	University of Rajasthan, Jaipur (UGC Sponsored)	University of Rajasthan, Jaipur	11-13 March, 2011

31	Ritu Pareek	National Conference on "Revisiting the Classics: Text, Context and (Re) interpretation"	Department of Mathematics & Humanities, Institute of Technology, Nirma University, Ahmedabad	Nirma University, Ahmedabad	25- 26 March, 2011
32	Ram Prakash, Dheeraj Bhardwaj	National Conference on Recent Advances in Physics & Technologies (NCRAPT-2011)	DST Govt. of U.P.	Agra College, Agra	26-27 March, 2011
33	P.K. Sharma, Santosh kumar Sharma	Workshop on Software Testing	Birla Institute of Technology, Mesra	Birla Institute of Technology, Mesra	March, 2011
34	Roopali Sharma	National Conference on Excellence in Higher Education	Indian Institute of Technology (IIT), Delhi	Indian Institute of Technology (IIT), Delhi	1-3 April, 2011
35	Seema Gaur	National Conference "WSCCT-2011"	Yagyavalkya Institute of Technology, Jaipur	Yagyavalkya Institute of Technology, Jaipur	15-16 April, 2011
36	Ravindra Kumar	National conference cum workshop on Recent Development in Engineering Materials	Birla Institute of Technology, Mesra	Birla Institute of Technology, Mesra	12 -14 May 2011
37	Ritu Pareek	Workshop on Getting Started With Your Research	ELTAI Rajasthan	MGD School, Jaipur	18 May, 2011
38	Shripal Vijayvargiya, Gurminder Singh, Vivek Gaur	13th International Conference of The International Academy of Physical Sciences CONIAPS – XIII	University of Petroleum and Energy Studies, Dehradun	University of Petroleum and Energy Studies, Dehradun	14-16 June , 2011

## PUBLICATIONS

### Published in International Journals

1. Gurminder Singh, P.R. Sharma, Steady MHD natural convection flow with variable electrical conductivity and heat generation along an isothermal vertical, Tamkang Journal of science and Engineering, 13(3) (2010) 235-242.
2. Anuj K. Jhankal, R. N. Jat, Amilal Kulhari Magneto Gas Dynamics Free Jet, Brunei Darussalan J. of Technology and Commerce, 5 (July 2010) 30-37.
3. A. K. Srivastava, Shashank Sharma, Harmeet Singh, M. Raja, H. K. Dwivedi, Optimization of sustain

- pulse parameters for luminous efficacy improvement in an AC plasma display panel, *Displays*, 31 (2010) 122-127.
4. A. K. Srivastava, Maharshi Samanta, S. Sharma, A. Rastogi, H. K. Dwivedi, Electrical discharge as an inspection method for imperfect plasma display cells, *Journal of Physics: Conference Series*, 208 (2010) 012113.
  5. A. K. Srivastava, Shashank Sharma, H. K. Dwivedi, Electrostatic analysis for designing of efficient discharge cell structures in AC plasma displays, *Journal of Electrostatics*, 68 (2010) 394-399.
  6. A. K. Srivastava, G. Prasad, Low frequency ionization waves in helium surface barrier glow discharge at atmospheric pressure, *Physics Letters A*, 374 (2010) 3960-3965.
  7. Anirudh Sahni, Abhishek Gautam, Assessment of Drinking Water Quality of Jaipur Main and Its Suburb Railway Stations with Special Mention to Fluoride, *Current World Environment*, 5 (2) (December,2010) 293-298.
  8. Ranjana Agrawal, Sharmila, Rupali, Volumetric determination of coenzyme Q 10 in pharmaceutical samples with ascorbic acid, *Journal of Chemistry and Chemical Sciences*, 1(1) (December, 2010) 21-28.
  9. Ranjana Agrawal, Physico Chemical characteristics of groundwater samples quality of Gangapur city town, Jaipur, Rajasthan, *Pollution Research Journal*, 29(4) (2010) 683-684.
  10. Anirudh Sahni, Abhishek Gautam "Assessment of Heavy Metal Toxicity in Soils nearby Municipal Solid Waste Dumping Site, Mathuradaspora-Jaipur", *Asian Journal of Experimental Science*, 25(1) (January, 2011) 55-58.
  11. Shripal Vijayvargiya, Pratyooash Shukla, A Structured Evolutionary Algorithm for Identification of Transcription Factor Binding Sites in Unaligned DNA Sequences, *International Journal of Advancements in Technology*, 2 (1) (2011) 100 – 107.
  12. Shripal Vijayvargiya, Pratyooash Shukla, Identification of Transcription Factor Binding Sites in Biological Sequences Using Genetic Algorithm, *International Journal of Research and Reviews in Computer Science*, 2( 2) (2011) 561 – 565
  13. Anuj K. Jhankal, R. N. Jat, Amilal Kulhari, Magnetogasdynamic Laminar Circular Jets, *Applied Mathematical Sciences*, Bulgaria (E U). 5 (21) ( 2011) 1007-1015.
  14. Shripal Vijayvargiya, Pratyooash Shukla, A Genetic Algorithm with Clustering for Finding Regulatory Motifs in DNA Sequences, *International journal of computer applications special issue on Artificial Intelligence Techniques, Novel Approaches & Practical Applications*, (2011) 6-10
  15. Madhavi Sinha, Swati Saxena, A study of Adaptive Replication Technique in routing time-constrained messages (VoIP) in MANET, *International Journal Of Computer Science & Engineering*, 3 (6) (2011) 2273-2285.
  16. Ram Prakash, U N Pal, P. Gulati, N. Kumar, M. Kumar, M. S. Tyagi, B. L. Meena, A K Sharma, Analysis of Discharge Parameters in Xenon Filled Coaxial DBD Tube, *IEEE Trans. Plasma Sci.*, 39 (2011) 1475-1481.

#### **Published in National Journals**

1. Ravindra Kumar, Ram Prakash, J Alphonsa, K S Boob, J Ghanshyam, P A Rayjada, P M Raole, S Mukherjee, Plasma nitriding of AISI 52100 ball-bearing steel and effect of the heat-treatment on the nitrided layer, *Bull. Mater. Sci.*, 34 (2011) 153-159.



### International Conference Proceedings

1. Gurminder Singh, P.R. Sharma, A.J.Chamkha, Stagnation point mixed convection flow and mass transfer in porous medium along a non-isothermal permeable vertical plate in presence of heat source/sink and chemical reacting specie, International Congress of Mathematicians, University of Hyderabad, Hyderabad, August 19-27, 2010.
2. Roopali Sharma, Emerging Trends and Prospects in India's Foreign Trade, Workshop on International Business Practices, PHD Chamber of Commerce & Industry and Konrad - Adenauer –Foundation Germany at Jaipur, September 7, 2010
3. A.K. Srivastava, Ram Prakash, K. S. Suraj, Shashank Sharma, Devendra Kachhwaha, Harmeet Singh, M. Raja, H. K. Dwivedi, Fast Rise-time asymmetric bipolar waveform for driving high luminous efficacy plasma displays, Asia Display, (IMID-2010) Kintex, Seoul, Korea, October 11-15, 2010.
4. Ritu Arora & Roopali Sharma, Collective Public-Private Approach to resolve energy crisis and stimulate related socio-economic development: A case study of recent oil exploration in Barmer region of India, International Conference on Sustainable Decision-Making in a Time of Crisis: Public and Private Perspectives, United Nations University, Tokyo and Asia Pacific Academy of Business in Society (APABIS), Griffith University, Australia, Tokyo, Japan, November 4-5 2010.
5. Shripal Vijayvargiya, Pratyosh Shukla, A Structured Genetic Algorithm for Finding Regulatory Motifs in Biological Sequences, International conference on computer engineering and technology ICCET-10, Jodhpur Institute of Engineering and Technology, Jodhpur, November 13-14, 2010
6. Anju Sharma, Madhavi Sinha, A Heuristic approach for multicast communication in MANETs, 12th International Conference of International Academy of Physical Sciences (CONIAPS XII) on Emerging Interfaces on Physical Sciences, University of Rajasthan, Jaipur, December 22 – 24, 2010
7. Archana Bhatnagar, Ashutosh Gupta, Trends and Challenges in Cloud Computing, 12th International Conference of International Academy of Physical Sciences (CONIAPS XII) on Emerging Interfaces on Physical Sciences, University of Rajasthan, Jaipur, December 22 – 24, 2010
8. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, S. Sancheti, Shorting pin loaded multi frequency broadband rectangular patch microstrip antenna with star shaped slot for wimax application, International Conference on Emerging Interfaces of Physical Sciences, at University of Rajasthan, Jaipur, December 22 - 24, 2010.
9. Ritu Arora, Role of Emerging Income Structure in Economic Sustainability of Banks in India, International Finance Conference (FINCON-2011), Management Development Institute (MDI) Gurgaon and School of Business, University of Connecticut, USA., MDI Gurgaon, January 7-8, 2011
10. Ram Prakash, A K Sharma, U. N. Pal, P. Gulati, Niraj Kumar, M. Kumar, M. S. Tyagi, B. L. Meena, Investigation of Discharge Parameters in Xenon filled Coaxial DBD Tube, Vacuum Electronics Conference (IVEC) 2011, IEEE International, Bangalore, February 21-24, 2011
11. Dheeraj Bhardwaj, Manish Kumar, Debashis Bandyopadhyay, Electronic Structure and Stability of  $\text{Hf@Ge}(n)$  ( $n=1-20$ ) clusters: A Density Functional Investigation, International conference on adaptive computer technologies in various engineering applications, Poornima college of engineering, Jaipur. February 24 - 26, 2011.
12. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, Multi frequency wide band pin loaded rectangular microstrip patch antenna with y shaped slot for future generation communication systems, International

conference on adaptive computer technologies in various engineering applications, Poornima college of engineering, Jaipur, February 24 - 26, 2011.

13. Dheeraj Bhardwaj, Komal Sharma, Deepak. Bhatnagar, Dual frequency broadband rectangular patch microstrip antenna with star shaped slot for wimax application, International conference on adaptive computer technologies in various engineering applications, Poornima College of engineering, Jaipur. February 24 - 26, 2011.
14. Shripal Vijayvargiya, Pratyosh Shukla, A Multi-Objective Genetic Algorithm for Identification of Regulatory Motifs in Biological Sequences, 13th International Conference of The International Academy of Physical Sciences CONIAPS – XIII, University of Petroleum and Energy Studies, Dehradun, June 14-16, 2011.
15. Gurminder Singh, Natural Convection along an inclined plate with Newtonian heating in the presence of transverse magnetic field, 13th International Conference of International Academy of Physical Science (CONIAPS XIII), University of Petroleum and Energy Studies, Dehradun, June 14-16, 2011.
16. Vivek Gaur, Responding to the Network Intrusions using Natural computing approach. 13th International Conference of The International Academy of Physical Sciences CONIAPS – XIII, University of Petroleum and Energy Studies, Dehradun, June 14-16, 2011.

#### **National Conference Proceedings**

1. Gurminder Singh, Numerical Solution of laminar flow and heat transfer between two parallel horizontal sheets, National Seminar on Recent Development in Fluid Dynamics and 14th P.D. Verma Memorial Lecture, University of Rajasthan, August 7-8, 2010.
2. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar S. Sancheti, Design of Multi Frequency Broadband Rectangular Patch Microstrip Antenna with Y Shaped Slot, National Conference on Advances in Wireless and Optical Communication Technologies, Poornima College of Engineering, Jaipur, August 7 – 8, 2010.
3. Gheesa Lal Vyas, Jalaj Jain, Ravindra Kumar, R Manchanda, Ram Prakash, Development of penning discharge source for establishment of a calibration technique for VUV spectrometer-detector system, 25th National symposium PSSI-10, Institute of Advance studies in Science and Technology (IASST), Guwahati, December 8-11, 2010.
4. Jalaj Jain, Gheesa Lal Vyas, Ravindra Kumar, R Manchanda, Ram Prakash, Opacity effect of photon emissivity coefficients (PECs) of neutral helium line emissions and its impact on line ratios, 25th National symposium PSSI-10, Institute of Advance studies in Science and Technology (IASST), Guwahati, December 8-11, 2010.
5. Ravindra Kumar, Ram Prakash, J. Alphonsa, Jalaj Jain, A. Pareek, Gheesa Lal Vyas, S. Mukherjee, Plasma Nitriding and Microstructure Study of Nickel Alloy, 25th National symposium PSSI-10, Institute of Advance studies in Science and Technology (IASST), Guwahati, December 8-11, 2010.
6. A. K. Srivastava, G. Prasad, Observation of self-excited ionization waves in a planar dielectric barrier discharge at atmospheric pressure, National symposium on Plasma Science and Technology, PLASMA-2010, IASST, Guwahati, December 8-11, 2010.
7. Shripal Vijayvargiya, Pratyosh Shukla, An Evolutionary Algorithm for Finding Variable Length Motifs in DNA Sequences, 51st Annual Conference of Association of Microbiologists of India AMI-2010, Birla Institute of Technology, Mesra, December 14-17, 2010

8. Rajni Agarwal, Sudhindra Kumar Sharma, Usha Jha, Impact of Contaminated Water on Environment, RGCRFE-2010, Poornima College of Engineering, Jaipur, December 18, 2010.
9. Ranjana Agrawal, Green fuels – Importance and future scope, National conference on Role of green Chemistry for Risk free environment, Poornima College of Engineering , Jaipur, December 18, 2010.
10. Alok Pandey, Aparajita Pandey, B.Pathak , Comparison of Various Network Congestion Control Techniques Using OPNET IT GURU 9.1, National Conference on Recent advances in Modern Communication Systems And Nanotechnology, Center for converging technologies, University of Rajasthan, Jaipur, January 6-8, 2011.
11. Dheeraj Bhardwaj, Anukriti Bansal, Ajay Sharma, Kamal Singh, Vikas Chaturvedi, Deepak Bhatnagar, Design of Pentagonal Patch Microstrip Antenna for Wireless Applications, National Conference on Recent Advances in Modern Communication Systems and Nanotechnology NCMCN-2011, University of Rajasthan, Jaipur, January 6 - 8 January, 2011.
12. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, S. Sancheti, Compact dual frequency broad band square patch with single notch microstrip antenna using shorting pin and shorting wall technique for wlan application. National Conference on Recent Advances in Modern Communication Systems and Nanotechnology NCMCN-2011, University of Rajasthan, Jaipur, January 6 - 8 January, 2011.
13. Roopali Sharma, Feasibility Study of Setting Up of Food Processing Zone (FPZ) and its Socio-Economic Implication, National Seminar on Agribusiness and Food Processing (IPF-2011), FORTI (Federation of Rajasthan Trade & Industry) and Ministry of Food Processing Industries, Government of India, Jaipur, January 7, 2011.
14. I. K. Dadheech, Gurminder Singh, Free convective flow and mass transfer through a porous medium bounded by infinite vertical porous plates in the presence of volumetric heat generation/absorption, National Symposium on Application of various techniques in Fluid dynamics, Department of Mathematics B.S.N.V. PG College, Lucknow & National Science Network (UGC Sponsored), February 10-12, 2011.
15. Roopali Sharma, Food Processing: An Emerging Element in New Perception of Food Security, National Seminar on Strengthening Cooperation in SAARC: In the Context of Non-Traditional Security Threats, University of Rajasthan & Indian Council of World Affairs, New Delhi , University of Rajasthan, Jaipur, February 11-12, 2011.
16. Gurminder Singh, P.R. Sharma, Heat transfer characteristics of a continuously stretching sheet with the sudden change in surface temperature, National Symposium on Application of various techniques in fluid dynamics (UGC Sponsored), Department of Mathematics, B.S.N.V PG College, Lucknow, February 11-13, 2011.
17. Ranjana Agrawal, Physico-chemical Analysis of some Groundwater Samples of Shahpura town Jaipur, Rajasthan, National conference on Sustainable Development of Water Resources and Environmental Management (SDWEM2011), Shri Balaji College of Engg. And Technology, Jaipur, February 25 - 26, 2011.
18. Bhawna Agarwal, Neha Goel, Performance and two dimensional modelling of fully depleted double gate SOI MOSFET, National Conference on Recent Advances in Microwave Tubes Devices and Communication System, JNIT, Jaipur and IEEE , March 4-5, 2011.
19. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, Radiation from rectangular patch Microstrip antenna

- with star shaped slot with and without shorting wall, National Conference on Micro and Nano Electronic Systems and Devices -2011, Vivekananda Institute of Technology, Jaipur, March 11-12, 2011.
20. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, Multi frequency Wide Band Modified Square Patch Antenna for Next Generation Communication Systems, National Conference on Recent Advances in Physics & Technologies (NCRAPT-2011), Agra College, Agra, March 26-27, 2011.
  21. Ritu Pareek, Preeti Bhatt, Goblin Market: A Psychoanalytical Reinterpretation, National Conference on Revisiting the Classics: Text, Context and (Re) interpretation, Ahmedabad, March 25 - 26, 2011.
  22. Dheeraj Bhardwaj, Saket Suman, Ritika Kapoor, Nehal Gupta, Shruti Mehrotra, Komal Sharma, Deepak Bhatnagar, Dual Frequency Dual Band Rectangular Patch Microstrip Antenna with U Shaped Slot for WiMax Application, National Conference on Emerging Trends in Wireless Communication (NCETWC-2011), Regional College for Education, Research and Technology, Jaipur, March 26 -27, 2011.
  23. Ram Prakash, Recent Advances in Plasma Science and Technologies, National Conference on Recent Advances in Physics & Technologies (NCRAPT-2011) , Agra College Agra , March 26-27, 2011.
  24. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, Multi frequency Wide Band Modified Square Patch Antenna for Next Generation Communication Systems, National Conference on Recent Advances in Physics & Technologies (NCRAPT-2011), Agra College Agra , March 26-27, 2011.
  25. Dheeraj Bhardwaj, Komal Sharma, Deepak Bhatnagar, Radiation from M- Shaped Microstrip Antenna with Variable Air Gap, National Conference on Emerging Trends in Wireless Communication (NCETWC-2011), Regional College for Education, Research and Technology , Jaipur, March 26 -27, 2011
  26. Roopali Sharma, New Markers of Student Motivation in higher Education: Cohesion of Knowledge, Intellect & Professional Attributes, National Conference on Excellence in Higher Education, Indian Institute of Technology (IIT), Delhi, April 1-3 , 2011.
  27. Om Prakash Rishi, Madhu Sharma, Ravindra Kumar, Ram Prakash, Case Based Reasoning for Identification of Process Parameters in Plasma Nitriding Process, RDME 2011, Birla Institute of Technology, Mesra, May 12 - 14, 2011.
  28. Ravindra Kumar, Ram Prakash, J. Alphonsa, Jalaj Jain, A. Pareek, P.A. Rayjada, P.M. Raole, S. Mukherjee, Impact of forging conditions on plasma nitrided hot-forging dies and punches, RDME 2011, Birla Institute of Technology, Mesra, May 12 - 14, 2011.

#### **Poster Presentation in National Conference**

1. Jalaj Jain, Ram Prakash , Pooja Gulati, N. Kumar, U. N. Pal, M. Kumar, M.S. Tyagi, B.L. Meena, A.K. Sharma, Study of discharge parameters in He-DBD using line-ratio method, poster presentation in the 25th National Symposium on Plasma Science and Technology (Plasma-2010) , IASST, Guwahati, December 8-11, 2010.
2. Ram Prakash, U. N. Pal, Pooja Gulati, N. Kumar, M. Kumar, M.S. Tyagi, B.L. Meena, A.K. Sharma, Comparative analysis of discharge in Xenon filled coaxial DBD sources, poster presentation in the 25th National Symposium on Plasma Science and Technology (Plasma-2010), IASST, Guwahati, December 8-11, 2010.
3. Ram Prakash, U. N. Pal, Pooja Gulati, N. Kumar, M. Kumar, M.S. Tyagi, B.L. Meena, A.K. Sharma, Analysis of discharge parameters in Xenon filled coaxial DBD tube, poster presentation in the 25th

National Symposium on Plasma Science and Technology (Plasma-2010) , IASST, Guwahati, December 8-11, 2010.

5. Dheeraj Bhardwaj, Komal Sharma, D. Bhatnagar, S. Sancheti , Multi Frequency Triple Band Rectangular Patch Microstrip Antenna with T Shaped Slot for WiMax Application, poster presentation in the National Conference on Recent Advances in Modern Communication Systems and Nanotechnology NCMCN-2011, University of Rajasthan, Jaipur, January 6 - 8 January, 2011.

#### **Books Authored**

1. Archana Bhatnagar, Software Engineering, Ajmera Book Company, Jaipur, 2010.
2. Anuj K. Jhankal, R. S. Khandelwal, Operations Research, first ed., College Book Centre, Jaipur, 2011

#### **Chapter contributed to Edited Volume-Published by International Level Publishers**

1. Shripal Vijayvargiya, Neha Kumari, MVK Karthik, Puneet Singh, Pratyosh Shukla, Molecular docking approaches for improvement in catalytic site binding of industrial chitinases from *Trichoderma harzianum*, Dr.Vivek Bajpai, Pallavi Sharma, Dr. Vijai Kumar Gupta, Recent Trends in Microbial Biotechnology, Lambert Academic Publishing, Germany, 2010, ISBN : 978-3-8433-9002-6

#### **Chapter contributed to Edited Volume-Published by National Level Publishers**

2. Roopali Sharma, Foreign Direct Investment (FDI)- Trends and Implications on Nepalese Economy, Dr. B.C. Upreti, State and Democracy in Nepal, Kalinga Publications, 2011, ISBN: 978-81-87644-85-9.

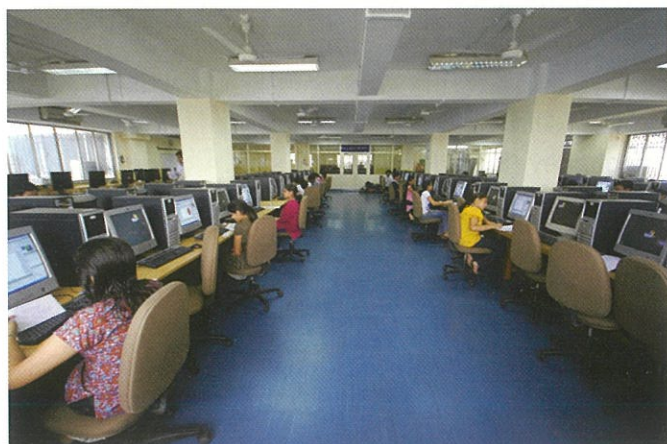
#### **Award / Recognition Bestowed on Faculty (National)**

<b>Sl. No.</b>	<b>Name of the Faculty</b>	<b>Title of the Award/ Hon ours</b>	<b>Organization</b>	<b>Year / Duration</b>
1	Anand Kumar Srivastava Applied Physics Dept.	PSSI Poster Award in the 25 <sup>th</sup> National Symposium on Plasma Science and Technology	Plasma Science Society of India (PSSI)	December 8-11 2010
2.	Jalaj Jain, Ravindra Kumar, Dr. Ram Prakash Applied Physics Dept.	PSSI Poster Award in the 25 <sup>th</sup> National Symposium on Plasma Science and Technology	Plasma Science Society of India (PSSI)	December 8-11, 2010
3.	Dr. Dheeraj Bhardwaj Applied Physics Dept.	Second Prize for Poster Presentation in National Conference on Recent advances in Modern Communication Systems And Nanotechnology	University of Rajasthan	January 6-8, 2011

**Departmental Students' Activities:**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	<b>Vibration 10:</b> (Cultural & Art Fest) An expression of vibrating enthusiasm and artistic talent of BIT Jaipur Campus students.	Harshit Malaviya (MBA IV) Anu Mangal (BE VIII ECE) Moksha Manghaney (BE VIII ECE) Dhrupad Srivastava (BE VII CSE) Samreen Zehra (BE VII CSE) Gaurangi Gupta (BE VII ECE)	October 28-30, 2010  3 days
2	<b>TechVibes 11 :</b> (Technical Fest) An event that stimulate minds to innovate and practically realize knowledge and ideas. The rich technical legacy of BIT gets new expressions in TechVibes.	Saket Suman (BE VIII ECE) Ritika Kapoor (BE VIII ECE) Piyush Agal (BE VIII CSE) Arjun Aggarwal (BE VIII CSE) Narendra S. Meena (MBA IV) Karan P. Singh (B.Sc. –A&M VI)	February 4-8, 2011  5 days
3	<b>Cavorts 11 :</b> (Sport Fest) An event to develop Physical, Mental, Competitive and Team Spirit strength. All these significantly contribute in professional career.	Sourajit Ghosh (BE VIII ECE) Harshvardhan (BE VIII CSE) Mohit pratap (BBA VI) Garvit Bothra (BBA VI)	February 7-9, 2011  3 days

## KOLKATA



Computer Lab.

BIT- Mesra, Kolkata Campus focuses on two major thrust areas along with two cross-cutting focal areas. With its programme structure, it deliver and co-ordinate education in developing knowledge in Management and Technology. The two cross-cutting focal areas are Sustainable Industrial Development and Marketing with State Governance System. The emphasis on entrepreneurial zeal and technology education through knowledge management gives a human touch to technology.

Through the project work in every discipline, BIT-Mesra, Kolkata Campus caters to the real needs of our rural society and disadvantaged sections. It is not

unduly preoccupied with industrial and business administration. The plan of our Technical Education also has an interventionist and catalytic role which perform in the areas of planning, development and governance.

In our present day thrust area we are giving priority to interdisciplinary research and activities like e-governance, disaster management, GIS-remote sensing.

Programmes offered :

1. MCA	2. MBA	3. MSC in BIOINFORMATICS
4. BBA	5. BCA	6. MBA Part Time
7. MTech (CS) for Working Professional		

New Programmes Introduced :

1. 5 Year Integrated MBA	2. 5 Year Integrated MCA
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Infrastructure Added :

1. Standing PA system : 2 nos.
2. Microprocessor Kit 8085 and 8086 : 23 nos
3. Software
4. New book added to the Library : 1211
5. Internet dedicated leased line upgraded from 2 Mbps to 3 Mbps

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Monitoring Air Pollution Using GIS and Sensor Technology	Dr. Ajanta De Sarkar (Co-PI)	UGC	Recommended on June 2011 Proposal presented on March 2011 Applied on September 2010	10,59,800/-	3 years



**Projects Completed during the period July 2010-June 2011**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Development of a PC-based Geo-referencing Software	Ambar Dutta (PI) / R. T. Goswami (Co-PI)	DST	3.3.2008	8.14 lakhs	2 years

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	International Conference on Emerging applications Of IT (EAIT 2011)	RT Goswami, Tutorial Chair	CSI Kolkata Chapter alongwith BIT Kolkata Campus	February 17 – 19 2011
2	National Seminar on 21 <sup>st</sup> Century Learning –Educating students in a changing world	Dr Ruchira Mukherjee, Organizing Chair	BIT Kolkata and GE Healthcare	April 6 2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/ Seminar..	Organized by	Venue	Date , Month, Year
1	Radha Tamal Goswami	National Seminar on 21 <sup>st</sup> Century Learning –Educating students in a changing world	BIT Kolkata Campus	BIT Kolkata	6, April, 2011
2	Radha Tamal Goswami	International Conference on Emerging applications Of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011
3	Subho Chaudhuri	International Conference on Emerging applications Of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011
4	Ajanta De Sarkar	International Conference on Emerging applications of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011
5	Ambar Dutta	International Conference on Emerging applications of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011
6	Rohit Kamal Chatterjee	International Conference on Emerging applications of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011

7	Ruchira Mukherjee	International seminar entitled "Computational Chemistry, Drug Discovery and Design	Presidency College	Presidency College	December, 2010
8	Ruchira Mukherjee	National Seminar on 21 <sup>st</sup> Century Learning –Educating students in a changing world	BIT Kolkata Campus	BIT Kolkata	6, April, 2011
9	Sraboni Dutta	National Seminar on 21 <sup>st</sup> Century Learning –Educating students in a changing world	BIT Kolkata Campus	BIT Kolkata	6, April, 2011
10	Sanchita Ghosh	National Seminar on 21 <sup>st</sup> Century Learning –Educating students in a changing world	BIT Kolkata Campus	BIT Kolkata	6, April, 2011
11	Soumendra Bhattacharjee	Effective Leadership and Team Work	Indian Society for Training and Development, Kolkata Chapter	Kolkata	18, September, 2010
12	Soumendra Bhattacharjee	Train the Trainer	Indian Society for Training and Development, Kolkata Chapter	Kolkata	14, May, 2011
13	Ranadeep Mukherjee	International Conference on Emerging applications Of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011
14	Soumya Ray	International Conference on Emerging applications Of IT (EAIT 2011)	CSI Kolkata Chapter	BIT Kolkata and Science City Kolkata	17-19, February, 2011
15	Ajanta De Sarkar	Cloud Computing	Computer Chapter of IEEE Calcutta Section and Jadavpur University	Jadavpur University	13, December, 2010

## PUBLICATIONS

### Published in International Journals

1. Ambar Dutta, B. N. Chatterji and Avijit Kar, "A Two Stage Approach to Corner Matching using Fuzzy Similarity Measure", International Journal on Information Processing, pp 1 – 8, Vol. 4, No. 3, 2010.

2. Ambar Dutta, B. N. Chatterji and Avijit Kar, "A New Approach to CornerMatching from Image Sequence using Fuzzy Similarity Index", Pattern Recognition Letters, pp 712 – 720, Vol. 32, No. 5, 2011
3. Ambar Dutta, B. N. Chatterji and Avijit Kar, "Adaptive Window-based Corner Detection Algorithm for Gray-scale Images", IETE Journal of Research, to be published in May-June 2011 issue
4. Sanchita Ghosh, "On Hydromagnetic Channel Flow of a Rotating Two-Phase Fluid Induced by Tooth Pulses", IAENG Int. J. Appl. Math, Vol 41,1, 2011.
5. Sanchita Ghosh, An Evolutionary Approach to Velocity and Traffic Sensitive Call Admission Control, Accepted to appear in Intelligent Decision Technologies Journal (IDT) 2011
6. Sanchita Ghosh Call Management in a Cellular Mobile Network Using Fuzzy Comparators, Accepted to appear in Knowledge-Based and Intelligent Engineering Systems (KES) 2011
7. Paromita Raha, Suranjana Chattopadhyay, Srijata Mukherjee, Ruchira Chattopadhyay, Koushik Roy, and Siddhartha Roy. 2010, Alternative Sigma Factors in the Free State Are Equilibrium Mixtures of Open and Compact Conformations, Biochemistry, 49, 9809-9819

#### **Published in National Journal**

1. Banerjee S. and Dutta S. (2010). A Stakeholder Perspective towards Evaluating Ethical Behaviour in Small firms, Survey, Vol 50 (3&4), ISSN: 0586-0008
2. Soumendra Bhattacharjee, April, 2011, "HR Issues in Tea Industry : A Micro Level Case Study" Contemporary Issues in Human Resource Management ISBN: 978 – 81 – 920513 – 0 – 7 Page 465 – 468.
3. Banerjee S. and Dutta S. (2010). Comparative Study of Nature of Small Businesses: Definitional Issues, Pragya, Academic Journal of Khudiram Bose Central College, Kolkata.

#### **Papers/Abstracts in Conference Proceedings**

1. Deepanwita Das and S. Mukhopadhyaya "An Algorithm for painting an Area by Swarm of Mobile Robots," in Proc. International Conference on Control, Automation and Robotics (CAR 2011), 2011, Global science and technology Forum, Singapore, 2011.
2. Rohit Kamal Chatterjee Proceedings of the IASTED International Conference Computational Bioscience (CompBio 2010) November 1 - 3, 2010 Cambridge, Massachusetts, USA. Title: "AN ANATOMY GUIDED HYBRID DEFORMABLE MODEL FOR RECONSTRUCTION OF BRAIN CORTEX FROM MR IMAGE"
3. Soumendra Bhattacharjee, Presented a Paper titled "HR Issues in Tea Industry : A Micro Level Case Study" at the National Conference on HRM, 2011 Organized by the Management Development Research Foundation, Delhi on 03.04.11
4. Dutta, S. and Banerjee, S. (2010). A Study of Customer Ethics in Small Businesses at the LCBR European Marketing Conference, Munich, Germany on 3rd -4th June 2010, ISSN 2190-7935.
5. Sraboni Dutta, Presented the paper "Ethical Practices towards Employees in Small Enterprises" at the 1st International Conference on Business, Strategy & Management (ICBSM) at the Veloxian Learning & Consultancy in June 2011.

### Award / Recognition Bestowed on Faculty

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Sraboni Dutta	Special Recognition Award for the paper "A Study of Customer Ethics in Small Businesses"	LCBR European Marketing Conference 2010, Munich, Germany.	2010
2	Sraboni Dutta	Fulbright Scholar –in –Residence Programme		2012(4 months)

### Departmental Students' Activities

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1	Blood Donation Camp	DISHA GROUP	September 2010
2	Social / Freshers Welcome	2 <sup>nd</sup> year student of all batch	October 2010
3	Cricket Tournament	MCA/BCA	January 2011

### Development of Learning Materials

Learning materials	Name of Subject/Course / Programme	Where and When used
Technology- enhanced Learning	Class room assignment, learning materials	In the class room during teaching, presentation by the student
Others	"Enterprise Resource Planning" of Birla Institute of Technology, Kolkata Campus	Birla Institute of Technology, Mesra, Kolkata Campus In-progress Commenced on August 2010.

No of summer trainees trained in the Department during July 2010 to June 2011 – 26

## LALPUR



Main Building

The Institute first started a Centre for Continuing Education at Lalpur in Ranchi, initially with part-time postgraduate M.E. courses in the disciplines of Mechanical, Civil, Electrical and Electronics engineering for the benefit of working professionals employed in various Ranchi based public and private sector undertakings who aspired to upgrade their qualification. Part-time evening courses were offered for first the M.E. then subsequently the MBA, MCA, and DCA courses, with laboratory classes being conducted on Sundays and holidays at the MESRA campus. This Centre is now named as BIT Lalpur Campus.

In 1997 the Institute started the full time courses B.Sc. Computer Science and B.Sc. Electronics course for girls and in 1998 the BCA course also for girls only. Because of its' success, in 1999 two extra shifts were added to run the BCA course for boys also. In 1999, M. Sc. Information Technology and M.Sc. Electronics and Telecommunication courses were introduced again for girls only. In 1979, the institute started the MBA as a Part time course for the working professionals. From the current session 2011-12 two new courses Integrated MBA and Integrated MCA courses have been introduced, the Lalpur Extension Centre has over 1800 students on its rolls of which almost 500 are post graduate students.

With a mission and commitment to be recognized as a leading centre for education, the quality of the courses imparted is of paramount importance to the centre. The centre is continually striving to impart best possible management and computer technology education to students. The core team of faculty members of the concerned departments, who posses excellent academic and corporate experience, share the responsibility with the adjunct faculty drawn from the different departments of BIT and also a number of distinguished visiting academicians and industry professionals.

The challenging and innovative course curriculum of computer science and management, aims to develop the knowledge, skills and competencies to enable the students to succeed in the corporate sector. The education provides the students with a traditional knowledge base in conjunction with the most recent progression of the field and extends cross functional awareness. A range of educational methods are used such as lectures, group discussions, case studies, presentations and projects along with intensive on the job industrial training, frequent industrial visits and foreign language learning. The students also actively engage themselves in various extracurricular activities through self-run societies, giving them opportunity for overall personality developments.

To support the needs of the students, research scholars and the faculty the institute has an access to an excellently established library with books, journals and periodicals. The library functions on an open access system for the faculty members and the research scholars and remains open from 8:30 AM to 8:30 PM, on all working days. The institute library has electronic access through the internet to a large numbers of online journals. The library has also developed an extensive CD-Database of back volumes and abstracts of leading books in computer science and management. The centre also has two large computer laboratories with 170 PCs all connected in LAN, and latest software.

The Placement activities are carried out by a dedicated placement cell, comprising a team of training and placement student coordinators under the guidance of T&P division BIT MESRA, which has initiated in overwhelming response in the placements. All possible guidance and support is offered to the students resulting in a rewarding placement level. Accepted as a premier centre for technical and management education, the centre has been successfully placing the students consistently in the reputed organizations like: INFOSYS, HCL Technologies, TCS, COGNIZANT, ACCENTURE, WIPRO, GOLDMAN SACHS etc and the management students in HCL Infosystems, HCL Commnet, ICICI, UTI, Goodyear, Pantaloon, IDBI, Reliance, ISPAT Industries, Bluestar etc.

As for support service, the centre has a UCO Bank branch and a medical centre with qualified doctors and nurses with proper supporting facilities to meet any medical emergency needs. The institute also has a hygienic canteen facility to meet the food requirements of the staffs and the students which is also properly administered. With the educational and extra curricular activities duly supported by the requisite facilities the ultimate aim of the centre is to provide to the students, a full range of academic and professional competence necessary to succeed in a challenging career and adapt with the changing corporate needs.

## **SPONSORED PROJECTS**

### **Ongoing projects sanctioned before July 2010**

<b>Project Title</b>	<b>PI/Co PI/ Collaborator, if any</b>	<b>Funding Agency</b>	<b>Date of sanction</b>	<b>Sanction Amount</b>	<b>Duration of the Project</b>
"Exploring the Career Journey of 'High Flyer' Managerial and Professional Women: Tribal and Non tribal Women of Jharkhand"	Ms. Anupma Sahai	Indian Council for Social Science Research (ICSSR) (Ministry of Human Resource Development), New Delhi	1 <sup>st</sup> February, 2010	Rs. 5,42,875	2 Years

### **Projects completed during the period July 2010 -2011**

<b>Project Title</b>	<b>PI/Co PI/ Collaborator, if any</b>	<b>Funding Agency</b>	<b>Date of sanction</b>	<b>Sanction Amount</b>	<b>Date of Completion of the Project</b>
Development of Metric Suite for Object – Oriented Software Design	Dr. V. Bhattacharjee	University Grants Commission	1.4.2008	Rs. 3,38,800	1.4.2011

**Conferences/Seminar/Workshops/ Staff Development Programmes/ Orientation Programme/ Refresher Courses etc. Attended**

Sl. No.	Name of the Faculty	Title of the Conference/ Seminar...	Organized by	Venue	Month, Date, Year
1	A. R. Srivastava	ICBE 2011-"Innovation & Creativity for Business Excellence"	ISM Dhanbad	ISM Dhanbad	Feb 17-18, 2011
2	Dr. Pranab Kumar	International Conference on Practice & Research in Management	Department of Management, Faculty of Social Science, Dayalbagh Educational Institute, Dayalbagh, Agra	Department of Management, Faculty of Social Science, Dayalbagh Educational Institute, Dayalbagh, Agra	Feb. 18-20, 2011
		National seminar on Innovation & creativity for Business Excellence	Department of Management, Indian school of Mines, Dhanbad	Department of Management, Indian school of Mines, Dhanbad	Feb. 17-18, 2011
3	Ms. Anupama Sahai	The Eight AIMS International Conference on Management	IIM Ahmedabad & AIMS	IIM Ahmedabad	January 1-4 2011
4	Mr. Ashutosh Mishra	Orientation Course	UGC-sponsored; UGC-ACADEMIC STAFF COLLEGE, Ranchi	Ranchi university, Ranchi Jharkhand	3 <sup>rd</sup> May – 30 <sup>th</sup> May, 2011s
		Refresher Course	UGC-sponsored; UGC-ACADEMIC STAFF COLLEGE, Ranchi	Ranchi university, Ranchi Jharkhand	10-6-2011 to 30-6-2011
5	Ms. Swati Priyadarshani	Refresher course in Financial Management	UGC-sponsored; UGC-ACADEMIC STAFF COLLEGE, Ranchi	Ranchi university, Ranchi Jharkhand	10-6-2011 to 30-6-2011
6	Dr. V. Bhattacharjee	International Congress on Productivity, Quality, Reliability, Optimization and Modeling	Quality Council of India, DRDO, ISI Delhi	New Delhi	February, 7-8, 2011
7	ONIMA TIGGA	FUNDAMENTALS OF SOFT COMPUTING	BIT, DEOGHAR CAMPUS	BIT, DEOGHAR CAMPUS	3 <sup>rd</sup> & 4 <sup>th</sup> SEP, 2010



8	N. P. Tiwary	International Conference on Computing & Systems (ICCS)	Department of Computer science, University of Burdwan, India.	Burdwan	November, 19-20, 2010
9	K.Mukherjee	International Conference on Computing & Systems (ICCS)	Department of Computer science, University of Burdwan, India.	Burdwan	November, 19-20, 2010
10	Jaya Pal	International Conference On Computing and Systems 2010	University of Burdwann	Department of Computer Science	November 19-20, 2010
11	Mr. P.S Bishnu	workshop on soft Computing and applications (WSCA'11)	ISI, ITER and SOA University, Bhubaneswar	SOA University, Bhubaneswar	January 13 -15, 2011
		Software fault Prediction using K Medoids Algorithm, ICPQROM-2011	Indian Statistical Institute, Delhi	Indian Statistical Institute, Delhi	Feb, 7-8, 2011

## PUBLICATIONS

### Published in International Journals

1. A.N. Jha, Ms Tanushree Bhatnagar & H.K. Singh, July' 10 – Dec'10 "Use of Information & Communication Technologies (ICT's) in E-Governance: A Review" International Journal of Emerging Technologies and sciences (IJ-ETA-ETS) ISSN: 0974-3588, Volume 3: Issue 2
2. P S Bishnu, V Bhattacharjee, March, 2011, Application of K-Medoids with Kd-Tree for Software Fault Prediction, ACM SIGSOFT Software Engineering Notes, Vol. 36, Issue2,pp. 1-6.
3. M. S. Neogi, V. Bhattacharjee, R. Mahanti August 2010 "A Study on Pair Programming and Early Testing Skills of Students" International Journal of Applied Research on Information Technology and Computing (IJARITAC), Vol. 1 Issue 2, pp. 224-232 (Indianjournals.com)
4. V. Bhattacharjee and J. Pal :Applying Fuzzy Clustering to predict Software usability"International Journal of Applied Research on Information Technology and Computing (IJARITAC), September - December 2010, Vol. 1 Issue 3, pp. 279 – 289 (Indianjournals.com)
5. Priyam, B.M. Karan, G. Sahoo, September 2010, "Application of Fuzzy Composition Relation for DNA Sequence Classification" International Journal of Computer Science and Information security, 8 (6) 145-148.
6. Dr. Pranab Kumar, Nitesh Bhatia, 2011, Human Resource Audit: Scope & Applicability in Government Departments; Scientific Forestry, An International Online Journal; [www.scientificfor.org/Journal](http://www.scientificfor.org/Journal) Vol. 1, No.1
7. K. Mukherjee, G.Sahoo, "Development of Mathematical Model for Market Oriented Cloud Computing", International Journal of Computer Applications (0975- 8887), Foundation of Computer science, New

York, USA, Vol. 9, No. 11, November 2010.

8. K.Mukherjee, G.Sahoo, "Green Cloud: An Algorithmic Approach", International Journal of Computer Applications (0975- 8887), Foundation of Computer science, New York, USA, Vol. 9, No. 9, November 2010.
9. K.Mukherjee, G.Sahoo, "Cloud Computing: Future Framework for e-Governance", International Journal of Computer Applications (0975- 8887), Foundation of Computer science, New York, USA, Vol. 7, No. 7, October 2010.
10. Umesh Prasad, "IT APPROACH FOR ENERGY MANAGEMENT IN ELECTRICAL DEMAND" page no. 20-28 INTERNATIONAL Journal of Management(IJM), ISSN 0976-6502(Print), ISSN 0976-6510(Online) Volume 1, Number 2, July-Aug(2010) © IAEME, <http://www.iaeme.com/ijm.html>

#### **Published in National Journals**

1. Dr. Pranab Kumar, Madhuri Mahato, 2011, "Forced Entrepreneurship – A Recessionary Career Call"; Pragyaan, Vol.8, Issue 2
2. Dr. Pranab Kumar, Madhuri Mahato, 2011, "Emotions – An emerging workplace egression"; Personnel Today, Vol. XXX, No. 4
3. Dr. Pranab Kumar, Nitesh Bhatia, 2010, "Human Resource Audit-A Concrete Scaffold", Growth, Vol. 37, No. 4, pp. 33-37

#### **Paper/ Abstracts in Conference Proceedings**

1. P S Bishnu, V Bhattacharjee, Feb, 2011, Software fault Prediction using K Medoids Algorithm, ICPQROM-2011, Indian Statistical Institute, Delhi, pp. 191.
2. V. Bhattacharjee, Dr. P. K. Mahanti, Musbah M. Aqel and Vinay Singh, Hidden Coupling and Its Impact on Software Reliability: An Analysis Accepted for presentation in 3rd International Conference on Future Computer and Communication, ICFCC 2011, June 3-5, 2011, Romania
3. M. Sharma and V. Bhattacharjee, "TEMPOS Based Humidity Sensor: Neural Network Approach" Proceedings of International Conference on Next Generation Communication and Computing Systems, December 25-26, 2010, Chandigarh, India, pp. 306 –
4. V. Bhattacharjee and V. Singh, "Reduction of Redundancy by Identifying Hidden Coupling" Proceedings of International Conference on Next Generation Communication and Computing Systems, December 25-26, 2010, Chandigarh, India, pp. 89 - 91
5. J. Pal and V. Bhattacharjee, "Movie Analyzer using Fuzzy Rule Based System" Proceedings of International conference on Computing and Systems, ICCS 2010, November 2010, Burdwan, India, pp. 16-21
6. Anupma Sahai, "Exploring the Career Experiences of Fast Track Women Professionals in Jharkhand", Proceedings of The Eight AIMS International Conference on Management, IIM Ahmedabad, January 1 – 4, 2011

### Student's Activities

INTERACT SOCIETY (Breaking the ice)	Quest 2K10, Forze season II
DEBATING SOCIETY (Break out of your shell)	Catalyst 2010
NEWS AND PUBLISHING SOCIETY (We promote talent)	Bold and Beautiful, Collage
FINE ART SOCIETY (Zoom your creativity)	Tatto Making
R&D WING (Dare to think different)	
BIZWIT SOCIETY (Know- L- Edge)	
IT SOCIETY (Engineered for enduring Excellence)	Dr. Debug, General awareness C/C++, Java, Oracel, Graphic Wizard Tecnovalours

### Any other important information

1. Anupma Sahai, Chaired the Session on "Women Professionals", 3 D – 5 Monday, January 3, 3:35 – 4:45 PM, The Eight AIMS International Conference on Management, IIM Ahmedabad, January 1 – 4, 2011

## NOIDA

### INTRODUCTION

Having felt the urgent need of a centre for diversified and advanced educational research, consultancy and training of human resources in IT and Management technology in the Northern Zone, BIT Mesra in the year 1998, established one of its extension centres at NOIDA. This is in advantageous position compared to other extension centres of BIT in terms of its location- near capital region and gateways to many IT companies at Greater NOIDA, Gurgaon and Delhi besides NOIDA. The curricula of all the credit based flexible programmes are carefully reviewed, updated, upgraded, diversified and are in pace with the needs of the industrial scenario of this country, with the help of BIT main campus. Starting with its humble beginning with a few students in BCA course, the centre is now imparting quality education to more than 1000 students through various academic programmes, both graduate and post-graduate, in Management, Computer Science and Animation & Multimedia. The campus registers scholars for Ph.D. programmes in Management & Computer Science. While the centre has a strong core faculty in all the related subjects, it has the location advantage to engage guest faculty from the Industry and other academic institutions for specialized lectures. Its placement cell is very active in getting the students placed with the Industry.



Main Building

### Programmes Offered:

1. Bachelor of Business Administration (BBA) – 3 years (6 semesters)
2. Bachelor of Business Administration (Business Economics) – 3 years (6 semesters)
3. Bachelor of Computer Application (BCA) – 3 years (6 semesters)
4. Bachelor of Science - Animation & Multimedia (BAM) – 3 years (6 semesters)
5. Masters in Computer Application (MCA) – 3 years (6 semesters)
6. Masters in Business Administration (MBA) – 2 years (4 semesters)
7. Masters in Animation & Multimedia (MAD) – 2 years (4 semesters)
8. Masters in Technology (M.Tech) Computer Science – 3 years (6 semesters) – weekend programme
9. Masters in Business Administration (MBA) – 3 years (6 semesters) – weekend programme
10. Doctor of Philosophy (Ph.D.) in Computer Science & Management – Full time & part time

**SPONSORED PROJECTS****Project Sanctioned during July 2010- June 2011**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Routing Protocol for Mobile Ad-Hoc Network	Ms. Charu Wahi	UGC	12 <sup>th</sup> Feb' 2011	Rs.90,000/-	1 year

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	National Conference on "Information & Communication Technologies: Opportunities & Challenges in 21 <sup>st</sup> Century	Ms. Charu Wahi & Mrs. Siba Mitra	DST	4 <sup>th</sup> – 5 <sup>th</sup> Feb'2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended, For example:**

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date , Month, Year
1.	Mr. Niket Mehta	Conference on Higher Education	IIT Delhi	New Delhi	1 <sup>st</sup> – 2 <sup>nd</sup> Apr'2011
2.	Ms. Meenakshi Sharma , Ms. Shruti Kohli Mr. Anurag Joshi	National Workshop on Leveraging Technologies using ERP & Open Source Technology	Technia Institute, New Delhi	New Delhi	25 <sup>th</sup> Mar'2011
3.	Ms. Rachana Prateek	Spring Membership Meet Institute of International Finance, Washington DC	Taj Palace	New Delhi	1 <sup>st</sup> – 4 <sup>th</sup> Mar'2011
4.	Dr. Monika Bisht, Ms. Preety Bajaj	FDP on SPSS and Business Data Analysis	Jaipuria Instt. Of Management, NOIDA	Noida	25 <sup>th</sup> – 26 <sup>th</sup> Feb'2011
5.	Mr. Lalit M. Bhatt, Mr. Aroop Kerketta	Adobe Digital Video Tour.	Adobe India	India Habitat Center, Lodhi Rd., New Delhi.	25th February 2011.
6.	Mr. Arun Mittal	Globalization and Consumer Protection" (ICGCP 2011)	Kalasalingam University, Virudunagar, Tamilnadu	Tamilnadu	2011

7.	Mr. Arun Mittal	Business Intelligence: An Alignment of IT and Management	Institute of Management and Technology, Faridabad, Haryana.	Haryana	2011
8.	Dr. S.L. Gupta	Second International Conference on Globalization and Consumer Protection – Challenges and Strategies	Kailasalingam University,		2011
9.	Dr. S.L. Gupta, Mr. Arun Mittal	National Conference on Contemporary Issues in Marketing and Intellectual Property Rights	University of Management Studies, Guru Gobind Singh Indraprastha University		2011
10.	Dr. S.L. Gupta	National Conference on Effective Management : Emerging Issues and Future Prospects "NCEM, 2011"	Institute of Management Education, Ghaziabad	Ghaziabad	2011
11.	Dr. S.L. Gupta, Mr. Arun Mittal	National Seminar on Social Empowerment Through Legal Awareness in Knowledge Based Society: Issues & Concerns	Department of Commerce, JVMGRR College, Dadri	Haryana	2011
12.	Mr. Niket Mehta	National conference on Information and Communication Technologies: Opportunities & Challenges in 21 <sup>st</sup> Century	BIT Noida	Noida	4 <sup>th</sup> – 5 <sup>th</sup> Feb'2011
13.	Mr. Partha Acharya	National conference on Information and Communication Technologies: Opportunities & Challenges in 21 <sup>st</sup> Century	BIT Noida	Noida	4 <sup>th</sup> – 5 <sup>th</sup> Feb'2011

14.	Ms. Charu Wahi	National conference on Information and Communication Technologies: Opportunities & Challenges in 21 <sup>st</sup> Century	BIT Noida	Noida	4 <sup>th</sup> – 5 <sup>th</sup> Feb'2011
15.	Ms. Shruti Kohli	ICT Workshop	Gautam Buddha University, NOIDA	Noida	
16.	Dr. Abhishek Singh	National Conference on Contemporary issues in Corporate Finance	University School of Management Studies, GGSIPU	New Delhi	29 <sup>th</sup> Jan'2011
17.	Dr. Abhishek Singh	National Seminar on Corporate Governance in Fund Houses : A Road Map	Deptt. Of Business Administration, Assam University, Silchar	Silchar	7 <sup>th</sup> – 8 <sup>th</sup> Jan'2011
18.	Mr. Pankaj Gupta Dr. Ila Sahay	International Conference	International Academy of Physical Sciences		22-24 Dec'2010
19.	Dr. Asha Prasad	52 <sup>nd</sup> annual conference of the Indian Society of Labour Economics	Deptt. Of economics, Karnataka University		Dec'2010
20.	Dr. Munish Makkad	National Conference on Commodities Exchange : Challenges Ahead	Deptt. Of Financial Studies, University of Delhi	New Delhi	22 <sup>nd</sup> Oct' 2010
21.	Mr. Pankaj Gupta	Symposium	BIT Mesra	Ranchi	19-20 Nov'2010
22.	Dr. Munish Makkad	High Powered Investors Protection Committee of SEBI on No Frill De-mat Account	SEBI Corporate Office	Mumbai	18 <sup>th</sup> Sept'2010
23.	Mr. Pankaj Gupta	Workshop	Delhi Technological University	New Delhi	17 <sup>th</sup> Sept'2010



24.	Mr. Niket Mehta	National Conference on "Rural Business Management - Imperatives for sustainable growth	Technia Institute	New Delhi	30 <sup>th</sup> Oct'2010
25.	Mr. Niket Mehta	Seminar on "Learning through Apple Systems"	Apple Inc.	New Delhi	31 <sup>st</sup> July'2010
26.	Mr. Arun Mittal	Challenges Arising from Global Recession: Strategies for Management	Bharty Vidyapeeth University Institute of Management and research, New Delhi	New Delhi	
27.	Mr. Arun Mittal	Knowledge Festival ICMPSG 2010	Annamalai University, Annamalai		
28.	Mr. Arun Mittal	Recent Global Developments in Management and Information technology: Prospects and Perspectives	School of Management Studies, Varanasi	Varanasi	
29.	Mr. Arun Mittal	Consumer Protection: Issues and Concerns	JVMGRR College, Charkhi Dadri, Haryana	Haryana	
30.	Mr. Arun Mittal	National Conference on Business Innovations	Appeejay Institute of Management, Jalandhar	Jalandhar	
31.	Mr. Arun Mittal	Mergers and Acquisitions"	IMS Noida	Noida	
32.	Mr. Arun Mittal	Contemporary Issues in Rural Development with emphasis on Management and Technology"	RGSC BHU, BARKACHHA, MIRZAPUR	MIRZAPUR	
33.	Mr. Arun Mittal	Spirituality and Ethics in Management	School of Management Studies, Varanasi	Varanasi	
34.	Dr. S.L. Gupta	Rural Business Management Imperatives for Sustainable Growth	Technia Institute of Advanced Studies, Delhi	Delhi	

35.	Dr. S.L. Gupta	63 <sup>rd</sup> All India Commerce Conference	Faculty of Commerce, Goa University		
36.	Dr. S.L. Gupta	Framework for Consumer Protection in India: Current Trends and Future Challenges	Department of Commerce, JVMGRR College, Charkhi Dadri, (Haryana)	Haryana	
37.	Dr. S.L. Gupta	Emerging Business Trends in India	Swami Keshvanand Institute of Technology, Jaipur	Jaipur	
38.	Dr. S.L. Gupta	Recent Advances in Research Methods & Data	Mangalmay Institutions, Greater NOIDA	Greater NOIDA	
39.	Dr. S.L. Gupta	International Conference on Management Practices for Sustainable Growth	Annamalai University		
40.	Dr. S.L. Gupta	National Seminar on Strategies for Sustainable Competitive Advantage in a Globalized Era	Faculty of Management Studies, ITM School of Management		

## PUBLICATIONS

### Published in International Journals

1. Mr. S.P.Singh, Efficient Algorithm for multidimensional matrix Multiplication Operations Representation, International Journal of Advanced Research in Computer Science, Volume 1, No. 3, Sep-Oct 2010.
2. Mr. S.P. Singh, Parallel Algorithm for Multi-Dimensional matrix Operations Representation, International Journal of Computational Intelligence Research, Volume 6, Number 3-4, pp. 493-504, July-Dec'2010.
3. Mr. S.P. Singh, Vector Architectures for matrix operations, International Journal of IT and Knowledge Management, Volume 3, No. 2, pp. 375-378, July-Dec'2010.
4. Dr. S.L. Gupta, An Exploratory Study on Influence of Internet in B2B Marketplace for IT organizations in India, Pertanika Journal of Social Sciences & Humanities, Vol. 18 (1), January'2010.
5. Dr. S.L. Gupta, An Insight into the Growth of Franchising in India, International Journal of Retailing and marketing, Volume 1, No. 2, July 2010.
6. Mr. Arun Mittal, Promotional Opportunities for Banking Industry through Service Delivery Innovations: An Empirical Study, RMS Journal of Management & IT ISSN-09754733, Volume 3, June'2010.
7. Dr. S.L. Gupta, A Study of Determinants on Online B2B Purchase in India, Pertanika Journal of Science & Technology, Vol. 19(I), Mar'2011.

8. Dr. Vandna Sharma, "Knowledge management antecedents and its impact on employee satisfaction: A study on Indian telecommunication industries", *The Learning Organization : An International Journal*, Vol. 18, No. 2, 2011.
9. Dr. Vandna Sharma, Key attributes of Successful Knowledge Management: An Empirical study in Telecommunications and Software Industries, *International Journal of Business Information Systems (IJBIS)*, Vol.7, No.1, 78-92, 2011.
10. Dr. S.L.Gupta, Effect of Web Mining on B2B Marketing, *Journal of Business & Economics*, New York, Vol. 2, No. 2, Feb'2011.
11. Dr. S.L.Gupta, Study of Supply Chain Based on Agent and Multi-Behavior Agent Model, *International Journal of Computing*, Vol. 1, Issue 1, Jan'2011.
12. Dr. Asha Prasad, Productivity based Hybrid HRM Model : Learnings from Indo-Japanese and Indian Auto Sector, *Journal of Advances in Management Research*, Emerald Group Publishing Limited, May'2011.

#### **Published in National Journal**

1. Dr. Vandna Sharma, A Perception based Model to assess performance of e-governance initiatives in India, *The Indian Journal of Commerce*, Vol.63, No.2, April-June'2010.

#### **Papers/Abstracts in Conference Proceedings**

1. Mr. Niket Mehta, Information Technology Contributions in FMGC and Agricultural Marketing in Indian Rural Markets - A Fresh look, *Proceedings of National Conference on "Rural Business Management - Imperatives for sustainable growth*, Technia Institute, New Delhi, 30th Oct'2010.
2. Dr. Asha Prasad, Electricity sector reforms and Industrial relations in selected Indian states, *Proceedings of 52nd annual conference of the Indian Society of Labour Economics*, Deptt. Of economics, Karnataka University, Dec'2010.
3. Dr. Munish Makkad, Modus operandi of No-Frill Accounts, High Powered Investors Protection Committee of SEBI on No Frill De-mat Account, SEBI Corporate Office, Mumbai, 18th Sept'2010.
4. Dr. S.L. Gupta, Mode of Communication in Rural Market, *Proceedings of Rural Business Management Imperatives for Sustainable Growth*, Technia Institute of Advanced Studies, Delhi, 2010.
5. Dr. S.L. Gupta, Role of Micro Finance in India, *Proceedings of 63rd All India Commerce Conference*, Faculty of Commerce, Goa University, 2010.
6. Dr. S.L. Gupta, Mr. Arun Mittal, Unethical Marketing Practices vis-à-vis Awareness and Scope of Consumer Protection Act, *Framework for Consumer Protection in India: Current Trends and Future Challenges*, Department of Commerce, JVMGRR College, Charkhi Dadri, (Haryana), 2010.
7. Dr. S.L. Gupta, Mr. Arun Mittal, An Insight into the Growth of Franchising in India, *Proceedings of International Conference on Management Practices for Sustainable Growth*, 2010.
8. Dr. S.L. Gupta, A Study for Recommendation of Best Promotional Methods for Indian Banking Industry from Customers' and Executives Perspective, *Proceedings of International Conference on Management Practices for Sustainable Growth*, Annamalai University, 2010.
9. Dr. S.L. Gupta, Marketing Strategies of Insurance Sector – A Theoretical Perspective, *National Seminar on Strategies for Sustainable Competitive Advantage in a Globalized Era*, Faculty of Management Studies,

ITM School of Management, 2010.

10. Mr. Pankaj Gupta, Dr. Ila Sahay, Temporal Data Mining, International Conference, 22nd – 24th Dec'2010.
11. Mr. Arun Mittal, Selecting Best Promotional Strategies for Banking Industry: A study of leading Indian Banks, Proceedings of Challenges Arising from Global Recession: Strategies for Management, Bhartiya Vidyapeeth University Institute of Management and research, New Delhi, 2010.
12. Mr. Arun Mittal, Designing 360 degree Marketing Framework for banking industry: A Study of Selecting Best Promotional Tools, Recent Global Developments in Management and Information technology: Prospects and Perspectives, School of Management Studies, Varanasi, 2010.
13. Mr. Arun Mittal, Employee Engagement Practices In Indian Banking Industry: A Study Of Delhi And National Capital Region (NCR), Proceedings of National Conference on Business Innovations, Apperjay Institute of Management, Jalandhar, 2010.
14. Mr. Arun Mittal, Motives and Benefits of Mergers and Acquisitions in Banking: A Study of Indian Banking Industry, IMS Noida, 2010.
15. Mr. Arun Mittal, Rural Development through Agri-Clinic and Agri business Center: A Case study, Contemporary Issues in Rural Development with emphasis on Management and Technology, RGSC BHU, BARKACHHA, MIRZAPUR, 2010.
16. Mr. Arun Mittal, Building Management Models from Chanakya Niti and Vidur Niti, School of Management Studies, Varanasi, 2010.
17. Dr. S.L. Gupta, Retail Format in India, Proceedings of National Conference on Effective Management: Emerging Issues and Future Prospects "NCEM, 2011", Institute of Management Education, Ghaziabad, 2011.
18. Dr. S.L. Gupta, Mr. Arun Mittal, A Study of Cyber Crimes and Cyber Laws in India, Proceedings of National Seminar on Social Empowerment Through Legal Awareness in Knowledge Based Society: Issues & Concerns, 2011.
19. Mr. Niket Mehta, Dr. S.L. Gupta, Mr. Arun Mittal, Role of Teachers in the Application of ICT for Modernization of Higher Education, Proceedings of National Conference on Excellence in Higher Education, Indian Institute of Technology, Delhi, 2011.
20. Dr. S.L. Gupta, Legal Framework for Advertising in India, Proceedings of Second International Conference on Globalization and Consumer Protection – Challenges and Strategies, Kailasalingam University, 2011.
21. Dr. S.L. Gupta, Mr. Arun Mittal, Unethical Marketing Practices in Marketing of Financial Services: A Consumer Protection Approach, Proceedings of National Conference on Contemporary Issues in Marketing and Intellectual Property Rights, University of Management Studies, Guru Gobind Singh Indraprastha University, 2011.
22. Dr. Abhishek Singh, Corporate Governance Practices : India vis a vis China, Proceedings of National Seminar on Corporate Governance in Fund Houses : A Road Map, Assam University, Silchar, 7th – 8th Jan'2011.
23. Dr. Abhishek Singh, Indian Mutual Fund Industry vis a vis Global standards, Proceedings of National

Conference on Contemporary issues in Corporate Finance, University School of Management studies, GGSIPU, Delhi, 29th Jan'2011.

24. Mr. Arun Mittal, Effectiveness of Online Advertising: An Empirical Study, Globalization and Consumer Protection" (ICGCP 2011), Kalasalingam University, Virudunagar, Tamilnadu, 2011.
25. Mr. Arun Mittal, Improving Productivity through Components of Success: An Analytical Study, Business Intelligence: An Alignment of IT and Management, Institute of Management and Technology, Faridabad, Haryana, 2011.
26. Mr. Partha Acharya, Role of Multimedia in ICT, Proceedings of National conference on Information and Communication Technologies: Opportunities & Challenges in 21st Century, BIT Noida, 4th – 5th Feb'2011.
27. Mr. Niket Mehta, Video Games as ICT, Proceedings of National conference on Information and Communication Technologies: Opportunities & Challenges in 21st Century, BIT Noida, 4th – 5th Feb'2011.
28. Ms. Shruti Kohli, Revisiting 3S of Web: search engine, searcher and SPAM, ICT Workshop, Gautam Buddha University, NOIDA, 2011.
29. Ms. Charu Wahi, Comparative Study of Routing Protocols in Mobile Ad-Hoc Networks, Proceedings of National conference on Information and Communication Technologies: Opportunities & Challenges in 21st Century, BIT Noida, 4th – 5th Feb'2011.

### Books

1. Dr. S.L. Gupta, Mr. Hitesh Gupta, Research Methodology, International Book house (P) Ltd., 2011.
2. Dr. S.L. Gupta, Mr. Hitesh Gupta, SPSS-17 for Researcher, International Book house (P) Ltd., 2011.

### MoUs / Collaborations with Academia/Industry

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1.	IIIT Allahabad	Development & technical support for e-content generation for students and professionals.	2011

### Departmental Students' Activities

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration	No. of Resource Persons
1.	Stock Market Trading		18 <sup>th</sup> April'2011 / 1 day	1
2.	BIT Cultural & Technical Fest'2011		8 <sup>th</sup> – 9 <sup>th</sup> April'2011 / 2 days	---
3.	Gaming Competition	Dept. of Animation & Multimedia	March 2011 / 2 days	----
4.	MBIT Test		19 <sup>th</sup> Feb'2011 / 1 day	1

5.	National Seminar on Consumer Awareness on Telecom Issues		29 <sup>th</sup> Jan'2011 / 2 days	5
6.	Corporate Communications		29 <sup>th</sup> Jan'2011 / 1 day	1
7.	HR Issues in Corporate World		29 <sup>th</sup> Jan'2011 / 1 day	1
8.	Seminar on A Voyage against 'Insecurities' in Secure Infrastructure	Abhiraj (BCA)	27 <sup>th</sup> Jan'2011 / 1 day	1
9.	Workshop on Personality Traits Assessment		19 <sup>th</sup> Jan'2011 / 1 day	2
10.	Project Feasibility Report and Financing of Small, Medium and Micro Enterprises		25 <sup>th</sup> Sept'2010 / 1 day	2
11.	A Workshop by Times Group for BBA final year students for Higher Education Opportunities		Sept'2010	2
12.	National Seminar on SEBI and Investors' Protection		18 <sup>th</sup> Sept'2010	4

### Members on Board of Studies (UG/PG)

1. Course – B.Sc (Animation & Multimedia) (UG)  
Masters in Animation & Design (PG)

S.No.	Name		Designation in Committee
1.	Prof. S.C. Goel	Director, BIT Noida	Chairman
2.	Dr. C.P. Srivastava	Educational Advisor, BIT Noida	Member
3.	Sh. Rama Kishore	Sr. Faculty, Dept. of IT, I.P. University	Member
4.	Mr. Ajay Joshi	Consultant	Member
5.	Mr. Lalit Bhatt	Coordinator, Animation & Multimedia Dept., BIT Noida	Member
6.	Dr. Vibhuti Pandya	Coordinator, Animation & Multimedia Dept., BIT Jaipur	Member
7.	Mr. Niket Mehta	Asst. Professor, BIT Noida	Member
8.	Mr. Rahul Dora	Sr. Animator, BIT Noida	Member
9.	Mr. Kiran Shetti	Sr. Animator, BIT Noida	Member
10.	Mr. Aroop Kerketta	Faculty, BIT Noida	Member
11.	Mr. Partha Acharya	Faculty, BIT Noida	Member

## 2. Course – Bachelor in Business Administration (Business Economics) (UG)

S.No.	Name		Designation in Committee
1.	Prof. S.C. Goel	Director, BIT Noida	Chairman
2.	Dr. S.L. Gupta,	Coordinator Academics & Doctoral Research, BIT Noida	Member
3.	Dr. D.D. Chaturvedi	Delhi Technical University	Member
4.	Prof. Jasvinder Singh	Delhi Technical University	Member
5.	Shri S.K. Gupta	Chartered Accountant	Member

**Any other important information**

Department of Animation has created and maintaining a blog since last 2 years [www.bitnoidabam.blogspot.com](http://www.bitnoidabam.blogspot.com) to connect with students where we showcase their Animation Projects and other works and organize competitions to encourage them, put information of Jobs, alumni whereabouts, animation companies etc.



## PATNA

### INTRODUCTION

The Birla Institute of Technology Mesra, a name synonymous with quality technical education, on the initiative of Govt. of Bihar, established its centre at Patna in year 2006. A Memorandum of Understanding was signed between the Institute and the Govt. of Bihar in December 2005. Subsequently, the Govt. of Bihar allotted 25 acres of land beside the Jai Prakash Narayan International Airport at Patna and released the requisite fund for establishing the centre. The Foundation Stone of the Centre was laid on 24 December 2005 and construction started in April 2006.

The Patna Campus currently offers the B.E. programmes in the disciplines of:

1. Civil Engineering
2. Computer Science & Engineering
3. Electronics & Communications Engineering
4. Electrical & Electronics Engineering
5. Information Technology
6. Mechanical Engineering
7. Production Engineering



Main Building

In addition, BIT Patna campus also offers Doctor of Philosophy Programmes in Applied Sciences and Engineering & Technology.

BIT, Patna, by far, is one of the best equipped, technically sound professional colleges in the state of Bihar. It has a Wi-Fi enabled campus. The infrastructure includes 3.25 lacs sq. feet of academic space, well equipped modern laboratories, workshops, auditorium with sitting capacity of 1000, staff quarters, guest house dispensary, play ground, gymnasium, a library with at present over 25,000 books (all bar-coded), periodicals, national & international journals & other research materials. The facility for video conferencing is established and e- library is being developed.

The heart of the institute is the large Computer Centre with 200 P4 Computers with a DELL Server connected to LAN to support multi user softwares. There is a provision for a second centralized Computer Lab with another 200 Computers. At present, the students are using System Software's like C++, MSDN, ORACLE, Rational Rose & Application Softwares like Auto CAD 2009, Auto CAD Raster Design, Auto CAD Electrical, Auto CAD Inventor, MATLAB, Multisim, Comsim, Xiling, Active HDL etc.

### SPONSORED PROJECTS

#### Project Sanctioned during July 2010- June 2011

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Preparation and characterization of Lithium Titanate pebbles for low activation Energy ceramics for breeder blanket reactor application	Dr. S.K.Sinha	BRFST, Govt. of India	Sep. 2010	30 lakhs	Sep. 2010 to Sep. 2013

**Ongoing Projects Sanctioned before July 2010**

Sl. No.	Project Title	PI / Co-PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Studies on Acoustic Properties of Glass Fibre Reinforced Plastics	Dr. K. K. Shrivastava	AICTE, New Delhi	October 2008	6.5 lakh	Two years
2.	Simulation of Heat Transfer Between a Solid of Tapered Shape and the Surrounding Fluid	Dr. Purnima Srivastava	(UGC)	2009 (Revised in 2010)	1.7 Lakh	One year

**Projects Completed during the period July 2010- June 2011**

Sl. No.	Project Title	PI / Co-PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Preparation and characterization of Lithium Titanate ceramics for breeder blanket reactor application	Dr. S.K.Sinha	BRFST, Govt. of India	Aug. 2007	14 lakhs	Aug. 2007 to Aug. 2010

**Seminar / Conferences / Short – term Courses Conducted by the Department**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Entrepreneurship Awareness Drive	Dr. S. P. Lal	Organized at BIT Patna in collaboration with IIT Kharagpur	October 9, 2010
2.	Research scholars' Day- 2011	Dr. S.K.Sinha	Organized at BIT Patna	March 25 – 26, 2011
3.	MATLAB Training Program	Mr. M. A. Hassan	Organized at BIT Patna	Sep 22-25, 2010

**Conference / Seminars / Workshops / Staff Development Programmes / Orientation programme/ Refresher Course etc. attended,**

Sl. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
1.	Dr. S. P. Lal	Round Table Conference on Energy, Environment and Sustainable Development	GLA Engg College	Mathura	March 26-27, 2011

2.	Dr. Rajnish Kumar	Short term course on Biofluid Mechanics	IIT Kanpur	IIT Kanpur	March 4-9, 2011
3.	K.P.Tiwary	25 <sup>th</sup> National symposium on Plasma Science & Technology (Plasma-2010).	IASST,	Guwahati, Assam	Dec. 8-11, 2010
4.	Megha Dadel, and K.P.Tiwary	International conference on devices and communications,	B.I.T Mesra, Ranchi	B.I.T Mesra, Ranchi	Feb.24-25, 2011.
5.	K.P.Tiwary	National Conference cum Workshop on Recent Development in Engineering Materials,.	B.I.T Mesra, Ranchi	B.I.T Mesra, Ranchi	May 12-14, 2011.
6.	M. A. Hassan	Short Term QIP Course on Advanced Computation in Engineering and Sciences.	IIT Kanpur	IIT Kanpur	Oct 5-9, 2010
7	M. A. Hassan	Workshop on Partial Differential Equations	IIT Patna	IIT Patna	March 3-5, 2011

## PUBLICATIONS

### International Journals

1. S. P. Lal, "Implementing Cleaner Manufacturing for Improving Productivity – A Case Study of an Indian Steel Industry", International Journal of Manufacturing Technology and Research, 2011, Vol 7 (1), page 66-80, ISSN 0973-0281.
2. K.P.Tiwary, Haider Abbas, L.S.S.Singh, M.Husain, Z.H.Zaidi, 'Thermally assisted ECR etching for CdTe in CCl<sub>2</sub>F<sub>2</sub>/ Ar discharge under different gas flow ratio'. Materials science in semiconductor Processing, Vol.13, Issue 2 (2010) 102-104.
3. K.P.Tiwary & M.Husain, 'Description of ECR Plasma device assembled and surface study of GaAs wafer in CFC discharge at various parameters'. International Journal of Material science. Vol. 6 No. 2 (2011) 159-167.
4. S.K.Sinha, A.K.Sinha, P.Kour and P.K.Barhai, Nickel doped PZT ceramics by spray dried-PVA assisted method, J. of Ceram. Process. Tech. (Seoul), Jan 2011, 234-237.
5. Megha Dadel, Shweta Shrivastava and K.P.Tiwary, 'Analysis of Log Periodic Frequency Independent Arrays of Rectangular Patch Antenna'. IEEE Explore. 2011 ISBN: 978-1-4244-9189-6
6. Kanhaiya Lal and Dr. N.C.Mahanti, "Mining Association Rules in Large Databases using Localized Pattern", International Journal of Advanced Research in computer Science, Vol.(1), No. 3, 2010, pp. 90-94.
7. Kanhaiya Lal and Dr. N.C.Mahanti, "Mining Association rules for clustered domains by separating disjoint sub-domains in Large databases", Journal of Global Research in Computer Science, Vol.(1), No. 2, 2010, pp. 31-34.
8. Kanhaiya Lal and Dr. N.C.Mahanti, "Mining Association Rules in Large Database by Implementing Pipelining Technique in Partition Algorithm", International Journal of Computer Applications, Vol.(2), No. 4, 2010, pp. 33-39.

7. Kanhaiya Lal and Dr. N.C.Mahanti, "A Novel Data Mining Algorithm for Semantic Web based Data Cloud", International Journal of Computer Science and Security, Vol (4), Issue 2, 2010, pp. 160-175.
8. Kanhaiya Lal and Dr. N.C.Mahanti, "Role of Soft Computing as a tool in Data Mining", Int. J. of computer Sc. & Information technologies Vol. 2(1), 2010, 526-537.
9. Dr. Rajnish Kumar- Unsteady Couette flow through a porous medium in a rotating system, "International Journal of Theoretical and Applied Mechanics", 5 (2) (2010), 119–132.
10. Dr. Rajnish Kumar- Unsteady Hydromagnetic Couette flow through a porous medium in a rotating system, "Theoretical & Applied Mechanics Letters" 1, 042005 (2011).

#### National /International Conference

1. Kanhaiya Lal and Dr. N.C.Mahanti, "Temporal Association rules mining in T-databases using pipeline technique", accepted for presentation in IEEE 11th International symposium on parallel architectures , algorithms & networks, Dalian, China. To be held in 24-26 Aug. 2011.
2. P. Kour & S. K.Sinha "Electro ding of PZT and La doped PZT ceramics by DC sputtering method 25th National symposium on Plasma Science & Technology (Plasma- 2010), 20-23 Dec. 2010, Guwahati,.
3. P. Kour & S. K.Sinha, "Electro ding of PZT and La doped PZT ceramics by DC sputtering method 25th National symposium on Plasma Science & Technology (Plasma- 2010), 20-23 Dec. 2010, Guwahati.
4. P. Kour & S. K. Sinha, "Study of dielectric and ferroelectric properties of Ca doped Pb (Zr 0.52Ti0.48) o3 ceramics" 4th Bihar science conference, Feb11-13,2011.

#### Award / Recognition Bestowed on Faculty

Sl. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1.	Dr. S. P. Lal	Chairman, Education & Research Committee	Bihar State Productivity Council	June, 2011
2.	Dr. S. K. Sinha	A-Grade on Research and Development Work	Board of Research in Fusion science and Technology, Govt. of India	Sept. 2010

#### Departmental Students' Activities

Sl. No.	Name of the Activity	Students' co coordinator, if any	Year / Duration
1	Technika 2011	Organized by a team of BIT students	2010-2011
2	Annual Sports Meet 2011		
3	REVA 2011		

#### Any other important information

- a) **NASA Project:** A team of nine students from BIT, Patna visited Kennedy Space Centre, NASA, Florida, USA, during May 23-28, 2011 to demonstrate indigenously developed robot for moon application under prestigious LUNABOTICS competition. The trip was fully sponsored from various government and non government organizations. The robot was designed, developed and fabricated in the campus only by

involving students of varied disciplines. Also a detailed report has been submitted to establish state of the art robotics laboratory at BIT, Patna. Prof. M. A. Hassan, Dept. of Mech. Engg. initiated this project.

- b) **Donation of Engineering Books and Journals:** Prof. G. P. Lal, member of Governing Body of BIT has donated over 1500 volume of Engineering Books and Journals which will enrich the library. He has promised to donate some more engineering books. His gesture is highly appreciated.
- c) **Project on Study of Traffic Flow and Parking Facility and its Improvement at J. P. N. I. Airport, Patna:** This project was taken up by BIT, Patna Campus. A team of eight civil engg. students under the leadership of Prof. S. K. Sinha went into the complexities in the traffic flow and the parking facility available for the vehicles coming for either dropping or picking passengers of flights inside the premises of the Airport. The entry-exit points of the parking area during the peak hours determined by the flight schedule were observed for about a month. The present layout of the traffic flow was studied and its shortcomings were listed. All these collected data were analyzed using the concept of traffic engineering and two sets of recommendations were made. The first set of recommendation is to improve upon the current arrangement to make the traffic flow a little more effective at a nominal cost. The second set of recommendation is for a new proposed plan with different layout at a considerable but reasonable cost.
- d) **Plasma Thin film Laboratory:** This laboratory has been established with an aim to impart training and research in the field of application of Plasma Technology.
- e) **Solar Water Distillation System:** Prof. M. A. Hassan developed a solar water distillation system and active/passive solar dryer at BIT, Patna, under project from BREDA in a record time of 6 months. No skilled manpower was used rather undergraduate students were involved at all stages.
- f) **Pratibimba, The Cultural Society Of BIT, Patna:** This society encourages students to display their excellence in the fields like music, Dance, and Dramatics . Students of this society participated and bagged various prizes in 'Anwesha 2011' and Spectrum 2011 , the annual cultural festival of IIT, Patna and NIFT ,Patna respectively .
- g) **4th Annual Athelete Meet:** This meet was held between 5th to 7th February 2011. Sri J.S. Sigiwal , Honourable minister of Labour & Resource in Govt. of Bihar , the Chief Guest distributed gold, silver and bronze medals to the students for their excellence in different tournaments . The honourable Vice-Chancellor of BIT Mesra, Prof. Ajay Chakrabarty also graced the occasion. The college volley ball team participated in a tournament organized by PMCH, Patna and won the first prize.
- h) **Blood Donation Camp:** On August 15th 2010 more than hundred students and faculty members donated their blood at a camp organized by NSS in collaboration with PMCH Patna.
- i) **Language Laboratory:** This laboratory has been established to hone the communication competence of the students.
- j) **E-Content Generation for Undergraduate Courses in Engineering & Technology:** A project proposal on the same has been submitted to Bihar Council on Science & Technology (BCST). The project objective is aimed at delivering video lectures for subjects covered in the undergraduate engineering programmes, viz. Computer Science, Electronics Engineering, Electrical Engineering and Mechanical Engineering.

**INTERNATIONAL CENTRES  
OF  
BIRLA INSTITUTE OF TECHNOLOGY  
MESRA, RANCHI**





## MUSCAT

### INTRODUCTION

The Waljat Colleges of Applied Sciences founded by H.E. Dr. Omar bin Abdul Muniem Al Zawawi in 2001 in academic partnership with Birla Institute of Technology as its International Centre, occupies a pride of place among the technical colleges in the Sultanate of Oman. Located in the "Knowledge Oasis" at Rusayl, Muscat, it attracts students from all over Oman and neighbouring countries.



Convocation

The College has a total built-up area of about 14,000 sq. meters consisting of Academic buildings, Smart Class Rooms, Laboratories and Computational Facilities, Library etc., A new academic building, workshop and canteen with a total built up area of 6,885 m<sup>2</sup> has been added to the existing infrastructure during the period of report. The various Laboratories have been modernized to meet the quality standards and curriculum requirements. The College has been admitted as a member of The Research Council, Sultanate of Oman. It has also improved its ranking to the 2nd position among the private colleges in Oman, during the year. The College has a dedicated Quality Assurance Department for implementing the relevant recommendations and suggestions to ensure high quality standards.

The College offers the following academic programmes of the Institute:

1. Bachelor of Engineering in
  - a. Biotechnology
  - b. Computer Science
  - c. Electronics & Communication Engineering
2. Bachelor of Computer Applications
3. Bachelor Business Administration
4. Masters in Business Administration
5. Executive MBA

\* Part-time programmes for working candidates are also offered except in case of B.E..

### RESEARCH ACTIVITIES:

The Centre has taken initial steps to encourage and nurture research interest in the Under-graduate and Post-graduate students. It is envisaged that curriculum projects assigned to the students have practical and motivating component in them in order to make them interesting and relevant to social and professional needs. The research activities being carried out at various Departments are summarized below:

#### a) Biotechnology

The research activities in the Department of Biotechnology can be clearly demarcated into three domains, viz; the research areas of global importance, the research areas relevant to Oman, and the desert ecosystem research.

In the first domain of the global importance-renewable energy and carbon capture has been taken up, where the marine microalgal species are screened for their oil production and CO<sub>2</sub> capture capabilities.

The second is the area of local importance- where the studies on date palm and other plants for their medicinal values is being carried out, and the studies on raw dates as a potential economic source of sugars for industrial processes like xanthan gum production is being taken up for supporting the local industrial biotechnology.

In the other domain of importance of desert ecosystem, studies on the local microflora are being taken up. In all these projects; the impetus is on industrial biotechnology and different groups of BE biotech students have been engaged in different projects to get a practical hands on training.

Earlier the students of previous BE batches have successfully developed caffeine and urease biosensors, and studied the high frequency of deletion of 32bp in CCR5 in diabetic subjects.

The 6th semester Students of BE – Biotech won Second prize in Paper category, Paper titled “First report of production and activity analysis of  $\alpha$ -amylase: A commercially important enzyme produced by a common fungus isolated from onions” at STEPS-2011 (Science, Technology and Engineering Projects-2011) organized by Ministry of Man Power, Sultanate of Oman at IBRA College of Technology, on April 2nd, 2011.

**b) Computer Science and Engineering**

The Department of Computer Science Engineering is currently involved in the research in the field of Digital image Processing, Data Mining, Information Retrieval, Software Engineering, Wireless Sensor Networks and Network Security. The faculty members are engaged in developing algorithms and tools in various areas of their field of research, such as Moving Boundary Problems, Stefan Problem using LSM, Object Oriented Software Metrics, Question Answering Systems, Recommender Systems, Efficient routing in Wireless sensor and adhoc networks, Defense against malicious codes in networks etc.

**c) Electronics & Communication Engineering**

The Department of Electronics and Communication Engineering provides a platform for students and researchers to implement projects based on hardware and software in the relevant field of studies. Students are provided with in-depth training in softwares like MATLAB, XILINK, ns2, Multisim etc. The Department is engaged in research work in the areas of Signal/Image Processing, Power Electronics, VLSI Design, Pattern Recognition, Non-linear Phenomena, Wireless Communication and Robotics. The work on development of a model for UWB channel estimation in MIMO environment and application of Artificial Neural Network in load flow analysis is in progress.

Our students won the Best Project Award at STEPS-2011 (Science, Technology and Engineering Projects-2011) organized by Ministry of Man Power, Sultanate of Oman at IBRA college of Technology, on April 2nd, 2011.

**d) Management**

The Department is actively engaged in research work in a variety of areas and is also conducting workshops and seminars for over all development of student community. Faculty members of the Department of Management are actively engaged in conducting research in the areas of E-Marketing, Value Chain, Data Envelopment Analysis, Performance Management, Women Entrepreneurship in Oman, Work Life Balance, Barriers to Career Advancement for Women in the Sultanate of Oman, Customer Satisfaction in Online Banking, E-Commerce in Middle East, Tourism Service Quality, Leadership styles in Corporate Sector, Word of Mouth & Trust in Online Media and Online Social Networking.

**e) Mechanical Engineering**

The research programme on desalination using Direct Contact Membrane with solar energy as low cost energy source has been completed. Efforts are also being made to design and develop an automatic solar tracking system for optimum utilization of solar radiations for different applications. A new well equipped workshop is being created with modern centre Lathe, CNC, Milling Machine etc., to impart training to undergraduate students and also to support in-house fabrication of components for R&D projects.

**Seminar / Conferences / Short – term Courses Conducted by the Centre:**

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	Establishing a Small Enterprise in Oman: Opportunities & Challenges”	Mr. Salah Bin Hilal Al Maawali, Director General for the Development of Medium & Small Enterprises, Ministry of Commerce, Oman	WCAS	12 <sup>th</sup> Oct. 2010
2.	Investments in Indian Equity Market	Mr. Vetrivel Mani, Head of ICICI Securities Ltd.	WCAS	20 <sup>th</sup> Oct. 2010
3.	Workshop on Managerial Skills	Management Department	WCAS	27 <sup>th</sup> Oct. 2010
4.	The Science of Email Management: A Managerial and Research Perceptive	Dr. Ashish Gupta, Associate Professor of Operations Management, Minnesota State University	WCAS	3 <sup>rd</sup> Nov.2010
5.	Interview Techniques & Presentation Skills	Management Dept.	WCAS	21 <sup>st</sup> Dec.2010
6.	Muscat Counsellors Group Meeting	WCAS	WCAS	17 <sup>th</sup> Jan 2011
7.	CV writing and Interview Skills	Management Dept.	WCAS	7-8 March 2011
8.	Energy Phenomenon in generating cooling effect	Mechanical Engg. Dept.	WCAS	16 <sup>th</sup> March 2011
9	Microarray Technology	Dr. Hassan Sadek, Senior Lecturer, Medical Laboratory Sciences Dept, Institute of Health Science, Ministry of Health, Sultanate of Oman	WCAS	13th April 2011
10	Economic Load Flow Using Lagrange Neural Network	Mr. Mohammed Mohatram, Sr. Lecturer, Dept of Electrical Engg	WCAS	20 <sup>th</sup> April 2011
11	Database Management System	Mrs. Anu Manchanda and Mrs. Akrati Kaul – Lecturers of Computer Science	WCAS	30 <sup>th</sup> April 2011

12	An introduction to computer worms and viruses and their countermeasures	Mr.Sounak Paul, Asst. Prof. with dept. of Computer Science	WCAS	25 <sup>th</sup> May 2011
13	Latest trends in Marketing in the Sultanate of Oman	Mr. Baby Sam Samuel, Managing Director of Key International, Muscat	WCAS	29 <sup>th</sup> May 2011
14	Training Programme on Research Methods and Statistical Analysis	Management Department	WCAS	Feb- June 2011

**Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
1	Mr. A. Prakash	Oman Capital markets in Muscat	Oman International Trade & Exhibition LLC	Al Bustan Palace Hotel	28-29 <sup>th</sup> Sept.2010
2	Mr. Sanjay Kumar – Asst. Professor Computer Science Dept	Internet2 Middle East SIG (Sharing Information Group)	KoM	Crown Plaza	30 <sup>th</sup> Nov 2010
3.	Mr. Jyoti Chandel, Asst. Professor, Management Dept	2 <sup>nd</sup> International Conference on Applied Business and Economics (2 <sup>nd</sup> ICABE2010)	Sohar University	Sohar University	14-15 Dec 2010
4	Dr. Seema Varshney, Lecturer Management Dept	2 <sup>nd</sup> International Conference on Applied Business and Economics (2 <sup>nd</sup> ICABE2010)	Sohar University	Sohar University	14-15 Dec 2010
5.	Mr. Deepak Venugopal, Quality Assurance Co-ordinator and Mrs. Akraati Kaul, Lecturer, Computer Science Dept.	Establishing a Quality Assurance Unit in Higher Education Institutions.	Oman Quality Network	Oman Tourism College	22 <sup>nd</sup> Dec.2010
6.	Dr. A. Prakash, Senior Lecturer, Management Department and Dr A. Pareek, Asst. Professor, Biotechnology	Grant Writing and Research Management Symposium	University of Nizwa	Nizwa University	24-26 Jan 2011

7.	Mr. Jyoti Chandel, Asst. Professor and Dr. G.P. Mishra, Asst. Professor, Management Dept	Leadership Development	Knowledge Initiative	KOM	25-26 Jan 2011
8.	Mr. Anil Kumar Sharma, Lecturer, Mechanical Engg. Dep.	International Manufacturing Standards Fulfillments	Public Establishment for Industrial Estates	Muscat	06 <sup>th</sup> Feb.2011
9.	Dr. Neeraj Pandey, Reader, Mathematics Dept. and Mr. Akhilesh Kumar Roy, Sr. Lecturer, ECE Dept	Oman Public Transport and Youth	Sohar University	Sohar University	09 <sup>th</sup> Feb.2011
10.	Dr. G. P. Mishra, Asst. Professor, Management Dept.	Corporate Social Responsibility & Environmental Sustainability.	Sultan Qaboos University	SQU, Al Khoudh	14-16 Feb 2011
11.	Ms. Nejma Mohd, Ms. Smita Prasad, Mr. Amin and Mr. David Manohar	Reading Skills	College of Scientific Design	Muscat	March 2011
12.	Dr. S.D. Khan, Librarian	The Changing Role of Information Professional in Knowledge Economy: Challenges and Opportunities	Special Libraries Association Arabian Gulf Chapter 2011	Sultan Qaboos University	8-11 March 2011
13	Mr. Deepak Venugopal, Quality Assurance Co-Ordinator	Consolidation and Virtualization – IT infrastructure and Virtualization	IBM and VMware	Inter Continental Muscat	11 <sup>th</sup> April 2011
14	Mr. Mohd Mohatram, Asst. Professor, Electrical Dept.	ETAP Software	ETAP, U.S.A	Hotel Crown Plaza	14 <sup>th</sup> April 2011
15	Mr. Mohd Mohatram, Asst. Professor, Electrical Dept.	IEEE International Conference Economic load flow using Lagrange Neural Network	Saudi International Conference on Electronic Communication & Photonics (SIECPC) 2011	King Abdulaziz City of Science & Technology Riyadh Saudi Arabia	23-24 April 2011
16	Mr. Akhilesh Roy, Sr Lecturer, ECE Dept and Dr. Nutan Lata Nath, Associate Professor Electrical Dept.	E-Learning Programme	Sultan Qaboos University	SQU, Al Khoudh	11 <sup>th</sup> May 2011

17	Mrs. Nejma Mohd, Mr. Khalid Al Gharibi and Mr. Roby Varghese – Lecturers of English Dept.	E- Movies	Scientific College of Design, Seeb	Seeb	11 <sup>th</sup> May 2011
18	Mr. Roby Varghese – Lecturers of English Dept.	Workable EFL/ ESOL Paraphrasing Technique	British Council	Muscat	1& 7 <sup>th</sup> June 2011
19	Mr. Niraj Mishra, Sr. Lecturer and Dr Seema Varshney, Lecturer of Management Dept.	Management Development Programme on Leveraging Marketing & Sales Excellence for Profit & Growth	ICMA, Oman	Al Khuwair	26-27 June 2011

## PUBLICATIONS

### Published in International Journals

1. Mohammad Mohatram, Dr. Peeyush Tewari, Shahjahan, "Applications of Artificial Neural Networks in Electric Power Industry: A Review", International Journal of Electrical Engineering, ISSN 0974-2158, Vol. 4, no. 2, pp.161-171, 2011.
2. Mohammad Mohatram, Prof. (Dr.) Praveen Dhyani, Dr. Peeyush Tewari, "A Different Approach to Economic Load Dispatch using an Exponential Cost Function" International Journal of COMADEM, U.K., Vol. 13, no. 4, pp 16-21, October 2010
3. Mr. Mithun shrivastava, Israel D. (2010), "Predicting Select Mobile Service Preferences Based on Demographic Profile of Mobile Users in Oman" - International Journal of Mobile Marketing 5(1), 98-112
4. Mrs. Blossom Christina, – "The Great Management Guru", International Management Journal, Sunder Deep College of Technology, Ghaziabad, Title: Omani Women Entrepreneurs in Oman – Issue 1,2011
5. Mr. Santosh Kumar Ray, Dr. Shailendra Singh, Dr. Bhagwati P. Joshi : "Question Classification & Answer Validation- A Semantic Approach using WorldNet and Wikipedia ",Pattern Recognition Letters, Volume 31,issue 13,pp.1935-1943,Elsevier,2010
6. Dr. Kumar Rajnish, Mr. Arvind Kumar Choudhry, Dr. Anand Mohan Agrawal : Inheritance Metrics for Object-Oriented Design "International Journal of Computer Science and Information Technology(IJCSIT), Academy & Industry Research Collaboration Centre (AIRCC),VOL. 2, No. 6.pp-13-26, December 2010.

### Published in National Journal

1. Mrs. Blossom Christina, "Gender Issues in Entrepreneurship Development with special reference to Women Entrepreneurs in Coimbatore District" Institute of Management and Research Council, Trivandrum, September 2011.
2. Dr. G.P. Mishra, Asst. Professor and Mrs. Kusum Lata Mishra, Associate Lecturer "A study on Organizational Commitment and Organizational Effectiveness" Name of the Journal – The Management Page. Volume 1, Issue 1, September 2010, Pp 36-45, ISSN No. 2331- 200 X.
3. Mr. Niraj Mishra, Senior Lecturer, Management Department – " Quality Management in Indian Service Sector" The alternative, Vol. IX No.2, April to September 2010.

**Papers/Abstracts in Conference Proceedings**

1. Blossom Christina – Eighth AIMS International Conference of Management, Ahmedabad on the topic “ Omani Women Entrepreneurship and SMEs in Oman – Challenges and Opportunities – 2011
2. Syed Aulia – Paper Title “Relationship between Personality Traits and Organizational Commitment: A Study of Science laboratory technicians in the Sultanate of Oman – December 2010 – Sohar University.
3. Mohd. Mohatram – presented a paper in an IEEE International Conference held at Riyadh, Saudi Arabia on the topic of “Economic load flow using Lagrange Neural Network”.
4. Santosh Kumar Ray and Dr. Shailendra Singh “Blog Content Based Recommendation Framework Using WorldNet and Multiple Ontologies”, In proceedings of the 6th International Conference on Next Generation Web Services Practices (NWeSP 2010) , to be published and indexed in IEEE explore , Conference Venue : MTM, Gwalior , November 23-25 ,2010 , India
5. Sounak Paul and Naveen Kumar Sao, “An Energy Efficient Hybrid Node Scheduling Scheme in Cluster Based Wireless Sensor Networks” to be presented in World Congress on Engineering, 2011, organized by International Association of Engineers(IAENG) to be held at Imperial College of London, UK, 6-8 July 2011.

**Students' Activities at Centre**

S. No.	Name of the Activity	Date/Duration
1.	Fresher's get-together	29 <sup>th</sup> Sept.2010
2.	Blood Donation Camp	11 <sup>th</sup> Oct.2010
3.	Election for Students Council	17 <sup>th</sup> Oct.2010
4.	Participation in Quiz Competition at Ibra College	1 <sup>st</sup> Nov.2010
5.	Traditional Day Celebration	8 <sup>th</sup> Nov.2010
6.	Participated in the Walk – Diabetic organized Al Raffah Hospital	12 <sup>th</sup> Nov.2010
7.	Cricket Tournament	21-24 Nov. 2010
8.	Solidarity Walk	5 <sup>th</sup> Dec.2010
9.	Visited Children's Care Centre	5 <sup>th</sup> Dec..2010
10.	Oman's National Day Celebration	13 <sup>th</sup> Dec.2010
11.	Trekking at Qantab Hills	14 <sup>th</sup> Feb.2011
12.	Picnic at Sawadi Beach- Beach Cleaning campaign	8 <sup>th</sup> March 2011
13.	Career Fair & Placement Activities	14 <sup>th</sup> March 2011
14.	Mother's day	22 <sup>nd</sup> March 2011
15.	English Drama	27 <sup>th</sup> March 2011
16.	Science Technology and Engineering Projects (STEPS2011) Competition among Oman's Colleges	20 <sup>th</sup> April 2011 (ECE Dept students won the first prize for their project and Biotech students won the 2 <sup>nd</sup> position in the Paper presentation
17.	Quiz Competition	28 <sup>th</sup> April 2011



18.	Industrial Visit to Haya "Oman Waste Water Treatment Plant at Ghala by B.E. Biotechnology students	4 <sup>th</sup> May 2011
19	A visit to Haya Oman Waste Water Treatment Plant at Ghala	4 <sup>th</sup> May 2011
20	Singing competition	9 <sup>th</sup> May 2011
21	Annual Open Day "OASIS 2011" presided over by Dr. Amer Al Rawas, Chief Executive Officer of Omantel	8 <sup>th</sup> and 9 <sup>th</sup> of May, 2011
22	Industrial Visit at Oman Cement Co by 6 <sup>th</sup> Semester B.E. Electronics	17 <sup>th</sup> May 2011
24	Tree Plantation carried out on World Environment Day at College Campus	5 <sup>th</sup> June 2011

### Development of Learning Materials

Learning materials	Name of Subject/Course /Programme	Where and When used
e- contents	Modle based e-learning content is being developed for all courses offered.	For UG/PG teaching
Virtual Lab	Electronics and Communication Engineering	For UG/PG teaching, projects and research purpose
Technology- enhanced Learning	Language Lab for foundation programme	For training of Foundation Students

### Members on Board of Studies (UG/PG)

Following are the Members of Research and Academic Committee of this Centre.

#### Research Committee

Prof. Mohan Varma, Dean	Chairman
Dr. Nutanlata Nath	Member Secretary
Dr. Kumar Rajnish	Member
Dr. Neeraj Pandey	Member
Prof. Padmini P	Member

#### Academic Committee

Prof. Mohan Varma, Dean	Chairman
Manager – Administration & HRD	Member Secretary
Prof. Padmini P	Member
All Heads of Academic Department	Member
All Professors of WCAS	Member
Dr. Avneesh Pareek	Member
Dr. Sheeba Khan	Member

**Any other important information**

- The Academic Year 2011 was especially marked as path-breaking, since the Beginners' Level in the Foundation Program was introduced for building of English language skills from basic level.
- The development of English Language Skill was aptly reflected in the progress charts of the Foundation students in the cycle tests conducted periodically to evaluate their progress.
- Students 'at risk' were identified and counseled by Academic Advisors, HOD and Students' Counsellors.
- Language Laboratory facilities offered at the Foundation Level, with an eye to the improvement of the same.
- E- News Letter – a Bi-monthly College publication has started circulation from January 2011 onwards. Faculties and Students actively contribute articles.

## RAS AL KHAIMAH

### INTRODUCTION

BIT International Center at Ras Al Khaimah started its operation from September 2005, where BIT's undergraduate programs in Electronics & Communication, Electrical & Electronics, Computer Engineering, Architecture, Management are offered along with a six - year integrated program in Engineering after ten years of schooling. Apart from this, two years of MBA and EMBA programs are also being conducted by BIT IC. MBA is a regular day-time program, while EMBA is a week-end program.



Main Building

As per law of the country the center is not allowed to own any property on permanent basis. Thus it is operating based on the agreement & License of "Royal College of Applied Science and Technology" issued by Ras Al Khaimah Free Trade Zone. It has started operating in a new Campus in Al Dhait, Ras Al Khaimah, since 15th March, 2009. During the academic year 2010-11, about 500 books of various disciplines have been added to the library. Also, the number of journals in the Library, both national and international, has been increased during this year to a total figure of 35. On the electronics, electrical and mechanical laboratory, new and advanced equipment have been added during this academic year. The budget allocation for the infrastructure up gradation would be more in the coming academic year, i.e. 2011-2012

### Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date , Month, Year
01	Mr. Soofi Anwar	AIMS, International Conference on Technology and Business Management	IIM, Ahmadabad	IIM-A, Campus, Ahmadabad	1-4, January, 2011
02	Dr. K. Durga Prasad	AIMS, International Conference on Technology and Business Management	IIM, Ahmadabad	IIM-A, Campus, Ahmadabad	1-4, January, 2011

### PUBLICATIONS

#### Published in International Journals

1. P. K Upadhyay, R. K Sinha, Detection of Sleep Patterns of Electroencephalogram using Self-Organizing Feature Map and Learning Vector Quantization, Caledonian Journal of Engineering, Oman, Accepted June 2011

**Published in National Journal**

1. K.Durga Prasad and Rajani Banda "Knowledge Professional in India: A study on I.T Industry, Vol. XVII, No. 1, July-September, 2010.

**Papers/Abstracts in Conference Proceedings**

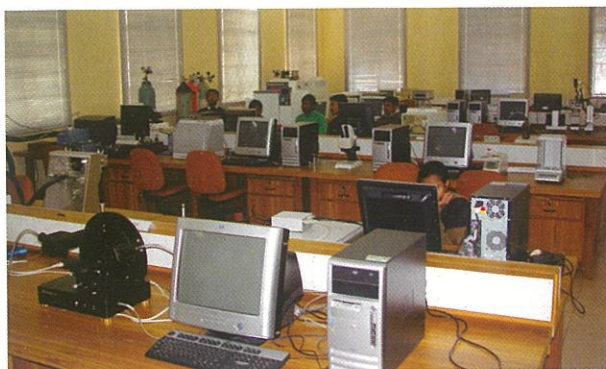
1. Mr. Soofi Anwar, Dr. K. Durga Prasad, Management education in 2020 Issues, Challenges and opportunity, Proceedings of AIMS, International Conference on Technology and Business Management, IIM-A, Campus, Ahmadabad, City. 1-4, January, 2011

**Departmental Students' Activities**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1	Academic Field Trip to "Greece", as part of academic curriculum of B Arch course	Mr. Gaurav Singh	01-07 Feb 2011
2	Industrial Visit to Fujairah Cables, Fujairah	Mrs. Indu	1 <sup>st</sup> March 2011



## CENTRAL INSTRUMENTATION FACILITY



Central Instruments Facility Laboratory

Central Instrumentation Facility (CIF) at Birla Institute of Technology, Mesra, Ranchi, established in the year 2006 under Technical Education Quality Improvement Programme (TEQIP), funded by World Bank and Government of Jharkhand, has an objective to provide sophisticated instrumentation facilities for advanced research to the faculty and students of Birla Institute of Technology, as well as other Institutions in the region. CIF is equipped with state of the art sophisticated instruments to carry out spectral measurements, surface behavior, molecular analysis, electrical studies, chemical and electrochemical analysis,

and electronic circuit preparation, structural analysis, mechanical strength analysis, characterization related to aerodynamic modeling etc. Instruments available at CIF are used by BIT personnel and outsiders at nominal charges.

### CIF facilities include:

1. Inductively coupled plasma optical emission spectroscope, Perkin Elmer, USA.
2. Microwave Digestion System-Multiwave 3000, Anton Paar, Austria.
3. Ultraviolet-Visible Spectroscope-Lambda25, Perkin Elmer, USA.
4. Electrochemical analyzer, CH Instruments, USA.
5. Gel Permeation Chromatograph, Waters, USA.
6. Differential Scanning Calorimeter, TA Instruments, USA.
7. Particle size, Molecular weight and Zeta potential analyzer, Malvern, UK.
8. Thermo Gravimetric Analyzer, Shimadzu, Japan.
9. FTIR Spectrophotometer, Shimadzu, Japan.
10. Chemiluminescence Spectrophotometer, Shimadzu, Japan.
11. Color measurement system, Hunter Lab, USA.
12. Element analyzer, CHNSO, Elementar, Germany.
13. Pulse analyzer, Oros, France.
14. Porosity meter, Thermoelectron, Italy
15. Atomic Force Microscope, NT-MDT, Russia.
16. Surface Tensiometer- plate and ring drop, Dataphysics, Germany.
17. Servo hydraulic dynamic tensile testing machine, Instron, UK.
18. Impedance Analyzer, Novocontrol, Germany.
19. Optical Contact Angle, Dataphysics, Germany.



Demonstration of Scanning Electron Microscope

20. Printed Circuit Board (PCB) designer, LPKF, Germany.
21. Robotic Kit, Technosolutions Pvt. Ltd., India.
22. Scanning Electron Microscope, JEOL, Japan.
23. Microscope, EZ4D, Leica, Germany (35X)
24. Microscope, DFC320, Leica, Germany (1000X)

**The facilities were utilized for laboratory classes by the following departments**

1. **Undergraduate (UG):** Applied Chemistry, Mechanical Engineering, Production Engineering, Polymer Engineering, and Biotechnology
2. **Postgraduate (PG):** M Sc/ ME/ M Tech/ M Pharm, Applied Chemistry, Production Engineering, Applied Mechanics, Applied Physics, Chemical and Polymer Engineering, Electronics and Communication Engineering, Space Engineering and Rocketry, Biotechnology, Pharmaceutical Science and Environmental Science.

**Research activities**

Doctoral Research Scholars from Applied Chemistry, Applied Physics, Biotechnology, Production Engineering, Chemical and Polymer Engineering and Pharmaceutical Sciences are working regularly in the lab.

CIF carries out sample testing works for various Academic, Research Institutions and Industries like ISMU Dhanbad; Ranchi University, Ranchi; Jadavpur University; NIT Rourkela; Jaypur College of Pharmacy, Orissa; RVS College of Engineering, Jamshedpur; KMCH College of Pharmacy, Tamil Nadu; JKK Natraj College of Pharmacy, Tamil Nadu; Sri Ram Nath Singh Mahavidyalaya, MP; Gupta College of Technological Sciences, Asansol; Guru Ghasidas University, Chhattisgarh; Magadh Mahila College, Patna; AISSMS College of Pharmacy, Pune; SOS University, Bhubaneswar; PRSS University, Raipur; IFTM, Moradabad, UP; SNMV College of Arts and Science, Coimbatore; Amrita School of Engineering, Coimbatore; NIFT, Hatia, Ranchi; SS Memorial College Ranchi; Ranchi University, Ranchi; Devi Ahalya Viswavidyalaya, Indore; RTM University, Nagpur; Institute of Science, Nagpur; SMIT, Sikkim; KIITS University, Bhubaneswar; SLT Institute of Pharmacy, Durg; Jaydev College of Pharmaceutical Sciences, Bhubaneswar; CECRI Karaikudi; Indian Institute of Natural Resins and Gums, Ranchi; Central Institute of Mining and Fuel Research, Ranchi; Tata Steel, Jamshedpur; M/s Park Nano, Ranchi. Total revenue that has been generated by the CIF through the various testing during year 2010-11 is ₹ 7,20,322/- (Seven lakh twenty thousand three hundred twenty two only)

**The facilities were also utilized for training of participants of following programs:**

1. Quality Improvement Program on "Recent Advances in Safety Pharmacology" (2nd – 14th Aug, 2010) organized by Dept of Pharmaceutical Sciences.
2. Refresher Course on "Life Sciences" (6th -26th Aug 2010) organized by UGC Academic Staff College, Ranchi University, Ranchi.
3. Quality Improvement Program on "Clinical Pharmacy in India: A need of Hour" (29th Nov – 11th Dec 2010) organized by Dept of Pharmaceutical Sciences, BIT, Mesra, Ranchi
4. NCERT Programme of National Talent Search (NTS) Awardees organized by the Dept of Applied Physics, BIT Mesra, March 1st –5th Feb 2011.
5. Summer School on "Quality Control & Quality Assurance" (8th June 2011) organized by Dept of Pharmaceutical Sciences, BIT, Mesra



## CENTRAL LIBRARY

The Central Library strives to evolve into a model and leading technical university library. The library contributes and supports BIT in building an internationally top ranked academic & research driven institution by establishing a knowledge hub.

Library automation has been completed through LibSys software. The collection comprises of print and electronic documents in the field of basic science, engineering, pharmacy, management and hotel management. Online journals like IEEE, Science Direct, Springer, IOP, ASME, ASCE and others subscribed through INDEST-AICTE & UGC-INFONET consortium. E-Library section consisting of a number of networked terminals to access e-journals, e-books and other e-reference resources to the library users under Intranet and Internet environment. 10 MBPS leased line connectivity has been installed exclusively for e-library through BSNL India under UGC-INFONET scheme.

### Library Mission

The mission of our central Library is to provide comprehensive information to fulfill the needs of the BIT community and to support the Institute's mission to contribute to society through the pursuit of education, teaching, learning and research at the premier levels of excellence.

### Library Vision

BIT Central Library make certain that its collections remain forward-looking, diverse in girth and form, unlock to browsing with internationally renowned quality. Through promotion, the Library makes its users aware of the resources available to them, and through innovation, it makes access to these resources easier. To serve potential users, the Library conserves information across all formats and ensures effectual storage and deliverance scheme. The Library's cooperation with expanding circles of associates yields unified access, broadening knowledge, and enhanced services.

### Print Books

**Total Volumes** : 1, 33,723

**Total Titles** : 42,298

**Print Journals/Magazine** : 16

**Electronic Journals** : 9009

**CD/ DVD** : 3,200

**Bound Volumes** : 18,512

**Library home page** : <http://bitmesra.ac.in/library/default.asp>

**Library Services** :

- Reference
- News clippings
- New arrivals
- Reprographic
- Inter Library Loan
- Bibliographic services





Document Lending Services  
 E Document Delivery Services  
 Referral  
 CD/DVD database search  
 Language Laboratory  
 Off Campus Service

### Library Working Hours

Monday to Friday : 08.00 AM to 08.00 PM  
 Saturday : 08.00 AM to 03.00 PM  
 Sunday : 09.00 Am to 1:00 PM

### Issue / Return Timings

Monday through Friday 08.15 – 17.00 hrs  
 Saturday 08.15 – 13.00 hrs

### Library Membership

The library serves over 4977 members including students, research scholars, faculty, project engineers, and staff.

Description	No. of Books	Period of Loan
Teaching Faculty	08	One Month
Non Teaching Staff	04	One Month
All Under Graduate and Post Graduate students	05	15 Days
All Under Graduate and Post Graduate SC/ST students	10	One Semester
All Under Graduate and Post Graduate OBC student	5	One Semester
Research Scholars	05	One Month
Books from Textbook Section for All Category	1	1 Day

### Library Consortium

Central library enrolled its membership for AICTE-INDEST and UGC-INFONET consortium to subscribe online journals

### Institutional Membership

American Library Kolkata  
 DELNET, New Delhi

**Department wise Books****Central Library: Overview As on March 2011**

SI No	Course	Titles Available	Volumes Available
1	Applied Chemistry	1953	8023
2	Applied Mathematics	1951	8598
3	Applied Mechanics	2873	5615
4	Applied Physics	2506	6684
5	Architecture	1569	2207
6	Biotechnology	1786	3061
7	Civil Engineering	2462	7023
8	ECE	2745	12050
9	CSE	5757	21440
10	IT & MIS	3234	8092
11	EEE	2395	9175
12	Environmental Science & Engineering	758	1256
13	HMCT	533	2739
14	Management	2241	11658
15	Mechanical Engineering	2318	10250
16	Pharmacy	2670	5964
17	Polymer Engineering	455	3100
18	Production & Engineering	2387	3087
19	Remote Sensing	582	1064
20	Space Engineering & Rocketry	630	1055
21	Others	493	1582
	<b>Total</b>	<b>42298</b>	<b>133723</b>

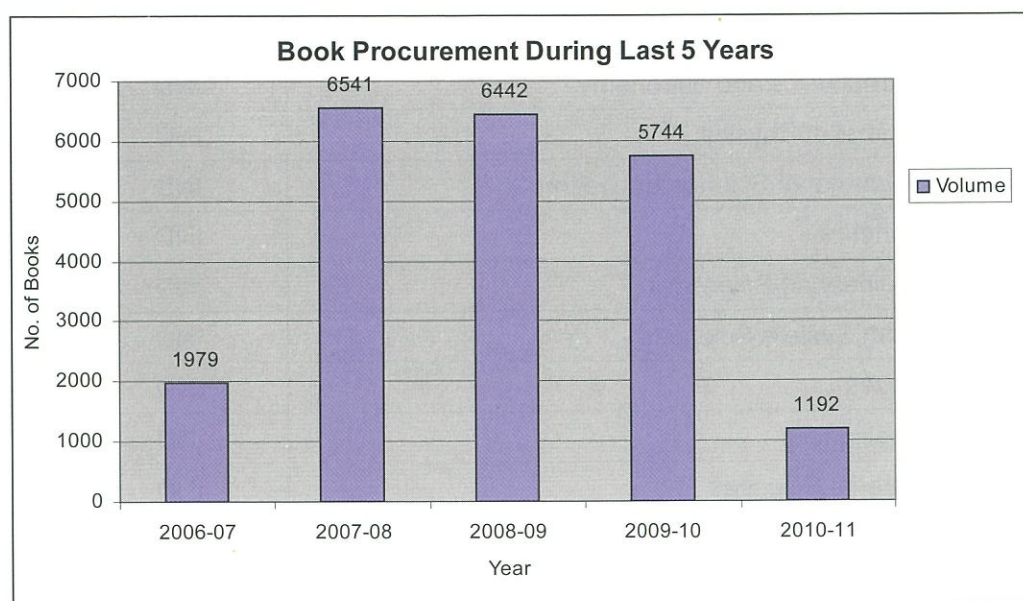
**Print Journals/ Magazines**

SI No	Name	IND / INT	Jr/ Mag
1.	Fortune	IND	Mag
2.	Time	IND	Mag
3.	Outlook Traveller	IND	Mag
4.	Business Today	IND	Mag
5.	India Today	IND	Mag
6.7.	Journal of Chemical Sciences	INT	Jr.

8.	Proceedings Mathematical Sciences	IND	Jr.
9.	Journal of Astrophysics and astronomy	IND	Jr.
10.	Pramana- Journal of Physics	IND	Jr.
11.	Resonance- Journal of Science Education	IND	Jr.
12.	Journal of Genetics	IND	Jr.
13.	Sadhana (Engineering Sciences)	IND	Jr.
14.	Journal of Earth System Sciences	IND	Jr.
15.	Current Sciences	IND	Jr.
16.	Journal of Biosciences	IND	Jr.
17.	Bulletin of Material Sciences	IND	Jr.

### Full Text Online Journals

ASCE	<a href="http://www.asce.org">http://www.asce.org</a>
ASME(Including AMR)	<a href="http://www.asme.org">http://www.asme.org</a>
American Institute of Physics	<a href="http://www.aip.org">http://www.aip.org</a>
American Chemical Society	<a href="http://pubs.acs.org/">http://pubs.acs.org/</a>
American Physical Society	<a href="http://www.aps.org">http://www.aps.org</a>
Annual Reviews	<a href="http://arjournals.annualreviews.org">http://arjournals.annualreviews.org</a>
Cambridge University Press	<a href="http://journals.cambridge.org">http://journals.cambridge.org</a>
Economic & Political Weekly	<a href="http://epw.in">http://epw.in</a>
EBSCOhost	<a href="http://web.ebscohost.com">http://web.ebscohost.com</a>
Institute of Physics	<a href="http://iopscience.iop.org/journals">http://iopscience.iop.org/journals</a>
ISID	<a href="http://isid.org.in">http://isid.org.in</a>
IEL/IEEE	<a href="http://ieeexplore.ieee.org">http://ieeexplore.ieee.org</a>
JCCC	<a href="http://www.jccc-ugcinfonet.in">http://www.jccc-ugcinfonet.in</a>
Oxford University Press	<a href="http://www.oxfordjournals.org">http://www.oxfordjournals.org</a>
Project Muse	<a href="http://muse.jhu.edu/journals">http://muse.jhu.edu/journals</a>
Royal Society of Chemistry	<a href="http://www.rsc.org">http://www.rsc.org</a>
Science Direct	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
Springer Link	<a href="http://www.springerlink.com">http://www.springerlink.com</a>
SIAM	<a href="http://www.epubs.siam.org">http://www.epubs.siam.org</a>
Taylor & Francis	<a href="http://www.tandfonline.com">http://www.tandfonline.com</a>
Web of science	<a href="http://www.isiknowledge.com">http://www.isiknowledge.com</a>
Wiley-Blackwell	<a href="http://www.onlinelibrary.wiley.com">http://www.onlinelibrary.wiley.com</a>



**Year wise Books Procurement (including Book Bank)**

### Site Map (Location Index)

#### Name of the resource, service, section

Bindery Section  
 Book Acquisition Section  
 Book Bank  
 Book stacks (All disciplines)  
 CD ROM workstations  
 Circulation counter /section  
 Faculty publications display  
 Fine Details  
 Indexing and Abstracting Journals (Back Volumes)  
 Issue of Library Card  
 Journals (Bound volumes)  
 Journals Section / current journals display  
 Library Office  
 New Arrivals Book display  
 Newspapers and Light Reading Material  
 OPAC (Online catalogue)  
 Photocopying facility  
 Reading Hall  
 Reference Section  
 Technical Processing Section  
 Text Book  
 Theses and dissertations

#### Location

Second floor  
 Ground floor  
 Second floor  
 First, Second & Third floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground floor  
 Ground, First & Second floor  
 Ground floor  
 Ground floor and First floor  
 First floor  
 Ground floor  
 First floor  
 First floor

## **LIBRARY RULES**

1. The Library Card will be issued to a Staff/Student at the beginning of his/her career in the Institute, subject to the rules and regulations of the Library.
2. The Bar-coded Card should be preserved carefully. Loss of the Card should be reported immediately in writing to the Librarian. Issue of a duplicate card may be considered in case of loss on payment of Rs.25/- for students and Rs. 40/- for Staff members but can not be claimed as a right. The Staff/ Student will be responsible for books found outstanding in the original card even after a duplicate has been issued.
3. All students may borrow five books from General Stock at a time for Fifteen days and one Text book for over night. All Teaching Staff may borrow eight books from General Stock at a time for one month and one Text book for over night. All Non Teaching Staff may borrow four books from General Stock at a time for one month and one Text book for over night. In addition to books, the teaching Staff may borrow two back volumes of any journal other than Indexing and Abstracting for a period of one week only.
4. The borrower will inspect the books and bring it to the notice of the Counter Assistance if they are damaged before getting them issued; otherwise he/she will be held responsible for the damage at the time of return.
5. Students may also borrow from SC/ST Book Bank on submission of eligibility certificate.
6. Overdue charges will be collected as per rules prevailing in case of delay in return. The current charges are General Stock Books: 1/- per day for the first week and Rs.10/- per day thereafter; Text-book: Rs. 10/- per day.
7. Loss of books/documents should be reported in written to the Librarian immediately. The decision of the Librarian will be final regarding recovery of cost.
8. The Librarian has the discretion to recall any book even before the due date.
9. The books/documents borrowed on the card are not transferable.
10. Only writing materials will be allowed inside the Library. Personal belongings such as loose garments, shawls, umbrellas, brief cases, bags, file covers, etc. are to be left behind at the appropriate place near the entrance to the library.
11. The Staff/Student will consult the Catalogue/OPAC to locate the books on the shelves arranged according to the Call Numbers in the Catalogue. In case of any difficulty the Librarian may be consulted.
12. The Staff/Student will present the Bar coded library card with books at the issue/return counter for charging/discharging.
13. Misuse of library privilege will be regarded as breach of discipline.
14. This card must be used only by the member to whom it is issued.
15. Library card/ Library books lost/found must be reported in writing to the Librarian immediately.
16. No dues Certificate will be issued only when all documents borrowed are returned to the Library. The above regulations may be amended at the discretion of the library.

## Library Statistics of 2010-11

### Total Books Added

Title	:	304
Volume	:	1192

### Total Journals Procured

Print	:	16
Online	:	9009

Total Number of Membership enrolled : 1,284

Total Number of Books Issued : 87,273

Total Number of Books Returned : 85,060

### Workshop/ Seminar conducted

1. One day workshop on "DELNET: Resources, Services & Facilities" on 21<sup>st</sup> April 2011, Central Library, Birla Institute of Technology, Deemed university, Mesra, Ranchi.
2. National workshop on "Koha: Open source software for library automation" on 4-5 June 2010, held at Central Library, Birla Institute of Technology, Deemed university, Mesra, Ranchi.
3. Commission for Scientific & Technical Terminology sponsored meeting on "Reconstruction Improvement of Library Science Dictionary" from 29<sup>th</sup> April to 2<sup>nd</sup> May 2010 at BIT Central Library, Mesra, Ranchi

### Staff Achievements

#### *Dr. Vijayakumar M*

- Higher Education : Completed MCA course with distinction from Madurai Kamaraj University, Tamil Nadu, INDIA

### Research Guide

1. Recognized as a research guide/ supervisor from Rayal Seema University, Andhra Pradesh to guide the research work of candidates which lead to PhD/ MPhil programme in Library and Information Science
2. Recognized as a research guide/ supervisor from Vinayaka Mission's Research Foundation Salem, Tamilnadu, to guide the research work of candidates which lead to PhD/ MPhil programme in Library and Information Science
3. Recognized as a research guide/ supervisor from Alagappa University, Tamilnadu to guide the research work of candidates which lead to PhD/ MPhil programme in Library and Information Science
4. Recognized as a research guide/ supervisor from Annamalai University, Tamilnadu for to guide the research work of candidates which lead to PhD/ MPhil programme in Library and Information Science

### Publications

#### *Books*

1. Use of Information Technology in Select Research Libraries in Karnataka: A Survey. Lambert Academic Publishing, Germany, 2011, 401p ISBN: 978-3-8443-0016-1

### **Journals**

1. A Study on user perceptions of HIV/AIDS based Web Resources in Karnataka. ISST Journal of Advances in Librarianship. Vol. 2. No.1 January June 2011

### **Indian Conferences**

1. Library 2.0: A Buzz word for Library and Information Service. Paper presented in the national conference on "Content management in Digital era: Opportunities and Challenges" at Kuvempu University during 12-13th March 2010

### **Participated in conference**

1. Participated in 3 days National Conference on "Technical Terminology in Indian Languages" Vigyan Bhavan, New Delhi during 27-29 2011, conducted by Commission for Scientific Technical Terminology, New Delhi.

### **Workshop/ Seminar conducted**

1. Coordinator for one day workshop on "DELNET: Resources, Services & Facilities" on 21<sup>st</sup> April 2011, Central Library, Birla Institute of Technology, Deemed university, Mesra, Ranchi.
2. Coordinator for the national workshop on "Koha: Open source software for library automation" on 4-5 June 2010, held at Central Library, Birla Institute of Technology, Deemed university, Mesra, Ranchi.
3. Local coordinator for the Commission for Scientific & Technical Terminology sponsored meeting on "Reconstruction Improvement of Library Science Dictionary" from 29<sup>th</sup> April to 2<sup>nd</sup> May 2010 at BIT Central Library, Mesra, Ranchi

### **Mr. Samir Kumar Jalal**

#### **Publications**

1. Web-based ranking and link analysis of central universities in India: a webometric analysis. Information Studies, 16(1), 3-26; 2010.
2. Hyperlink analysis for selected Indian universities: using webometric tools and techniques. Annals of Library and Information Studies, 57(2), 109-121; 2010
3. Web presence of selected Asian countries: A webometric study. COLLNET Journal of Scientometrics and Information Management, 4 (2), 57-68; 2010

### **Ms. Tanushree Bhatnagar**

#### **Publication**

##### **International Conference**

1. Bhatnagar, Tanushree, Jha, A.N , and Singh, H.K "Open Source Platforms for sustainability in e-Governance" International Conference on E-governance (ICEG 2010) IIM Bangalore .
2. Bhatnagar, Tanushree, Jha, A.N , and Singh, H.K "Open Source Software and its applications in e-Governance" International Conference on Digital Library and Knowledge Organization" (ICDK 2011) MDI Gurgaon .



### **International Journal**

1. Bhatnagar, Tanushree, Jha, A.N , and Singh, H.K "Use of Information Communication Technologies (ICT) in E-governance: A review" IJ-ETA-ETS July 2010 ISSN : 0974-3588
2. Bhatnagar, Tanushree, Jha, A.N , and Singh, H.K ICT Applications in E-Governance
3. International Journal of Advances in Science and Technology Vol 1 Issue 4 Nov 2010 ISSN: 2229-5216 (2010)
4. Bhatnagar, Tanushree, Jha, A.N , and Singh, H.K Effectiveness of ICT in E-governance with special reference to Jharkhand State GJCST Volume 10 Issue 14:27-31 Nov30th,2010
5. Bhatnagar, Tanushree, Jha, A.N , and Singh, H.K "A study of Information Communication Technology effectiveness in select government organization at Jharkhand State" International Journal of Engineering Science and Technology, June ,2011

### **Mr. Debojyoti Nath**

- Attended AICTE-INDEST sponsored workshop on e-resources at IIT Kharagpur, 2010
- Participated in the workshop on e-Granthalaya software at BITT, Ranchi.
- Paper contributed in the National Seminar at Vidyasagar University, West Bengal
- Paper contributed in the National Seminar at Kuvempu University, Karnataka

### **Mr. Amitabh Kumar Manglam**

- Participation in the 8th International CALIBER 2011 on the theme "Towards building a knowledge society: library as a catalyst for knowledge discovery and management" organized by Goa University and INFLIBNET centre, Ahmedabad during 02-04 March, 2011.
- Participation in the workshop "e-Granthalaya: software for library automation" organized by Library & Information Services Division, NIC, New Delhi at BITT, Ranchi during 22-24 Feb 2011.
- Participation in the one-day workshop on "DELNET: Resources, Services & Facilities" organized by DELNET, New Delhi at BIT Mesra, Ranchi on April 21, 2011.

### **Ms. Rameshwari Pandey**

- Attended AICTE-INDEST sponsored workshop on e-resources at IIT Kharagpur, 2010

### **Mr. Asutosh**

- Received MCA Degree from Sikkim Manipal University

### **Mr. Mohan Mahato**

- Received BLIS Degree in 2011

## STUDENTS' CULTURAL ACTIVITIES

This is the annual report of student clubs of BIT, Mesra for the academic session 2010-11. It was quite an eventful year considering the zestful involvement of all clubs.

The news and publication society covered all college events, prepared reports on the same and summarized into a report the yearly contribution of all clubs. It was also actively involved in preparing the souvenir for 2007 batch.

Starting off, the BIT, Mesra IET students' chapter, organized numerous workshops during the year, objects ranging from GRE preparation sessions to image processing and others of the ilk, like coding sessions and general student help. BIT, Mesra ACM student's chapter organized workshops on core computing that received hefty participation.

A number of cultural clubs reside in BIT. Fine arts society, like every year, embellished the central staircase in the main building. Also, much of the decoration in college festivals was handled by the society. The students' society of architecture designed T-shirts and souvenirs for alumni and had a vital role in stage decoration. Dance club, on the other hand, had a major role to play in pantheon and BITOTSAV through vivid dance competitions. Also, the club was the cynosure of all eyes in IIT-Kgp spring fest where it bagged the third prize for the institute. Dramatic society was involved in realization of writing and other talent events that took place across the year. Music club had an imperative role to play during college fests through the year. Also, it participated in events outside the campus boundaries.

The hospitality club conducted the Independence Day luncheon, a youth week and was responsible for erecting stalls in various college festivals. Rotaract club did a profound job by displaying organizational capability during college festivals and a blood donation camp, proving a large workforce for all.

## TRAINING & PLACEMENT DIVISION

The Training & Placement Division has the responsibility of providing the most effective employment support and outstanding career development services to its students community. The activities of this Division are diverse and yet pointed towards its core mission of providing information, guidance, counseling as well as providing opportunities for effectively influencing life long career transition among the students.

The Campus Recruitment programme at BIT, Mesra has over the years been most successful not just in terms of generating offers exceeding the number of students on campus but also in terms of development of wide ranging relationship covering almost all sectors of the industry.

A summary of the activities undertaken by the Division during the year 2010-11 is as under:

### Campus Recruitment Programme:

A total of 107 organizations visited for campus recruitment and a total of 1808 offers were generated through this process which encompasses all students of BE, ME, M. Tech., MCA, M.Sc., Pharmacy, Architecture, Management & HMCT. Several students received multiple offers.

### Student workshops conducted in collaboration with Industry:

1. Batch Assessment Program for BIT Mesra Campus students.
2. Batch Assessment Program for BIT Patna Campus students.
3. Batch Assessment Program for BIT Jaipur Campus students.
4. Batch Assessment Program for BIT Allahabad Campus students.
5. Batch Assessment Program for BIT Noida Campus students.
6. Batch Assessment Program for BIT Kolkata Campus students.
7. Student Workshop on Green Computing by TCS, 20<sup>th</sup> August 2010.
8. Mahindra Auto Quiz – Auto Quotient – 21st September'10.
9. Pre - Placement student workshop regarding current IT industry scenario, work environment and scope of work in TCS and expectations from students for selection in TCS - 26<sup>th</sup> October 2010.
10. Wipro Mission 10X – 5 full-days workshop for faculties of BIT and 2 other institutions: This program is oriented towards building continuous professional development of teachers of engineering education.





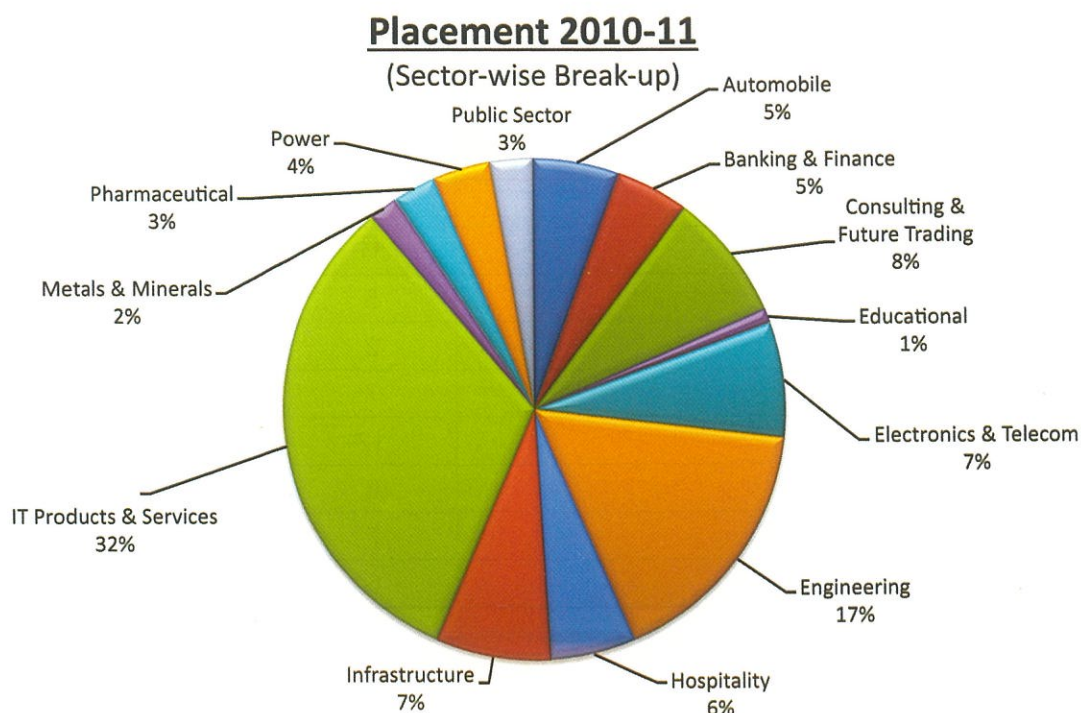
It is primarily designed to shift the paradigm from teaching to learning and transform the learning cultures in the institutions of engineering education - 22<sup>nd</sup> to 26<sup>th</sup> November 2010.

11. Student Workshop on Recent Trends in Information Technology by TCS, 12<sup>th</sup> January 2010.
12. 2 days Advance Workshop under Wipro Mission 10X Programme for faculty of BIT and other 2 Institutions, 8<sup>th</sup>-9<sup>th</sup> March 2011.
13. Student Workshop 'Be Inspired and Aspire' by IBM, 30<sup>th</sup> March 2011.
14. TCS Best students and Best Project Award Ceremony.
15. EMPOWER: Ericsson University Relationship Program 2010-2011, a year long training programme for the final year students.
16. Summer training for the Pre-final year students was organized in a number of organizations in different sectors. Several students were awarded pre-placement offers on completion of the summer training.

#### Conclaves & conferences attended:

1. Defining Dialogues 10: Industry –Academia Meet at Mumbai by CTS
2. Accenture Academia Meet 2010 at Mumbai
3. Leap 2010 Industry–Academia Meet organised by Wipro at Port Blair
4. Disha – 'Amdocs' Campus Conclave at Gurgaon

#### Placement Data 2010-11



**Companies' On-Campus**

Sr.	Company	Offer	Sector
1	ABB Ltd.	1	Power
2	Accenture	23	IT Services
3	Adani Power	6	Power
4	AGC Networks	7	Electronics
5	AIRTEL	3	Telecom
6	Akash Institute	4	Educational
7	Amdocs	5	IT Services
8	Apeejay Surrendra Park Hotels	1	Hospitality
9	Arcelor Mittal	3	Engineering
10	Aricent Technologies	133	Electronics
11	Atos Origin	66	IT Services
12	Axis Bank	3	Banking
13	Birlasoft	35	IT Services
14	CAPARO	3	Engineering
15	Capgemini	13	IT Services
16	Capital IQ	2	Consultancy
17	Caterpillar	4	Automobile
18	Club Mahindra	1	Hospitality
19	Cognizant Technologies	389	IT Services
20	Courtyard Marriott	4	Hospitality
21	Cummins	2	Engineering
22	Cybage	3	IT Services
23	Deloitte	22	Consultancy
24	Directl	1	IT Products
25	Domino's Kolkata	11	Hospitality
26	Dr.Reddy's	5	Pharmaceutical
27	ERA Group	2	Infrastructure
28	EXL Services	7	Consultancy
29	Fiserv	12	IT Services
30	Fluor Daniel	9	Infrastructure
31	Freescale	7	Electronics
32	Frost & Sullivan	6	Consultancy
33	Future First	2	Future Trading
34	Gammon India	7	Infrastructure
35	Gmmco	9	Engineering

36	Goldman Sachs	7	Consultancy
37	Google	1	IT Products
38	Havells	5	Electricals
39	HCL Info Ltd	1	IT Services
40	HCL Info Mind	2	IT Services
41	Headstrong	44	IT Services
42	Hindalco	2	Metals
43	Hyderabad Industries	1	Engineering
44	Hyundai Motors	2	Automobile
45	IBM	52	IT Services
46	ICICI Bank	13	Banking
47	ICICI Securities	8	Financials
48	IDBI Bank	17	Banking
49	Idea Cellular	7	Telecom
50	IFB	4	Home Appliances
51	Indegene	0	Pharmaceutical
52	Indian Army	0	Gov.
53	Infosys	290	IT Services
54	IOCL	11	PSU Oil
55	ITC Sonar, Kolkatta	6	Hospitality
56	JUSCO	4	Infrastructure
57	L&T ECC	14	Infrastructure
58	L&T Finance	2	Financials
59	L&T Ltd.	7	Engineering
60	Mahindra & Mahindra	5	Automobile
61	Maruti Suzuki	8	Automobile
62	McNally Bharat	7	Engineering
63	Metalsa	1	Engineering
64	Metrix Lab	11	Pharmaceutical
65	Microsoft	6	IT Products
66	Misys	3	IT Services
67	Mu Sigma	4	IT Services
68	NEI	3	Engineering
69	Nestle	3	FMCG
70	Nomura	7	Consultancy
71	NTPC	5	PSU Power
72	Oberoi OCER, Kolkatta	3	Hospitality

73	Oracle	3	IT Products
74	Philips Electronics (I) Ltd.	3	Electronics
75	Punj Lloyd	10	Infrastructure
76	PWC	12	Consultancy
77	Reckitt Benkiser	1	FMCG
78	Reliance Power	14	Power
79	Royal Infratech	0	Infrastructure
80	Samsung - Software Engg. Lab	24	IT Products
81	Samsung SISO	11	IT Products
82	SAPIENT	13	IT Services
83	Simplex Infrastructures	9	Infrastructure
84	Sony Software	3	IT Products
85	Tata Auto Comp	9	Engineering
86	Tata Motors	12	Automobile
87	Tata Power	9	Power
88	Tata Steel	15	Metals
89	Tata Steel Systems	6	IT Services
90	Tata Technologies Ltd	5	IT Services
91	Tech Mahindra	10	IT Services
92	Tejas	5	Electronics
93	Telcon	1	Automobile
94	Tinplate	2	Engineering
95	TRF	6	Engineering
96	Usha Martin Ltd.	7	Engineering
97	Vedanta	3	Engineering
98	Wipro Technologies	23	IT Services
99	Yahoo	3	IT Products
100	ZS Associates	8	Consultancy
<b>Companies visited for BCS &amp; BBA Programme</b>			
101	Aricent Technologies	25	Electronics
102	Cognizant Technologies	53	IT Services
103	EXL Services (KPO)	8	IT Services
104	NIIT	3	IT Services
105	SAP Labs	6	IT Products
106	TCS	3	IT Services
107	Wipro Technologies	106	IT Services



## **ANNEXURE**



## ANNEXURE I

### MEMBERS OF THE GENERAL COUNCIL

#### I. Founder Members

Shri C. K. Birla  
9/1, R. N. Mukherjee Road  
KOLKATA - 700 001

Shri G. D. Kothari  
8, India Exchange Place  
KOLKATA

Shri Russi Modi, 5 / 1 B,  
Belvedere Road  
KOLKATA - 700 027

Shri S. L. Bhatler , C/o  
Hindustan Motors Ltd  
10<sup>th</sup> Floor, Birla Building  
9/1 R. N. Mukherjee Rd  
KOLKATA - 700 001

Dr. A. K. Chatterjee  
9/11, Moore Avenue  
KOLKATA

Shri D. N. Patodia  
45, Akash Neem Marg  
DLF City Phase II  
GURGAON 122 001  
Haryana

Shri Sarosh Ghandy  
45, Museum Road  
BANGALORE - 560 025

Dr. Karan Singh  
3, Nyaya Marg, Chanakyapuri  
NEW DELHI

Dr. A. R. Kidwai  
Governor of Haryana  
Raj Bhavan  
CHANDIGARH

#### II. Life Members

Dr. H. C. Pande  
1/97, Vijay Khand - I  
Gomti Nagar  
LUCKNOW – 226 010

Shri Mohammed Yousif Jalal  
Mohammed Jalal & Sons WLL  
P. O. Box : 113, MANAMA  
Kingdom of Bahrain

H. E. Dr. Omar bin Abdul Muniem Al-Zawawi  
Omar Zawawi Establishment (OMZEST)  
P. O. Box 879, P. C. 113, MUSCAT  
Sultanate of Oman

#### III. Corporate Members:

**Name of the Company / Organisation**  
M/s National Engineering Industries Ltd.

**Represented by**  
Shri H. P. Singhi  
9/1 R N Mukherjee Road  
KOLKATA - 700 001

M/s Hyderabad Asbestos & Industries Ltd.

M/s Orient Paper & Industries Ltd.

Dr. Praveen Dhyani  
BIT, Mesra

M/s Indian Press Exchange Ltd.

Dr. P. Ghosh  
M/s B. M. Birla Science  
& Technology Centre  
Statue Circle, JAIPUR - 302 005

M/s Hindustan Motors Ltd.

M/s Orient General Industries Ltd.

M/s General Mktg. & Mfg. Co. Ltd.

Shri P. C. Agarwal  
9/1 R N Mukherjee Road  
KOLKATA - 700 001

#### **IV. Members by Representation**

Representative of the  
Ministry of Human Resource Development  
Government of India

Shri R. D. Sahay  
Dy. Secretary  
MHRD  
Government of India  
NEW DELHI - 110 001

Representative of the  
University Grants Commission

Prof. R.P. Kaushik  
G-19/19, DLF, Phase-I,  
Gurgaon – 124 022

Representative of the  
Department of Science & Technology  
Government of India

Shri H. K. Mittal  
Adviser & Head (NEB)  
Department of Science & Technology  
Government of India  
NEW DELHI-110 016

Representative of the  
All India Council for Technical Education

Prof. (Dr.) Suresh Chandra Saxena  
Director  
IIT, Roorkee  
ROORKEE - 247 667

Representative of the  
Department of Science & Technology  
Government of Jharkhand

(Ex-Officio)

Representative of BISR

Shri S. S. Jajodia  
78, Syed Amir Ali Avenue  
KOLKATA

Vice Chancellor of the Institute

(Ex-Officio)

#### **V. Alumni Members:**

- 1) Dr. H. S.Sagar  
Director  
Sant Baba Bhag Singh  
Institute of Engineering & Technology  
Padhiana (Near Adampur Doaba)  
JALANDHAR - 144 033
- 2) Shri D. Sahay  
27, Kali Babu Street  
RANCHI – 834 001

## ANNEXURE II

### MEMBERS OF THE BOARD OF GOVERNORS

Sri C. K. Birla Chairman, Board of Governors Birla Tower (9th Floor) 25, Barakhamba Road NEW DELHI – 110 001	Chairman
Sri R. D. Sahay Dy. Secretary, Government of India Ministry of Human Resource Development Dept. of Secondary & Higher Education Shastri Bhawan, NEW DELHI - 110 001	Nominee of MHRD, Govt. of India
Dr. (Mrs.) Renu Batra Joint Secretary University Grants Commission Bahadur Shah Zafar Marg NEW DELHI – 110 002	Nominee of UGC
Dr. Suresh Chandra Saxena Director Indian Institute of Technology Roorkee - 247 667	Nominee of AICTE
Secretary Dept. of Science & Technology, Govt. of Jharkhand (Ex-Officio)	Ex-Officio
Secretary Dept. of HRD, Govt. of Jharkhand (Ex-Officio)	Ex-Officio
Commissioner, South Chhotanagpur Division, Jharkhand (Ex-Officio)	Ex-Officio
Sri Sudhir Tripathi, I.A.S. Principal Secretary to the Governor Governors Secretariat Raj Bhawan, Ranchi	Nominee of the Chancellor
Dr. H. C. Pande 1/97, Vijay Khand - I Gomti Nagar LUCKNOW – 226 010	Nominee of HCT

Sri M. L. Pachisia 9/1, R. N. Mukherjee Road KOLKATA – 700 001	Nominee of HCT
Sri Rohit Saboo M/s Engineering Industries Ltd. JAIPUR	Nominee of HCT
Dr. Ajay Chakrabarty Vice Chancellor BIT Mesra, Ranchi	Vice Chancellor
Sri D. N. Patodia 45, Akash Neem Marg D L F City, Phase II GURGAON - 122 001	Nominee of General Council
Sri G. P. Lal VEDSHREE Dujra, PATNA - 800 001	Nominee of General Council
P.Ghosh M/s B. M. Birla Science & Technology Centre Statue Circle	Nominee of General Council
Dr. Mohan Varma BIT Mesra, Ranchi	Institute Faculty
Sri V. K. Jha BIT Mesra, Ranchi	Institute Faculty

## ANNEXURE –III

### MEMBERS OF THE FINANCE COMMITTEE

Shri C. K. Birla  
9/1 R. N. Mukherjee Road  
KOLKATA - 700 001

Chairman

Dr. Ajay Chakrabarty  
Vice Chancellor, BIT, Mesra  
RANCHI

Vice Chancellor  
BIT, Mesra  
Ranchi

Prof. Jose Varghese  
Profssor of Eminence  
Christ University  
(Deemed University)  
Hosur Road  
BANGALORE - 560 029

Nominee of  
University Grants Commission

Shri Sudhir Tripathi, IAS  
Principal Secretary to the Governor  
Governor Secretariat  
Raj Bhawan  
Ranchi

Nominee of Chancellor

Dr. H. C. Pande  
1/97, Vijay Khand - I  
Gomti Nagar  
LUCKNOW – 226 010

Nominee of General Council

Shri Rohit Saboo  
M/s Engineering Industries Ltd.  
JAIPUR

Nominee of Board of Governor

Shri S. S. Jajodia

Honorary Treasurer



**ANNEXURE – IV**  
**BUILDING & WORKS COMMITTEE**

**Chairman**

Vice- Chancellor, B.I.T., Mesra	-	Dr. Ajay Chakrabarty
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**Members**

Advisor, Planning & Campus Development	-	Prof. Gopal Pathak
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Treasurer, B.I.T. Mesra	-	Shri S.S. Jajodia
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Representative of the Institute Architects	-	M/s Kothari & Associates, Kolkata
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Representative of the State PWD	-	Nominee
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Head, Department of Civil Engineering	-	Dr. K.V. Krishnamurthy
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**Member-Secretary**

Registrar	-	Col. R. K. Verma (Retd.)
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## ANNEXURE V

# TECHNICAL COUNCIL

### Chairman

Vice-Chancellor B. I. T Mesra

: Dr. Ajay Chakrabarty

### Chancellor's Nominees

#### 1. Engineering

Shri Siddh Nath Singh  
B-203, Siddhi Vinayak Apartment  
Behind Hotel Yuvraj Palace  
Doranda, Ranchi – 834 002

#### 2. Science

Dr. Madhukar S Bhat  
A-3 New A.G. Cooperative Colony  
Kadru, Ranchi – 834 012

#### 3. Humanities

Dr. Krishna Kumar  
"Ashray"  
30, Kali Babu Street  
Behind Civil Court  
Ranchi – 834 001

### Members

- |                             |                                |                              |
|-----------------------------|--------------------------------|------------------------------|
| 1. Dr. P. K. Barhai         | 19. Dr. (Mrs.) M. Chakraborty  | 37. Dr. A.N. Jha             |
| 2. Dr. Ashok Mishra         | 20. Prof. D. Bhagat            | 38. Dr. S. Samanta           |
| 3. Dr. A. K Chatterjee      | 21. Dr. P.R.P. Verma           | 39. Dr. S. Jha               |
| 4. Dr. J. K. Prasad         | 22. Prof. R.P. Singh           | 40. Dr. S. Medhekar          |
| 5. Dr. N. C. Mahanthi       | 23. Dr. S.K. Bose              | 41. Dr. D.K. Mohanta         |
| 6. Dr. D. Jairath           | 24. Dr. (Mrs.) Nisha Gupta     | 42. Dr. Manju Bhagat         |
| 7. Prof. R. K. Narayan      | 25. Dr. A. S. Vidyarthi        | 43. Dr. Shradha Shivani      |
| 8. Dr. G. Sahoo             | 26. Dr. S. K. Ghorai           | 44. Dr. R. N. Bhagat         |
| 9. Dr. P. C. Joshi          | 27. Dr. Swapan Kumar Konar     | 45. Dr. R.C. Jha             |
| 10. Dr. (Mrs.) M. Mukherjee | 28. Dr. Nilanchal Patel        | 46. Dr. T. Ghose             |
| 11. Dr. D. Sasmal           | 29. Dr. K.G. Pandey            | 47. Dr. B.K. Singh           |
| 12. Dr. Gopal Pathak        | 30. Dr. Balram Singh           | 48. Dr. R.K. Sihna           |
| 13. Dr. R. Sukesh Kumar     | 31. Dr. B.N. Sinha             | 49. Dr. P. Dhyani            |
| 14. Dr. A. K. Ray           | 32. Dr. A.K. Sinha             | 50. Dr. A.P. Krishna         |
| 15. Dr. M. S. Nathawat      | 33. Prof. Sitesh P. Srivastava | 51. Sri D.K. Jain            |
| 16. Dr. (Mrs.) Ushs Jha     | 34. Dr. Arbind Kumar – I       | 52. Col. R. K. Verma (Retd.) |
| 17. Prof. C. M. Prasad      | 35. Dr. Kunal Mukhopadhyay     | 53. Sri B.B. Pant            |
| 18. Dr. K.V. Krishnamurthy  | 36. Dr. Utpal Baul             |                              |

**ANNEXURE – VI**  
**DEPARTMENT'S HEAD/ INCHARGE AND EXECUTIVES**

Vice Chancellor	:	Dr. Ajay Chakrabarty
Treasurer	:	Shri S. S. Jajodia
Registrar	:	Col. R. K. Verma (Retd.)

**Deans**

Admission	:	Dr. D. Jairath
Post – Graduate Studies	:	Dr. A. K. Chatterjee
Under – Graduate Studies	:	Prof. C. M. Prasad
Sponsored & Collaborative Research	:	Dr. P. K. Barhai
Academic Coordination	:	Dr. D. Sasmal
Extension Centres	:	Dr. A. K. Chatterjee
Faculty Development	:	Dr. K.V. Krishnamurthy
Finance	:	Dr. P. C. Joshi
Academic Infrastructure	:	Dr. (Mrs.) Usha Jha
Doctoral Research	:	Dr. Ashok Misra
Development Programme	:	Dr. (Mrs.) M. Mulherjee
Students' Welfare	:	Dr. A.K. Sinha

**Associate Deans**

Women Affairs	:	Mrs. S. G. Panpalia
Boys Affairs	:	Dr. R.C. Jha

**Department's Head / In Charge**

Architecture	:	Dr. (Mrs.) M. Chakraborty
Applied Chemistry	:	Dr. (Mrs) Usha Jha
Applied Mathematics	:	Dr. N. C. Mahanthi
Applied Mechanics	:	Prof. A. K. Ray
Applied Physics	:	Dr. P. K. Barhai
Bio-Medical Instrumentation	:	Dr. Rakesh Kumar Sinha
Biotechnology	:	Dr. A. S. Vidyarthi
Civil Engineering	:	Dr. K. V. Krishnamurthy
Computer Science & Engineering	:	Dr. R. Sukesh Kumar
Electronics & Communication Engineering	:	Dr. Nisha Gupta
Electrical & Electronics Engineering	:	Dr. T. Ghosh
Environmental Engineering & Science	:	Dr. Gopal Pathak
Hotel Management & Catering Technology	:	Mr. Sitesh Srivastava

Information Technology	:	Dr. G. Sahoo
Management	:	Dr. S. K. Bose
Mechanical Engineering	:	Dr. Ashok Mishra
Polymer Sciences Engineering	:	Dr. (Mrs) M. Mukherjee
Production Engineering	:	Dr. B.K. Singh
Pharmaceutical Sciences	:	Dr. D. Sasmal
Physical Education & Sports	:	Prof. Atul Anand
Remote Sensing	:	Dr. M. S. Nathawat
Space Engineering & Rocketry	:	Dr. A. K. Chatterjee
Co-ordinator Semester Programme	:	Dr. B.K. Singh
Additional Registrar (Fin.)	:	Shri O. P. Bhagaria
Additional Registrar (Career Planning & Development Programme)	:	Shri B. B. Pant
Controller of Examination	:	Dr. S. K. Jain
Chief Accountant	:	Shri G. S. Sharma
Library	:	Dr. M. Vijay Kumar
Chief Medical Officer	:	Dr. Arjun Prasad Singh
Cultural Coordinator	:	Dr. Ram Pal Singh

## ANNEXURE – VII

### IMPORTANT TELEPHONE NUMBER

Sl. No.	Name	Department	Phone No.	Fax
1.	Dr. Ajay Chakrabarty	Vice Chancellor	2275402	2275401
2.	Col. R. K. Verma (Retd.)	Registrar	2276052	
3.	Dr. S. K. Jain	Controller of Examination	2275138	2275923
4.	Dr. P. K. Barhai	Dean Faculty Development and Sponsored Research	2276522	
5.	Dr. A. K. Chatterjee	Dean Undergraduate Studies	2275983	
6.	Dr. P.C. Joshi	Dean Doctoral Research and postgraduate studies	2275338	
7.	Dr. D. Sasmal	Dean Admission and Academic Coordination	2275868 2275872	2276007 2275872
8.	Mr. B. B. Pant	Dean External affairs and Additional reg. T &P	2275566	
9.	Dr. A. K. Chatterjee	Space Engg. & Rocketry	2275983, 2276224	
10.	Prof. A. K. Ray	Applied Mechanics	2276182	
11.	Dr. N. C. Mahanti	Applied Mathematics	2276183	
12.	Prof K. V. Krishnamurthy	Civil Engineering	2276502	
13.	Dr. A. S. Vidyarthi	Biotechnology	2276223, 2276590	
14.	Dr. Nisha Gupta	Electronics & Comm.	2276185	
15.	Dr. B.K. Singh	Production Engg.	2275044	
16.	Dr. (Mrs). M. Mukherjee	Polymer Engineering	2276053	
17.	Dr. (Mrs.) Usha Jha	Applied Chemistry		
18.	Dr. D. Jairath	Applied Physics	2275522	
19.	Dr. G. Sahoo	Information Technology	2276185	
20.	Dr. (Mrs.) M. Chakraborty	Architecture	2275093	
21.	Dr. N. Patel	Remote Sensing	2276003	
22.	Mr. G. S. Sharma	Chief Accountant	2275927	
23.	Dr. Arjun Prasad	Chief Medical Officer	2276009	
24.	Mr. D. K. Jain	University Polytechnic	2276008	
25.	B. I. T. Exchange		2275444, 2275896, 2276267 (INPCO)2276492/93/94/95/98/99	

26.	VIP Guest House		2275213
27.	Chairman Bungalow		2275574
28.	Hostels		H1- 441, H2-442, H3-443, H4-444, H5-445/536, H6-446/537, H7-447/538, H8-448/558, H9-449, H9A-559, H10-534/539, H 11- 588/543, H 12 -627, H – 13- 628, RS Hostel: 435 (please dial 0651-2275444 for extension numbers as above)
29.	I. G. H		2276210
30.	<b>Off Campus Centre:</b>		
31.	Ranchi (Lalpur)		(0651)2531679,2531817
32.	Deoghar		9304422078 (WLL), +91 94311 37755
33.	Kolkata		(033)55256728,24414542
34.	Jaipur		(0141)2751178,2751567
35.	Allahabad		(0532)2687099
36.	Noida		(0120)2553661-2
37.	Patna		(0612)2223538,2223545,3200853
38.	Muscut		(00968)24449196
39.	Ras Al Khaimah		(+971)504862900,(+971)72272203

## ANNEXURE –VIII

### ADDRESS OF THE EXTENSION CENTRES

Sl. No.	
1.	BIT Extension Centre Lalpur Lalpur, Ranchi-834001 Ph No-(0651)2531679,2531817 Fax No.(0651)2531658,2531676 www.biteclalpur.ac.in
2.	BIT Extension Centre, Jaipur B. S. I. R Campus 27, Malviya Nagar Industrial Area, JAIPUR-302017 Phone- (0141)-2751567/2751178 Fax: No. – (0141)-2751601, 2751565
3.	BIT Extension Centre Kolkata Southend Conclave 1582 Rajdanga Main Road 4 <sup>th</sup> Floor, KOLKATA-700107 Ph. No. (033)55256728,24414542 Fax No.(033)25762398,24414547
4.	BIT Extension Centre, Noida A- 7, Sector -1 NOIDA-201301,(UP) Phone(0120)2553661/2 Fax: No. (0120) 2554146
5.	BIT Extension Centre, Allahabad B-7, Industrial area , P.O.-TSL Naini Allahabad – 211010 Phone: 0532-2687363,2687099 Fax: 0532-2687554 City Office- 14 Tagore Town, Allahabad – 211002 Phone:0532-2465518

Sl. No.	
6.	BIT Extension Centre, Patna Near Patna Airport, P. O. Bihar Veterinary College, Patna 800014 Phone:0612-2223538/2223545/3200853 Fax:0612-2223545 Patna City Office:62 D, Rajesh Kumar Path, S. K. Puri, Patna-800001 Phone: 0612-2540105, Fax:0612-2540105
7.	BIT Extension Centre, Deoghar Jasidih, Deoghar-814132 Ph: 9304422078 (WLL)
8.	BIT International Centre Muscat Waljat College of Applied Science P. O Box No. 197, Rusayal, Postal Code 124 MUSCUT, Sultanate of OMAN Fax: No. – (00968) 24449196 Phone: 00968-24449193
9.	BIT International Centre, UAE C/o Royal College of Applied Science & Technology Knowledge, Centre, RAK Free Zone Ras Al Khaimah, U.A.E Phone: +971504862900(M), +9717 2272203



## XXI-CONVOCATION

February 24, 2011



L to R - Dr. A. P. J Abdul Kalam, Former President of India, H.E. Shri M. O. H. Farook, Hon'ble Governor of Jharkhand & Chancellor, Dr. Ajay Chakrabarty, Vice Chancellor.



H.E. Shri M.O.H. Farook, Hon'ble Governor of Jharkhand and Chancellor awarding Degree & Gold Medal





LALPUR CENTRE



ALLAHABAD CENTRE



RAS-AL-KHAIMAH CENTRE



KOLKATA CENTRE



NOIDA CENTRE



DEOGHAR CENTRE



JAIPUR CENTRE



MUSCAT CENTRE



PATNA CENTRE

