



# ANNUAL REPORT 2012-13

**BIRLA INSTITUTE OF TECHNOLOGY**

(Deemed University)

Mesra, Ranchi - 835215, Jharkhand, India





## THE 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."

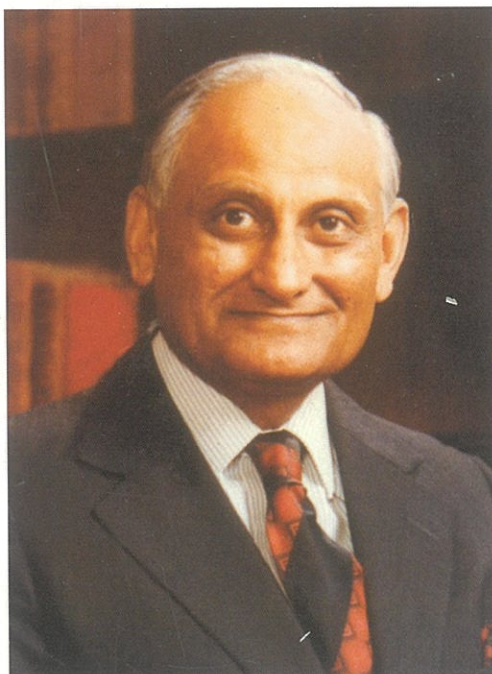
हे जग त्राता, विश्व विधाता, हे सुख शांति निकेतन हे ।  
प्रेम के सिन्धु, दीन के बन्धु, दुःख दरिद्र विनाशन हे ।  
नित्य अखण्ड अनन्त अनादि, पूरन ब्रह्म सनातन हे ।  
जगआश्रय जगपति जगवन्दन, अनुपम अलख निरंजन हे ।  
प्राण सखा त्रिभुवन प्रतिपालक, जीवन के अवलम्बन हे ।

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.





**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**



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# ACTIVITY REPORT OF THE INSTITUTE BY THE VICE CHANCELLOR

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 in the year 1986. The rich legacy of the founder has been carried forward by Late Shri. G.P. Birla and the present chairman of Board of Governors, Shri C. K. Birla by continuing its commitment to provide high quality education in diverse fields.

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 geographical spread. The institute has seven off campuses in India: Jaipur, Noida, Allahabad, Patna, Deoghar, Kolkata and Lalpur and two off shore campuses: Ras Al Khaimah and Muscat. [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 the former Chancellors as well.

BIT, by virtue of the quality of its academic programmes, has consistently been ranked amongst the leading technical Institutes of the country. Academic programmes are offered in as many as 20 academic disciplines. At present the total faculty strength stands at 650 and students' strength above 13,000 including the campuses in India and abroad.

The institute has initiated many schemes to strengthen quality education to the students, career advancement 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 has been working dedicatedly towards the vision of producing quality technical graduates, competent teachers, scientists and leaders for the academics, research, industry and administration under the guidance and dynamic leadership of the Chairman.

The multidimensional activities of the Institute during the year 2012-13 are as follows:

## 1.0 ACADEMIC ACHIEVEMENTS:

- The department of Applied Chemistry has been identified for support under FIST programme of DST, Govt. of India in level I.
- The Institute has been selected under The Technical Education Quality Improvement Programme, supported by Government of India (TEQIP-II) for Scaling-up Post Graduate Education and demand driven Research & Development and Innovation.
- 14 PhD students and 118 non-GATE ME/MTech students of TEQIP supported Departments were provided scholarships of Rs. 18000/- per month and Rs. 5000/- respectively during the year 2012-13.
- Under TEQIP-II the Institute has also been selected for Establishing Centre of Excellence in "Bio-resources and Bio-prospecting".

## 1.1 R & D ACTIVITIES OF THE INSTITUTE

The Institute is committed to high end R&D activities and support it in terms of Institute Fellowship and travel grant to attend National and International seminars, symposia and conferences.

During the period June 2012 to March 2013 altogether 341 faculty members were supported by the Institute to attend National Seminars and 13 faculty members were offered financial support to attend international conferences. 165 Ph.D. scholars received Institute Research Fellowships.



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. through sponsored projects and consultancies.

**The Institute's research achievements are reflected by the following data:**

Publication in International Journals	: 394
Publication in International Proceedings	: 147
Publication in National Journals	: 45
Publication in National Proceedings	: 82
On-going R&D Projects	: 145
Books	: 5
Patent Granted / Filed	: 2

## 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 Civil Engineering added 1 kN load cell (Universal type) – 1 No., +/- 20 mm displacement sensor – 2 Nos., 50 psi pressure cell – 1 No., 4 channel digital load indicator – 1 No., 2 STRUDS software and 01 ESR-GSR software
- Department of Applied Chemistry acquired NIR Spectrophotometer, Rotor evaporators, Multi vessel dip coating system, UV-Vis spectrophotometer, Osmometer, Microwave Synthesizer, Flame Photometer, Junkers Gas Calorimeter, Micro-grinder hand mill, Microprocessor based table-top centrifuge
- Department of Pharmaceutical Sciences procured TXT Texture Analyzer (Stable Micro Systems, UK), Diffusion Cell Apparatus (Chemico), Disintegration Tester (Electrolab, India), Dual Drum Friability Tester (Electrolab, India), Portable Digital Hardness Tester (Electrolab, India), Planetary Mill (Fritsch, Germany), Viscometer (Malvern UK), Nano Spray Dryer (Labultima, India), Stability Chamber, Probe and Bath Sonicator (Bandelin, Germany), Beckman Coulter Table top Ultracentrifuge, Tap Densitometer (Electrolab, India), Digital Stirrer (IKA, Germany), T25 Homogenizer (IKA, Germany)
- Centre of Excellence for Climatology procured Fast Response IR Hygrometer, Skin Temperature Sensors, Soil temp./moisture sensors.
- Department of Mechanical Engineering procured Scheffler Disc (Solar Concentrator) for Generation of Steam at 200 C & 10 Bar pressure, Solar Photovoltaic Power Plant of 3 Kw capacity, Solar Thermal Training KIT and Solar Photovoltaic Training KIT.
- Department of Remote Sensing procured GPS enabled Digital Sony Digital Camera, GPS and Digital Laser Altimeter.
- Department of Space Engineering & Rocketry installed a new Supersonic Wind Tunnel, up graded Liquid Propulsion Thrust Stand. It also procured Impac Pyrometer Model SI 12, Unsteady Pressure Transducer, Software for High Speed Camera, Differential Pressure Transducer & Sensor, Turbine Flow Meter to enhance its R&D activities.

- Department of Bio Technology procured Water proof Large Screen Display pH SPEAR Tester.
- Department of EEE procured Magnetic Levitation System, Servo fundamental Trainer, Twin Rotor MIMO System, Air Circuit Breaker and Accessories and Power Measurement system for smart grid.
- Deoghar Off campus procured VLSI tool and 12MBPS antenna.
- Kolkata Off campus procured Matlab – software, CMIE Database software, CMOS VLSI software, Hyperlynx 3DEM software, ARM – Development Software and Opnet Software
- BIT, Patna procured Isometric Systems, Jogger trade wheel, bicycle with handles rowing, Internet Work LAN.
- Central Library added 1807 Books, 10371 online journals & print Journals, 80000 Online Books and database of 1.5 Million Online Theses & dissertations.
- Department of Applied Physics procured Thermal CVD for Carbon Nano Tube fabrication and a Polishing Set-up.
- BITEC Jaipur procured Equipment for Electrical Machine Lab for its new BE programme in EEE.
- Department of Chemical & Polymer Engineering procured Ultra sonicator, Dissolved Oxygen meter, Data acquisition systems. Digital Portable Refractometer, Redwood viscometer, Saybolt viscometer, Engleriscometer, Glass “U” tube viscometer, Cleveland open cup flash and fire point apparatus, Pensky martens closed cup flash point tester, Abel flash point apparatus, Cloud and pour point apparatus, standard penetrometer, softening point of bitumen by *bring and ball* method, Isothermal CSTR, CASCADE CSTR, Isothermal Batch reactor.
- BITEC Noida procured 20 DELL workstations, 2 DELL Servers

### 1.3 MoUs

- Department of ECE signed an MoU with M/s Atmel Corp. Inc., Noida, UP under University Program for setting up Microcontroller Lab.
- Department of EEE signed an MoU with Tata Steel, Jamshedpur under AICTE-INAE sponsored academic-industry interaction

### 1.4 CONSULTANCY

1. Dr. Manjari Chakraborty and Dr. N.R. Mandal of Department of Architecture were consultant for Government of Jharkhand for Redevelopment of Ranchi Hill and Pahari Mandir, Ranchi for the period Dec.2010-Dec.2013.
2. Department of Civil Engineering was engaged in Roof structure Certification of New Terminal Building of Birsa Munda Airport, Ranchi, in Site Investigation & Laboratory Tests of CCL, Dakra, Laboratory Tests of Railway Siding Work - Tokisud, Irrigation Department - Simdega, BPL- Ranchi, PEOCP, CCL - Giddi, East Central Railway - Koderma and Rites Ltd. during June 2012 to March 2013.
3. Department of Applied Chemistry was consultant of Coal India & its Subsidiaries, NTPC and some small scale industries for Water quality monitoring and control, waste oil utilization for the period April 2012 to March 2013
4. Dr. S. S. Solanki was consultant for Automation work for the new product designed to SKM Design New Delhi for the period 2012-2013
5. Dr Arbind Kumar, Dr Jeeoot Singh & NUMBERG Engg. Limited, NOIDA were consultant to Hindustan Petroleum Corporation Limited, Bokaro for Base Plate, Pedestal and Footing Design of Pipe Bridge during July 2012.



6. Dr Arbind Kumar was consultant to Jharkhand Renewable Energy Development Agency, Govt. of Jharkhand, Ranchi for Design Specification of 10 Kw, 1 Kw & 2 Kw SPV Power Plant during September 2012
7. Dr. V. S. Rathore was consultant to NRSC, DoS, GoI for AIBP Assessment of Irrigation potential during March 2011-13.
8. Dr. C. Jeganathan was consultant to National Remote Sensing Centre (NRSC, ISRO, Hyderabad) for Mapping the Land Use Land Cover of full Bihar State using Satellite data at 1:50,000 scale and identifying changes in comparison with 2005-06 data for the period March 2012 to August 2013.
9. BIT, Kolkata off campus is consultant to Coal India Limited for ICT based Environment Management Application Programme Development for Coal Mining for the period March 1 2013 – February 28 2015.
10. BIT off campus Patna was consultant to BRED A for Energy Audit
11. Department of Environmental Science & Engineering is consultant to ENV-DAS India for Environmental Impact Assessment of Drinking water supply schemes in Jharkhand for the period Jan 2013-April 2013.
12. Dr. G. Sarkhel of Department of Chemical & Polymer Engineering was consultant to IINRG, Namkum for Tensile testing during January 2013.
13. Mr. P. Dutta of Department of Chemical & Polymer Engineering was consultant to Minor Irrigation Deptt for Pipe testing during March 2013.

### **1.5 NEW PROGRAMMES**

**The Institute has started the following new programmes at the main campus as well at the off campuses:**

1. Kolkata Off campus has started new programmes in ME (Wireless Communication) and Integrated MSc (Mathematics and Computing)
2. BIT Off campus at Patna has started Integrated M.Sc in Physics and Integrated M.Sc. in Mathematics & Computing
3. Department of Chemical & Polymer Engineering is starting ME (Chemical Engineering) from 2013-14.
4. Department of Chemical & Polymer started a course on Safety and Hazards in Chemical Industries.
5. BIT Off campus at Noida started 5-Year Integrated Master in Business Economics (IMBE)

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

A total of 85 faculty members visited various Institutes and R & D organizations in India and Abroad to deliver lectures and for Research Collaborations.

## **2. CAMPUS PLACEMENTS**

The Campus Recruitment Programme 2012-13 achieved new landmarks. As the process continues, till date as many as 76 recruiters have participated generating a total of 1142 offers. This year has seen the highest ever number of international offers being secured by BIT students. The average salary for BE students has moved up from last year's 5.05 to a new high of 6.04 lacs per annum. Highest compensation (national) was Rs 20 lacs CTC while the highest International offer well exceeded last year's offer of US\$ 1.19 lacs.

### 3. VISIT BY NBA, UGC TEAM, COUNCIL OF ARCHITECTURE AND PERSONNEL FROM Other Organisations

- CoA visited Department of Architecture for Extension of approval of 5 years full-time B.Arch degree Course in August 2012
- ITPI visited Department of Architecture for Course recognition during 3<sup>rd</sup>-4<sup>th</sup> January 2013
- DRDL Officers visited Department of Space Engineering and Rocketry during August 2012.
- DRDL Officers visited Department of Space Engineering and Rocketry for Submission of CARS Proposal during Feb 18-19, 2013
- Delegation from Centre for Knowledge Societies & National Innovation Council, Govt. of India visited BITEC Jaipur during January 2013 for presentation on National Programme for leadership and Innovation and Interactive session with faculty & students
- EBTC Biotech visited BITEC Jaipur during June 2012 for interaction.

#### 3.1 VISIT OF OTHER EMINENT PERSONALITIES

**More than 80 eminent personalities visited BIT and its Extension Centres to share their expertise with teachers and students which includes**

1. Ar. Saiful Haq
2. Ar. Raihan Saghir
3. Dr. Anil Kasyap, University of Ulster
4. Dr. Javed Khan, Kent State University, Ohio, USA
5. Prof. Scott Yam, Queen's University, Kingston, Canada
6. Mr. Gunjan – Senior Team Leader, Hilton Al Alin, Abu Dhabi
7. Shri Yashwant Kumar, MD Paras Energy & Natural Resources Dev. Ltd., Nigeria
8. Prof. (Dr.) Peter Atkinson, University of Southampton, UK
9. Dr. Arvind C. Ranade, Principal Scientific Officer, Vigyan Prasar, Department of Science and Technology, Govt. of India.
10. Dr. Satyendra Singh, University of Winnipeg, Canada
11. Dr. Vibhas Nath, School of Geosciences, University of Sydney, Australia
12. Prof. R. L. Boxman, Tel Aviv University, Israel
13. Smt. Mamata Sharma, Chairperson, National Commission for women, Govt. of India
14. Prof. A. S. Kamzim
15. Dr. S. G. Chatterjee, SUNY College of Environmental Science and Forestry, Syracuse, NY, USA

### 4. AWARD / DISTINCTION / FELLOWSHIP / MEMBERSHIP / HONOURS RECEIVED Faculty

1. Dr. R. N. Gupta was nominated expert member in Indian Pharmacopeia Commission, Govt. of India and was awarded 1<sup>st</sup> prize at 64<sup>th</sup> Indian Pharmaceutical Congress held at Chennai in Dec'12 for best Poster on 'Proposals for the Amendments in the Cosmetic Products Legislation in India'.
2. Dr. S.S. Mahapatra won 3<sup>rd</sup> Prize in Indian Society for Electroanalytical Chemistry (ISEAC).



3. Dr. Manik Ghosh awarded USC-PEIN Scholarship as Academic Staff by University of Santiago de Compostela, Spain and received Certificate in "PH207x Health in Numbers: Quantitative Methods in Clinical & Public Health Research" awarded by Harvard University and edX
4. Dr. S. Chakraborty received "Glory of India Award" by India International Friendship Society at Bangkok (Thailand) on 20<sup>th</sup> June, 2012 and received "Rajiv Gandhi Excellence Award" by India International Friendship Society on 29<sup>th</sup> Aug, 2012 at New Delhi, India. He also became reviewer of Journal of Theoretical and Applied Statistics (Science Publishing Group, USA)
5. Dr. B. K. Mishra was appointed Editor in Chief of International Journal of Mathematical Modeling and Computing, Santa Clara, CA, USA.
6. Prof S K Ghorai, Prof. Nisha Gupta, Prof. V. R .Gupta, Dr. Sanjay Kumar, Dr. Mahesh Chandra, Dr. S. Srivastava Gupta and Dr. R. K. Lal became Fellow of IETE.
7. Dr. Mahesh Chandra was appointed Chief editor, International Journal of Electronics Signals and Systems (IJESS)
8. Dr. N. Patel was Visiting Scholar, University of Aveiro, Aveiro, Portugal during September-October, 2012.
9. Dr. A. P. Krishna was appointed Senior Editor, International Journal of Advance Remote Sensing and GIS and invited to serve as a Member on the Abjudication Committee for Partnership Development Seed Grant (PDSG) between India and Canada, SICI/CIDA - University of Calgary, Canada (2012-2013).
10. Dr. Mohan Varma was awarded "The Certificate of Recognition" by The Korean Society of Propulsion Engineers on 22.11.2012.
11. Dr. A. C. Pandey received MyCOE/SERVIR Fellowship (Himalayas) as Mentor sponsored by USAID, NASA & SERVIR.
12. Dr. D. M. Pandey appointed as Advisory Board Member for the 'International Journal of Agriculture Sciences' of BIOINFO PUBLICATIONS JOURNALS and also appointed in Editorial Board of International Journal of Computational Bioinformatics and In Silico Modeling, Current Research in Microbiology and Biotechnology of AIZEON PUBLISHERS, and in Editorial Board of Biochemistry & Molecular Biology of SCIKNOW Journal.
13. Dr. R. Bandopadhyay appointed as Associate Editor of Frontiers in Genomic Assay Technology
14. Dr. Sumita Hazra has joined as UGC Dr. D. S. Kothari Post-doctoral fellow in the department of Applied Chemistry under the mentorship of Dr. Usha Jha.
15. Dr. D. K. Mohanta became Member, IEEE PES RRP subcommittee and Member of Working Group for IEEE P2030.4™ - Guide for Control and Automation Installations Applied to the Electric Power Infrastructure (Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System and End-Use Applications, and Loads)
16. Dr Vijayakumar M. nominated as a steering network member for Association of Commonwealth University Libraries and Information Network and Elected as a Governing Body Member of DELNET, New Delhi
17. Dr. Mainak Mukhopadhyay was awarded Eminent Member Award by The Institution of Electronics & Telecommunication Engineers, Kolkata Centre (IETE, Kolkata Centre) on Diamond Jubilee Celebration of IETE on February 1, 2013.
18. Soumya Banerjee became Collaborator Researcher at University of Maniatoba

19. Dr. S. Karmakar's biography enlisted in Margqui's Who's Who in the World, NY, USA
20. Dr. Bappa Acherjee received Most Downloaded Paper Award 2012 for the paper entitled "Modeling and analysis of simultaneous laser transmission welding of polycarbonates using an FEM and RSM combined approach" and for the paper entitled "Modeling of laser transmission contour welding process using FEA and DoE"
21. Prof. (Dr.) S.L. Gupta became Fellow of Indian Commerce Association
22. Shri S.M. Sahay became Member of Senate, Magadh University
23. Shri S.M. Sahay received Scroll of Honour by Hon'ble CM of Bihar
24. Dr. Amit Kumar Gorai received Raman Postdoctoral Fellowship awarded by UGC under India-US knowledge Initiative
25. Dr. S. K. Mahapatra was Visiting Scientist, Univ. of California, Los Angeles
26. Dr. S. K. Mahapatra was FACET User, Stanford University, USA
27. Dr. I. Banerjee received BOYSCAST FELLOW, Univ. of California, Los Angeles, USA
28. Dr. I. Banerjee received CAYT AWARD, AICTE
29. Dr. Roopali Sharma received "Indo-Nepal Star Gold Award" by Economic Growth Society of India, New Delhi for her research achievements in the field of International Trade & Business and Socio-Economic Development
30. Dr. Arun Mittal won The Best Research Paper Award in Marketing Area on Paper "Factors Affecting the Customers' Bank Selection Criteria: An Empirical Study of Delhi-NCR" International Conference on Finance and Business Management (ICFBM) Society of Technical and Management Professional.

#### Students

1. Amit Kumar and Sarvesh Singh were Runner's Up in International b-plan event, IDEAS-13, 14<sup>th</sup>-17<sup>th</sup> March 2013
2. Anant Basudev Shadangi was winner in Theme-I in Birla White Yuvaratna 2012
3. Harsh Wardhan, Saikat Roy and Ankur Podder were winner in theme-II in Birla White Yuvaratna 2012
4. Arijit Patra, has been chosen by the stellar jury for the national award in Theme-II in Birla White Yuvaratna 2012
5. Miss Kumari Sugandha received J B Mody Award by Indian Drugs Manufacturing Association in Jan'2013
6. Smita Pati was awarded Marquis Worlds Who's Who in 2012
7. Smita Pati became Reviewer of Mathematical Reviews (American Mathematical Society)-World's largest database on the journals in Mathematics
8. Dhruva Kumar and Monisha Saw won best paper award for the paper entitled "Design of 2:1 Multiplexer and 1:2 De-multiplexer Using Magnetic Tunnel Junction Elements," at IEEE International Conference on Engineering Trends in VLSI, Embedded Systems, Nano-Electronics and Telecommunication Systems (ICEVENT).
9. Pranshuman Singh received First rank in Quiz competition held by University East zone youth festival, Nadia, west Bengal.
10. Ms. Joyeeta Poddar received MyCOE/SERVIR Fellowship (Himalayas) sponsored by USAID, NASA & SERVIR.



11. Priyatosh Mahish secured first prize in the event of Paper Presentation in International Conclave held at BIT, Patna.
12. Akshat Uniyal scored 98.9% in CAT Exam-2012
13. Prashant Kumar scored 99.94 Percentile in GATE-2013
14. Deepali Sinha and her team won the Microsoft Imagine Cup, which happens to be one of the world's premier student's technology. The team designed software based on the motto –“Every child is special
15. Sudarshan Kumar became the Brand Ambassador of 'hp', following his commendable performance during his summer training last year (2012).
16. Deepali Sinha and Khushboo Rajgariah won the second prize of 3000 INR for their pretty little game based on the principles of embedded gaming using motion sensing in E-live 2012.
17. Sheffali Singh won the second prize for 'solo performance in the Dance Competition at ISM Dhanbad
18. Subhabrata Ray and Dibyajyoti Deb were Winner of All India Business quiz and won a trophy and Cash prize of worth Rs.1,50,000/-
19. Sweta became Google Student Ambassador
20. Avantika was awarded with 7<sup>th</sup> Most Popular Entry in Create Future Design Contest organized by NASA
21. Abhishek Sugam was selected amongst the top 30 Photographers by the National Photography School
22. Team GURUTVA of BIT Patna got the invitation from NASA to participate in Lunabotics competition-2013.
23. Akshay Jalan, received recognition from the Stanford University, for being among the top 100 College Entrepreneurs across the world
24. Akshay Jalan, Nitin Gupta and Naofel Nasim won various International Business Plan Competitions across the country in MasterPlan conducted by IIM-Ahmedabad at Confluence'12, B-Plan Competition conducted by Indian Institute of Foreign Trade, New Delhi, B-Plan Competition conducted by IIT – Bombay as part of Eureka'12, B-Plan Competition conducted by DAIICT, Gandhinagar and Selected in the final round of TiE Asia Level.
25. Ms. Paridhi Jain, Ms. RachitaAgrawal and Ms. Namrata Sinha won First Prize awarded in poster presentation in National Conference on “Advancements in Microelectronics and Communication Technologies”, organized by CEERI Pilani, IETE Jaipur and Swami Keshwanand Institute of Technology, Jaipur
26. Mr. Chaitanya Pansare won Best paper award by in inter college cometetion held at Jaipur
27. Mr. Chaitanya Pansare and Mr.Ankur Mundhra of secured 2nd spot in the National quiz organised by Rajasthan Renewable Energy Corporation.
28. Mr. Lakshya Arora won best athlete award in the sport event organized by IIT Rajasthan, Jodhpur
29. Ankit Verma won 1<sup>st</sup> prize in inter-college Logo Designing Competition, Conducted by Neofusion Creative Foundation, Jaipur.
30. In the East Zone National Youth Festival organized by AIU, Team BIT Mesra consisting of Abhishek, Debojit and Pranshuman were overall winner in literary event by securing first position in quiz whereas and Nofel and Kinshuk Tripathy secured second position in debate.

31. Pragya Prashant, of BIT Mesra, Ranchi, Roll no: BE/1618/2011 has been selected for Paramahansa Yogananda Scholarship for Professional Course Students, for the academic year 2012-13. The total amount of Scholarship is Rs 1,00,000, which will be given in four instalments of Rs 25,000 each.
32. Akshay Jalan BE/1046/2010 ECE selected as one of the top 100 entrepreneurs around the world for the e- boot camp Stanford University, USA to be held on 17-21 April 2013
33. First Year B.Arch Student Karan Dhawan secured Second Position in east Zone Youth fest Poster making competition org by AIU.

## 5. SEMINARS / SYMPOSIA / SHORT TERM COURSES ORGANIZED

**The Institute and its Extension / International Centres organized as many as 60 Seminars / Symposia / Workshops:**

1. Department of Pharmaceutical Sciences organized short term course on "Novel approaches in Phyto-pharmacology research: Time for a new paradigm shift from 1<sup>st</sup> Sep. 2012 to 15<sup>th</sup> Sep. 2012
2. Department of Pharmaceutical Sciences organized short term course on "Impetus to organic synthesis: Approaches for pharmaceutical Chemistry " from 16<sup>th</sup> Sep. 2012 to 30<sup>th</sup> Sep. 2012
3. Department of Pharmaceutical Sciences organized short term course on "Prospects and confronts for Nanotechnology products in drug Delivery, cosmetics and Nanomedicines " from 1<sup>st</sup> October 2012 to 14<sup>th</sup> October 2012
4. Department of ECE organized Short Term Course on 'Signal Processing & Its Applications' from 24.12.12 to 29.12.12
5. Department of ECE organized series of Workshop on 'Being Objective' from 11.2.2013 to 21.2.2013.
6. Department of Production Engineering organized All India Seminar on Technology Solutions In Manufacturing from 1<sup>st</sup> March 2013 to 2<sup>nd</sup> March 2013.
7. Department of Bio technology organized National Science day on 28<sup>th</sup> Feb 2013.
8. Department of EEE organized Short Term Course on SMART GRID during March 7-9, 2013.
9. Department of EEE organized Short Term Course on Microcontroller and its applications from 20<sup>th</sup> February 2013 to 2<sup>nd</sup> March 2013.
10. Central Library organized National training workshop on Expansion in developing and organizing Digital Information Resources from 24.9.2012 to 26.9.2012.
11. Department of Environmental Science & Engineering organized National conference on sustainable Development and Global Competitiveness from 5<sup>th</sup> December 2012 to 5<sup>th</sup> December 2012.
12. Department of Applied Physics organized National Conference on Condensed Matter Physics (CMDAYS) 2012 during August 29-31.2012.
13. Deoghar off campus organized
  1. Special Track: Recommender System: Design Using Evolutionary & Natural Algorithms Conference: Bio-Inspired Computing: Theories and Applications, 2012 (BIC-TA 2012) from December 14, 2012 to December 16, 2012
  2. Special Session on *Reconfigurable Computing System*, this session is organized as a part of The First International Conference on Advanced Machine Learning Technologies and Applications, AMLTA 2012, Cairo, Egypt during December 8-10, 2012



3. Special Session on *Adaptive System*, this session is organized as a part of The First International Conference on Advanced Machine Learning Technologies and Applications, AMLTA 2012, during December 8-10,2012.
4. Auto Spark: A Workshop & competition on automobile mechanics & I.C. Engine Design during February 23-24, 2013.
14. BIT off campus at Jaipur organized
  1. Entrepreneurship Development Programme from 23.4.2012 to 2.6.2012
  2. Skill Development Training Programme from 4.6.2012 to 25.8.2012
  3. Summer Training from 11.6.2012 to 21.7.2012.
  4. Bioinformatics: Sequence Analysis from 21.9.2012 to 23.9.2012.
  5. Molecular Modeling and Drug Design from 14.12.2012 to 16.12.2012.
  6. Faculty Development Programme on Entrepreneurship development from 15.1.2013 to 27.1.2013.
15. Kolkata Off campus organized
  1. Student workshop on Recent Trend on IT on March 15, 2013.
  2. Cyber Law Workshop on March 18, 2013
  3. ADS Tool Workshop on January 17, 2013
  4. Alan Turing Year Celebration on June 23, 2012
16. BITEC Noida organized
  1. Workshop on Structural Equation Modelling (SEM) – An Advance Research Technique for data Analysis during December 7-8, 2012.
  2. Incubator Cell for Mobile Apps Development during September 2012.
  3. Faculty Development Programme on Entrepreneurship Development during January 7-19, 2013.
  4. Journey Of Colors – Lecture Demonstration Workshop on Water Color Painting & Painting Competition during February 25-27, 2013.
  5. Water colour workshop on 4<sup>th</sup> August 2012.
  6. Storytelling Workshop on 6<sup>th</sup> august 2012.
  7. Music Workshop from 29<sup>th</sup> July to 8<sup>th</sup> August 2012.
  8. Digital Painting Workshop during Sept. 2012.
  9. Blackberry and Open class organized a 4 day workshop on "HTML5 and Black Berry Web Works" on 21<sup>st</sup> July 2012.
  10. 1<sup>st</sup> students film festival from 12<sup>th</sup> Sept to 26<sup>th</sup> Sept 2012.
  11. Workshop on Visual Effects during September 2012.
  12. Gaming Workshop on 23<sup>rd</sup> Oct 2012.
  13. A workshop on "Principles of Animation" on 12<sup>th</sup> January 2013.
  14. Participation in Comic Con Exhibition during Feb 2012.
  15. 3D and Gaming Workshop from 18<sup>th</sup> March 2013 to 23<sup>rd</sup> March 2013.
  16. Workshop on VFX and compositing from 20<sup>th</sup> March 2013 from 22 March 2013.
  17. HTML5 and Black Berry Web Works from 21 July 2012 to 25 July 2012

18. Video Games Workshop on 23 Oct 2012
19. Nokia Asha Developers Day on 2 Feb 2013
17. BIT off campus at Patna organized
  1. International Conclave on Innovations in Engineering & Management (ICIEM 2013) from 22.2.2013 to 23.2.2013
  2. National Conference on Environment Friendly Sustainable Construction- Need of the Hour from 02.03.2013 to 03.02.2013
  3. Workshop on MATLAB and its Application in Engineering from 12.01.2013 to 13.01.2013
  4. Workshop on Robotics from 19.01.2013 to 20.01.2013
  5. Poster & Model Competition on NANONYX-13 on 20.01.2013
  6. Workshop on Soft Skill and Personality Development from 08.01.2013 to 13.01.2013
  7. Winter School on Effective Teaching from 24.12.2012 to 29.12.2012
  8. SAMAVESH by Nanotech Society, BIT Patna on 05.09.2012
  9. ABHIVYAKTI' 12, IEEE from 08.12.2012 to 09.12.2012
  10. Art of Living Course from 25.09.2012 to 30.09.2012
  11. Workshop on Ethical Hacking from 13.10.2012 to 14.10.2012
  12. FDP on Research Methodology & SPSS from 03.11.2012 to 04.11.2012
  13. FDP on Intellectual Property Right on 05.12.2012
  14. National Workshop on Entrepreneurship Development on 06.12.2012
  15. 28<sup>th</sup> Annual Conference of the mathematical Society- BHU, Organised by BIT off campus Patna from 03.12.2012 to 04.12.2012

## 6. STUDENTS' ACTIVITIES

1. BITOTSAV - 2013, an inter-college techno cultural festival was organised from 13th March to 17th March 2013. It consisted of Heritage Nite, Cultural Nite, Dance Nite, Band Nite, and Pro Nite. The events included Battle of the Bands, Acoustic Alchemy, Big hunt, Entanglement, Agni, Build from Scratch, Hackathalon, Codolympics, General Quiz, Virtual stock market, B-Plan, Safety workshop and many informal events. Guest performances by Fictitious dance Group, Mrigya – fusion rock band and Kailash Kher along with his band Kailasha were also held during this festival.
2. The 4-day festival known as 'Bharat Mahotsav' with the theme awakening Indian towards India, organised by the Department of Creative Arts headed by Mr. Mrinal Pathak in association with BIT Staff club, from 27<sup>th</sup> February to 2<sup>nd</sup> March 2013 dedicated to re-igniting the cultural spirit within oneself. The event was unique and highly appreciated for the great effort towards national integration and awakening towards the different aspect of colourful and ancient scientific excellence of India.
3. Pantheon 2012, an intra-college techno cultural festival was organised from 29th September to 1st October 2012. It consisted of dance events Roborash, The Vincicode, Circuit Analysis, Sursamrat and food festival Fugiya. First ever Book-fest in BIT Mesra, where compositions of prolific BIT writers were showcased, as well as a mini library was created for BITians.
4. The Literary Fest: Rostra'13 held on 2nd and 3rd February 2013 was a 2-day state level literary fest comprising several events: Youth Parliament- BIT's first ever session of Parliament, providing the participants an insight to the proceedings of the Indian Parliament.

5. Dein-E-Diwali was held on 1st December'12 – Organised jointly by LEO Club and NAPS, a social service event in which students of H.H.High School, Brambe were taken on an educational tour around various sites of the BIT campus.
6. A blood donation camp was organized by Leo Club and Rotaract Club, in association with Wake Up India Foundation, a well-known NGO in Ranchi with the vision of service to society, on the 12th of August. LEO Club in collaboration with the Dance Club at BIT Mesra, organized a Dandiya Night celebrating the festival of Navratri, on 15th October, 2012.
7. The LEO CLUB of BIT Mesra held a New Year cum Lohri bash called Esperanza '13 on 20th January 2013.

In addition to the above mentioned programmes, large number of students activities were organised by various Clubs and Societies. Some of the events are mentioned below.

- On 8th – 9th September 2012 EDC, BIT Mesra, hosted the Idea to Execution workshop by Nurture Talent Academy in association with of IIM-A. The Zonal Level of Masterplan – The Business Plan Competition of IIM-Ahmedabad was also conducted. The event was supported by TEQIP. Over 120 students from Ranchi participated in the Workshop
- Workshops on Mobile Photography & DSLR photography
- Workshops on 2D Flash Animation & Adobe Photoshop in collaboration with IETperspective judging competition 'Perspect-o-meter' by Photographic Society

**Students also participated in other Institute's festivals, such as**

- Mood Indigo at IIT, Mumbai in December 2012
- Spring Fest at IIT, Kharagpur in January 2013

### **TEAM SRIJAN**

Team SRIJAN participated in BAJA SAE India – 2013 held at Indore from 14<sup>th</sup> – 19<sup>th</sup> February, 2013.

### **DRISTI**

DRISTI (Developing Rural India towards Social and Technological Integration) organized training session for villagers around BIT, Mesra on computer education, electronic equipment and English language.

## **7. NATIONAL AND INTERNATIONAL EXCHANGE PROGRAMMES WITH UNIVERSITIES / RESEARCH ORGANIZATIONS:**

- Department of Production Engineering organized
  - a. Educational/industrial visit of 40-45 students of 3rd semester (Production) and 1st semester (ME AMS) at Jindal Steel & Power Limited, Patratu on 10<sup>th</sup> oct. 2012 to get acquainted with various advanced manufacturing techniques and industrial environment.
  - b. Industrial Visit to Alcast (25<sup>th</sup> September, 2012) for 1st semester (ME AMS) students.
- Mr. UtkarshTripathi of BE Biotechnology (Batch 2009) was selected for the student exchange programme at Mannheim University of Applied Sciences, Germany for the winter semester 2012/13.
- Ms. Shambhavi Singh, research scholar visited Stanford University for research on climate change during May 2012-August 2012.
- Ms. Anamika Shrivastava, research scholar visited NBRI, Lucknow for research on phytoremediation.
- Prof. R. L. Boxman, School of Electrical Engineering, Tel Aviv University, Israel visited the Institute, during Sept 2012 and Feb 2013 under INDIA-ISRAEL S&T COOPERATION



- Prof. P. K. Barhai visited Tel Aviv University, Israel, during April and August 2012 under INDIA-ISRAEL S&T COOPERATION
- Dr. S. Keshri visited Ioffe Technical University, St. Petersburg, during 24-28 March 2013, and Moscow State university on 30 March 2013 under Indo-Russian project supported by DST, Govt of India,
- Prof. A. S. Kamzim, Ioffe Technical University, St. Petersburg, Russia visited BIT, Mesra under Indo-Russian project supported by DST, Govt of India,
- An India-Tunisia collaborative project has been sanctioned by Department of Science & Technology, Govt. of India and Ministry of Higher Education and Scientific Research of the Republic of Tunisia to Dr. A. S. Vidyarthi, Professor & Head, Department of Biotechnology, BIT Mesra.
- BITEC Jaipur organized industrial tours at Instrumentation Ltd. (IL), Kota & Rajasthan Spinning Mill Gulabpura.
- Students of ME(Production Engineering) of ISM Dhanbad visited the Polymer Processing and Polymer Product development facilities at BIT, Mesra.
- Mr. Abhishek Sasmal, Research Associate from Central Institute of Fisheries and aquaculture visited BIT, Mesra for collaboration with Dr Akhil Sen of Department of Chemical & Polymer Engineering.
- Mr. Vishal Gupta and Ms. Nikhita Amin, 4th semester B.E. (Electronics & Communication Engg.) Students of BITIC Muscat got transferred to University of Leeds, UK under BIT- UoL Twinnig Programme.

## 8. SPORTS ACTIVITIES

1. 27<sup>th</sup> Annual Athletic Meet was organized by the Institute during February 1-3, 2013. Mr. Chetan Kumar and Ms. Abha Suman were declared Individual champions among men and women section respectively. Shri Ajay Kumar Singh, IAS, Secretary, Sports & Youth Affairs and Dr. L.N. Bhagat, Vice Chancellor, Ranchi University graced the occasion as Guest of Honour.
2. 21<sup>st</sup> Chetan Devraj Memorial Inter Technical College Cricket Tournament was organized from 28<sup>th</sup> February to 3<sup>rd</sup> March 2013. NIFFT Ranchi won the Championship. Shri Amitabh Choudhary, IPS, President, Jharkhand State Cricket Association graced the occasion as Chief Guest.
3. In honour of Late Abhishek Mishra, a cash prize of Rs. Five thousand and a trophy was awarded for Best Sports Person of the Year 2012-13 to Mr. Chetan Kumar.

## 9. ALUMNI EVENTS

Last year saw several alumni reunions and other prominent events being organised at Mesra campus and elsewhere. The Alumni Relations Group supported the organisation of the events. Both the Golden Jubilee and Silver Jubilee Batches celebrated reunions attended by a large number of alumni from all over the globe.

### Prominent alumni events during the year were:

- The 1962-66 batch of Alumni celebrated their "Golden Jubilee Reunion" at the BIT Mesra Campus during 16<sup>th</sup>-18<sup>th</sup> of November 2012.
- First Ever Silver Jubilee Alumni Meet of the MBA Batch of 1985-87, celebrated on December 14<sup>th</sup> - 15<sup>th</sup>, 2012
- The 1983-87 Batch celebrated their "Silver Jubilee Reunion" at the BIT Mesra Campus during 25<sup>th</sup> - 26<sup>th</sup> December 2012.

- The 1957-62 Batch celebrated their "Golden Jubilee Reunion" at Ranchi with a day's activity at the Mesra Campus during 25th -26th December 2012.
- A 'Leadership Summit' was successfully organised at Bangalore on 15th December 2012 by BITOSA Bangalore Chapter. The first such summit was organised in the year 2010.

#### **10. AWARD OF DEGREES**

During 23<sup>rd</sup> convocation held on April 10, 2013 a total of 3388 students have been awarded Degrees and Diplomas in various disciplines, out of which 37 scholars have been awarded Ph.D. Degree, 2 Master of Philosophy, 1159 Post Graduate Degree, 2084 Graduate Degree and 106 students have received Post Matriculation 3 years Diploma.

Shri Nandan Manohar Nilekani, Chairman, Unique Identification Authority of India was Chief Guest.

## INTRODUCTION



*The Main Building at BIT, Mesra, Ranchi*

The Institute was established as an All India Institute of Technical Education by the renowned philanthropist and visionary industrialist, Late Sri B. M. Birla in July 1955. Initially it started 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 term of research and excellent academic programme led to its attaining the status of a Deemed University under section 3 of the UGC Act in August 1986.

The Institute has constantly improved on its technical facilities as well as academics 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. This institute celebrated the Golden Jubilee of its establishment in the year 2005 reaffirming its commitment to the cause of higher education.



## ADMINISTRATION

B.I.T. Mesra is a “Deemed University” under Sec. 3 of the U.G.C. act 1986. It functions under the overall supervision, direction and control of a high powered Board of Governors, comprising representatives of the Ministry of Education, Government of India, the U.G.C, the State Government the Chancellor, the A.I.C.T.E, The Hindustan Charity Trust and the Institute Faculty. The Governor of the state of Jharkhand is the Chancellor of the Institute. Shri C.K. Birla is the Chairman of the Board of Governors. The composition of the Board of Governors is given in Annexure – II.



*Department of Pharmaceutical Science*



*The R&D building at BIT, Mesra, Ranchi*

The Technical Council decides the academic policy of the Institute. It controls and approves the curriculum, the 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, Students Welfare Committee etc. and Department Board of Studies to look into specific academic matters arising from time to time. The teaching, training and research activities of various departments

at the Institute are constantly under review for both facilities and standards. The Vice – Chancellor of the Institute is the Chairman of the Technical Council. Members of the technical council are listed in Annexure – V.

The Finance Committee gives financial advice to the Institute in matters relating to building works. The composition of these committees are given in Annexure –III & IV

## THE MAIN CAMPUS, MESRA, RANCHI

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

The workshop annexe has covered area of 4,000 sq. mtrs. The laboratories and offices of the Department of Space Engineering & Rocketry are situated for security reasons in a sub – Campus, about half a Kilometer away from the main building. For the convenience of working Engineers to participate in Post – Graduate Programmes, a Technology centre was established in Ranchi City at Lalpur in 1976. The campus is self – contained amidst well – laid lawns, with its own protected water supply, marketing centre, dispensary, bank and schools.



## Institute Building

(Sq. Mtrs.)

• Main building & Administration block	3700
• Class room & laboratory, Drawing halls, Staff room's etc	19300
• Library block	2600
• Mini – Auditorium	450
• 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

## Residential Complex

• Staff quarters in different categories	422
• Residential complex for supporting services Guards, Dairy Shopkeepers, Washer man etc.	116



*Research Scholars' hostel*



*Boys' hostel*



*Staff Quarter*



*The Golden Jubilee Auditorium*

## GUEST HOUSES

The Institute maintains two Guest houses with a total number of 38 furnished rooms and one VIP Guest - House with 3 deluxe bedrooms to accommodate Guests comfortably.

## AUDITORIUM

The Institute building houses one auditorium with a capacity of 350 persons. Events of larger scale are held at Golden Jubilee Auditorium having a seating capacity of approximately 3000 persons.

## GAMES & SPORTS COMPLEX

**The Institute has elaborate sports facilities for Indoor as well as Outdoor sports. These are as follows:**

• Gymnasium including Multi – Gym	1
• Stadium for Track & Fields for Sports/ Athletics	1
• Cricket ground including net	2
• Football ground	2
• Hockey ground	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



*Health Centre*



*The Shopping Centre*

## 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 Facilities
- Suction Machine Facility
- Medical Officers : 04
- Pharmacists : 04
- Dressers : 01
- X – ray Technician : 01
- Pathological Technician : 01
- Staff Nurse : 01

### Visiting Physician

- Physiotherapy
  - Dentistry
  - Pediatric Clinic
  - Homeopathic Clinic
  - Eye & Skin Clinic
  - Anti Natal Clinic
  - Ambulance Facilities
  - Pathological Lab Facility
  - Immunization
  - Blood donation camp, Eye camp, Gynaecological camp are organized at frequent intervals.
  - 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 by Group Mediclam Policy in hospitalization cases
  - Proposed - Ultrasound machine facilities & ICU facility, isolation ward & Pathological Lab
  - Community Health services are also carried out by organizing Medical camp in villages.
- National health Services are organized like Pulse Polio immunization, T.B. eradication programme, Laproxyl eradication programme, Blindness removal programme etc.

## SHOPPING CENTRE

A well-maintained Cooperative Store provides the daily requirements of the campus residents. Additional Shopping Complex is provided for meeting the sundry needs.

**OTHERS**

- Consumer's co-operative stores      375 Sq. Mtrs.
- NCC Block      400 Sq. Mtrs.
- Rifle Firing Range      1 No.
- NCC Parade ground      1 No.

**HOSTEL FACILITIES FOR STUDENTS**

The institute being completely residential there is sufficient provision for each student. The campus is equipped with eleven boys' hostels and two girls' hostels. All these have spacious accommodation for every student. Inter hostel tournaments, indoor and outdoor games, various competitions and adventure trips are its salient features. The hostel mess in each hostel is managed by the students themselves under the supervision of the Hotel Warden and Assistant Wardens.

**HOSTEL ACCOMMODATION**

Hostel No.	No. of Rooms	No. of Students
<b>Boys' Hostel</b>		
1.	126	123
2.	137	134
3.	150	141
4.	144	142
5.	324	317
6.	294	292
7.	303	292
8.	278	277
9.	278	268
10.	224	221
11.	224	220
<b>Girls' Hostel</b>		
12.	240	296
13.	298	592
<b>Grand Total</b>	<b>3020</b>	<b>3315</b>

- Research Scholar Hostel      112 Rooms (Single)



## ACADEMIC PROGRAMMES

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

### ***BIT MESRA CAMPUS***

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

Programme	Year of Introduction of the Courses	Duration of the Course	Intake Capacity
<b>Computer Aided Design &amp; Drafting</b> 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
Polymer	2003	2Years	18
<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
Environmental Science & Engineering	2002	2Years	18
<b>Master of Pharmacy</b> Specialization 1. Pharm. Chemistry 2. Pharmaceutics 3. Pharmacology 4. Pharmacognosy	1983 1983 2004 2002	2 years	36 + 8(QIP)
Master of Urban Planning	2006	2Year	12
<b>Master of Science Programme</b>			
Biomedical Instrumentation	1992	2 Years	20
Information Science	1993	2Years	30
Bio Informatics	2006	2Years	30
Geo Informatics	2006	2Years	10
<b>Business Management</b> Specialization 1. Marketing 2. Finance 3. System 4. Human Resource	1980	2 Years	120
Master of Computer Application	1984	3 Years	60

Programme	Year of Introduction of the Courses	Duration of the Course	Intake Capacity
Bachelor of Food Processing Technology	2009	3 Years	30
Integrated M.Sc.	2011	5 Years	60
Integrated Ph.D.	2012	5 Years	15

### CONTINUING EDUCATION (PART TIME) POST - GRADUATE PROGRAMME

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

- A certificate of Merit after Completing 6 units.
- A diploma after completing 12 units.
- Degree after completing 20 units.

### PROGRAMMES OFFERED AT OTHER CAMPUSES

	Allahabad	Jaipur	Lalpur	Kolkata	Noida	Patna
Courses	Sanctioned Strength					
B. E		80				120
BCA	100	80	200	90	80	
BBA	40	80	200	90	80	
B. Sc. (A&M)		60			80	
MCA	45	45	105	45	60	
MBA		45	60		60	
MBA(PT)			30			
MCA(PT)			30			
M. Tech (CS), PT			30			
M. E. (P.T)						
M. Sc. (I.T)			30			
M. Sc. Bioinformatics		30		30		
IMBA						
IMCA						

### THE DOCTOR OF PHILOSOPHY PROGRAMME

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

## STUDENTS ENROLMENT

During the academic year 2012 – 2013, total of 10549 students were registered in various courses. The programme – wise enrolment is given below.

S. No.	Course	No. of Students
1.	Bachelor of Engineering	5266
2.	Bachelor of Architecture	269
3.	Bachelor of Pharmacy	169
4.	Bachelor of Hotel Management & Cat. Tech.	83
5.	Bachelor of Computer Application	418
6.	Bachelor of Business Administration	673
7.	BBM	13
8.	Doplama	8
9.	IMBA	717
10.	IMCA	331
11.	I.M.Sc. (Chemistry)	14
12.	I.M.Sc. (Maths)	36
13.	I.M.Sc. (Physics)	14
14.	B. Sc. ( A & M)	210
15.	IMBE	13
16.	B.Tech (P.T.)	12
17.	B.Sc. (Food Technology)	8
18.	Master of Business Administration	554
19.	Master of Computer Applications	843
20.	Master of Pharmacy	106
21.	Master of Engineering	341
22.	Master of Technology	323
23.	M.Sc. (Applied Chemistry)	4
24.	M.Sc. (Applied Physics)	5
25.	M. Sc. ( Information Science)	6
26.	M. Sc. (Bio Medical Instrumentation)	6
27.	M. Sc. (IT)	51
28.	M. Sc. ( Bio-informatics )	27
29.	M. Sc. (Geo-Informatics)	21
30.	M.Sc. (Animation & Design)	17
31.	MUP	12
32.	Ph.D.	167
<b>Total</b>		<b>10776</b>



## ADMISSION DURING 2012 - 2013

In the academic year 2012 – 2013, 1258 fresh students were admitted in various disciplines. The branch – wise backup is given below.

Sanctioned intake and net number of admission after permanent withdrawals in the academic session 2012-2013 at BIT Mesra

S. No.	Programmes offered	Sanctioned Seats	Session 2012-13
			Net admission after Withdrawals§
Undergraduate Programmes:			
1.	B.E. In Biotechnology	60	47
	B.E. In Chemical Engineering	30	27
	B.E. In Chemical & Polymer Engineering	30	25
	B.E. In Civil Engineering	60	63
	B.E. In Computer Science	120	128
	B.E. In Electrical & Electronics Engineering	60	60
	B.E. In Electronics & Communication Engineering	120	120
	B.E. In Information Technology	60	56
	B.E. In Mechanical Engineering	90	100
	B.E. In Production Engineering	30	27
	Total	660	653*
2.	B. Arch	40	42*
3.	B. Pharm	60	26
4.	BHMCT	60	21
5.	B. Sc. Food Processing Technology	40	Not advertise
	Total	200	89*
B. MBA & MCA Programmes:			
6.	MBA	120	59 (seat offered 60)
7.	MCA	60	55
	Total	180	114
C. M. E. Programmes			
8.	Automated Manufacturing Systems	25	20
9.	Civil	24	11
10.	Computer Aided Analysis & Design – CAAD	18	10
11.	Electrical	42	41
12.	Electronics & Communication	42	42
13.	Mechanical	24	21
14.	Polymer	18	0
15.	Quality Engineering & Management	25	4
16.	Software Engineering	15	14
17.	Space Engineering & Rocketry	24	19
	Total	257	182
D. Pharmacy			
18.	M. Pharm. In (P’Ceutics, P’Chem, P’Clology, P’Cognosy)	54	47

S. No.	Programmes offered	Sanctioned Seats	Session 2012-13
			Net admission after Withdrawals§
19.	M. Pharm. in Clinical Research	18	0
20.	M. Pharm. In Quality Assurance & Regulatory Affairs	18	0
21.	MS Clinical Research & Pharmacovigilance	18	2
22.	PG Diploma in Bio-analytical Techniques	30	0
23.	PG Diploma in Clinical Research	30	0
24.	M. Pharm. Under QIP §	8	0
	<b>Total</b>	<b>176</b>	<b>49</b>
<b>E. M. Tech Programmes</b>			
25.	Biotechnology	18	15
26.	Computer Science	16	16
27.	Energy Technology	18	13
28.	Environmental Science & Engineering	18	14
29.	Fuels & Combustion	25	0
30.	Information Security	18	18*
31.	Nano Science & Nano Technology	18	10
32.	New Material & Processing Technology	18	0
33.	Polymer Science & Technology	15	0
34.	Remote Sensing	18	17
35.	Scientific Computing	16	2
	<b>Total</b>	<b>198</b>	<b>105</b>
<b>F. M.Sc. Programmes</b>			
36.	Applied Chemistry	15	2
37.	Applied Mathematics	15	0
38.	Applied Physics	15	4
39.	M.Sc. Bioinformatics	20	8
40.	M.Sc. Biomedical Instrumentation	20	1
41.	M.Sc. Geoinformatics	20	10
42.	M.Sc. Information Science	20	0
	<b>Total</b>	<b>125</b>	<b>25</b>
43.	G. Master of Urban Planning	12	9
<b>H. integrated M.Sc.</b>			
44.	Chemistry	20	5
45.	Mathematics and Computing	20	22
46.	Physics	20	3
	<b>Total</b>	<b>60</b>	<b>30</b>
47.	I.Integrated M. Tech-Ph.D.	10	2
	<b>Total Admissions</b>	<b>1878</b>	<b>1258</b>

\*Including candidates admitted under OBC category of Jharkhand and NRI/PIO/GOI

§ Admitted through AICTE-QIP, interviews conducted at National level

§ Net number of admissions after withdrawals as on 31 August 2012

**ADMISSION in Ph. D. PROGRAMME**

167 new scholars have been admitted for the Ph. D. Programme in the area of Engineering Science, Pharmacy and Management during the session 2012 – 2013. The details are given below

S. No.	Roll No.	Name	Research Topic
<b>Department of Architecture</b>			
1.	Ph.D/AR/10001/2012	Md. Danish	Appropriate passive solar design to alter the microclimatic parameters in rural huts in Jharkhand
2.	Ph.D/AR/10002/2012	Sumantra Mishra	Determination of Architectural Styles in India
3.	Ph.D/AR/10003/2012	Anuj Kumar Toppo	Determination of Architectural Styles in India
<b>Department of Applied Chemistry</b>			
4.	Ph.D/AC/10001/2012	Ashish Kumar	"Arsenic Removal from Aqueous system Using Low-Cost iosorbents"
5.	Ph.D/AC/10002/2012	Md. Shahid	"Low energy ion beam treated hydroxyapatite (HAp) coating on alumina by so-gel method for hard tissue implantation"
6.	Ph.D/AC/10003/2012	Shipra Sagar	"Synthesis, characterization and reactivity of V, Mn & Ni complexes with nitrogen, oxygen and Sulphur donor ligand"
<b>Department of Applied Mathematics</b>			
7.	Ph.D/AM/10001/2012	Jayantika Pal	"Modeling and analysis of Seismic wave propagation in Poro-elastic layered media"
8.	Ph.D/AM/10002/2012	Mahuya Deb	"A study on the Intuitionistic Fuzzy Optimization Approach to Inventory Models"
9.	Ph.D/AM/10004/2012	Ranjan Kumar	
10.	Ph.D/AM/10051/2012	Ms. Aradhana Yaduvanshi	"Studies on Land Surface Hydrological Processes over Subarnarekha River basin of India"
<b>Department of Applied Physics</b>			
11.	Ph.D/AP/10001/2012	Kumar Amit	"Fabrication & performance study of Dye Sensitized Solar Cells using Graphene and Aluminium Doped ZnO electrodes"
12.	Ph.D/AP/10002/2012	Rajendra Mohan	"Fabrication and Characterization of Magnetically Addressable Luminescent Quantum Dots"
13.	Ph.D/AP/10003/2012	Mohit Sharma	"Design of Photonic Crystal Fibers and Investigation of Nonlinear Wave Propagation in These Fibers"
14.	Ph.D/AP/10004/2012	Nitu Borgohain	Nonlinear Optical Pulse and Beam Propagation in Atomic Systems and Quantum Well Nanostructures
<b>Department of Biotechnology</b>			
15.	Ph.D/BT/10001/2012	Nikita Singh	"Production of esterase from marine bacteria"
16.	Ph.D/BT/10002/2012	Saket Chandra	"Discovery of Single Nucleotide Polymorphism and Haplotype structure determination in Wheat (Triticum aestivum L.) using Next-Generation Sequencing Data"

S. No.	Roll No.	Name	Research Topic
17.	Ph.D/BT/10003/2012	Poonam	"Study of the transcription factors ZIM, GRAS and HSF to elucidate their role during biotic and abiotic stress in Wheat ( <i>Triticum aestivum</i> L.)"
18.	Ph.D/BT/10004/2012	Dhirendra Prabhakar	"Detection of Heavy Metals in Environmental Samples through Porous Silicon Based Nanosensor"
19.	Ph.D/BT/10005/2012	Yuvraj	"Modelling growth and designing photobioreactor for cultivation of high cell density microalgal culture"
20.	Ph.D/BT/10006/2012	Tesnim Arfi	"Microbial production of a thermostable 3-cyanopyridinase towards production of nicotinic acid"
21.	Ph.D/BT/ 10007/2012	Ms. Archana N Panche	"In vitro Production of Inhibitors for proteases producing $\beta$ -Amyloid from Selected Medicinal Plants of Jharkhand"
22.	Ph.D/BT/ 10008/2012	Mr. Nawed Anjum	"Production of potential secondary metabolites from bacterial endophytes of selected medicinal plant"
23.	Ph.D/BT/10051/2012	Bushra Khanam	"Production of Natural Dye from Isolated Plant Endophytes"
24.	Ph.D/BT/10052/2012	Sweta Verma	"Sex determination in lac insects with special reference to environmental liability and endosymbionts"
25.	Ph.D/BT/10053/2012	Ms. Khusboo Agrawal	"Screening and characterization of bacterial esterase from marine source and optimizing its production"
<b>Department of Civil Engg</b>			
26.	Ph.D/CE/ 10001/2012	Mr. Dineshwar Mahto	"Modelling of Soil Properties by the application Of Intelligent models (Case study-South Chhotanagpur Division, Jharkhand)"
27.	Ph.D/CE/ 10002/2012	Mr. Jit Lal Mahto	"Study of Hydraulic Conductivity in different soil texture in a granitic hard rock terrain of Ranchi"
28.	Ph.D/CE/10051/2012	Sushma Kiran	"Application of Intelligent Modelling Geotechnical Engg."
29.	Ph.D/CE/10052/2012	Mr. Vidya Binod Prasad	"Large scale roughness in open channel flow"
<b>Department of Chemical Engg. &amp; Polymer Engg.</b>			
30.	Ph.D/CHP/10001/2012	Sushil Kumar Verma	"Synthesis, Characterization and aliphatic alcohol Sensing properties of Poly (m-aminophenol)/ functionalized carbon nanotube composites"
31.	Ph.D/CHP/10002/2012	Abhishek Das	"Development of Carbon fiber reinforced toughened Epoxy Composites"
<b>Department of Computer Science Engg.</b>			
32.	Ph.D/CS/10001/2012	Ajit Kumar Keshri	"Defending against malicious objects in wireless network"
33.	Ph.D/CS/10002/2012	Dibya Ranjan Das Adhikari	"Optimization of Networking Issues with Wireless Sensor Networks"
34.	Ph.D/CS/10003/2012	Sandip Mal	"Development of Software Quality Metrics for Object-Oriented Design"

S. No.	Roll No.	Name	Research Topic
35.	Ph.D/CS/10004/2012	Dipti Kumari	"Development of Software Fault Prediction Model using Object Oriented Design Measurement"
36.	Ph.D/CS/10005/2012	Sweta Kumari	"Enhancing Models & Algorithms for Software Cost Estimation"
37.	Ph.D/CS/10006/2012	Vishnu Kumar Sharma	"Enhancing Models and Algorithms in Privacy Preserving Data Mining"
38.	Ph.D/CS/10007/2012	Amit Prakash	"Development of Cross-Lingual Information Retrieval System for Indian Languages: Resource Poor Approaches"
39.	Ph.D/CS/10019/2012	Mr. Puneet Singh Duggal	"Virtualization Technologies: Managing and Analyzing BIG DATA"
40.	Ph.D/CS/10056/2012	Neeraj Kumar Singh	"Average Case Analysis through Statistical Bounds: A computer Experiment Oriented Approach"
<b>Department of Electronics &amp; Communication Engg.</b>			
41.	Ph.D/EC/10001/2012	Mrinmoy Chakraborty	"Design, Analysis and Development of Advanced Wide Band Antennas"
42.	Ph.D/EC/10002/2012	Ali Ehtesham	"Self-Structuring Antenna System"
43.	Ph.D/EC/10003/2012	Prikshit Vasisht	"Design and Analysis of Broadband High Gain Metamaterial based Microstrip Antenna"
44.	Ph.D/EC/10004/2012	Asutosh Kar	"Design and Analysis of Variable Structure Acoustic Echo Canceller Based on Adaptive Multiple Sub- filters"
45.	Ph.D/EC/10005/2012	Sudakar Singh chauhan	"Investigation of multiplexing and diversity schemes for MIMO systems to enhance capacity"
46.	Ph.D/EC/10006/2012	Sharmila Biswas	"Analysis of Hindi Songs using Signal Processing Techniques"
47.	Ph.D/EC/10007/2012	Pankaj Goel	"Real-Time Implementation of Speech Enhancement Techniques"
48.	Ph.D/EC/10008/2012	Sheelu Kumari	"Design and Optimization of Substrate Integrated Waveguide for Frequency Selective Applications"
49.	Ph.D/EC/10009/2012	Vishal Kumar	"Study of temperature and polarization effects on Quantum Well Devices"
50.	Ph.D/EC/10010/2012	Abhishek Pandey	"Design of Ultra Low Power CMOS Temperature Sensor for Missiles Application"
51.	Ph.D/EC/10011/2012	Sanjeev Kumar	"A multi-resolution approach to digital mammography for breast cancer detection"
52.	Ph.D/EC/10012/2012	Bibha Kumari	"Design, Implementation and some Applications of Chaotic Circuits"
53.	Ph.D/EC/10016/2012	Shipra	"Speech Recognition using Hidden Markov Model"
<b>Department of Electrical &amp; Electronics Engg.</b>			
54.	Ph.D/EE/10001/2012	Kumar Raja Gadham	"Analysis of Demand Response and Control Technologies in The context of Smart Distribution Grid Operation"
55.	Ph.D/EE/10002/2012	Vijay Kumar Karan	"Analysis of Converter fed Brushless DC Motor Drive for Hybrid Electric Vehicles"



S. No.	Roll No.	Name	Research Topic
56.	Ph.D/EE/10003/2012	Sushma Surya Prakash Kamlu	"License Plate Localization and Recognition"
57.	Ph.D/EE/10004/2012	Sarita Kumari	"Study on some aspects of sensor design for measurement of process parameters"
58.	Ph.D/EE/10005/2012	Kumar Rajan	"An Image Processing Based Approach for Vehicular traffic Surveillance System"
59.	Ph.D/EE/10006/2012	Murthy Cherukuri	"Reliability Evaluation of Phasor measurement Unit PMU"
60.	Ph.D/EE/10007/2012	Suraj	"Design of Online Human-Computer Interface"
<b>Department of Environmental Science &amp; Engg.</b>			
61.	Ph.D/ESE/10001/2012	A. Pratap	"Environmental Consequences and Reclamation Options for Charhi & Kuju Coal Mining Areas of Jharkhand, India"
62.	Ph.D/ESE/10002/2012	Poonam Tirkey	"A Comparative Water Regime Analysis of Ranchi City and Surrounding Areas"
63.	Ph.D/ESE/10003/2012	Md. Osaid Alam	"Bioavailability, uptake and translocation of arsenic in selected agricultural crops of Sahibganj, Jharkhand, India"
64.	Ph.D/ESE/10004/2012	Anamika Srivastava	"Mitigation of Arsenic in drinking water using DHR (dried hyacinth rooth) Technique"
65.	Ph.D/ESE/10051/2012	Ms. Shikha Pandey	"Chemically Assisted Phytoextraction of Metals from Fly Ash and Its Potential Use as Fertiliser"
<b>Department of Information Technology</b>			
66.	Ph.D/IT/10001/2012	Chandan Kumar	"Cryptography Using Biometric Features and Music as a Tool"
67.	Ph.D/IT/10002/2012	Yugal Kumar	"Development and Implementation of a New Hybrid Algorithm for Data Mining Task Using Nature Inspired Model"
68.	Ph.D/IT/10003/2012	Chandrashekhar Azad	"Application of Data Mining to Resolve Security Problems"
69.	Ph.D/IT/10004/2012	Shree Ranjan	"ERP Implementation in OEM Companies of developing Country Like India: Challenges and their Mitigation Measures"
70.	Ph.D/IT/10005/2012	Sumit Srivastava	"Speaker Authentication Using biometric Features and Audio Watermarking"
71.	Ph.D/IT/10051/2012	Ms. Tanushree Roy	"A Framework for Digital Forensic Investigation of Windows System Memory"
72.	Ph.D/IT/10052/2012	Mrs. Debjani Mustafi	"Designing Clustering Algorithms using Heuristic Approaches for the Analysis of Documents"
<b>Department of Management</b>			
73.	Ph.D/MB/10052/2012	Mrs. Shelly Srivastava	"Decision Making Process of Retail Investors with reference to Investment in Equity Shares in Indian Capital Market"

S. No.	Roll No.	Name	Research Topic
<b>Department of Mechanical Engg.</b>			
74.	Ph.D/ME/10001/2012	Ravi Shastri	
75.	Ph.D/ME/10051/2012	Mr. Manoj Kumar Solanki	"Analysis of Composite Plates using Meshfree Method"
76.	Ph.D/ME/10052/2012	Chandan Kumar	"Static buckling and Vibration analysis of laminated composite and Sandwich plates"
<b>Department of Pharmaceutical Science</b>			
77.	Ph.D/PH/10001/2012	Aslam Siddiqui	"Pharmacognostical Phytochemical and Pharmacological evaluation of Blumea lacera DC. Leaf"
78.	Ph.D/PH/10002/2012	Samridhi	"Studies on Self-Emulsifying Systems as Nanocarriers for Oral delivery of some drugs Using Formulation by design Approach"
79.	Ph.D/PH/10003/2012	Sima Singh	"Standardization and Pharmacokinetic Studies on Some Selected Plant Used for Ulcerative colitis"
80.	Ph.D/PH/10004/2012	Abhishek Kumar	"Evaluation of Anticancer Potential of Some Flavonoids on 7,12 Dimethylbenz(a) anthracene- induced Mammary Carcinogenesis"
81.	Ph.D/PH/10005/2012	Afzal Jussain	"Design, Development and Evaluation of Lipid Based Nanoparticles of Some Anti-tubercular Drugs"
82.	Ph.D/PH/10006/2012	Md Wasimul Haque	"Studies of Some Flavonoids in combination with Chemotherapeutic Agents Used for the Management of Mammary Cancer on Non-Clinical Cancer Models"
83.	Ph.D/PH/10007/2012	Pinki Rawat	"Synthesis and Pharmacological evaluation of Some Chroman Analogs"
84.	Ph.D/PH/10008/2012	Ashish Kumar Pandey	"Development and Characterization of Nanoparticles for Topical Delivery of Some Antifungal Drugs"
85.	Ph.D/PH/10009/2012	Amol sambhaji Bansode	"Design, Synthesis and Study of Anti-tubercular Activity of Some Novel Hybrid heterocyclic Compounds"
86.	Ph.D/PH/10010/2012	Damale Manoj Dangadhar	
87.	Ph.D/PH/10011/2012	Biplam Debnath	"Synthesis and Study of Some newer Isatin Analogs"
88.	Ph.D/PH/10012/2012	Sony Jacob K	"Synthesis and Study of Some Newer Pyrazole Analogs"
89.	Ph.D/PH/10013/2012	Hasan Ali	"Design, Development and Evaluation of Solid Lipid Nanoparticles of Some Drugs"
90.	Ph.D/PH/10014/2012	Aniruddha Mukherjee	"Neuro Pharmacology of Metabolic Syndrome"
91.	Ph.D/PH/10015/2012	Shina Chacko	"Design, Synthesis and Screening of Some Non-Peptides and Peptide Heterocyclic Hybrid Compounds against Hepatitis C Virus and Hepatocellular Carcinoma"
92.	Ph.D/PH/10016/2012	Burle Sushil Sureshrao	"Design, Synthesis and Hepatoprotective Study of Some Hybrid Taurine Amino Acid and Peptide Analogues"

S. No.	Roll No.	Name	Research Topic
93.	Ph.D/PH/10017/2012	Sandeep Kumar	"Design, Development and Optimization of Silk Nanoparticles of Some Drugs"
94.	Ph.D/PH/10018/2012	Mr. Anoop Kumar	"Immunotoxic Profile and Proteomics of Deltamethrin in Murine Thymocytes and Splenocytes: Attenuation by Phytoconstituent and Immunomodulatory drugs"
95.	Ph.D/PH/10051/2012	Ram Kumar Dubey	"Bioanalytical Method Development and Validation of a Few Selected Antihypertensive Drugs"
96.	Ph.D/PH/10051/2012	Mr. Kamal Kant	"Phytochemical and Biological Investigation on Arisaema tortuosus (Wall.) Schott – Folklore of Western Himalayan Region"
97.	Ph.D/PH/10052/2012	Mr. Naseem Alam	"Evaluation of the Mechanistic Approach for some Selected Flavonoids on NDEA-Induced Liver carcinogenesis"
98.	Ph.D/PH/10053/2012	Mr. Satheesh Chitla	"Studies of Pterospermum acerifolium (L) Willd on complications associated with Diabetes"
99.	Ph.D/PH/10054/2012	Mr. Viswanathan S.	"Bioanalytical Method Development, Validation and Pharmacokinetic Study of Omega-3-Fatty Acid Ethyl Esters Formulation Using LC-MS/MS"
<b>Department of Production Engg</b>			
100.	Ph.D/PE/10001/2012	Kirti Kumar	
<b>Department of Remote Sensing</b>			
101.	Ph.D/RS/10001/2012	Alok Bhushan Mukherjee	"Spatial temporal analysis and modeling of urban system using geo-statistical and geo-spatial techniques"
102.	Ph.D/RS/10002/2012	Fayma Mushtaq	"Impact of land use/land cover, soil erosion and run-off changes on the geo-environment of Wular lake, Kashmir (India) using Geoinformatics"
103.	Ph.D/RS/10003/2012	Praveen Kumar	"Assessment of long term changes in the pattern of agriculture in Bihar using remote sensing and GIS"
104.	Ph.D/RS/10004/2012	Akshay Kumar	"Geoenvironmental assessment in coal mining area (Ramgarh district) Jharkhand using remote sensing"
105.	Ph.D/RS/10005/2012	Rakesh Saur	"Determination and mapping of flood hazard risk zones in Jia-Dhal river basin, India using geo-informatics"
106.	Ph.D/RS/10051/2012	Md. Gulam Ansari	"Characterisation and Assessment of Urban Landscape and Environmental and Electromagnetic Sensitivity – A Geoinformatics Approach"
<b>Department of SER</b>			
107.	Ph.D/SER/10051/2012	Mr. Makade Rahul Ganpatrao	"Cavity Flow Field Studies at Supersonic Speed"
<b>BITEC, Allahabad</b>			
108.	Ph.D/MB/10051/2012	Pawan Kumar Kedia	

S. No.	Roll No.	Name	Research Topic
109.	Ph.D/MB/10053/2012	Prakash Kundnani	"A study On Productivity Analysis of Scheduled Commercial Banks in India in the new millennium"
110.	Ph.D/MB/10054/2012	Sweta Tiwari	"Model Towards Management of Human Resources Strategically for the Success of Automobile Companies Operating in India"
<b>BITEC, Deoghar</b>			
111.	Ph.D/EC/10015/2012	Chinmay Chakraborty	
112.	Ph.D/MB/10005/2012	Sumana Choudhuri	"Impulse Buying Tendency and its Consequences in the Retail Sector: A Study of Urban Consumers in India"
<b>BITEC, Jaipur</b>			
113.	Ph.D/CS/10016/2012	Rinkey	"Development of Cloud Based Architecture for Performance Enhancement of E-Learning Systems"
114.	Ph.D/CS/10017/2012	Kashinath K Chandelkar	"Design of Cloud Based Content Management System"
115.	Ph.D/CS/10018/2012	Ankit Kumar	"Framework Design for Security of Vanet Network"
116.	Ph.D/CS/10020/2012	Santosh Kumar Sharma	"Design a Framework to Evaluate Efficiency and Effectiveness of Software Testing Methodologies"
117.	Ph.D/MB/10016/2012	Mukesh Kumar Singh	"A Study to Analyze the Impact of Emerging Managerial Practices Performance of the Hotel Industry in the Jaipur Region"
118.	Ph.D/MB/10017/2012	Dharmendra Kumawat	"A study of Public Private Partnership (PPP) in Operation and Maintenance of Urban Drinking Water Supply System with special reference to Jaipur City"
119.	Ph.D/MB/10018/2012	Santosh Kumar	"A Study of the Performance of Indian Stock Exchanges during the Period of Recent Global Financial Crisis"
120.	Ph.D/AMM/10051/2012	Neeraj Sharma	"Study of Characters in Indian Mythology in the Context of Animation Design"
121.	Ph.D/AMM/10052/2012	Rishi Pandey	"Study of Visual Effects and their Impact on Indian Digital Media Commercials"
122.	Ph.D/AMM/10053/2012	Chandan Kumar	"A Critical Study of Visual Narratives for Multimedia Communication with Reference to Social Development"
123.	Ph.D/AMM/10054/2012	Gourav Choudhary	"Development of Concept Designs for Animated Short Films with Traditional Art Styles of India"
124.	Ph.D/CS/10052/2012	Saurabh Singh	"Enhancement of Dimensionality Reduction Technique for Pattern Construction of Biometric Authentication Systems"
<b>BITEC, Lalpur</b>			
125.	Ph.D/CS/10012/2012	Onima Tigga	"A Study of Data Mining Techniques and its Application in Bioinformatics"
126.	Ph.D/MB/10003/2012	Shrerya Patel	"Role of Microfinance In Socio-Economic Upliftment of Economically Weaker Section With Reference To Jharkhand State"
127.	Ph.D/MB/10004/2012	Pranjal Kumar	"Economic contribution of tourism sector: A study of Jharkhand state (India)"

S. No.	Roll No.	Name	Research Topic
128.	Ph.D/MB/10020/2012	Amit Roba	"An Analytical Study of Foreign Direct investment in the Indian Multi-Brand Retail Sector and its Impact on Agri-Food Sector"
129.	Ph.D/MB/10055/2012	Sindhu Kumari Chouhan	"The effect of EDP on Entrepreneurial intentions – A study of Government aided Entrepreneurship Training Programs in Jharkhand"
130.	Ph.D/MB/10056/2012	Chandrima Roy	"Sustainable Value Creation through Social Entrepreneurship : A case study of a public sector handicraft and handloom company in Jharkhand"
131.	Ph.D/MB/10057/2012	Shirupa Kumari	"Female attitude and perception towards entrepreneurship – A study of graduate students of Jharkhand"
<b>BITEC, Kolkata</b>			
132.	Ph.D/CS/10010/2012	Sukalyan Goswami	"Load Balancing in Computational Grid Environment"
133.	Ph.D/CS/10011/2012	Rudranath Mitra	"Approaches for Energy Efficiency and Lifetime Maximization in Wireless Sensor Networks"
134.	Ph.D/EC/10013/2012	Vivek Kumar	"Performance analysis of energy efficient MAC protocol for Multiple-Wireless Body Area Networks (M-WBANs) for medical healthcare"
135.	Ph.D/EC/10014/2012	Sravanthkumar Ramauri	"Emotion Recognition Through BCI to Enhance Performance of WBAN/ WPAN"
136.	Ph.D/IT/10006/2012	Debabrata Pal	"Biomedical Information Modelling and Visualization under Telemedicine Framework"
137.	Ph.D/MB/10002/2012	Diganta Munshi	"Corporate Sustainability – An Evolving Corporate Management Paradigm in Indian Manufacturing Firms"
<b>BITEC, Patna</b>			
138.	Ph.D/AM/10003/2012	Sultana Begum	
139.	Ph.D/PE/10002/2012	Amit Kishore	
140.	Ph.D/MB/10008/2012	Manoj Kumar Giri	"Restructuring of Unorganized Retail Sector in Changing Scenario of Indian Market"
141.	Ph.D/CS/10008/2012	Soni Sweta	"Designing a Framework for Adaptive E-Learning System in Using Educational Data Mining"
142.	Ph.D/CS/10009/2012	Kanika Thakur	"Data Mining for Human Intelligence Analysis"
143.	Ph.D/EE/10007/2012	Ram Kumar Karsh	"Numerical Protection of Transmission Line Using Discrete Wavelet Transform and Fuzzy Logic"
144.	Ph.D/AM/10054/2012	Ajay Kumar	"Studies on MHD Viscous Flow over a Stretching /Shrinking Sheet"
145.	Ph.D/AM/10055/2012	Rakesh Kumar Roy	"Some Problems on Boundary Layer Flow of Fluids due to Stretching/Shrinking Surface"
146.	Ph.D/AP/10051/2012	Sholk Yadav	"Studies of Some Transition Metals Modified Lithium Metatitanate Ceramics"
147.	Ph.D/MB/10062/2012	Sneha	"A study on effectiveness of Corporate Social Responsibility over Consumers of Indian Service Industry"



S. No.	Roll No.	Name	Research Topic
148.	Ph.D/MB/10063/2012	Ketaki Singh	"The Impact of Quality of Management Education in India"
<b>BITEC, Noida</b>			
149.	Ph.D/CS/10013/2012	Harendra Pratap Singh	
150.	Ph.D/CS/10014/2012	Ankit Gupta	"Design and development of Web Intelligence Model for Improved and Intelligent Information Retrieval"
151.	Ph.D/CS/10015/2012	Pankaj Kumar Sharma	"Development of intelligent system Model for Detection and Prevention of Anomalies in Mobile Adhoc Network"
152.	Ph.D/AM/10005/2012	Vijayalakshmi Sarraju	
153.	Ph.D/MB/10006/2012	Balwant Rai Sharma	"Development of Performance Process Model for Enhancing Predictability"
154.	Ph.D/MB/10007/2012	Pooja Jha	"A Study of Factors Affecting Performance of Indian Women Entrepreneurs "
155.	Ph.D/MB/10008/2012	Narendra Nath Mahato	"Performance Management Chain in Energy Sector of India : An Empirical Study "
156.	Ph.D/MB/10009/2012	Monika Chowdhary	
157.	Ph.D/MB/10010/2012	Md. Moddassir Alam	"Effectiveness of Branding Strategies of Selected Pharmaceutical Firms in India : An Empirical Study"
158.	Ph.D/MB/10011/2012	Neela Prasad	
159.	Ph.D/MB/10012/2012	Neha Gupta	"A Study of Impact of Human Resource Practices in Employee Engagement in Mass Rapid Transit System Organizations in India"
160.	Ph.D/MB/10013/2012	Anamica Singh	"A Study of Brand Building through Green IT for Sustainable Development of IT Companies in India"
161.	Ph.D/MB/10014/2012	Aastha Kochar	"A Study of relationship between Internal Corporate Social Responsibility (CSR) Practices and Employee Retention in Indian Service Sector"
162.	Ph.D/MB/10015/2012	Uttara Jangbadhadur	"A Study of Relationship between Employee Development Practices and Sustainable Organizational Performance in Indian Steel Industry"
163.	Ph.D/MB/10058/2012	Chetna Kudeshia	"Impact of Social Media Marketing on Consumer Buying Behavior : An Empirical Study"
164.	Ph.D/MB/10059/2012	Ratna Gupta	
165.	Ph.D/MB/10060/2012	Karnica Tanwar	"Employer Branding as a Strategic HR Tool: A Study of Selected IT Firms"
166.	Ph.D/MB/10061/2012	Bhawna Pal	
167.	Ph.D/CS/10051/2012	Shailini Puri	

**CONVOCATION, RESULTS, DEGREES / DIPLOMA AWARDED**

Upon recommendation of the Board, all who have cleared their respective programme during 2012-13 were awarded Degree / Diploma in the convocation 2012-13 held on 10<sup>th</sup> April 2013

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI****MAY 2012 TO 15 MARCH 2013**

			ID	I	II	Total
1.	Doctor of Philosophy	Architecture	—	—	—	—
	Doctor of Philosophy	Engineering	—	—	—	7
	Doctor of Philosophy	Management	—	—	—	4
	Doctor of Philosophy	Pharmacy	—	—	—	4
	Doctor of Philosophy	Science	—	—	—	10
	Doctor of Philosophy	Technology	—	—	—	12
			Total			37
2.	Master of Philosophy	Management	2	—	—	2
3.	Post-Graduate Degrees		ID	I	II	Total
	Master of Animation Design		2	12	—	14
	Master of Business Administration		95	166	18	279
	Master of Computer Applications		161	220	17	398
	Master of Engineering	Automated Manufacturing System	3	5	—	8
	Master of Engineering	Computer Aided Analysis & Design	1	4	1	6
	Master of Engineering	Civil	3	4	—	7
	Master of Engineering	Electrical	14	16	4	34
	Master of Engineering	Electronics & Communication	28	16	2	46
	Master of Engineering	Mechanical	5	11	—	16
	Master of Engineering	Quality Engineering Management	5	4	—	9
	Master of Engineering	Software	8	7	—	15
	Master of Engineering	Space Engineering & Rocketry	8	12	1	21
	Master of Pharmacy		54	23	—	77
	Master of Science	Applied Chemistry	2	6	—	8
	Master of Science	Applied Mathematics	2	2	1	5
	Master of Science	Applied Physics	5	3	1	9
	Master of Science	Bio-Informatics	11	10	1	22
	Master of Science	Bio-Medical Instrumentation	4	5	2	11
	Master of Science	Clinical Research	2	—	—	2
	Master of Science	Geo-Informatics	12	2	—	14
	Master of Science	Information Science	2	2	—	4
	Master of Science	Information Technology	16	4	—	20
	Master of Technology	Biotechnology	13	2	—	15
	Master of Technology	Computer Science	30	12	—	42
	Master of Technology	Energy Technology	5	1	—	6
	Master of Technology	Environmental Science & Engineering	9	3	—	12
	Master of Technology	Information Security	8	8	1	17

	Master of Technology	Nano-Science & Nano-Technology	7	5	—	12
	Master of Technology	Polymer Science & Technology	1	3	—	4
	Master of Technology	Remote Sensing	13	2	2	17
	Master of Urban Planning		3	3	1	7
	Post-Graduate Diploma	Business Administration	1	—	1	2
			<b>Total</b>			<b>1159</b>
4.	Under-Graduate Degrees		ID	I	II	Total
	Bachelor of Architecture		23	2	0	25
	Bachelor of Business Administration		302	120	9	431
	Bachelor of Business Administration (Business Economics)		17	6	—	23
	Bachelor of Commerce		6	8	1	15
	Bachelor of Computer Applications		203	91	4	298
	Bachelor of Engineering	Biotechnology	12	12	2	26
	Bachelor of Engineering	Chemical & Polymer	9	1	—	10
	Bachelor of Engineering	Civil	52	17	—	69
	Bachelor of Engineering	Computer Science	135	92	6	233
	Bachelor of Engineering	Electrical & Electronics	79	73	3	155
	Bachelor of Engineering	Electronics & Communication	194	101	4	299
	Bachelor of Engineering	Information Technology	39	24	—	63
	Bachelor of Engineering	Marine	—	2	—	2
	Bachelor of Engineering	Marine Technology	1	—	—	1
	Bachelor of Engineering	Mechanical	92	54	4	150
	Bachelor of Engineering	Polymer	—	2	—	2
	Bachelor of Engineering	Production	20	15	—	35
	Bachelor of Hotel Management & Catering Technology		5	13	6	24
	Bachelor of Pharmacy		45	3	—	48
	Bachelor of Science	Animation & Multimedia	58	42	1	101
	Bachelor of Science	Food Processing Technology	10	2	—	12
	Bachelor of Science	Information Technology	11	2	—	13
	Bachelor of Science	Medical Laboratory Technology	20	7	3	30
	Bachelor of Science	Nautical Science	2	6	—	8
	Bachelor of Technology	Civil	1	—	—	1
	Bachelor of Technology	Electrical & Electronics	3	7	—	10
	Bachelor of Technology	Mechanical	1	4	—	5
			<b>Total</b>			<b>2089</b>
5.	Diploma		ID	I	II	Total
	Diploma in Technology	Automobile Engineering	14	15	—	29
	Diploma in Technology	Computer Science	11	15	1	27
	Diploma in Technology	Electronics Engineering	23	5	2	30
	Diploma in Technology	Manufacturing Engineering	5	14	1	20
			<b>Total</b>			<b>106</b>
			<b>Grand Total</b>			<b>3393</b>

**FACULTY STRENGTH**

S. No.	Category	Number
1.	Professor	63
2.	Associate Professor	91
3.	Assistant Professor	421
4.	Associate Lecturer	69
5.	Scientific Officer	9
6.	Teaching cum Research Fellow	14
7.	Others	51
	<b>Total</b>	<b>717</b>

**DEPARTMENT OF APPLIED CHEMISTRY**

S. No.	Name	Designation
1	Prof. Usha Jha	Professor & Head
2	Dr. Bimal Verma	Associate Professor
3	Dr. J.P. Pandey	Associate Professor
4	Dr. Ashoke Sharon	Associate Professor
5	Dr. Chandralata Bal	Assistant Professor
6	Dr. Rafique-Ul-Islam	Assistant Professor
7	Dr. Subhendu Naskar	Assistant Professor
8	Dr. Deep Shikha	Assistant Professor
9	Dr. Sumit Mishra	Assistant Professor
10	Dr. Gautam Sen	Assistant Professor
11	Mr. Rahul	Assistant Professor
12	Dr. Sushanta Sinha Mahapatra	Assistant Professor
13	Dr. Poulomi Roy	Assistant Professor
14	Dr. Barnali Dasgupta Ghosh	Assistant Professor
15	Dr. PRADIP KAR	Assistant Professor
16	Dr. GYAN KUMAR AGRAWAL	Assistant Professor

**DEPARTMENT OF APPLIED MATHEMATICS**

S. No.	Name	Designation
1	Dr. Swapan Kumar Chakraborty	Professor & Head
2	Dr. Saral Kumar Jain	Professor
3	Dr. Bimal Kumar Mishra	Professor
4	Dr. S.S. Roy	Associate Professor
5	Dr. Seshadev Padhi	Associate Professor
6	Dr. Soubhik Chakraborty	Associate Professor
7	Dr. Anjana P. Ghorai	Associate Professor
8	Dr. Nishi Srivastava	Assistant Professor



9	Dr. Ashwini Ranade	Assistant Professor
10	Dr. Abhinav Tandon	Assistant Professor
11	Dr. Suchandan Kayal	Assistant Professor
12	Dr. Manoj Kumar	Assistant Professor
13	Dr. Swati Pandey	Assistant Professor

#### DEPARTMENT OF APPLIED PHYSICS

S. No.	Name	Designation
1.	Dr. P. K. Barhai	Professor & Dean (Spon. Res.)
2.	Dr. D. Jairath	Professor & Head
3.	Dr. S. Konar	Professor
4.	Dr. (Mrs) S. Keshri	Professor
5.	Dr. S. K. Sinha	Associate Professor
6.	Dr. S. K. Rout	Associate Professor
7.	Dr. S. Mahapatra	Associate Professor
8.	Dr. I. Banerjee	Associate Professor
9.	Mr. M. K. Sinha	Senior Scientific Officer
10.	Dr. K. Bose	Assistant Professor
11.	Dr. S. Mukherjee	Assistant Professor
12.	Dr. Ravikant Choubey	Assistant Professor (resigned, April 2013)
13.	Dr. Swatenshumala	Assistant Professor (resigned June 2013)
14.	Dr. Rishi Sharma	Assistant Professor
15.	Dr. (Mrs) Ela Sinha	Assistant Professor
16.	Dr. Mrinal Mishra	Assistant Professor
17.	Dr. Sanat Kr. Mukherjee	Junior Research Officer (on leave for PDF)

#### DEPARTMENT OF ARCHITECTURE

S. No.	Name	Designation
1.	Dr. Manjari Chakraborty	Professor & Head
2.	Dr. N.R. Mandal	Professor
3.	Dr. D. J. Biswas (on deputation)	Professor
4.	Dr. Satyaki Sarkar	Associate Professor
5.	Mrs. Ritu Agrawal	Assistant Professor
6.	Mr. Sanmarga Mitra	Assistant Professor
7.	Mrs. Smriti Misra	Assistant Professor
8.	Mrs. Parama Mitra	Assistant Professor
9.	Mr. Shashi Kant Pandey	Assistant Professor
10.	Mr. Anuj Toppo (on deputation)	Assistant Professor
11.	Mr. Bimal Chandra Roy	Assistant Professor
12.	Mr. Rajan Chandra Sinha	Assistant Professor

13.	Mr. Janmejy Gupta	Assistant Professor
14.	Mr. Arup Das	Assistant Professor
15.	Mrs. Sangita	Associate Lecturer
16.	Mr. Biswajeet Chakraborty	Associate Lecturer
17.	Mrs. Swetambra Verma	Teaching cum Senior Research Fellow
18.	Mr. Mrinal Pathak	Associate Lecturer

**DEPARTMENT OF BIOTECHNOLOGY**

S. No.	Name	Designation
1.	Dr. Kunal Mukhopadhyay	Professor & Head
2.	Dr. Pratyooosh Shukla (On EOL)	Associate Professor
3.	Dr. Ramesh Chandra	Associate Professor
4.	Dr. Dev Mani Pandey	Associate Professor
5.	Dr. Vinod Kumar Nigam	Associate Professor
6.	Dr. Rajib Bandopadhyay	Assistant Professor
7.	Dr. Manish Kumar	Assistant Professor
8.	Dr. Raju Poddar	Assistant Professor
9.	Dr. Avneesh Pareek	Assistant Professor
10.	Dr. (Mrs.) Shashwati Ghosh Sachan	Assistant Professor
11.	Mr. Santosh Kumar Jha	Assistant Professor
12.	Dr. Ashish Sachan	Assistant Professor
13.	Dr. (Mrs.) Sheela Chandra	Assistant Professor
14.	Dr. Hare Ram Singh	Assistant Professor
15.	Ms. Koel Mukherjee	Assistant Professor
16.	Dr. (Mrs.) Shubha Rani Sharma	Assistant Professor
17.	Dr. Dinesh Prasad	Assistant Professor
18.	Dr. Debabrata Garai	Assistant Professor
19.	Mr. Saswata Goswami	Scientist
20.	Ms. Sneha Singh	Associate Lecturer
21.	Dr. Shankaracharya (On EOL)	Associate Lecturer

**DEPARTMENT OF CHEMICAL ENGINEERING & TECHNOLOGY**

S. No.	Name	Designation
1.	Dr. M. Mukherjee	Professor
2.	Dr. Gautam Sarkhel	Associate Professor
3.	Dr. S. Goswami	Associate Professor
4.	Dr. Akhil Sen	Associate Professor
5.	Dr. Arup Choudhury	Assistant Professor
7.	Dr. G.T.Mohanraj	Assistant Professor
8.	Mr. S. Jana	Assistant Professor

9.	Mr. P. Dutta	Assistant Professor
10.	Ms Debashree Ghose	Assistant Professor
11.	Mr. J.Sudeepan	Assistant Professor
12.	Dr. A.N. Mishra	Assistant Professor
13.	Dr. Raghu Raj Pandya	Assistant Professor
14.	Dr. Jhansi	Assistant Professor

#### LIST OF SCIENTIFIC OFFICERS IN CENTRE FOR FOOD TECHNOLOGY

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

#### Department of Civil Engineering

S. No.	Name	Designation
1.	Dr. Balram Singh	Professor & Head
2.	Dr. Anand Kumar Sinha	Professor
3.	Dr. Rajiv Ranjan Sahay	Professor
4.	Dr. Sudeshna Chakravarty	Professor
5.	Dr. Arun Kumar	Associate Professor
6.	Dr. Indrajit Roy	Associate Professor
7.	Dr. Bindhu Lal	Associate Professor
8.	Dr. Birendra Kumar Singh	Associate Professor
9.	Dr. Siddhartha Sengupta	Associate Professor
10.	Mr. Jitu Kujur	Assistant Professor
11.	Dr. Avijit Burman	Assistant Professor
12.	Mr. Koushik Paul	Assistant Professor
13.	Mr. Ashish Kumar	Teaching Cum Research Fellow

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

S. No.	Name	Designation
1.	Dr. R.Sukesh Kumar	Professor & Head
2.	Dr. D.K.Mallick	Associate Professor
3.	Dr. K.Sridhar Patnaik	Associate Professor
4.	Mr. S.K.Chatterjee	Assistant Professor
5.	Mr. I.Mukherjee	Assistant Professor
6.	Mr. Kishore Kumar Senapati	Assistant Professor
7.	Dr. Abhijit Mustafi	Assistant Professor
8.	Mrs. Itu Snigdh	Assistant Professor
9.	Mr. P.Paul	Assistant Professor
10.	Mrs. Shruti Garg	Assistant Professor

11.	Dr. Sanchita Paul	Assistant Professor
12.	Mrs. Amritanjali	Assistant Professor
13.	Dr. Sudip Kumar Sahana	Assistant Professor
14.	Dr. Sujan Kumar Saha	Assistant Professor
15.	Dr. Shashank Pushkar	Assistant Professor
16.	Mrs. Samama Anwar	Assistant Professor
17.	Mrs. Pooja Jha	Institute Research Fellow
18.	Mr. Mukta Majumder	Institute Research Fellow
19.	Mr. Vaibhav Soni	Institute Research Fellow
20.	Mr. Rakesh Patra	Institute Research Fellow
21.	Mr. Niraj Kumar Singh	Teaching cum Institute Research Fellow
22.	Mr. Amit Parkash	Teaching cum Institute Research Fellow
23.	Mr. Dibya Ranjan Das Adhikari	Institute Research Fellow
24.	Mr. Sandip Mal	Institute Research Fellow

**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

S. No.	Name	Designation
1.	Prof. S K Ghorai	Professor and Head
2.	Prof. N Gupta	Professor
3.	Prof. S Pal	Professor
4.	Prof. V R Gupta	Professor
5.	Mr. K K Masand	Associate professor
6.	Mr. B B Pal	Associate professor
7.	Dr. Sanjay Kumar	Associate professor
8.	Dr. S S Solanki	Associate professor
9.	Dr. Mahesh Chandra	Associate professor
10.	Dr. Shweta Srivastava	Associate professor
11.	Dr. Neela Chattoraj	Associate professor
12.	Dr. R K Lal	Associate professor
13.	Mr. Kartik Mahto	Assistant professor
14.	Mr. S K Dash	Assistant professor
15.	Dr. Sanjeet Kumar	Assistant professor
16.	Dr. A Islam	Assistant professor
17.	Dr. Manoj Mukul	Assistant professor
18.	Dr. Vijay Nath	Assistant professor
19.	Dr. A K Tiwary	Assistant professor
20.	Dr. S S Sahu	Assistant professor
21.	Dr. A K Tiwary	Assistant professor
22.	Mr. Janardan Sahay	Assistant professor
23.	Mr. Vishal H Shah	Assistant professor

24.	Dr. Dileep Kumar Upadhyay	Assistant professor
25.	Mr. Gajendra Mishra	Assistant professor
26.	Mr. Pryinak Saxena	Assistant professor
27.	Mr. Somnath Sengupa	Assistant professor
28.	Mrs. S M Annapurna	Assistant professor
29.	Mr. S S Tripathy	Assistant professor
30.	Ms. Swati Prasad	Assistant professor
31.	Dr. Soumya Sidhishwari	Associate lecturer
32.	Mr. R K Sinha	Associate lecturer
33.	Mr. Santashraya Prasad	Associate lecturer
34.	Mrs. Saba Firdous	Associate lecturer

#### DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

S. No.	Name	Designation
1.	Prof. R. K. Narayan	Professor
2.	Dr. T. Ghose	Professor & Head
3.	Dr. R. C. Jha	Professor
4.	Dr. D. K. Mohanta	Professor
5.	Dr. (Mrs.) N. L. Nath	Associate Professor
6.	Dr. P.R. Thakura	Associate Professor
7.	Dr. R.K. Sinha	Associate Professor
8.	Dr. (Mrs.) S. Chakraborty	Associate Professor
9.	Dr. (Mrs.) Vijaya Laxmi	Associate Professor
10.	Mr. Prem Prakash	Assistant Professor (Sr. scale)
11.	Mr. Abinash Prasad	Assistant Professor (Sr. scale)
12.	Mr. R. K. Keshri	Assistant Professor
13.	Mr. Surendra Kumar	Assistant Professor
14.	Mrs. Debomita Ghosh	Assistant Professor
15.	Mr. G. S. Gupta	Assistant Professor
16.	Dr. S. K. Mishra	Assistant Professor
17.	Dr. S. K. Pradhan	Assistant Professor
18.	Ms. Aparna Gautam	Assistant Professor
19.	Mr. B. M. Prasad	Assistant Professor
20.	Dr. Y. Aggarwal	Assistant Professor
21.	Mrs. Anjana Dwivedi	Associate Lecturer
22.	Mr. S. K. Das	Associate Lecturer
23.	Mrs. Sushma Kadwane	Associate Lecturer
24.	Dr. B. M. Karan	Visiting Faculty
25.	Mr. N. Neogi	Visiting Faculty



**DEPARTMENT OF HOTEL MANAGEMENT AND CATERING TECHNOLOGY**

S. No.	Name	Designation
1.	Mr. Praveen Srivastava	Asst. Prof.
2.	Dr. Abhinav Kr. Shandilya	Asst. Professor
3.	Dr. Amit Saran	Asst. Professor
4.	Ms. Rajeshwari Chatterjee	Asst. Professor
5.	Mr. Gautam Shandilya	Asst. Professor
6.	Mr. Abhisek Jana	Asst. Professor
7.	Mr. Sanjiv Srivastava	Asst. Professor
8.	Mr. Nishikant Kumar	Asst. Professor
9.	Ms. Pratima Ekka	Associate Lecturer
10.	Mr. Pranjal Kumar	Associate Lecturer

**DEPARTMENT OF INFORMATION TECHNOLOGY**

S. No.	Name	Designation
1.	Dr. (Prof.) Gadadhar Sahoo	Professor & Head
2.	Dr. Sandip Dutta	Associate Professor
3.	Dr. Aruna Jain	Associate Professor
4.	Dr. Bhaskar Karn	Associate Professor
5.	Dr. Vijay Kumar Jha	Associate Professor
6.	Mr. Indra Deo Ram	Assistant Professor
7.	Dr. Anup Kumar Keshri	Assistant Professor
8.	Dr. Kumar Rajnish	Assistant Professor
9.	Mr. Subrajeet Mohapatra	Assistant Professor
10.	Mr. Ritesh Jha	Assistant Professor
11.	Dr. Bikash Kanti Sarkar	Assistant Professor
12.	Mr. B. K. Chanda	Assistant Professor
13.	Mr. Kalyan Samanta	Assistant Professor
14.	Ms. Sabina Priyadarshini	Lecturer
15.	Mrs. Debjani Mustafi	Associate Lecturer
16.	Mr. Sumit Srivastava	Teaching Cum Research Fellow
17.	Ms. Tanushree Roy	Teaching Cum Research Fellow

**DEPARTMENT OF MANAGEMENT**

S. No.	Name	Designation
1	Dr. S.K. Bose	Professor & Head
2	Dr. U Baul	Professor
3	Dr. Mrs. Manju Bhagat	Professor
4	Dr. Mrs. Shradha Shivani	Professor
5	Dr. R. N. Bhagat	Professor

6	Prof. S.C. Mishra	Associate Professor
7	Dr. Supriyo Roy	Associate Professor
8	Dr. P.C. Jha	Asistant Professor
9	Dr. D.K. Chand	Asistant Professor
10	Mr. S. K. Singh	Asistant Professor
11	Dr. A. Ghosh	Asistant Professor
12	Dr. R.K. Pandey	Asistant Professor
13	Dr. J.B. David	Asistant Professor
14	Mr. A. Kumar	Asistant Professor
15	Mrs. S. Srivastava	Asistant Professor
16	Mr. A. Verma	Asistant Professor
17	Ms R. Jha	Asistant Professor
18	Sr Rajneesh Choubisa	Assistant Professor
18	Mrs. S.P. Dash	Associate Lecturer
19	Mr. A.Pd. Sinha	Associate Lecturer
20	Mr. S. Kr. Mishra	Associate Lecturer

#### DEPARTMENT OF MECHANICAL ENGINEERING

S. No.	Name of the Faculty	Designation
1.	Dr. Arbind Kumar	Head & Professor
2.	Dr. Arbind Kumar II	Professor
3	Dr. R.P. Sharma	Associate Professor
4.	Dr. A.K. Roy	Associate Professor
5.	Dr. Rajeev Kumar	Associate Professor
6.	Prof. S.K. Sinha	Associate Professor
7.	Dr. Kaushik Kumar	Associate Professor
8.	Dr. J. Singh	Associate Professor
9.	Dr. D.P. Mishra	Associate Professor
10.	Dr. D.B. Lata (On Lien)	Associate Professor
11.	Dr. Sabin Mishra	Assistant Professor
12.	Mrs. Richa Pandey	Assistant Professor
13.	Sri S.K. Dhiman	Assistant Professor
14.	Sri P. Mishra	Assistant Professor
15.	Sri B.S. Choudhary	Assistant Professor
16.	Dr. N.K. Singh	Assistant Professor
17.	Sri O. P. Pandey	Assistant Professor
18.	Sri B. K. Prabhakar	Assistant Professor
19.	Sri Sujeet Kr. Mishra	Assistant Professor
20.	Sri Abhijit Nag	Assistant Professor
21.	Dr. Dhaneshwar Mahto	Assistant Professor

22	Sri Arun Dayal Udai (Study Leave)	Assistant Professor
23.	Sri. L.S.Brar	Teach. cum. Res. Fellow
24.	Sri. A.Bhowmik	Scientific Officer

**DEPARTMENT OF PHARMACEUTICAL SCIENCES**

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.	Dr. R. N. Gupta	Professor
7.	Mrs. S. G. Panpalia	Assoc. Professor
8.	Dr. (Ms.) S. Ganguly	Assoc. Professor
9.	Dr. Jayaram Kumar	Assoc. Professor
10.	Dr. (Mrs.) P. Mitra Mazumder	Assoc. Professor
11.	Dr.(Mrs.)S. M. Verma	Assoc. Professor
12.	Mr. Ashok Pattanaik	Assistant Professor
13.	Dr. J. Venkatesh	Assistant Professor
14.	Dr. Manik	Assistant Professor
15.	Dr. A. Basu	Assistant Professor
16.	Dr. N. Mishra	Assistant Professor
17.	Dr. S.P. Pattanayak	Assistant Professor
18.	Dr. A. Dev	Assistant Professor
19.	Mr. B. Sarkar	Assistant Professor
20.	Dr. T. Bal	Assistant Professor
21.	Dr. A. Pandey	Assistant Professor
22.	Dr. Neelima Sharma	Assistant Professor
23.	Dr. Sandeep Kumar Singh	Assistant Professor
24.	Dr. Animesh Ghosh	Assistant Professor
25.	Dr.Uma Ranjan Lal	Assistant Professor
26.	Dr.Sugato Banerjee	Assistant Professor
27.	Dr. Kishanta Pradhan	Assistant Professor

**DEPARTMENT OF PRODUCTION ENGINEERING**

S. No.	Name	Designation
1.	Dr. B.K. Singh	Professor & Head
2.	Dr. Vinay Sharma	Professor & Dean (SW)
3.	Mr. Atul Anand	Associate Professor
4.	Mr. A. K. Thakur	Associate Professor

5.	Dr. Sanjay Kumar Jha	Associate Professor
6.	Dr. Ritesh Kumar Singh	Associate Professor
7.	Dr. L.N. Pattanaik	Associate Professor
8.	Dr. Vijay Pandey	Associate Professor
9.	Dr. S. C. Srivastava	Associate Professor
10.	Dr. Joyjeet Ghose	Associate Professor
11.	Dr. Rajeev Agrawal	Assistant Professor
12.	Mr. Binay Kumar	Assistant Professor
13.	Dr. Somak Datta	Assistant Professor

#### DEPARTMENT OF REMOTE SENSING

S. No.	Name	Designation
1.	Dr. Nilanchal Patel	Professor and Head
2.	Dr. A. P. Krishna	Professor
3.	Dr. C. Jeganathan	Professor
4.	Dr. M. S. Nathawat	Professor (on EoL)
5.	Dr. A. C. Pandey	Associate Professor
6.	Mr. S. Chelliah	Assistant Professor
7.	Mrs. Richa N. K. Sharma	Assistant Professor
8.	Dr. V. S. Rathore	Assistant Professor
9.	Dr. Mili Ghosh	Assistant Professor
10.	Dr. L. K. Sharma	Assistant Professor (on EoL)

#### DEPARTMENT OF SPACE ENGINEERING & ROCKETRY

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

#### DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

S. No.	Name	Designation
1.	Dr. Mahendra Kumar	Assistant Professor

#### ENVIRONMENTAL SCIENCE & ENGINEERING GROUP

S. No.	Name	Designation
1.	Dr. Gopal Pathak	Professor & Head
2.	Dr. Kirti Avishek	Assistant Professor
3.	Dr. Amit Gorai	Assistant Professor

4.	Dr. R. Naresh Kumar	Assistant Professor
5.	Dr. Sukalyan Chakraborty	Assistant Professor
6.	Dr. Tanushree Bhattacharya	Assistant Professor
7.	Mr. Jawed Iqbal	Associate Lecturer
8.	Mrs. Neeta Kumari	Associate Lecturer

**CENTRE OF EXCELLENCE FOR CLIMATOLOGY**

S. No.	Name	Designation
1.	Dr. Manoj Kumar	Lecturer (SG)
2.	Dr. Sunita Verma	Assistant Professor (on deputation)
3.	Dr. Swagata payra	Assistant Professor (on deputation)
4.	Dr. Ashwini Ranade	Assistant Professor
	Dr. Nishi Srivastava	Assistant Professor

**OFF CAMPUS: ALLAHABAD**

S. No.	Name	Designation
1.	Dr. Rampal Singh	Professor & Director

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

S. No.	Name	Designation
1.	Dr. Suvendu Kanungo	Assistant Professor
2.	Shri Ravi Shankar Pandey	Assistant Professor
3.	Mrs. Anita Kushwaha	Assistant Professor
4.	Shri Subhash Chandra Pandey	Assistant Professor
5.	Shri Kamta Nath Mishra	Assistant Professor
6.	Shri Ajit Kumar Keshri	Assistant Professor
7.	Dr. Prakash Chandra Srivastava	Assistant Professor
8.	Shri Ratnesh Mishra	Assistant Professor
9.	Mrs. Aparna Shukla	Associate Lecturer
10.	Shri Navin Trivedi	Associate Lecturer
11.	Shri Hareshwar Prasad	Associate Lecturer

**DEPARTMENT OF MANAGEMENT**

S. No.	Name	Designation
1.	Dr. Adhip Kumar Mahanty	Assistant Professor
2.	Dr. Sunil Kumar Pandey	Assistant Professor
3.	Dr. Ashish Mohan Dubey	Assistant Professor
4.	Mrs. Nidhi Tiwari	Associate Lecturer

**DEPARTMENT OF ENGINEERING & APPLIED SCIENCE**

S. No.	Name	Designation
1.	Shri Shambhu Sharan Kumar	Assistant Professor



**OFF CAMPUS: DEOGHAR**

S. No.	Dept.			
1.	ECE	S. No.	Name	Designation
		1	Dr. Mainak Mukhopadhyay	Assistant Professor & I/C
		2	Mr. Babu Lal Shahu	Assistant Professor
		3	Mrs. Sutapa Mondal	Assistant Professor
		4	Mr. Sridhar Chintala	Assistant Professor
		5	Mr. Mahendra Kumar Das	Associate Lecturer
		6	Mr. Chinmay Chakraborty	Assistant Professor
		7	Mr. Akash Kumar Gupta	Assistant Professor
		8	Mr. Shashikant Kumar	Teaching cum Research Scholar
2.	EEE	S.No.	Faculty Name	Designation
		1.	Mr. Piyush Kumar Ojha	Assistant Professor & In-Charge
		2.	Mr. Pankaj Mishra	Assistant Professor
		3.	Mr. Prabhat Kumar Ranjan	Assistant Professor
		4.	Mr. Srihari Gude	Assistant Professor
		5.	Mr. Deep Shekhar Acharya	Assistant Professor
		6.	Mr. Surendra Kumar Mahto	Associate Lecturer
3.	CSE	S. No.	Name	Designation
		1.	Dr. Soumya Banerjee	Associate Professor and I/C
		2.	Mr. Balaram Mondal	Assistant Professor
		3.	Mr. RajaRam Dutta	Assistant Professor
		4.	Mr. S.K.Borat	Associate Lecturer
		5.	Mr. Nishi Kant Kumar	Associate Lecturer
		6.	Mr. Saswat Mukherjee	Associate Lecturer
		7.	Mrs. Neena Jha	Associate Lecturer
4.	MECH	S. No.	Name	Designation
		1	Dr. A. Chakrabarty	Associate Professor & I/C
		2	Mr. R. K. Upadhyay	Assistant Professor
		3	Mr. Ashutosh Kumar	Assistant Professor
		4	Mr. Srinivasarao Gopiseti	Assistant Professor
		5	Mr. T. K. Baug	Scientific Officer
		6	Mr. R. J. K. Singh	OSD (Academic)
10.	.....	S. No.	Name	Designation (Section)
		1.	Mrs. Meera Jha	Associate Lecturer (Tech. Eng.)
		2.	Mrs. Alka Srivastava	Music Teacher
		3.	Mrs. Anindita Banerjee	Associate Lecturer (Creative Art)
		4.	Mr. Ashok Kumar Singh	Superintendent (PT & Games)

**OFF CAMPUS: JAIPUR**

S. No.	Name	Designation
1.	Dr. Abhinav Dinesh	Director
<b>Computer Science Department</b>		
1.	Dr.(Mrs.) Madhavi Sinha	Associate professor
2.	Dr. Shripal Vijayvargiya	Associate professor
3.	Mr. P.K. Sharma	Assistant Professor
4.	Mr. Bimalendu Pathak	Assistant Professor
5.	Dr. Piyush Gupta	Assistant Professor
6.	Mr. Madan Mohan Agarwal	Assistant Professor
7.	Mr. Alok Pandey	Sr. System Manager (Also having teaching assignment)
8.	Mr. Vivek Gaur	Assistant Professor
9.	Mr. Subhash Chand Gupta	Assistant Professor
10.	Dr. (Mrs.) Archana Bhatnagar	Assistant Professor
11.	Mrs. Seema Gaur	Assistant Professor
12.	Mrs. Anju Sharma	Assistant Professor
13.	Mr. Santosh Kumar Sharma	Assistant Professor
15.	Mr. Santhosh Kumar Agarwal	Associate Lecturer
<b>Electronics &amp; Communication Engineering Department</b>		
1.	Mr. Jankiballabh Sharma	Assistant Professor
2.	Mr. Deepak Chaturvedi	Assistant Professor
3.	Mrs. Jyoti Sharma	Assistant Professor
4.	Mr. Gaurav Jain	Assistant Professor
5.	Mr. Snehanshu Shekhar	Assistant Professor
6.	Mr. Puneet Sharma	Associate Lecturer
7.	Mr. Jitendra Kumar Saini	Associate Lecturer
8.	Mrs. Kanika Joshi	Teaching cum Research Associate
<b>Electrical &amp; Electronics Engineering Department</b>		
1.	Mr. Surya Lal Mishra	Senior Scientific Officer (Also having teaching assignment)
2.	Mr. Prashant Singh Rathore	Assistant Professor
3.	Mrs. Aparajita Pandey	Assistant Professor
<b>Management Department</b>		
1.	Dr. Roopali Sharma	Associate professor
2.	Dr. Ritu Arora	Assistant Professor
3.	Mrs. Pankaj Sharma	Assistant Professor
4.	Dr. Pramod Bubna	Asst. Registrar (Presently having teaching assignment)

S. No.	Name	Designation
5.	Mr. Sumit Kulshrestha	Associate Lecturer
6.	Mr. Priyanshu Sharma	Associate Lecturer
7.	Mrs. Purvi Mathur	Associate Lecturer
<b>Animation &amp; Multimedia Department</b>		
1.	Dr. Vibhuti Pandya	Assistant Professor
2.	Mr. Vivek Sharma	Assistant Professor
3.	Mr. Gautam Kumar Goswami	Assistant Professor
4.	Mr. Manish Kumar	Associate Lecturer
5.	Mrs. Rishika Sharma	Associate Lecturer
7.	Mrs. Neeraja Sharma	Scientific Officer (Presently having teaching assignment)
<b>Applied Chemistry Department</b>		
1.	Dr. S.K. Sharma	Professor
2.	Dr. (Mrs) Ranjana Agarwal	Assistant Professor
3.	Mrs. Rajni Agrawal	Jr. Scientific Officer (Presently having teaching assignment)
<b>Applied Physics Department</b>		
1.	Dr. Dheeraj Bhardwaj	Assistant Professor
2.	Mr. Anand Kumar Srivastava	Assistant Professor
3.	Mr. Ravindra Kumar	Associate Lecturer
<b>Applied Mathematics Department</b>		
1.	Dr. Anuj Kumar Jhankal	Assistant Professor
2.	Dr. Gurminder Singh Malhotra	Assistant Professor
3.	Mr. Indra Kumar Dadheech	Assistant Professor
4.	Dr. (Mrs.) Bhawna Agarwal	Assistant Professor
<b>Mechanical Department</b>		
1.	Mr. Abinash Pankaj	Scientific Officer (Also having teaching assignment)
2.	Mr. Vikas Sangwan	Assistant Professor
<b>Humanities Department</b>		
1.	Mrs. Ritu Pareek	Associate Lecturer (English Literature)
<b>Bio- Technology Department</b>		
1.	Dr. M. Krishna Mohan	Professor
2.	Mr. P.S.Solanki	Assistant Professor
3.	Dr. R.K. Gothwal	Assistant Professor
4.	Mrs. Shivani Chandra	Associate Lecturer
<b>Environmental Science Dept.</b>		
1.	Mrs. Nidhi Singh	Associate Lecturer

**OFF CAMPUS: KOLKATA**

S. No.	Full Name	Designation
1.	Radha Tamal Goswami	In-Charge
2.	Subho Chaudhuri	Associate Professor
3.	Srabani Mukhopadhyaya	Associate Professor
4.	Ajanta De Sarkar	Associate Professor
5.	Bharat Gupta	Associate Professor
6.	Sraboni Dutta	Associate Professor
7.	Sandip Kumar Sengupta	Assistant Professor
8.	Tanmoy Kumar Banerjee	Assistant Professor
9.	Ambar Dutta	Assistant Professor
10.	Sanchita Ghosh	Assistant Professor
11.	Rohit Kamal Chatterjee	Assistant Professor
12.	Soumendra Bhattacharjee	Assistant Professor
13.	Ruchira Mukherjee	Assistant Professor
14.	Siba Mitra	Assistant Professor
15.	Ranadeep Mukherjee	Associate Lecturer
16.	Khalid Ashraf	Associate Lecturer
17.	Keka Das	Associate Lecturer
18.	Soumya Ray	Associate Lecturer
19.	Sohini Ghosh	Associate Lecturer
20.	Abhijit Kundu	Adjunct Professor

**OFF CAMPUS: LALPUR**

S. No.	Name	Designation
1.	Dr. A. N. Jha	Professor
2.	Dr. (Mrs.) V. Bhattacharjee	Professor
3.	Dr. (Mrs.) Amrita Priyam	Associate Professor
4.	Mrs. Onima Tigga	Assistant Professor
5.	Dr. Pranab Kumar	Associate Professor
6.	Mr. A K. Singh	Assistant Professor
7.	Dr. A.R. Srivastava	Assistant Professor
8.	Ms. Anupma Sahai	Assistant Professor
9.	Mr. Amar Kumar	Assistant Professor
10.	Mr. Sanjay Kumar	Assistant Professor
11.	Mr. N.P. Tiwary	Assistant Professor
12.	Mr. Kuntal Mukherjee	Assistant Professor
13.	Dr. S.N. Sahdeo	Assistant Professor
14.	Mr. Somnath Mukherjee	Assistant Professor
15.	Ms. Jaya Pal	Assistant Professor

16.	Dr. Ashutosh Mishra	Assistant Professor
17.	Dr. S. Anis Haider	Assistant Professor
18.	Mrs. Mili Dutta	Assistant Professor
19.	Mr. Amitabh Chandan	Assistant Professor
20.	Dr. P.S. Bishnu	Assistant Professor
21.	Mr. B.K. Sharma	Assistant Professor
22.	Dr. Pradeep Munda	Assistant Professor
23.	Mr. J. Bhagat	Associate Lecturer
24.	Dr. Umesh Prasad	Associate Lecturer
25.	Mr. D.K. Mishra	Associate Lecturer
26.	Mr. Soumitro Chakravarty	Associate Lecturer
27.	Mrs. Swati Priyadarshini	Associate Lecturer
28.	Dr. Avinash Sinha	Associate Lecturer
29.	Mr. Satrajeet Choudhury	Associate Lecturer

**OFF CAMPUS: NOIDA**

S. No.	Name	Designation
1.	Dr. Suparna Dutta	Associate Professor & Coordinator
2.	Mr. Niket Mehta	Assistant Professor
3.	Mr. Kiran A. Shetti	Senior Animation Trainer
4.	Mr. Lalit Bhatt	Editor
5.	Mr. Das Mohan Singh	BG Artist
6.	Mr. Manoj Kumar	Animator
7.	Mr. Obed Longwah	Cinematographer
8.	Mr. Rahul Dora	Senior Animator
9.	Mr. Aroop Kerketta	Faculty
10.	Mr. Partha Acharya	Faculty
11.	Cdr. B. R. Sharma	Director
12.	Mrs. S. Mallika	Assistant Professor
13.	Dr. Peeyush Tewari	Associate Professor
14.	Dr. S.P. Singh	Assistant Professor
15.	Dr. Ila Sahay	Associate Professor
16.	Mr. Anil Kumar	Assistant Professor & Coordinator
17.	Mr. Pankaj Gupta	Assistant Professor
18.	Mrs. Mrinalini Mehta	Assistant Professor
19.	Mrs. Vibha Kaw	Assistant Professor
20.	Mrs. Soma Sircar	Assistant Professor
21.	Dr. Shruti Kohli	Assistant Professor
22.	Mr. Aruna Malik	Assistant Professor
23.	Mr. Rayees Ahmed	Assistant Professor



24.	Mrs. Sheetal Dhir	Assistant Professor
25.	Mrs. Pramila Joshi	Assistant Professor
26.	Mrs. Muntaha Ahmad	Assistant Professor
27.	Mrs. Smitha Jha	Assistant Professor
28.	Mr. Anurag Joshi	Assistant Professor
29.	Mrs. Priti Sharma	Assistant Professor
30.	Mrs. Siba Mitra	Assistant Professor
31.	Ms. Charu Wahi	Assistant Professor
32.	Mrs. Seema Sharma	Assistant Professor
33.	Mrs. Lipika Jha	Associate Lecturer
34.	Mr. Rakesh Singh	Associate Lecturer
35.	Mr. Omair Ujala	Assistant Professor
36.	Dr. Munish Makkad	Professor
37.	Dr. Asha Prasad	Professor
38.	Dr. Vandna Sharma	Associate Professor & Coordinator
39.	Dr. Meenakshi Sharma	Associate Professor
40.	Dr. Monika Bisht	Assistant Professor
41.	Dr. Abhishek Singh	Assistant Professor
42.	Dr. Arun Mittal	Assistant Professor
43.	Dr. K.B. Singh	Assistant Professor
44.	Ms. Rachana Pratik	Assistant Professor
45.	Ms. Preety Bajaj	Assistant Professor
46.	Ms. Ritu Jain	Assistant Professor
47.	Ms. Harpreet Charanjit	Assistant Professor

**OFF CAMPUS: PATNA**

S. No.	Name	Designation	Department
1.	Prof. (Dr.) S.L. Gupta	Director	Management
2.	Prof. (Dr.) S.P. Lal	Deputy Director	Production
3.	Dr. Kaushlendra Sharma	Assistant Professor & In- Charge	Applied Chemistry
4.	Dr. Rakesh Kumar	Assistant Professor	Applied Chemistry
5.	Ms. Anubha Singh	Assistant Professor	Applied Chemistry
6.	Dr. Trishna Paul	Associate Professor & In- Charge	Applied Maths
7.	Dr. Rajnish Kumar	Assistant Professor	Applied Maths
8.	Dr. Premlata Singh	Assistant Professor	Applied Maths
9.	Dr. S.K. Sinha	Associate Professor & In- Charge	Applied Physics
10.	Dr. Binay Bhushan	Assistant Professor	Applied Physics
11.	Dr. Kamala Pati Tiwary	Assistant Professor	Applied Physics
12.	Ms. Paramjit Kour	Associate Lecturer	Applied Physics
13.	Dr. A. K. Singh	Associate Professor & In- Charge	B. Arch

S. No.	Name	Designation	Department
14.	Ms. Anamika Nandan	Assistant Professor	B. Arch
15.	Mr. Abhiroop Das	Assistant Professor	B. Arch
16.	Mr. Danish	Assistant Professor	B. Arch
17.	Prof. A.S.Vidarthi	Professor & Head	Bio-Tech.
18.	Prof. R R Sahay	Professor & In- Charge	Civil
19.	Mr. Anish	Assistant Professor	Civil
20.	Miss Bandana Mahto	Assistant Professor	Civil
21.	Mr. Syed Tabin Rushad	Assistant Professor	Civil
22.	Ms. Subha Sinha	Assistant Professor	Civil
23.	Mr. Bishwas Narayan Singh	Associate Lecturer	Civil
24.	Dr. Kanhaya Lal	Assistant Professor & In- Charge	CSE/IT
25.	Ms. Sheel Shalini	Assistant Professor & Co-ordinator BCA	CSE/IT
26.	Mr. Shridhar Kumar	Assistant Professor & Co-ordinator BBE, BBA	CSE/IT
27.	Mr. Ashish Ranjan	Assistant Professor	CSE/IT
28.	Mr. Samant Saurav	Assistant Professor	CSE/IT
29.	Mr. Upendra Kumar	Assistant Professor	CSE/IT
30.	Mr. Adnan Mahmood	Associate Lecturer	CSE/IT
31.	Mr. Madhup Kumar	Associate Lecturer	CSE/IT
32.	Mr. Raghav Mallik	Associate Lecturer	CSE/IT
33.	Ms. Smita Srivastava	Associate Lecturer	CSE/IT
34.	Ms. Smita Pallavi	Jr. Teaching Cum-Research Fellow	CSE/IT
35.	Mr. Shahiruddin	Assistant Professor & In- Charge	ECE
36.	Mr. Atul Kumar Pandey	Assistant Professor	ECE
37.	Ms. Megha Dadel	Assistant Professor	ECE
38.	Mr. Priyadarshi Suraj	Assistant Professor	ECE
39.	Miss Poonam Priyadarshini	Assistant Professor	ECE
40.	Mr. Prashant Kumar	Assistant Professor	ECE
41.	Mr. Ritesh Kumar Badhai	Assistant Professor	ECE
42.	Ms. Shipra	Assistant Professor	ECE
43.	Mr. Sudhanshu Verma	Assistant Professor	ECE
44.	Mr. Shiv Kumar Choubey	Teaching Cum Research Fellow	ECE
45.	Mr. Abu Nazar Ghazali	Teaching Cum Research Fellow	ECE
46.	Ms. Sweta Kumari	Teaching Cum-Research Fellow	ECE
47.	Dr. Nirmala Soren	Assistant Professor & In- Charge	EEE
48.	Mr. Sanjay Kumar I	Assistant Professor	EEE
49.	Mr. Kumar Nikhil	Assistant Professor	EEE
50.	Mr. Mayank Singh	Assistant Professor	EEE
51.	Miss Swati	Assistant Professor	EEE
52.	Mr. Sanjay Kumar - II	Associate Lecturer	EEE

S. No.	Name	Designation	Department
53.	Mr. Raj Kumar Mishra	Associate Lecturer	EEE
54.	Ms. Shradha Kishore	Teaching-Cum-Research Fellow	EEE
55.	Mr. Girish Pathak	Assistant Professor & In- Charge	Mechanical
56.	Mr. Amit Kumar	Assistant Professor	Mechanical
57.	Mr. Anand Kumar	Assistant Professor	Mechanical
58.	Md. Ashique Hassan	Assistant Professor	Mechanical
59.	Mr. Chandan Kumar	Assistant Professor	Mechanical
60.	Mr. Ravi Shankar Anand	Assistant Professor	Mechanical
61.	Mr. Soumen Mandal	Assistant Professor	Mechanical
62.	Mr. Sudipta Kishore Pradhan	Assistant Professor	Mechanical
63.	Dr. Vijay Agrawal	Associate Professor & In- Charge	Management
64.	Dr. Amit Raghuvanshi	Assistant Professor	Management
65.	Md. Iftekhar Ahmad	Assistant Professor	Management
66.	Dr. Mahua Ghosal	Assistant Professor	Management
67.	Ms. Sweta	Associate Lecturer	Management
68.	Mr. Kapildeo Prasad	Assistant Professor	Production
69.	Mr. Prashant Prakash	Assistant Professor	Production
70.	Mr. Thakur Abhinav Amar	Assistant Professor	Production
71.	Mr. Vijay Kr. Mandal	Associate Lecturer	Production
72.	Mr. Suresh Singh Yadav	Associate Lecturer	PT & Game
73.	Ms. Somali Fouzdar	Superintendent	PT & Game
74.	Dr. Abhishek Santra	Assistant Professor	Remote Sensing
75.	Mr. K.C.Bajpai	Visiting Professor	Creative Arts
76.	Ms. S. Bajpai	Visiting Professor	Creative Arts

**OFF-SHORE CAMPUS: MUSCAT**

S. No.	Name	Designation
<b>Management Department</b>		
1.	Mr. Jyoti K Chandel	Assistant Professor
2.	Mr. Mithun Srivastava	Assistant Professor
3.	Mr. Sayeed Aulia	Assistant Professor
4.	Dr. Niraj Mishra	Assistant Professor
5.	Mr. Sushil Kumar	Assistant Professor
6.	Dr. Srilekha Goveas	Assistant Professor
7.	Dr. Seema Varshney	Assistant Professor
8.	Dr. Nupur Sen	Assistant Professor
9.	Ms. Blossom Christina	Assistant Professor
10.	Ms. Neelufer Aslam	Assistant Professor
11.	Dr. A. Prakash	Assistant Professor
12.	Dr. Soofi Asra Mubeen	Assistant Professor

S. No.	Name	Designation
13.	Mr. Prashant Kumar Singh	Assistant Professor
14.	Ms. Sameena Begum	Assistant Professor
15.	Dr. Arvind Hans	Assistant Professor
16.	Dr. Ganesh Prasad Mishra	Associate Professor
17.	Mrs. Kusum Lata Mishra	Associate Lecturer
18.	Mr. Sultan Khan	Lecturer
<b>Computer Science &amp; Engineering</b>		
19.	Ms. P. Vijaya	Assistant Professor
20.	Mr. Satish Chander	Assistant Professor
21.	Mr. Sanjay Kumar	Assistant Professor
22.	Mr. Shahid Ali	Assistant Professor
23.	Ms. Vallikannu R. M.	Assistant Professor
24.	Ms. S. B. Sinymol	Assistant Professor
25.	Dr. Santosh Kumar Ray	Assistant Professor
26.	Mr. Arbind Kumar Choudhary	Assistant Professor
27.	Ms. Nabila Saif Al-Ghenami	Information System Teacher
28.	Ms. Kothar Salim Al-Rawahi	Information System Teacher
29.	Houda Nasser Al-Quwaitai	Information System Teacher
30.	Ms. Anu Manchanda	Assistant Professor
31.	Ms. Cimi Thomas	Assistant Professor
32.	Ms. Alycia Edwin	Assistant Professor
33.	Ms. Akрати Koul	Assistant Professor
34.	Mr. Sounak Paul	Assistant Professor
<b>Electronics &amp; Communication Engg</b>		
35.	Mr. Akhilesh Roy	Assistant Professor
36.	Mr. Vikash Sharma	Lecturer – Selection Grade
37.	Ms. Anasuya Patil	Associate Lecturer
38.	Ms. Priya C Rajan	Assistant Professor
39.	Ms. Smitha Felix	Assistant Professor
40.	Mr. Rajeev Ranjan	Assistant Professor
41.	Dr. Rajeev Kumar	Assistant Professor
42.	Mr. Shyam Sunder Purohit	Senior Lab Technician
42.	Mrs. Nabila Al Zadjali	Lab Technician
<b>Mechanical Engineering</b>		
43.	Mr. Kuldeep Gupta	Assistant Professor
44.	Mr. Praveen James Sanga	Assistant Professor
<b>Mathematics Department</b>		
45.	Dr. Prabal Datta	Assistant Professor
46.	Mr. Umair Ujala	Assistant Professor
<b>Electrical Engineering</b>		
47.	Dr. Nutanlata Nath	Associate Professor

S. No.	Name	Designation
48.	Mr. Mohd Mohatram	Assistant Professor
<b>Biotechnology Department</b>		
49.	Dr. Padmini Padmanabhan	Professor
50.	Dr. Sadaf Zahra	Assistant Professor
51.	Ms. Atiya Tabassum	Assistant Professor
52.	Ms. Sharmila Queenthly	Assistant Professor
53.	Ms. Akhila Rajan	Assistant Professor
<b>English Department</b>		
54.	Mr. David Manohar	Assistant Professor
55.	Mr. El Amin El Nur	Associate Lecturer
56.	Ms. Smita Prasad	Assistant Professor
57.	Ms. Sara Mubarek Al-Hedabbi	Language Teacher
58.	Mr. Issa Al Noobi Al Saad	Language Teacher
59.	Ms. Indrani Basu	Assistant Professor
60.	Mr. Roby Varghese	Associate Lecturer

**OFF-SHORE CAMPUS: RAS AL KHIMAH**

S. No	Name	Designation
<b>Architecture Department</b>		
1.	Dr. DJ Biswas	Professor
2.	Mr. Anuj Kumar 'Toppo	Assistant Professor
3.	Mrs. Bhavna Modi	Assistant Professor
4.	Ms. Shimna Shafeeq	Part-time Faculty
5.	Ms. Vyjyantha	Part-time Faculty
6.	Mrs. Vidhya Mohan	Part-time Faculty
<b>Department of Science</b>		
7.	Dr. P.K Upadhyay	Asst. Professoor
8.	Dr. Suja	Part-time Faculty
9.	Mrs. Vijayalaxmi	Associate Lecturer
<b>Electrical &amp; Electronics Engineering</b>		
10.	Mrs. Reshma Gopi	Asst. Professor
11.	Mrs. Chetna Nagpal	Asst. Professor
12.	Mrs. Julia	Part-time
13.	Mrs. Jeesha	Part-time
<b>Electronics &amp; Communication Engg.</b>		
14.	Mrs. Sangeetha Amit Kumar	Asst. Professor
15.	Mrs. Deepthy Manikantan	Asst. Professor
16.	Mrs. Tinsen Thomas	Asst. Professor
17.	Mrs. Pampa Nandi	Asst. Professor
18.	Mrs. Devisree	Asst. Professor



S. No	Name	Designation
<b>Computer Science &amp; Engineering</b>		
19.	Mr. Siva	
20.	Mrs. Bineta	Asst. Professor
21.	Mrs. Archana Pandita	Asst. Professor
22.	Mrs. Sarah	Asst. Professor
23.	Mrs. Gopika	Part-time Faculty
24.	Mrs. Jotsna	Part-time Faculty
<b>Mechanical Engineering</b>		
25.	Mrs. Shimna Shafeeq	
26.	Mrs. Vidhya Mohan	Visiting Faculty
<b>Management Department</b>		
27.	Mr. Soofi Anwar	
28.	Mr. Sarfaraz Khan	Asst. Profesoor
29.	Mrs Rodha	Asst. Profesoor
30.	Mrs. Sonali	Asst. Profesoor
31.	Mr. Nikhil	Asst. Profesoor
32.	Mrs. Shanti Rajan	Asst. Profesoor
		Part-time Faculty

**UNIVERSITY POLYTECHNIC**

S. No	Name	Designation
1.	Mr. Devendra Kumar Jain	
2.	Mr. Ramkesh	Director
3.	Mr. Manish Oraon	Assistant Professor
4.	Dr. B. N. Sanyal	Assistant Professor
5.	Mr. G. M. Ansari	Assistant Professor
6.	Mr. Pradeep Toppo	Assistant Professor
7.	Mr. Ramnish Sinha	Assistant Professor
8.	Mrs. Meena Singh	Assistant Professor
9.	Dr. Satish Kumar	Assistant Professor
10.	Mr. Rajendra Mahto	Assistant Professor
11.	Mr. Abhay Kumar	Assistant Professor
12.	Dr. (Mrs.) Sandhya Rani	Assistant Professor
13.	Dr. (Mrs.) Sumana	Assistant Professor
14.	Dr. T. K. Parashar	Associate Lecturer
15.	Mrs. Neeru Singh	Associate Lecturer
16.	Mrs. Rekha Kumari	Associate Lecturer
17.	Mr. Niraj Kumar	Associate Lecturer
18.	Mr. Rakesh	Associate Lecturer
19.	Mr. N. K. Mukherjee	Associate Lecturer
20.	Ms. Nirupam	Associate Lecturer
21.	Mr. Maqubool Hossain	Associate Lecturer
22.	Mr. Narendra Kumar Singh	Associate Lecturer
		Physical Trg.Instructor

## DEPARTMENT OF APPLIED CHEMISTRY

The Department was established in 1955 as a support department offering various chemistry courses for the BE programmes and other post graduate programmes like M.Tech in Env. Sc. & Engineering, M.Tech in Nano Sc. & Technology and M.Tech in Fuel & Combustion.

The Department currently offers following programmes:

Programmes Offered	Intake
Integrated M.Sc. in Chemistry – (5-years, 10- semesters)	20
M. Sc. in Applied Chemistry – (2-years, 4- semesters)	15
Ph. D. Programmes in various discipline of Chemistry and Applied Chemistry	



*Applied Chemistry Research Laboratory*

The Department has received support under “Fund for Improvement in Science & Technology Infrastructure” (FIST-2012) programme of the Department of Science and Technology, New Delhi for NMR and Computational Chemistry facility. The Department has also received significant funds from World Bank under TEQIP-I which has helped in creating a central Instrumentation Facility with sophisticated instruments like :ICP-AES, AAS, FTIR, GC, UV-Vis, GC MS, HPLC, HPTLC, DSC, TGA, SEM, AFM and Electrochemical Analyzer. Through the funds obtained from UGC XIth plan the department has developed a state of art Synthesis Lab which caters to the needs of PG students & research scholars.

The department has quality research programs supported by UGC, DST, DBT, AICTE, CSIR, UNICEF and the World Bank. The faculty members are actively involved in research in the fields of pure and applied chemistry and have various publications in high-impact journals.

The Department is actively involved in promoting environmental awareness amongst the tribal and rural population in Jharkhand and has developed as a nodal centre to answer problems related to Qualitative and Quantitative Analysis of Various Environmental Pollutants and Engineering Materials.

The Department runs a post graduate programme **M.Sc. in Applied Chemistry** from Session 2009. This program designed to provide an in-depth knowledge in various aspects of Applied Chemistry relevant to current educational and research prospects in **Organic & Medicinal Chemistry, Environmental & Inorganic Chemistry, Materials, Computational/Theoretical and Physical Chemistry**. This curriculum expands the scope of traditional chemistry courses by encouraging students to apply knowledge and skills to important societal problems (food, energy, health, environment, etc.) and by exploring new approaches to common questions about nature and life. The aim of this program is to prepare students for entry into Ph.D. programs, academics, industries and careers in R & D laboratories.

The Department has also started an **Integrated M.Sc. in Chemistry** programme in the year 2011. This programme lays emphasis on mastering interdisciplinary concepts. Biology, chemistry, mathematics, physics, electronics and computers are intertwined, in lectures and in labs, to achieve a dynamic understanding of a wide range of fundamental principles within the modern scientific method. The result is a community of students

trained in, and dedicated to, an interdisciplinary strategy for learning, and ultimately advancing, the many directions of science. Learning the foundations of physical, mathematical and life sciences in an integrated, active-learning classroom has the effect of producing students who are well prepared for delving into diverse areas of research. In addition to meeting disciplinary learning outcomes in biology, chemistry, mathematics, physics and computers, the students develop skills in teamwork, real problem solving, and communication.

## SPONSORED PROJECTS

### A. PROJECT SANCTIONED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Infrastructure Development Fund	Coordinator : Dr. Usha Jha Professor & Head	DST FIST	2012	1.43 Cr.	3 years

### B. ONGOING PROJECTS

S. No.	Principal Investigator	Year (Date of Starting)	Funding Agency	Project Title and Sanction number	Amount received (Rs. in lacs) Total
1.	Dr. Ashoke Sharon	2010	DBT	Structure Based Discovery of novel antiviral molecules with potential to inhibit drug resistance viruses	25 Lac
2.	Dr. Ashoke Sharon	2010	DBT	Structure Based Discovery of novel antiviral molecules with potential to inhibit drug resistance viruses	11.55
3.	Dr. Chandralata Bal	2011	UGC	Synthesis and Evaluation of Carbocyclic Nucleoside Analogs with Exocyclic Double Bond as Anti-HBV HepDirectProdrug.	4.5 lac
4.	Dr. Deep Shikha	2012	DST Project (Under FAST Track Schem)	"Ion beam treated HAP coating on alumina for orthopaedic implants."	1705000.00
5.	Dr. S. Naskar	2012	AICTE, India	Synthesis, characterization and redox & photo-physical study of Ruthenium dyes for Dye Sensitized Solar Cell	20.00000
6.	Dr. S. Naskar	2012	CSIR	Synthesis, Characterisation and reactivity study of Biologically relevant and Industrially important Coordination Complexes of Mn, Co, Ni, Cu and Zn with N, O and S donor ligands	10.14 lac
7.	Dr. S. Naskar	2012	UGC	Synthesis, characterization and electrochemical study of biologically active manganese complexes	8.068 Lac

S. No.	Principal Investigator	Year (Date of Starting)	Funding Agency	Project Title and Sanction number	Amount received (Rs. in lacs) Total
8.	PI: Dr. S. Mishra Co - PI: Dr. G. Sen	2011-2	UGC 2011	Microwave assisted synthesis of poly acrylamide grafted agar; Characterizations and applications as flocculant for waste water treatment	5.97.3
9.	Dr S. Mishra	2012-2015	DST Project (Under FAST Track Scheme)	Microwave based synthesis of graft copolymers of barley, its characterization and applications	26.50000
10.	Co-PI: Dr. Pardip Kar	2012-2015	DST	Preparation of Novel Poly(m-aminophenol)/functionalised carbon nanotube nanocomposites selective sensing for aliphatic alcohol	24.85

### C. PROJECTS COMPLETED

S. No.	Principal Investigator	Year (Date of Starting)	Funding Agency	Project Title and Sanction number	Amount received (Rs. in lacs) Total	Status completed/ ongoing/ expected date of completion
1.	PI: Dr. Ashoke Sharon	2009 - 2012	DST SR/FT/CS-001/2009 Dec 2009	The target based discovery of carbocyclic nucleosides as an anti-HCV agent through computer assisted drug design and synthesis.	17.03 Lac	Completed in March 2013
2.	Dr. Ashoke Sharon	2010 - 2013	UGC Feb 2010	Computer assisted design and synthesis of carbocyclic nucleosides as an anti-hepatitis agent	6.81 Lac	Completed in March 2013

### CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED

Name of the faculty	Topic of Conference / Symposia / Workshop attended	Duration of Conference / Symposia / Workshop
Dr. Poulomi Roy	3 <sup>rd</sup> EICOON-2012 International conference, Kolkata, India.	April 30 <sup>th</sup> -4 <sup>th</sup> May 2012
Dr. Poulomi Roy	AICTE sponsored short term course on "Renewable Energy Materials And Their Industrial Applications" at Indian Institute of Technology Kharagpur, India	November 05-16, 2012
Dr. A. Sharon	26 <sup>th</sup> International Conference on Antiviral Research, San Francisco, USA	May 11-15, 2013
Dr. C. Bal	26 <sup>th</sup> International Conference on Antiviral Research, San Francisco, USA	May 11-15, 2013



## PUBLICATIONS:

### Published in International Journals

1. Kumar, A.; Chakravarty, H.; Bal, N. C.; Balaraju, T.; Jena, N.; Misra, G.; Bal, C.; Pieroni, E.; Periasamy, M.; Sharon, A., Identification of calcium binding sites on calsequestrin 1 and their implications for polymerization. *Molecular bioSystems* 2013, 9, 1949-57.
2. Kasula, M.; Balaraju, T.; Toyama, M.; Thiyagarajan, A.; Bal, C.; Baba, M.; Sharon, A., A Conformational Mimetic Approach for the Synthesis of Carbocyclic Nucleosides as Anti-HCV Leads. *ChemMedChem* 2013, 8, 1673-1680.
3. Karak, M.; Bal, N. C.; Bal, C.; Sharon, A., Targeting peroxisome proliferator-activated receptor gamma for generation of antidiabetic drug. *Current diabetes reviews* 2013, 9, 275-85.
4. Chouhan, D. K.; Sharon, A.; Bal, C., Molecular and structural insight into plasmodium falciparum RIO2 kinase. *Journal of molecular modeling* 2013, 19, 485-96.
5. Bharti, S.; Mishra, S.; Sen, G., Ceric ion initiated synthesis of polyacrylamide grafted oatmeal: Its application as flocculant for wastewater treatment. *Carbohydrate polymers* 2013, 93, 528-36.
6. Banerjee, C.; Ghosh, S.; Sen, G.; Mishra, S.; Shukla, P.; Bandopadhyay, R., Study of algal biomass harvesting using cationic guar gum from the natural plant source as flocculant. *Carbohydrate polymers* 2013, 92, 675-81.
7. Bharti, S.; Mishra, S.; Sen, G., Ceric ion initiated synthesis of polyacrylamide grafted oatmeal: Its application as flocculant for wastewater treatment. *Carbohydrate polymers* 2013, 93, 528-36.
8. Banerjee, C.; Ghosh, S.; Sen, G.; Mishra, S.; Shukla, P.; Bandopadhyay, R., Study of algal biomass harvesting using cationic guar gum from the natural plant source as flocculant. *Carbohydrate polymers* 2013, 92, 675-81.
9. Bag, P.; Ojha, D.; Mukherjee, H.; Halder, U. C.; Mondal, S.; Chandra, N. S.; Nandi, S.; Sharon, A.; Sarkar, M. C.; Chakrabarti, S.; Chattopadhyay, D., An Indole Alkaloid from a Tribal Folklore Inhibits Immediate Early Event in HSV-2 Infected Cells with Therapeutic Efficacy in Vaginally Infected Mice. *PloS one* 2013, 8, e77937.
10. B. Dasgupta, S. Banerjee, Preparation and evaluation of gas transport properties of poly(ether imide)-POSS nanocomposite membranes, *Advanced Science Letters*, 2012, 10, 14-23.
11. D. Bera, P. Bandyopadhyay, B. Dasgupta, S. Banerjee, Gas transport properties of new aromatic poly(ether amide)s containing cyclohexylidene moiety, *Journal of Membrane Science*, 2012, 407-408, 116-127.
12. D. Bera, B. Dasgupta, S. Chatterjee, S. Maji, S. Banerjee, Synthesis, characterization and properties of semifluorinated organo-soluble new aromatic polyamides, *Polymers for Advanced Technologies*, 2012, 23, 77-84
13. Thiyagarajan, A.; Salim, M. T.; Balaraju, T.; Bal, C.; Baba, M.; Sharon, A., Structure based medicinal chemistry approach to develop 4-methyl-7-deazaadenine carbocyclic nucleosides as anti-HCV agent. *Bioorganic & medicinal chemistry letters* 2012, 22, 7742-7.
14. Sen, G.; Mishra, S.; Rani, G. U.; Rani, P.; Prasad, R., Microwave initiated synthesis of polyacrylamide grafted Psyllium and its application as a flocculant. *International journal of biological macromolecules* 2012, 50, 369-75.
15. Rani, P.; Sen, G.; Mishra, S.; Jha, U., Microwave assisted synthesis of polyacrylamide grafted gum ghatti and its application as flocculant, *Carbohydrate Polymer* 2012, 89, 275-281.

16. Mishra, S.; Rani, G. U.; Sen, G., Microwave initiated synthesis and application of polyacrylic acid grafted carboxymethyl cellulose, Carbohydrate Polymer 2012, 87, 2255-2262.
17. Rani, G. U.; Mishra, S.; Sen, G.; Jha, U., Polyacrylamide grafted Agar: synthesis and applications of conventional and microwave assisted technique. Carbohydrate polymers 2012, 90, 784-91.
18. Pal, S.; Sen, G.; Ghosh, S.; Singh, R., High performance polymeric flocculants based on modified polysaccharides—Microwave assisted synthesis. Carbohydrate polymers 2012, 87, 336-342.
19. Kirti, A.; Gautam, S.; Gopal, P.; Nathawat, M., Assessment and Monitoring of Urban Wetlands: A Case Study. International Journal of Ecology & Development 2012, 22, 63-73.
20. Karampuri, S.; Bag, P.; Yasmin, S.; Chouhan, D. K.; Bal, C.; Mitra, D.; Chattopadhyay, D.; Sharon, A., Structure based molecular design, synthesis and biological evaluation of alpha-pyrone analogs as anti-HSV agent. Bioorganic & medicinal chemistry letters 2012, 22, 6261-6.
21. Debprasad, C.; Hemanta, M.; Paromita, B.; Kumar, K. A.; Shanta, D.; Kumar, H. P.; Tapan, C.; Ashoke, S.; Sekhar, C., Inhibition of N O<sub>2</sub>, P G E 2, TNF-. Evidence-Based Complementary and Alternative Medicine 2012, 2012.
22. Banerjee, C.; Gupta, P.; Mishra, S.; Sen, G.; Shukla, P.; Bandopadhyay, R., Study of polyacrylamide grafted starch based algal flocculation towards applications in algal biomass harvesting. International journal of biological macromolecules 2012, 51, 456-61.

#### **AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award / Honours	Organisation	Year / Duration
1.	Dr. Rafique Ul Islam	Postdoctoral Fellow	University of Johannesburg South Africa	September 2012 – December 2013

#### **PATENTS (APPLIED / GRANTED)**

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. A. Sharon Dr. C. Bal	Pyrrolo [2,3-d] pyrimidine based pseudonucleoside compounds, process for preparation and method of treating viral infections	522/KOL/2012	2012
2.	Dr. A. Sharon Dr. C. Bal	Pyrazolo[3,4-d] pyrimidine based pseudonucleoside compounds, process for preparation and method of treating viral infections	521/KOL/2012	2012

#### **MOUS / COLLABORATIONS**

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Kagoshima University	Antiviral Drug Discovery	Onwards



## BOARD OF STUDIES(UG/PG)

**Chairman:** Dr. Usha Jha

### Members :

- |                          |                         |
|--------------------------|-------------------------|
| 1. Dr. J P Pandey        | 2. Dr. Ashoke Sharon    |
| 3. Dr. S. Mishra         | 4. Dr. S. Naskar        |
| 5. Dr. Deepshikha        | 6. Dr. Rafique ul Islam |
| 7. Dr. Mandira Mukherjee | 8. Dr. P.C. Joshi       |

### Panel of experts from outside the Institute:

1. Dr. M.K. Bannerjee: Professor Dept. of Chemistry NIT Jamshedpur
2. Dr. R.K. Dey, Professor, Dept. of Applied Chemistry, CUJ
3. Dr. Rakeshwar Bandichhor: Director, API R&D, Dr. Reddy's Lab Hyderabad
4. Dr. D. Tiwari : Associate Professor, Dept. of Chemistry IT BHU, Varanasi
5. Dr. Ian Cliffe, Director- Head, Medicinal Chemistry New Drug Discovery Research
6. Ranbaxy laboratories ltd. R & D Centre. New Delhi

### Departmental Academic Committee:

- |  |   |          |
|--|---|----------|
| 1. Dr. Usha Jha, Professor & Head (Applied Chemistry)            | : | Chairman |
| 2. Dr. J.P. Pandey, Associate Professor (Applied Chemistry)      | : | Member   |
| 3. Dr. Ashoke Sharon, Assistant Professor (Applied Chemistry)    | : | Member   |
| 4. Dr. Sumit Mishra, Assistant Professor (Applied Chemistry)     | : | Member   |
| 5. Dr. Deepshikha, Assistant Professor (Applied Chemistry)       | : | Member   |
| 6. Dr. Rafique-ul-Islam, Assistant Professor (Applied Chemistry) | : | Member   |
| 7. Dr. S. Naskar, Assistant Professor (Applied Chemistry)        | : | Member   |
| 8. Dr. C. Bal, Assistant Professor (Applied Chemistry)           | : | Member   |
| 9. Dr. D. Sasmal, Professor, Dept. of Pharmaceutical Sciences    | : | Member   |
| 10. Dr. P.C. Joshi, Professor (Space Engineering & Rocketry)     | : | Member   |

## DEPARTMENT OF APPLIED MATHEMATICS



*Radiosonde observations for upper boundary layer*

Department of Applied Mathematics is the oldest department of the Institute. The faculties of the department are actively engaged in research in the areas of Differential Equations, Differential Equations, Cyber Crime, Mathematical Modelling, Fuzzy Logic, Optimization Technique, Operations Research, Seismology and many more. The faculties of the department publish more than 30 research papers in international journals of repute.

### 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.	Periodic solutions of models in population dynamics.	Dr. S. Padhi	NBHM	April 25, 2012	12,00,000	3 years
2.	A Decision Support System for vendor selection problem under intuitionistic fuzzy environment	P.I: Dr. P. Kaur Co. PI: Dr. S.K. Jain	UGC	April 2013	11 Lakhs Fifty Thousand Eight Hundred	3 years
3.	Analyzing the performance of Hindustani classical music through statistics	Dr. S. Chakraborty	UGC	Feb. 15, 2011	6,26,941	July 31, 2013 2 years and 6 months

### CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED

#### Dr. P. Kaur:

1. Faculty development programme on "Matlab Fundamentals and Neural networks and Fuzzy Logic Toolboxes, university Institute of Engineering and Technology (UIET), Panjab University, Chandigarh, 3-14 December 2012.
2. A talk on "Fuzzy Sets" at Central university, Jharkhand for taking a session on MDP-Research Methodology on 12 February 2013.
3. Participated in a Ph.D winter school on Stochastic Programming with applications in energy and natural resources from 7<sup>th</sup> April to 13<sup>th</sup> April 2013 in Tignes, France.
4. Participated as a trainer in TEQIP sponsored short term training programme on Basic Matlab 24<sup>th</sup> June -01<sup>st</sup> July 2013 at BIT, Mesra Ranchi.

5. National conference on Recent advances in mathematics and its application(Rama),14-16, February, 2013,Indian School of Mines, Dhanbad.

#### Dr. S. Padhi

1. Delivered an Invited Lecture on the "Oscillation of Solutions of Differential Equations",18-20 January 2012,International Conference on Nonlinear Functional Analysis, Institute of Mathematical Sciences, Chennai.
2. Delivered one hour Invited talk on the "Global attractivity of solutions of first order delay differential equations in population dynamics", July 21-22, 2012 in the International conference on Mathematical Analysis and Applications, Department of Mathematics, Berhampur University, Berhampur, India.
3. Delivered an Invited Lecture on the "Oscillation of Third order Differential Equation ", October 29-31,2012, 17th Ramanujan Symposium on Mathematical Analysis and Applications, Ramanujan Institute for Advanced Study in Mathematics, University of Madras, Chennai, India.
4. Delivered one hour Invited talk on the Global attractivity of solutions of first order delay differential equations in population dynamics", March 15-16, 2013 in the International conference on New Trends in Differential and Difference Equations, Department of Mathematics, University of Tennessee at Chattanooga, Tennessee, USA.

#### Dr. S. Chakraborty

1. Workshop on "Frontiers of Research in Speech and Music" Organised by ITC SRA and Jadavpur University, Travel grant funded by UGC, Venue: CVRCPM, Jadavpur University and ITC SRA, Kolkata, from 5-7 March, 2013.

### PUBLICATIONS :

#### Published in International Journals

1. John R.Graef, Seshadev Padhi and Smita Pati, Periodic solutions of some models with strong Allee effects, Nonlinear Analysis: Real World Applications, 13(2012), 569-581.
2. Seshadev Padhi and Smita Pati; Multiple positive periodic solutions for nonlinear first order functional difference equations, Communications in Applied Analysis, 16(1), (2012), 97-112.
3. John R. Graef, Seshadev Padhi, Smita Pati and P.K. Kar; Positive solutions of differential equations with unbounded Green's kernel, Applicable Analysis and Discrete Mathematics, 6(2012),159-173.
4. Seshadev Padhi and Chuanxi Qian; Global attractivity in a higher order nonlinear difference equation, Dynamics of Continuous, Discrete and Impulsive Systems Series A:Mathematical Analysis, 19(1) (2012), 95-106.
5. John R. Graef, Seshadev Padhi and Smita Pati; Multiple positive periodic solutions of first order ordinary differential equations with unbounded Green's kernel, Communications in Applied Analysis, 17, no. 3 and 4(2013), 319-330.
6. John R. Graef, Seshadev Padhi and Smita Pati; Existence and nonexistence of multiple positive periodic solutions of first order differential equations with unbounded Green's kernel, Pan American Mathematical Journal, 23(1), (2013), 45 -55.
7. Seshadev padhi and Smita Pati; Oscillations of the solutions of the third order differential equation  $x^{(\prime\prime\prime)}+a(t)x^{(\prime\prime)}+b(t)x^{(\prime)}+c(t)x=0$ , Theory of Third Order Differential Equations, 1(2013) 107-119.

8. Seshadev Padhi; Stability of solutions of third order delay differential equations, Fasciculi Mathematici, 50 (2013), 51-63.
9. Seshadev Padhi and P.K. Kar; Existence of multiple positive periodic solutions of state-dependent delay differential equations with applications to population dynamics, Functional Differential equations, 23(2013), 21-35.
10. Seshadev Padhi and Smita Pati; Asymptotic behaviour of solutions of the third order nonlinear nonhomogeneous differential equation  $x^{\prime\prime\prime} + a(t)x^{\prime\prime} + b(t)x^{\prime} + c(t)x = f(t, x, x^{\prime}, x^{\prime\prime})$ , Theory of Third Order Differential Equations, 1(2013) 306-311.
11. Seshadev Padhi and Smita Pati; Stability of solutions of  $x^{\prime\prime\prime}(t) = p_1 x^{\prime\prime}(t) + p_2 x^{\prime}(t-\tau) + q_1 x^{\prime\prime}(t) + q_2 x^{\prime}(t-\tau) + r_1 x(t) + r_2 x(t-\tau)$ , Theory of Third Order Differential Equations} 1(2013) 481-496.
12. Smita Pati, Seshadev Padhi and E.Thandapani; Multiple periodic solutions for Some difference equations subjected to Allee effects, Dynamic Systems and Applications, 22(2013), 1-23.
13. Seshadev Padhi, Julio G.Dix and Smita Pati ; Global attractivity of solutions of first-order delay differential equations with applications in population dynamics, Dynamic Systems and Applications, 22(2013), 24-40.
14. A. Kumari and S. Chakraborty, The Middle Pivot Element Algorithm, ISRN Computational Mathematics (Hindawi Pub, USA), Vol. 2012 (2012), article no 947634, doi: 10.5402/2012/947634
15. K.K. Sundararajan, M. Pal, S. Chakraborty and N.C. Mahanti, K-Sort: A New Sorting Algorithm that beats Heap Sort for  $n \leq 70$  lakhs!, International on Recent Trends in Engineering and Technology (ACEEE), Vol. 8, No. 1, Jan 2013, 64-67
16. M. Pal, S. Chakraborty and N. C. Mahanti, Amir Schoor's Algorithm Revisited for Bernoulli and Geometric Distribution Inputs, Georgian Electronic Scientific Journal: Computer Science and Telecommunications, 2012, No. 4(36), 35-40
17. S. B. Singh, S. Chakraborty, K. M. Jha, A. Bhattachayra, S. Prakash, Impact of Hindustani ragas on CVA and DHI patients: An Application of Linear Mixed Model,
18. International Journal of Advanced Science, Engineering and Technology, Vol. 2(1), 2013, 97-103
19. S.B. Singh, S. Chakraborty, K.M. Jha, S. Haider, S. Chandra, Repeated Measure Analysis in Raga Therapy: A Case Study on Head Injury Patients, Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol.4 (1), 2013, 420-428
20. S. Tewari and S. Chakraborty, A Statistical Analysis of Bhairav-The First Morning Raga, International Journal of Computers and Technology, Vol. 4, No. 2, 2013, 371-386
21. S. Chakraborty, R. Ranganayakulu, S. Chauhan, S. S. Solanki and K. Mahto, Given a raga recording, can we scientifically verify which school of Vadi-Samvadi selection is Supported by the artist? International Journal of Computers and Technology, Vol. 4, No. 2, 2013, 300-300
22. M. Patra and S. Chakraborty, Analyzing the digital note progression of ragas within a that using fractal geometry, International Journal of Advanced Computer and Mathematical Sciences, Vol. 4, issue 2, 2013, 148-153
23. S. B. Singh, S. Chakraborty, K. M. Jha, S. Chandra and S. Prakash, Impact of Hindustani Ragas on Visual Acuity, Spatial Orientation and Cognitive Functions in Patients with Cerebrovascular Accident and Diffuse Head Injury, Music and Medicine, Vol. 5(2), 2013, 67-75

24. S. Chakraborty, S. Sarkar, S. Tewari and M. Pal, An Interesting Application of Simple Exponential Smoothing in Music Analysis, International Journal of Soft Computing, Artificial Intelligence and Application, Vol. 2(4), 2013, 37-44
25. S. Tewari and S. Chakraborty, Using K-Means Clustering Algorithm to Optimize the Performance of an Artist and Prevent Music Privacy, International Journal of Innovative Research in Science, Engineering and Technology, Vol.2(11), 2013, 6194-6199
26. A. Kumari and S. Chakraborty, Parameterized Complexity-A Statistical Approach Combining Factorial Experiments with Principal Component Analysis, International Journal of Computer Science Engineering, Vol.2(5), 2013, 166-176
27. M. S. Neogi, S. Chakraborty and V. Bhattacharjee, Factors Influencing Software Development Process: A Statistical Outlook, International Journal of Software Engineering and its Applications, Vol. 7(6), 2013, 221-236.
28. Anjana P. Ghorai, Modeling of Surface Waves in a Fluid Saturated Poro-Elastic Medium under Initial Stress Using Time-Space Domain Higher Order Finite Difference method, Applied Mathematics, 4(2013), 469-467.
29. Bimal Kumar Mishra, R.T. Goswami, Information and the dynamics of SEIR e-epidemic model for the spreading behavior of malicious objects in computer network, Int. Journal of Engineering Science and Technology, 4(10), pp 581-588, 2012
30. Bimal Kumar Mishra, Aditya Kumar Singh, SIERS e-Epidemic model with multiple groups of infection in computer networks, International Journal of Nonlinear Science, 13, 357-362, 2012
31. Bimal Kumar Mishra, Anil Sharma, Configuration of a 2 kW Capacity Absorption Refrigeration System Driven by Low Grade Energy Source, International Journal of Mechanical and Production Engineering Research and Development, Vol.2, Issue 4, Dec 2012, 89-97
32. Bimal Kumar Mishra, Anil Sharma, Sensitivity analysis of a low grade energy assisted LiBr-H<sub>2</sub>O absorption cooling system, International J. of Engg. Research & Indu. Appls. (IJERIA), Vol.5, No. IV (November 2012), pp. 109-120
33. Navnit Jha, Bimal Kumar Mishra, A class of spline schemes for non-linear weakly regular singular boundary value problems using non-uniform mesh : application to physiological models, International Journal of Mathematical Modeling, Simulation and Applications, Vol. 2, 2012 180-189.
34. Bimal Kumar Mishra, Neha Keshri, Mathematical model on the transmission of worms in wireless sensor network, Applied Mathematical Modelling, Elsevier, 37 (2013) pp. 4103-4111
35. Sontosh Kumar Srivastava, Bimal Kumar Mishra, Binay Kumar Mishra, Security Framework against malicious attacks in wireless sensor network, International journal of advanced technology and Engineering Research, vol. 3, Issue 5, 2013,, pp 7-10
36. Sounak Paul, Bimal Kumar Mishra, Selection of Next Generation Anti-Virus against Virus Attacks in Networks Using AHP, International Journal of Computer Network and Information Security, 5(2), 2013, pp 29-35

#### Published in International Proceedings

1. N.K. Singh and S. Chakraborty, Partition Sort versus Quick Sort: A Comparative Average Case Analysis with special emphasis on parameterized complexity published in N. Meghanathan et. al., (eds.), advances in Computing and Information Technology, AISC 177, pp. 107-113, Springer-Verlag Berlin Heidelberg 2012
2. N.K. Singh and S. Chakraborty, A Statistical Approach to the Relative Performance Analysis of Sorting Algorithms in Computational Science, Engineering and Information Technology, ACM International

Conference Proceedings edited by N. Meghanathan and M. Wozniak, CCSEIT-2012, Coimbatore, India, p. 57-62, 2012

### **Published in National Proceedings**

1. P. Kaur, An intuitionistic fuzzy simple additive weighting (IFSAW) method for selection of vendor, National conference on Recent advances in mathematics and its application (Rama), 14-16, February, 2013, Indian School of Mines, Dhanbad.
2. P. Kaur, A Multiattribute Approach for selection of vendor based on similarity measure of intuitionistic fuzzy sets held on April 12-13, 2013 in Department of Applied Sciences, Amity School of Engineering & Technology, New Delhi.

### **BOOKS:**

Seshadev Padhi and Smita Pati, Theory of Third Order Differential Equations, Springer, 2013.

### **AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. S. Padhi	Felicitation	P. G. Sacred Heart College, Tirupattur, India.	August 6, 2013
2.	Dr. Soubhik Chakraborty	National Award For Teaching Excellence	Indus Foundation	2013
3.	Dr. Soubhik Chakraborty	Best Academic Researcher Award 2013	Association of Scientists, Developers and Faculties	2013

### **DEPARTMENTAL ACADEMIC COMMITTEE:**

1. Prof. S.K. Chakraborty
2. Prof. S.K. Jain
3. Prof. B.K. Mishra
4. Dr.S.S.Roy
5. Dr. S. Padhi
6. Dr. S. Chakraborty
7. Dr. A.P.Ghorai
8. Dr. P. Kaur
9. Prof. A. K. Roy (External Member)
10. Prof. S. Konar (External Member)

**Other Important Information:** Dr. Soubhik Chakraborty became a Reviewer of Mathematical Reviews (American Mathematical Society).



## 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 currently offers the following programmes:

### Programmes Offered

- Integrated M.Sc. in Physics – (5-years, 10-semesters)
- M. Sc. in Applied Physics – (2-years, 4-semesters)
- M. Tech. in New Materials and Processing Technology - (2-years, 4- semesters)
- M. Tech. in Nano Science & Technology - (2-years, 4- semesters)
- Ph. D. Programmes in various discipline of Physics and Materials Science



*Physics Laboratory*

The Department has received support under “Fund for Improvement in Science & Technology Infrastructure” (FIST) programme of the Department of Science and Technology, New Delhi, and under Special Assistance Programme (SAP) of the UGC. The Department has received funding under TEQIP-I and TEQIP -II. In addition, the Department is currently running sponsored projects funded by UGC, DST, AICTE and BRNS.

The Department started a new M. Tech. programme in Nano Science & Nano Technology in 2010. This has now been renamed as M. Tech. in Nano Science & Technology, and approved by AICTE, with effect from the academic year 2013-2014 (vide their letter F.No. Eastern/1-1454845662/2013/EOA, dated 19 March 2013). This M.Tech programme lays emphasis on fundamentals of nanotechnology, applications of nanotechnology, theoretical modeling of nanostructures, synthesis and characterization of nanomaterials, and is conducted in collaboration with the Departments of Applied Chemistry, Biotechnology, Chemical and Polymer Engineering, Electronics & Communication Engineering, and Mechanical Engineering.

The Department has well-equipped laboratories and computing facilities with software such as MATLAB, Maple, LabVIEW, FullWAVE, BandSOLVE, BeamPROP, etc. The Department is equipped with sophisticated facilities like RF/DC magnetron co-sputtering system (Vacuum Technique Pvt. Ltd., Bangalore), 3-target RF magnetron sputtering system (Plasma Consult, Germany), anodic vacuum arc deposition unit (Hind Hivac, Bangalore), plasma nitriding system (Milman, Pune), plasma enhanced chemical vapour deposition systems (DC, RF and Microwave), salt spray chamber, planetary ball milling unit, metallurgical microscope (Leica Microscope), and several high temperature furnaces. The Department has a real-time holography laboratory for non-destructive testing of materials. In addition, it has facilities for optical coherence tomography, fabrication of fibre composite plates, and optical characterization of materials. Recently, the Department has also purchased Micro-Raman spectrometer (Renishaw, UK), Nano-indenter (Bruker-CETR, USA), Ferroelectric loop tracer (Radiant, USA). The Department has cryogenics, materials science and thin film laboratories where research work is being conducted on advanced materials like high-temperature superconductors, colossal magneto-resistive materials, dilute magnetic semiconductors, microwave dielectric ceramics, piezoelectric materials, electronic composites, diamond-like carbon films, nano and ultranano crystalline diamond films, grapheme, photocatalytic coating of  $\text{TiO}_2$ , tribological coatings like CN, TiC, TiN, SiC, Ti(Al)N, HfC, etc. The optics laboratory also has a Nd-YAG laser. The Department regularly organizes seminars and symposia and maintains a nationally



and internationally recognized academic level. The Department has organized a “National Conference on Condensed Matter Physics, (CMDAYS-2012)” on 29-31 Aug 2012. Other recent conferences and workshops organized by the Department are “Workshop on Plasma Nitriding” on August 2010 and “National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM)” on May 2011.

Dr. Sanat Kr. Mukherjee is doing post doctoral work at University of Duisburg-Essen, Germany for one year. Dr. S. K. Mahapatra was visiting scientist at University of California, Los Angeles, USA (Oct. 2011-Nov. 2012). He is also a FACET member of SLAC, Stanford University, USA. Dr. Indrani Banerjee was awarded BOYSCAST fellowship during the period Sept. 2011-Jan. 2013. Dr. S. Keshri visited Russian Academy of Sciences, Ioffe Physical Technical Institute, St. Petersburg, Russia on Feb. 2013 and Moscow State University during Mar. 2013. Prof. P. K. Barhai visited University of Tel Aviv, Israel under Indo-Israel Bilateral Cooperation in Science & Technology to work on an Indo-Israel Project during the periods June 12- 19, 2013 and August 16-24, 2012. He also visited Ningbo University, Ningbo, China on invitation from Director, Foreign Affairs during July 29-31, 2012 for academic collaboration.

The current areas of research activities in the Department are Nanotechnology, solar cells, plasma and laser material processing, surface engineering with plasma coating, anodic vacuum arc deposition of thin films, carbon nanotubes, DLC films, nanocrystalline diamond coatings, plasma torch parameters and applications in material processing, high temperature superconductivity, colossal magneto-resistive materials, dilute magnetic semiconductors, dielectric, ferroelectric and piezoelectric materials, fiber composite materials, electronic composite materials, magnetic composites, holography for NDE testing, nonlinear optics, soliton and light propagation, optical communication, photonic crystal fibres, optoelectronics etc.

During last one year, the Department has completed 13 projects, and received 6 new projects while 10 projects are running. A total of national and international journal publications add to its credit.

## SPONSORED PROJECTS

### PROJECT SANCTIONED:

S. No.	Project Title	PI/Co- PI/ Collaborator, If any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)
1.	Study of physico-technological principles of preparation of new magnetic nanostructures for multifunctional biomedical applications	Dr. S Keshri (PI) Dr. Swastika Ganguly (CI)	DST-RFBR	Feb 2013	9.00
2.	Study of spin injection and spin dynamics in semiconductors for spintronic applications	Dr. Samrat Mukherjee	CSIR	May 2013	09.41
3.	Studies on microwave dielectric ceramics and their device applications	Dr. (Mrs.) S. Keshri Dr. N. Gupta Dr. V. R. Gupta	DST	May 2013	31.72
4.	In-situ spectroscopic investigation of growth mechanism of nitride shape mercury alloy (SMA) thin films & its correlation with mech. Tribological chemical & biological relativity	Dr. I. Banerjee (PI)	DST	2013	

S. No.	Project Title	PI/Co- PI/ Collaborator, If any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)
5.	Development of high piezoelectric bismuth layered perovskites materials for transducer applications	Dr. S. K. Rout (PI)	NRB	2013	15.90
6.	Investigation on photoluminescence and microwave dielectric properties of some tungstates and molybdates prepared by microwave assisted solid state reaction route.	Dr. S. K. Rout (PI)	DST	2013	22.50

**ONGOING PROJECTS:**

S. No.	Project Title	PI/Co- PI/ Collaborator, If any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
1.	Investigation of plasma instability & establish its correlation with deposited species during nitride & oxynitride colored films deposition	Dr. S. K. Mahapatra (PI) Dr. I. Banerjee (CI)	BRNS DAE	Feb 2010	19.41	
2.	Development of atmospheric pressure plasma jet sources and their characterization	Dr. P. K. Barhai (PI) Dr. Rishi Sharma (CI)	BRNS (DAE)	March 2011	24.385	3 years
3.	Fund for improvement of S&T infrastructure (FIST)-2010	Dr. P. K. Barhai (PI) Dr. S. Konar (CI) Dr. S. K. Rout (CI) Dr. Rishi Sharma (CI)	DST (FIST)	March 2011	200.0	5 years
4.	Development of atmospheric pressure plasma jet sources and their characterization	Dr. P. K. Barhai (PI) Dr. Rishi Sharma (CI)	BRNS (DAE)	March 2011	24.385	
5.	Fund for improvement of S&T infrastructure (FIST)-2010	Dr. P. K. Barhai (PI) Dr. S. Konar (CI) Dr. S. K. Rout (CI) Dr. Rishi Sharma (CI)	DST (FIST)	March 2011	200.0	
6.	Synthesis, dielectric and optical properties of rare earth doped lead free BZT relaxor ceramics	Dr. S. K. Rout (PI)	UGC	Jan 2011	9.82	

S. No.	Project Title	PI/Co- PI/ Collaborator, If any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
7.	Simulation of highly nonlinear photonic crystal fibers and study of nonlinear optical phenomena in these fibers	Dr. S. Konar (PI)	DST	Sept. 2011	7.0	
8.	Special assistance programme-UGC (SAP-UGC)	Dr. S. Konar (PI) Dr. (Mrs) S.Keshri (CI)	UGC (SAP)	Sept. 2011	48.10	
9.	Design and investigation of photonic crystal fibers with emphasis to the development of optical nonlinearity based devices	Dr. S. Konar (PI)	UGC	May 2012	7.45	
10.	Fabrication and characterization of magnetically doped semiconducting mesoscopic quantum dots for possible spintronic applications	Dr. Samrat Mukherjee	UGC	May 2012	9.16	

**PROJECTS COMPLETED**

S. No.	Project Title	PI/Co- PI/ Collaborator, If any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
1.	Field emission study of diamond - like carbon and nano - crystalline diamond films	Dr. P.K. Barhai (CI) Dr. Rishi Sharma (CI)	Indo-German	Feb 2008	6.23	
2.	Development of nanostructured Carbon-Nitride coatings for nano-tribological applications	Dr. P.K. Barhai (PI) Dr. S. K. Rout (CI)	AICTE	2008	5.75	
3.	Synthesis of ultrananocry stalline diamond films for field emission applications using microwave plasma enhanced chemical vapour deposition	Dr. P. K. Barhai (PI) Dr. Rishi Sharma (CI)	DST	Sept 02, 2009	36.12	4 years
4.	Synthesis of ultrananocrystalline diamond films for field emission applications using microwave plasma enhanced chemical vapour deposition	Dr. P. K. Barhai (PI) Dr. Rishi Sharma (CI)	DST	Sept 02, 2009	36.12	

S. No.	Project Title	PI/Co- PI/ Collaborator, If any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
5.	Development and characterisation of multilayer thermal barrier coatings of hafnium carbide (hfc) and sic for aerospace applications	Dr. P.K. Barhai (PI) Mr. M.K. Sinha (CI)	ISRO	2009	12.09	
6.	Study of photocatalytic activity of nano structured TiO <sub>2</sub> thin films produced by plasma assisted process and correlation with plasma parameters	Dr. P.K. Barhai (PI), Dr. I. Banerjee (CI)	BRNS	2009	22.58	
7.	Effect of ion implantation and gamma irradiation on wide band gap semiconductors	Dr. (Mrs) S. Keshri	UGC-DAE CSR- Kolkata Centre	2009	4.31	3 years
8.	Developments of nano crystalline high permittivity lead free materials for microwave applications	Dr. S.K. Rout, Dr. P.K. Barhai	DST	2009	23.35	3 years
8.	Studies on ferromagnetic-ferroelectric composites and their electronic applications	Dr. (Mrs) S.Keshri	DST	2009	17.68	3 years
9.	Development of photovoltaic solar cell with nanostructured behaviour-modified and doped zinc oxide electrodes	Dr. P. K. Barhai (PI) Dr. Rishi Sharma (CI)	DST India and OCS Israel	Sept. 2011	19.86	2 years
10.	Development of photovoltaic solar cell with nanostructured behaviour-modified and doped zinc oxide electrodes	Dr. P. K. Barhai (PI) Dr. Rishi Sharma (CI)	DST India and OCS Israel	Sept. 2011	19.86	
11.	Facile synthesis and characterizations of magnetically modulated luminescent nanocomposites	Dr. Samrat Mukherjee Dr. P.K. Barhai	AICTE	2011	8.50	3 years

**SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT:**

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	National Conference on Condensed Matter Physics (CM Days -2012)	Dr. S. K. Rout	Dst, brns, iopb, sinp, insa, bit, Mesra	29-31 August, 2012

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Rishi Sharma	69 <sup>th</sup> Orientation Program organized	UGC	Ranchi University, Ranchi	Academic Staff College, Ranchi University, Ranchi	11th Jul - 7 <sup>th</sup> Aug. 2012
2.	Dr. D. Jairath Dr. S. Konar Dr. S. Keshri Dr. S. K. Sinha Dr. S. K. Rout Dr. M. Mishra Dr. K. Bose Dr. Samrat Mukherjee Dr. Rishi Sharma Mr. M. K. Sinha	National Conference on Condensed Matter Physics (CM Days -2012)	Dst, brns, iopb, sinp, insa, bit, mesra	BIT, Mesra	BIT, Mesra	29 <sup>th</sup> -31 <sup>st</sup> Aug. 2012
3.	Dr. S. Keshri	National Seminar on New Material Research and Nanotechnology (as an Invited Speaker)	DST	Govt. Arts College, Ooty	Ooty, Tamil Nadu	12 <sup>th</sup> - 14 <sup>th</sup> Sept. 2012
4.	Dr. S. Keshri	Winter School on 'Physics and Technology of Sensors' (as a Resource person).	University of Calcutta	University of Calcutta	Calcutta	21 <sup>st</sup> Nov - 11 <sup>th</sup> Dec 2012
5.	Dr. S. K. Sinha	Acquaintance Programme on Inter University Accelerator Centre, New Delhi	IUAC New Delhi	Central University Jharkhand	Central University Jharkhand	23 <sup>rd</sup> Nov. 2012
6.	Dr. Samrat Mukherjee Dr. R. K. Choubey	57th DAE - Solid State Physics Symposium	DAE	IIT, Mumbai	IIT, Mumbai	3 <sup>rd</sup> -7 <sup>th</sup> Dec. 2012
7.	Dr. S. Keshri	Second International Symposium on Semiconductor Materials and Devices (as an Invited Speaker).	TEQIP	Jammu University	Jammu	31 <sup>st</sup> Jan - 2 <sup>nd</sup> Feb 2013
8.	Dr. S. K. Sinha	National Seminar on the Role of Nanotechnology for Development of Bihar, Aryabhat	Govt of Bihar	Centre for Nanoscience and Nanotechnology,	Aryabhat Knowledge University Bihar	Feb 22-23, 2013



## PUBLICATIONS :

### Published in International journals

1. Sunita Keshri and Shailendra Singh Rajput "Effect of BTO addition on the structural and magnetoresistive properties of LSMO", Phase Transitions 2013 <http://dx.doi.org/10.1080/01411594.2013.797979>
2. Sunita Keshri, Ashutosh and Debdulal Kabiraj "Tailoring of optical and gas sensitivity behaviours of WO<sub>3</sub> films by low energy Ar<sup>+</sup> ion implantation", Thin Solid Films vol. 526, 50, 2012
3. Shailendra Singh Rajput, Sunita Keshri and Vibha Rani Gupta "Microwave dielectric properties of (1-x) Mg<sub>0.95</sub>Zn<sub>0.05</sub>TiO<sub>3</sub>-(x)Ca<sub>0.6</sub>La<sub>0.8/3</sub>TiO<sub>3</sub> ceramic composites"; Journal Alloys and compounds, 552, 219, 2013
4. Leena Joshi and Sunita Keshri "Extrinsic behaviour in La<sub>0.67</sub>Ca<sub>0.33</sub>MnO<sub>3</sub>-BaTiO<sub>3</sub> composites", Ceramics International, 38, 5889, 2012
5. Shailendra Singh Rajput, Sunita Keshri, Vibha Rani Gupta, Nisha Gupta, Viktor Bovtun, Jan Petzelt "Design of microwave dielectric resonator antenna using MZTO-CSTO composite"; Ceramics International, 38, 2355, 2012
6. Ashutosh Kumar, J. B. M. Krishna, Dapankar Das and Sunita Keshri "Conductivity Modification of ZnO film by low energy Fe<sup>10+</sup> ion Implantation", Applied Surface Science, 258, 2237, 2012
7. Vijay Chatterjee, Rishi Sharma and P. K. Barhai "Effect Of Process Parameters On The Properties of Ultrananocrystalline Diamond Films Deposited Using Microwave Plasma Enhanced Chemical Vapor Deposition" Article first published online: 11 Nov 2013 | DOI: 10.5185/amlett.2013.10550.
8. S. K. Mukherjee and P. K. Barhai "Reliability of anodic vacuum arc in depositing thermoelectric alloy thin films", Journal of Alloys and Compounds, 511, 14, 2012.
9. Shailendra Singh Rajput, Sunita Keshri, Vibha Rani Gupta, Nisha Gupta, Viktor Bovtun, Jan Petzelt "Design of microwave dielectric resonator antenna using MZTO-CSTO composite"; Ceramics International 38, 2355, 2012
10. Ashutosh Kumar, J. B. M. Krishna, Dapankar Das and Sunita Keshri, "Conductivity Modification of ZnO film by low energy Fe<sup>10+</sup> ion Implantation"; Applied Surface Science, 258, 2237, 2012
11. Sunita Keshri, Ashutosh Kumar and Debdulal Kabiraj "Tailoring of optical and gas sensitivity behaviours of WO<sub>3</sub> films by low energy Ar<sup>+</sup> ion implantation"; Thin Solid Films, 526, 50, 2012
12. Rakhi Bhattacharya, S. Konar "Dual-core photonic crystal fibers for dispersion compensation". SPIE, DOI: 10.1117/1.JNP.6.063520, 2012.
13. C. C. Wu, R. K. Choubey, C.W. Lan "Generation of Annularly Symmetric Periodic Ferroelectric Domains in Nd Doped Near Stoichiometric LiTaO<sub>3</sub> Crystals by VTE Processing" Materials Letter 67, 88, 2012.
14. Wei Tse Hsu, Zhi Bin Chen, Chien Cheng Wu, Ravi Kant Choubey, Chung Wen Lan "Optical properties of Mg, Fe co-doped near-stoichiometric lithium tantalate single crystals" Materials 5, 227, 2012
15. C.C. Wu, Z.B. Chen, R. K. Choubey, C.W. Lan "On the study of zinc doping in congruent LiTaO<sub>3</sub> crystals" Materials Chemistry and Physics 133, 813, 2012
16. P. Laha, A. B. Panda, P. K. Barhai, A. K. Das, S. K. Mahapatra, 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, 258, 2275, 2012
17. Rakhi Bhattacharya and S. Konar, Extremely Large Birefringence and Shifting of Zero Dispersion Wavelength of Photonic Crystal Fibers, Optics and Laser Technology 44, 2210, 2012
18. S Mukherjee, S Kumar, D Das "Spin disorder induced behaviour ferromagnetism in iron-based nanocomposites", Appl. Phys. A, 106, 507, 2012

19. Samrat Mukherjee, Sanjay Kumar, Dipankar Das "Tailoring Magnetic Responses of Nanoscale Integrated Magnetite and Cadmium Sulphide: Microstructural, Magnetic and Hyperfine Studies", 4, 110, 2012
20. Laila Girgis, Kaisar R. Khan, Daniela Milovic, Sihon H. Crutcher, Swapan Konar, Anjan Biswas "Adiabatic phase variation for optical Gaussons"; Optics & Laser Technology, 44, 1219, 2012
21. Anjan Biswas, Stephen Johnson, Megan Fessak, Beatrice Siercke, Essaid Zerrad and Swapan Konar "Dispersive Optical solitons by Semi-inverse Variational Principle", Journal of Modern Optics, 59, 213, 2012
22. D. B. Lata, A. Mishra and S. Medhekar "Effect of hydrogen and LPG addition on the efficiency and emissions of a dual fuel diesel engine", International Journal of Hydrogen Energy, 37, 6084, 2012
23. P. Laha, I. Banerjee, P. K. Barhai, A. K. Das, V. N. Bhoraskar, S. K. Mahapatra "Effects of 6 MeV electron irradiation on electrical properties and device parameters of Al/Al<sub>2</sub>O<sub>3</sub>/ TiO<sub>2</sub>/n-Si MOS capacitors", Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 283, 9, 2012
24. S. Parida, S.K. Rout, L.S. Cavalcante, E. Sinha, M. Siu Li, V. Subramanian, N. Gupta, V.R. Gupta, J.A. Varela, E. Longo "Structural refinement, optical and microwave dielectric properties of BaZrO<sub>3</sub>", Ceram International, 38, 2129, 2012
25. B Parija, T.Badapanda, S.K.Rout, S.Panigrahi, T.P.Sinha "Dielectric dispersion and impedance spectroscopy of lead free (Bi<sub>0.5</sub>Na<sub>0.5</sub>)TiO<sub>3</sub> ferroelectric ceramics", Physics Express, 2, 21 2012)
26. Kumar Mohit, S. K. Rout, Vikram Kumar, S. Parida, G. P. Singh, S. K. Sharma, S. K. Pradhan, Ill Wom Kim "Structural, optical and dielectric studies of NixZn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> prepared by auto combustion route", Physica B: Condensed Matter, 407, 935, 2012
27. S. Parida, S. K. Rout, P. K. Barhai and J. Bera "Influence of Ball Milling Parameters on the Crystallite Size of Ba(Ti<sub>1-x</sub>Zrx)O<sub>3</sub>", Ferroelectrics, 429, 22, 2012
28. T.Badapanda, V Senthil, S.K. Rout, S. Panigrahi, T.P. Sinha "Frequency-Temperature dependence of Dy doped Ba(Zr<sub>0.25</sub>Ti<sub>0.75</sub>)O<sub>3</sub> Ceramic: Impedance and modulus spectroscopy", Physics Express, 2, 19, 2012.
29. T. Badapanda, V. Senthil, S.K. Rout, S. Panigrahi, T.P. Sinha Dielectric relaxation on Ba<sub>1-x</sub>Bi<sub>2x/3</sub>Zr<sub>0.25</sub>Ti<sub>0.75</sub>O<sub>3</sub> ceramic,, Mat. Chem. Phys, 133 (2012) 863– 870.
30. B.Parija, T. Badapanda, V Senthil, S.K. Rout, S. Panigrahi "Diffuse phase transistion, Piezoelectric and Optical study of Bi<sub>0.5</sub>Na<sub>0.5</sub>TiO<sub>3</sub> ceramic", Bull. Mat. Sci., 35 (2), 197-201(2012).
31. S. Parida, S. K. Rout\*, V. Subramanian. P. K. Barhai N. Gupta. V. R. Gupta, "Structural, microwave dielectric properties and dielectric resonator antenna studies of Sr(ZrxTi<sub>1-x</sub>)O<sub>3</sub> ceramics", J Alloy Compd, 528 126-134(2012).
32. Leena Joshi and Sunita Keshri, "Extrinsic behaviour in La<sub>0.67</sub>Ca<sub>0.33</sub>MnO<sub>3</sub>-BaTiO<sub>3</sub> composites"; Ceramics International, 38 5889–5896, 2012.
33. Shailendra Singh Rajput, Sunita Keshri, Vibha Rani Gupta, Nisha Gupta, Viktor Bovtun, Jan Petzelt, 'Design of microwave dielectric resonator antenna using MZTO-CSTO composite"; Ceramics International, 38, 2355–2362, 2012.
34. Ashutosh Kumar, J. B. M. Krishna, Dipankar Das and Sunita Keshri, Conductivity Modification of ZnO film by low energy Fe<sup>10+</sup> ion Implantation; Applied Surface Science 258, 2237-2245, 2012.
35. Shradha Shekhar, Ankhuri Dubey, Mrinal Mishra and Nisha Gupta, 'Interconnect Modeling using the Quasi Mont Carlo Integration Technique', Advanced Computational Techniques in Electromagnetics, Vol. 2012, 2012.

36. C.C. Wu, R. K. Choubey, C.W. Lan "Generation of Annularly Symmetric Periodic Ferroelectric Domains in Nd Doped Near Stoichiometric  $\text{LiTaO}_3$  Crystals by VTE Processing", *Materials Letters*, 67, 88, 2012
37. Wei Tse Hsu, Zhi Bin Chen, Chien Cheng Wu, Ravi Kant Choubey and Chung Wen Lan "Optical properties of Mg, Fe co-doped near-stoichiometric lithium tantalate single crystals", *Materials*, 5, 227, 2012
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39. Karamjit Singh, H.S. Bhatti, K.V. Baiju, S. Shukla, Sunil Kumar, R. K. Choubey, "Study of size dependent photo-induced exciton life-time and photocatalytic activity of nanocrystalline  $\text{CdZnS}$ ", *Advanced Science Letters*, 16, 237, 2012
40. P. K. Srivastava, Ragendra Kumar, P. K. Barhai, Energy Profile and Thermodynamic Feasibility of Iron (I) during Electrochemical Machining of Iron *International Journal of Mechanical Engineering*, ISSN:2051-3232, Vol.41, Issue.1 (2013) 1123-36.
41. S. Parida, S.K. Rout, L.S. Cavalcante, A.Z. Simões, P.K. Barhai, N.C. Batista, E. Longo, M. Siu Li, S.K. Sharma, Structural investigation and improvement of photoluminescence properties in  $\text{Ba}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  powders synthesized by the solid state reaction method, *Materials Chemistry and Physics* 142 (2013) 70 -76.
42. N. Kumari, P.S. Das, N.K. Joshi and P.K. Barhai, Correlations of plasma parameters and properties of magnetron sputtered TiN films, *The European Physical Journal Applied Physics / Volume59 / Issue02 / September 2012*, 20302.
43. Ashwini Kumar Singh, Neelam Kumari, S. K. Mukherjee and P.K. Barhai, Atomic force microscopy analysis of effect of rf/dc power ratio on the properties of co-sputtered  $\text{Ti}_{1-x}\text{N}_x$  thin films, *IJRRAS* 14 (3), March 2013, 603-611.
44. S. Parida, S. K. Rout, V. Subramanian, P. K. Barhai, N. Gupta, V. R. Gupta, Structural, microwave dielectric properties and dielectric resonator antenna studies of  $\text{Sr}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  ceramics, *J. Alloys Compd.*, 528 (2012)126-134.
45. S. Parida, S. K. Rout, P. K. Barhai and J. Bera, Influence of Ball Milling Parameters on the Crystalline Size of  $\text{Ba}(\text{Ti}_{1-x}\text{Zr}_x)\text{O}_3$ , *Ferroelectrics*, 429,1-9,2012.
46. S. G. Rakesh, Divya Prakash Gnanadhas, Uday Sankar Allam, Karaba N. Nataraja, P. K. Barhai, Gopalan Jagadeesh, Dipshikha Chakravorty, Development of micro-shock wave assisted dry particle and fluid jet delivery system, *Appl Microbiol Biotechnol*, Vol 95 No 2, 2012 DOI 10.1007/s00253-012-4196-8.
47. A. B. Panda, S. K. Mahapatra,, P. K. Barhai, A. K. Das, I. Banerjee, Understanding of gas phase deposition of reactive magnetron sputtered  $\text{TiO}_2$  thin films and its correlation with bactericidal efficiency, *Applied Surface Science* 258 (2012) 9824–9831.
48. P. Laha, I. Banerjee, A. Bajaj, P. Chakraborty, P. K. Barhai, S. S. Dahiwal, A. K. Das, V. N. Bhoraskar, D. Kim, S. K. Mahapatra, Irradiation effects of 6MeV electron on electrical properties of  $\text{Al}/\text{Al}_2\text{O}_3/\text{n-Si}$  MOS capacitors, *Radiation Physics and Chemistry* 81 (2012) 1600-1605.
49. Verma, S. Devendra K. and Barhai, P. K., "Design & Development of Nanoelectronic Binary Decision Tree Device based on CMOS and QCA (Quantum-Dot Cellular Automata) Nanotechnology," *IJCA Journal*, Vol. 7, No. 1, 2012.
50. S.R. Nagaraja, S. G. Rakesh, J. K. Prasad, P. K. Barhai, G. Jagadeesh, Investigations on micro- blast wave assisted metal foil forming for biomedical applications, *International Journal of Mechanical Sciences* 61(2012)1-7.

51. S.K. Mukherjee, P.K. Barhai, Reliability of anodic vacuum arc in depositing thermoelectric alloy thin films, Journal of Alloys and Compounds, 511 (2012) 14– 21.
52. P. Laha, A.B. Panda, P.K. Barhai, A.K. Das, S.K. Mahapatra, 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, Volume 258, (2012) Issue 7, p. 2275-2282.

#### Published in International Proceedings:

1. S. Medhekar, R. Kumar, S. Mukherjee and R. K. Choubey "Study of Nonlinear Refraction of Organic Dye by Z-scan Technique Using He-Ne Laser" AIP Conference Proceedings, 1512, 470 (2013).
2. Indrajit Kumar, Amiya Priyam and Ravi Kant Choubey, "Degree of Supersaturation: an Effective Tool to Control the Luminescence Efficiency and Size Distribution in CdTe Quantum Dots", AIP Conference Proceedings (2013).

#### Published in National Proceedings:

1. S. Rajpal, Md Shahid, D. Shikha and S.K. Sinha, "Synthesis and Characterization of nanocrystalline CdS thin film using chemical bath deposition method", All India Seminar on Technology Solution in Manufacturing 01-02 held at BIT Mesra, Ranchi, Proceeding paper no. 16, 8 March, 2013
2. I. Kumar, A. Priyam, R. K. Choubey and S. Medhekar "Supersaturation Induced Enhancement of Luminescence Efficiency in Colloidal CdTe Quantum Dots" 5th Bangalore Nano, Bangalore (05-07 Dec. 2012) p. 14.
3. Indrajit Kumar, Amiya Priyam and Ravi Kant Choubey "Supersaturation Controlled Synthesis of Luminescent CdTe Quantum Dots and Its Self-Assembly into Nanowires" Nano India 2013, Thiruvananthapuram (19-20 Feb. 2013) p. 14.

#### BOOK CHAPTERS:

##### S. K. Mahapatra and Indrani Banerjee:

1. Nanomedicine and Drug Delivery
2. Advanced Nanomaterials, Synthesis, Properties & Applications

#### AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL ):

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. P. K. Barhai	Visiting Scientist	University of Tel Aviv, Israel & University of Duisburg, Germany	2012
2.	Dr. S. Konar	Senior Associate	International Center for Theoretical Physics (ICTP, Italy),	(2007-2014).
3.	Dr. S. K. Rout	Bharat Jyoti Award	India International Friendship Society, New Delhi.	2012
4.	Dr. S. K. Mahapatra	Visiting scientist	University of California, Los Angeles, USA	Oct. 2011- Nov. 2012
5.	Dr. Indrani Banerjee	BOYSCAST fellowship	University of California, Los Angeles, USA	Sept. 2011- Jan. 2013.
6.	Dr. Sanat Kr. Mukherjee	Post Doctoral Research Associate	(Universität Duisburg-Essen, Germany	2012-2013

### MOUS / COLLABORATIONS:

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Tel Aviv University, Israel	Research, solar cells	2011-2013
2.	BARC, Mumbai	Research, Plasmas	2011 onwards
3.	Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland.	Magnetic materials	Aug. 2011 – till the date
4.	BARC, Mumbai	Research, Plasmas	2011 onwards
5.	Russian Academy of Sciences, Ioffe Physical Technical Institute, St. Petersburg, Russia.	Nanomaterials for purpose of biomedical applications	Feb 2013 – till the date
6.	Moscow State University	Magnetic materials	March 2013 – till the date

### BOARD OF STUDIES(UG/PG)

#### Internal Members

1. Dr. D. Jairath, Prof. & Head, Dept. of Applied Physics : Chairman
2. Dr. P. K. Barhai, Vice-Chancellor & Dean F & SR : Member
3. Dr. S. Konar, Professor, Dept. of Applied Physics : Member
4. Dr. (Mrs.) S. Keshri, Professor, Dept. of Appl. Physics : Member
5. Dr. S. K. Rout, Assoc. Professor, Dept. of Applied Physics : Member
6. Dr. (Mrs.) Usha Jha, Prof. & Head, Dept. of Appl. Chemistry : Member
7. Dr. S. K. Ghorai, Prof. & Head, Dept. of ECE : Member

#### External Members (Any two of the following)

1. Dr. B. S. Murty, Professor, Dept. of Materials and Materials Engineering, IIT, Madras, Chennai-600036, India, Ph: 044-22574754, email: murty@iitm.ac.in
2. Dr. V. Subramanian, Professor, Dept. of Physics, IIT Madras, Chennai-600036, Ph: 044-22574883, Email: manianvs@iitm.ac.in
3. Dr. S.R. Kumar, Associate Professor, Dept. of Materials and Metallurgical Engineering, NIFFT, Ranchi
4. Dr. S. Panigrahi, Professor, Department of Physics, NIT, Rourkela, Odisha, Ph: 9437145313
5. Dr. Anil Kumar Nirala, Professor, Department of Physics, Indian Schools of Mines, Dhanbad, Ph: +91-326-223-5282, Email : aknirala@gmail.com
6. Dr. (Mrs.) S.K. Mishra, Scientist EII, MST Division, National Metallurgical Laboratory Jamshedpur, India-831007 Ph. 91-657-2271709\*2030, Fax 91-0657-2270527, Mob. : 9334732298, Email: suman@nmlindia.org,skm\_smp@yahoo.co.in

#### Departmental Academic Committee

1. Dr. D. Jairath, Professor & Head, Dept. of Applied Physics : Chairman
2. Dr. P. K. Barhai, Vice-Chancellor & Dean F & SR : Member
3. Dr. S. Konar, Professor, Dept. of Applied Physics : Member
4. Dr. (Mrs.) S. Keshri, Assoc. Professor, Dept. of Applied Physics : Member

- |     |   |   |        |
|-----|---|---|--------|
| 5.  | Dr. S. K. Sinha, Assoc. Professor, Dept. of Applied Physics       | : | Member |
| 6.  | Dr. S. K. Rout, Assoc. Professor, Dept. of Applied Physics        | : | Member |
| 7.  | Dr. (Mrs.) I. Banerjee, Asst. Professor, Dept. of Applied Physics | : | Member |
| 8.  | Dr. Samrat Mukherjee, Asst. Professor, Dept. of Applied Physics   | : | Member |
| 9.  | Dr. S. K. Ghorai, Professor & Head, Dept. of ECE                  | : | Member |
| 10. | Dr. (Mrs.) Usha Jha, Prof. & Head, Dept. of Applied Chemistry     | : | Member |

## OTHER IMPORTANT INFORMATION

### Information about MOU's and student exchange programme with international Universities:

11. INDIA-ISRAEL S&T COOPERATION between Prof. P. K. Barhai, Department of Applied Physics, and Prof. R. L. Boxman, School of Electrical Engineering, Tel Aviv University, Israel  
 Prof. R. L. Boxman visited the Institute, during Sept 2012 and Feb 2013  
 Prof. P. K. Barhai visited Tel Aviv University, Israel, during April and August 2012
12. Indo-Russian project under DST, Govt of India, Study of New Magnetic Nanostructures for Multifunctional Biomedical Applications: Dr. S. Keshri, Department of Applied Physics, & Dr. Swastika Ganguly, Department of Pharmaveutical Sciences, and Prof. A.S. Kamzim, Ioffe Technical University, St. Petersburg, Russia
  - Prof. A. S. Kamzim visited the Institute, during Nov 2012
  - Dr. S. Keshri visited Ioffe Technical University, St. Petersburg, during 24-28 March 2013, and Moscow State university on 30 March 2013
  - Mr. Vijay Chatterjee, JRF under Prof. P. K. Barhai, was awarded the Commonwealth Split-Site Fellowship, and opted for the same at the University of Bristol, UK from Dec 2012 for a year.



## 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, fifteen batches of

architecture students have graduated till now and they have found gainful employment in planning, design and construction sector. Many of B. Architecture 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 involved in quality research now.

The department has started offering the Master in Urban Planning degree course from January 2007 with a maximum intake capacity of 12. The intake includes students with degrees of B.Arch., B.E./B.Tech.(Civil Engineering), M.A. in Geography, Sociology or Economics. The students have gained fruitful employment in planning organizations, in teaching, and other related activities.

The Department has ranked among the top ten best Architecture Departments as per the survey conducted by the Outlook. and Eduways since last three years.

The Department is the first in the country as an Architecture Department to publish an internationally refereed bi-annual research journal named ABACUS since August 2006. Fifteen 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



**SPONSORED PROJECTS****ONGOING PROJECTS SANCTIONED BEFORE JULY 2013**

S. 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	Govt. of Jharkhand	December 2010	Rs. 16.00 lakhs	3 years
2.	National Mission Project on Education through ICT “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	31.2 Lacs	3 Years

**WORKSHOPS CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Workshop	Name of Coordinator	Funding / Sponsoring Agency	Venue	Date of Seminar / Workshops
1.	Lecture on “Waterfront Regeneration of Belfast, Northern Ireland”	Dr. Anil Kashyap	Department of Architecture, BIT Mesra	Seminar Hall II R&D Building, BIT, Mesra	18th July 2012
2.	Lecture series & Workshop on “Course Development & Workshop with Master of Urban Planning”	Dr. Anil Kashyap	Department of Architecture, BIT Mesra	Seminar Hall, Department of Architecture, BIT Mesra	16th -18th July 2012
3.	Interactive Session	Ar. Shibabrata Lai	Department of Architecture, BIT Mesra	Department of Architecture, BIT Mesra	9th Nov. 2012
4.	Interactive Session	Ar. Saiful Haq	Department of Architecture, BIT Mesra	Department of Architecture, BIT Mesra	11th Nov. 2012
5.	Interactive Session	Dr. S.S. Ray	Department of Architecture, BIT Mesra	Department of Architecture, BIT Mesra	11th Nov. 2012

**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.	Smriti Mishra	Training program on whether climate Meteorological hazard and disasters over Jharkhand region	Centre of Excellence in Climatology, BIT Mesra and Birsa Agriculture Kanke	BIT Mesra	27th- 29th June, 2013
2.	Shashi Kant Pandey	International Conference on Computational and Financial Econometrics (CFE- 2012)	Indian Institute of Technology (IIT) Kharagpur	Indian Institute of Technology (IIT) Kharagpur	14th – 16th December, 2012
3.	Shashi Kant Pandey	India Finance Conference (IFC)	Indian Institute of Management (IIM) Calcutta	Indian Institute of Management (IIM) Calcutta	19th -22nd December, 2012
4.	Shashi Kant Pandey	National Conference on Urban Mobility- Challenges, Solutions and Prospects	Indian Institute of Technology (IIT) Madras	Indian Institute of Technology (IIT) Madras	July, 2012
5.	Shashi Kant Pandey	International Conference on Computational and Financial Econometrics (CFE- 2012)	Indian Institute of Technology (IIT) Kharagpur	Indian Institute of Technology (IIT) Kharagpur	December 27-29, 2012
6.	Janmejy Gupta	National Conference on Emerging Trends of Energy Conservation in Buildings. CSIR-Central Building Research Institute, Roorkee Uttarakhand.	CSIR-Central Building Research Institute, Roorkee Uttarakhand.	Indian Institute of Technology (IIT ) Roorkee	1-3 November 2012

**PUBLICATIONS:**

**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. **Urban Prospects**, Volume 08, Number 1, Spring 2013
  - Editor-in-chief: Dr. Manjari Chakraborty
  - Issue Editor: Mr. Satyaki Sarkar
- b. **Evolution of Architecture**, Volume 07, Number 02, Monsoon 2012
  - Editor-in-chief: Dr. Manjari Chakraborty
  - Issue Editor: Mrs. Ritu Agrawal

**FACULTY PUBLICATIONS**

**Published in International Journals**

1. Janmejy Gupta & Dr. Manjari Chakraborty (2013), Simulation and on-site Measurement Methods to Study Thermal Performance of Rural Mud Hut in Humid Sub-Tropical Climate: A Case-Study in Jharkhand, India, International Journal of Engineering Research & Technology (IJERT), Vol 2, Issue 6, pp. 1243-1273
2. Janmejy Gupta & Dr. Manjari Chakraborty (2012), Sustainability of Rural Mud Houses in Jharkhand: Analysis related to Thermal Comfort, ABACUS : A Bi-annual International Journal on Architecture, Volume 7, No. 1, pp. 56-63

3. Sudha Panda, Dr. Manjari Chakraborty, Dr Santosh Kumar Mishra (2013), A Sustainability Scorecard for Urban India - An Urgent Need of the Hour, ABACUS, Vol. 8, No. 1, pp. 50-56.
4. Pandey Shashikant & Pradhan Rudra (2013), Internet Growth Nexus: Evidence from Cross Country Panel Data. Applied Economics Letters, Vol. 20, No. 16, pp. 1511-1515.
5. Pandey Shashikant & Pradhan Rudra (2013), The Link between Telecommunication Infrastructure and Economic Growth in 34 OECD Countries. International Journal of Technology, Policy and Management, Vol. 13, No. 2, pp. 278-293.
6. Pandey Shashikant & Pradhan Rudra (2013), More penetration More growth? A Panel Co-integration Analysis for the OECD Countries. International Journal of Public Policy, Vol. 9, No.4/5/6, pp.371 - 388.
7. Pandey Shashikant & Pradhan Rudra (2013), The Dynamics of Financial Depth and Economic Growth: Empirical Evidence from Middle East and North African Countries. International Research Journal of Finance and Economics, Vol. 112, No. 2, pp. 172-180.
8. Pandey Shashikant & Pradhan Rudra (2012), Modeling the Casual Nexus between Social Development and Economic Growth in 15 Asian Countries. Asian African Journal of Economics and Econometrics, Vol. 12, No. 2, pp. 407-420.
9. Pandey Shashikant & Pradhan Rudra (2012), Credit Default Risk and Macro Economics Determinants in G-20. International Journal of Financial Economics and Econometrics, Vol. 4, No. 2, pp. 183-194.

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

1. Janmejy Gupta & Dr. Manjari Chakraborty (2012), Thermal Performance of Rural Architecture in Jharkhand : Case-Study of a Typical Mud House, National Conference on Emerging Trends of Energy Conservation in Buildings. CSIR-Central Building Research Institute, Roorkee Uttarakhand, pp. 126-135.

#### **BOOKS**

S. No.	Book Title	Author	Publisher	ISBN	Topic and Page No.
1.	Strategic Framework of Infrastructure Financing	Shashikant Pandey	Bloomsbury Publishing India Pvt. Ltd.	978-81-924302-1-8	The Effect of Infrastructure on FDI inflows in India: Using Panel Data Modeling Pages: 570-584

#### **DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	ZONASA at Bengal Engineering and Science University	Pratik Jadojia	26th-28th October, 2012
2.	Student's Tour - Maharashtra & Gujarat	Arunav Nandy & Alisha Sinha	8th - 17th December, 2012

**DEVELOPMENT OF LEARNING MATERIALS (E- CONTENTS, PEDAGOGY, STUDENT - CENTRIC LEARNING, VIRTUAL LAB, TECHNOLOGY- ENHANCED LEARNING, ETC.)**

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> <ol style="list-style-type: none"> <li>1. Architectural Sociology,</li> <li>2. Building Economics, Real Estate Management &amp; Marketing,</li> <li>3. Energy Efficient Buildings,</li> <li>4. Housing &amp; Settlement Systems,</li> <li>5. Structural Systems,</li> <li>6. Vernacular Architecture</li> </ol>	The project began in September 2009 and was sanctioned for 3 years. It is funded by MHRD, the total amount being 31.2 lacs.

**MEMBERS ON BOARD OF STUDIES (UG/PG)**

**Internal**

- Dr. Manjari Chakraborty, Prof. & Head, Department of Architecture.
- Dr. N.R. Mandal, Professor, Department of Architecture.
- Dr. Gopal Pathak, Prof. & Head, Department of Environmental Engineering.
- Head of Department, Department of Civil Engineering.
- Head of Department, Department of Remote Sensing.

**External (any two)**

- Prof. B.K. Sengupta, Professor, Department of Architecture, IIT Kharagpur.
- Prof. S. S. Roy, Professor, Department of Architecture, CET Bhubaneswar.
- Mr. Amit De, Deputy General Manager, Architecture Division, MECON, Ranchi.
- Mr. Rajiv Chadda, Professional Architect, Ranchi.

**Other important information**

- The Department has ranked 5<sup>th</sup> position in All India Ranking of Architecture Colleges 2013, published by Eduways dot com on the basis of survey conducted by the NNE. It ranks 2<sup>nd</sup> among all the private architecture colleges in India.
- 2<sup>nd</sup> Overall winners in ZONASA 2013, hosted by college of Architecture Moradabad, UP.
- Runners-Up prize in international business-plan event- IDEAS'13, held at IIT Kanpur, 14th- 17th March, 2013- won by Amit Kumar (2011 batch) and Sarvesh Singh (2012 Batch)
- Certificate of Merit in All India essay writing Event organized by Shri Ram Chandra Mission in collaboration with United Nations Information Centre for India – won by Sanyukta Mohta (2012 Batch)
- National Level Winner- 'Yuvaratna', design competition organised by the Birla White Cement Ltd (December 2012)– won by Arijit Patra. (Theme 2)

- Eastern Zonal Winners-'Yuvaratna', design competition organised by the Birla White Cement Ltd (December 2012)- won by Anant Basudev Shadangi (Theme 1) and Harsh Wardhan, Saikat Roy, Ankur Podder (Theme 2)
- National Inter University Youth Festival '2012 ( poster making contest) & stood 2nd in East Zone, India & qualified for Nationals & bagged 5th position All India
- Semi-Finalist Essay Entry in the Fourteenth Berkeley Prize Essay Competition, 2012 – Dominic Mathew, Gauri Mathur, Ushnata Datta, Insha Sharma and Dipon Bose
- First Prize in the architectural design competition named "Archcult 2012" under the project category 'Redesigning the Total Structure and Presenting a New, Fresh and a Better Structure' with the entry titled 'Sainik Market Complex, Main Road, Ranchi' - Satish Kumar, Amit Kumar and Deo Kumar Raj
- Pidilite Award for Excellence (PAFE) in Kolkata on Thursday, June 13th, 2013 for 2005 Batch, Kolkata, West Bengal.
- UKIERI (UK India Education & Research Initiative) [Initiative of British Council and supported by MHRD, GOI & Govt. of UK] - Staff Exchange Programme under which Dr. Anil Kashyap, Asst. Prof., School of Built Environment, University of Ulster visited BIT Mesra during 15 – 18 July, 2012 on this exchange



## 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. Recently, Centre of Excellence, TEQIP-II in Bioresources and Bioprospecting was started in May 2013. Well planned department building situated on the bank of Suvernarekha 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 desires to participate 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. Eleven 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 six candidates have submitted Ph.D. thesis in this year. The PhD degree was awarded to seven scholars. Fifteen students completed their projects on Bioinformatics at BTISnet Centre (DBT, GOI, New Delhi) of the department. Spectrophotometers, Orbital shaking incubators, and centrifuges have been recently added to the list of instrumentation facility in the department.

### SPONSORED PROJECTS

#### PROJECTS SANCTIONED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
1.	Molecular cloning and heterologous expression of <i>Antheraea mylitta</i> cocoonase	Dr. D. M. Pandey (PI) Dr. K. Mukhopadhyay (Co-PI) Collaborators: CTRTL, Ranchi	DBT	10.6.2013	14.36	Jun 2013 to May 2015
2.	A RNAi approach to induce parthenocarpy in <i>Trichosanthes dioica</i> Roxb. by regulating phytohormones	Dr. D. Prasad	UGC BSR	01.04.2013	6.0	April 2013 to March 2016

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
3.	Exploiting agricultural wastes for harnessing a value- added product ferulic acid	Dr. A. Sachan	DST - SERB	12.12.2012	19.4	Feb 2013 to March 2016
4.	Biosynthesis of fungal secondary metabolite Lovastatin	Dr. V. K. Nigam	AICTE	28.11.2012	10.5	Nov 2012 to Oct 2015

**ONGOING PROJECTS**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
1	Establishment of Bioinformatics Centre under BTIS Net scheme	Dr. A. S. Vidyarthi (PI)	DBT	February 2004	68.0	Feb 05 to Mar 13
2	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	10.01.2009	BIT Share 66.50	Apr 09 to March 14
3	Functional genomics approach towards validation of biologically important consensus promoter motifs in rice ( <i>Oryza sativa</i> L.) under submergence	Dr. D. M. Pandey (PI)	UGC	19.12.2009	12.35	Feb 10 to Jan 13 (extended till Jul 13)
4	Production of Natural Flavour Compounds from Ferulic Acid by Microbial Transformation	Dr. S. Ghosh (Sachan) (P.I.) Dr. A. S. Vidyarthi (Co-P.I.)	UGC	19.12.2009	10.3	Feb 10 to Jan 13 (extended till Jul 13)

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
5	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.)	UGC	19.12.2009	12.31	Feb 10 to Jan 13 (extended till Jul 13)
6	Indigenous development of 1µm swept source optical coherence tomography (SSOCT) setup for noninvasive imaging of posterior segment of animal eye	Dr. R. Poddar (P.I.)	DST	June 2010	25	Sep 10 to Sep 12
7	Process optimization for bioemulsifier production by microorganisms	Dr. A. Sachan (PI)	UGC	22.06.11	5.01	Jul 11 to Jul 14
8	Identification, characterization and molecular documentation of non-marine water chlorophycean microalgal biodiversity of Chota Nagpur Plateau	Dr. A. Pareek (PI) Dr. A. S. Vidyarthi (Co-P.I.)	UGC	22.06.11	8.678	Jul 11 to Jul 14
9	Development of recombinant human Growth Colony Stimulating Factor	Dr. M. Kumar (PI)	UGC	05.07.2011	10.328	Jul 11 to Jul 14
10	Discovery, annotation, validation and characterization of SNPs in Wheat ( <i>Triticum aestivum</i> L.) and haplotype structure determination using Next-Generation Sequencing Data	Dr. K. Mukhopadhyay (Project Co-ordinator) Dr. M. Kumar (Co-PI) Dr. R. Poddar (Co-PI) Multi-Institutional R&D Project Collaborators: CCSU Meerut	DBT	06.05.2012	BIT Share: 24.6	May 12 to Apr 15

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Duration of the Project
11	Development of LAMP based dipstick format biosensor for sensitive and specific DNA detection	Dr. Dinesh Prasad (PI)	DST - SERB	16/02/2012	15.85	April 2012 To April 2014
12	Studies on biotechnological potential of halophilic alkaline proteases	Dr V.K. Nigam (PI) Dr. M. K. Mohan (Co-PI) Dr. A. S. Vidyarthi (Co-PI)	UGC	17.07.2012	7.52	July 2012 To June 2015
13	Process Optimization for gold nanoparticle production by microorganisms	Ms. Sneha Singh (PI) Dr. A. S. Vidyarthi (Co-PI)	UGC (Minor Research Project)	08.08.2012	1.5	July 2012 To June 2014

### PROJECTS COMPLETED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in Lacs)	Date of completion of the Project
1.	Study of Antioxidative and DNA protective properties of Anthocyanins	Dr. K. Mukhopadhyay (PI) Dr. D. Sas-mal (Co-PI)	UGC	10.01.2009	15.13	Jan 12
2.	Development of Protocols for Micropropagation, elicitation and Hairy root culture Techniques for the conservation of critically endangered medicinal plant – Swertia chirayita : a potential source of Xanthone	Dr. S. Chandra (PI)	UGC	19.12.2009	7.82	Jan 13
3.	Enhanced production of L-Asparaginase by Extractive Fermentation using aqueous two phase system	Mr. S.K. Jha (PI.) Dr. H. R. Singh (Co-PI.)	UGC (Minor research project)	12.01.10	1.80	Feb 12
4.	Exploring Biotechnological prospective of Indigenous Novel Hydrogen Producing Microalgae and their characterization	Dr P Shukla (PI) Dr R Ban-dopadhyay (Co-PI)	Innovative Project Scheme for young scientists under PD programme of the institute	05.09.2011	2.92	Nov 2012

**SEMINAR / CONFERENCES / SHORT – TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short – term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	National Science Day Celebration	Dr Rajib Bandopadhyay and Dr Ramesh Chandra	BIT and AMI Jharkhand Chapter	28th Feb 2013

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. K. Mukhopadhyay	13 <sup>th</sup> International Cereal Rusts and Powdery Mildews Conference	CPDG, BIT Mesra	ICRPM, Berlin	Beijing, China	Aug 26 - Sept 01, 2012
2.	Dr. M. Kumar	BGRI 2012 Technical Workshop	CPDG, BIT Mesra	BGRI, New York	Beijing, China	Sept 01-04, 2012
		70th Orientation Programme		ASC, Ranchi University	ASC, Ranchi University	Nov 25 - Dec 22, 2012
3.	Dr. D. M. Pandey	VI International Conference in Legume Genetics and Genomics	CPDG, BIT Mesra	ICRISAT, Hyderabad	Hyderabad, AP, India	Oct 02-07, 2012
4.	Dr. R. Bando-padhyay	International Conference on Algal Biorefinery (ICAB – 2013)	Registration – BIT Mesra	IIT KGP	IIT KGP	Jan 10-12, 2013
		National Conference on Sustainable Development and Global Competitiveness	Registration – BIT Mesra	Department of Environmental Science and Engineering	BIT Mesra Ranchi	Dec 4-5, 2012
		The National Academy of sciences (India) 82nd Annual Session and National Symposium on “Nano-science & Technology for mankind”	NASI and self	National Academy of sciences (India)	Banaras Hindu University, Varanasi	Nov 29- Dec 01, 2012
		53rd Annual Conference of Association of Microbiologists of India (AMI), International Conference on Microbial World: recent Innovation and Future Trends	CPDG, BIT, Mesra	AMI and KIIT University, Bhubaneswar	KIIT University, Bhubaneswar	Nov 22-25, 2012
5.	Dr. D. Prasad	Refresher Course, Biotechnology, UGC			JNU New Delhi	Jul 12- Aug 09 2012



S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6.	Dr. S. Chandra	69th Orientation Programme	-	Academic Staff College, Ranchi	ASC, Ranchi University	Jul 11- Aug 7 2012
7.	Mrs. K. Mukherjee	85 <sup>th</sup> Orientation Programme	Organizers	ASC, RDVV, Jabalpur	ASC, RDVV, Jabalpur, MP	Sept 22- Oct 20 2012

## PUBLICATIONS:

### Published in International Journals

1. S. Singh, A. S. Vidyarthi, V. K. Nigam, A. Dev, "Extracellular facile biosynthesis, characterization and stability of gold nanoparticles by *Bacillus licheniformis*," *Artif. Cells, Nanomed. Biotechnol.*, Early Online, doi: 10.3109/21691401.2012.759122, 2013.
2. S. Shrivastava, P. Shukla, P. Dakshinamoorthy Deepalakshmi, K. Mukhopadhyay, "Characterization, cloning and functional expression of novel xylanase from *Thermomyces lanuginosus* SS-8 isolated from self-heating plant wreckage material," *World J Microbiol. Biotechnol.*, Online First Article; doi: 10.1007/s11274-013-1409-y, 2013.
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2. A. Vimal, V. K. Nigam, A. S. Vidyarthi, M. K. Mohan, "Studies on suitability of alkaline proteases from halophilic microorganisms in detergent industry," in International Conference on "Microbial World: Recent Innovations and Future Trends" (AMI-2012), 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012, pp. 163.
3. N. Panjiar, A. Ray, S. Ghosh Sachan, A. Sachan, "Biosurfactant production from a gram positive bacterial isolate," in International Conference on "Microbial World: Recent Innovations and Future Trends" (AMI-2012), 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012, pp. 110.
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6. P. Gupta, A. Sachan, R. S. Singh, Shankaracharya, A. S. Vidyarthi, "Structure modelling and active site prediction of Methyl coenzyme M reductase from *Methanosarcina mazei*," in International Conference on "Microbial World: Recent Innovations and Future Trends" (AMI-2012), 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012, pp. 329.
7. P. Gupta, C. Banerjee, P. Guru, P. Mitra Mazumder, R. Bandopadhyay, "Screening of isolated fresh and marine microalgae for antidiabetic and antibacterial activity," in International Conference on "Microbial World: Recent Innovations and Future Trends" (AMI-2012), 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012.
8. N. Singh, P. Gupta, T. S. Chandra, R. Bandopadhyay, "Isolation of marine bacteria and its biological potential," in 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012.
9. A. Sarkar, C. Banerjee, R. Bandopadhyay, "Studying the potential of an isolated algal strain of *Desmodesmus* sp. for the production of biodiesel," in 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012, pp. 163.
10. C. Banerjee, P. Shukla, R. Bandopadhyay, "Bioharvesting of *Chlorella* sp CB4 using St-g-PAM and cationic guar gum as a natural flocculant," in 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012, pp. 154.
11. R. Sharma, A. Kumar, N. K. Jha, S. Ghosh Sachan, S. R. Sharma, "Microbiological study of gallstone in Jharkhand region," in 53<sup>rd</sup> AMI Annual Conference, KIIT University, Bhubaneswar, Odisha, India, Nov 22-25, 2012, pp. 335.
12. D. M. Pandey, A. Kumar, G. K. Prajapati, A. Kumari, A. Wany, "Computational and Molecular Biology Approaches for Plant Research & Improvement," in International Conference on Industrial Biotechnology (ICIB-2012) & 9<sup>th</sup> Convention of The Biotech Research Society, India, Punjab University, Patiala, India, Nov 21-23, 2012, pp. 37.
13. A. Kumari, A. Kumar, A. Wany, G. K. Prajapati, D. M. Pandey, "Identification and annotation of abiotic stress responsive candidate genes in peanut ESTs," in VI International Conference in Legume Genetics and Genomics, Hyderabad, AP, India, Oct 02-07, 2012, pp. 98.
14. D. M. Pandey, A. Kumar, G. K. Prajapati, A. Kumari, A. Wany, "Unraveling of Integrated Mechanisms in OMICS Technology for Crop Improvement," in 3<sup>rd</sup> World Congress on Biotechnology (Biotechnology-2012), Hyderabad International Convention Center, Hyderabad, India, Sept 13-15, 2012, pp. 166.
15. D. Kumar, A. Kapoor, K. Mukhopadhyay, M. Kumar, "Molecular characterization and protein-DNA interaction analysis of a WRKY transcription factor during leaf rust infection in wheat," in BGRI 2012 Technical Workshop, Beijing, China, Sept 01-04, 2012, pp. 157.
16. D. Singh, G. Bhaganagare, M. Kumar, R. Bandopadhyay, K. V. Prabhu, H. S. Balyan P. K. Gupta and K. Mukhopadhyay, "Comprehensive transcriptome characterization of wheat NILs in response to leaf rust disease using next generation SOLiD-SAGE sequence data," in 13<sup>th</sup> International Cereal Rust and Powdery Mildew Conference, Beijing, China, Aug 28- Sept 01, 2012, pp. 79-80.

**Published in National Journals**

1. R. S. Thakur, R. Bandopadhyay, "A bioinformatics approach towards sequence analysis for revealing dark matters," Indian Journal of Biotechnology, vol. 12, pp. 52-57, 2013.
2. C. Banerjee, R. Bandopadhyay, P. Shukla, "A simple novel agar diffusion method for isolation of indigenous microalgae Chlamydomonas sp. CRP7 and Chlorella sp. CB4 from operational swampy top soil," Indian J Microbiol, vol. 52, pp. 710-712, 2012.

**Published in National Proceedings**

1. R. Bandopadhyay, "Use of comparative genomics and Bioinformatics for better resolution in Agrobiotechnology," in National Seminar on Recent Advances in Rice Genomics and Biotechnology, Mar 23-24, 2013.
2. R. Bandopadhyay, "Agriculture Bioinformatics: A New Approach for Recent Advances in Agrobiotechnology and Sustainable Agriculture," in Recent Advances in Agrobiotechnology and Sustainable Agriculture (RAAB 2013), Feb 5-6, 2013.
3. P. Gupta, C. Banerjee, N. Singh, R. Bandopadhyay, "Isolation and Characterization of Microorganisms Isolated from Southern Ocean Water Sample," in 100<sup>th</sup> Indian Science Congress Association, Jan 3-7, pp. 166, 2013.
4. R. Bandopadhyay, C. Banerjee, A. Sarkar, P. Gupta, "Isolation of indigenous microalgae and biomass collection for biofuel production," in Proceeding of 2nd National Conference on Recent advances in Bio-Energy research, SSS-NIRE, Kapurthala, vol. 2, pp. 304-312, 2013. (Full paper)
5. P. Gupta, N. Singh, R. Bandopadhyay, "Isolation of marine bacteria and microalgae from Southern Ocean for screening of antibacterial activity of microalgae," in National Conference on sustainable development and global competitiveness, Dept. of Environment Engineering and Sciences, BIT, Mesra, Ranchi, Dec 4-5, 2012.
6. R. Sharma, U. Kumar, N. K. Jha, S. Ghosh Sachan, S. R. Sharma, "Correlating Heme iron as a Major factor for Pigmentation of Gallstone," presented at JASICON, RIMS, Ranchi, Nov 02-04, 2012.

**BOOKS:****Book chapters**

1. V.K. Nigam, A. Agarwal, A.K. Khandelwal, A.S. Vidyarthi, "Biodegradation of nitriles using nitrile metabolizing enzymes-nitrilase," in Environmental Biotechnology- Recent Perspectives, Lambert Academic Publishing AG & Co KG, Germany, 2012, pp. 10-30

**AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. Shankaracharya	Post-doctoral Fellow	Department of Epidemiology, Unit 1340, The University of Texas, MD Anderson Cancer Center, Houston, Texas, USA	Jan- Dec 2013

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4. Dr. Debbrata Das, Dept. of Biotechnology, IIT Kharagpur
5. Dr. B.N. Mishra, Professor & Coordinator, Biotechnology Programme, Institute of Engg. & Technology
6. Dr. Ranjana Srivastava, Deputy Director & Head, Gene cloning Laboratory, Central Drug Research Institute, Lucknow – 226001

7. Mr. G. K. Sharma, GM (Production), Ranbaxy Pvt. Limited, Poanta Sahib, Himachal Pradesh
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#### Departmental Academic Committee

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#### Other Important Information

##### Awards/Citations received by students:

- Arunabh Sarkar (M Tech Biotechnology 2011 Batch) won the best paper award at BITOTSAV 2013.
- Ms. Priyanka Gupta and Mr. Chiranjib Banerjee, Ph.D. scholars were awarded CSIR-SRF, April 2013.
- Ms. Akanksha Wany and Ms. Tesnim Arfi, Ph.D. scholars received the UGC-Maulana Azad National Fellowship, February 2013.

#### Lectures Delivered by Faculty Members at Various Organizations:

##### Dr. Kunal Mukhopadhyay

- RealTime PCR and its applications in Pharmaceutical Sciences, Quality Improvement Program 2013, Department of Pharmaceutical Sciences, BIT Mesra. Jun 11-24, 2013.
- Recent advances in biotechnology and the public outcry, UGC sponsored programme on Biotechnology for Women, Prassana Dev Womens' College, Jalpaiguri, West Bengal, Dec 4-5, 2012. (Also invited as chairperson)

##### Dr. D. M. Pandey

- Computational and Molecular Biology Approaches for Plant Research & Improvement, Punjabi University, Patiala, India (International Conference on Industrial Biotechnology (ICIB-2012) & 9<sup>th</sup> Convention of



The Biotech Research Society, India), Punjab University, Patiala, India, Nov 21-23, 2012. (Also invited as chairperson)

- Unraveling of Integrated Mechanisms in OMICS Technology for Crop Improvement, In: 3<sup>rd</sup> World Congress on Biotechnology (Biotechnology-2012), Hyderabad International Convention Center, Hyderabad, India, Sept 13-15, 2012. (Also invited as chairperson)

#### **Dr. R. Bandopadhyay**

- DNA Fingerprinting for Forensic Science: A interface of legal Science, National University and Research in Law, Ranchi. Orientation Program for Faculty, Jun 27-29, 2013.
- Use of comparative genomics and Bioinformatics for better resolution in Agrobiotechnology, Department of Biotechnology and Palli Siksha Bhavana, Visva-Bharati, Santiniketan, Mar 22-23, 2013.
- Agriculture Bioinformatics: A New Approach for Recent Advances in Agrobiotechnology and Sustainable Agriculture, Moolji Jaitha College, NMU, Jalgaon, Maharastra, Feb 5-6, 2013. (Also invited as chairperson)
- Experiences during Southern Ocean Expedition 2011, Academic Staff College, Ranchi University, Jul 28, 2012.

#### **Dr. M. Kumar**

- Chromatography in life science research, UGC Academic Staff College, Ranchi University, Aug 14, 2012.

#### **Other achievements by faculty members**

- Dr. R. Bandopadhyay was invited as chairperson at 4th Indian Youth Science Congress (IYSC-2012), Nagpur, Maharashtra, Nov 9-11, 2012.
- Dr. R. Bandopadhyay was invited as chairperson at 100 Years of Indian Science Congress, ISCA, Calcutta, Jan 3-7, 2013.
- Dr. R. Bandopadhyay has been nominated as Associate Editor in Frontiers in Genomic Assay Technology

#### **Students' contribution in Journal**

- R. S. Thakur (M.Sc. Bioinformatics 2010 batch) contributed in papers published in Frontiers in Genetics and Indian Journal of Biotechnology
- S. Karumuri (M.Sc. Bioinformatics 2010 batch) contributed in paper published in Asian Journal of Pharmacy and Life Science

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

- Ms. Ashvini Ray (BE Biotechnology 2010 batch) and Mr. Arunabh Sarkar (M Tech Biotechnology 2011 Batch) participated in 53<sup>rd</sup> Annual Conference of Association of Microbiologists of India (AMI), International Conference on Microbial World: recent Innovation and Future Trends, Organized by KIIT University, Bhubaneswar, Odisha on 22<sup>nd</sup> – 25<sup>th</sup> November, 2012.

## DEPARTMENT OF CHEMICAL ENGINEERING & TECHNOLOGY



*Injection Moulding Machine*

The Department of Chemical Engineering & Technology offers two undergraduate programme - BE(Chemical Engineering) and B.E (Chemical Engineering –Plastics & Polymers), and two post graduate programmes - ME (Polymer Engineering) and M.Tech. (Polymer Science and Technology). This academic year Department got approval of Board of Studies and Technical council for ME(Chemical Engineering) programme to be introduced from July 2013. The Department also provides facilities for Doctoral Research in Engineering and Technology in the areas related to Chemical Engineering and Polymer Science and Engineering. The Department

is a DST FIST Department, and also winner of the Gold Trophy for Plasticon Award 2012 in the category of Best Educational Institution Contributing to Plastics

The undergraduate programme BE (Chemical Engineering) imparts 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 industries – 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 Engineering –Plastics & Polymers) 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 industries, polymer processing machinery manufacturing industries and advanced level research in the field of polymer science and engineering.

The M. Tech (Polymer Science and Technology) 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. New acquisitions in the present academic year includes establishment of Process Control Laboratory [Trainers for Flow, Level, Pressure & Multi Process control with SCADA], various Liquid fuel testing equipment for Fuel Technology laboratory and augmentation of Chemical Reaction Engineering Laboratory with Isothermal, Cascade CSTR, Isothermal Batch Reactor, Isothermal Plug Flow Reactor. The facilities in the Polymer Characterization Laboratory include HAAKE Torque Rheometer, Haake Minilab Micro Compounder and micro injection Moulding, Rotational Rheometer, Malvern, Instron Tensile Testing machine, Dynamic Mechanical Thermal analyzer (TA). The major Polymer Engineering facilities are - Injection Moulding machines - 80 ton L&T Ergotech, Extrusion Blow moulding machine with parison

programming, Kolsite Film blowing plant and PVC pipe Extrusion plant, Ultrasonic welding, FDM system Stratasys for rapid prototyping, MCP-HEK vacuum casting machine for prototyping, 3 axis CNC EDM machine etc. The students are trained in various CAE applications -ASPEN Plus, Accelerlys-Material Studio for molecular simulation, MATLAB, PROENGINEER, ANSYS, CATIA, FLUENT, POLYFLOW, and MOLDFLOW etc.

The research areas in the Department include Catalytic Reaction Engineering, Multiphase Flow, 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, Fuel Cell Membrane etc. .

**DESIGN DEVELOPMENT AND TRAINING CENTRE IN PLASTICS ENGINEERING:** Department 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. Services provided by the Centre are : Product Testing Facility to the Plastics Processing Industry, Consultancy and Industry-Institute Collaborative R&D, Need based Short Term Courses to the Industry in the areas of CAD,CAE, Plastics Processing machinery operation, Mould design and fabrication, Entrepreneurship in Plastics Processing, Quality Control, etc.

**CENTRE FOR FOOD PROCESSING TECHNOLOGY & QUALITY CONTROL:** From this academic year the Department of Chemical Engineering & Technology is coordinating the activities of Centre for Food Processing and Technology. The Centre for Food Processing & Quality control received grants from Ministry of Food Processing Industries to set up Food Processing Laboratory and Quality Control Laboratory. The Centre's objective is to create adequate Human Resources for the food processing industry and to provide testing and quality control facilities to farmers, entrepreneurs and food processing industries, and to promote entrepreneurship in Food Processing by providing consultancy, and prospective entrepreneurs an opportunity to obtain test runs of their produce and develop standard operating procedure for their products. The Centre offers 3 year Undergraduate programme B.Sc. (Food Processing Technology) and proposes to start Integrated M.Sc (Food Technology). The **Food Processing Laboratory** for training and product development is a registered unit under F.P.O. Act The Food Quality Control Laboratory includes Lyophilizer, Polarimeter, Microscope, Laminar flow clean Air workstation, UV-VIS Spectrophotometer, HPLC, Digital Photofluorometer, etc.

### ONGOING PROJECTS

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Interpenetrating networks based on hydrophilic-hydrophobic acrylics	Dr. S. Goswami	DST-FAST TRACK	21.5.09	10.23	3 Years
2.	Development of Infrastructure for Polymer blends and nanocomposite Laboratory	Dr. M. Mukherjee Dr. G. Sarkhel Dr. S. Goswami Dr. A. Choudhury	DST-FIST	31.1.11	65.0	3 Years

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
3.	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
4.	Toughening of Epoxy for PAN Carbon composite	Dr.M.Mukherjee Dr. G. Sarkhel Dr Akhil Sen Dr.G.T.Mohanraj	DRDL, Hyderabad Govt. of India	12.11.10	9.47 l	3 years
5.	Characterization of thermal protection primer and thermal protection coating	Dr.M.Mukherjee Dr. G. Sarkhel Dr Akhil Sen Dr.G.T.Mohanraj	DRDL, Hyderabad Govt. of India	12.11.10	3.70	2 years
6.	Preparation of novel Poly(m-aminophenol) / functionalised carbon nanotube nanocomposite for selective sensing of aliphatic alcohols.	PI: Dr. Arup Choudhury Co-PI: Dr. Pradip Kar	DST-SERC, Govt. of India	12.01.12	Rs. 24,95,880/-	3 years

**PROJECTS COMPLETED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Modernization and Removal of obsolescence in Polymer Rheology laboratory	Dr. M. Mukherjee	AICTE		15.00	3 years
2.	Erosion resistance studies	Dr. M. Mukherjee Dr. G. Sarkhel Dr. Akhil Sen Dr. G.T. Mohanraj	DRDL, Hyderabad Govt. of India	12.11.10	3.42	2 years
3.	Enhancement of thermal resistance properties of Epoxy adhesive by adding Nano filler	Dr. M. Mukherjee Dr. G. Sarkhel Dr. Akhil Sen Dr. G.T. Mohanraj	DRDL, Hyderabad Govt. of India	12.11.10	3.50	2years



**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. G. T. Mohanraj	Workshop on "Polymers: Properties, Characterization and Applications", Conducted by	UGC-NRC-M, Indian Institute of Science, Bangalore	Indian Institute of Science, Bangalore	Indian Institute of Science, Bangalore	16 – 20 July 2012,
2.	Dr. G. T. Mohanraj, Dr S. Chatterjee (Visiting Professor)	Workshop on "Convergence of government agencies and industries for R&D funding in India",		National Institute of Technology, Durgapur	National Institute of Technology, Durgapur	26-27 July 2012
3.	Dr. G. T. Mohanraj Dr. Raghuraj	AUTOCAD training,	TEQIP CELL, BIT Mesra	TEQIP	BIT Mesra	13- 20 May 2013,
4.	M. Mukherjee, G. Sarkhel, P. Dutta, Dr S.Goswami, Dr. Akhil Sen	6th International Exhibition on Plastics - INDPLAS'12	Indian Plastic Federation	Indian Plastic Federation	Kolkata	5th -8th October 2012
5.	Mr. S. Jana	Indian Chemical Engineering congress CHEMCON-2012	IICHE	IICHE Doaba Centre and NIT Jalandhar	NIT Jalandhar	27th -30th Dec 2012
6.	Mr. S.Jana, Dr S. Datta	Industry Academia Workshop on "Simulation and Modelling in the Process Industry "	Petroleum Federaiton of India, Lovraj, Kumar Memorial Trust	IOCL	Haldia Refinery, WB	25th -28th July 2012
7.	Dr. A. K. Sen	Internatinal Coir tech,	Coir Board	Coir Board, Kerala	Cochin	12-16th August 2012
8.	Dr. A.K. Sen	3rd Natinal Symposium on Agricultural Production and Protectin incontext of climate change	BAU Ranchi	BAU Ranchi	BAU,Ranchi	3rd to 5th Nov. 2012
9.	Dr M. Jhansi and Ms D. Ghosh	MATLAB Training	TEQIP	BIT Mesra	BIT Mesra	24th June -1st July 2013

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10.	Jhansi Lakshmi Kishore	21st National Symposium on Catalysis	IICT, Hyderabad	IICT, Hyderabad	IICT, Hyderabad	10-13th February 2013,
11.	Sudeepan J,	4th International Conference on Advancements in Polymeric Materials	CIPET, Chennai,	CIPET, Chennai,	CIPET, Chennai,	Mar 01 – 03, 2013
12.	Sudeepan J,	2nd International Conference on Advanced Manufacturing and Automation	Kalasalingam University, Tamil Nadu,	Kalasalingam University, Tamil Nadu,	Kalasalingam University, Tamil Nadu,	Mar 28 – 30, 2013
13.	Dr. Suman Datta	Short Term Program on “Exploration, Production and Refining of Petroleum”		Chemical Engineering Department, National Institute of Technology Durgapur, West Bengal	National Institute of Technology Durgapur, West Bengal	January 7-11, 2013
14.	Baijnath Mahto/	Workshop on CNC-EDM, CNC-Wirecut, CNC-Milling	TEQIP	Jharkhand Mini tool Room & Training Centre	Tatisilwai, Ranchi	10-29th June'13
15.	Ramkishor Mahto	Workshop on CNC-EDM, CNC-Wirecut, CNC-Milling	TEQIP	Jharkhand Mini tool Room & Training Centre	Tatisilwai, Ranchi	10-29th June'13

## PUBLICATIONS

### *PUBLISHED IN INTERNATIONAL JOURNALS*

S. No	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
1.	Kalpana Kiran, Atal Behari Panda, Partha Pratim Sharma, Indrani Banerjee, Sudipta Goswami	Study of Drug Transport Phenomenon of Acrylic IPNs Embedded with Iron Oxide Nanoparticles,,	International Journal of Polymeric materials and Polymer Biomaterials,	62, 9, 509-516,2013	2013	0091-4037



S. No	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
2.	Archana Kumari, Gautam Sarkhel and Arup Choudhury	Effect of polyvinylpyrrolidone on separation performance of cellulose acetate-polysulfone blend membranes	Journal of Macromolecular Science, Part A: Pure and Applied Chemistry	Vol. 50, Page: 1-11	2013	1060-1325
3.	Arup Choudhury, Jeong-Hyun Park and Soo-Young Park.	Effect of HI-reduction of graphene oxide on electrical properties of BBL/graphene nanocomposites.	Macromolecular Research	Vol. 21 Iss. 11, Page: 1254-1262	2013	2092-7673
4.	Sreejith K. R., A. K. Sen	A new high temperature Lithium para-toluene sulfonate (LIPTSA) salt for rechargeable batteries	Int. J. Polymer Mat	62, (2013), 145-149.	2013	0091-4037
5.	Siddhi Gupta, Bikramjit Basu, Greeshma T., Sudipta Goswami Arvind Sinha,	Stiffness and wettability-dependent myoblast cell compatibility of transparent Poly (vinyl alcohol) hydrogels,	Journal of Biomedical Material Research :part b:Applied Biomaterials,	101B (2) 346-354,	2013	1552-4981
6.	Jagesh Ranjan, Kalpana Mahato, Sudipta Goswami,	Mechanical and Morphological Properties of Vinyl Ester /Guar Gum Treated Sisal Fibre Composites,	International Journal of Engineering Research and Technology	Vol.2, 12,	2013	2278-0181
7.	Arup Choudhury	Preparation, characterization and dielectric properties of polyetherimide nanocomposites containing surface-functionalized BaTiO <sub>3</sub> nanoparticles.	Polymer International	Vol. 61 Iss. 5, Page: 696-702	2012	1097-0126
8.	Arup Choudhury, Hun Wook Ha, Tasheen Kamal, Dong-Hun Kim and Soo-Young Park.	Effect of chemical modification of graphene on mechanical, electrical and thermal properties of polyimide/graphene nanocomposites.	Applied Materials & Interfaces	Vol. 4 Iss. 9, Page: 4623-4630	2012	1944-8244
9.	Arup Choudhury, Jeong-Hyun Park, B.L. Farmer, T.D. Dang Soo-Young Park.	Chemically modified graphene/polybenzimidazobenzophenanthroline nanocomposites with improved electrical conductivity.	Polymer	Vol. 50, Iss. 18, Page: 3937-3945	2012	0032-3861

S. No	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
10.	Suman Dutta, Projjwal Sarkar, Chiranjib Bhattacharjee, Siddhartha Datta	Performance comparison of rotating disk ultrafiltration membrane module, a high shear device with cross-flow module	Int. J. Environment and Waste Management	49 (3), 197-209	2012	1478-9868
11.	Papita Das Saha, Suman Dutta	Mathematical modelling of biosorption of safranin onto rice husk in a packed bed column using artificial neural network analysis	Desalination and Water Treatment	41 (2012) 308-314	2012	1944-3994
12.	Suman Dutta	Applications and Development of Nanomaterials and Nanotechnology: Role of Chemical Engineers	Recent Patents on Chemical Engineering	5 (3), 197-205	2012	2211-3347
13.	A. Singh, K. Yadav, A. K. Sen	Sal (Shorea Robusta) Leaves Lignin Epoxidation and Its use in Epoxy Based Coatings	Am. J. Polymer Sci..	2(1), (2012), 14-18	2012	2163-1344
14.	A. K. Sen, S. Roy, V. A. Juvekar	On the Importance of Purification of Sodium Polystyrene Sulfonate	ISRN Analytical Chemistry	2012, 5	2012	2090-732X
15.	S. K. Ghosh, Gulzar Waghoo, K. Rajesh Kumar, Faisal Ansari, Kapil Yadav, A. K. Sen,	Effect of silane modification of calcite and talc on the epoxy coating formulations	Progress in Organic Coatings	75, (2012), 14-19	2012	0300-9440
16.	S. Shekhar, M. Mukherjee and A.K.Sen	Synthesis characterization and protein separation efficiency of N-Isopropylacrylamide-co-N-Tertiary butylacrylamide-co-Acrylamide based hydrogels	Iran. Polym. J.	2012), 21(12), 895-905.	2012	1026-1265
17.	S. Shekhar, M. Mukherjee and A.K.Sen	Studies on thermal and swelling properties of Poly (N-Isopropylacrylamide-co-2-Hydroxyethylacrylate) based hydrogels	Adv. Mat. Res.	1(4), (2012), 267-282.	2012	1662-8985
18.	S. K. J Rahaman, M. Mukherjee and Gautam Sarkhel	Effect of Zirconium Phosphate on Structural, Thermal and Electrical Properties of Polyether Sulfone (PES) Membrane	International Journal of Polymeric Materials	61:655-668, 2012	2012	0091-4037

S. No	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
19.	Archana Kumari, Arup Choudhury and Gautam Sarkhel	Effect of Tetraethylorthosilicate (TEOS) on Structural, Thermal and Morphological Properties of Cellulose Acetate (CA) Membrane	Journal of Progress in Rubber, Plastics & Recycling Technology	Vol 28 No. 3, 2012	2012	1478-2413
20.	S. saw, Gautam sarkhel and Arup Choudhury	Preparation and Characterization of Chemically Modified Jute-Coir Hybrid Fibre Reinforced Epoxy Novolac Composites	Journal of Applied Polymer Science	Volume 125, Issue 4, 2012, Pages: 3038-3049.	2012	1097-4628
21.	Archana Kumari, Gautam Sarkhel and Arup Choudhury	Preparation and Characterization of Polyvinylpyrrolidone Incorporated Cellulose Acetate Membranes for Ultrafiltration of Metal Ion	Journal of Applied Polymer Science	Volume 124, Issue S1, Pages: E300-E308	2012	1097-4628
22.	Joyati Sankar Borah, Gautam Sarkhel, Tapan K Chaki	Simultaneous effect of organoclay and controlled peroxide curing on dielectric properties and flammability of LLDPE/ EMA blend	Polymer Bulletin	Volume 68, Number 9, 2012, Pages 2255-2267.	2012	0170-0839
23.	F, Ansari, B, Baboo, D. N. Goswami, Gautam Sarkhel	Changes in the properties of shellac on blending with rosin, effect on storage	Pigment & Resin Technology	vol. 42, Issue 4, 2012.	2012	0369-9420
24.	Gautam Sarkhel, Sanjay Manjhi	Effect of Compatibilizer on The Dynamic Mechanical and Electrical Properties of Kaolin Clay Reinforced EPDM Rubber	Science Malaysian Journal	Volume 42 Number 4, 2013	2012	1394-3065
25.	Rajput, Amit; Sarkhel, Gautam; S. K. J. Rahaman Patra, Manoj; Vadera, S; Singru, Pravin; Yagci, Yusuf; Ghosh, Narendra	Synthesis, characterization and properties of flexible magnetic nanocomposites of $\text{CoFe}_2\text{O}_4$ -polybenzoxazine- LLDPE	Journal of Applied Polymer Science	DOI: 10.1002/app.38426.	2013	1097-4628

S. No	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
26.	S. saw, Gautam sarkhel, Arup Choudhury	Effect of layering pattern on the physical, mechanical and thermal properties of jute/ bagasse hybrid fibre reinforced epoxy novolac composites	Polymer Composite	Vol. 33, Iss. 10, Pages: 1824-1831	2012	1548-0569
27.	Amit Balsing Rajput, Seikh Jiyaar Rahaman, Gautam Sarkhel, and Narendra Nath Ghosh	Preparation and characterization of flexible polybenzoxa-zine- LLDPE composites	Designed Monomers and Polymers	Volume 16, Issue 2, 2013	2013	1568-5551
28.	F, Ansari, B, Baboo, D. N. Goswami, Gautam Sarkhel	Effect of temperature on coating properties of shellac-novolac blends	Pigment & Resin Technology	vol 42, issue 5, 2013	2013	0369-9420
29.	F, Ansari, B, Baboo, D. N. Goswami, Gautam Sarkhel	Effect of butylated melamine formaldehyde resin on coating properties of shellac - rosin blends	Asia pacific Coatings Journal	Vol 25, No. 5, 35-38, 2012.	2012	1468-1412
30.	Amit B. Rajput <sup>1</sup> , Seikh J. Rahaman, Gautam Sarkhel, Manoj K. Patra, Sampat R. Vadera and Narendra N. Ghosh	Preparation, characteri-zation and properties of flexible magnetic nano-composites of NiFe <sub>2</sub> O <sub>4</sub> -polybenzoxazine-LLDPE	Polymer-Plastics Technology & Engineer-ring (PPTE)	Accepted	2013	0360-2559
31.	G.T.Mohanraj, B.Kumar, P. Guegan, V. Celton, M. Castro and J.F.Feller	Novel biopolyester-carbon nanotubes nanocomposite thin films for vapor sensing	Sensors & Actuators A: Physical	Accepted	2013	0924-4247

**PUBLISHED IN NATIONAL JOURNALS**

S. No	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
1.	Suman Dutta	Dynamic simulation of Batch Photocatalytic Reactor (BPR) for wastewater treatment	Journal of the Institution of Engineers (India): Series E	August 2012, Volume 93, Issue 1, pp 25-30	2012	2250-2483
2.	A. K. Tiwari, A.S Bidyarthi	Jackfruit Jam: Preparation Nutritive value and storage stability.	PHARMBIT	XXV-XXVI 33-43	2012	0973-6204

**PUBLISHED IN INTERNATIONAL PROCEEDINGS**

S. No.	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
1.	S. Goswami	Dynamic Mechanical Properties and Morphology of Poly(Vinyl Chlorite/ Poly(Methyl Methacrylate) Interpenetrating Network	Int. Conf. on advancements in polymeric materials	Proceedings	2013	
2.	J. Sudeepan, K Kumar, T K Barman, P Sahoo	Study of tribological and mechanical properties of ABS/CaCO <sub>3</sub>	4th International Conference on Recent Advances in Composite Materials	Proceedings	2013	
3.	Sudeepan J, Kumar K, Barman T K, Sahoo P	Study of tribological and mechanical properties of ABS/TiO <sub>2</sub>	4th International Conference on Advancements in Polymeric Materials	Proceedings	2013	
4.	J. Sudeepan, K Kumar, T K Barman, P Sahoo	Comparative Studies of tribological and mechanical properties of ABS/CaCO <sub>3</sub> and ABS/TiO <sub>2</sub>	2nd International Conference on Advanced Manufacturing and Automation	Proceedings	2013	
5.	Neerja Shukla, S.Roy, G.T.Mohanraj, A.K.Sen	Effect of hydrophobic forces on the large scale production of free flowing nanosilica particles from sodium silicate	International Conference on Advancements in Polymeric Materials (APM 2013)	Proceedings	2013	
6.	Ankita Singh and A.K.Sen	Bio based Cellulosic Plastic form Sugarcane Bagasse	8th International Plastics Exhibition & Conference	Proceedings	2012	
8.	G.T.Mohanraj and Amit K. Jha	Synthesis and Characterization of Polyaniline Nanofibers-Silver Nanoparticles Hybrid Nanocomposites for EMI Shielding application	ANTEC 2012, SPE International Conference, Mumbai	Proceedings	2012	

S. No.	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
9.	S. Kumari, A. Anjum, G Sarkhel	Studies on Mechanical and Morphological properties of Sisal Fibre Reinforced epoxy composite	International Conference on Advancements in Polymeric Materials (APM 2013)	Proceedings	2013	
10.	Ansari, M.F., Sarkhel, G., Goswami, D.N. and Baboo, B.	Lac: a natural binder for green panels	International Conference on "Future of panel industry: Challenges and Key Issues"	IPIRTI, Bangalore, September 26-28, 2012	2012	
11.	Ansari, M.F., Sarkhel, G., Goswami, D.N. and Baboo, B.	Effect on the properties of shellac-rosin blends during storage	International Symposium on Grain Storage	GBPUA&T, Pantnagar, Uttarakhand, February 18-20 2012	2012	

#### ***PUBLISHED IN NATIONAL PROCEEDINGS***

S. No.	Author	Title	Journal/ proceeding name	Issue No. vol. no. pp	Year	ISSN
1	M. Jhansi Lakshmi Kishore and Kim Dong Hyun	Anodized Aluminum Oxide (AAO) catalyst for DME synthesis	21st National Symposium on Catalysis	Proceedings	2013	--

#### **BOOKS:**

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

Polymeric IPNs for Biomedical Application, edited by Munmaya Mishra : Encyclopedia of Biomedical Polymers and Polymeric Biomaterials, Sudipta Goswami, Kalpna Kiran, accepted, Taylor & Francis, Encyclopedia Program, Taylor & Francis Group, 711 Third Avenue, 8th Floor, New York, NY 10017 U.S.A.

#### ***AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )***

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. Arup Choudhury	Brain-Korean 21 National Fellowship	Govt of Korea Kypook National University, South Korea	2011-12
2.	Dr. Arup Choudhury	Post Doctoral Fellow	at University of Texas at Dallas, US	2012 September for 1 year



**MOUS / COLLABORATIONS**

S. No.	Name of Organisation / 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 with Dr Gautam Sarkhel in the area of coating materials based on natural resin	2009
4.	United Technology Research Centre, CT, USA	Joint Research in the area of Direct Contact Membrane Distillation	2009
5.	Shalimar Paints, Mumbai	Collaborative Research with Dr Akhil Sen	2010
6.	Central Institute of Fresh water Aqua culture, Bhubaneswar	Collaborative Research with Dr Akhil Sen	2011-12
7.	BITS Pilani, Goa Campus	Collaborative research With Dr. Gautam Sarkhel	2011-12
8.	National Chemical Laboratories Pune	Collaborative Research with Dr G.T. Mohanraj	2012

**DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Students' co ordinator, if any	Date/ Duration
1.	Vocational training at AdityaBirla Chemicals, MECON Ltd, SAIL R&D, SAIL Bookaro, IOCL Barauni, IOCL Haldia, IOCL Panipat, Orient Paper mills, Haldia Petrochemicals Haldia, Exide Industries, Haldia, Dabur India Ltd. Haldia Petrochemicals Application centre, Kolkata, CMPDI, Ranchi,	-	May June 2013
2.	Industrial visit to Bokaro Steel Plant All students of V Semser BE (Chemical Engg) BE (Chemical Engg-Plastics and Polymers)	-	22 <sup>nd</sup> September 2012
3.	IICHE students Chapter organized Induction Ceremony/ Quantitative aptitude/Group Discussion/Personal Interview training	G.Bhowmik, Sangeeta Kumari, S.Saini	10 <sup>th</sup> -12 <sup>th</sup> Dec 2012
4.	IICHE students Chapter organized T Shrit Design Contest with theme "Deptt of Chemical Engineering & Technology	Tarash Jain, Ashish Kumar, G. Bhowmik	20 <sup>th</sup> Jan 2013
5.	IICHE students Chapter organized Career Counselling session by Mr. Praphulla Tewary, an ex student of the Department, presently pursuing research at Queens University of Canada after working in Haldia Petrochemicals for several years	Ezaz, G.Bhowmik, Ekta Andani, Rupal Shrivastava	31 <sup>st</sup> Jan, 2013
6.	IICHE students Chapter published e News Letter	G. Bhowmik	
7.	Team of students from the Department participated in Students symposium ChemInsight'13, held at IIT Kharagpur	G. Bhowmik S.Kumari	8 <sup>th</sup> - 10 <sup>th</sup> March 2013

S. No.	Name of the Activity	Students' co ordinator, if any	Date/ Duration
8.	Final year students were placed in companies like IOCL, Balkrishna Tyres, ACC Ltd, PWC India,		
9.	Students excelled in GATE Examination obtained high ranks and two students are pursuing Masters at IIT Kharagpur		

### RESEARCH SCHOLARS

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1.	Presented paper Natural fibre/vinyl ester composites-morphology & mechanical properties at ANTEC 2012, SPE International conference, Mumbai	Ms Kalpana Mahato	6-7 <sup>th</sup> Dec 2012
2.	Presented paper Lac: A natural binder for green panels at IPIRTI, Bangalore, September 26-28, 2012	Mr M.F. Ansari	26 <sup>th</sup> to 28 <sup>th</sup> September 2012
3.	Presented paper Effect of hydrophobic forces on the large scale production of free flowing nanosilica particles from sodium silicate at International Conference on Advancements in Polymeric Materials (APM 2013)	Neerja Shukla	Mar 1-3 2013
4.	Presented paper "Drug Release Kinetics of Acrylic – IPN gel filled with Iron oxide" at Nanoparticles 1 <sup>st</sup> International Workshop on Nanomaterials (IWON), Engineering Photon and Phonon Transport, school of Materials Science & Nanotechnology, Jadavpur University, Kolkata	Ms Kalpana Kiran	14 <sup>th</sup> – 15 <sup>th</sup> Dec2012

### BOARD OF STUDIES(UG/PG)

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

a.	Prof. (Mrs. ) M. Mukherjee	Chairman
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c.	Dr. (Mrs.) S. Goswami	Member
d.	Dr. Akhil Kumar Sen	Member
e.	Dr. G. T. Mohan Raj	Member
f.	Dr. (Mrs.) M. Jhanshi L. Kishore	Member
g.	Dr. A. Kumar, Head, Dept. of Mechanical Engg	Member
h.	Dr. J. K.Prasad, Head, Dept. of Space Engg. & Rocketry	Member

#### Panel of External Expert from Institute

1. Prof. A. K. Ghosh, Centre for Polymer Science and Engineering, IIT, Delhi
2. Prof. A. N. Samanta Dean PG and Research, Dept. of Chemical Engineering, IIT, Kharagpur
3. Prof. P. Sarkar, Dept. of Polymer Science and Technology, University of Kolkata
4. Prof. Parthapratim Gupta, Dean Research and Consultancy, Dept. of Chemical Engineering, NIT, Durgapur

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1. Mr. K.K. Thakur, Retd. G.M., Coal and Chemicals, MECON Ranchi.
2. Dr Samik Gupta, Senior Scientist, SABIC Global research Centre, Bangalore

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- |                                     |                   |
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| d. Dr. Akhil Kumar Sen              | Member            |
| e. Dr. G. T. Mohan Raj              | Member            |
| f. Dr. (Mrs.) M. Jhanshi L. Kishore | Member            |
| g. Dr. Arup Choydhury               | Member            |
| h. Dr. (Mrs.) U. Jha                | Member            |
| i. Dr. J. K. Prasad                 | Member            |

**Panel of External Expert from Institute**

1. Prof. A. K. Ghosh, Centre for Polymer Science and Engineering, IIT, Delhi
2. Prof. A. N. Samanta, Dept. of Chemical Engineering, IIT, Kharagpur
3. Prof. P. Sarkar, Dept. of Polymer Science and Technology, University of Kolkata
4. Prof. Parthapratiim Gupta, Dean Research and Consultancy, Dept. of Chemical Engineering, NIT, Durgapur
5. Prof. B. Adhikari, Material Science Centre, IIT, Kharagpur
6. Prof A.K. Datta, Department of Food and Agriculture Engineering IIT Kharagpur
7. Prof A.K. Chauhan, Centre for Food Science and Technology, BHU,

**Panel of External Expert from Industry**

1. Dr. Samik Gupta, Sr. Scientist, SABIC Global Research Centre, Bangalore
2. Mr. K.K. Thakur, Retd. G.M., Coal and Chemicals, MECON Ranchi.

**Departmental Academic Committee:**

- |                                    |          |
|------------------------------------|----------|
| a. Head of the Department          | Chairman |
| b. Prof. (Mrs. ) M. Mukherjee      | Members  |
| c. Dr. Gautam Sarkhel              | Members  |
| d. Dr. (Mrs.) S. Goswami           | Member   |
| e. Dr. Akhil Kumar Sen             | Member   |
| f. Dr. G. T. Mohan Raj             | Member   |
| g. Dr. (Mrs) M. Jhanshi L. Kishore | Member   |
| h. Dr. (Mrs.) U. Jha               | Member   |
| i. Dr. J. K. Prasad                | Member   |

### Other Important Information

Department of Chemical Engineering and Technology participated in 6th International Exhibition on Plastics - INDPLAS'12 – held at Science City Kolkata from 5th to 8th October 2012. Research and academic activity were displayed in the stall with poster and LCD projector. During four days exhibition participating teachers and students were interacted with several industry people and academicians. Teachers attended Dr. Gautam Sarkhel, Dr. S. Goswami, Dr. Akhil Sen, Mr. Pulak Dutta. Supported by S. Sengupta, Ramkishore Mahato, Baijnath Mahato, S. J. Rhaman, Suman Sekhar, Gaurav Bhowmik, Sangeeta Kumari

1. Dr S. Goswami invited to deliver Invited Lecture on “Dynamic Mechanical Properties and Morphology of Poly(Vinyl Chloride)/Poly(Methyl Methacrylate) Interpenetrating Polymer Network,” at International Conference on Advancements in Polymeric Materials,, Innovation in Materials and Product Development, Lucknow, organized by Advanced Research School for Technology and Product Simulation, R&D Wing of CIPET, March, 01-03, 2013
2. Dr S. Dutta, Dr M.Mukherjee visited PRAXAIR at Durgapur in connection with collaborative UG Project guidance in the area of Process Control and Condenser design in Air Separation Unit.
3. Dr. Siddhartha G. Chatterjee, Associate Professor Department of Paper and Bioprocess Engineering, New York, SUNY-ESF Syracuse, US, was in the Department as Visiting Professor. He took classes on Project Engineering and
4. Participated in collaborative research in July 2012.
5. Prof A.N.Samanta, IIT Kharagpur, and Prof P.P.Gupta, NIT Durgapur, attended Board of Studies Meeting to approve ME(Chemical Engineering) curriculum.
6. Mr J Sudeepan coordinated “AUTOCAD” organized by TEQIP.
7. Department offered testing facilities especially PVC pipe testing for Minor Irrigation Department, Govt of Jharkhand, and Tensile testing facilities of Indian Lac Research Institute
8. Dr. (Mrs) M. Jhanshi L. Kishore and Dr. RaghuRaj Pandya joined the department and Dr. Suman Datta left the Department

## DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil engineering was established in the year 1957. It is one of the oldest departments and has the infrastructure and facilities to match with the very best in the country. It has all the ingredients for imparting necessary knowledge in providing better quality of life. The range includes topics of general nature and service to mankind. Buildings, Roads and Highways, Railways, Tunnels and Bridges, Dams and Canals, Docks and Harbours, Airports, Water Supply and Drainage works, Tower Structures and Skyscrapers, all fall within its remain. The Civil Engineering discipline offers wide scope to students in terms of promising career opportunities and professional advancement.



*Digital Triaxial Test Equipment*

### SPONSORED PROJECTS

#### PROJECT SANCTIONED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	" Behavior of piled raft foundations in layered soils under eccentric vertical loading"	Dr. Siddhartha Sengupta	Department of Science & Technology, Govt. of India	01.09.2012	Rs.8.10 Lac	3 Years
2.	" Interference of two closely spaced strip footings carrying eccentric loads in sand"	Dr. Siddhartha Sengupta	Council of Scientific & Industrial Research, Govt. of India	15.05.2013	Rs. 6.10 Lac	3 Years

#### ONGOING PROJECTS

S. 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 Surkha(north) lignite mines	Dr. Indrajit Roy	Gujrat Mineral Development Corporation	4 <sup>th</sup> May 2013	Rs. 5.00 Lac	5 Months
2	Slope Stability Study of Gare-Pelma-II	Dr. Indrajit Roy	Lanco,India	8 <sup>th</sup> April 2013	Rs. 2.50 Lac	3 Months



**PROJECTS COMPLETED**

S. 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 guidelines for safe dump profile of dragline mines of Coal India	Dr. Indrajit Roy	Coal India Limited R&D Grant	21 <sup>st</sup> Jan 2010	Rs. 59.00 Lac	3 Years
2.	Slope Stability Study of Mahan coal block	Dr. Indrajit Roy	Essar-Hindalco Joint Venture company	29 <sup>th</sup> March 2012	Rs. 4.50 Lac	3 Months
3.	Slope Stability Study of Fatehpur coal block	Dr. Indrajit Roy	Visa Power & others Joint Venture company	June 2012	Rs. 3.50 Lac	3 Months
4.	Slope Stability Study eastern quarry of Umrer ocp	Dr. Indrajit Roy	Western Coalfield Limited	4 <sup>th</sup> December 2012	Rs. 3.00 Lac	6 Months
5.	Slope Stability Study of OB Dumps of Gondegaon ocp	Dr. Indrajit Roy	Western Coalfield Limited	Dec 2011	Rs. 3.50 Lac	1 Year
6.	Slope Stability Study of OB Dumps of Ukni ocp	Dr. Indrajit Roy	Western Coalfield Limited	Dec 2011	Rs. 3.50 Lac	1 Year
7.	Slope Stability Study of OB Dumps of Chinda ocp	Dr. Indrajit Roy	Western Coalfield Limited	August 2012	Rs. 3.50 Lac	3 Months

**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. Anand Kumar Sinha	Workshop on "Training and Identification of Master Trainers on New Outcome based Accreditation Process"	National Board of Accreditation	KIIT, Bhubaneswar, Odisha	31 <sup>st</sup> Aug to 2 <sup>nd</sup> Sept, 2012.
2.	Dr. Anand Kumar Sinha	Workshop on "Outcome based Accreditation Process and Parameters"	National Board of Accreditation	DTU, Delhi	21-22 <sup>nd</sup> Sept, 2012
3.	Dr. Anand Kumar Sinha	Summit for Vice-Chancellors and Directors on 'Next Era of Education'	Hewlett-Packard,	Kolkata, W.B	19-20 <sup>th</sup> April, 2013



## PUBLICATIONS

### Published in International Journals

1. Indrajit Roy, " Development of Guidelines for Safe Dragline Dump Profile under Geo-Engineering Conditions of Coal Mines in Coal India " at International Journal of Computer Science & Management studies, Vol.13, Issue 02, May 2013 ISSN(Online): 2231-5268(www.ijcsms.com).

### Papers/Abstracts in Conference Proceedings Reference to Proceedings:

1. Jitu Kujur & B.Bhattacharjee, 'Study of corrosion rate in carbonated concrete,' International UKIERI Concrete Congress on 'Innovations in Concrete Construction,' during March 5-8, 2013 at NIT Jalandhar, Punjab, India.

## BOOKS

Dr. Indrajit Roy

1. One Chapter of a book "Coal Mining and Management" Oct 2012. Published by Khanna Prakashan, Bilaspur.

### Reference to a chapter in an edited book:

1. Dr. Indrajit Roy, Slope Stability, S.P Mathur & N.K. Singh. Coal Mining and Management, Khanna Prakashan, Mawal Niketan, Gulab Nagar, Seepat Road P.O. Mopka, Bilaspur, 2012

### AWARD / RECOGNITION BESTOWED ON FACULTY ( STATE / NATIONAL / INTERNATIONAL )

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr. Indrajit Roy	Invited Lecture	Surface Mining Reclamation and enforcement, Pittsburgh (US Govt. Regulatory Body)	October, 2012.

### DEPARTMENTAL STUDENTS' ACTIVITIES

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	Aarohan-Inter College Civil Fest	Shakti Avasthy	25-27 January '13
2.	Rubik's Cube	Rakesh Kumar	11-12 August '12
3.	STAAD. Pro Workshop	Mayank Jain	8-10 March '13
4.	Pantheon '12 Cyberbridgeton, Bridge D Gap	Shakti Avasthy	29 Sept – 1 October '12
5.	Bitotsav '13 Cyberbridgeton, R U Sensible?	Shakti Avasthy	19-23 March '13
6.	AutoCAD Workshop	Pratik Kumar	10-12 Sept '12
7.	Disaster Management	Pratik Kumar	5th March '13

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

- |    |  |          |
|----|--|----------|
| a. | Head of the department of Civil Engineering                | Chairman |
| b. | Prof. Balram Singh (Professor, Dept. of Civil Engg.)       | Member   |
| c. | Prof. Gopal Pathak (Professor, Dept. of Civil Engg.)       | Member   |
| d. | Prof. Anand Kumar Sinha (Professor, Dept. of Civil Engg.)  | Member   |
| e. | Dr. Arun Kumar (Associate Professor, Dept. of Civil Engg.) | Member   |

f.	Dr. Avijit Burman (Assistant Professor, Dept. of Civil Engg)	Member
g.	Dr. R.P. Sharma (Associate Professor, Dept. of Mechanical Engg.)	Member
h.	Dr. A.C. Pandey (Associate Professor, Dept. of Remote Sensing)	Member
i.	Prof. R.P. Sharma (Ex. Head of the Dept. of Civil Engg., BIT, Sindri)	Member
j.	Er. K.K. Chatterjee (G.M. Civil, CMPDI, Kanke Road, Ranchi-834008.)	Member

### **Departmental Academic Committee**

a.	Head of the Department	Chairman, Ex-officio
b.	Prof. Balram Singh	Member
c.	Prof. Gopal Pathak	Member
d.	Prof. Anand Kumar Sinha	Member
e.	Prof. Rajeev Ranjan Sahay	Member
f.	Prof. S. Chakravarty	Member
g.	Dr. Arun Kumar	Member
h.	Dr. Bindhu Lal	Member
i.	Dr. B.K.Singh	Member
j.	Dr. Indrajit Roy	Member
k.	Dr. Avijit Burman	Member
l.	Dr. R.P. Sharma (Mech. Engg.)	Member
m.	Dr. A .C. Panday (Remote Sen.)	Member

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Computer Laboratory

The Department of CSE was established in the year 1983 and is now recognized as one of the leading departments 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 career. The other goal is to create and disseminate knowledge to improve Computer Science research, education and practice.

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

Programmes Offered	Intake
B.E in Computer Science (4 years : 8-semesters)	120
M.E. in Software Engineering (2 years: 4-semesters)	15
M.Tech in Computer Science (2 years: 4-semesters)	16
Ph.D. Programmes	

**Facilities:** The Department is equipped with four laboratories with over 180 computers available for conducting laboratory sessions in diverse topics like in (i) Programming languages : C, C++, Java, Oracle. (ii) Matlab for Soft Computing and Image Processing (iii) Rational Rose for Software Engineering and (iv) Laboratories for Networking, Multimedia, Simulation, Parallel Computing etc . All the Laboratories are internally networked allowing students to remotely access any particular resource at any point in time.



**Areas of Research:** Bioinformatics, DNA Computing, Parallel Computing, Grid Computing, Image Processing, Robotics, Intelligent Systems, Rough Sets, DNA Nanorobotics, Software Engineering, Sensor Networks, Data Mining, Pattern Recognition, Natural Language Processing etc.

### ON GOING PROJECTS

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	A Non-Invasive method to treat brain blood clot through Nano-Robot	Dr. Sanchita Paul	AICTE	April 2011	4 Lakh	31st March, 2014



**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Amritanjali	Fourth International Conference on Advances in Recent Technologies in Communication & Computing	BIT, Mesra	ACEEE	Bangalore	October 19-20, 2012
		Third International Conference on Computational Systems Biology & Bioinformatics	BIT, Mesra	King Mongkut's University of Technology, Thornburi	Bangkok	October 3-5, 2012

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

1. Amritanjali and G Sahoo, Exploring the Solution Space of Sorting by Reversals: A New Approach, International Journal on Information Technology, vol. 3, pp. 98-104, 2013.
2. K.K. Senapati, Arindam Kotal "A New Algorithm to Find longest Common Subsequence's" International Journal of Scientific and Engineering Research (IJSER). Vol. 4, Issue 5, P 664-669, May 2013.
3. K.K. Senapati, Gyanendra Tiwari "Reconstruction of Partially Damaged Facial Image" International Journal of Research in Engineering & Technology (IJRET). Vol. 2, Issue 5, P 787-792, May 2013.
4. K.K. Senapati, D.R. Das Adhikari and G .Sahoo " An Application of Pattern matching algorithm for Motif Identification" International Journal of Biometrics & Bioinformatics (IJBB). Vol. 6, Issue 5, P 38-47, October 2012.
5. K.K. Senapati and Sandip Mal "Bone Mark Analysis Using Image Processing" Fourth International Conference on Advances in Recent Technologies in Communication and Computing, (ARTCom) 19-20 October 2012. Bangalore, India. Springer LNCS.
6. K.K. Senapati and Sandip Mal "Feature Extraction of Tooth Morphology for Human Identification". International Journal of Bio Engineering and Technology (IJBET). Vol. 3, Issue 3, P 12-17, September 2012.
7. K.S. Patnaik, Lipika Jha," A Proposed Method for Interprocedural Slicing", International Journal of Software Engineering" Vol 6, pp 83-96, January, 2013 .
8. K.S. Patnaik, P.Jha, "Comaprative Analysis of COCOMO81 using various Fuzzy Membership Functions", International Journal of Computer Applications, Vol-58, No.14, pp 20-27, Nov-2012.
9. P. Paul, B.S. Rawat, S.K. Ghorai," Traffic grooming in WDM optical network with grooming resources at Max Connectivity node", Optical Fiber Technology, 18, pp. 490-497, 2012.
10. P. Paul, B.S. Rawat, S. K. Ghorai," Dynamic Traffic Grooming in WDM optical Networks with full wavelength conversion and Grooming Devices on Max-Connectivity Nodes". Int Journal of Computer Application.vol. 57, pp.19-29, 2012
11. Shruti Garg, G. Sahoo, Crack Classification and Interpolation of Old Digital Paintings, published in International Journal of Computer Sciences and Applications, ISSN 2328-725X, Vol. 1, Issue 5, June 2013, 85-90, Sciepub

12. Suchismita Das, Shruti Garg, G. Sahoo, Comparison of Content Based Image Retrieval System using Wavelet Transform and Curvelet Transform, published in International Journal of Multimedia and Its Applications(IJMA), Vol 4, No. 4, Aug 2012, 138-154, AIRCC
13. Suchismita Das, Shruti Garg, G. Sahoo, Comparison of Content Based Image Retrieval System using Wavelet Transform, published in Advances in Computer Science, Engineering & Applications, Volume 166, 2012, pp 639-648, Springer.
14. Sahana,S,K., Al-Fayoumi,M., Jain,A and Mahanti,P,K, "Solution of Traveling Salesman Problem Using Hybrid Ant Colony Algorithm", Advances in Information Technology and Applied Computing, Volume (1), pp 11-16, ISSN 2251-3418.2012
15. Saha Sujan Kumar, Mitra Pabitra, Sarkar Sudeshna, "A Comparative study on feature reduction approaches in Hindi and Bengali named entity recognition, Knowledge Based Systems, Elsevier, Vol. 27, pp 322-332, Thomson Reuter's Impact factor:4.104.
16. Sanjaya Shankar Tripathy and R. Sukesh Kumar, "Perceptual Similarity Based Image Retrieval Systems using Relevance Feedback" European Journal of Scientific Research, Vol.96, No. 1, pp 117-125, Feb. 2013.
17. Paul, S., Dipti, "Nanorobots: Survey on Recent Developments in Medical Application", International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE), Volume 2, Issue 4, April 2012, pp: 366-369.
18. Paul S and Dipti, "Biological Nanorobot Architecture for Medical Target Identification." International Journal Pharmaceutical Sciences and Research, July 2012; Vol. 3(7), pp. 2006-2010.
19. Paul, S., Dipti., "Review : Hardware Architecture for Nanorobots in Medical Applications", International Journal of Advanced Research in Computer Science (IJARCS), Vol. 3, No. 3, pp 14-20, 2013.
20. Paul, S., Dipti., "Biological Nanorobot for Medical Target Identification", International Journal of Computer Science Issues (IJCSI)", ISSN(online):1694-0784, 2013.
21. AKSHAT DHINGRA, SANCHITA PAUL., "A Survey of Energy Efficient Data Centres in a Cloud Computing Environment", International Journal of Advanced Research in Computer and Communication Engineering, Vol. 2, Issue 10, pp 4033-4040, October 2013.
22. S. Paul, G. Sahoo., "SWSA -LPR: A stochastic search strategy for estimation of ML DNA Phylogenetic tree", Applied Soft Computing, Elsevier, 18c, pp 104-114, 2014.
23. AKSHAT DHINGRA, SANCHITA PAUL., "Towards energy efficient data centre resource allocation", International Journal of Engg. research and technology, March 2014. (Accepted and in press).
24. Kumari, Sweta, and Shashank Pushkar. "Performance Analysis of the Software Cost Estimation Methods: A Review." International Journal 3.7 (2013).
25. Chahmoli, Sushant, Shashank Pushkar "Accessing Invisible Web" International Journal on Information and Communication technologies, Vol 06 Number 1-2\*PP 210-214, 2013, ISSN (0973-5836).

#### Published in International Proceedings

1. Amritanjali and G Sahoo, Parallel Strategy for Exploring the Solution Space of Sorting by Reversals, Proceedings of ARTCOM 2012, ACEEE, pp. 110-117, 2012.
2. Amritanjali, S Anand and G Sahoo, Exploring the Solution Space of Sorting by Translocations, Procedia Computer Science, vol. 11, pp. 160-168, 2012.
3. Shruti Garg, G. Sahoo, A Comparative Study of Classification Methods for Cracks in Old Digital Paintings, published in *Advances in Engineering and Technology Series (AETS)*, Vol. 3, 2013, 463-468, DOI:03.AETS. 2013.3.253 ACEEE, ISBN: 2214-0344 .

4. Sahana S.K and Jain. A. 2012. "Modified Ant Colony Optimizer (MACO) for the Travelling Salesman Problem", Computational Intelligence and Information Technology CIIT 2012, 3-4 Dec,2012, Chennai, In : ACEEE Conference Proceedings Series 3 by Elsevier, pp 267-276, ISBN:978-93-5107-194-5.
5. Mukta Mazumdar, Barman Utsav, Prasad Rahul, Saurabh Kumar, Saha Sujan Kumar, "A Novel Technique for Name Identification from Homeopathy Diagnosis Discussion Forum," Proceedings of 2<sup>nd</sup> International Conference on Communication, Computing and Security (ICCCS-2012), Elsevier, Sciverse Science Direct, NIT, Rourkela, 379-386, Oct-2012.
6. K.S. Patnaik, S.Patel, "Analysis of Clustering Algorithms for MRI image Segmentation using IQI", Proceedings of 2<sup>nd</sup> International Conference on Communication, Computing and Security (ICCCS-2012), Elsevier, Sciverse Science Direct, NIT, Rourkela, 389-396, Oct-2012.
7. Puneet Singh Duggal, Sanchita Paul., "Big data Analytics: Problem and solutions" International conference on CLOUD, BIG DATA, and TRUST (ICCBTD-2013), Bhopal, Nov. 13-15, 2013.
8. Pushkar, Shashank, Saxena, V.K. "Privacy Preserving Data Mining: Issues & Challenges", Proceeding of 7<sup>th</sup> International Conference on Mapping Business Excellence through Vision, Values and Vibrant Practices, Prestige Institute of Management & Research, Indore (M.P.), India, January, 30-31, 2013

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

1. P. Paul, M.Basu, S.K.Ghorai", Max-Connectivity Grooming in WDM mesh networks for cost effective network resource utilization," in IETE, July 2013

#### **MoUs / COLLABORATIONS**

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Mannheim University, Germany	Student Exchange Program	2012/2 years
2.	Queens University, Canada	Twining Program	2012/2 years

#### **BOARD OF STUDIES (UG/PG) (INTERNAL)**

##### **Head of the Department, CSE, Chairman (Ex-Officio)**

- Dr. Abhijit Mustafi, Asst. Prof., CSE Dept., BIT Mesra
- Dr. D.K. Mallick, Asso. Prof., CSE Dept., BIT Mesra
- Mr. S. K. Chatterjee, Asst. Prof., CSE Dept., BIT Mesra
- Dr. S. K. Saha, Asst. Prof., CSE Dept., BIT Mesra
- Mr. K.K.Senapati, Asst. Prof., CSE Dept., BIT Mesra
- Mr. I. Mukherjee, Asst. Prof., CSE Dept., BIT Mesra
- Dr. G. Sahoo, Prof. and Head, IT Dept., BIT Mesra
- Dr. Nisha Gupta, Prof., ECE Dept., BIT Mesra



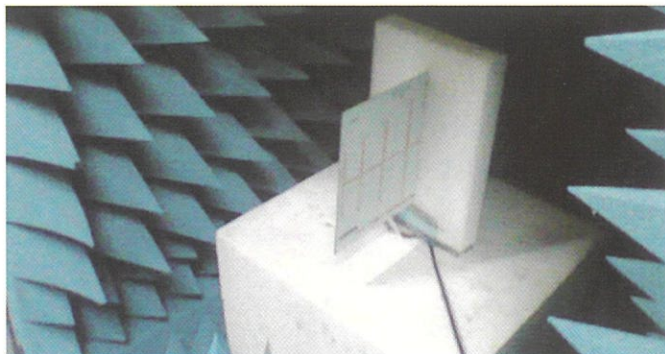
**Board of Studies (UG/PG)(External)**

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

**Departmental Academic Committee**

- Dr. R. Sukesh Kumar, Professor & Head, Deptt. of CSE
- Dr. G. Sahoo, Professor & Head, Deptt. of IT
- Dr. Nisha Gupta, Professor, Deptt. of ECE
- Dr. D.K. Mallick, Associate Professor, Deptt. of CSE
- Dr. K. Sridhar Patnaik, Associate Professor, Deptt. of CSE
- Dr. S.K. Saha, Assistant Professor, Deptt. of CSE
- Dr. Sanchita Paul, Assistant Professor, Deptt. of CSE
- Dr. Shashank Pushkar, Assistant Professor, Deptt. of CSE

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



*Antenna Measurement in anechoic chamber*

The Department of Electronics and Communication Engineering was established in the year 1960. This is one of the largest departments of the institute having the highest number of students and the faculty members. Due to its modern infrastructure and exposure given to the students, it is one of the elite departments in India. The ECE department runs Bachelor in Engineering (BE) and several Master in Engineering (ME) Programmes in addition to Ph.D. Programme within the field of Electronics and Communications Engineering.

### BACHELOR IN ENGINEERING

It offers B.E. in Electronics & Communication Engineering, a 4-year (8-semester) programme with intake of 120 students. The students are exposed to all fundamental and advanced technology in the field of Electronics and Communication Engineering. Some of the courses offered are Modern Instruments and Measurements, Microprocessor and Microcontroller, Digital Communication system, Microwave Engineering, Digital Signal Processing, Intelligent Instrumentation, Computer Networking, Fiber Optics Communication system, Antennas and Propagation for Wireless Communication, Mobile and Cellular Communication etc. The syllabi are frequently updated to incorporate recent developments. The Department has several well-equipped and advance laboratories to help students in gaining practical exposure. Almost 100% students are absorbed by various leading industries and organizations by campus placement.

### MASTER IN ENGINEERING

The Department is currently running three postgraduate programmes with specializations in (a) Instrumentation with intake of 12, (b) Microwave Engineering with intake of 12 and (c) Wireless Communication with intake of 18 students. A team of expert teachers are involved in teaching and providing research guidance. Students are exposed to several specialized software tools such as Cadence System Design Tools, Silvako Software (Athena & Atlas), IE3D, HFSS, Microwave Office, Sonnet, Fidelity, Beampro, SystemView and NS-2, LABView and MATLAB etc. The department is recipient of assistance in the form of Departmental Research Support under the Special Assistance Programme of UGC. The department is running several R & D projects from various agencies like UGC, DST, AICTE, ISRO etc.

### SPONSORED PROJECTS

#### PROJECT SANCTIONED:

S. No.	Project Title	PI/Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in lacs)	Duration of the Project
1.	Studies on microwave dielectric ceramics and their device applications"	Prof. V.R. Gupta (Co-PI)	DST under SERB	Sanctioned date 20/5/2013	31.7	Duration: Three years (2013-2016)

**ONGOING PROJECTS**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in lacs)	Duration of the Project
1.	Special Assistance Program II (SAP)-II, for UG projects	Prof. Nisha Gupta	UGC	2009	52.50	5 Years (2009-2014)
2.	Pedagogy project (NMP ICT) development of VLSI Design course.	Dr. Vijay Nath	MHRD	June 2010	5	5 Years (2010- 2015)
3.	Pedagogy project (NMP ICT) development of VLSI Design course.	Dr. S.S. Solanki	MHRD	June 2010	5	5 Years (2010- 2015)
4.	Establishment of national MEMS design center.	Dr. Neela Chatteraj	ADA	2010	11.16	4 Years (2010-2014)
5.	Design of ultra low power CMOS cell for temperature sensors in VLSI	Dr. Vijay Nath	DST & DRDL Hyderabad	2011	26.7	3 Years (2011-2014)

**PROJECTS COMPLETED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (₹ in lacs)	Date of completion of the Project
1.	Microstrip antenna for wearable applications	Prof. V.R. Gupta	AICTE	July 2009	6.0	2009-2012
2.	Studies on Ferromagnetic - Ferroelectric Composites and Their Electronic Applications	Prof. V.R. Gupta (CO-PI)	DST	2009	15.79	2009-2012
3.	Design, Development and Characterization of Magneto-Optic material based current sensor for Industrial Applications	Prof. S. K. Ghorai (CO-PI)	DST	2yrs (2010 - 2012) + 6 months Extension	25.98	Dec31, 2012

**SEMINAR/CONFERENCES/SHORT-TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	Being Objective	Dr. Sanjay Kumar	BIT Mesra, Ranchi,	Six times (between 11 to 21 Feb., 2013)
2.	Short term course on Signal Processing & Its Applications	Dr. Mahesh Chandra	Self finance	Dec. 24-29, 2012
3	Course on Advanced VLSI Design (TWAVD_2012)	Dr. Vijay Nath	TEQUIP	Sep 16-30, 2012

**CONFERENCES/SEMINARS/WORKSHOPS/STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Mr. Janardan Sahay	Workshop on EM Simulation and antenna design using FEKO tool	Self	Ni2designs, BIT Mesra	BIT Mesra	10-11 May 2013
2.	Dr. S.S.Sahu	MidSouth Computational Biology and Bioinformatics Society Conference	Self	MCBIOS	Missouri, USA	5-6April, 2013
3.	Prof. S. K. Ghorai	International Colloquium on Innovation in Engineering and Management (ICIEM-2013)	B.I.T., Patna	B.I.T., Patna	B.I.T., Patna	22-23 Feb., 2013
4.	Mr. B.B.Pal,	International Conclave (ICIEM13) on "Innovations in engineering & management",	B.I.T., Patna	B.I.T., Patna	B.I.T., Patna	22-23 Feb., 2013
5.	Dr. Sanjay Kumar	A Workshop on Vihamgam Yoga	NA	Vihangam Yoga Sansthan, Jhansi, Allahabad	BIT Mesra Ranchi	14 Dec., 2012
6.	Dr. Aminul Islam	Attended European Union Awareness Raising and Information Campaign in India	European Union	European Union	Radisson Blu, Ranchi	12 Sep 2012
7.	Dr. Neela Chatteraj	Radio and Antenna Day of OCEAN	CPDG	Mauritus University & URSI	Sugar Beach resort, walmar, Flicen Flac, Mauritius,	24-27 Sept,2012
	Dr. Neela Chatteraj	Radio and Antenna Day of OCEAN	CPDG	Mauritus University & URSI	Sugar Beach resort, walmar, Flicen Flac, Mauritius	24-27 Sept,2012

## PUBLICATIONS

### Published in International Journals

1. Qurratulain and Neela Chatteraj" A Compact UWB Antenna with Single Wide Band-Notch for WLAN Band" IJCA, International Journal of Computer Applications ((0975 – 8887) 4-7, June 2013 iC3S - Number 2 ISBN: 973-93-80875-21-6h pp4-7
2. Qurratulain and Neela Chatteraj " Effect of Ground plane on a tapered U slot Ultra Wideband Antenna IJCA, International Journal of Computer Applications ((0975-8887), 4-7, June 2013 iC3S - Number 2 ISBN: 973-93-80875-21-6h pp8-11.
3. Aloke Saha, Dipankar Pal and Mahesh Chandra, "Low Power 6-GHz Wave-Pipelined 8b×8b Multiplier," IET Circuits, Devices & Systems, Volume 7, Issue 3, May 2013, pp. 124 – 140.
4. V. K. Gupta, Mahesh Chandra, S. N. Sharan, "Acoustic Echo and Noise Cancellation System for Hand-Free Telecommunication using Variable Step Size Algorithms", Radio Engineering, April 2013, vol.22, no.1, pp.200-207.
5. A Islam, "A Technique For Designing Variation Resilient Subthreshold SRAM Cell," IIUM Engineering Journal, vol. 14, no. 1, pp. 52–65, May. 2013. (Peer reviewed & indexed). ISSN: 1511-788X.
6. Pooja Sharma, Pranshumaan, Shrishti Prasad and Janardan Sahay "Robust Transmit Power Control for Multi User Cognitive Radio System Using GA" International Journal of Emerging Trends in Electrical & Electronics (IJETEE)" Vol. 2, Issue. 3, April-2013,ISSN 2320-9569.
7. D. Roy, A. K. Singh, R. Anand, and A. Islam, "Bit line and storage node decoupled 13T SRAM cell in 22-nm technology node," Wulfenia Journal, vol. 20, no. 3, pp. 40–55, Mar. 2013 (Impact factor 0.267). (Peer Reviewed & SCI and SCOPUS Indexed). ISSN: 1561-882X.
8. Mustafi and S.K. Ghorai, "A novel blind source separation technique using fractional fourier transform for denoising medical images." Optik, Vol. 124, pp. 265-271, February 2013.
9. S. Kushwaha, D. Kumar, M. Saw, A. Islam, "MTJ-Based Nonvolatile 9T SRAM Cell," Int. J. of Recent Trends in Engineering and Technology, vol. 8, no. 2, pp. 26–30, Jan. 2013. (Peer Reviewed & Indexed). ISSN: 2158-5563, DOI: 01.IJRTET.8.2.50.
10. Rakesh Kaundal, Sitanshu S Sahu, Ruchi Verma and Tyler Weirick, "Identification and characterization of Plastid-type proteins from sequence –attributed features using machine learning", BMC Bioinformatics, 14:S7, 2013
11. P.R. Pani, R.K. Nagpal, R. Malik, and N. Gupta, "Design of planar EBG structures using cuckoo search algorithm for power/ground noise suppression," Progress In Electromagnetics Research M, 2013, Vol. 28, 145-155.
12. Shailendra Singh Rajput, Sunita Keshri, Vibha Rani Gupta, "Microwave dielectric properties of  $(1 - x) \text{Mg}_{0.95}\text{Zn}_{0.05}\text{TiO}_3 - (x) \text{Ca}_{0.6}\text{La}_{0.8/3}\text{TiO}_3$  ceramic composites", Journal of Alloys and Compounds, 2013, Vol. 552, 219–226.
13. Asutosh Kar and Mahesh Chandra, "A Minimized Complexity Dynamic Structure Adaptive Filter Design for Improved Steady State Performance Analysis" International Journal of Computational Vision and Robotics, 2013, Vol.3, No.4, pp.326-340.
14. S.Parida, S.K. Rout, N. Gupta. V.R. Gupta, "Solubility limits and microwave dielectric properties of  $\text{Ca}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  solid solution", Journal of Alloys and Compounds, 2013, 546216-223.
15. Pawan Kumar and Mahesh Chandra, "Pitch Based Cepstral Features for Gender Classification in Noisy Environments" Int. Journal of Signal and Imaging System Engineering, vol.6, no.3, pp. 138–142, 2013.

16. N. Mishra, Mahesh Chandra, Astik Biswas and S. N. Sharan, "Hindi Phoneme-Viseme Recognition from Continuous Speech" *Int. Journal of Signal and Imaging System Engineering*, vol.6, no.3, pp. 164-171, 2013.
17. Ale Imran, Mohd. Hasan, A. Islam, and S. A. Abbasi, "Optimized design of a 32nm CNFET based low power ultra wide band CCII," *IEEE Trans. Nanotechnology*, vol. 11, no. 6, pp. 1100-1109, Nov. 2012. (Impact Factor: 2.29). ISSN: 1536-125X. DOI: 10.1109/TNANO.2012.2212248.
18. Somnath Das, Abhishek Chakraborty, Sanjay Kumar, "Capacity Calculation and Sub-optimal Power Allocation Scheme for OFDM -based Systems", *Communications and Networks*, vol. 4, Nov. 2012, p.p. 292-297
19. Partha Paul, Balbeer S Rawat and S.K. Ghorai, "Dynamic Traffic Grooming in WDM Optical Networks with Full Wavelength Conversion and Grooming Devices at Max-Connectivity Nodes," *Intl. J. Comp. App.*, December 2012 Vol. 57, No.11, pp. 19-29.
20. S. Parida, S.K. Rout, V. Subramanian, P. K. Barhai, N. Gupta, V. R. Gupta, "Structural Microwave Dielectric Properties and Dielectric Resonator Antenna studies of  $\text{Sr}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  ceramics", *Journal of Alloys and Compounds*, 2012, 528 126-134.
21. Partha Paul, Balbeer Singh Rawat and S.K. Ghorai, "Traffic Grooming in WDM optical network with grooming resources at Max-connectivity nodes," *Opt. Fiber Technol.*, November 2012, Vol. 18, pp. 490-497.
22. Shradha Shekhar, Ankhuri Dubey, Mrinal Mishra, Nisha Gupta, "Interconnect Modeling Using the Quasi Monte Carlo Integration Technique", *Advanced Computational Techniques in Electromagnetics*, 2012, pp. 1-5.
23. Manas Ray, Mahesh Chandra, B.P. Patil, "Evaluation of CDMA Microwave Links at Different Environments for VoIP Applications" *International Journal of Advanced Research in Computer and Communication Engineering*, vol. 1, issue 8, pp.508-512, October 2012. ISSN:2319-5940
24. Shyam Lal, Sanjeev Kumar & Mahesh Chandra, "Removal of High Density Salt & Pepper Noise Through Super Mean Filter for Natural Images" *International Journal on Computer Science Issue (IJCSI)*, vol. 9, no.3, pp. 303-309, 2012.
25. M. Narayanan, H. Al-Nashash, Baquer Mazhari, Dipankar Pal, and Mahesh Chandra, "Analysis of Kink Reduction in SOI MOSFET Using Selective Back Oxide Structure," *Active and Passive Electronic Components*, 9 pages, 2012.
26. V. K. Gupta, Mahesh Chandra, S. N. Sharan "Noise Minimization from Speech Signals using RLS Algorithm with Variable Forgetting Factor," *Research Journal on Applied Science, Engineering & Technology*, vol.4, no.17, pp.3102-3107, 2012.
27. Shyam Lal and Mahesh Chandra, "Image Denoising of Wavelet based Compressed Images Corrupted by Additive White Gaussian Noise", *Research Journal on Applied Science, Engineering & Technology*, vol.4, no.17, pp. 3108-3118, 2012.
28. Shyam Lal, Mahesh Chandra & Gopal Krishna Upadhyay, "Efficient Algorithm for Removal of High Density Additive White Gaussian Noise", *World Applied Sciences Journal (WASJ)*, vol.16, no.12, pp.1722-1733, 2012.
29. V.K. Gupta, Mahesh Chandra, Anirban Bhowmick "Speech Enhancement Using Adaptive Algorithms," *International Journal of Mathematical Modelling, Simulation and Applications*, vol. 4, no. 4, pp. 343-351, 2012.



30. Sulekha Saxena, V.K. Gupta, Mahesh Chandra, Pankaj Goel, "A Family of Adaptive Filter Algorithms in Noise Cancellation for Speech Enhancement", International Journal of Electronic and Electrical Engineering, vol. 5, no. 6, pp. 511-513, 2012.
31. Islam, Mohd. Hasan, and Tughrul Arslan, "Variation Resilient Subthreshold SRAM Cell Design Technique," International Journal of Electronics, vol. 99, no. 9, pp. 1223-1227, Sep. 2012 (Impact factor 0.44). (Peer Reviewed & Indexed in ISI Science Citation Index, INPEC, SCOPUS, etc.). ISSN: 0020-7217 (Print), 1362-3060 (Online), DOI: 10.1080/00207217.2012.669708.

#### Published in International Proceedings

1. S. Prasad, Z.-H. Tan, R. Prasad "Multi-frame rate based multiple-model training for robust speaker identification of disguised voice", 16th International Symposium on Wireless Personal Multimedia Communications (WPMC), Atlantic City, New Jersey, Jun. 2013.
2. Qurratulain and Neela Chatteraj "Design & Development of small Compact UWB Antenna" Published in IOP SCIENCE SERIES, Volume 44 pp1-4, April 2013.
3. Pankaj Goel, Sonam Rai, Mahesh Chandra and V.K. Gupta, "Analysis of LMS Algorithm in Wavelet Domain", Conference on Advances in Communication and Control Systems 2013 (CAC2S 2013), Dehradun, pp. 734-738, 06-07 April 2013.
4. Astik Biswas, P.K. Sahu, Anirban Bhowmick and Mahesh Chandra, "Audio Visual Isolated Oriya Digit Recognition Using HMM and DWT", Conference on Advances in Communication and Control Systems 2013 (CAC2S 2013), Dehradun, pp. 234-238, 06-07 April 2013.
5. Sitanshu S Sahu and Rakesh Kaundal "Predicting Multi-target Protein Subcellular Localization Combining Homology and Machine Learning Approaches", MCBIOS Conference, Columbia, MO, April 2013.
6. Prafulla Prasad, N. Chatteraj "Design of Compact Ku Band Microstrip Antenna for Satellite Communication" Pp196-200, ISBN 978-1-4673-4865-2 IEEE Explorer, IEEE International Conference on Communication and Signal Processing-ICCSP'13 3-4th April, Tamilnadu
7. Arpita Sen, N. Chatteraj "Design and Development of a Single Feed Reconfigurable Dual-Frequency Microstrip Antenna" Communication", Pp221-225 ISBN 978-1-4673-4865-2 IEEE Explorer, IEEE International Conference on Communication and Signal Processing-ICCSP'13 3-4th April, Tamilnadu
8. Kumar, S. Prasad, A. Islam, "Realization and Optimization of CNFET Based Operational Amplifier at 32-nm Technology Node," International Conclave 2013 "Innovations in Engineering & Management" (ICIEM 2013), BIT, Patna, India, February 22-23, 2013.
9. Mainak Basu, Anupriya Singh and S. K. Ghorai, "Structural Health Monitoring of composite structures based on FBG sensor system and Support Vector Regression", Proc. of International Colloquium on Innovation in Engineering and Management (ICIEM-2013), BIT, Patna Extension Centre, Patna, February 22-23, 2013.
10. Asutosh Kar, Mahesh Chandra "An Advanced Approach for Reduced Complexity Stereophonic Acoustic Echo Canceller Design", In Proc. International Conference on Computer Science and Information Technology, Coimbatore, pp 254-259, Feb 2013.
11. Sanjeev Kumar and Mahesh Chandra, "Wavelet Based Adaptive Modified Sigmoid function for Contrast Enhancement of Digital Mammographic Images", In Proc. International Conference on Computer Science and Information Technology, Coimbatore, p.p. 250-253, Feb. 2013.
12. Dhruva Kumar, Monisha Saw, A. Islam, "Design of 2:1 Multiplexer and 1:2 Demultiplexer Using Magnetic Tunnel Junction Elements," IEEE International Conference on Engineering Trends in VLSI, Embedded

Systems, Nanoelectronics and Telecommunication Systems (ICEVENT), pp. 1 – 5, SKP Engineering College, Tiruvannamalai, Tamil Nadu, India, January 7-9, 2013. ISBN: 978-1-4673-5300-7. DOI: 10.1109/ICEVENT.2013.6496589 (Best paper award).

13. Asutosh Kar, Mahesh Chandra "Dynamic Length Estimation Based low Complexity Acoustic Echo Canceller", Proc. IEEE International Conference on Emerging Trends in Science, Engineering and Technology INCOSSET, Trichy, pp. 339-343, Dec. 2012. (Indexed in Scopus/ IEEE Xplore)
14. S. Kushwaha, S. Prasad, and A. Islam, "Variation Mitigation Technique in SRAM Cell using Adaptive Body Bias," IEEE International Conference on Communications, Devices, and Intelligent Systems (CODIS), pp. 117 – 120, Jadavpur University, Kolkata, India, December 28-29, 2012. ISBN: 978-1-4673-4699-3. DOI: 10.1109/CODIS.2012.642215
15. M. Narayanan, H. Al-Nashash Dipankar Pal and Mahesh Chandra; "Circuit model for SelBox MOSFET", IEEE International Conference on Electron Devices and Solid State Circuits (EDSSC2012), Bangkok, Thailand, Dec. 3-5, 2012.
16. Islam and Mohd. Hasan, "FinFET-based Variation Resilient 8T SRAM Cell," IEEE Annual India Conference (INDICON), pp. 121 – 125, Kochi, Kerala, India, December 7-9, 2012. ISBN: 978-1-4673-2270-6. DOI: 10.1109/INDICON.2012.6420600.
17. Islam, Mohd. Ajmal Kafeel, Tanjeem Iqbal, and Mohd. Hasan, "Variability Analysis of MTJ-based circuit," IEEE 3<sup>rd</sup> International Conference on Computer and Communication Technology (ICCCT), pp. 57 – 62, MNNIT, Allahabad, Uttar Pradesh, India, November 23-25, 2012. ISBN: 978-1-4673-3149-4, DOI: 10.1109/ICCCT.2012.20.
18. Asutosh Kar, Mahesh Chandra "A Minimized Complexity Variable Structure Adaptive Filter Design for Improved Steady State Performance", Proc. International Conference on Electrical, Electronics & Computer Science, ICEECS, Chennai, pp. 92-98, Nov. 2012.
19. Biswas Arumita, Gupta Vibha Rani, "Design and Development of Quad band Antenna for Wireless Application", 2012 International Conference on Advances in Mobile Network, Communication and its Applications (MNCAPPS), Bengaluru, India, 1-2 Aug 2012, 123 - 126.
20. Arpita Sen, N. Chattoraj "Reconfigurable Microstrip Antenna for Wireless Applications and its equivalent circuit" International Conference on Innovations in Electronics and Communication Engineering, ICIECE -2012, Hyderabad, Jul. 20-21, 2012, pg 229-232
21. M. Narayanan, H. Al-Nashash Dipankar Pal and Mahesh Chandra; "Frequency Response of MOS Devices with SELBOX Structure", The 16th IEE Mediterranean Electro-technical Conference on Microelectronics (MELECON 2012), Tunisia, 25-28 March, 2012.

#### Published in National Proceedings

1. Prof. R.K. Lal, Vishal Kumar, "Performance review of Quantum Well compound III-V semiconductor device and simulation of multiple GaN heterostructure", Abstract published in Proc. Dimond Jubilee Zonal Seminar on Advances of Electronics, Information and Communication Technology in India, 13-14, July 2013 at IETE Ranchi Center, 2013.
2. Partha Paul, Mainak Basu, S. K. Ghorai, "Max-Connectivity Grooming in WDM mesh networks for cost effective network resource utilization", Proc. of the Zonal Seminar on "Advances of Electronics, Information and Communication Technology in India", Ranchi, July 13-14, 2013.

**Book chapters**

1. Springer Book Series: Quality, Reliability, Security and Robustness in Heterogeneous Networks, Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol. 115, pp. 451-460. (SCOPUS, DBLP, Thomson ISI)  
Authors: Asutosh Kar, Mahesh Chandra  
Title of the chapter: Reduced Complexity Pseudo-fractional Adaptive Algorithm with Variable Tap-Length Selection  
Link: [http://link.springer.com/content/pdf/10.1007%2F978-3-642-37949-9\\_39.pdf](http://link.springer.com/content/pdf/10.1007%2F978-3-642-37949-9_39.pdf)
2. Springer Book Series: Quality, Reliability, Security and Robustness in Heterogeneous Networks, Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol. 115, pp. 273-282. (SCOPUS, DBLP, Thomson ISI)  
Authors: Shyam Lal, Rahul Kumar, Mahesh Chandra  
Title of the chapter: An Improved Method for Contrast Enhancement of Real World Hyperspectral Images  
Link: [http://link.springer.com/content/pdf/10.1007%2F978-3-642-37949-9\\_39.pdf](http://link.springer.com/content/pdf/10.1007%2F978-3-642-37949-9_39.pdf)

**AWARD/RECOGNITION BESTOWED ON FACULTIES (STATE/NATIONAL/INTERNATIONAL)**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year/ Duration
1.	Dr. Aminul Islam	Best paper award	IEEE International Conference on Engineering Trends in VLSI, Embedded Systems, Nanoelectronics and Telecommunication Systems (ICEVENT)	2013

**MoUs / COLLABORATIONS**

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	WSU University London	Design and Development of CMOS Signal Conditioning Circuit for Early Stage Detection of Cancer with Nano biosensors in VLSI	June 2011 - June 2015
2.	DRDL Hyderabad	Design of Ultra Low Power CMOS Cell for Temperature Sensors in VLSI	May 2011 - May 2013
3.	I.I.T. Kharagpur, Signal transformations	Research & Development	2010 -2013
4.	Dept of EEECE, University of Birmingham, UK, Research, Microwave Engg.	Research & Development	2008 - 2013

**DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Students' (co ordinator, if any)	Date/ Duration
1.	Pranshuman Singh won :First rank in Quiz competition (held by University East zone youth festival, Nadia, west Bengal	Dr. A. Islam	2013
2.	Dhruva Kumar & Monisha Saw won Best paper award, IEEE International Conference on Engineering Trends in VLSI, Embedded Systems, Nano-Electronics &Telecommunication Systems (ICEVENT).	Dr. A. Islam	2013

S. No.	Name of the Activity	Students' (coordinator, if any)	Date/ Duration
3.	Arpita Sen won young Investigator award for best presentation & content in the International Conference on Electronics and Communication Engineering, ICECE, Kolkata.	Dr. N. Chattoraj	2012
4.	Tarun Karuturi's smart switch has been selected by the ICICI Trinity 2013 for Idea Presentation Round	Dr. S S Solanki	2013

Students have published several papers in International journals & presented research papers in a large number of conferences.

## BOARD OF STUDIES (UG/PG)

### Panel for BOS

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

### Panel for expert from outside

- Prof. G Panda, IIT Bhubaneswar
- Dr. V Kumar, ISM, Dhanbad
- Prof. S Sanyal, IIT Kharagpur
- Dr. S Chakravarty, IIT Kharagpur
- Dr. S K Patra, NIT Rourkela
- Dr. Tapas Chakravarty, TCS, Kolkata

### Departmental Academic Committee

- Prof. S K Ghorai
- Prof. Nisha Gupta
- Pro. S Pal
- Prof. V R Gupta
- Dr. Sanjay Kumar
- Dr. Mahesh Chandra
- Dr. S Srivastava
- Prof. R Sukesh Kumar (CSE)
- Dr. R K Sinha (EEE)



## ELECTRICAL & ELECTRONICS ENGINEERING



Power Electronics Lab

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, viz., Power System, Control System and Power Electronics. The Centre for Biomedical Instrumentation under this department starts a new programme on M.Tech. in Biomedical Instrumentation during this period. Department also offers Ph.D. programmes in various specializations. 32 research scholars are currently pursuing for their doctoral degree. Department of EEE is presently utilizing the grants received from DST under FIST, from UGC under SAP scheme, from AICTE under MODROB grant and grant from TEQIP to strengthen the research facility for test bed of Smart Grid, Electrical Motor Drives, Process control and Control systems. Twin rotor MIMO System, Magnetic Levitation system, DC servo fundamental trainer kit, Temperature, Pressure, level and flow controller both manual and PLC based, Transformer testing kit, circuit breaker, NI Data acquisition Card, controller, NI USRP, NI CRIO, Semikron 3 phase inverter NI SBRIO have been installed in the different labs under DigSilent Power factory software has been installed in our computer lab. Faculty members are working on different concepts related to Smart Grid, Hybrid Electric Vehicles, Multi-level inverters, Robotics, V2V energy exchange while in motion, fault tolerant multi phase drives, electric vehicle propulsion, Power System Voltage Stability, System Identifications, Soft Computing Techniques applications etc.

### SPONSORED PROJECTS

#### PROJECT SANCTIONED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	FIST Grant for doing research on Smart Grid and Drive Hybrid Electric Vehicle	Dr. T. Ghose	DST (FIST), GOI	2012	58.00	3 Years
2.	Application of Power Electronics in Power System and Electrical Drive	Dr. T. Ghose Dr. P. R. Thakura	UGC (SAP)	2012	61.00	5 Years
3.	Hardware Development and Implementation of Microcontroller Based Boost Converter for Hybrid Electric Vehicles	Dr. P. R. Thakura	UGC	2012	12.65	3 Years
4.	MODROB Grant for Process Control Lab	Dr. T. Ghose	AICTE	2012	9.20	1 Year
5.	Determination of Mental Workload and Fatigue under Different Degree of Mental Task	Dr. Yogendra Agrawal	UGC (Start-up- grant)	2013	6.00	3 Years



### ONGOING PROJECTS

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	FIST Grant for doing research on Smart Grid and Drive Hybrid Electric Vehicle	Dr. T. Ghose	DST (FIST), GOI	2012	58.00	3 Years
2.	Application of Power Electronics in Power System and Electrical Drive	Dr. T. Ghose Dr. P. R. Thakura	UGC (SAP)	2012	61.00	5 Years
3.	Hardware Development and Implementation of Microcontroller Based Boost Converter for Hybrid Electric Vehicles	Dr. P. R. Thakura	UGC	2012	12.65	3 Years
4.	MODROB Grant for Process Control Lab	Dr. T. Ghose	AICTE	2012	9.20	1 Year
5.	Determination of Mental Workload and Fatigue under Different Degree of Mental Task	Dr. Yogendra Agrawal	UGC (Start-up-grant)	2013	6.00	3 Years

### SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	Workshop on SMART GRID	Dr. T. Ghose Dr. D. K. Mohanta Dr. S. K. Pradhan	UGC (SAP) DRS-I	7 <sup>th</sup> - 9 <sup>th</sup> March, 2013
2.	Short Term Course on Power Converter and Applications	Dr. P. R. Thakura Mr. N. Neogi	DIT, NaMPET, GOI	2013
3.	Workshop on Microcontroller Applications	Dr. T. Ghose	TEQIP Phase-II	2013

### CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. D. K. Mohanta	IEEE International Conference on Environment and Electrical Engineering (EEEIC)	(Presented through Skype)	Wrocland University of Technology, Poland	Poland	5-8 May, 2013



S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2.	Dr. P. R. Thakura	PESA-2013, National Conference on Power Electronics Systems and Applications	IEEE Kolkata Chapter	NIT, Rourkela	Dept. of EE NIT Rourkela	16-17 <sup>th</sup> March, 2013
3.	Dr. (Mrs.) S. Chakraborty	National Training Programme on EDMT (Entrepreneurship Development & Management)	DST, Govt. of India	EDI, Entrepreneurship Development of India, & DST	Gandhinagar, Ahmadabad, Gujrat	10-14 <sup>th</sup> December, 2012
4.	Dr. (Mrs.) Vijaya Laxmi	Basic Pedagogy Training Programme	TEQIP	BIT, Mesra	BIT, Mesra	23-26 <sup>th</sup> August, 2013
5.	Dr. (Mrs.) Vijaya Laxmi	Short Term Course on Smart Grid	SAP	BIT, Mesra	BIT, Mesra	
6.	Mr. Prem Prakash	Short Term Course on Smart Grid	SAP	BIT, Mesra	BIT, Mesra	
7.	Dr. S. K. Pradhan	National Workshop on Advances in Signal Processing for Power, Control & Communication	TEQIP (II)	IIT, Bhubneshwar	Bhubneshwar, India	27-29 <sup>th</sup> June, 2013
8.	Dr. S. K. Mishra	National Workshop on "Swarm Intelligence: Theory & Applications"	IIT, Bhubaneswar	IIT, BBSR, Odisha	IIT, BBSR, Odisha	25 - 27 May, 2012
9.	Dr. S. K. Mishra	National workshop on "image and video analysis"	S 'O'A University	SOA university, BBSR, Odisha	SOA university, BBSR, Odisha	18-20 May 2013
10.	Dr. S. K. Mishra	International Conference on Advanced Computing, Networking, and Informatics (ICACNI 2013)	Springer	C.I.T, Raipur, Chhatisgarh	C.I.T, Raipur, Chhatisgarh	12-14 June 2013
11.	Mrs. Sushma Kamlu	International Joint Conference of Advanced Engineering & Technology (ICAET-2013)	-	NIT, Raipur	NIT, Raipur	9 <sup>th</sup> April, 2013

**PUBLICATIONS :****Published in International Journals:-**

1. D. K. Mohanta, S.G. Kadwane, "Reliability Evaluation for Overall Wind Energy Conversion System Incorporating Power Electronic Inverter", International Journal of Reliability and Safety (IJRS), Volume 7 (4), pp 319-331, 1st January, 2013.
2. Sachine Singh, T. Ghose. "Improved Radial Load Flow Method", International Journal of Electrical Power & Energy system, Vol-44, Issue-1, pp 721-727, January, 2013.
3. V. Laxmi, D. K. Mohanta, B. M. Karan, "Wavelet based intelligent techniques for automatic identification of motor vehicles: a comparative study", International Journal of Vehicle Autonomous Systems, Vol-11, No.-1, pp 42-61 February, 2013.
4. Madhwi Kumari, P. R. Thakura, D. N. Badodkar "EMI and Bearing Current due to PWM Voltage Source Inverters in Hybrid Electric Vehicles", International Journal of Global Technology Initiatives, Vol-2, Issue-1, March, 2013.
5. Prem Prakash, R. C. Jha, Shinky Garg "A New Fast Contingency Ranking Method for Modern Power System", International Journal of Applied Engineering Research, Vol-8, Issue-6, pp 65-68, March, 2013.
6. M. Jaya Bharata Reddy, Rama Krishnan Raghupathy, D. K. Mohanta "Power Quality Analysis Using Discrete Orthogonal S-Transform (DOST)", International Journal of Digital Signal Processing (Elsevier Publication), Volume 23, Issue 2, pp 616-626, March, 2013.
7. M. Jaya Bharata Reddy, B. Karthik Chandra, D. K. Mohanta "Condition Monitoring of 11 kV Distribution System Insulators Incorporating Complex Imagery Using Combined DOST-SVM Approach", IEEE Transactions on Dielectrics and Electrical Insulation, Volume 20, Issue 2, April, 2013.
8. M. Jaya Bharata Reddy, D. Venkata Rajesh, D. K. Mohanta "Robust Transmission Line Fault Classification Using Wavelet Multi-resolution Analysis", International Journal of Computers and Electrical Engineering (Elsevier Publication), Vol-39, Issue-4, pp 1219-1247, May, 2013.

**Published in International Proceedings:-**

1. S. K. Mishra, Ganapati Panda, Babita Majhi, Ritanjali Majhi, "Improved Portfolio Optimization Combining Multiobjective Evolutionary Computing Algorithm and Prediction Strategy", IAENG Conferences-World Congress on Engineering (WCE-2012), Vol-1, pp 470, 4-6 July, 2012, London. U.K.
2. S. K. Pradhan, B. D. Subudhi, "Self-Tuning Control using a NARMAX Model for a Flexible Link Manipulator (ACODS-2012)", International Conference on Advance in Control Optimization of Dynamic System, PP 1-5, ISSN 978-1-4577-1110-7, July, 2012.
3. Sidhanta Kumar Mishra, Mrutyunjaya Mangaraj, Ashwini Kumar Nayak, D. K. Mohanta, "Dynamic Voltage Restorer incorporating dq0 Transformation Enhancing Power Quality", International Conference on Communication, Circuits and Systems (iC3S-2012), pp 19-22, October 5-7, 2012.
4. M.S. Rao, D.S. Roy, P.R. Patro, D. K. Mohanta, "An Ant Colony Metaheuristic Approach for Optimal Reliability Assessment of Software Systems Incorporating Redundancy", World Congress on Information and Communication Technologies (WICT), PP-577-582, 30 Oct.- 2 Nov., 2012.
5. Pankaj Mishra, T. Ghose, "Exploring Profit Earning Strategies Used by DISCOMs Under Frequency Linked Tariff Followed in India", IEEE Power India Conference, pp-1-7, 19-22 December, 2012.
6. Gopakumar Pathirikkat, M. Jaya Bharata Reddy, D. K. Mohanta, "Renewable Energy Utilization using Low Power Micro grid System", IEEE International Conference on Power, Energy and Control (ICPEC '13), 6-8th Feb 2013.

7. Madhwi Kumari, P. R. Thakura, D. N. Badodkar, "EMI and Bearing Current due to PWM Voltage Source Inverters in Hybrid Electric Vehicles", International Conference of Global Technology Initiatives, Vol-2, Issue-1, March, 2013.
8. Kumar Ayush, S. K. Mishra, "Stereo Vision Based Obstacle Detection Using Cloud Services", IEEE International Conference on Communication and Signal Processing-ICCSP'2013, 3-5 April, 2013.
9. Soumya Ranjan, S. K. Mishra, "Asymmetrical cascade multilevel inverter for electric traction", IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS'13) 10-12 April, 2013, Kanyakumari, Tamilnadu, India.
10. D. K. Mohanta, Cherukuri Murthy, Maibam Shillakanta Singh, Diptendu Sinha Roy, "Effect of Switching on Standby Redundancy Operating Mode of Phasor Measurement Unit(PMU)", International Conference on Environment and Electrical Engineering (EEEIC), May 5-8, 2013, Poland.
11. Gopakumar Pathirikkat, M. Jaya Bharata Reddy, D. K. Mohanta, "Novel Multi-Stage Simulated Annealing for Optimal Placement of PMUs in Conjunction with Conventional Measurements", International Conference on Environment and Electrical Engineering (EEEIC), May 5-8, 2013, Poland.
12. Dusmanta Mohanta, K. Ajay Varma and M Jaya Bharata Reddy, "Applications of Type-2 Fuzzy Logic in Power Systems: A Literature Survey", International Conference on Environment and Electrical Engineering (EEEIC), 2013, May 5-8, 2013, Poland.
13. Prajna Parimita Dash, Dipti Patra, S. K. Mishra, "Local Binary Patterns A Texture Feature Descriptor in Object Tracking Algorithm", Springer, ICACNI-2013, 12-14 April, 2013, Raipur, India.
14. Gauri Shanker Gupta, Subhojit Ghosh, Ashwini Kumar, Shikhar Kumar, Rakesh Kumar Sinha, "Wigner Bispectrum and support Vector Machine based Classifier for Multiclass Motor Imagination-BCI Data", International Conference on Recent Trends in Engineering Sciences, (ICRTES - 2013), Nasik India, Book Published by Elsevier Science Technology, pp 1-5, 2013.

#### **AWARD / RECOGNITION BESTOWED ON FACULTIES (STATE / NATIONAL / INTERNATIONAL)**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. T. Ghose	Member of IET, UK	IET	August, 2012
2.	Dr. T. Ghose	Delivered Lecture as Invited Speaker on Power System Operation in India at International Conclave on "Innovations in Engineering & Management"	BIT, Patna Centre	February, 2013
3.	Dr. R. C. Jha	MIEEE Member	IEEE	July, 2012 Onwards
4.	Dr. D. K. Mohanta	Editor, Electric Power System and Components	Taylor & Francis Publication	May, 2013 Onwards
5.	Dr. (Mrs.) S. Chakraborty	Fellow	IETE	2013 (Life)
6.	Dr. S. K. Pradhan	Editorial Journal of Global Research in Electronics & Communications, Board Member	ISSN 2321-3175	July, 2012 Onwards

**PATENTS (APPLIED / GRANTED)**

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
	Dr. D. K. Mohanta	A Novel Power Monitoring System for Detection, Localization and Classification of Disturbances.	Application No. 612/KOL/2008, Patent No. 254882	2013
	Dr. D. K. Mohanta	A Novel System for Detection and Classification of power System Transmission line Faults.	Application No. 611/KOL/2008, Patent No. 256209	2013

**MoUs / COLLABORATIONS**

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
	University of Padova, Italy	Research and Academic Collaboration	2011 – 2014 (three years)

**DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Students' coordinator, if any	Date/Duration
1.	Search Engine Optimization	Mr. Zeeshan Tarique	17th August, 2012
2.	Building a Website in 10 Minutes	Mr. Zeeshan Tarique	3rd September, 2012
3.	C++ and Data Structures	Mr. Zeeshan Tarique	28th September, 2012
4.	PHP and MySQL	Mr. Zeeshan Tarique	17th October, 2012
5.	Digital Imaging and Photography	Mr. Zeeshan Tarique	26th October, 2012
6.	Photoshop	Mr. Zeeshan Tarique	15th November, 2012
7.	Android Workshop	Mr. Zeeshan Tarique	9th – 10th February, 2013
8.	Workshop on MATLAB Software	Mr. Deljit Roy	August, 2012 (2 Days)
9.	Workshop on Basic and Advanced C/C++	Mr. Sumit Jha	August, 2012 (3 Days)
10.	Workshop on ARDUINO	Mr. Satyam Mishra	September, 2012 (2 Days)
11.	Workshop on Industrial Automation	Mr. Aditya Tyagi	September, 2012 (2 Days)
12.	Workshop on Python	Mr. Sidhartha Sahu	October, 2012 (2 Days)
13.	Workshop on Automobiles	Mr. Jay Megotia	January, 2013 (2 Days)
14.	Workshop on Adobe Photoshop	Mr. Sidhartha Sahu	January, 2013 (2 Days)
15.	Workshop on Adobe Flash	Mr. Nitin Reddy	February, 2013 (2 Days)
16.	Workshop on Control System	Ms. Garima Sameer	February, 2013 (2 Days)
17.	PLC & Scada Workshop, IETE Student Chapter, BIT, Mesra	Mr. G. S. Gupta	3-18 March, 2013
18.	Inauguration of IETE Student Chapter in BIT, Mesra	Mr. G. S. Gupta	9th March, 2013
19.	Workshop on Digital Image Processing	Mr. Aditya Tyagi	March, 2013 (2 Days)
20.	Workshop on Circuit Analysis	Mr. Jaivardhan Shivam	March, 2013 (1 Days)
21.	Workshop on Google-IT-OUT	Mr. Debjit Roy	March, 2013 (1 Days)

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
22.	Workshop on Blitzkreig	Mr. Sumit Jha	March, 2013 (1 Days)
23.	Workshop on Electrical Machine	Mr. Jaivardhan Shivam	September, 2012
24.	Circuit Analysis on Pantheon'12	Mr. Jaivardhan Shivam	September, 2012
25.	Workshop on Microcontroller	Mr. Jaivardhan Shivam	January, 2013
26.	Analogies on Bitotsav'13	Mr. Jaivardhan Shivam	March, 2013
27.	Industrial Visit to TATA Steel	Mr. Jaivardhan Shivam	3rd April, 2013
28.	Industrial Visit to TATA Motors Jamshedpur	Mr Avnish Kumar	15th May, 2013

## BOARD OF STUDIES (UG/PG)

### Internal Members

- |     |                          |   |          |
|-----|--------------------------|---|----------|
| 1.  | HOD, EEE (Ex-officio)    | - | Chairman |
| 2.  | Prof. R. K. Narayan      | - | Member   |
| 3.  | Prof. T. Ghose           | - | Member   |
| 4.  | Prof. (Dr) R. C. Jha     | - | Member   |
| 5.  | Prof. (Dr) D. K. Mohanta | - | Member   |
| 6.  | Dr. R. K. Sinha          | - | Member   |
| 7.  | Dr. P. R. Thakura        | - | Member   |
| 8.  | Dr. S. Ghosh             | - | Member   |
| 9.  | Prof. (Dr) N. Gupta      | - | Member   |
| 10. | Prof. (Dr) G. Sahoo      | - | Member   |

### External Experts

- Dr. J. Pal, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
- Dr. A. K. Sinha, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
- Dr. D. Das, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
- Dr. S. K. Biswas, Professor, Dept. of EE, Jadavpur University, Kolkata
- Dr. S. K. Goswami, Professor, Dept. of EE, Jadavpur University, Kolkata
- Dr. S. C. Bera, Professor Dept. of Applied Physics, Instrumentation Engineering Section Calcutta University, Kolkata
- Dr. S. Basu, Mg. Director, Electronics Res. & Dev. Centre. Bose Res. (P) Ltd. Bangalore
- Mr. S. B. Prasad, GM, MECON, Ranchi
- Mr. Sandeep Dhir, Chief Employee Training & Development, TISCO, Jamshedpur.
- One student representative each from UG, PG and Ph.D. Programme.
  - Mr. Nishant Singh, Research Scholar, Dept. of EEE
  - Mr. Vivek Anand Verma, M.E. Student, Dept. of EEE
  - Ms. Sakchi Sharma, B.E. Student, Dept. of EEE



### Other Important Information

1. Dr. T. Ghose has delivered guest lecture on Bacterial foraging Technique in the workshop on Optimization Techniques organized by Deptt. Of Production Engineering, BIT, Mesra
2. Dr. D.K. Mohanta, Invited Speaker for workshop on "Modern Power System Protection", 19th March 2012, Electrical Engineering Department, KIIT University, Bhubaneswar.
3. M. Tech. course in Biomedical Instrumentation has been introduced in this session.
4. Dr. P.R. Thakura delivered Guest Lecture on High Power Semiconductor Switches on Industrial Training on Embedded System Design, BIT, Mesra, Ranchi, June, 2012.
5. Dr. P.R. Thakura delivered Inaugural Speech on World Environment Day in DAV College of Engineering, Daltonganj, 18<sup>th</sup> June, 2012.
6. Mr. S. K. Mishra, attended as a resource person in "Faculty Development Program on MATLAB and its applications in Engineering" from 16th March 2012 to 18th March 2012 sponsored by BPUT and organized by the Dept. of ETC of Trident Academy of Technology, Bhubaneswar and also delivered lecture in AICTE sponsored Faculty Development Programme on "Advanced Signal Processing Algorithm: It's Application in Engineering Research (ASPA)" during 17th -30th June 2013, in the Department of ECE, Centurion University of Technology and Management (CIT) Bhubaneswar campus.

## HOTEL MANAGEMENT & CATERING TECHNOLOGY

Department of Hotel Management & Catering Technology of BIT MESRA was established in January-2003. Department offers 4 years (8 Semester) Bachelor's Degree in Hotel Management & Catering Technology (BHMCT) and 03 years (06 Semester) as an exit option. This program is approved by AICTE. The program lays emphasis on practical application of theoretical lessons through training, laboratory work, hands on workshops, theme parties, and project and study tour. The department has a



*Students at work in Kitchen*

a well-qualified team of faculty members with a blend of industry experience worked in India and overseas, 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.

Department is equipped with training kitchens, housekeeping laboratory, front office laboratory, computer laboratory etc. which ensures practical training in a professional environment to students.

Department also publishes its own bi annual blind refereed, research journal JOHAR Journal of Hospitality Application and Research.

As a regular feature department organizes various workshops and food festivals to cultivate skill among the students. Department has established a respectable place in the field of hospitality and declared the 18th best Hotel Management Institute of Excellence - survey conducted by GHRDC.

Among the branded and luxurious hotels in India our department has gained a very good image and students go on "Industrial Exposure Training" for 18 weeks in various star Hotels such as Taj group of hotels, Oberoi group of hotels, ITC, The Park hotels, Dominos, Specialty Restaurant Ltd. etc. From the past three years department has achieved the superb 100% quality placement to the students.

### **SEMINAR /CONFERENCES/SHORT-TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar/ Conferences/ Short Tem Courses/ Workshop	Coordinator	Funding/ Sponsoring Agency	Date of Seminar/ Conferences/ Short Term courses
1.	Workshop on Bake and Take	Mr. Rajesh Langiya	Fund was generated from Registration fees of candidates	17 <sup>th</sup> June-27 <sup>th</sup> June'13



**CONFERENCES/ SEMINARS/ WORKSHOPS /STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the conference / Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Abhinav Kumar Shandilya	Orientation program for Program Officers of Bihar & Jharkhand		Regional Centre, NSS, Patna and Training, Orientation & Research Centre, R. K. Mission Ashrama, Kolkata	BIT, Mesra, Ranchi.	17 <sup>th</sup> -23 <sup>rd</sup> February 2013
2.	Sanjeev Srivastava, Praveen Srivastava	National Seminar on Foreign Direct Investment: Changing Paradigm	BIT		Karim City College, Jamshedpur	2012
3.	Nishikant Kumar, Pranjali Kumar, Rajeshwari Chatterjee	Management Development Programme on Research Methodology	BIT	Central University, Jharkhand	Central University, Jharkhand	11 <sup>th</sup> -17 <sup>th</sup> February, 2013.
4.	Rajeshwari Chatterjee	International Conference on Environment and Human Health	BIT	National Department Science Academy and Jamia Hamdard	INSA, New Delhi	28 <sup>th</sup> -29 <sup>th</sup> November, 12.
		National Conference on Sustainable Development and Global Competitiveness		Dept. of Environmental Science, BIT, Mesra, Ranchi.	Dept. of Environmental Science, BIT, Mesra, Ranchi.	4 <sup>th</sup> - 5 <sup>th</sup> December, 2012.
		International conference on Agile Manufacturing		IIT, BHU	IIT, BHU	16 <sup>th</sup> -19 <sup>th</sup> December, 2012
		Analytical techniques for characterization of biological macromolecules	Self Sponsored	Heritage Institute of Technology, Kolkata.	Heritage Institute of Technology, Kolkata. .	30 <sup>th</sup> January -1 <sup>st</sup> February, 2013.

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

1. Kumar, N., and Kumar, A. (2013). The Attitude of Tribal Population of Ranchi towards hospitality education. International Journal of Commerce and Management. Vol 1(1), 8-10.
2. Chatterjee, R., Sharma, V. and Kumar, S. (2012). Eco-efficiency from cradle to grave design system based on atmospheric conditions in the biodiesel manufacturing sector produced from Jatropha curcas for sustainable cleaner production. Int. J. of Sustainable Manufacturing. Vol 2, No (4), 261-275.

- Chatterjee, R., Sharma, V. and Kumar S. (2012). Life cycle assessment of energy performance of biodiesel produced from *Jatropha curcas*. Journal of Renewable and Sustainable Energy.(4).053110

#### Published in International Proceedings:

- Chatterjee, R., Sharma, V. and Kumar, S. (2012). Evaluation of environmental impact of biodiesel produced from *Jatropha curcas* by life cycle assessment and eco-efficiency for sustainable cleaner production. International conference on Agile Manufacturing.485-492.

#### Published in National Journals

- Chatterjee, R. (2012). Treatment of the effluent generated from the Pickling method and to remove their toxic property to make it eco-friendly. Journal of Advances in Engineering Sciences. Vol (Jan-July), 1-12.

#### BOOKS :

- Saran, A. (2013). The Indian Imperial Diet (600 BC-18<sup>th</sup> Century). Excel India Publishers, New Delhi. ISBN: 978-93-82062-35-6.

#### DEPARTMENTAL STUDENTS' ACTIVITIES

S. No.	Name of Activity	Students' Coordinator, if any	Date / Duration
1.	Conference at Hotel Ranchi Ashok	Mr. Nishikant Kumar & Mr. Gautam Shandilya	18/08/2012
2.	Guest Lecture for students on challenges on Hospitality Industry – By Abhijeet Srivastava, AVP – Operation, lemon Tree Hotels	Prof. Sitesh P Srivastava	19/09/2012
3.	Challenges and Opportunities in Hotel Industry – By Mrs. Anjana Bhattacharya, FOM, Hotel Radisson Blu, Ranchi	Prof. Sitesh P Srivastava	21/09/2012
4.	Sham-e-Awadh Food Festival	Prof. Sitesh P Srivastava	4 <sup>th</sup> -6 <sup>th</sup> Oct.'12
5.	Guest Lecture on "F&B Practices in Hilton Group" By- Mr. Gunjan, Senior Team Leader, Hilton, Al Alin, Abu Dhabhi	Prof. Praveen Srivastava	22/02/13
6.	Guest Lecture on "Motivation of employees during induction and socializing phase" by – Mr. Arun Kr. Gautam, HOD, Event Management, Club Mahindra Snow Peaks, Manali & Mr. Ayodhya Nath Tiwari, MT, Leela Mumbai	Prof. Praveen Srivastava	09/04/13

#### BOARD OF STUDIES

##### UG

- |   |                         |
|---|-------------------------|
| 1. Head/ In charge, HMCT                        | - Chairman (Ex Officio) |
| 2. Prof. Praveen Srivastava, Asst. Professor    | - Member                |
| 3. Prof. Nishikant Kumar, Asst. Professor       | - Member                |
| 4. Prof. Abhinav Kr. Shandilya, Asst. Professor | - Member                |
| 5. Prof. Abhishek Jana, Asst. Professor         | - Member                |
| 6. Prof. Gautam Shandilya, Asst. Professor      | - Member                |

- |  |          |
|--|----------|
| 7. Prof. Rajeshwari Chateerjee, Asst. Professor                    | - Member |
| 8. Prof. Sanjiv Kr. Srivastava, Asst. Professor                    | - Member |
| 9. Prof. Amit Saran, Asst. Professor                               | - Member |
| 10. Dr. S.K. Bose, Prof. & Head, Dept. of Management               | - Member |
| 11. Dr. B. N. Sinha, Professor, Dept. of Pharmacy                  | - Member |
| 12. Dr. Saswati Ghosh, Assistant Professor, Dept. of Biotechnology | - Member |

**External Members (Any Two):**

1. General Manager, Hotel Radisson Blu
2. General Manager, Hotel Ranchi Ashok
3. Principal, IHMCTAN, Hazipur
4. Principal, NSHM, Durgapur
5. General Manager, JTDC, Ranchi.
6. Front Office Manager, Hotel Golden Tulip

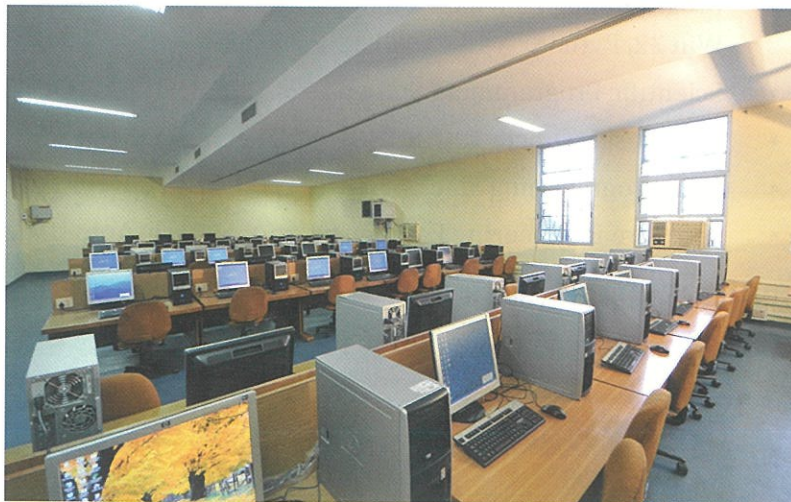
**Departmental Academic Committee**

- |   |                         |
|---|-------------------------|
| 1. Head/ In charge, HMCT                        | - Chairman (Ex Officio) |
| 2. Prof. Praveen Srivastava, Asst. Professor    | - Member                |
| 3. Prof. Abhinav Kr. Shandilya, Asst. Professor | - Member                |



## DEPARTMENT OF INFORMATION TECHNOLOGY

The Department of Information Technology was established with a vision to promote high quality education and research in the fast emerging field of Information Management and Communication. This department is a manifestation of the Institute's vision in the field of IT and its application. The department is committed to producing competent graduates who would be up to the challenge of implementing viable and sound IT solution in various domains. With the rapidly increasing demand of IT professional, the department is gearing up to the challenge of introducing its students



*IT Lab*

to the demands of the industry from the very outset of their technical education program. The department also engages in active, high quality research in different domains.

### PROGRAMS OFFERED BY THE DEPARTMENT:

#### *THE DEPARTMENT CURRENTLY OFFERS THE FOLLOWING PROGRAMS UNDER ITS AEGIS:*

Program	Year of Inception	Duration
Bachelor of Engineering (BE) in Information technology	2001	4 years (8 semesters)
Master of Computer Applications (MCA)	1983	3 years (6 semesters)
Master of Information Security (M. Tech in IS)	2010	2 years (4 semesters)
Master of Information Technology (M. Tech in IT)	2013	2 years (4 semesters)
Master of Information Science (MIS)	1993	2 years (4 semesters)

### 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 hardware and software platforms. The Department is planning to upgrade its laboratory facilities with new laboratories in Network Simulation, Multimedia, Biometric Analysis, Computational Intelligence etc.

#### Hardware:

- Dell OptiPlex 3010, Intel® Core™ i5-3470 CPU @3.20 GHz, 4GB RAM, 500 GB HDD.
- IBM P-IV, 256 MB RAM, 40 GB HDD.
- HP Compaq DX 7400 Small Form, Intel® Core™ 2 Duo E4500 @ 2.20 GHz 1.18 GHz, 1 GB RAM, 160 GB HDD.
- HP dx2280 MT, Intel® Pentium® D CPU 3.40 GHz, 2.37 GHz, 1 GB RAM, 160 GB HDD.
- HP Compaq 6000 Pro MT PC, Intel® Core™ 2 Duo CPU E7500 @ 2.93 GHz 1.58 GHz, 4 GB RAM, 250 GB HDD.
- PARAM 10000 Parallel Computing Super Computer.



**Softwares:**

- Programming Language Compilers and IDEs: Code Blocks, Visual Studio, Net Beans, Eclipse, Turbo C++ Win 32, Python.
- Scientific Programming Software: MATLAB, SCILAB, OCTAV.
- Data Bases: Oracle 10G, MYSQL, SQL Server Express Edition.
- Web Programming Stacks: ASP.NET/IIS, PHP/LAMPP/WAMPP, JSP/APACHE/ TOMCAT.
- Software Engineering Packages: Rational Rose, Argo UML.

**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.	Need, Availability And Utilization Of Electronic Resources And UGC Infonet Consortia In Universities Of Eastern India	Bhaskar Karn	UGC	01.02.2011	5,66,500	3 Years

**PROJECTS COMPLETED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Local area Rainfall prediction using Hybrid Approach	B. K. Sarkar	UGC	01-02-2011	1,45,000	31-07-2012

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Kalyan Samanta	Basic MATLAB	TEQIP	Birla Institute of Technology, Mesra, Ranchi	Birla Institute of Technology, Mesra, Ranchi	24 June- 1 July, 2013
2.	S. Mohapatra	IHCI-2012	TEQIP	Indian Institute of Technology, Kharagpur	Indian Institute of Technology, Kharagpur	27-29 Dec, 2012
3.	Tanushree Roy	Basic MATLAB	TEQIP	Birla Institute of Technology, Mesra, Ranchi	Birla Institute of Technology, Mesra, Ranchi	25 June- 1 July, 2013
4.	Tanushree Roy	IDTTS-2013	ISEA and TEQIP-II	National Institute of Technology, Hamirpur	National Institute of Technology, Hamirpur	21-25 March, 2013

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5.	Sumit Srivastava	WISAP-2013	TEQIP-II	Indian Institute of Technology, Chennai	Indian Institute of Technology, Chennai	22-25 Feb, 2013

## PUBLICATIONS :

### Published in International Journals

1. Sarkar, A., Sahoo, G., and Sahoo, U. C., Application of Fuzzy Logic in Transport Planning, Int. J. Soft Computing, Vol. 3(2), pp. 1-21, 2012.
2. Rashmi, Mehruz, S., Sahoo, G., A five- phased approach for the cloud migration, International Journal of Emerging Technology and Advanced Engineering, Vol. 2(4), April 2012.
3. Yugal, K. and Sahoo, G., Prediction of different types of liver diseases using rule based classification model, Technology and Healthcare, 2013 (In Press) (SCI IF-0.638)
4. Yugal, K. and Sahoo, G., Study of Parametric Performance Evaluation of Machine Learning and Statistical Classifiers, International Journal of Information Technology and Computer Science (IJITCS) 5.6 (2013): 57.
5. Yugal, K. and Sahoo, G., Analysis of Parametric & Non Parametric Classifiers for Classification Technique using WEKA, International Journal of Information Technology and Computer Science (IJITCS) 4.7 (2012): 43.
6. Yadav G., Yugal, K. and Sahoo, G., Predication of Parkinson's disease using data mining methods: a comparative analysis of tree, statistical, and support vector machine classifiers, Indian Journal of Medical Science, Vol. 65(6), pp. 231-242. (SCI IF-0.871) 2013
7. Yadav, G., Yugal, K. and Sahoo, G., Role of the Computational Intelligence in Drugs Discovery and Design: Introduction, Techniques and Software, International Journal of Computer Applications 51.10 (2012): 7-18.
8. Garg, S. and Sahoo, G., Crack Classification and Interpolation of Old Digital Paintings, International Journal of Computer Science and Application, Vol. 1(5), pp. 85-90, June 2013.
9. Garg, S. and Sahoo, G., Virtual Restoration of Old Digital Paintings, International Journal of Computer Science and Engineering (IJCSE), Vol. 2(3), pp. 36-46, July 2013.
10. Das, S., Garg, S. and Sahoo, G., Comparison of Content Based Image Retrieval System using Wavelet Transform and Curvelet Transform, International Journal of Multimedia and Its Applications(IJMA), Vol. 4(4), pp. 138-154, Aug-2012.
11. Akhtar, Md. A. K. and Sahoo G., Behavior Based High Performance Routing Protocol for MANET, Indian Journal of Science & Technology, 2013.
12. Akhtar, Md. A. K. and Sahoo G., The Principles of humanism for MANETs, International Journal of Computer Networks & Communications (IJCNC), 2013, AIRCC.
13. Akhtar, Md. A. K. and Sahoo G., Subsiding Routing Misbehavior in MANET using Mirror Model, CS & IT – CSCP, Jun-2013, AIRCC.
14. Akhtar, Md. A. K. and Sahoo G., Classification of Selfish and Regular nodes based on Reputation values in MANET using Adaptive Decision Boundary, International journal of Communications and Network (CN), May-2013.

15. Akhtar, Md. A. K. and Sahoo G., A Novel Methodology to Overcome Routing Misbehavior in MANET using Retaliation Model, International Journal of Wireless & Mobile Networks (IJWMN), 2013.
16. Akhtar, Md. A. K. and Sahoo G., Characterization and Modeling of Uncertainty Intended for a Secured MANET, International Journal of Engineering and Technology (IJET), 2013.
17. Akhtar, Md. A. K. and Sahoo G., Humanistic Approach in Mobile Adhoc Network: HAMANET, CS & IT – CSCP, 2013, AIRCC.
18. Gunjan, K., Sahoo, G., Tiwari, R. K., Identity Management in Cloud Computing –A Review, Vol. 1(4), July 2012
19. Gunjan, K., Sahoo, G., Tiwari, R. K., Towards Securing APIs in Cloud Computing, Vol. 2(2), 2013.
20. Amritanjali, Anand, S., Sahoo, G., Exploring the Solution Space of Sorting by Translocations, Procedia Computer Science, pp- 160-168, 2012.
21. Amritanjali, G. Sahoo, Exploring the Solution Space of Sorting by Reversals: A New Approach, International Journal of Information Technology, pp. 98-104, 2013.
22. Sahoo, G., Mukherjee, K., Yadav, V., Cluster Energy optimization in Cloud Computing: An Algorithmic Approach, International Journal of Computer Application, Vol. 71(4), May 2013.
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28. Ghosh, S. S. and Jain, A., Hybrid Cache Replacement Policy for Proxy Server, International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE), Vol. 2(3), pp. 1527 - 1532, May 2013.
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32. Roy, T., and Jain, A., Windows Registry Forensics: An Imperative Step in Tracking Data Theft via USB Devices, International Journal of Computer Science and Information Technologies (IJCSIT), Vol. 3(3), pp. 4427-4433, 2012.
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39. Prantosh Kr. Pau<sup>1</sup>, R Senthamarai, K S Shivraji, D Chatterjee B Karn "Artificial Intelligence and Expert Systems: its emerging interaction and importance in Information Science- An overview" Asian Journal of Electrical Sciences, Vol. 1(2), July-Dec. 2012, ISSN-2249-6297, pp.- 06-10, The Research Publication, Coimbatore, India, EIC-Hebba Hassan, Oman.
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41. Azad, C., Agrawal, S., and Jha, V. K., Security, Privacy And Accountability In Wireless Network: A Review, International Journal of Engineering Research and Technology Engineering, Vol. 2(7), 2013.
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50. Keshri A.K., Chatterjee S., Das B.N., Rinha R.K., "WEBspike: A New Proposition of Deterministic Finite Automata and Parallel Algorithm Based Web Application for EEG Spike Recognition", I.J. Information Technology and Computer Science, 11:93-102, 2013.



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1. Das, S., Garg, S. and Sahoo, G., Comparison of Content Based Image Retrieval System using Wavelet Transform, *Advances in Intelligent and Soft Computing*, Vol. 166,, 2012, Springer
2. Shankar, T. N., Sahoo, G., Niranjana, S. 'Digital Signature of an Image by Elliptic Curve Cryptosystem' *CCSIT-2012, Part III, LNICST*, Springer, 86, pp. 337-346.
3. Akhtar, Md. A. K. and Sahoo G., A Novel Methodology for Securing Adhoc Network by Friendly Group Model, *LNEE*, Springer, pp 23-35, Dec-12 Springer
4. Ghosh, S. S. and Jain, A., An Energy Efficient Hybrid Proxy Cache-Prefetch Model for Web Optimization, 2nd International Conference on Eco-friendly Computing and Communication Systems (ICECCS 2013), *Lecture Notes in Computer Science (LNCS)* by Springer in the series of Communications in Computer and Information Science (CCIS) SpringerLink Digital Library, 2013.
5. Sahana S. K. and Jain. A., Modified Ant Colony Optimizer (MACO) for the Travelling Salesman Problem, *Computational Intelligence and Information Technology CIIT 2012*, Janahan Lal Stephen and Vinu V Das (Ed.): CIIT 2012, LNICST pp. 73-82, 2012.
6. Paul, P.K., Bairagya, S., Chatterjee, D. and Karn, B., Information & Knowledge Management: The need and its educational opportunities in India, Accepted in IEEE/ MSOE(USA) sponsored International Conference on Information Management in the Knowledge Economy [IKME-2012] Chitkara University, 16-17 July, 2012.
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8. Mohapatra, S., Patra, D., Kumar, S., & Satpathi, S., Kernel Induced Rough c-means clustering for lymphocyte image segmentation. In *Intelligent Human Computer Interaction (IHCI)*, 2012 4th International Conference on [pp. 1-6]. IEEE, 2012, December.

#### **Published in National Proceedings**

1. Paul, P. K., Kumar, K., Kumar, A., Karn, B., Community Informatics: challenges, Problems and prospect in Indian scenario, in *Proceedings of National Conference on Emerging Trends in Computer Application & Management [NCETCAM-13]*, AVIT, VM University, 17-18/04/2013, GK Publisher, Chennai, Page-84-87, ISBN- 978-93-81208-23-6.
2. Paul, P. K., Sarangi, B. B., Bhatnagar, R., Kumar, A., Jena, S. K., Karn, B., Information Centres and their apex body: emphasizing interaction of emerging Networking and Communication Technology, *International Journal of Network and Mobile Technologies*, Vol. 3, No. 2, July-Dec. 2012, ISSN- 2230-8903, Page-51-55, International Science Press, Haryana, India.
3. Kumar H., Kumar A., Sharma R. P., Keshri A. K., "Simulation of Biogas Generation", All India Seminar on Technology Solution in Manufacturing BIT, Mesra, Ranchi, paper no. 16-06, 01-02 March, 2013.
4. Kumar H., Kumar A., Keshri A. K., "Power Management of Renewable Hybrid Generation with the help of Fuzzy Logic", All India Conference on "Global Innovations" in Electrical & Electronics Engineering,

Chhatrapati Shivaji Institute of Technology, Durg – 491001 ISBN: 978-81-923288-1-2, April 12th-13th 2013.

#### Books:

1. Karn, B., Fuzzy Logic based Information Retrieval System” Lambert Academic Publication. Germany - 2013, ISBN: 978-3-659-32354-6

#### Book chapters written

1. Das, S., Garg, S. and Sahoo, G., Comparison of Content Based Image Retrieval System Using Wavelet Transform, Advances in Computer Science, Engineering & Applications
2. Akhtar, Md. A.K. and Sahoo G., A Novel Methodology for Securing Ad Hoc Network by Friendly Group Model, Computer Networks & Communications, pp 25-35.
3. Shankar, T. N., Sahoo, G., Niranjana, S. Digital Signature of an Image by Elliptic Curve Cryptosystem, Advances in Computer Science and Information Technology, pp-337-346, 2012.

#### BOARD OF STUDIES(UG/PG)

##### *THE PANEL FOR BOARD OF STUDIES IS AS FOLLOWS:*

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| 1. Dr. G. Sahoo            | Chairman |
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| 7. Dr. R. Suresh Kumar     | Member   |

#### External Experts

1. Dr. C. Majumdar, Department of Computer Science and Engineering, Jadavpur University, Kolkata
2. Dr. A. Mishra, Department of MCA, National Institute of Technology, Jamshedpur
3. Dr. Rajib Mall, Department of Computer Science and Engineering Indian Institute of Technology, Kharagpur
4. Dr. B. Majhi, Department of Computer Science and Engineering National Institute of Technology, Rourkela

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| 7. Dr. R. Sukesh Kumar                   | Member                |
| 8. Dr. T. Ghosh                          | Member                |
| 9. The Guide(s) of the candidate         | Member                |

**Other Important Information**

Ayush Kedia, of B.E. (I.T.) 2010 batch was chosen as one of the winners of "*Nokia Connecting the Next Billion Contest – 2012*".

**Others**

1. Dr. Aruna Jain – Co-editor – GSTF International Journal on Computing. ISSN: 2010-2283.
2. Dr. Aruna Jain – Programme Committee Member – ICCCS, NIT Rourkela.

## DEPARTMENT OF MANAGEMENT

The Department of Management was founded in 1979 to impart holistic management education to potential young managers and has completed 35 glorious years of its existence. The programmes offered by the department are characterized by academic excellence, extensive networking with the corporate world and emphasis on nurturing personal integrity & social responsibility among 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 department offers the following programmes

Ph. D in Management

Master of Business Administration

M.E. (Quality Engineering & Management)

### SPONSORED PROJECTS

#### ON GOING PROJECT

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Pedagogy Project, NMEICT (Pilot Phase)	S Shivani (Institute Coordinator)	MHRD, GOI	October, 2009	Rs 44 lacs	4 years

#### 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
1.	Dr.Rohit Pandey	Workshop on interpersonal skills	BIT Mesra	IIT Patna	IIT Patna	28 <sup>th</sup> to 30 <sup>th</sup> September 2012
2.	Amitabh Verma	Workshop on interpersonal skills	BIT Mesra	IIT Patna	IIT Patna	28 <sup>th</sup> to 30 <sup>th</sup> September 2012
3.	Dr. J.B.David	Seminar on New Trend in English Studies	BIT Mesra	SKMU, Dumka	SKMU, Dumka	7-8 Sept. '12

### PUBLICATIONS

#### International Journal

1. Bose, S.K., Debnath Somnath, Dhalla R.S. "Environmental management Accounting : An overview of its Methodological development" Vol-5 No 1 March 2012, International Journal of Business insights and transformation, USA
2. Mani R.V.S., Baul Utpal, Mohanty R.P., 'An Empirical Study of Information Technology Infrastructure Capability and its Impact on Digitally Enabled Customer Processes in Life Insurance Companies', "International journal of Business Information Systems", Vol.14, No 4, P: 461-479
3. Pyne Tarapada, Baul Utpal, Jangid R.S., 'Knowledge Management and Equipment Reliability: Towards a Relationship Model', International Journal of Strategic Engineering Asset Management, Inderscience Enterprises, Ltd., Switzerland, Vol 1, No: 2, 2012, P: 193-223

4. Shyama Kumari, Shradha Shivani, A study on gender Portrayals in Advertising through the years: A Review Report, Journal of Research in Gender Studies, Vol 2(2), Addleton Publishers, Sept 2012
5. Somnath Mukherjee, Shradha Shivani, Service Marketing Mix and Brand equity ; The Servicescape Advantage", Asian Journal of Research in Business Economics and Management, Vol 3 issue 4, April 2013, ISSN 2249-7307
6. R.G.Ratnawat, P.C.Jha, Making Performance Management Work, International Journal of Research in Commerce and Management, Vol.-4, Issue-6, (2013), 58-60,
7. R.G.Ratnawat, P.C.Jha, Problems and Possible Solutions of Performance Management, Zenith International Journal of Multidisciplinary Research, Vol.-3, Issue-6, (2013), 162-168
8. R.G.Ratnawat, P.C.Jha, Effectiveness of Performance Management: Indian Experience, International Journal of Business and Management Tomorrow, Vol.-3, Issue-5, (2013)
9. R.G.Ratnawat, P.C.Jha, A Commentary on Effectiveness of Performance Management, International Journal of Scientific and Engineering Research, Vol.-4, Issue-3, (2013), 01-08,
10. Sinha Anand Prasad, Jha, P.C, The Problems of public sector enterprises in Management of Technology, International Association of Scientific Innovation and Research (IASIR), ISSN (Online): 2279-0039, ISSN (Print): 2279-0020, Issue 5, Volume 1, June-August, 2013, pp. 105-107.

#### National Journal

1. Dash, S.P (2012) "Human Capital Management (HCM): The Evolution of the Field", *BIZCRAFT*, Vol.6, No.1, pp. 50-66. ISSN: 2231-0231.
2. Roy Supriyo, Baul Utpal, 'Managing Supply Chain Inspired by Foraging Behavior of biological real ants', "Perspectives on Management", Journal of management Education Centre, Heritage Institute of Technology, Kolkata, Vol. 4, No: 9 & 10, September '12, ISSN 0974-7095, P: 144-155
3. Pyne Tarapada, Baul Utpal, Jangid R.S., 'Developing an Instrument to Understand Impact of Knowledge Management on Equipment Reliability', International Journal of Scientific and Research Publications, Online Publication, IJSRP, Vol 3, Issue 2, February 2013, ISSN 2250 – 3153, <http://www.ijsrp.org/research-paper-0213.php?rp=P14670>
4. Mani R.V.S., Baul Utpal, Mohanty R.P., 'Approach to Relationship between Information Technology Infrastructure and Digitally Enabled Processes: Study of Customer Management Process in Life Insurance Industry', Industrial Engineering Journal, Vol VI, Issue 1, January 2013, ISSN 0970-2555, P: 30-36
5. Vijaya G.S., Baul Utpal, 'Enterprise Resource Planning (ERP) – An Innovative Key for the Success of an Organization', 'Interscience Management Review (IMR)', Interscience Open Access Journals', ISSN: 2231-1513, Volume-2, Issue- 3, 2012. [www.interscience.in](http://www.interscience.in)
6. Ghosh, A., Khanna, M. & Karandikar, M (2013). Impulse Buying: A Tale of two cities, The Alternative. 12 (1):36-51.
7. Ghosh, A & Karandikar, M (2012) Shopping Companion & the subsequent impact on Impulse Buying, Journal of Management Development & Research. 2(2):1-12.
8. Arpita Pandey, Shradha Shivani, Hedonic Value perception for Cellular Phones, BVIMSR's Journal of Management Research, Vol 5 No1, April 2013.
9. Somnath Mukherjee, Shradha Shivani, Influence of Physical Evidence on Service Brand Image Dimensions and Brand Equity", Indian Journal of Marketing, April 2013, ISSN 0973-8703



10. Sinha Anand Prasad, Jha, P.C, The effectiveness of new Technology Planning and its Implementation in Central Coalfields Ltd. A Case Study. IOSR (International Organization and Scientific Research) Journal of Business and Management (IOSR-JBM, ISSN: 2278-487X. Volume 4, Issue 2 (Sep-Oct. 2012), PP 33-40.

## CONFERENCE PROCEEDINGS

### International Conference

1. David, J.B., Voices from the Margin: Society, Culture and exclusion. Feb 20-22, 2013 at CUJ Alice Walker: The writer for the Marginalized Page No. 85-86.
2. Arpita Pandey, Shradha Shivani, A Study of Hedonism of Non Food product published in proceedings of international conference of emerging economies. IIM Ahmedabad. January, 2013
3. Somnath Mukherjee, Shradha Shivani, Marketing Mix Influence on Brand Image and Brand Equity: A Study of the retail banking sector, MARCON – 2012, International Marketing Conference at IIM Calcutta, December, 28-30, 2012

### National Conference

1. Somnath Mukherjee, Shradha Shivani, Controlling Advertising and Word of Mouth to build service brand equity”, National Seminar on Management Challenges in the New Milieu- The Road Ahead, ICAI University, Ranchi, Nov, 2012
2. Ghosh, A, & Chakraborti, C. Environmental Corporate Social Responsibility in India, Proceedings of International Conference on Management in the New World Order, IIM Ranchi, Radisson Blu Hotel, Ranchi, August 13-14, 2012.

## MEMBERS ON BOARD OF STUDIES(UG/PG)

### I MBA

- Dr S K Bose – HOD, Deptt of Management – Chairman (ex-Officio)
- Dr. N.C. Mohanty, Emiratus Professor, Deptt. Of Applied Mathematics - Member
- Dr U Baul, Professor, Deptt of management – member
- Dr S Shivani, Associate Professor, deptt of management- Member
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- Dr Hariharan, Sr DyGM MTI, SAIL, Ranchi – External Member

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- 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 a wide reputation for the 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 career centre on campus, which helps the students to get entry into various National and Multinational companies.



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

- B.E. (Mechanical Engineering) sanctioned strength: 90
- M.E. (Mechanical Engineering) sanctioned strength : 24
- Specialization: Heat Power /Design of Mechanical Equipment.
- M.Tech. (Energy Technology): 18
- Ph.D. in Mechanical and Interdisciplinary field of research.

### **SPONSORED PROJECTS COMPLETED:**

S.No.	Project Title	PI/Co-PI/ Collaborator if any	Funding Agency
1.	Development of New Health Care Monitoring system for Elderly using Emerging Communication Technologies	Mrs. Richa Pandey Dr. R.P. Sharma, Dr. Rajeev Kumar	DST

### **PUBLICATIONS:**

#### **International Journals:**

1. U.C. Singh, Anant Prasad & Arbind Kumar, A lump integrated model based freezing and melting of a bath material onto a cylindrical solid Additive of negligible resistance, Journal of Mining and Metallurgy, Section B: Metallurgy.
2. U.C. Singh, Anant Prasad & Arbind Kumar, A lump integral model for freezing and melting of a bath material on to a plate shaped solid additive in an agitated bath, Acta Metallurgica Slovaca, 19, pp 61 – 73.
3. R.P. Sharma, A numerical study of three-dimensional darcy- forchheimer (D-F) model in an inclined rectangular porous box, International Journal of Mechanical Engineering and Technology 4(3), pp 259 – 265.
4. R.P. Sharma, Experimental analysis of liquid cooling system for Desktop computers, International Journal of Mechanical Engineering and Technology 4(3), pp 266 – 272

5. R.P. Sharma, Experimental analysis of solar water heater using porous medium and agitator, International Journal of Mechanical Engineering and Technology 4(3), pp 273 – 280
6. R.P. Sharma and Chikesh Ranjan, Modeling and simulation of four-bar planar mechanisms using ADAMS, International Journal of Mechanical Engineering and Technology 4(2), pp 429 – 435.
7. Alok Kumar Pandey and R.P.Sharma, Simulation of eight wheeled rocker bogie suspension system using MATLAB, International Journal of Mechanical Engineering and Technology 4(2), pp 436 – 443.
8. R. P. Sharma and Chikesh Ranjan, Modeling, simulation & dynamic analysis of four-bar planar mechanisms using CATIA V5R21,, International Journal of Mechanical Engineering and Technology 4(2), pp 444 – 452.
9. R.P. Sharma, A numerical analysis of three-dimensional darcy model in an inclined rectangular porous box using S A R technique, International Journal of Mechanical Engineering and Technology 4(2), pp 554 – 561.
10. R.P. Sharma, Mathematical modelling and analysis of three dimensional darcy –brinkman (D-B) model in an inclined rectangular porous box,, International Journal of Mechanical Engineering and Technology 4(2), pp 562 – 567.
11. Ajay Kumar Kapardar and R. P. Sharma, Numerical and CFD based analysis of porous media solar air heater, International Journal of Mechanical Engineering and Technology 3(2), pp 374 – 386
12. Ajay Kumar Kapardar and R. P. Sharma, Experimental investigation of solar air heater using porous medium, International Journal of Mechanical Engineering and Technology 3(2), pp 387 – 396
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14. R.P.Sharma and R. V. Sharma, Modelling & simulation of three-dimensional natural convection in a porous box, International Journal of Mechanical Engineering and Technology 3(2), pp 712 – 721
15. A.K. Roy, B. Maiti, P.K. Das, Visualisation of air entrainment by plunging jet, Procedia Engineering, 56 (2013), pp 468–473.
16. M. K. Das, K. Kumar, T. K. Barman and P. Sahoo, Optimization of Material Removal Rate in EDM Using Taguchi Method, Advanced Materials Research, 626, pp 270-274.
17. Sandeep Singh, Jeeoot Singh, K. K. Shukla, Buckling of laminated composite plates subjected to mechanical and thermal loads using meshless collocations. Journal of Mechanical Science and Technology 27(2), 327-336.
18. Jeeoot Singh and K. K. Shukla, Non linear flexural analysis of functionally graded plates under different loadings using RBF based meshless method, Engineering analysis with boundary Elements, 36, 1819 – 1827.
19. D.P. Mishra, Maximum Air Suction into a Louvered Funnel through Optimum Design, Journal of ship research, 56(1), 1-11.
20. A Sengupta, P Mishra, V Singh, S Mishra, P K Jha, S K Ajmani and S C Sharma, Physical modelling investigation of influence of strand blockage on RTD characteristics in a multistrand tundish, Ironmaking & Steelmaking: Processes, Products and Applications, 40(3), 159-166.
21. D. Mahto and S. Pal, Thermodynamics and thermo-economic analysis of simple combined cycle with inlet fogging, Applied Thermal Engineering 51, 413 – 424.



### International Proceedings:

1. M. K. Das, K. Kumar, T. K. Barman and P. Sahoo, Optimization of Material Removal Rate in EDM Using Taguchi Method, Proceedings of International Conference on Advanced Material Engineering & Technology 2012 (28 - 30 November 2012), Batu Feringhi, Penang Island, Malaysia
2. M. K. Das, K. Kumar, T. K. Barman and P. Sahoo, Optimization of Surface Roughness in EDM of EN31 Tool Steel Using Taguchi Method, Proceedings of 8th International Conference on Industrial Tribology (07-09 December, 2012), Pune
3. M. K. Das, K. Kumar, T. K. Barman and P. Sahoo, Surface Roughness Modeling in Wire Electrical Discharge Machining (WEDM) Using Response Surface Methodology, Proceedings of International Conference on Advances in Mechanical Engineering and its Interdisciplinary Areas (ICAMEI-2012) (27 - 28 December 2012), Kolaghat
4. J. Sudeepan, K. Kumar, T. K. Barman and P. Sahoo, Study of tribological and mechanical properties of ABS /  $\text{CaCO}_3$  composites International conference on recent advances in composite materials (ICRACM-2013), (18 - 21 February 2013), Goa.
5. J. Sudeepan, K. Kumar, T. K. Barman and P. Sahoo, Study of tribological and mechanical properties of compression molded ABS- $\text{TiO}_2$  composites International Conference on Advancements in Polymeric Materials (APM2013) Innovation in Materials and Product Development, (01-03 March, 2013), Lucknow
6. M. K. Das, K. Kumar, T. K. Barman and P. Sahoo, Optimization of EDM Process Parameters Using Grey-Taguchi Technique International Conference on Advanced Manufacturing and Automation (INCAMA-2013), (28-30 March, 2013), Madurai.
7. J. Sudeepan, K. Kumar, T. K. Barman and P. Sahoo, Comparative studies on tribological and mechanical properties of ABS- $\text{CaCO}_3$  and ABS- $\text{TiO}_2$  composites International Conference on Advanced Manufacturing and Automation (INCAMA-2013), (28-30 March, 2013), Madurai.

### National Proceedings

1. M. K. Das, K. Kumar, T. K. Barman and P. Sahoo, Modeling of MRR in WEDM on EN 31 Tool Steel Using Response Surface Methodology, Proceedings of National Conference on Sustainable Development through Innovative Research in Science and Technology, (September 28-29, 2012), Jadavpur University.
2. S.K. Dhiman, Ashish Narula, A. K. Sahu, "Design of the liquid nitrogen pre-cooling heat exchanger for the kW class indigenous helium refrigerator/liqefier", 24th National Symposium on Cryogenics (NSC-24), Institute for Plasma Research, Gandhinagar, Gujrat, p183
3. S.K.Dhiman, Amrit, Vivek Kumar Gaba, "Computational Study of Flow and Heat Transfer Around a Tube in Cross-Flow of Air at Reynolds number range from 100-50,000 ", Proceedings, 2<sup>nd</sup> National Conference on Computational Techniques for Engineering Applications, NSCTEA-2012, November 9-10, 2012, CIST Bhopal MP, pp 27-31
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5. S.K. Dhiman, A.K. Kapardar, Amrit, "Some Experimental Study of Semi-Circular Blades to Improve Savonius Rotor Performance", Proceedings, National Conference on Evolving Techniques in Mechanical Engineering, ETME12, at Sri Venkateshwara College of Engg. & Tech, Tamil Nadu, August 23-24, 2012, pp 75-80.

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

1. A group of Final year and pre-final students participated in the competition "Team Firebolt" held in February 2013 at Indore where a Racing Car fabricated by them was showcased and qualified in the Racing Event.

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

- Dr. Arbind Kumar
- Prof. P.K. Choudhary
- Dr. R.P. Sharma
- 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.



## DEPARTMENT OF PHARMACEUTICAL SCIENCES



*Pharmaceutical Chemistry Laboratory*

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 in quality and innovative research.

The Department runs both B.Pharm. and M. Pharm programmes. 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 Modelling laboratories for this purpose.

The Department is supported by two major projects namely FIST of DST and SAP of UGC. The Department was awarded 5 UGC BSR Fellowships in the current year.

### **INFRASTRUCTURE DEVELOPMENT:**

#### **Names of equipment procured under the funding from DBT, DRDO, AICTE-MODROB, UGC and Institute**

1. Magnetic Stirrer with hot plate (IKA, Germany)
2. TXT Texture Analyzer (Stable Micro Systems, UK)
3. Diffusion Cell Apparatus (Chemico)
4. Disintegration Tester (Electrolab, India)
5. Dual Drum Friability Tester (Electrolab, India)
6. Electromagnetic Sieve Shaker (Electrolab, India)
7. Portable Digital Hardness Tester (Electrolab, India)
8. Planetary Mill (Fritsch, Germany)
9. Viscometer (Malvern UK)
10. Nano Spray Dryer (Labultima, India)
11. Stability Chamber
12. Probe and Bath Sonicator (Bandelin, Germany)
13. Beckman Coulter Table top Ultracentrifuge
14. Tap Densitometer (Electrolab, India)
15. Digital Stirrer (IKA, Germany)
16. T25 Homogenizer (IKA, Germany)
17. Radley's 12 Plus Reaction Station (UK)

18. Rotary vacuum Flash Evaporator (Zenith glassware and instruments, India)

19. Bacteriological Incubator (Zenith glassware and instruments, India)

## SPONSORED PROJECTS

### PROJECT SANCTIONED

S. No.	Project Title	PI / Co- PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	In silico Design, Synthesis and Evaluation of newer azoles as HIV-1-RT inhibitors	Dr. S. Ganguly and Dr. A. Dev	UGC	25 <sup>th</sup> March 2013	13.84 lacs	3 years
2.	To determine molecular mechanism associated with Type 2 Diabetes associated cognitive impairment.	Dr Sugato Banerjee (PI)	DST-SERB	June 2013	25 lacs	3 years
3.	Design & Synthesis of Potent Dual Inhibitors of Cdk4 and Tubulin as Anticancer Agents	Dr. B.N. Sinha BIT, Mesra *RGM: Dr. Venkatesan J. Collaborator: Dr. Bob Chaudhury (De Montfort University, UK) Prof. Bob Choudhuri, De Montfort Univ, UK	UGC-UKERI	2013	30.88 lacs	2 years
4.	Neutraceuticals and cosmaceuticals from Tamarind seeds, Sal Seed Oil and Karanj oil Using Low Cost Technology	Dr. K. Jayaram Dr. S. Jha and Dr. Anima Pandey	(DST TRIFED)	2013	12.5 lacs	2 years
5.	Anti-tubercular Drug Loaded Novel Cubosomes/ Hexosomes Based Drug Delivery System Using Response Surface Methodology	Dr. Sandeep K Singh	(UGC-BSR-Start up Grant )	2013	6 lacs	2 years
6.	Design, Development and Optimization of Self Nanoemulsifying and Solidified Self Nanoemulsifying Drug Delivery Systems of Anti-tubercular Drugs	Dr. Sandeep K Singh Dr. PRP Verma, and Dr. S.M. Verma	(DBT)	2012	14.5 lacs	2 years
7.	Invitro characterization of microsp sponge loaded gel for wound healing- evaluation of safety and efficacy	Dr. Animesh Ghosh and Mr. A.K. Patnaik	(UGC)	2012	6.42 lacs	3 years

S. No.	Project Title	PI / Co- PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
8.	Estimation of Heavy Metals Toxicity in Vegetables & Medicinal Plants collected from Road Side Market and Organized Market Sites of different areas of Ranchi City	Dr. Manik	UGC	2012	0.8 Lakhs	2 Years
9.	MODROB	Dr. PRP Verma	AICTE	2012	6.0 Lacs	2 years

**ONGOING PROJECTS**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	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, Dr. A. S. Vidharthy, Department of Biotechnology Dr. Kunal Mukhopadhyay, Department of Biotechnology	ICAR	Jan 2009	66.5 lacs	3 years (Extended upto Dec.2013)
2.	Design, Synthesis and study of some NIDDM based antidiabetics linear and cyclopeptides and non peptides	Dr. S. Samanta	UGC	Dec 2009	10.818 lacs	3 years
3	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
4	Identification and optimization of some anticancer lead molecules as Ribonucleotidoreductase-Histone Deacetylase dual inhibitors	Dr. B. N. Sinha and Dr. A. Basu	UGC	2010	10.06 lacs	3 Years
5	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

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
6	Evaluation of antidiabetic potential of the indigenous medicinal plants of chotanagpur region	Dr. P. M. Mazumder and Dr. D. Sasmal	UGC	Feb2011	11.08 lacs	3 years
7	Studies on immunotoxic profile and proteomics of deltamethrin in murine thymocytes and splenocytes: Attenuation by herbals	Dr. N. Sharma and Dr. D. Sasmal	UGC	Feb2011	9.29 lacs	3 years
8	Improvement of bioavailability of poorly water soluble drugs by micronization and establishment of Level A In vitro In Vivo correlation.	Dr. Animesh Ghosh	DRDO	2011	9.27lacs	3 years
9.	Manufacture of Stable Potassium Iodate Tablet and Syrup	Dr R.N.Gupta and Dr Sunil Kaushal	DRDO, DELHI	Sept 2011	Rs. 9.95lacs	2 years
10	Modernization of Pharmaceutical laboratory	Dr. P.R.P. Verma	AICTE	March 2012	6.00 lacs	2 years

**PROJECTS COMPLETED**

S. 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 some selective Monoamine oxidase B inhibitors against alzheimer's disease.	Dr. N. Misra	UGC	Jan 2011	1.65 lacs	March 2013
2.	Formulation and evaluation of herbal antiwrinkle gel and its invitro studies	Dr. A. Pandey	UGC	Jan 2011	1.35 lacs	Jan 2013
3.	Gastroretentive floating drug delivery systems of antiretroviral drug-formulation and invitroevaluation	Dr. T. Bal	UGC	2010	1.30 lacs	2012

**SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	Novel Approaches in Phyto-Pharmacology Research: Time for a New Paradigm Shift	Division of Pharmacognosy & Pharmacology	AICTE	September 01 - 15, 2012
2.	Impetus to Organic Synthesis: Approaches for Pharmaceutical Chemistry	Division of Pharmaceutical Chemistry	AICTE	September 16 - 30, 2012
3.	Prospects and Confronts for Nanotechnology Products in Drug Delivery, Cosmetics and Nanomedicines	Division of Pharmaceutics	AICTE	October 01 - 14, 2012
4.	Newer Perspectives in Ethnopharmacological Research	Division of Pharmacognosy & Pharmacology	AICTE	May 27 - June 10, 2013
5.	Recent Innovations in Drug Delivery: Addressing the Bioavailability Problem	Division of Pharmaceutics	AICTE	June 11 - 24, 2013
6.	Systematic Approaches to Rational Drug Designing for Discovery and Development of Medicinals	Division of Pharmaceutical Chemistry	AICTE	25th June to 8th July, 2013

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Nibha Mishra	Workshop on Molecular Biotechnology and Bioinformatics	Self funded	International Centre for Stem Cells, Cancer and Biotechnology (ICSCCB)	Prabhavee Tech Park, Baner Road, Pune Maharashtra	Jul 15, 2013 to Jul 19, 2013
2.	Dr. K Jayaram Kumar	"Isolation and formulation studies on some natural sustained releasing starches from Jharkhand" in 3rd International Biennial Conference on New Developments in Drug Discovery from Natural Products and Traditional Medicines		NIPER, Mohali	NIPER, Mohali	Nov. 22-24, 2012

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2. Mishra N., Sasmal, D., "Attenuating A $\beta$ 1-42-induced toxicity by a novel Acetylcholinesterase inhibitor". *Neuroscience*, 250, pp 309-319, 2013.
3. Mishra N., Sasmal, D. Additional Acetyl Cholinesterase Inhibitory Property of Diaryl Pyrazoline Derivatives. *Bioorganic & Medicinal Chemistry Letters*, 23, pp 702-705, 2013.
4. Anoop Kumar, D. Sasmal, Neelima Sharma, "Deltamethrin induced an apoptogenic signalling pathway in murine thymocytes : exploring the molecular mechanism", *Journal of Applied Toxicology*, published online: 12 Nov 2013 DOI: 10.1002/jat.2948
5. Pachauri, Shakti D; Verma, Priya Ranjan P; Dwivedi, Anil K; Tota, Santoshkumar; Khandelwal, Kiran; Saxena, Jitendra K; Nath, Chandishwar; Ameliorative effect of Noni fruit extract on streptozotocin-induced memory impairment in mice, *Behavioural pharmacology*, 24 (4), 307-319, 2013.
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7. Kansal, Shaswat; Tandon, Rati; Verma, Priya Ranjan Prasad; Dube, Anuradha; Mishra, Prabhat Ranjan; Development of doxorubicin loaded novel core shell structured nanocapsules for the intervention of visceral leishmaniasis, *Journal of microencapsulation*, 2013. doi:10.3109/02652048.2012.752532.
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11. Kumar, Ajay; Verma, Priya Ranjan Prasad; Monif, Tausif; Khuroo, Arshad H; Iyer, Sunil S; Singh, Abhishek Kumar; Challenges in bioanalytical method development for simultaneous determination of olmesartan and hydrochlorothiazide in human plasma by liquid chromatography coupled to tandem mass spectrometry, *Journal of Liquid Chromatography & Related Technologies*, 35 (1), 59-78, 2012.
12. Shrestha, B.; Bhuyan, N. R.; Sinha, B. N., "Simultaneous determination of Ceftriaxone and Tazobactam in injectables by UHPLC method", *Pharmaceutical Methods*, doi: 10.1016/j.phme.2013.12.001
13. Development and validation of a stability indicating HPLC method for estimation of Ceftriaxone in sterile powder for injection without using ion pairing reagent. *International Journal of Pharmacy & Pharmaceutical Sciences* 5 (3), pp 948-952, 2013.
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25. A.K. Pandey, P. Verma, J.S. Danji, R.N. Gupta, 'Development and evaluation of Entric Coated Formulation of Chloroquine Phosphate ",*World Journal of Pharmacy and Pharmaceutical Sciences*, 1, pp 1413-1424,2013
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**AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL)**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr R.N.Gupta & Sujit Kumar (Research Scholar)	1st Prize Best poster Presentation	64 <sup>th</sup> Indian Pharmaceutical Congress at Bangalore	DEC'12
2.	Dr R.N. Gupta	Nomination	National Formulary Of India as Reviewer	Apr'13
3.	Dr. K Jayaram Kumar	Resource person for "Training on Livelihood Generation through NTFP and Medicinal Plants	Institute of Forest Productivity	2012
4.	Dr. K Jayaram Kumar	Marquis Who's who	Science and Engineering	2012
5.	Dr. Manik	USC Programa de Excelencia Investigadora PEIN : INDIA scholarship as Academic Staff	Universidad de Santiago de Compostela, Lugo, Spain	Jan 15, 2013 to Feb 05, 2013

**PATENTS (APPLIED / GRANTED)**

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. A. K. Dorle, Dr. P.R.P. Verma, D. M. Biyani	A Novel Neutraceutical Formulation of an Ayurvedic Preparation Containing Ghee	390/MUM/2013	2013
2.	B. N. Sinha, S. S. Jadav, Venkatesan J.	Arylmethylidenhetero cyclics as novel antiviral agents against chikungunya viral infection	Application No. 811/ KOL/2013	2013
3	Swastika Ganguly and Radhe Shyam Bahare	Thiazolidine-2,4-dione derivatives, their synthesis and uses	Application No. 75/ KOL/2012	2012
4	Radhe Shyam Bahare and Swastika Ganguly	Novel thiazolidinedione agents	Application No. 655/ KOL/2013	2013
5	Biplab Debnath and Swastika Ganguly	Isatin (1H-indol-2,3-dione) derivatives, their synthesis and uses	Application No. 1226/ KOL/2013	2013
6	Geeta Yadav and Swastika Ganguly	Novel benzimidazoles as antimicrobials	Application No. 1323/ KOL/2013	2013

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  21. Bansal Priya, Pandey Deepika, Kumar Anish, Ghosh Manik. "Study on Azelaic acid derivatives as potent antifungal", 64<sup>th</sup> Indian Pharmaceutical Congress, Chennai: Dec 7-9, 2012 (D-344)
  22. Mishra Madhumita, Mishra Namita, Ranjan Priya, Ghosh Manik. "Comparative analysis of whole and splitted tablets of two different brands of Amlodipine besylate", 64<sup>th</sup> Indian Pharmaceutical Congress, Chennai: Dec 7-9, 2012 (E-120)
  23. Ghosh Arpita, Ghosh Sneha, Sinha Rashmi, Ghosh Manik. "Estimation of Pesticide (Acetamiprid) in commonly used Vegetables and Fruits", 64<sup>th</sup> Indian Pharmaceutical Congress, Chennai: Dec 7-9, 2012 (F-195)
  24. Srivastava Vasundhara, Ghosh Manik, Gope Chandra Mukul. "Estimation of Heavy Metals in Chocolates and Chips using Inductively Coupled Plasma Optical Emission Spectroscopy", 64<sup>th</sup> Indian Pharmaceutical Congress, Chennai: Dec 7-9, 2012 (F-258).

## BOOKS:

### Book Chapters:

1. Manoj Goyal, Ayurveda the Ancient Science of Healing: An Insight, D. Sasmal and B.P. Nagori, in Drug Discovery Research in Pharmacognosy, (ISBN: 978-953-51-0213-7 ), (DOI: 10.5772/31818) (Book Chapter). InTech, Available from: <http://www.intechopen.com/books/drug-discovery-research-in-pharmacognosy/introduction-to-ayurveda->
2. Basu A., Sinha B.N., Hydroxamates as Ribonucleotide Reductase inhibitors in Hydroxamic acids Edited by Gupta, S. P. Springer Publication (2013), ISBN: 978-3-642-38110-2.
3. Swastika Ganguly, QSAR in Drug Design, Ed., B.K. Razdan, CBS Publishers, New Delhi, 2012, 1<sup>st</sup> Edition, pg 235-254.
4. Swastika Ganguly, Molecular Modelling in Drug Design, Ed., B. K. Razdan, CBS Publishers, New Delhi, 2012, 1<sup>st</sup> Edition, pg 256-282.
5. K.J. Kumar, B.N. Sinha, S.D. Kulkarni; "Lagenaria siceraria (Molina) Standley-A Natural Multi Therapeutic Agent," in Rec. Prog. Med. Plants, Studium Press LLC, Houston, TX –USA, Vol. 34, pp. 1-29.
6. K.J. Kumar, S.M. Soni, "Development of efficacious Quality Natural Medicines: A step towards conservation of Medicinal Plants," in Non-timber Forest Products and Medicinal Plants conservation, Improvement and sustainable utilization, Institute of Forest Productivity, Ranchi, India, 2012, pp. 68-75.

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|----------------------------------|--|
| 7. Dr. R.N. Gupta                | Professor                                    |
| 8. Dr. (Ms.) S. Ganguly          | Associate Professor                          |
| 9. Dr. K. Jayaram Kumar          | Associate Professor                          |
| 10. Dr. (Mrs.) P. Mitra Mazumder | Associate Professor                          |
| 11. Dr. (Mrs.) S.M. Verma        | Associate Professor                          |
| 12. Dr. (Mrs.) Usha Jha          | Professor & Head, Dept. of Applied Chemistry |
| 13. Dr. Kunal Mukhopadhyay       | Professor & Head, Dept. of Biotechnology     |
| 14. Respective Guide(s)          |  |

### Other Important Information

#### Certificate Programs Attended:

1. Dr. Manik Ghosh received Certificate for attending 'Stat2.1x Introduction to Statistics: Descriptive Statistics' conducted by University of California, Berkeley and edX (February 20, 2013 - April 01, 2013)
2. Dr. Manik Ghosh received Certificate for attending 'PH207x Health in Numbers: Quantitative Methods in Clinical & Public Health Research' conducted by Harvard University and edX (October 15, 2012 - February 01, 2013)
3. Dr. Manik Ghosh received Certificate for attending 'Advance Certificate Program in Project Management' conducted by Catalyst Clinical Services, Delhi (July 2012 - December 2012: 6 months)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
7	Dr. K Jayaram Kumar	A stable antioxidant herbal composition comprising microspheres of Lagenaria siceraria fruit extract, Process for preparing the same and use thereof	1690/MUM/2012	2012
9	S. M. Verma and Kalyan K. Sethi	4,5,6,7 - tetrachloro-1,3-dioxoisindolin-2-yl benzenesulfonamide derivatives.	Application no. 568/KOL/2013.	2013
10	S. M. Verma and Kalyan K. Sethi	4,5,6,7-tetrabromo-1,3-dioxoisindolin-2-yl benzenesulfonamide derivatives.	Application no.: 567/KOL/2013.	2013
11	S. M. Verma and Kalyan K. Sethi	Novel Benzothiazole Sulfonamide derivatives.	Application no.: 74/KOL/2013.	2013
12	S. M. Verma and Kalyan K. Sethi	Novel Sulfonamides International Journal derivatives	Application no.: 908/KOL/2012.	2012

#### DEPARTMENTAL STUDENTS' ACTIVITIES

S. No.	Name of the Activity	Date/Duration
1.	Welcome Function of Students	April, 2013
2.	Farewell Function to outgoing students	Oct 2013

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

• Dr. P.R. Varia	External Member
• Dr. Arup Mukherjee	External Member
• Dr. (Mrs) Usha Jha	Professor (Internal)
• Dr. Kunal Mukhopadhyay	Professor (Internal)
• Dr. D. Sasmal	Professor (Internal)
• Dr. P.R. P. Verma	Professor and Head (Internal)
• Dr. B.N. Sinha	Professor (Internal)
• Dr. S. Samanta	Professor (Internal)
• Dr.S. Jha	Professor (Internal)
• Dr. (Mrs) S.G. Panpalia	Associate Professor (Internal)
• Mr. A.K. Pattnaik	Assistant Professor (Internal)

#### Departmental Academic Committee

1. HOD,	Chairman
2. Dr. D. Sasmal	Professor
3. Dr. P.R.P. Verma	Professor
4. Dr. B.N. Sinha	Professor
5. Dr. S. Samanta	Professor
6. Dr. S. Jha	Professor

**SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short - term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	All India Seminar on "Technology Solution In Manufacturing",	Dr. Rajeev Agrawal	IE (India) organized by IE(I), JSC in association with Department of Production Engineering, BIT, Mesra, Ranchi	01 <sup>st</sup> & 02 <sup>nd</sup> March, 2013

**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 Pandey	Short term school on Micromanufacturing	I.I.T., Kanpur	Kanpur	5-10, November 2012
2.	Dr. S.C. Srivastava	Short term school on Micromanufacturing	I.I.T., Kanpur	Kanpur	5-10, November 2012
3.	Dr. Vijay Pandey	Short term course on Applications of AI techniques in engineering systems	Department of mechanical engineering, M.N.N.I.T., Allahabad	Allahabad	10-14, June, 2013
4.	Dr. B.K. Singh	Training programme on outcome based accreditation at KIIT Bhubaneswar	KIIT Bhubaneswar	Bhubaneswar	31.08.2012 to 02.09.2012
5.	Dr. B.K. Singh	Management capacity enhancement for administrator	IIM Lucknow, Noida campus	IIM Lucknow, Noida campus	11.2.2013 to 15.02.2013
6.	Dr. Vinay Sharma	Management capacity enhancement for administrator	IIM Lucknow, Noida campus	IIM Lucknow, Noida campus	11.2.2013 to 15.02.2013
7.	Dr. B.K. Singh	Special workshop on Accreditation process at KIIT Bhubaneswar	KIIT Bhubaneswar	Bhubaneswar	25.06.2012
8.	DR. L.N. Pattanaik	4 <sup>th</sup> International 25 <sup>th</sup> AIMTDR Conference 2012	Jadhavpur University, Kolkata	Kolkata	14-16, December, 2012
9.	Dr. Ritesh Kumar Singh	International Workshop on Industry-Academia Collaboration	MHRD, AICTE & CII	Hotel Lalit, Barakhamba Road;	April 15, 2013



## 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. It aims at developing 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. The Department has established 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

#### PROJECTS SANCTIONED

S. No.	Project Title	PI / Co- PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Microwave assisted welding	Dr. Vinay Sharma B. K. Singh Arpita Roychoudhary	UGC	01.04.2013	5.55	3 Years

#### ONGOING PROJECTS

S. No.	Project Title	PI / Co- PI/Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	FIST-II	Dr. B.K. Singh	DST	2007	110 lakhs	5 years

#### PROJECTS COMPLETED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Creating infrastructural facilities for training and research in precision forming.	Dr. B.K. Singh	UGC (SAP)	01.04.2007	72 lakhs	2013

9. Vinay Sharma, Sanjeev Kumar, S. Chattopadhyaya, "A Comparative Analysis of Internal Environmental Management Performance Between Indian Small and Medium Sized Enterprises for Implementation of Sustainable Supply Chain, International Journal of Advanced Manufacturing Systems, Vol 14, issue 2, 2002, pp 49-61
10. Rajeshwari Chatterjee, Vinay Sharma, Surender Kumar, "Eco-efficiency from cradle to grave design system based on atmospheric conditions in the biodiesel manufacturing sector produced from *Jatropha curcas* for sustainable cleaner production" International Journal of Sustainable Manufacturing, Inderscience, Vol. 2, No. 4, 2012, pp- 261-275
11. Vinay Sharma, J. Ghose, S. Kumar "Compressive and Acoustic Behavioural Analysis of Al-MMC Foam for Industrial Applications", Springer, Journal of The Institution of Engineers (India): Series C, 2012) volume 93(1) pp. 33-40
12. J. Ghose, Vinay Sharma, S. Kumar, "Acoustic Absorption Characteristics of Closed Cell Aluminium Foam" Applied Mechanics and Materials, Trans Tech Publications, Vols. 110-116 (2012) pp. 1145-1149
13. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "Sustainable Supply Chain Management: A Case Study From Indian Automotive Industry", Advanced Materials Research Vols. Trans Tech Publications, 472-475 (2012) pp 3359-3370
14. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "Sustainable supply chain: vendor and customer participation", International Journal of Modelling in Operations Management, Vol. 2, No. 4, 2012, pp 360, 377
15. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "Green Supply Chain Management: A Case Study from Indian Electrical and Electronics Industry", International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume-1, Issue-6, January 2012, pp 276, 281.
16. Anand Prakash, S. K. Jha "Scenario Planning for Service Quality: A Monte Carlo simulation study", International Journal of Strategy and Management, Emerald publication, PP. 331-352, Volume 5, Issue 3, 2012.
17. P. Prakash, S. K. Jha "A Study Of Process Parameters Of Friction Stir Welded AA 6061 Aluminum Alloy", International Journal of Innovative Research in Science, Engineering and Technology, PP. 2304-09, Volume 2, Issue 6, 2013.
18. A. Singh, S. K. Jha "Green Manufacturing Practices In Brick Industries: A Case Study Using AHP", International Journal of Innovative Research in Science, Engineering and Technology, PP. 2236-42, Volume 2, Issue 6, 2013.
19. Rajeev Agrawal, L.N. Pattanaik And S Kumar, "Scheduling of a Flexible Job-Shop using a Multi-objective Genetic Algorithm", (2012) International Journal of Advances in Management Research (Emerald) ISSN:0972-7981, Vol.9 Iss:2, page 178-188, IF-0.712
20. Rajeev Agrawal, Koushik Kabiraj, Ravi Singh "Modeling a controller for an Articulated Robotic Arm", Intelligent Control & Automation, Scientific Research Publishing Inc. USA, Vol. 3 No. 3, August 2012.
21. Somak Datta, D.K. Pratihar, P.P. Bandyopadhyay, Modeling of input-output relationships for a plasma spray coating process using soft computing tools, Applied Soft Computing, Vol. 12, pp 3356 -3368, 2012.
22. Somak Datta, D.K. Pratihar, P.P. Bandyopadhyay, Hierarchical adaptive neuro-fuzzy inference systems trained by evolutionary algorithms to model plasma spray coating process, Journal of Intelligent & Fuzzy Systems, Vol. 24, pp.355-362, 2013.

S. No.	Name of the Faculty	Title of the Conference/ Seminar.....	Organized by	Venue	Date, Month, Year
10.	Dr. Ritesh Kumar Singh	Regional Industry Academia Collaboration workshop	NPIU, AICTE, CII	Bengal Engineering and Science University, Shibpur, Howrah	19-20 June 2013
11.	Dr. Rajeev Agrawal	1st International Conference on Best Practices in Supply Chain Management BPSCM-2012	Shiksha 'O' Anusandhan University, Bhubaneswar,	Odissa	22-23, November, 2012
12.	Dr. Rajeev Agrawal	Y Design in Engineering	PDPM, IIIT, Jabalpur	Jabalpur	5-7, December, 2012
13.	Mr. Binay Kumar	Application of Matlab in research	TEQIP, B.I.T, Mesra, Ranchi	B.I.T, Mesra, Ranchi	24/6/13 to 1/7/13
14.	Dr. Somak Datta	National Seminar on Technology Solutions in Manufacturing	IE(I) and Production Engg. Dept. BIT-Mesra	BIT -Mesra	March 1-2, 2013

## PUBLICATIONS

### International Journals

1. R.K. Singh and Lyes Benyoucef, Fuzzy Logic and Interval Arithmetic Based TOPSIS Method for Multi-criteria Reverse Auctions", Service Science, Vol. 4, No. 2, 2012, pp. 1-17
2. R.K. Singh and Lyes Benyoucef, A consensus based group decision making methodology for strategic selection problems of supply chain coordination, Eng. Applications of Artificial Intelligence, Volume 26, Issue 1, January 2013, Pages 122-134.
3. KD Prasad, SK Jha, RK Singh, Productivity Assessment of Utensils Manufacturing Unit: A Case Study, International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET), June 2013, Vol. 2, Issue 6.
4. Pattanaik, L. N. (2013), "Applications of Soft computing tools in Metal forming: A state-of-art review", Journal of Machining and Forming Technologies, Vol 5, Issue 1-2, pp 29-44. (ISSN 1947-4369).
5. Subodh Kumar, Vinay Sharma, Ajit Kumar Singh Choudhary, Somnath Chattopadhyaya, Sergej Hloch, "Determination of layer thickness in direct metal deposition using dimensional analysis", The International Journal of Advanced Manufacturing Technology, August 2013, Volume 67, Issue 9-12, pp 2681-2687
6. Sanjeev Kumar, S. Chattopadhyaya, Vinay Sharma, "Developing Green Supply Chain System for Indian Enterprises", Int. J. Business Excellence, Vol. 6, No. 3, 2013, pp 270-291
7. V N Sundharam, Vinay Sharma, I S Stephan Thangaiah, "An integration of BSC and AHP for sustainable growth of manufacturing industries" Inderscience, International Journal. Business Excellence, Vol. 6, No. 1, 2013, pp 77-92
8. Rajeshwari Chatterjee, Vinay Sharma, Surender Kumar, "Life cycle assessment of energy performance of biodiesel produced from *Jatropha curcas*" J. Renewable Sustainable Energy, American Institute of Physics,

7. Ankita Chakraborty, Neha Verma, Partho Banerjee, Arpith. S, and Vijay Pandey. " Micromachining and actuation control of micro-EDM", Proceeding of National Conference on Emerging trends in mechanical engineering, T.I.T, Bhopal, November 29-30, 2012.
8. Partho Banerjee, Arpith S., Ankita Chakraborty, Neha Verma, and Vijay Pandey. " Just In Time: A model for better Productivity", Proceeding of National Conference on Emerging trends in mechanical engineering, T.I.T, Bhopal, November 29-30, 2012.
9. Neha Verma, Partho Banerjee, Arpith S., Ankita Chakraborty, and Vijay Pandey. "Precision forming approach in vehicle assemblies", Proceeding of National Conference on Emerging trends in mechanical engineering, T.I.T, Bhopal, November 29-30, 2012.
10. Navaneeta Mahanty and Vijay Pandey. "Green supply chain management for developing countries like India: A review", Proceeding of All India Seminar on Technology Solution in Manufacturing, Institution of Engineers (I), Jharhkhand State Centre, IE(I), B.I.T., Mesra, Ranchi, March 1-2, 2013.
11. Asifa Imam, Ankita Chakraborty, and Vijay Pandey. "Filament winding: A technology for manufacturing of composites", Proceeding of All India Seminar on Technology Solution in Manufacturing, Institution of Engineers (I), Jharhkhand State Centre, IE(I), B.I.T., Mesra, Ranchi, March 1-2, 2013.
12. Utkarsh, Sushant Kumar Thakur, and Vijay Pandey. "Warehouse design and optimization by order picking: A literature overview", Proceeding of All India Seminar on Technology Solution in Manufacturing, Institution of Engineers (I), Jharhkhand State Centre, IE(I), B.I.T., Mesra, Ranchi, March 1-2, 2013.
13. Prashant Kumar, S.K.Jha and S.C.Srivastava, " Design, development and analysis of the friction stir welding process" e-Proceeding of All India Seminar on Technology Solution in Manufacturing, B.I.T Mesra, Ranchi, 01<sup>st</sup> -02<sup>nd</sup> march -2013.
14. T.K.Baug, L. N. pattanaik & S.K.Jha, " Selection of lean tools for achieving sustainability in manufacturing" e-Proceeding of All India Seminar on Technology Solution in Manufacturing, B.I.T Mesra, Ranchi, 01<sup>st</sup> -02<sup>nd</sup> March -2013.
15. A.K.Singh and S.K.Jha, " Sustainability assessment using Analytical Hierarchy Process: A case study" e-Proceeding of All India Seminar on Technology Solution in Manufacturing, B.I.T Mesra, Ranchi, 01<sup>st</sup> -02<sup>nd</sup> March -2013.
16. Prashant Prakash, Sanjay Kumar Jha & S. P. Lal, "Investigations of friction stir welding of metallic materials." E-Proceeding of International conclave on Innovation in Engineering and Management, BIT Mesra, Patna Centre, 22<sup>nd</sup> -23<sup>rd</sup> February -2013.
17. Rajeev Agrawal, Amit Kumar, Om Prakash, Design of Supply Chain Model for E-Manufacturing Framework,, All India Seminar On "Technology Solution In Manufacturing", under the aegis of IE(India) organized by IE(I), JSC in association with Department of Production Engineering, BIT, Mesra, Ranchi will be held during 01<sup>st</sup> & 02<sup>nd</sup> March, 2013.
18. Subhash Kumar, Rajeev Agrawal, Simulation of Robotic spray paint application for offline programming, All India Seminar On "Technology Solution In Manufacturing", under the aegis of IE(India) organized by IE(I), JSC in association with Department of Production Engineering, BIT, Mesra, Ranchi will be held during 01<sup>st</sup> & 02<sup>nd</sup> March, 2013.
19. Rajeev Agrawal, Sudhir Kumar, Srikrishna L. Purohit, L.N Pattanaik, Improving Machinability of High Carbon Steel through Heat Treatment Processes, All India Seminar On "Technology Solution In Manufacturing", under the aegis of IE(India) organized by IE(I), JSC in association with Department of Production Engineering, BIT, Mesra, Ranchi will be held during 01<sup>st</sup> & 02<sup>nd</sup> March, 2013.



23. Pankaj Upadhyay, and Dr. S. C. Srivastava, "Priority Rule Based Genetic Algorithm Approach for Non Polynomial Complete Job Shop Scheduling Problem", An International Journal Manufacturing Technology and Research, January- June, 2013 Volume 8, No.1 ISSN No.: 0973-0281 pp.73-78.

#### **Published in International Proceedings**

1. Pattanaik, L. N. and B. K. Jena (2012), "Optimization of Aluminum die casting process using ANN", 4<sup>th</sup> International and 25<sup>th</sup> AIMTDR conference, JU, Kolkata.
2. Arpith. S, Meghla Clara Costa, Rajeev Agrawal, "Manufacturing Management Model To Optimize Production Technologies", 3rd International Conference on Production and Industrial Engineering (CPIE 2013) organized by Department of Industrial and Production Engineering Dr B R Ambedkar National Institute Of Technology, Jalandhar, India, March 29-31, 2013, Page 32-36.
3. Ankit Tibrewal, Aditya Prakash & Rajeev Agrawal, "Modeling of Solar Panels Automatic Tracking System Based on Delta PLC", 3rd International Conference on Production and Industrial Engineering (CPIE 2013) organized by Department of Industrial and Production Engineering Dr B R Ambedkar National Institute Of Technology, Jalandhar, India, March 29-31, 2013,
4. Naval Kishore Gupta & Rajeev Agrawal, "A Framework For Supply Chain Integration And E-manufacturing", 1<sup>st</sup> International Conference on Best Practices in Supply Chain Management BPSCM-2012, Organised by ITER (Faculty of engineering and Technology), Shiksha 'O' Anusandhan University, Bhubaneswar, Odisha, 22-23<sup>rd</sup> Nov, 2012.

#### **Published in National Proceedings**

1. Rajeshwari Chatterjee and Vinay Sharma, " Evaluation of Environmental Impact of Biodiesel produced from Jatropha Curcas by life cycle assessment and eco-efficiency for sustainable cleaner production", 9<sup>th</sup> All India Peoples Technology Congress, organised by Forum of Scientists, Engineers & Technologists, 8-9 February, 2013
2. Arpita Roychoudhury, B. K. Singh, Vinay Sharma, "Microwave Assisted Welding: A New Tool for Welding of Plastics" 27<sup>th</sup> National Convention of Production Engineers & National Seminar on Advancements in Manufacturing - Vision 2020, 25<sup>th</sup> – 26<sup>th</sup> May, 2012, BIT Mesra Ranchi, India
3. Manish Oraon, Vinay Sharma and Surender Kumar, "Effect of tool geometry in sheet metal incremental forming" 27<sup>th</sup> National Convention of Production Engineers & National Seminar on Advancements in Manufacturing - Vision 2020, 25<sup>th</sup> – 26<sup>th</sup> May, 2012, BIT Mesra Ranchi, India
4. Aniruddha Ghosh, S. Chattopadhyaya, Sergej Hloch and Vinay Sharma, "Numerical Simulation of Transient Temperature during Submerged Arc Welding Process" 27<sup>th</sup> National Convention of Production Engineers & National Seminar on Advancements in Manufacturing - Vision 2020, 25<sup>th</sup> – 26<sup>th</sup> May, 2012, BIT Mesra Ranchi, India
5. Sujeet Kumar Mishra, Vinay Sharma and Ashok Misra, " Some Studies on the Electromagnetic radiation under compression in sintered Aluminium Preforms" 27<sup>th</sup> National Convention of Production Engineers & National Seminar on Advancements in Manufacturing - Vision 2020, 25<sup>th</sup> – 26<sup>th</sup> May, 2012, BIT Mesra Ranchi, India
6. Arpith. S, Partho Banerjee, Neha Verma, Ankita Chakraborty, and Vijay Pandey. " Recent trends in manufacturing", Proceeding of National Conference on Emerging trends in mechanical engineering, T.I.T., Bhopal, November 29-30, 2012.



8. Dr. A.K. Jha, Professor, Mechanical Engineering Department, IT, BHU, Varanasi
9. Dr. A.K.S. Choudhary, Professor & Head, Production Engineering Department, B.I.T., Sindri, Dhanbad
10. Dr. S. Kumar, Professor, Mechanical Engineering Department, N.I.T., Jamshedpur
11. Dr. A.K. Pathak, Associate Professor, Department of Manufacturing Engg., NIFFT, Hatia
12. Er. S.K. Saxena, G.M., Foundry and Forge Plant, H.E.C., Ranchi

**DEPARTMENTAL ACADEMIC COMMITTEE**

S. No.	Name	Designation	
1.	Dr. B.K. Singh	Professor & Head	Chairman
2.	Dr. Vinay Sharma	Professor	Member
5.	Dr. Sanjay Kumar Jha	Associate Professor	Member
6.	Dr. Ritesh Kumar Singh	Associate Professor	Member
7.	Dr. L.N. Pattanaik	Associate Professor	Member
8.	Dr. Vijay Pandey	Associate Professor	Member
9.	Dr. Arbind Kumar	Professor, Mech. Engg. Deptt.	Member
10.	Dr. J.K. Prasad	Professor & Head, SER	Member
11.	External Expert		Member

**Other Important Information**

1. New Lab added, Manufacturing simulation lab
2. New equipment added, Computerized rolling mill

20. Ankita Chakraborty, Naval Kishor Gupta, Rajeev Agrawal, "Optimum Resources Utilization to Overcome Energy Crisis and Pollution Control", National Conference on Sustainable Development and Global Competitiveness, Organised by Environmental Science & Engineering Group, BIT, Mesra, Ranchi, Dec.4-5,2012.
21. Partho Banerjee & Rajeev Agrawal, "An Industrial Model for Environmental Sustainability – A Primer", National Conference on Sustainable Development and Global Competitiveness Environmental Science & Engineering Group, BIT, Mesra, Ranchi, Dec.4-5,2012.
22. Arpith S. & Rajeev Agrawal, "Environmental Management System in Manufacturing Industries", National Conference on Sustainable Development and Global Competitiveness Environmental Science & Engineering Group, BIT, Mesra, Ranchi, Dec.4-5,2012.
23. Himanshu Agarwal & Rajeev Agrawal, "Making Every Village a Knowledge Centre for Sustainable Development," National Conference on Sustainable Development and Global Competitiveness Environmental Science & Engineering Group, BIT, Mesra, Ranchi, Dec.4-5,2012.
24. Pattanaik, L. N., Sudhir Kumar and S. Purohit, "Improving Machinability of High Carbon Steel Through Heat Treatment Processes", Proceedings of All India Seminar on Technology Solution in Manufacturing, March 1-2, 2013, Ranchi.
25. Anurag Anand and Pattanaik, L. N., "Development of a Need Assessment Model For Reconfigurable Manufacturing System", Proceedings of All India Seminar on Technology Solution in Manufacturing, March 1-2, 2013, Ranchi.

#### **AWARD / RECOGNITION BESTOWED ON FACULTY ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. Rajeev Agrawal	Recognition from Jharkhand state Centre IE (I), for organizing various technical activities	JSC, The Institution of engineers (India )	2012

#### **DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Date/Duration
1.	Introductory workshop cum interactive session on engineering graphics	24 <sup>th</sup> & 25 <sup>th</sup> August, 2012
2.	Educational/industrial visit at Jindal Steel & Power Limited, Patratu	10 <sup>th</sup> oct. 2012
3.	Industrial Visit to Alcast, Ranchi	25 <sup>th</sup> September, 2012

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

1. Head of the Production Engineering Department-Chairman
2. Dr. Vinay Sharma, Professor
3. Dr. S.K. Jha, Associate Professor
4. Dr. J.K. Prasad, Professor, Department of SE & R
5. Dr. Ashok Misra
6. Two Student members (One from UG and one from PG) External
7. Dr. S.S. Mahapatra, Professor, Mechanical Engineering Department, N.I.T., Rourkela

S. No.	Project Title	Name of the PI/ Co-PI/ Collaborator	Name of the funding agency	Date of Sanction	Sanctioned Amount (₹)	Duration
2	Monitoring Snow & Glaciers of Himalayan Region, Zaskar Basin (J&K) Ph-II	Dr. V. S. Rathore & SAC, ISRO, Ahmedabad	MoEF and DoS	17.2011	3855000/-	3 years (31.3.14)
3.	IWMP, Kanke, Ranchi	Dr. P. K. Barhai, Dr. G. Pathak, Dr. N. Patel and Dr. V. S. Rathore	MoRD, DoLR, GoI and GoJ	30.06.11	74276602/-	5 Years (31.03.16)
4.	Crop Suitability and Potential Soil Erosion Assessment in the Drought Prone Puruliya District of West Bengal	Dr. Abhisek Santra (PI)	UGC	30th March, 2013	6,00,000/-	2 Years
5.	Understanding Lunar Volcanism and Tectonism on Moon using Chandrayaan-1 data	Dr. V. S. Rathore & Dr. Mili Ghosh/ SAC, ISRO	DoS	5.09.11	4,40,000/-	2 Years
6.	Hybrid Polarimetric Signatures study under desertic environment under RISAT-UP	Dr. V. S. Rathore & Dr. Mili Ghosh/ SAC, ISRO	DoS	1.9.10	13,00,000/-	3 years

#### SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	9th EDUSAT Course on "Basics of Remote Sensing, GIS and GPS".	Dr. C. Jeganathan	Indian Institute of Remote Sensing (IIRS, ISRO, Dehradun)	6 <sup>th</sup> August 2012 to 17 <sup>th</sup> October 2012
2.	10th EDUSAT Advance Course on "GeoWeb Services - Technology & Applications".	Dr. C. Jeganathan	Indian Institute of Remote Sensing (IIRS, ISRO, Dehradun)	11 <sup>th</sup> Feb 2013 to 15 <sup>th</sup> March 2013



## DEPARTMENT OF REMOTE SENSING

The Department of Remote Sensing was established in 1997 with the approval of AICTE with the view to meet the increasing demand for qualified manpower in this rapidly developing field.

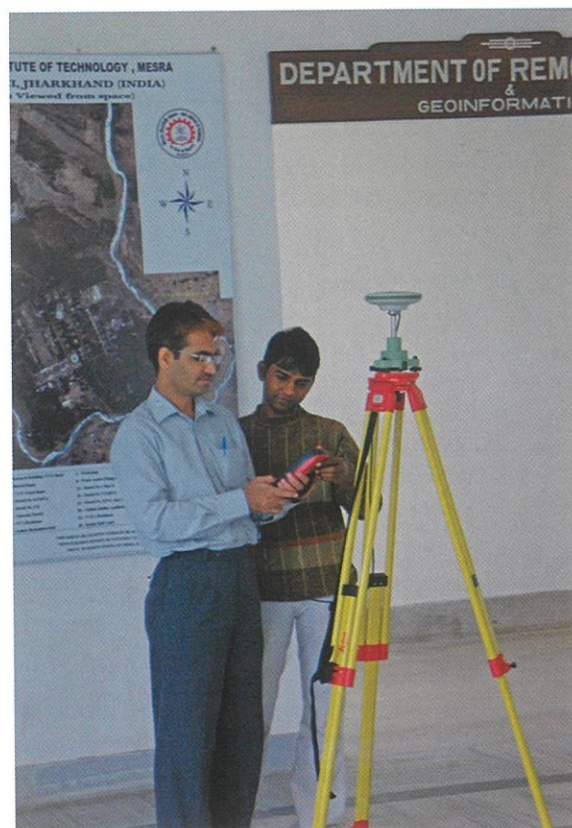
The Department of Remote Sensing is now a FIST-DST sponsored department and is also SAP (Special Assistance Programme) supported by UGC.

### Programmes:

1. M.Tech. (Remote Sensing) – 2 years duration (Intake-18 seats)
2. M.Sc. (Geo-informatics) – 2 years duration (Intake-20 seats)
3. Ph.D. (both full time and part-time) - admission held twice in a year (in August and February)

### Facilities available:

1. Digital Image Processing and GIS software
2. Digital Photogrammetry software
3. GPS and Differential GPS
4. Stereoscopes
5. GPS enabled camera
6. Ground Truth Radiometer
7. Adequate numbers of PCs
8. A0 size scanner, plotter
9. 24 hours Internet facility



*Global Positioning System*

**Faculty members** having rich expertise in diverse research areas and having both international and national collaborations, several sponsored research projects and consultancies.

The Department offers highly amicable teaching-learning ambience and collaborative research.

### SPONSORED PROJECTS

#### ONGOING PROJECTS

S. No.	Project Title	Name of the PI/ Co-PI/ Collaborator	Name of the funding agency	Date of Sanction	Sanctioned Amount (₹)	Duration
1.	Ground Water Quality Mapping under RGNDWM-PH-IV in parts of M.P.	Dr. V. S. Rathore,	NRSC, DoS, Hyderabad	1.9.11	45,00,000/-	3 years (31.3.14)

11. Chhetri, S, Singh, K K and Krishna, A P (2013). Resource use impacts within the forest land cover of Khangchendzonga Biosphere Reserve, Sikkim Himalaya along different disturbance levels and altitudinal zones; *Applied Ecology and Environmental Research*, 11(2): 273-291, ISSN 1589 1623, ALÖKI Kft., Budapest, Hungary
12. Atkinson, P.M., Jeganathan, C., Dash, J., and Atzberger, C. (2012). Inter-comparison of four models for smoothing satellite sensor time-series data to estimate vegetation phenology. *Remote Sensing of Environment*, 123, 400-417.
13. V.F. Rodríguez-Galiano, M. Chica-Olmo, F. Abarca-Hernández, P.M. Atkinson and C. Jeganathan (2012). Random Forest Classification of Mediterranean Land Cover Using Multi-seasonal Imagery and Multi-seasonal Texture. *Remote Sensing of Environment*, 121, 93-107.
14. Jeganathan, C., Chandrashekhar, B. and Roy, P.S. (2013). Intelligent Object Based Smoothing: An algorithm for removing noises in the classified satellite image. *International Journal for Advancement in Remote Sensing, GIS and Geography*, 1(1), 52-61.
15. Dasgupta, Arunima, Sastry, K. L. N., Dhinwa, P S, Rathore, V. S. and Nathawat, M. S., 2013. Identifying desertification risk areas using fuzzy membership and geospatial technique – A case study, Kota District, Rajasthan, J. Earth Syst. Sci. 122, No. 4, pp. 1107–1124.
16. Singh, S. K., Pandey, A. C. Rathore, V. S. and Nathawat, M. S., 2013. Evaluating factors responsible for contrasting signature of wasteland development in northern and southern Ganga Plains (Bihar State, India) with focus on waterlogging, Arab J. Geosci, 6 (8), DOI: 10.1007/s12517-013-1094-z.
17. Santra, A., (2013). Change detection analysis of the shoreline using toposheet and satellite image: A case study of the coastal stretch of Mandarmani-Shankarpur, West Bengal, India. *International Journal of Geomatics and Geosciences*, Vol. 3, No. 3, pp. 425-437.

#### Published in International Proceedings

1. Jeganathan, C., Nilay Nishant, Peter M. Atkinson and Shuhe Zhao (2013). Downscaling of Coarse Resolution Normalised Difference Vegetation Index. 35th International Symposium on Remote Sensing of Environment, 22-26<sup>th</sup> April, 2013, Beijing, China.

#### Published in National Journals

2. Kumar, R. N., Reddy, K. S., Nathawat, M. S., Patel, N., and Rathore, V.S. (2013). Climate Change Implications on water Resources in India-Review, *Environment & Ecology*, 31 (3), pp. 1269-1275.
3. P. S. Roy, M.S.R. Murthy, A. Roy, S.P.S. Kushwaha, S. Singh, C.S. Jha, M.D. Behera, P.K. Joshi, C. Jeganathan, H.C. Karnatak, S. Saran, C.S. Reddy, D. Kushwaha, C.B.S. Dutt, M.C. Porwal, S. Sudhakar, V.K. Srivastava (2013). Forest Fragmentation in India. *Current Science*, Indian Academy of Science, 105(6), 774-780.

#### Published in National Proceedings

1. Manibhushan, Patel, N., Sahoo, G. (2013). Land Use and Land Cover Classification Using Fuzzy Logic for Better Accuracy, BIT International Conclave on Innovations in Engineering & Management (ICIEM 2013), Birla Institute of Technology Patna Campus, Patna, Bihar, India, 22-23 February, 2013.
2. Kumar, Santosh and Krishna, A.P. (2012). Landslide susceptibility modelling using artificial neural network: case study of a Central Himalayan area, Proc. (abs.) National Symposium on Space Technology for Food & Environmental Security & Annual Convention of Indian Society of Remote Sensing (ISRS), December 5-7, 2012, New Delhi



**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. C. Jeganathan	EDUSAT User Interaction Seminar	Indian Institute of Remote Sensing (IIRS, ISRO, Dehradun)	IIRS, ISRO, Dehradun	IIRS, ISRO, Dehradun	11 to 12 <sup>th</sup> March 2013.
2.	Dr.Mili Ghosh Nee Lala	100th Indian Science Congress 2013,	BIT Mesra, Ranchi	Calcutta University, Kolkata	Calcutta University, Kolkata	Jan 03-07, 2013

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

1. Verma, S, Verma R. K., Tiwari, R. K., Patel, N., and Murthy, S. (2012). Relationships between Land-use/ Land-cover Patterns and Surface Water Quality in Damodar River Basin, India, *Global Journal of Applied Environmental Science (GJAES)* ISSN 2248-9932, Vol. 2 (2), pp. 107-121.
2. Sharma, L. P., Patel, N., Ghose, M. K., and Debnath, P. (2012). Geo-Spatial Technology Based Landslide Vulnerability Assessment and Zonation in Sikkim Himalayas in India, *Journal of Geomatics*, Vol. 6, No. 2.
3. Sharma, L. P., Patel, N., Ghose, M. K., and Debnath, P. (2012). Application of Frequency Ratio and Likelihood Ratio Model for Geo-spatial Spatial modeling Modeling of Landslide Hazard Vulnerability Assessment and Zonation: A Case Study from the Sikkim Himalayas in India, *Geocarto International (Taylor & Francis)*.
4. Sharma, L. P., Patel, N., Ghose, M. K., and Debnath, P. (2013)., Article title: Synergistic Application of Fuzzy Logic and Geo-informatics for Landslide Vulnerability Zonation - A Case Study in Sikkim Himalayas, India, *Applied Geomatics (Springer)*, DOI: 10.1007/s12518-013-0115-7.
5. Manibhushan, Patel, N., Sahoo, G., and Singh, A. K. (2013). Image Classification for Different Land Use and Land Covers Using Fuzzy Logic for the Improvement of Accuracies, *Journal of Agricultural Science*; Vol. 5, No. 3; pp. 278-283, ISSN 1916-9752 E-ISSN 1916-9760, doi:10.5539/jas.v5n3p278, URL: <http://dx.doi.org/10.5539/jas.v5n3p278> (Published by Canadian Center of Science and Education).
6. Manibhushan, Patel, N., Sahoo, G. (2013). A Fuzzy Approach for Urban Landuse and Land Cover Classification to Enhance Producer's Accuracy, *International Journal of Tropical Agriculture*, Nos. 1-2, pp. 27-32.
7. Manibhushan, Patel, N., Sahoo, G. (2013). Spectral Mixture Analysis – A Tool for Classification of Mixed Pixels of Satellite Images, *International Journal of Tropical Agriculture*, Nos. 1-2.
8. Kumar, R. N., Reddy, K. S., Nathawat, M. S., Patel, N., Rathore, V. S., Babu, R.R., Mishra P., and B. Sailaja, B. (2013). Assessing the Sensitivity of Reference Crop Evapotranspiration to Increase in Mean Surface Temperature in a Semi-arid Area Using CROPWAT, *International Journal of Tropical Agriculture*, Nos. 1-2, pp. 33-37.
9. Chatterjee, S, Krishna, A P and Sharma, A P (2013). Geospatial assessment of soil erosion vulnerability at watershed level in some sections of the Upper Subarnrekha river basin, Jharkhand, India, *Environmental Earth Sciences* (Online April 2013: DOI: 10.1007/s12665-013-2439-3, Print version In Press)
10. Kumari, Nemika and Krishna, A P (2013). Groundwater recharge site suitability assessment using geospatial techniques, *International Journal of Advanced Remote Sensing and GIS*, Volume 2, Issue 1, pp. 96-109, Article ID Tech-79 ISSN 2320 – 0243

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
6.	Dr. C. Jeganathan	"Editor-in-Chief"	IROSSS "International Journal of Advancements in Remote Sensing, GIS and Geography"	February 2013 (continuing till)

### BOARD OF STUDIES (UG/PG)

#### Internal Members

- |                                    |                       |
|------------------------------------|-----------------------|
| 1. Head of the Department:         | Chairman (Ex-Officio) |
| 2. Dr. Nilanchal Patel             | Member                |
| 3. Dr. A. P. Krishna               | Member                |
| 4. Dr. C. Jeganathan               | Member                |
| 5. Dr. A.C. Pandey                 | Member                |
| 6. Dr. Mili Ghosh                  | Member                |
| 7. Dr. G. Sahoo (IT Deptt.)        | Member                |
| 8. Dr. S. Jha (Pharmacy)           | Member                |
| 9. Dr. N. C. Mahanti (Climatology) | Member                |

#### External Members (Any Two)

- Dr. S. Sengupta, Advisor, Deptt. of Science & Technology, Govt. of West Bengal
- Dr. D. Ramakrishna, Asso. Professor, Deptt. of Earth Sciences, IIT Bombay
- Dr. M. K. Ghose, Prof. & Head, Deptt. of Computer Science & Engg., SMIT, Majitar, Sikkim
- Dr. R. N. Sahoo, ICAR, Pusa, New Delhi
- Dr. V. Raghavaswamy, Group Director (LU&US Group), National Remote Sensing Centre, Hyderabad

#### Departmental Academic Committee

- |                                     |                       |
|-------------------------------------|-----------------------|
| 1. Head of the Department:          | Chairman (Ex-Officio) |
| 2. Dr. Nilanchal Patel              | Member                |
| 3. Dr. A. P. Krishna                | Member                |
| 4. Dr. C. Jeganathan                | Member                |
| 5. Dr. A.C. Pandey                  | Member                |
| 6. Dr. L. K. Sharma                 | Member                |
| 7. Dr. V. S. Rathore                | Member                |
| 8. Dr. Mili Ghosh                   | Member                |
| 9. Dr. G. Sahoo (IT Deptt.)         | Member                |
| 10. Dr. S. Jha (Pharmacy)           | Member                |
| 11. Dr. N. C. Mahanti (Climatology) | Member                |
| 12. Guide/Co-Guide of the Candidate | Member                |

3. Krishna, A.P. and Rathaur, J S (2012). A remote sensing approach for geo-environmental assessment of mining impacts in selected mining zones of Musabani block, East Singhbhum, Jharkhand, India, Proc. National Seminar on Recent Advances in Geosciences in Bihar and Jharkhand, October 2012, Patna, Bihar
4. Jeganathan, C., and Nilay Nishant (2012). Reliability of MODIS and GIMMS vegetation indices for extracting phenological information of natural vegetation in India. National Symposium on Space Technology for Food & Environmental Security and Annual Conventions of Indian Society of Remote Sensing and Indian Society of Geomatics, December 5-7, 2012, New Delhi, India
5. Rumia Basu, Jeganathan, C., Chander Kumar Singh (2012). Monitoring Agricultural Drought in Jharkhand Using Vegetation Indices: A Remote Sensing Approach. National Symposium on Space Technology for Food & Environmental Security and Annual Conventions of Indian Society of Remote Sensing and Indian Society of Geomatics, December 5-7, 2012, New Delhi, India.
6. Ghosh M, Rathore V S, Awasthi N, Arya A.S, Raja Shekhar, P, Ajai (2013). Compositional study of Domes/ Relief features of Marius Hills Complex using Chandrayaan-1 M<sup>3</sup>data. 100<sup>th</sup> Indian Science Congress 2013, Jan 03-07, 2013, Calcutta University, Kolkata
7. Santra, A. (2013). Validation of the MODIS LAI Product and Comparative Suitability Analysis between Landsat ETM+ and DMC Imagery: An UP-Scale Validation Approach. Presented in National Conference on Environment Friendly Sustainable Construction -- Need of The Hour held at BIT Patna on 2nd-3rd March, 2013.

#### Books

1. C. Jeganathan (2013). Modelling Three Decades of Land Use Change in the Western Himalaya: Geoinformatics based study about Shimla District. Book Published by AV Akademikerverlag GmbH & Co. KG, Germany. ISBN: 978-3-659-32767-4.
2. C. Jeganathan (2012). Quantifying Sustainability of Forest Management using Fuzzy Logic: Focussing towards Forest Certification. Book Published by AV Akademikerverlag GmbH & Co. KG, Germany. ISBN: 978-3-659-22673-1.

#### AWARD / RECOGNITION BESTOWED ON FACULTIES (STATE / NATIONAL / INTERNATIONAL)

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. N. Patel	Visiting Scholar	University of Aveiro, Aveiro, Portugal	During September-October, 2012
2.	Dr. N. Patel	Member, Editorial Board	Journal of Forestry Research (Springer)	Continuing
3.	Dr. N. Patel	Member, Editorial Board,	AMBIENCIA, Brazil	Appointed in October, 2012
4.	Dr. A.P. Krishna	Member, Abjudication Committee for bi-lateral Partnership Development Seed Grant (PDSG) between India and Canada	SICI/CIDA, University of Calgary	2012-13
5.	Dr. A.P. Krishna	Senior Editor	International Journal of Advanced Remote Sensing and GIS	Since 2012

## DEPARTMENT OF SPACE ENGINEERING AND ROCKETRY

The Department introduced two- year Post Graduate Degree Programme in 1968, leading to M. E. in Space Engineering 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, housed in separate buildings.



*Launch Pad*

### The various Divisions under the Department are:

- Aerodynamics Division
- Rocket Propulsion Division
- Propellant Technology Division
- Combustion Division

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. It has successfully completed as many as 36 Projects and currently 7 sponsored projects under progress. The Department has also been recognized under Special Assistance Programme of UGC. Development of a Hybrid Rocket Propulsion facility is under progress in Phase II.

### THE NOTABLE CURRENT RESEARCH ACTIVITIES OF THE DEPARTMENT INCLUDE:

#### Development of Hybrid Rocket Propulsion Systems

- Droplet Combustion Studies
- Development of High Regression Rate Hybrid Fuel
- Combustion Study of Hybrid Fuels with Nitrous Oxide Oxidizer



### Other Important Information

The Department of Remote Sensing is a DST-FIST and UGC-SAP assisted Department. It is recognized by all the research units of ISRO (i.e. National Remote Sensing Centre, Hyderabad, Space Applications Centre, Ahmedabad and Indian Institute of Remote Sensing, Dehradun) as a nodal department for imparting quality teaching and research. In addition, the Department boasts of having considerable international collaboration with China, Denmark, France, Portugal, UK, Germany and USA. The Department has been awarded a mission mode project on **Integrated Watershed Management Plan** by the Ministry of Rural Development, Govt. of India and Jharkhand State with an amount of over INR 7 crores. The Department acts as an interfacing department with several other departments of the Institute in both teaching and collaborative research. The Department has been recognised by the National Land Records Modernization Programme (NLRMP) of the Govt. of India to impart training to the Assistant Settlement Officers of the state of Jharkhand in modern technology of mapping, digital data inventorization and GIS.



- Study on Premixed Flame
- Commissioning of Liquid Propulsion and Solid Liquid Hybrid setup
- Flow field of Reusable Launch Vehicle at Subsonic Speed
- Flow Field around Slender Bodies at High Angles of Attack
- Flow field around multiple cylinders at Subsonic speed
- Studies of flow field around protrusions at Supersonic speed
- Cavity flow field at supersonic speed
- Studies on Blunt Bodies with Spikes at Supersonic Speeds
- Flow Field Studies around Supersonic Air Intake
- Commissioning of a Supersonic Wind Tunnel of size 4" x 6"

## 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.	Development of Cryo - Hybrid Rocket Propulsion	Dr. P. C. Joshi	UGC (SAP - II)	01/4/ 2007	49.00	06 years
2.	Augmentation of Supersonic Tunnel	Dr. J. K. Prasad Dr. Sudip Das Prof. P. Kumar	AR &DB Ministry of Defence	01/10/ 2009	19.38	03 years
3.	Investigation of Flow Field around Double Delta Wing at Subsonic Speed	Dr. J. K. Prasad Prof. P. Kumar Dr. Sudip Das	CSIR, New Delhi	01/05/2010	07.51	03 years
4.	Measurement of Unsteady Pressures on Conical Region of a Missile at Supersonic Speed	Dr. J. K. Prasad	ASL DRDL	01/6/2011	8.20	01 year
5.	Study of Flow Field Inside Air Intake With Flow Control	Dr. J. K. Prasad Dr. Sudip Das Prof. Priyank Kumar	RESPOND (ISRO)	01/04/2011	18.59	03 years
6.	Investigation of Flow Behaviour on Winged body at Subsonic Speed	Dr. J. K. Prasad Dr. Sudip Das Prof. P. Kumar	AR&DB	01/02/2012	11.40	02 years

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. J. K. Prasad	26 <sup>th</sup> National Convention of Aerospace Engineers (NCAE)	Sponsored Project (ASL/DRDL)	IE(I)	Hyderabad	Nov. 23-25, 2012
2.	Dr. Sudip Das	26th National Convention of Aerospace Engineers (NCAE)	BIT, Mesra	IE(I)	Hyderabad	Nov. 23-25, 2012
3.	Dr. J. K. Prasad	National Conference on Fluid Mechanics & Fluid Power (FMFP)	Sponsored Project (CSIR)	FMFP	NIT, Surat	Dec. 13-15, 2012
4.	Dr. J. K. Prasad	Indian Society of Theoretical and applied Mathematics (ISTAM) Conference	Sponsored Project (ISRO)	ISTAM	DIAT, Pune	Dec. 17-20, 2012

**PUBLICATIONS****International Journals**

1. Nagaraja, S. R., Rakesh, S. G., Prasad, J. K., Barhai, P. K. and Jagadeesh, G. "Investigations on microw-blast wave assisted metal foil forming for biomedical applications" International Journal of Mechanical Sciences, 1 (61) 2012, 1-7.

**International Proceedings**

1. S. K. Karthick, S. Das, P. Kumar and J. K. Prasad "Aerodynamics and performance of a projectile in ground proximity at supersonic" ISTAM, Dec. Pune 2012.
2. G. K. Prashant, D. B. Lata, P. Leela, and P. C. Joshi "Experimental study on various parameters of a single droplet Ethanol, Methanol and its mixtures" International Proceedings, 9th Asia pacific Conference on Combustion, South Korea May 2013.
3. J. Sinha, S.Das, P.Kumar, J.K.Prasad, "Studies on an Axisymmetric supersonic Cavity with Front Wall Inclinations" Int. proceeding of: 15th Annual CFD Symposium, 2013, IISc Bangalore

**National Proceedings**

1. David N, P. Kumar, S. Das and J. K. Prasad "Investigation of Unsteady Flow across Double Delta Wing at Subsonic Speed" 26th National Convention of Aerospace Engineers, AP State Centre, Hyderabad, Nov. 23-25, 2012.
2. V. Jagadish Babu P. Kumar, S. Das and J. K. Prasad "Studies of Supersonic Air-Intake with Notched Cowl" 26th National Convention of Aerospace Engineers, AP State Centre, Hyderabad, Nov. 23-25, 2012.
3. S. K. Karthick, S. Das, P. Kumar and J. K. Prasad, "Effect of ground proximity on the trajectory of a bullet at supersonic speed" 26th National Convention of Aerospace Engineers, AP State Centre, Hyderabad, Nov. 23-25, 2012.
4. Senthil Kumar, S. Das, P. Kumar and J. K. Prasad "Investigation of flow field around a typical reentry capsule at Supersonic Speed" 26th National Convention of Aerospace Engineers, AP State Centre, Hyderabad, Nov. 23-25, 2012.

5. N. K. Gahlot, P. Kumar, S. Das and J. K. Prasad " Flow Field Studies of a Supersonic Air-Intake with Vortex Generators" Proceedings of the 39th Conference on Fluid Mechanics and Fluid Power, SVNIT, Surat, Gujarat, Dec. 2012.
6. S. Puja, S. Das, P. Kumar and J. K. Prasad " Effect of bluntness on the reduction of drag using a spike at supersonic speed" Proceedings of the 39th Conference on Fluid Mechanics and Fluid Power, SVNIT, Surat, Gujarat, Dec. 2012.
7. S. J. Sivabharaty P. Kumar S. Das and J. K. Prasad "Effect of Apex flap deflection on double delta wing at subsonic speed" Proceedings of the 39th Conference on Fluid Mechanics and Fluid Power, SVNIT, Surat, Gujarat, Dec. 2012.
8. Pratim Kumar "Application of mathematical tools for predicting the burning rate of solid propellant: a review" National Conference on Recent Trends in Mathematics and Their Applications, Dec 21-22, 2012, Vinobha Bhave University, Hazaribagh.

#### **BOARD OF STUDIES(UG/PG)**

<b>Internal Members</b>		
<b>Head of the Dept.</b>	<b>Dept. of SE&amp;R</b>	<b>Chairman</b>
Dr. J. K. Prasad	Professor, Dept. of SE&R	Member
Dr. P. C. Joshi	Professor, Dept. of SE&R	Member
Dr. Sudip Das	Professor, Dept. of SE&R	Member
Prof. Priyank Kumar	Asst. Professor, Dept. of SE&R	Member
Dr. Arbind Kumar	Professor & Head, Dept. of Mech. Engg.	Member
Dr. B. K. Singh	Professor & Head, Dept. of Prod. Engg.	Member

#### **External Members**

1. Dr. Navtej Singh, Professor, IIT, Kharagpur
2. Dr. B. Mazumdar, Professor, Jadavpur University, Kolkata
3. Dr. A. K. Chakrabarti, Emeritus Scientist, DRDL, Hyderabad
4. Shri M. C. Dathan, Director, LPSC, Valiamala, Trivandrum

#### **Departmental Academic Committee:**

- |                           |                                       |
|---------------------------|---------------------------------------|
| 1. Head of the Department | Chairman, ex- Officio                 |
| 2. Dr. J. K. Prasad       | Professor, Dept. of SE&R              |
| 3. Dr. P. C. Joshi        | Professor, Dept. of SE&R              |
| 4. Dr. Sudip Das          | Assoc. Professor, Dept. of SE&R       |
| 5. Dr. Arbind Kumar       | Professor, Dept. of Mech. Engg.       |
| 6. Dr. Usha Jha           | Professor, Dept. of Applied Chemistry |

## ENVIRONMENTAL SCIENCE & ENGINEERING GROUP

The Environmental Science & Engineering Group (ESEG), established in the year 2002 has emerged as a potential centre in the field of environment through its dedicated involvement and quality contribution towards education, research & professional services. The Institute had been identified as a State Referral Institute and an MoU was entered between Drinking Water and Sanitation Department, Government of Jharkhand and BIT, Mesra for community based National rural drinking water quality monitoring & surveillance programme. ESEG had also been helping the DWSD, Government of Jharkhand to update the laboratory



*Students performing Ecological Survey*

facilities for drinking water in different districts. ESEG has laboratory facilities and equipments like Ozone Analyser, Air Sampler, CO<sub>2</sub> Analyser, Multi parameter Analyser and other instruments like Spectrophotometer, Flame Photometer, and Orbital shaker for routine analysis of water, air and soil quality study. It also has collaboration with other departments of the institute for various laboratory studies. Currently the department offers 2 years (Full Time) programme in M-Tech Environmental science & Engineering and PhD Programmes in Environmental Science and Engineering. Researchers from prestigious universities and established central government organizations from different parts of India like ISM, FRI, Doon University, SRM University, Patna University, Gujarat University, SAIL, CMPDI, CCL, NTPC & MECON Ltd are pursuing their PhD here. The Alumni of the department are well placed in research positions and jobs in various government and private organisations of repute like IIT-Delhi, IIT Bombay, IIT Guwahati, IIT, Chennai, Indian Institute of Science, NHAI, ATREE, State Pollution control boards, Delhi Pollution Control Committee, NEERI, Nagpur, L&T and CIMFR, SESA, Goa etc. The Department has also proposed to start an M-Tech Course on Sustainable Development Engineering.

### SPONSORED PROJECTS

#### PROJECT SANCTIONED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Groundwater quality mapping using geostatistical approach for Ranchi municipal area with special emphasis on Iron, Fluoride and Nitrate	PI: Amit Kumar Gorai Co-PI: Jawed Iqbal	CGWB, MoWR	11.10.12	Rs:15.7 Lacs	3
2	"Environmental Consequences and Reclamation Options for coal mining Activities in Charhi & Kuju of Jharkhand, India."	PI: Sukalyan Chakraborty	UGC	June 2013	Rs. 6 Lacs	2 years

**ONGOING PROJECTS**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Geostatistical Analysis and Mapping of Ground Level Ozone in an Urban Area In India: A Case Study of Ranchi City	PI: Amit Kumar Gorai	DST	25 <sup>th</sup> July, 2012	Rs. 20.3 Lacs	3 years
2.	Evaluating the spatial and temporal variations in groundwater quality around municipal solid wastes dumping site in Ranchi and developing a solute transport model	PI: R. Naresh Kumar (PI)	UGC, New Delhi	01/4/2013	Rs. 11.46 Lacs	3 Years

**PROJECTS COMPLETED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Environmental Impact Assessment of Drinking water pipeline supply schemes in Jharkhand	PI: Dr.Gopal Pathak Collaborator: Dr.Kirti Avishek	ENV-DAS India. Lucknow	2/01/2013	3.01 Lacs	April, 2013.
2.	Prediction of Groundwater Vulnerability to Pollution in Ranchi District using Fuzzy Technique.	PI: Dr. Amit Kumar Gorai	UGC	12 <sup>th</sup> January, 2011	Rs. 1.00 Lacs	July, 2013

**SEMINAR / CONFERENCES / SHORT – TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short – term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	National Conference on Sustainable Development and Global Competativeness.	Dr. Gopal Pathak Dr. Kirti Avishek Dr. R. Naresh Kumar	---	Dec, 4-5; 2012



**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Gopal Pathak	Symposium on "Connecting the Dots: The Energy Food Water and Climate Nexus	Stanford University	Stanford University	Stanford University, USA	19 <sup>th</sup> April 2013
2.	Kirti Avishek	7 <sup>th</sup> International Conference on Cooperation and Promotion of Information Resources in Science and Technology	CAS.	Chinese Academy of Sciences.	Nanjing. China	23-25 <sup>th</sup> Nov, 2012.
3.	Amit Kumar Gorai	1 Week training program on Climate Modeling at TERI New Delhi	BCCR, Norway	TERI-BCCR	TERI New Delhi	1 <sup>st</sup> -5 <sup>th</sup> Oct.2012
4.	Amit Kumar Gorai	2 days training program on Air Quality Management	DST New Delhi	IIT Bombay	IIT Bombay	06-07 <sup>th</sup> Dec. 2012
5.	Sukalyan Chakraborty	International Science Congress	ISCA	International Science Congress Association	Mathura, India	8-9 Dec. 2012
6.	Sukalyan Chakraborty	Understanding EIA: From Screening to Decision making"	CSE	Centre for Science & Environment	CSE, New Delhi	22-26 April 2013
7.	Tanushree Bhattacharya	Attended Indo-German partnering Post Kolleg workshop on 3D GIS and hydrogeological flow modelling	Alexander von Humboldt foundation, Germany	SES, Jawaharlal Nehru University,	Jawaharlal Nehru University, New Delhi	10 <sup>th</sup> -12 <sup>th</sup> February.
8.	Tanushree Bhattacharya	International Humboldt Kolleg on Management Of Water, Energy And Bio-Resources In Changing Climate Regime: Emerging Issues And Environmental Challenges	Alexander von Humboldt foundation, Germany	SES, Jawaharlal Nehru University,	Jawaharlal Nehru University, New Delhi	8-9, February 2013
9	Tanushree Bhattacharya	International Science Congress	ISCA	International Science Congress Association	Mathura, India	8-9 Dec. 2012
10	Neeta Kumari	National Conference on Sustainable Development and Global Competitiveness.	BIT	ESEG, BIT	R&D, BIT, Mesra	Dec, 4-5; 2012

## PUBLICATIONS

### Published in International Journals

1. Avishek, K., Yu., X., Liu, J. (2012). Ecosystem Management in Asia Pacific: Bridging Science-Policy Gap. Environ. Develop. Volume 3, July 2012, Pages 77–90. ISSN: 2211-4645.
2. Avishek, K., Shalu, Sen, G., Hazra, M., Pathak, G., Nathawat, M.S. (2012). Assessment and Monitoring of Urban Wetlands: A case study. International Journal of Ecology and Development. V22 (2). pp.63-73. CESER pub. ISSN: 0973-7308.
3. Avishek, K., Liu, J., Yu, X., (2012). Challenges and Opportunities for Management of Terrestrial Ecosystems in Asia. UNEP Policy Series. Policy Brief 9-2012.
4. Rajeev, S., Gorai, A. K., and Segaran, R.G. (2013). Characterization of LD Slag of Bokaro Steel Plant and its Feasibility Study of Manufacturing Commercial 'Fly Ash - LD Slag' Bricks, International Journal of Environmental Technology and Management, Vol. 16., No. ½, pp.129-145.
5. Mandal, T., Gorai, A. K., & Pathak, G. (2012). Development of Air Quality Index using soft Computing Approach, Environmental Monitoring Assessment, 184:6187–6196 (Online published DOI 10.1007/s10661-011-2412-0).
6. Gorai, A. K., Fuzzy Pattern Recognition for Air Quality Assessment, International Journal of Environmental Protection, Vol. 2, pp.27-30. 2012
7. Gorai, A.K., and Kumar, S. (2013). Assessment of Groundwater Quality using Statistical and Geostatistical techniques in Ranchi Municipal Corporation Area, Jharkhand, India, Geoinformatics and Geostatistics: An Overview, 1(2), doi:<http://dx.doi.org/10.4172/2327-4581.1000105>
8. Jonstrup, M., R. Naresh Kumar, B. Guieysse, B. Mattiasson and M. Murto (2013). Decolourisation of textile dyes by Bjerkandera sp. BOL 13 using biomass as carbon source. Journal of Chemical Technology and Biotechnology. Vol. 88, 388–394.
9. S. Chakraborty, G. Owens. Metal distributions in seawater, sediment and marine benthic macroalgae from the South Australian coastline. Int. J. Environ. Sci. Technol. DOI 10.1007/s13762-013-0310-4
10. Das S, Jean J, S, Kar S, Chakraborty S (2012). Effect of arsenic contamination on bacterial and fungal biomass and enzyme activities in tropical arsenic contaminated soils. Biology and Fertility of Soil. DOI 10.1007/s00374-012-0769-z
11. Poonam Tirkey, Tanushree Bhattacharya, Sukalyan Chakraborty: Water quality indices- important tools for water quality assessment: a review. International Journal of Advances in Chemistry (IJAC) Vol.1, No.1, November, 15-28, (2013).
12. Tanushree Bhattacharya, Sukalyan Chakraborty, DharaTuteja, Mitul Patel: Zinc and Chromium Load in Road Dust, Suspended Particulate Matter and Foliar Dust Deposits of Anand City, Gujarat. Open journal of metal. 3, 42-50, (2013).
13. Tanushree Bhattacharya, Leena Kriplani, Sukalyan Chakraborty: Seasonal Variation in Air Pollution Tolerance Index of various plant species of Baroda City. Universal journal of Environmental Research and Technology.vol.3, issue 2, 199-208, April, (2013).
14. Mangukiya Rupal, Bhattacharya T, Chakraborty S: Quality characterization of groundwater using Water Quality Index in Surat city, Gujarat, India. ISCA International Research Journal of Environmental Sciences. Vol. 1(4), 14-23, November (2012)

15. T. Bhattacharya, S. Chakraborty, M. Kagatha, B. Thakur: Ambient air quality and the air pollution tolerance indices of some common plant species of Anand city, Gujarat, India. Report and Opinion 2012; 4 :( 9: 7-15) .Marshland Press USA.
16. T. Bhattacharya, Neha Tuck, and S. Chakraborty: Physicochemical analysis of groundwater quality of Anand district. ISCA International Research Journal of Environmental Sciences. Vol.1 (1). 33-38. 2012.
17. J. Iqbal, A. K. Gorai, P. Tirkey, Gopal Pathak (2012) Prediction of Groundwater Vulnerability to Pollution: A Literature review, AJWEP, 9(1), 105-115.
18. P. Tirkey, A. K. Gorai, J. Iqbal, (2013) AHP-GIS based DRASTIC Model for Groundwater Vulnerability to Pollution Assessment: A Case study of Hazaribag District, ij-ep, 2(3), 20-31.

#### Published in International Proceedings

1. Kirti Avishek (2012). Environmental Data Availability and Sharing Capacities in India. COINFO 2012. Proceedings of the 7<sup>th</sup> International Conference on Cooperation and Promotion of Information Resources in Science and Technology. Nanjing. China.23-25<sup>th</sup> Nov, 2012.
2. Sun Wei, Zhu, J., Kirti Avishek, Hamid, J.S., Mohammad, R.A., Myat, Z., Joshi, S., Akram, U. (2012). Research and Analysis on present situation of Resources and Environmental Data Sharing in Hindu-Kush-Himalayan Region. Proceedings of the 7<sup>th</sup> International Conference on Cooperation and Promotion of Information Resources in Science and Technology. Nanjing. China.23-25<sup>th</sup> Nov, 2012.
3. Naresh Kumar, R., McCullough, C.D. and Lund, M.A. (2012). Upper and lower concentration thresholds for bioremediation of acid mine drainage using bulk organic substrates. Proceedings of the International Mine Water Association Conference 2012, pp. 525-532, Bunbury, Australia.
4. Lund, M.A and McCullough, C.D. and Naresh Kumar, R. (2012) The Collie Pit Lake District, Western Australia: An Overview. Proceedings of the International Mine Water Association Conference 2012, pp. 287-294, Bunbury, Australia.
5. McCullough, C.D., Naresh Kumar, R., Lund, M.A., Newport, M., Ballot, E. and Short, D. (2012). Riverine breach and subsequent decant of an acidic pit lake: evaluating the effects of riverine flow-through on lake stratification and chemistry. Proceedings of the International Mine Water Association Conference 2012, pp. 533-539, Bunbury, Australia.
6. Sukalyan Chakraborty, T. Bhattacharya, G. Singh. Spatial distribution of Heavy metal concentrations in the seawater and surface sediment samples collected from Gulf of Kutch, India. International Science Congress. Mathura, India. 8-9<sup>th</sup> Dec. 2012.

#### Published in National Journals

1. Sukalyan Chakraborty & Tanushree Bhattacharya. Nutrient composition of marine benthic algae found in the Gulf of Kutch coastline, Gujarat, India. J. Algal Biomass Utln. 2012, 3 (1): 32 – 38
2. T. Bhattacharya, S. Chakraborty, Neha Sharma: Influence of Fertiliser industry effluent on growth and biochemical composition of *Catharanthus roseus* (Madagascar periwinkle. Environmental Science an Indian journal. Volume 7, Issue 8:300-304. 2012.

#### Books

1. Gorai, A. K., A Complete Guide for Mining Engineers, December 2012 (ISBN: 978-81-7956-120-1) Published by Lovely Prakashan, Dhanbad.

**Book chapters**

1. Naresh Kumar, R., C.D. McCullough and M.A. Lund (2013). *Pit lakes in Australia. In: Acidic Pit Lakes – The legacy of coal and metal surface mines* (Eds. W. Geller, M. Schultze, B. Kleinmann and C. Wolkersdorfer) pp. 342–361, Springer publishers, Berlin, Germany.

**AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Kirti Avishek	Research Fellow (International)	International Ecosystem Management Partnership, United Nations Environment Programme. Beijing China.	1-07-2012 to 30.06.2013
2.	Kirti Avishek	Guest Lecture (National)	UGC sponsored refresher course in Environmental sciences	11.1.2013
3.	A. K. Gorai	Raman Postdoctoral Fellowship	UGC	2012
4.	A. K. Gorai	Young Researchers Award	WMO	March, 2012

**DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1.	Attended 2 days training program on Air Quality Management organised at IIT Bombay	Kanchan (PhD Student)	6-7 <sup>th</sup> Dec. 2012
2.	Presented Papers in National seminar on urbanization and changing state of environment at St'Xaviers College, Ranchi	Kuldeep Singh (PhD Student) Abhinav Thakur (MTech Student)	Sep.24-25 <sup>th</sup> 2012.
3.	Attended International Humboldt Kolleg on Management Of Water, Energy And Bio-Resources In Changing Climate Regime: Emerging Issues And Environmental Challenges	Osaid Alam, Poonam Tirkey (PhD Students)	8-9, February 2013
4.	Attended Indo-German partnering Post Kolleg workshop on 3D GIS and hydrogeological flow modelling organised by SES, Jawaharlal Nehru University, New Delhi.	Osaid Alam, Poonam Tirkey (PhD Students)	10 <sup>th</sup> -12 <sup>th</sup> February 2013
5.	Attended Environment Impact Assessment of Nuclear Fuel Cycle Facilities Organized by Indira Gandhi Centre for Atomic Research (IGCAR) at Anupuram, Kalpakkam, TamilNadu.	Navyatej Gorji (M.Tech, 4 <sup>th</sup> semester)	July 8-12, 2013
6.	Attended Programme on Integrated Catchment Modelling (ICMOD-2013) Organized by National Institute of Hydrology, Roorkee	Navyatej Gorji (M.Tech, 4 <sup>th</sup> semester)	November 11 - 15, 2013

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

1. Dr. Gopal Pathak: Head and Chairman
2. Dr. Kirti Avishek: Internal Member

3. Dr. Amit Kumar Gorai: Internal Member
4. Dr. R. Naresh Kumar: Internal Member
5. Dr. Sukalyan Chakraborty: Internal Member
6. Dr. Tanushree Bhattacharya: Internal Member
7. Dr. Monoj Kumar: Internal Member (Members from Allied Department)
8. Dr. A.C. Pandey: Internal Member (Members from Allied Department)
9. Dr. S.C. Jain: External Member (MECON India Ltd. Ranchi)
10. Dr. Gurdeep Singh: External Member (Professor, CESE, ISM, Dhanbad)
11. Dr. M.J. Xavier: External Member (Director, IIM, Ranchi)
12. Dr. Mukhesh Khare: External Member (CESE, IIT Delhi)
13. Dr. Pramila Goel: External Member (IIT Delhi)
14. Dr. A.K. Gupta: External Member (IIT Kharagpur)

**Departmental Academic Committee**

1. Dr. Gopal Pathak: Head and Chairman
2. Dr. Kirti Avishek: Internal Member
3. Dr. Amit Kumar Gorai: Internal Member
4. Dr. R. Naresh Kumar: Internal Member
5. Dr. Sukalyan Chakraborty: Internal Member
6. Dr. Tanushree Bhattacharya: Internal Member
7. Dr. N.C. Mohanty: Member from Department of Applied Mathematics
8. Dr. A.C. Pandey: Member from Department of Remote Sensing



## CENTRE OF EXCELLENCE IN CLIMATOLOGY

A new inter-disciplinary Centre of Excellence in Climatology was established for capacity building in the field of Atmospheric Sciences. It was felt that BIT Mesra is an ideal place in Jharkhand where an interdisciplinary centre together with a M.Tech. programme could be started for studying different aspects of Meteorological/Atmospheric Sciences which includes land surface processes, micrometeorology, climate change, and generate good quality scientific manpower in the emerging areas such as monsoon dynamics, weather prediction, climate change and disaster management.

The centre has started an Integrated Course on Ph.D. (With M.Tech.) in Atmospheric Science & Engineering. The centre became functional from March, 2011.

Considering the strategic location of Chhotanagpur region for the evolution of monsoon dynamics, the Department of Science & Technology (GOI) established land surface atmosphere and micrometeorological observational system (LATAMOS) at BIT. Land surface observational system contains 32 meter micrometeorological tower equipped with weather sensors at different logarithmic height viz. at 1, 2, 4, 8, 18 and 32 meter height

Seeing the progress and commitments and also considering importance of the place, other agencies like ISRO Head Quarters, Bangalore, Space Application Centre, Ahmedabad, Vikram Sarabhai Space Centre, Thiruvananthapuram, MoES New Delhi have also sanctioned projects (total outlay 50 million rupees) to measure and analyse the data on aerosol, black carbon, land surface process study and boundary layer evolution in the higher atmosphere (upto 35 km)

An important mission of the Centre is to identify the challenges of the earth system science such as Climate Change, Monsoon dynamics, forecasting, modeling of aerosol and pollutants, Rainfall, etc. It is also aimed at establishing a observational hub for land surface atmosphere observational system coupled with boundary layer and aerosol monitoring system in the national interest, which will be helpful in all future experiments and validation of regional/climate model products.

### 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.	Surface process observational studies coupled with atmospheric transfer interaction along eastern end of monsoon trough	Dr. Manoj Kuamr (PI) Prof. N C Mahanti (Co-PI)	MOES, New Delhi	August, 2011	53.0 Lakhs	2011-2014



S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
2.	Satellite Application in Land Surface Atmosphere coupled Study over Eastern Part of the Country (An INSAT-3D Data Retrieval observatory at Birla Institute of Technology Mesra, Ranchi)	Dr. Manoj Kuamr (PI) Prof. N C Mahanti (Co-PI) Dr. A C Pandey (Co-PI)	Space Application Centre, Ahmedabad	August, 2011	20.0 Lakhs	2011-2014
3.	<i>PRWONAM Campaign activity and MBLM data analysis</i>	N C Mahanti A C Pandey	ISRO HQ	21 March, 2011	22.7 Lakhs	3-5 Years
4.	AERONET system and measurements: BITEC Jaipur	Dr Swagata Payra-PI Dr Sunita Verma-co-PI	GSFC, NASA	In collaboration	Instrumental mode	Continuous
5.	Physical and Optical Properties of aerosols over an urban site in northwestern India	Dr Sunita Verma-PI Dr Swagata Payra-co-PI	DST, Govt of India, Delhi	Sept, 2009	38.95 Lakhs	2009-2014

### PROJECTS COMPLETED

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	ABLN&C programme at BIT Ranchi	Dr. Manoj Kumar-PI Prof. N C Mahanti-Co-PI	SPL, VSSC (ISRO)	April, 2010	55.0 Lakhs	2010-2013
2.	An ARFI network observatory at BIT, Mesra, Ranchi	Dr. Manoj Kumar-PI Prof. N C Mahanti-Co-PI	SPL, VSSC (ISRO)	Nov, 2009	35.0 Lakhs	2009-2013
3.	Energy & Mass Exchange in Vegetative System Under Collaborative mode	Dr. Manoj Kumar	SAC, Ahmedabad	26-3-2008	10.0 Lakhs	2008-12

### SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT

S. No.	Title of Seminar / Conferences / Short - term Courses	Name of Coordinator	Date of Seminar / Conferences / Short - term Courses
1.	<b>Training program on-</b> Weather, Climate, Meteorological Hazards and Disasters over Jharkhand region	Dr Manoj Kumar	27-29 June 2013

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES/ ORIENTATION PROGRAMME/ REFRESHER COURSE ETC. ATTENDED**

S. No.	Name of the Faculty/Staff	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
1.	Dr. Manoj Kumar	INSAT3D Project meeting	SAC Ahmedabad	SAC	7 <sup>th</sup> June, 2012
		Annual Review Workshop of ARFI & NOBLE Projects	SPL, VSSC (ISRO),	Trivandrum	20-22 June, 2012
		Application of Crop Simulation Model and Decision Support System in Yield Forecasting	MoES, New Delhi	Banaras Hindu University, Varanasi	25-30 June, 2012
		Training on Microwave remote sensing & it's applications	NRSC(ISRO)	Hyderabad	4-22 May, 2012
		Annual Review Workshop of ARFI & NOBLE Projects	SPL, VSSC (ISRO),	Trivandrum	20-22 June, 2012
2.	Dr. Ashwini Ranade	Training program on- Weather, Climate, Meteorological Hazards and Disasters over Jharkhand region	BIT Mesra,	Ranchi	27-29 June 2013
		National Workshop cum Training on – 'Ocean Initialization for Coupled Models'	MoES	New Delhi	22-24 March 2012
		International Meeting on 'Seamless Prediction System: Coupled Modeling and Assimilation'	MoES	New Delhi	19-21 March 2012,
3.	Dr. Nishi Srivastava	National Conference on Recent Trends in Mathematics and Their Applications	University department of Mathematics, Vinoba Bhave University,	Hazaribag	Dec21-22, 2012
		International Conference on Emerging Trends in Physics for Environmental Monitoring & Management (ETPEMM-12),	Punjabi University	Patiala	17-19, December 2012
		1 <sup>st</sup> Bi-Annual conference on Jharkhand society of mathematical sciences	Jharkhand society of mathematical sciences	Ranchi, India	November 22-23, 2012,
		ISRO-GBP, ARFI, ICARB, RAWEX, Project Review Meeting	VSSC, ISRO, Trivandrum	Trivandrum	20-21 June 2012
4.	Dr. Swagata Payra	Entrepreneurship Development under Faculty Development Programme	DST, Govt of India	BIT Jaipur	Jan, 2013
		4th International Workshop on Air Quality Forecasting Research (IWAQFR)	World Meteorological Organisation, Geneva	Geneva, Switzerland	12-14 December, 2012

S. No.	Name of the Faculty/Staff	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
5.	Dr. Sunita Verma	Future Directions for Weather and Climate Research in the Tropics	Centre for Atmospheric Sciences (CAS), IITD	CAS, IITD	3-5 December, 2012

## PUBLICATIONS

### Published in International Journals

1. K. Krishna Moorthy, S.N. Beegum, N. Srivastava, S. K. Satheesh, Mian Chin, Nadege Blond, S. Suresh Babu, S. Singh, Performance Evaluation of Chemistry Transport Models over India, *Atmospheric Environment*, 71 (2013) 210-225
2. Ashwini Ranade and Nityanand Singh: Large-Scale and Spatio-temporal Extreme Rain Events over India: A Hydrometeorological Study, *Theoretical and Applied Climatology*, (2013) DOI:10.1007/s00704-013-0905-1.
3. Jyotsna Singh, Bimal K. Bhattacharya, and Manoj Kumar, 2012. Solar Radiation and Evaporation Trend over India. *Journal of Earth Science and Engineering*, 2 (2012) 160-165.
4. Jyotsna Singh, Manoj Kumar and Bimal K. Bhattacharya 2012. Global Radiation, Transmissivity and Bright Sunshine Hour trend over Nagpur. *Atmospheric and Climate Sciences*, Scientific Research Publishing, 2(2012), 206-209.
5. S. Verma, Payra S., Gautam R., Prakash D, Soni, M., Holben B., and Bell S., Dust events and their influence on aerosol optical properties over Jaipur in Northwestern India, *Environmental Monitoring and Assessment* (ISSN 0167-63690), Springer, EMAS-D-12-11425, (DOI: 10.1007/s10661-013-3103-9), 2013.
6. S. Verma Boucher, O., Upadhyaya, H. C. and Sharma, O. P., Variations in sulphate aerosols concentration during winter monsoon season for two consecutive years using a general circulation model, *Atmósfera*, vol. 26, no. 3, pp. 360–367, 2013.
7. Prakash D, Payra S., Soni M., and Verma S, Aerosol particle behavior during Dust Storm and Diwali over an urban location in North Western India, DOI: 10.1007/s11069-013-0780-1, 1-13, *Natural Hazards*.2013.
8. S. Verma, O. Boucher, M. S. Reddy, H.C. Upadhyaya, P. Levan, F. Binkowski and O.P. Sharma, Tropospheric distribution of sulphate aerosol number and mass concentrations for INDOEX-IFP and its transport over Indian Ocean, *Atmos. Chem. Phys.*, 12, 6185–6196, 2012.

### Published in National Proceedings

1. Nishi Srivastava, S. K. Satheesh, K. Krishnamoorthy and S. Suresh Babu, *Evaluation of CHIMERE chemistry transport model over Indian Region*, ISRO-GBP, ARFI, ICARB, RAWEX, Scientific Progress Report. Proceeding of the Project Review Meeting, Pg. 198-200, 20-21 June 2012.
2. Payra, S., Verma, S., Prakash, D., Kumar, P., Soni, M., Holben, B., Aerosols properties during dust-storm episodes over Jaipur, Northwestern India, *AIP Conference Proceedings*, vol. 1527, pp. 515–518, 2013.
3. N. Srivastava, S.K. Satheesh, Blond N., “Comparative Study of Anthropogenic Aerosol Fraction Estimation over India”, Fourth National Research Conference on Climate Change, 26-27 Oct2013, IIT-Madras, Chennai
4. Blond N., N. Srivastava, S. Satheesh, A. Clappier, “Air quality monitoring and modeling” Workshop on Air Quality Monitoring, Modeling and Assessment, 22 march 2013, CiSTUP, IISc, Bangalore

5. Nishi Srivastava and S. K. Satheesh, "Air Quality Estimation Over India", National Conference on Recent Trends in Mathematics and Their Applications, Dec21-22,2012, University department of Mathematics, Vinoba Bhave University, Hazaribag
6. Nishi Srivastava and S.K. Satheesh, "Characterization of Ambient Air Quality over Metro-city: A Case Study", International Conference on Emerging Trends in Physics for Environmental Monitoring & Management (ETPEMM-12) 17-19, December 2012, Punjabi University, Patiala
7. Nishi Srivastava, "Direct radiative forcing by sea salt aerosols: modulation by sea surface winds", 1<sup>st</sup> Bi-Annual conference on Jharkhand society of mathematical sciences, November 22-23, 2012, Ranchi, India
8. Swagata Payra, Pramod Kumar, Sunita Verma and Divya Prakash, Winter and summer time size segregated distribution of aerosols and optical properties over a site in Northwestern India, 4th International Workshop on Air Quality Forecasting Research (IWAQFR), WMO, 12-14 December, Geneva, 2012.
9. Sunita Verma, Pramod Kumar, Divya Prakash, Swagata Payra, Identification of Potential Sources of Aerosol Concentration at Jaipur, Rajasthan, India, Eos Trans. AGU, Fall Meet. Suppl., Abstract A21A-0006 at 3-7 Dec., 2012, San Francisco, California, USA.
10. Swagata Payra and Manju Mohan, Multi-rule Based Diagnostic Approach for Fog Prediction using WRF Modeling Tool, Abstract A23D-0263 at 3-7 December, 2012, Fall Meeting, AGU, San Francisco, California, USA.

## BOOKS

**Chapter contributed to Edited Volume-Published by International Level Publishers (With ISSN/ISBN Numbers.): One**

Verma, Sunita and Swagata Payra, 2012, "Carbonaceous Aerosols: an Overview based on Research in India" in "Soot: Sources, Formation and Health Effects" Nova Science Publishers, Inc, USA.

## AWARD / RECOGNITION BESTOWED ON FACULTY (STATE / NATIONAL / INTERNATIONAL)

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1.	Dr Swagata Payra	Research Fellowship award to work at <b>Météo-France</b>	French Meteorological Dept., France	One year (2013-2014)
		Invited talk -- Air Quality-Forecast and Research at Geneva, Switzerland	World Meteorological Organization ( <b>WMO</b> ), Geneva	12-14 December, 2012

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

- |                               |   |                       |
|-------------------------------|---|-----------------------|
| 1. Head / In-Charge of Centre | - | Chairman (Ex-officio) |
| 2. Prof. N. C. Mahanti        | - | Member                |
| 3. Dr. Manoj Kumar            | - | Member                |
| 4. Prof. M.S. Nathawat        | - | Member                |
| 5. Prof. Gopal Pathak         | - | Member                |

## External Members (Any two of the following)

1. Prof. P.C. Pandey, Ex-Director, NCAOR Goa & Professor (Emeritus)-CORAL, IIT Kharagpur – 721 302 (WB)  
Prof. U.C. Mohanty, Centre for Atmospheric Sciences, IIT Delhi, Hauz Khas, New Delhi – 110 016



2. Dr. (Mrs.) Kusuma G. Rao, Scientist SG & Project Director (ASP), Indian Space Research Organisation, New Bell Road, Bangalore – 560 231.

#### **Departmental Academic Committee**

1. Prof. Gopal Pathak (ESEG)
2. Prof. N. Patel (Remote Sensing)
3. Prof. N.C. Mahanti
4. Prof. B.K. Mishra
5. Dr. S. Padhi
6. Dr. Manoj Kumar
7. Dr. (Mrs.) Ashwini Ranade
8. Dr. (Mrs.) Nishi Srivastava
9. Dr. Sunita Verma (BITEC, Jaipur)

#### **Other Important Information**

**The centre has shown remarkable achievements during last six years after establishment of Land Surface Atmosphere and Micrometeorological Observational Systems.**

1. *Birla Institute of Technology, Mesra, Ranchi has established Land surface observational system in augmentation with Agrometeorological observatory at its Main Campus.* Land surface observational system contains 32 meter micrometeorological tower equipped with weather sensors at different logarithmic height viz. at 1, 2, 4, 8, 18 and 32 meter height
2. Also established meteorological instruments for temperature (dry, wet, maximum and minimum), soil temperature (at different depths), bright sunshine hours, wind speed & direction, pressure, evaporation, rain gauge for rainfall etc.
3. Installed Sky Radiometer to study aerosol and ozone depth with help of IITM Pune
4. Started ARFI network Station at BIT Ranchi to monitor aerosol and black carbon for eastern India using Athalometer (Aerosol Optical Depth, Black Carbon, etc.) and Sun Photometer (AOD & AOT)
5. Have started observations on upper air with ISRO based GPS-Sonde System for RS/RW system to study thunderstorm activity and Planetary Boundary Layer study under SPL's ABLN&C programme & under ISRO's PRWONAM scheme.
6. Will install SODAR to study turbulence, MRR, MWR for temp profiling upto 30 km soon.
7. Published more than 50 research papers & 15 Proceed. during last five years
8. Centre is involved in ISRO's satellite programme also. Conducted special experiment on Atmospheric Science at BIT during successful launches of
9. PSLV-C17 launched GSAT - 12 on July 15, 2011 (Successful), PSLV-C16 RESOURCESAT - 2, YOUTHSAT and X-SAT on April 20, 2011 (Successful) and also participated in PSLV-C18 launch which was scheduled for launch with Megha-Tropiques on 25th September, 2011 from SHAR, Gadanki under ISRO's PRWONAM field campaign.

#### **Collaborations/Linkage with other R & D organizations in national level**

1. STORM field campaign and working with CORAL IIT Kharagpur and CAS IIT Delhi by sharing the STORM and CTCZ data and research collaboration. Other collaborative institutes are as follows:

2. DST/MoES, ISRO HQ. Bangalore, SPL VSSC Thiruvananthapuram, SAC Ahmedabad under project mode
3. IISC Bangalore under R & D Activity
4. IITM Pune under collaborative project mode
5. SAC Ahmedabad under R & D activity as well as Ph.D., M.Tech. research moe
6. Birsa Agril. University under R & D mode
7. NCMRWF, IIT Delhi, IIT Kharagpur, BHU Varanasi under R & D and project modes
8. Collaboration with CMFRI, Dhanbad under research mode
9. Inter-Departmental collaboration with other linkage Departments like Civil Engg., Dept. of Environmental and Remote Sensing, Polymer etc. under M.Tech. programme or data sharing basis

#### **PARTICIPATION OF DEPARTMENT STUDENTS IN CONFERENCES/WORKSHOPS:**

S. No.	Name of Student	Attended workshop/conference	Venue	Date
1.	Gargi Akhoury	Data Assimilation for Atmospheric and Ocean models	IITM, Pune	3 Oct. – 10 Oct. 2012
		Short term training Program on basic MATLAB	BIT, Mesra, Ranchi	24 <sup>th</sup> June – 1 <sup>st</sup> July 2013
		An analysis on the impact of monsoon circulations on the upper Troposphere and lower Stratosphere over the Ranchi region : National Conference on Recent Trends in Mathematics and their Applications	V.B.U Hazaribag	21-22, December, 2012
		Prediction of Soil Temperature by Air Temperature over Ranchi Region : 1st bi-annual conference of Jharkhand Society of Mathematical Sciences, Ranchi	Jharkhand Society of Mathematical Sciences, Ranchi	22-23, November, 2012
2.	Aradhana Yaduvanshi	Training Programme on weather, climate, Meteorological hazards and disasters over Jharkhand Region	BIT, Mesra, Ranchi	June 27-29, 2013
3.	Tripta	Variation in soil humidity in different seasons and its interrelationship with the variation of troposphere height.: National Conference on Recent Trends in Mathematics and their Applications	V.B.U Hazaribag	21-22, December, 2012
		SDGC 2012, BIT MESRA	BIT MESRA	4-5 December 2012
4.	Sagarika Chandra	Course work in ABL dynamics under NOBLE project	VSSC, ISRO	12 Oct. –30 Oct. 2012
		Short term training Program on basic MATLAB	BIT, Mesra, Ranchi	24 <sup>th</sup> June – 1 <sup>st</sup> July 2013
		Training Programme on weather, climate, Meteorological hazards and disasters over Jharkhand Region	BIT, Mesra, Ranchi	June 27-29, 2013



## DEPARTMENT OF PHYSICAL EDUCATION & SPORTS

### INTRAMURAL TOURNAMENT

1. Nikhil Khanna Rolling Trophy Championship was organized from 21<sup>st</sup> to 24<sup>th</sup> March 2013.
2. Football - Date - 03.10.2013  
Winner - H. No. - 1 & H. No. - 2  
Runner - Hostel No. - 03
3. Basketball - Date - 24.01.2014  
Hostel No. 02 & 03 V/s 7 (Men)  
Winner Hostel No. - 02 & 03  
Hostel No. 08 & 09 (Women)  
Winner - H. No. - 09
4. Volleyball - Date - 27.01.2014  
Winner - No. 12 & 13  
Runner - Hostel No. 10
5. Cross Country Race (Boy's & Girls) - 27<sup>th</sup> January 2013.
6. 28<sup>th</sup> Annual Athletic meet 2013-14 - 31<sup>st</sup> January to 2<sup>nd</sup> February 2014. Mr. Chetan Kumar of production Engg. declared Individual Championship amongst Men & Miss. Apurva Nidhi of Computer Science in women.



*Annual Athletic Meet*



*Volley Ball Match Under way*

### Extramural Tournament

1. Mecon Sports Club, Doranda, Ranchi Organized state championship Open Badminton Tournament 2013 on 26<sup>th</sup>, 27<sup>th</sup>, & 28<sup>th</sup> April 2013, in which Institute Team participated.
2. Mr. Lakshay Arora, BE/4123/10, ECE, of BIT Extension Centre, Jaipur participated in All India Inter University Athletic meet 2013-14 Organized by Punjabi University Patiala.

### BADMINTON (M & W) 2013 - 14

Inter University Badminton (East Zone Tournament (M&W) 2013-14 Organized at BIT Mesra	Participating Team	Date
	28	05.11.2013 to 10.11.2013

### RESULTS

#### Men's

1. First Position - University of Calcutta
2. Second Position - Manipur University
3. Third Position - Mizoram University
4. Fourth Position - T.M. Bhagalpur University

## Women's

1. First Position - University of Calcutta
2. Second Position - Dibrugarh University
3. Third Position - Mizoram University
4. Fourth Position - Jadavpur University
5. On 15<sup>th</sup> August 2013 Football match played between SAI Morhabadi Ranchi and Institute Team at sports complex.
6. Institute Football Team participated in 'SARDHA' festival organized by BHU Varanasi.
7. 22<sup>nd</sup> Chetan Devraj Memorial East Zone Technical Institute/College Cricket Tournament 2013-14 from 18.02.2014 to 22.02.2014. In which NIFFT, Hatia, Ranchi won the championship.

## Total Team – 10

1. BITEC Lalpur
2. NIFFT, Hatia
3. BIT Mesra Ranchi
4. BITEC Allahabad
5. BITEC Deoghar
6. BESU Shivpur
7. RTC Ormanjhi
8. BITEC Kolkata
9. BITEC Patna
10. BAU Kanke

**Winner** - **NIFFT, Hatia**

**Runner-up** - **BIT, Mesra Ranchi**

## Awards Honours

1. Dr. Mahendra Kumar nominated Neutral AIU Observer for National/Zonal University Games for the Kho-Kho Game session 2013-14 Organized by VBSPU Jaunpur. (U.P)
2. Dr. Mahendra Kumar nominated as Technical Expert by I.Q.R.S for audit in TATA Steel Sports Department from 10<sup>th</sup> February to 11 February 2014.



## TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME PHASE -II

The objectives of The Technical Education Quality Improvement Programme Phase-II (TEQIP-II) of Government of India (GOI) are to Strengthen Institutions to produce high quality engineers for better employability, Scaling-up postgraduate education and demand-driven Research & Development and Innovation, Establishing Centers of Excellence for focused applicable research, Training of faculty for effective Teaching, and Enhancing Institutional and System Management effectiveness.

Birla Institute of Technology, Mesra, Ranchi has been selected in TEQIP-II under sub-component 1.2 and subcomponent 1.2.1(March 2013).

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 in December 2014. Institute has received Rs. 2 crore on 12.05.2012 for initiating various activities of the project as first installment.

Under subcomponent 1.2.1 the institute will receive Rs. 5 Crores for establishment of center of excellence on Bioresources and Bioprospecting. MHRD & SPFU Government of Jharkhand has released Rs. 2 crore to the institute under this subcomponent in June 2013.

### RELEASE OF FUNDS:

Sub -Component	Amount Released (Rs. Crore)	Released on	% Utilization (30 June 2013)
1.2	2.00	12.05.12	100 %
1.2.1	2.00	13.05.13	0 %

### DETAILS OF ACTIVITIES CARRIED OUT UNDER SUBCOMPONENT 1.2

#### Improvements in teaching, training and learning facilities

##### New laboratories developed:

1. Solar energy lab – Department of Mechanical Engineering
2. Manufacturing Simulation lab – Department of Mechanical Engineering
3. Air lab – Environmental science & engineering

##### Up gradation of Existing laboratory facilities

1. Power Electronics Lab - EEE
2. Control system lab -EEE
3. Plasma lab – Applied physics

##### Learning Resources (Software's) procured:

1. STRUDS+ ERS-GRS : Civil Engineering
2. LabView :Space engineering and rocketry
3. ANSYS HFSS: ECE

##### Augmentation of library facility

1. ProQuest Dissertation & Theses Full Text Collection – Part B (Science & Technology) has been purchase for Central Library with 5 year subscription.



### Teaching and Research Assistantships

- TEQIP Teaching assistantship of Rs 5000/- per month has been provided to 118 ME/MTech students admitted in institute in 2012.
- TEQIP research assistantship of Rs 18000/- per month has been provided to 14 PhD students admitted in various departments in 2012.

### Faculty and Staff Development (FSD)

- Faculty and Staff Development is an important component of TEQIP. Training need analysis (TNA) of faculty and staff members is conducted in the beginning of every year. Training Plan for the year was prepared on the basis of TNA analysis. Following activities are conducted under head FSD:

1. **Thirty nine** faculty members were financially supported for attending conference, workshop, seminar, training program etc. outside institute.
2. Seven Training program were organized for training the faculty members and staff.

S. No.	Title of programme	Duration Of Programme	No. of participants
1.	Refresher Course on Advanced VLSI Design (TWAVD_2012)	16.09.12 to 30.09.12	40
2.	Workshop on Microcontroller based applications	20.02.13 to 2.03.13	39
3.	One day Institutional (internal) academic workshop	20.04.13	52
4.	Training programme on AutoCAD	13.05.13 to 20.05.13	36
5.	Training of technical staff on various Conventional/CNC/Non Conventional Machines in mini tool room.	10.06.13 to 9.06.13,	43
6.	Training programme on Basic MATLAB	24.06.13 to 01.07.13	55
7.	Training programme (office staff) on Computer fundamentals, Operating System, MS Office and Internet browsing	17.06.13 to 27.06.13	50

3. Six faculty members were supported for publishing research article in international journals.

4. Number of faculties supported for printing PhD thesis : 03

### Institutional Management Capacity Enhancement Details of institute officials sent for administrative training and training in their functional areas:

- **National Seminar on Academic leadership, CEDBEC, Christ University, Bangalore, 26.09.12-28.09.12.**
  1. Dr. Balram Singh, HOD, Civil Engineering
- **Management development program for administrators, IIM Lucknow, Noida Campus.**
  1. Dr. B. K. Singh, HOD Production Engineering: 11th February to 15th February, 2013
  2. Dr. Vinay Sharma, Dean Student Welfare: 11th February to 15th February, 2013
  3. Dr. T. Ghosh, HOD, EEE: 10th June to 14th June 2013
- **Technical Workshop on e-governance of office system, Jaipur, 2.07.13 to 09.07.13**
  1. Mrs. Nidhi Jaiswal, AR Legal.
- **Technical workshop on financial rules and regulations, Society for economic research and training, 12-14 July 2012.**
  1. Nishant Joshi, Accountant
  2. Kuntal Choudhary, Accountant

- **85<sup>th</sup> Orientation Programme, Rani Durgawati Vishwavidyalaya, Jabalpur, 22.09.2012 to 20.10.2012**
  1. Koel Mukherjee

#### Industry Institute Interaction

- BIT has signed EoI with Mahindra & Mahindra in the regional industry academia collaboration workshop held in Kolkata.
- A formal MoU will be signed during the inauguration of the automobile laboratory at BIT Mesra.
- Discussions with 3 industries (Jonson & Jonson, Jindal Steels and Tata Technologies) are in process for signing of MoU regarding activities of mutual benefits.
- Dr. R.K Singh and Dr. Rajeev Agarwal visited Tata Technologies, Jamshedpur to discuss and explore various areas for collaborations.
- Dr. R.K Singh and Dr. P. K. Barhai attended International workshop on Industry – Academia Collaboration Organised by AICTE and CII on 15<sup>th</sup> April 2013 at New Delhi.
- Dr. R.K Singh, Dr. Rajeev Agarwal and Mr. B.B Pant attended the Regional Workshop on Industry Academic Collaboration along with Industry partners.

#### 1. Industrial visits - Following are some Industrial tours supported by TEQIP in 2012-13:

1. Dept of EEE organized an industrial tour at Tata Steel, Jamshedpur during 1<sup>st</sup> week of March 2013. 42 students participated in this industrial tour.
2. Study tours (Jindal Steel & Usha Martin) for students of BE & ME Production Engineering has been conducted.
3. Dept of EEE organised an industrial tour at Kolkata in 1<sup>st</sup> week of April 2013.
4. Dept of EEE organised an industrial tour at Tata Motors, Jamshedpur in 1<sup>st</sup> week of May 2013.
5. Dept of Production Eng. Organised an industrial tour to SAIL Bokaro.

#### 2. Visit of industrial experts:

1. Dr. R.K. Gupta, Director, ASDAG, Advanced Systems Laboratory, DRDO, Hyderabad delivered a lecture on "Aerospace Design of Missiles" in the department of Space Engg. & Rocketry on Jan 23, 2013. 12 number of participants attended.
  2. Dr. P.S Dhinwa Scientist G, SAC ISRO Ahmadabad deliver lecture in Remote sensing dept on 25<sup>th</sup> & 26<sup>th</sup> April 2013. Faculty & Research scholars attended the programme.
  3. Dr. Vinod Bothale, Group Director NRSC, ISRO Hyderabad give expert lecture on Bhuvan data access on 27<sup>th</sup> April 2013 in Remote Sensing dept. Faculty, students & Research scholars attended the programme.
  4. Mr. Manas Chabra, Senior Design Engineer Free scale semiconductor pvt. Ltd. On 6.05.2013 in ECE dept for laboratory experiments development.
  5. Dr. Sibdas Bandhopadhyay, CGCRI, Kolkata deliver lecture in Chemical & Polymer Engg. Department.
3. Two day workshop on entrepreneurship development (Idea Execution) was conducted on 8th -9th September 2012 in association with Natural Talent Academy. Total number of student participants: 120.

### Academic support to weak students

- Remedial classes were conducted for weak students. The details are as follows :
  - Spring 2012 : 115 classes
  - Monsoon 2012 : 125 classes
  - Spring 2013 : 104 classes
- Finishing school:
  - Diagnostic test for 463 students of 5<sup>th</sup> Semester has been conducted.
  - 120 students (2 sections) are identified for Competency development Programme (CDP). CDP address areas like:
    - i. Communication skills
    - ii. English language
    - iii. Other soft skills
    - iv. Input from industry experts
  - 9 sessions of 2 hrs was conducted in 2012-13 with support of T&P division.

### Development of research interest among undergraduate students:

- From IOC head of TEQIP-II provision has been made to provide financial support to UG/PG/PhD students for attending seminar, conference, workshops etc.
- Total number of students supported in 2012-13: 35

### Patent

- Patent filed with TEQIP support: 4
- Patent obtained: 1

## NATIONAL CADETS CORPS 3 JHARKHAND COMPOSITE TECHNICAL COMPANY NCC BIT MESRA

National Cadets Corps (NCC) training at B.I.T Mesra is being organized by 3 Jharkhand Composite Technical Company . NCC is being offered as an elective to undergraduate engineering /pharmacy students for first four semesters . In accordance to DGNCC letter No.0946/Re-str/NCCHQ/Plg dated 20 Jun 2013, NCC as an elective subject would be offered to undergraduate engineering /pharmacy students for six semesters from 2013-2014 batch . The same had been approved by Technical Council, of B.I.T Mesra.

3 Jharkhand Composite Technical Company has a capacity to enroll 200 cadets for NCC elective. NCC training aims at imparting basic Knowledge of the role, functions and organizations of three technical arms i.e. EME, Engineering and signals . In session 2012-13, 3 Jharkhand Composite Technical Company . NCC training was conducted in training classes, drill practice and extra circular activities like firing, blood donation, tree plantation to name a few . The cadets put up impressive parade during Republic Day and Independence Day Which was lauded by all. The Army band from Punjab Regimental Centre brought more colour and fanfare to the parade . The following major activities were conducted by the composite technical company.

1. Live firing of .22 Riffle by cadets.
2. Participation in Republic Day and Independence Day Parade.
3. Tree Plantation by cadets inside B.I.T Campus.
4. Blood Donation by the entire NCC staff and cadets.
5. 02 Cadets were awarded with 'Sahara Scholarship' in which they were given cash award of Rs.30,000/- each.

The unit is commanded by Lt Col (Dr) LM Jha, has two Associate NCC Offrs viz Major (Dr) Subir Samanta, Lt KK Senapati, two caretakers viz Shri Biswatrish Sarkar and Ms Swati Prasad, four instructional staff from army and civilian support staff.



## NSS

A group of 60 NSS students have started sharing their knowledge with village students in their adopted villages (Nawatoli, Mesra, Hombai, Pancholi, Masu) in evening time. In each village NSS students go in a group of two students each day from Monday to Saturday. In every village an unemployed graduate youth enrolls 20 to 30 students from his village. These students get benefited by NSS team from 5.00 PM to 7.30 PM everyday.

Personality Development programme for NSS Students from Bihar School of Yoga, Mungure. (01.04.13 to 06.04.13)



Training programme for Programme officers of NSS from Bihar and Jharkhand Universities:

Training programme of 60 programme officers of NSS from Bihar and Jharkhand Universities had been held in BIT Mesra from 17<sup>th</sup> Feb. 2013 to 23<sup>th</sup> Feb. 2013 in association with Training Orientation and Research Centre, R.K. Mission, Narendarpur, Kolkata for effective programme implementation in their colleges.



## STUDENTS MARCH DURING PRABHAT PHERI ON 15<sup>TH</sup> AUGUST 2012



### Other Works by NSS students:

1. NSS students started coaching programme for VIII class to 12<sup>th</sup> class of village students on Saturday and Sunday in every week in Kislay vidya Mandir.
2. Volunteering work in Sports meet, Langar, Sarswati puja, Convocation etc. whenever requirements come.
3. Teaching science, Maths, English, Physics, Chemistry etc in BIT high, middle, +2, Kislay school from Monday to Saturday in every week.





## **OFF CAMPUSES**



## ALLAHABAD

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 Part – time B. Tech. Degree Programme in Civil, Mechanical and Electrical & Electronics Engineering for the working Engineering Diploma holders. The first batch of students of B. Tech programme was admitted in January 1998.



*Main Building*

In view of demand for trained computer and management personnel at National level and also to provide job-oriented professional education and training to youth of the region, 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 is available.

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 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 and slow pace 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) M.Sc. Information Technology
- iv. 2-years (Full Time) Master of Business Administration
- v. 2-years (Full Time) Master of Technology in Computer Science
- vi. 2-years Master of Business Administration (Slow Pace)
- vii. 2-years Master of Technology in Computer Science (Slow Pace)



**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)

***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.	Shambhu Sharan Kumar	National Symposium on "Polymers & Coatings-2012	C.S.I.R. - I.I.C.T. Hyderabad & Oil Technologist's Association of India	I.I.C.T. Hyderabad & Oil Technologist's Association of India	Sept.2012
2.	P.C. Srivastava	Introduction to Research Methodologies	IIT Bombay	Jaipur Engineering College, Kukas, Jaipur	25 June – 04 July, 2012
3.	P.C. Behari	Introduction to Research Methodologies	IIT Bombay Under MHRD (ISTE workshop)	Jaipur Engineering College, Kukas, Jaipur	25 June –04 July, 2012
4.	P.C. Behari	Competitive Seminar on Waste Energy Management	Technical Society of Electrical Engineers at SSET	Sam Hingginbottom Institute of Agriculture, Technology & Sciences, Allahabad	September 28, 2012
5.	P.C. Behari	SIEMENS PLC Workshop	Electrical Engineering Department at SSET	Sam Hingginbottom Institute of Agriculture, Technology & Sciences, Allahabad	October 19, 2012
6.	S.K. Pandey	A Special Summer School on "Globalization"	UGC	University of Allahabad, Allahabad	May 25-June 14, 2013
7.	A.M. Dubey	A Short Term Training Program on Business Analysis and Perspective of Foreign Investments in India	MNNIT, Allahabad	MNNIT, Allahabad	June, 24-30, 2013
8.	A.M. Dubey	Faculty Development Program on "Teaching Methodology	MNNIT, Allahabad	MNNIT, Allahabad	May, 20-26, 2013
9.	A.M. Dubey	National Workshop on "Scientific/Research Paper Writing"	The National Academy of Sciences	Mohan Lal Sukhadia University, Udaipur, Rajasthan	April 5-7, 2013
10.	Nidhi Tiwari	Tenth Biennial Conference on Entrepreneurship	EDII, Ahmedabad	EDII, Ahmedabad	February 20-23, 2013
11.	Nidhi Tiwari	Short Term Training Program on "Research Methodology"	MNNIT, Allahabad	MNNIT, Allahabad	29 April – 3 May, 2013



S. No.	Name of the Faculty	Title of the conference/ seminar	Organized by	Venue	Date, Month, Year
12.	Nidhi Tiwari	Faculty Development Program on "Teaching Methodology"	MNNIT, Allahabad	MNNIT, Allahabad	May, 20-26, 2013
13.	Suwendu Kanungo	Short Term Course on "Numerical Methods in Science and Engineering"	MNNIT, Allahabad	MNNIT, Allahabad	August 25-26, 2012
14.	Ajit Keshri	Short Term Course on "Numerical Methods in Science and Engineering"	MNNIT, Allahabad	MNNIT, Allahabad	August 25-26, 2012
15.	P.C. Srivastava	National Workshop on "Scientific/Research Paper Writing".	The National Academy of Sciences	Mohan Lal Sukhadia University, Udaipur, Rajasthan	April 5-7, 2013
16.	P.C. Srivastava	Short Term Course on "Numerical Methods in Science and Engineering"	MNNIT, Allahabad	MNNIT, Allahabad	August 25-26, 2012
17.	P.C. Srivastava	ISTE Workshop on "Introduction to Research Methodology"	IIT Mumbai	IIT Mumbai	June-July, 2012
18.	Ratnesh Mishra	Short Term Course on "Numerical Methods in Science and Engineering"	MNNIT, Allahabad	MNNIT, Allahabad	August 25-26, 2012
19.	Ratnesh Mishra	Workshop on "Advances in Energy Engineering & Technology"	IIT (BHU), Varanasi	IIT (BHU), Varanasi	June 28-30, 2013
20.	Navin Trivedi	Workshop on "Advances in Energy Engineering & Technology"	IIT (BHU), Varanasi	IIT (BHU), Varanasi	June 28-30, 2013
21.	Aparna Shukla	2nd National Conference on Emerging Trends in Engineering & Technology	SBIT, Sonapat	SBIT, Sonapat	February 2013

## PUBLICATIONS

### Published in International Journals

1. Dubey, A.M., Goel, G, and Sahu, G.P. (2013), 'Effective Implementation of Competitive Advantage and Sustainable Competitive Advantage: A Conceptual Model', International Journal on Business Innovation and Research, Vol. 7, No. 5, pp.519-535.
2. S. Kanungo, G. Sahoo and M.M. Gore., BiRange: An Efficient Framework for Biclustering of Gene Expression Data Using Range Bipartite Graph, American Journal of Bioinformatics Research, Vol. 2(4), 40-46, 2012.
3. Kamta Nath Mishra, Prakash Chandra Srivastava, and Anupam Agrawal et al., "Minutiae Distances and Orientation Fields Based Thumbprint Identification of Identical Twins", International Journal of Image, Graphics, and Signal Processing, Vol. 5, No. 2, 51-59, February 2013. <http://www.mecs-press.org/ijigsp/v5n2.html>
4. Prakash Chandra Srivastava, Anupam Agrawal, and Kamta Nath Mishra\* et al., "Fingerprints, Iris, and DNA Features Based Multimodal Systems: A Review", International Journal of Information Technology and Computer Science, Vol. 5, No. 2, 88-111, February 2013. <http://www.mecs-press.org/ijitcs/v5n2.html>

5. S.C. Pandey, G.C. Nandi,, Blood sugar Regularization Based Evolutionary Algorithm for Data Classification, Applied Soft Computing, Elsevier, Vol 12, pp. 2266-2273, 2012.

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

1. Nidhi Tiwari and Geetika Goel., "An Empirical Study to Identify the Determinants of Success of Women Entrepreneurs in Uttar Pradesh", Tenth Biennial Conference on Entrepreneurship in EDII, Ahmedabad, 20-23 February, 2013. Vol. II, EDII, pp 732-740, 2013.
2. Shambhu Sharan Kumar, "Synergistic effect of Nano TiO<sub>2</sub> and Nano ZnO particles on the Corrosion behavior of solvents based Polyester/amino Paint", National Symposium on "Polymers & Coatings-2012" in Sept.2012 by C.S.I.R. - I.I.C.T. Hyderabad & Oil Technologist's Association of India.
3. Shambhu Sharan Kumar, "Chemical synthesis of ZnS Nano-particles by solid-liquid reaction with ZnO and Na<sub>2</sub>S for the development of fluorescence property of Surface Coatings", National Symposium on "Polymers & Coatings-2012" in Sept.2012 by C.S.I.R. - I.I.C.T. Hyderabad & Oil Technologist's Association of India.
4. Ratnesh Mishra, Energy Efficient Wireless Network Security Using Block Cipher Technique, Workshop on Advances in energy engineering, Organized by IIT BHU Varanasi, June 2013. ISBN:978-93-82880-44-8.
5. Aparna Shukla, A Generalization Approach Applied to Security Ontology, 2nd National Conference on Emerging Trends in Engineering & Technology, SBIT, Sonapat, February 2013.

#### **STUDENTS' ACTIVITIES**

S. No	Name of the Activity	Students' Coordinator, if any	Date/Duration
1.	Annual Inter-Semester Cricket Tournament	Shri A.K. Keshri	February 4, 2012 - February 16, 2012
2.	One Day Workshop on Information Security & Ethical Hacking	Dr. A.M. Dubey	10-12-2012
3.	Two Day Workshop on Information Security & Ethical Hacking	Dr. A.M. Dubey	21-22 February, 2013

#### **Academic committee**

1. Dr. Rampal Singh – Director, BIT Allahabad
2. Dr. S. Kanungo – Department of Computer Science, BIT Allahabad
3. Dr. A.K. Mahanty – Department of Management, BIT Allahabad
4. Dr. A.K. Malviya – Department of Management, MONIRBA, University of Allahabad
5. Prof. R.R. Tiwari – Department of Computer Science, J.K. Institute of Applied Physics, University of Allahabad

#### **Other important information**

- Dr. Rampal Singh, Life Member, Indian Science Congress Association
- Dr. Suvendu Kanungo, Life Member, Indian Science Congress Association
- Mr. Shambhu Sharan Kumar, Life Member, Indian Institute of Chemical Engineers (M.I.I.Ch.E), LM – 4583

## DEOGHAR



*Main Building*

The BIT campus at Deoghar was established in 2007 on the initiative of the Govt. Of Jharkhand under Public-Private Partnership (PPP) mode, with a view to impart quality technical education to its students and to be recognized as a world-class learning institute of technical education and research. After BIT Patna and BIT Jaipur this was the third extension center of BIT Mesra imparting degrees in engineering. The intake of the first batch was 150, 50 in each streams CSE, ECE and EEE. The academic activities commenced at a temporary

transit campus at Daburgram, Deoghar in Pancayat Training Institute. Now, the permanent campus spreads at Jasidih across an area of 25 acres and is about 1.5 km away from the Jasidih rail station (an important junction on the Howrah-Patna route). The institute campus includes an academic block, two boys' hostel, a girls' hostel and a health centre. The institute runs five B.E. courses in the departments of ECE, EEE, CSE, Mechanical and Production. The total intake of students each year is restricted to 270. The institute has a well maintained library with a large number of academic books, magazines and journals. Being located about 7 km away from the Deoghar town, the institute provides a bus service during the office hours to facilitate transport connectivity in between the residential areas and the office. A few staff quarters are also available within the campus.

The future plans of the institute include construction of an Administrative Block, a third Boys' Hostel, a few Staff Quarters, Market Complex, Auditorium, Guest House and a Well-equipped Dispensary.

S. No.	Dept.	About the Department
1	ECE	<p>The Department has modern laboratories and support facilities in several areas of Electronics &amp; Communication.</p> <p>These include Analog and Digital Communication, Digital Electronics and Integrated Circuits, Circuit Simulation Package, Microprocessor, Instrumentation and Fiber Optics Communication Laboratories.</p> <p>The communication libraries are well equipped with analog communication kits (like amplitude modulation and demodulation, frequency modulation and demodulation, phase modulation and demodulation) and digital communication kits (like ASK, FSK, PSK and QAM). Commsim software is also available in the laboratory.</p> <p>Fiber optics laboratory is well equipped with optical to electrical converters, electrical to optical converers, He-Ne laser source, LED and LD sources, various tupes photo detectors, couplers, multiplexers, faclcon kits and various types of fibers.</p> <p>Here the microprocessor and interfacing laboratory is well equipped with 8085 Vynitics kits, various types interfacing module (like stepper motor control interfacing module, traffic light control interfacing module etc.)</p>

S. No.	Dept.	About the Department
2	EEE	The department of Electrical Engineering at BIT, off campus Deoghar offers a vibrant environment for under-graduate education in Electrical & Electronics Engineering. The vision of the department is to enable India's excellence in the field of Electrical & Electronics Engineering. The department is committed to advancement of the frontiers of knowledge in Electrical & Electronics Engineering and to provide the students with a stimulating and rewarding learning experience.
3	CSE	The Department of Computer Science & Engineering was established along with the inception of the college in the year 2007. At present only Under Graduate program and Ph.D program in Computer Sc. & Engineering are offered. The department has 3 spacious and well-designed laboratory, equipped with over 200-networked high-end P-IV personal computers with high speed Internet connectivity. CyberRoam™ is also available for controlling networking and distribution of bandwidth across campus. Couple of Dell servers are used for deploying client server softwares laboratories. Operational in an environment of Windows Server 2008/2003, Windows 7 Prof, Windows XP Professional, MS-Office 2010/2007 and UNIX. .net, Python and Advanced Java with Visual C++ environment are available for application development. Open source application development using PHP, MySQL and Android applications are highly appreciated Department also has a niche flavour towards research and industrial implementation focussing Web based Auctioning, Developing Soft Computing based Utilities, System Biology integration, Development of Recomender System, Hybrid intelligence in security, Software testing and Reliability analysis of software Applications.
4	MECHANICAL	<p>BIT Deoghar is a premier Institute for Mechanical Engineering education and will be well recognized in a variety of areas of Mechanical Engineering research and scholarly work. The Department of Mechanical Engineering will :</p> <ul style="list-style-type: none"> <li>• Have a dynamic faculty dedicated to excellence in teaching creating and transferring knowledge that provide the foundation for new educational programs in areas of emerging technologies.</li> <li>• Respond to current societal needs by developing selected “target research thrusts” which utilize the talent and encompass the aspiration of the faculty and by providing the appropriate research infrastructure supporting our faculty to excel in their field of expertise.</li> <li>• Have a nationally-recognized undergraduate educational program.</li> <li>• Maintain state-of-the-art laboratories and facility infrastructure to support the educational enterprise.</li> </ul> <p><b>The main laboratories are:</b></p> <ol style="list-style-type: none"> <li>1. Fluid Mechanics Lab</li> <li>2. Strength of Materials Lab -1</li> <li>3. Engineering Mechanics Lab</li> <li>4. Energy Engineering Lab.</li> <li>5. Engineering Measurement Lab.</li> <li>6. AUTO CAD Lab.</li> <li>7. Engineering Drawing Lab.</li> <li>8. Design of Machine Elements Lab.</li> </ol>



S. No.	Dept.	About the Department
5	PRODUCTION	<p>The Department offers four-year B.E. programme in Production Engineering. The intake capacity at present is 30. Although, Production Engineering, as a branch, has been introduced with effect from 2008 session at this campus, it has been imparting training for workshop practice to students from earlier batches till then. The Department's goal is to impart knowledge in latest manufacturing technology and to develop managerial skills in students.</p> <p><b>Facilities and infrastructure available in the department:</b></p> <ol style="list-style-type: none"> <li>1. Pattern Making and Foundry Shop</li> <li>2. Welding Shop</li> <li>3. Machining Shop and Machine Tool Lab</li> <li>4. Metal Forming and Fitting Shop</li> <li>5. Metrology Lab</li> <li>6. Metallurgy Lab</li> <li>7. Tool Design Lab</li> <li>8. Simulation Lab (Central facility)</li> </ol>
6	APPLIED PHYSICS	<p>The Department of Applied Physics is engaged in teaching Physics at the BE level. It has one UG Applied Physics lab and a theoretical research lab. The faculty members are actively involved in R&amp;D in the areas of plasma physics, non-linear optics, experimental condensed matter physics and nanotechnology.</p>
7	APPLIED CHEMISTRY	<p>The Department has been engaged in teaching of Engineering Chemistry and Environmental Science courses for undergraduate student. Department has well established fuel technology and water quality testing laboratories. The faculties of the department are engaged in research work in the area of oscillatory chemical reactions, pattern formation, bio-diesel, environmental pollution and electro chemical machining. The department has been involved in promoting environmental awareness amongst the tribal and rural population.</p>
8	APPLIED MATHAMATICS	<p>The Department has set up a modern computer centre with latest scientific software of MATLAB and MATHCAD. The department is having three faculty members, who are actively involved in teaching and research. It has been organizing time to time internal seminars cum presentation on the field related to current study courses as well as recent research development. The area of research which is in progress includes:</p> <ol style="list-style-type: none"> <li>1. Generalized thermoelasticity</li> <li>2. Elastic and thermal ware</li> <li>3. Generalized thermo-visco-elastic</li> <li>4. Potoelasticity</li> <li>5. Fluid Mechanics includes Porius media, MHD, Dustry Fluids, Blood Flow</li> </ol>



**SPONSORED PROJECTS****PROJECT SANCTIONED**

S. No.	Dept.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	<b>APPLIED PHYSICS</b>	Investigation of coupled optical beam propagation in nonlinear media for soliton pair and breather pair formation	Dr. Ram Krishna Sarkar	UGC	25.03.2013	10.56 Lacs	3 Years

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Dept.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	<b>EEE</b>	Pankaj Mishra	IEEE Fifth Power India Conference	IEEE	IEEE	Murthal, Harayana	Dec.19-22, 2012
2.	<b>CSE</b>	Dr. Soumya Banerjee	The Seventh International Multi-Conference on Computing in the Global Information Technology ICCGI 2012 - Venice, Italy	IEEE, University of Milan, Italy, Forum IARIA	IEEE, Venice Chapter, IARIA	Venice	June 24-29, 2012
		Mr. Nishikant Kumar, Mr. Rajaram Datta, Mr. Arup Yoy. Mr Manash Sarkar, Mr. Abhishek Pandey & Ms. Goldina Ghosh	Workshop on Data Mining and its Industrial Applications to be held in ISI, Kolkata	Indian Statistical Institute	ISI, Kolkata	Kolkata	20-22 <sup>nd</sup> Feb, 2013.

S. No.	Dept.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
3.	PROD	Dr. Bappa Acherjee	4th International and 25th All India Manufacturing Technology, Design and Research (AIMTDR) Conference 2012	DST, BARC, UGC, CIL, AICTE etc.	Department of Production Engineering, Jadavpur University	Jadavpur University, Kolkata	December, 14 - 16, 2012
		Mr. Abhishek K. Singh	All India Seminar on Technological Solution in Manufacturing	The Institution of Engineers, Jharhand	The Institution of Engineers (India)	BIT, Mesra	March 1-2, 2013.
		Dr. Bappa Acherjee	National Conference on Recent Trade in Manufacturing Science & Technology	AICTE and others	Department of Mechanical Engineering	NITTTR, Kolkata	April, 18-19, 2013
		Mr. Sanjiv Kumar Tiwari	National Conference on "Achieving Excellence for Industrial Competitiveness (AEIC-2013)"	AICTE and Others	Department of Mechanical Engineering	GLA University, Mathura	Jan. 19-20, 2013

## PUBLICATIONS

### *PUBLISHED IN INTERNATIONAL JOURNALS*

S. No.	Dept.	List of publications
1.	ECE	<p>Chinmay Chakraborty, "A review on Telemedicine based WBAN framework for patient monitoring," International Journal of Telemedicine and e- health, Mary Ann Libert inc, Vol 19, No.8, 2013, 619-626.</p> <p>Chinmay Chakraborty, "Determination of safe distance limit from Cellular base station radiation exposure using SAR analysis," International journal of IJCA Proceeding on computing Comm. &amp; Sensor n/w 2013, 18-22, New York, USA.</p>

S. No.	Dept.	List of publications
2.	CSE	<p>Soumya Banerjee, Nitin Agarwal, Analyzing Collective behavior from Blogs Using Swarm Intelligence, Knowledge &amp; Information Science, International Journal, Springer, December 2012, Volume 33, Issue 3, pp.523-547. (Impact Factor: 2.9)</p> <p>Soumya Banerjee, Minimizing Ripple Effect of Web Centric Software Using Pheromone Extension, Information Science, Elsevier, Information Sciences, Volume 193, July 2012, pp.218-232.</p> <p>Gautam Mahapatra (Ph.D scholar) and Soumya Banerjee, A Study of Bacterial Foraging Algorithm and its Application to Solve Simultaneous Equations, in International Journal of Computer Applications (IJCA) (0975 - 8887) Volume 72- No.5, pp. 1-7<sup>th</sup> May 2013.</p>
3.	PROD	<p>B. Acherjee, A.S. Kuar, S. Mitra and D. Misra, Finite element simulation of laser transmission thermoplastic welding of circular contour using a moving heat source, International Journal of Mechatronics and Manufacturing Systems, 2013, Accepted for publication.</p> <p>Abhishek K. Singh, Shubhanshu S. Shukla, Sanjay K. Jha, Green manufacturing practices in brick industries: a case study using AHP, International Journal of Innovative Research in Science, Engineering and Technology, 2013, 2 (6), 2236-2242.</p>
4.	APPL PHYSICS	<p>Shraddha Prasad, Ram Krishna Sarkar, S. Medhekar, Coupled Tapering / Uptapering of Soliton Pairs in Nonlinear Media, Optik, 124, 6661 (2013).</p> <p>Soumen Karmakar, A.B. Nawale, N.P. Lalla, V.G. Sathe, S.K. Kolekar, V. L. Mathe and S.V. Bhoraskar, Gas phase condensation of few-layer graphene with rotational stacking faults in an electric-arc, Carbon, 55 209 (2013).</p>

#### **PUBLISHED IN INTERNATIONAL PROCEEDINGS**

S. No.	Dept.	List of publications
1.	CSE	<p>Soumya Banerjee, Hameed Al-Qaheri, Goldina Ghosh (Ph.d Scholar) Does Chaos Exist in Social Network Components? Role of Evolutionary Dynamics &amp; Tool at The Seventh International Multi-Conference on Computing in the Global Information Technology ICCGI 2012 June 24-29, 2012 - Venice, Italy.</p> <p>Soumya Banerjee, Neveen I. Ghali, Arup Roy (Ph.D. Scholar), Investigating Optimization in Retail Inventory: A Bio-inspired Perspective towards Retail Recommender System, in 2012 3<sup>5th</sup> International Conference on Telecommunications and Signal Processing (TSP) Information System Track, July 3-4, 2012, Prague, Czech Republic.</p>

**PUBLISHED IN NATIONAL PROCEEDINGS**

S. No.	Dept.	List of publications
1.	PROD	<p><b>B. Acherjee</b>, A.S. Kuar, S. Mitra and D. Misra, Laser welding of polymers – temperature field modeling and experimental validation, Proc. of National Conference on Recent Trade in Manufacturing Science &amp; Technology, NITTTR Kolkata, April 18-19, 2013.</p> <p>N. Roy, A.S. Kuar, S. Mitra, <b>B. Acherjee</b>, Parametric optimization of laser micro-drilling of SiC-30BN nanocomposite, Proc. Of National Conference on Recent Trade in Manufacturing Science &amp; Technology, NITTTR Kolkata, April 18-19, 2013.</p> <p><b>S. K. Tiwari</b>, R.K. Singh, B. Kumar, S. Kumar, Design for variety in the initial stages of product development, National Conference on Achieving Excellence for Industrial Competitiveness (AEIC 2013), GLA University, Mathura, Jan 19-20, 2013.</p> <p><b>Abhishek K. Singh</b>, Shubhanshu S. Shukla, Sanjay K. Jha, Sustainability assessment using Analytical Hierarchy Process (AHP): A case study” Proc. of All India Seminar on Technological Solution in Manufacturing, The Institution of Engineers (India), March 1-2, 2013.</p>

**BOOKS:****BOOK CHAPTERS**

S. No.	Dept.	Particulars of the books
1.	CSE	<p>Edison Marrese Taylor, Cristi'an Rodríguez O., Juan D. Velásquez, <b>Goldina Ghosh</b> (Ph.d Scholar), <b>Soumya Banerjee</b>, Vasile Palade (Oxford University, UK) Web Opinion Mining and Sentimental Analysis in Advances in Web Intelligence - 2. Web User Browsing and Preference Analysis, J.D. Velasquez, V.Palade, L.C. Jain (eds). Springer 2012.</p> <p><b>Soumya Banerjee</b>, Nashwa El-Bendary, Aboul Ella Hassanien, Environmental Monitoring Using Wireless Sensor Networks, Book chapter on WSN, CRC Press USA, June 2013.</p>

**AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Department	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Appl. Physics	Dr. Soumen Karmakar	Biography enlisted	Marquis Who's Who in the World, NY, USA	Nov. 2012
2.	Production Eng.	<i>Dr. Bappa Acherjee</i>	<i>"Most Downloaded Paper Award 2012"</i>	Elsevier Science Publisher BV, The Netherlands	2012
3.	ECE	<i>Mr. Chinmay Chakraborty</i>	<i>"2<sup>nd</sup> best paper" For the paper entitled "Determination of safe distance limit from Cellular base station radiation exposure using SAR analysis"</i>	International journal of IJCA Proceeding on computing Comm. & Sensor n/w	2013

**DEPARTMENTAL STUDENTS' ACTIVITIES**

S. No.	Dept.	Name of the Activity	Students' coordinator, if any	Date/Duration
3.	CSE	Summer Technical Internship at AVI EDlogiq, New Delhi	Aditya Kumar (6208/11)	May –June 2013 onwards
		Summer Technical Internship at Xperia Technologies Pvt. Ltd. New Delhi.	Tahseen Ahmad (6180/11)	May –June 2013 onwards
		Summer Technical Internship at Indian Statistical Institute	Sudarsan Kumar (6155/10) & Anupama Baxla (6193/10)	May –July 2013.
		Summer Technical Internship at Iowa State University, USA	Prateek Mishra	May –July 2012.

**Other Important Information****a. Faculty involvement in other Academic Activities**

- Dr. Bappa Acherjee of the Department of Production was a Member of Technical Program committee, 2<sup>nd</sup> Global Conference on Material Science and Engineering – CMSE 2013, China Engineering. He delivered the following invited talks
  1. “Laser Transmission welding of thermoplastic”  
Event: two day workshop on “Advanced Welding Processes & Selection Considerations”, under the Technical Education Quality Improvement Programme (Phase II) of Jadavpur University during 14-15<sup>th</sup> March 2013.
  2. “Laser Welding of Plastics: Process, Quality and Applications”  
Event: UGC Academic Staff College, Jadavpur University Sponsored Three Day Faculty Development Program on “Recent Advances in Laser Technology & its Applications” at School of Laser Science & Engineering, Jadavpur University during 20-22<sup>nd</sup> March, 2013.

**b. Dr. Soumya Banerjee of CSE department was involved in the following activities**

S. No.	Title of Conference	Coordinator	Funding / Sponsoring Agency	Date of Conferences
1.	Special Track: Recommender System: Design Using Evolutionary & Natural Algorithms Conference: Bio-Inspired Computing: Theories and Applications, 2012 (BIC-TA 2012)	Dr. Soumya Banerjee, jointly with Dr. Shenbo Guo, Xerox Research France	MHRD & Sprigner Verlag	December 14-16, 2012
2	Special Session on Reconfigurable Computing System, this session is organized as a part of The First International Conference on Advanced Machine Learning Technologies and Applications, AMLTA 2012, Cairo, Egypt	Dr. Soumya Banerjee Jointly with Dr. Shampa Chakrabarty, NSIT India, & Dr Roman Neruda Institute of Computer Science Academy of Sciences of the Czech Republic	University of Egypt, Springer – Lecture Note in Computer Sc.	8-10th December, 2012,



S. No.	Title of Conference	Coordinator	Funding / Sponsoring Agency	Date of Conferences
3.	Special Session on Adaptive System, this session is organized as a part of The First International Conference on Advanced Machine Learning Technologies and Applications, AMLTA 2012, <a href="http://egyptscience.net/AMLTA12/files/SS-2.pdf">http://egyptscience.net/AMLTA12/files/SS-2.pdf</a>	Dr. Soumya Banerjee Jointly with Dr. Yudith Cardinale, University of Venezuela	University of Egypt, Springer – Lecture Note in Computer Sc.	8-10th December, 2012,
4.	Invited talk on Social Network And Customer Relationship Mining : Perspective With Computational Intelligence” in the Workshop on Data Mining and its Industrial Applications to be held in ISI, Kolkata	Dr. Soumya Banerjee	ISI Kolkata	20-22 <sup>nd</sup> Feb, 2013.

### CENTRAL LIBRARY

The Learning Resource Centre is the nerve centre of BIT Deoghar. The institute takes pride in its state-of-the-art library infrastructure and resources. Well furnished and spacious reading room forms part of it. The library is entirely devoted to the academic needs of the students and Faculty.

It offers a wide range of books and over national journals on the subject areas and other research materials. Important local, regional dailies in English and Hindi are also an important part of Newspaper section of the library.

Numbers of volumes of books added during the academic year 2012-13 is 3271. Currently total number of books is 18954. The facility for E-library is being likely to be developed. A library software Libsys is installed

### TRAINING & PLACEMENT CELL

In view of the economic slow-down, the industry, specially the IT sector Organisations will be cutting their training costs and would be recruiting those students, who may require the minimum of post-recruitment training. Pursuant to our policy for continued interaction with the industry, on one hand and in order to make our students more “Industry-Ready”, on the other, following steps have been taken up:

- Setting up of a Training and Placement Cell with co-ordinators from various departments and in co-ordination with the T&P Division of BIT. Mesa, Ranchi, the Cell has organised Competency Development Programmes supported by skill developments. Written tests, mock interviews, group discussions, online tests, field visits to several nearby organisations and vocational training for students.

## 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 enabled innovative management practices will be the gateway to the future growth, it is one of the leading institutes of Rajasthan in the field of Engineering, Applied Sciences and Management.



*Main Building*

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. Knowledge spread, innovative concepts, innovative practices and technology breakthroughs are at the core of this process. In the professional education domain, it is a two dimensional need for upgrading knowledge and infrastructure - one to understand the fast happening conceptual and technology breakthroughs and second to facilitate new such breakthroughs to take place with more knowledge inputs and basic research. In the present competitive environment, it is now a compulsion for a capable and growth oriented organization to be a part of contemporary development process.

With excellent performance, progressive mind set and good will earned, the Jaipur center has a long term vision to consolidate its strength and excel in 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 is in the eastern part.

### ACADEMIC PROGRAMMES:

#### UNDERGRADUATE:

##### **B.E. in following branches of Engineering :**

- i. Computer Science
- ii. Electronics and Communication Engineering
- iii. Electrical & Electronics Engineering

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

#### POSTGRADUATE:

##### **MBA, MCA, Masters in Animation Design, Integrated MBA, Integrated MCA and Part Time MBA**

##### **Doctoral :**

Ph.D Programme in Computer Science Engineering, Electronics & Communication Engineering, Management and Applied Sciences



**NEW LABS/EQUIPMENT/SOFTWARE ADDED DURING THE SESSION:*****LABS/EQUIPMENTS***

Following new labs have been installed in Electrical & Electronics Engineering Department;

- i. Electrical Machine Lab I & II
- ii. Control System Lab
- iii. Power Electronics & Applied Power Electronics Labs
- iv. Power System Lab

30 new Desktop computers (Intel i 5 processor) installed in the Common Computer Centre to upgrade the internet access and other computing facilities

***SOFTWARE/SIMULATION TOOLS***

CADENCE simulation tool is installed in the VLSI lab in ECE department

**SPONSORED PROJECTS*****ONGOING PROJECTS***

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Duration of the Project
1	Physical and Optical properties of aerosols over an urban site in northwestern India, Discipline : Climatology	PI : Dr Sunita Verma Co-PI: Dr. Swagata Payra,	DST, New Delhi, Govt. of India	20/07/10	3254400	Initially sanctioned for 3 years

***PROJECTS COMPLETED***

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.	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	31/12/12

**SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE CENTRE**

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	Faculty Development Programme on Entrepreneurship Development (The Programme is attended by 32 faculty members of our institute)	Abinash Pankaj	Dept of Science & Technology, Govt. of India	January 15-27, 2013
2.	Workshop on Landscape and Color Perspective By Prof. Subroto Mondol Head- Dept. of Visual Art, Fine Art Faculty, University of Rajasthan, Jaipur	Dr. Vibhuti Pandya	BIT-Jaipur	March 25, 2013
3.	Short Term Course on Software Quality & Testing Process	Santosh Kumar Sharma	BIT, Jaipur	May 1-15, 2013
4.	Short Term Course on Microprocessor and Micro-controller	Snehanshu Shekhar	BIT, Jaipur	May 7-16, 2013
5.	Entrepreneurship Development Programme	Abinash Pankaj	Dept of Science & Technology, Govt. of India	May 27 to July 05, 2013
6.	Short Term Course on On Java programming and Web Technologies	Dr. Shripal Vijayvargiya and Mr. Subhash C. Gupta	BIT, Jaipur	Jun 1-10, 2013

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Anuj Kumar Jhankal	Summer Research Fellow Programme-2012	IIT Delhi	IIT Delhi	Department of Mathematics, IIT Delhi	May 17 to July 5, 2012
2.	Subhash C. Gupta, Dr. Archana Bhatnagar, B. Pathak, Mr. M.M. Agarwal, Vikas Sangwan, Dr. Pramod Bubna Santosh Kumar Agarwal & Priyanshu Sharma	ISTE Workshop on Introduction to Research Methodologies	National Mission on Education, MHRD, Govt. of India	IIT Bombay	VIT, Jaipur	June 25 -July 4, 2012

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
3	Santosh Kumar Sharma	Short Term Course on Introduction to research	IIT Indore	IIT Indore	IIT Indore	July 6-7, 2012
4	Jankiballabh Sharma, Depak Chaturvedi & Gaurav Jain	Recent Advances in Signal Processing and Communications	-	MNIT, Jaipur	MNIT, Jaipur	September 01-05, 2012
5	Dr. Piyush Gupta	Information and Communication Technology in Education	ICSSR	NEHU, IGNOU, ICSSR, Shillong	Shillong	September 13-15, 2012
6	Jyoti Sharma	RF & MW testing & Digital Debugging	Agilent Technologies	Agilent Technologies	MNIT Jaipur	September 14, 2012
7	M.M. Agarwal, Vivek Gaur, Dr. Archana Bhatnagar & Seema Gaur	BICON -2012, Techno global issues: Expansion, Impacts and challenges	DST, CSIR	Biyani Girls College, Jaipur	Biyani Girls College, Jaipur	September 18, 2012
8	Dr. Anirudh Sahni	Climate Change: Impact and Response	-	Biyani Girls College, Jaipur	Biyani Girls College, Jaipur	September 20, 2012
9	Dr. Anand Kumar Srivastava & Ravindra Kumar	National conference of Vacuum Electronics Device Application (VEDA)-2012	CSIR	Central Electronics Engineering Research Institute -CEERI	CEERI-Pilani	September 21-24, 2012
10	Ritu Pareek	Interfacing Language, Culture and Technology	ELTAI	BITS-Pilani	BITS-Pilani	October 8-9, 2012
11	Dr. Rajni Agarwal	Recent Advances in Pollution Prevention Technologies in Process Industries	-	Malviya National Institute of Technology, Jaipur	Malviya National Institute of Technology, Jaipur	October 22 – 26, 2012
12	Dr. Bhawna Agarwal	89 <sup>th</sup> Orientation Programme	UGC	Academic staff college, University of Rajasthan, Jaipur	University of Rajasthan, Jaipur	November 19 -December 15, 2012



S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
13	Subhash C. Gupta	National Conference Computation -II, 2012	-	V.I.T, Jaipur	V.I.T, Jaipur	November 30- December 1, 2012
14	Dr.Ranjana Agrawal	International workshop on Chemistry for a Sustainable future	-	University of Rajasthan, Malviya National Institute of Technology, Jaipur and University of Delhi	Univesity of Rajasthan, Jaipur	December 10 -12, 2012
15	Dr. Anand Kumar Srivastava	National Symposium on Plasma Science and Technology	PSSI	Pondicherry University	Pondicherry University	December 10-13, 2012
16	Mr. Vikas Sangwan	ISTE Workshop on Engineering Thermodynamics	National Mission on Education, MHRD, Govt. of India	IIT Bombay	Poornima College, Jaipur	December 11-21, 2012.
17	P. K. Sharma, Dr. Piyush GuptaAnju Sharma, Seema Gaur & B. Pathak & Santosh Agarwal	Refresher course on "Information Technology"	UGC	Academic Staff College, University of Rajasthan	UGC Academic staff college, University of Rajasthan, Jaipur	December 17, 2012- January 5, 2013
18	Dr. Rajni Agarwal, Dr. Anirudh Sahni	National Conference on Environmental Conservation and Management for Sustainable Era- 2012	-	SS Jain Subodh PG College, Jaipur	S.S. Jain Subodh PG College, Jaipur	December 20 -22, 2012
19	Dr. Anirudh Sahni	100th Indian Science Congress	Indian Science Congress Association, Kolkata	Kolkata University, Kolkata	Kolkata University, Kolkata	January 3-7, .2013
20	Dr. Rajni Agarwal	Refresher course conducted by UGC on 'Physical Sciences'	-	University of Rajasthan Jaipur	University of Rajasthan Jaipur	January 7-26, 2013.

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21	Ritu Pareek	Empowering The English Language Classroom	MNIT, Jaipur	MNIT, Jaipur	MNIT, Jaipur	January 18-19, 2013
22	Dr. Vibhuti Pandya & Vivek Sharma	Jaipur International Film Festival (JIFF)	-	Jaipur International Film Festival (JIFF)	Chamber Bhawan & Golcha Theatre, Jaipur	January 30 to February 3, 2013
23	Dr. Vibhuti Pandya & Vivek Sharma	Comic Conference 2013	-	Comic Con India, New Delhi	Delhi Haat, New Delhi	February 8-10, 2013
24	Dr. Anuj Kumar Jhankal, Seema Gaur, Santosh Agarwa	16 <sup>th</sup> National Conference on e-Governance	Government of India and Government of Rajasthan	Department of Administrative Reforms and Public Grievances, Government of India	B. M. Birla Auditorium, Jaipur	February 11-12, 2013
25	Dr. S. K. Sharma, Dr. Madhavi Sinha, Dr. Roopali Sharma, Dr. Anuj Kumar Jhankal, Jankiballabh Sharma, Dr. Vibhuti Pandya & Ritu Pareek	Short term course on Communication @ workplace	-	Malaviya National Institute of Technology, Jaipur	Malaviya National Institute of Technology, Jaipur	February 18-22, 2013
26	Abinash Pankaj	All India Seminar on Technological Solution in Manufacturing	The Institution of Engineers	BIT Mesra, Ranchi	BIT Mesra, Ranchi	March 1-2, 2013
27	Dr. Anuj Kumar Jhankal	Ramanujan Mathematics Awareness Programme	Indian Society for Technical Education	Global Institute of Technology, Jaipur	Global Institute of Technology, Jaipur	March 9, 2013
28	Dr. Dheeraj Bhardwaj	Advancements In Microelectronics And Communication Technologies	AICTE	SKIT Engg. College Jaipur	SKIT Engg. College Jaipur	March 15-17, 2013

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
29	Subhash C. Gupta, Santosh Sharma, M.M. Agarwal, Dr. Piyush Gupta & Vikas Sangwan	ISTE Workshop on Database Management System	National Mission on Education, MHRD, Govt. of India	IIT Bombay	VIT, Jaipur	May 21-31, 2013.

## PUBLICATIONS

### Published in International Journals

1. Anju Sharma and Madhavi Sinha, "A Differential Evaluation Algorithm for routing Optimization in Mobile Ad-hoc Networks", International Journal of Computer Science and Network (IJCSN), Vol. 1, Issue 4, pp 109-115, August 2012.
2. Ravindra Kumar, Ram Prakash, J. Alphonsa, Jalaj Jain, A. Pareek, P. A. Rayjada, P. M. Raole and S. Mukherjee, "Impact of forging conditions on plasma nitrided hot-forging dies and punches," Journal of Materials Science Research, Vol. 1, No. 4, pp. 11-18, August 2012.
3. Dheeraj Bhardwaj, Komal Sharma and Deepak Bhatnagar, "Dual band and Broadband Rectangular Patch Microstrip Antenna with T Shaped Slot for WiMax Application", International Journal of Engineering Research and Development, PISSN: 2278-800X, Volume 3, Issue 12, pp. 14-21, September 2012.
4. Alok Pandey, "A Simplified Defense Mechanism Against Man - In - The - Middle Attacks", International Journal of Engineering Innovations & Research - IJEIR, Volume -1, Issue-1, pp. 385-389, September 2012.
5. Vpathak and Vivek Gaur, "AIDEN: A Density Conscious Artificial Immune System for Automatic Discovery of Arbitrary Shape Clusters in Spatial Patterns" BRAIN- Broad Research in Artificial Intelligence and Neuroscience, Vol. 3, No. 3 pp 5-11 Oct. 2012.
6. Swati Saxena and Madhavi Sinha, "Statistical study of Performance Metrics of Adaptive Fault Tolerant Replication Routing Protocol for MANET", International Journal on Computer Science & Engineering, Vol. 4, Issue 11, pp 1804- 1815 November 2012.
7. Piyush Gupta and Kashinath Chandelkar, "Brain to Brain knowledge transfer for disabled with e-Governance ". International Journal of Advanced Research in Computer Science and Software Engineering, Vol 2, Issue 12, December 2012.
8. Piyush Gupta and Kashinath Chandelkar, Intelligent Network Practices and Innovative Networking Solution for Enterprises, International Journal of Emerging Research in Management & Technology, Research Article ISSN: 2278-9359, December 2012.
9. Pramod Bubna, "Monitoring System for Terrorist and Dangerous Prisoners", International Journal of Research in Computer application and Management, Issue 12, Volume 2, pp 110-113, December 2012.
10. Pramod Bubna, "Monitoring and Tracing System for Soldiers with Radio Frequency Identification Technology", Zanith International Journal of Multidisciplinary Research, Issue 12, Volume 2, pp 437-440, December 2012.
11. Anuj Kumar Jhankal, Subhash chand Gupta and Vikas sangwan "Optimized Layout for machines by applying Ganetic Algorithm", International Journal of Operations Research and Optimization, Vol. 3, No. 2, pp. 213-216, 2012.

12. Archana Bhatnagar et al., "Android-Platform For Mobile Devices And Its Ecofriendly Applications", International Journal of Environmental Engineering and Management, Vol. 3, pp: 61-64, 2012.
13. Ranjana Agrawal "Nitrate contamination in ground water samples of Gangapurcity town (Sawai Madhopur District) Rajasthan", Journal of Chemical, Biological and Physical Sciences, Vol. 2(1), pp 511-513, 2012.
14. Ranjana Agrawal "Fluoride contamination in ground water samples and its effect on human body in Gangapurcity town (Sawai Madhopur District) Rajasthan", Journal of Chemical, Biological and Physical Sciences, Vol. 2(2), pp 1051-1053, 2012.
15. P.R. Sharma, Gurminder Singh and A.J. Chamkha "Steady mixed convection flow of water at 4° C along a non-isothermal vertical moving plate with transverse magnetic field" International Journal of Industrial Mathematics, Vol. 4(3), pp. 171-186, 2012.
16. Gurminder Singh, P.R. Sharama and A.J. Chamkha "Mass transfer with chemical reaction in MHD mixed convective flow along a vertical stretching sheet", International Journal of Energy and Technology, Vol. 4, Article 20(1-12), 2012.
17. Gurminder Singh and O.D. Makinde, "Computational dynamics of MHD free convection flow along an inclined plate with Newtonian heating in the presence of volumetric heat generation". Chemical Engineering Communications, Vol. 199(9), pp.1144-1154, 2012.
18. Alok Pandey, "Counter Measures to Combat Misuses of MAC Address Spoofing Techniques", International Journal of Advanced Networking Applications, Volume 3, Issue 05, pp. 1358-1361, 2012.
19. V.Pathak and Vivek Gaur, "Exploring measurable impacts in viral marketing using social coordination games and fuzzy logic", International Journal of computational Science, Engineering and Technology, vol. no.1, pp 1-7, January 2013.
20. Pramod Bubna, "Multiplier effect in Medical Tourism", Asia Pacific Journal of Marketing and Management, Review, Issue 1, Volume 2, pp. 100-111, January 2013.
21. Pramod Bubna, "FDI in Multibrand Retail in India", Zanith International Journal of Multidisciplinary Research, Issue 2, Volume 3, pp 308-315, February 2013.
22. Pramod Bubna, "Impact of Akash Tablet in Indian E-Commerce Market", Zanith International Journal of Business Economics and Management Research, Issue 4, Volume 3, pp251-259, April 2013.
23. Pramod Bubna, "Security and Safety Information System for Female Crime", Excel International Journal of Multidisciplinary Management studies, Issue 4, Volume 3, pp.117-126, April 2013.
24. Piyush Gupta and Kashinath Chandekar,"Analyzing High Performance Cloud Computing: A Perspective Approach" International Journal of Advanced Research in Computer Science and Software Engineering, Vol 3, Issue 4 April 2013.
25. Prateek Sharma and Vishal Raghav, ", InternationaCloud supported e-learning framework for cost effective online learningl Journal of Information Technology & Computer Sciences Perspectives,, Vol 2, No 2, pp-555-559, April-June,2013.
26. P. Kumar, M. Rani and B.K.Singh, "An Efficient Hybrid Classification Approach for Land Use/Land Cover Analysis in a Semi-Desert Area Using ETM+ and LISS-III Sensor", Sensors Journal, IEEE, vol.13, no.6, pp.2161,2165, June 2013.
27. Ranjana Agrawal "Contamination of Nitrate in ground water samples of Sawai Madhopur town Rajasthan", International Journal of Green and Herbal Chemistry Vol.2(1), pp 60-64, 2013.

28. Shripal Vijayvargiya and Pratyooosh Shukla, "Proportional Performance Exploration of Evolutionary Approaches for Motif Discovery in DNA Sequences", International Journal of Computational Science, Engineering & Technology, Vol. 1, No. 1, pp. 8-12, 2013.
29. J.B. Sharma, K.K. Sharma and Vineet Sahula, "Digital image dual watermarking using self-fractional Fourier functions, bivariate empirical mode decomposition and error correcting code," Journal of Optics(Springer), vol. 42, no.3, pp. 214-227, 2013.
30. Anuj Kumar Jhankal and Manoj Kumar "MHD Boundary Layer Flow Past a Stretching Plate With Heat Transfer", International Journal of Engineering and Science, Vol. 2, Issue 3, pp. 9-13, 2013.
31. Anuj Kumar Jhankal "A Similarity Solution for Laminar Boundary Layer Flow of a Power-Law Fluid on a Moving Flat Plate in the Presence of Transverse Field", International Journal of Mathematics Archive. Vol. 4(4), pp. 80-83, 2013.
32. Anuj Kumar Jhankal "Boundary Layer Flow Over a Stretching Vertical Sheet With Surface Heat Flux", International Journal of Physics and Mathematical Sciences, Vol. 3(1), pp. 109-112, 2013.
33. Anuj Kumar Jhankal and Manoj Kumar "MHD Boundary Layer Flow Induced by a Permeable Stretching Surface", International Journal of Advances in Engineering & Technology,. Vol. 6, Issue 2, pp. 913-919, 2013.
34. Anuj Kumar Jhankal "Unsteady MHD Boundary Layer Flow and Heat Transfer over a Stretching Surface", International Journal of Physics and Mathematical Sciences, Vol. 3(2), pp. 110-114, 2013.
35. Anuj Kumar Jhankal, R.N. Jat and Amilal Kulhari "Swirling Jets of Conducting Fluids in the presence of a Transverse Magnetic Field", MATEMATIKA, Vol. 29, No. 1, pp. 133-148, 2013.
36. Gurminder Singh and A.J. Chamkha "Dual solutions for second-order slip flow and heat transfer on a vertical permeable shrinking sheet", Ain Shams Engineering Journal, Vol.4, pp.911-917, 2013.
37. Gurminder Singh and O.D. Makinde "MHD slip flow of viscous fluid over an isothermal reactive stretching sheet", Annals of Faculty Engineering Hunedoara- International Journal of Engineering, Tome XI, Fascicule 2, pp. 41-45, 2013.
38. U. Mishra and Gurminder Singh "A similarity solution of a mixed convection flow along an unsteady stretching sheet", Caspian Journal of Applied Sciences Research, Vol. 2(3), pp. 17-23, 2013.

#### **Published in International Proceedings**

1. Anuj Kumar Jhankal and Manoj Kumar "Similarity Solution for MHD Plane Free Jet as Boundary Layer Flow Induced by Impermeable Stretching Plane", Proceeding of the 15th International Conference of International Academy of Physical Sciences, Thailand, pp.7-10, December 2012.
2. Pramod Bubna and Priyanshu Sharma, "E-Entrepreneurs In Telecom Sector In India, A Case Study", Proceedings of BIT International conclave on innovations in Engineering & Management(ICIEM 2013), Birla Institute of Technology, Mesra, Patna, February 22-23, 2013.
3. Hemant Purohit, Kanika Sharma and K. L. Sharma, "Role of Data Interleaving technique in band-limited environment" International Conference on Soft Computing, Artificial Intelligence, Pattern Recognition, Biomedical Engineering and Associated Technologies" (SAP-BEATS 2013), Jodhpur, February 23-24, 2013.
4. J.B. Sharma, K.K. Sharma and Vineet Sahula, "Comparison of bit error rate performance measure of robust watermarking scheme based on self-fractional Fourier functions, empirical mode decomposition and cyclic encoding," Proceedings of International Conference on Advancement In Information Technology, (ICAIT- 2013), Jaipur, pp.42-46, March 2013.



5. Roopali Sharma, "Changing Scenario of Foreign Direct Investment in Nepal and Economic- Strategic Opportunities for India", Proceedings of International Seminar on India-Nepal Relations: The Emerging Issues and Challenges of Cooperation, University of Rajasthan, University of Rajasthan, March 22-23, 2013.
6. Anuja Arora, Madhavi Sinha, "Stata Based Test case Generation using Variable Chromosome Length Genetic Algorithm", Third International Conference on Computer Science, Engineering & Applications, ICCSEA 2013 Proceedings, Delhi, India; Springer-Verlag, Germany; May 24-26, 2013.

#### Published in National Journals

1. Ritu Arora and Roopali Sharma, "Effective Branding Strategies of Multinational Corporations in International Markets: The Case of India", Practices and Research in Marketing (PRIMA), Symbiosis Centre for Management & Human Resource Development, ISSN 2230-844X, Volume 3, Issue 1, pp. 4-14, September 2012.
2. Dheeraj Bhardwaj, Komal Sharma and Brajraj Sharma, "Rectangular Patch Microstrip antenna with U Shaped Slot with Shorted Pin and Walls for WiMax and WLAN Application", SKIT Research Journal, ISSN2278-2508, vol-2, pp. 157-160, 2012.

#### Published in National Proceedings

1. Ranjana Agrawal, "Climate change and its effect on water", 7th Biyani International Conference (BICNO-12), Biyani College, Jaipur, September 20, 2012.
2. Anand Kumar Srivastava, "Dielectric barrier discharge plasma sources for Industrial research and development", Conference series of Vacuum Electronics Device Application (VEDA), September 21-24, 2012.
3. Ravindra Kumar, Ram Prakash, J. Alphonsa, S. Konar and S. Mukherjee "Plasma Nitriding System for Surface Engineering of Industrial Components," Conference series of Vacuum Electronics Device Application (VEDA), September 21-24, 2012.
4. Ranjana Agrawal, "Seasonal variation in Physico-Chemical property of ground water collected from nearby area of Municipl Solid waste dump site, Jaipur", National Seminar on status of environment and biodiversity RIO+20 and Role of Space Technology (Under UGC Special Assistance Programme), Department of Zoology and Environmental Science, Gurukul Kangri University, Haridwar. In collaboration with Indian Academy of Environmental Sciences. Haridwar. November 2-3, 2012.
5. Rajni Agarwal, S. K. Sharma, U. Jha, " Management of industrial effluents to protect environment", Proceedings of the 'National Conference on Water Crisis Management under Changing Climate' at hotel Sutrupti, Bhubneshwar, Odisha (India), pp. 23, (S3-02), November 16 -17, 2012.
6. Ranjana Agrawal, Nidhi Singh, "Echo-friendly approach through Ionic Liquids", International workshop on Chemistry for a Sustainable future, Department of Chemistry, University of Rajasthan and Malviya National Institute of Technology, Jaipur in Collaboration with Green Chemistry Network Centre, Department of Chemistry, University of Delhi, December 10-12, 2012.
7. Anand Kumar Srivastava, S. K. Sharma and H. K. Dwivedi, "Optimization study of dielectric barrier discharge plasma cells for efficient UV/VUV emission", Proceedings of National Symposium on Plasma Science and Technology, PLASMA-2012, Pondicherry, India, December 10-13, 2012.
8. Rajni Agarwal, S. K. Sharma, U. Jha, "Environmental degradation and treatment of Industrial Effluents", National Conference on Environmental Conservation and Management for Sustainable Era (ECMSE) -2012, S S Jain Subodh PG College, Jaipur (India), December 20- 22, 2012.

9. Ranjana Agrawal, Rashmi Nair, A. Sahni, "Waste water and its treatment techniques", National Conference on Environmental Conservation and Management for Sustainable Era (ECMSE-2012, Department of Environmental Science S.S. Jain Subodh PG College, Jaipur, December 20-22, 2012.
10. Anuj Kumar Jhankal "Thermal Boundary Layer Flow Adjacent to a Stretching Vertical Sheet", National Conference on ECMSE-2012, S. S. Jain Subodh P. G. College, Jaipur, Rajasthan, December 20-22, 2012.
11. Ankit Kumar and Archana Bhatnagar, "Security and Challenges in Mobile Cloud Computing", BICON-2012, Jaipur, p-118, 2012.
12. Roopali Sharma, "An Analysis of Trade Performance between India and China", Proceedings of National Seminar on China's Engagement with South Asia: Regional & Global Implications, South Asia Studies Centre, University of Rajasthan, University of Rajasthan, February 4-5, 2013.
13. Ranjana Agrawal, Nidhi Singh, "Eco- industrial Parks: An Approach Towards Industrial Ecology", BIT International Conclave 2013, on Innovation in Engineering and Management, BIT, Patna, February 22-23, 2013.
14. Abinash Pankaj, "An Ergonomic Evaluation of Manual Metal Arc Welding Workstation", All India Seminar on Technological Solution in Manufacturing, Birla Institute of Technology, Mesra, Ranchi, March 1-2, 2013.
15. Anuj Kumar Jhankal "Boundary Layer Flow and Mass Transfer Past a Vertical Plate in a Porous Medium in the Presence of Magnetic Field", National Conference on Advancements in Microelectronics and Communication Technologies, Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur, Rajasthan, March 15-17, 2013.
16. Anuj Kumar Jhankal "Curved Wall Jet of a Conducting Fluid in the Presence of Magnetic Field", National Conference on Energy, Materials & Communication Systems, Rajdhani Engineering College, Jaipur, Rajasthan, March 16-17, 2013.
17. Ranjana Agrawal, "Study of Physico Chemical Parameters of ground water samples in Viratnagar town of Jaipur District in Rajasthan", National Conference of Energy, Materials. Communication Systems (ECMS-2013), Rajadhani College of Engineering, Rohini Nagar Phase-I, Sangarner Renwal Road, Jaipur, March 16-17, 2013.
18. Anuj Kumar Jhankal "Boundary Layer Flow and Heat Transfer over a Stretching Vertical Surface", National Conference on Advance Research in Engineering Technology & Applied Sciences, Jaipur Institute of Technology, Jaipur, Rajasthan, March 23, 2013.
19. Anuj Kumar Jhankal "A Similarity Solution for Boundary Layer Flow Past Over a Permeable Stretching Sheet in the Presence of Transverse Magnetic Field", 24<sup>th</sup> National Conference of Rajasthan Ganita Parishad on Modern Aspects and Challenges in Mathematics, M A J Government College, Deeg, Bharatpur, Rajasthan, May 18-19, 2013.

#### Book chapters:

1. Pareek, Ritu. "Effective Non Verbal Communication: Sensitivity towards Cultural Differences." Ed. Sanjay Arora. CLT: The Changing Face of ELT. Jaipur: Gauttam Book Company, pp. 296-305, 2012.
2. Pareek, Ritu and Preeti Bhatt. "Enhancing Cultural Awareness in Second language Learning." Eds. Pushpa Lata, Devika, Gajendra Singh Chauhan. Interfacing Language, Culture and Technology, New Delhi: Jain Brothers, pp.139-144, 2012.
3. Pareek, Ritu and Preeti Bhatt. "Using Classroom Activities for Language Teaching." Empowering The English Language Classroom. Eds. Preeti Bhatt, Nanny Tripathi. New Delhi: Excellent Publishing House, pp. 5-9, 2013.

4. Shripal Vijayvargiya, Pratyooosh Shukla, "Regulatory Motif Identification in Biological Sequences: An Overview of Computational Methodologies", in Shukla P. and Pletschke B.I. (eds.), Advances in Enzyme Biotechnology. Springer, India, ISBN: 978-81-322-1093-, 2013.1
5. Shripal Vijayvargiya, Pratyooosh Shukla, "Microbial Gene Finding Through Identifying Transcription Factor Binding Sites (TFBS)", in Gupta V.K., Tuohy M.G. Sharma G.D. and Gaur S. (eds.), Applications of Microbial Genes in Enzyme Technology. Nova Science Publishers, Newyork, ISBN: 978-1-62417-821-4, 2013.

**AWARD / RECOGNITION BESTOWED ON FACULTY ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award/ Honors	Organization	Year / Duration
1.	Dr. Vibhuti Pandya	Jury Member of Jaipur International Film Festival-2013	JIFF India, Jaipur	30 <sup>th</sup> Jan. To 3 <sup>rd</sup> Feb. 2013
2.	Dr. Roopali Sharma	"Indo-Nepal Gold Star Award"	Economic Growth Society of India, New Delhi	April 20, 2013

**STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	<b>Vibrations:</b> (Cultural & Art Fest) An expression of vibrating enthusiasm and artistic talent of BIT Jaipur Campus students.	Nishith Jain (BE- VIII th Sem) Aakanksha Garg (BE- VIII th Sem) Vipul Pande (BE- VIII th Sem) Kirti Ahluwalia (BE- VIII th Sem) Udai Mudgal ( MBA – Ist Sem) Neelam Agarwal (MCA-V Sem) Shivani Jain (B.Sc, (A&M)- V th Sem)	December 10-12, 2012
2	<b>TechVibes :</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 Tech Vibes.	Kshitiz Panwar (BE- VIII th Sem) Abhishek Rai (BE- VIII th Sem) S. Srimanth (BE -VIII th Sem) Rachita Agarwal (BE -VIII th Sem) Santosh Kumar (BE -VIII th Sem) Yagyadeep Khatri (BE -VIII th Sem) Himanshu Sharma (B.Sc, (A&M)- VI th Sem) Prashant Grover (B.Sc, (A&M)- VI th Sem)	February 18-20 2013
3	<b>Cavorts :</b> (Sport Fest) An event to develop Physical, Mental, Competitive and Team Spirit strength. All these significantly contribute in professional career.	Santosh Kumar (BE VII th Sem) Yogesh Sharma (BE VII th Sem) Neelesh Batra (MCA IV th Sem ) Faizan Ahmed (MBA Ist Sem)	October 13-15, 2012

**Other Important Information****A. Invited Lectures delivered by Faculty**

- i. Anuj Kumar Jhankal, "Finding Optimized Layout by Applying Genetic Algorithm for Cellular Manufacturing System", 24<sup>th</sup> National Conference of Rajasthan Ganita Parishad on Modern Aspects and Challenges in Mathematics, Organized by Department of Mathematics, M A J Government College, Deeg, Bharatpur, Rajasthan, May 18-19, 2013.
- ii. Roopali Sharma, "World Trade Organization - Understanding its Implications for India", UGC Refresher Course in International Relations, Organized by Academic Staff College, University of Rajasthan, September 13, 2012.
- iii. Roopali Sharma, "Role of Special Economic Zones (SEZs) in Promotion of Foreign Trade & Investment", UGC Refresher Course in International Relations on The Contemporary World: Issues, Challenges & Options, Organized by Academic Staff College, University of Rajasthan, September 17, 2012

**B. Eminent persons visited the campus during the period:**

S. No.	Name of the person	Purpose
1.	Dr. S. Pal President IETE and distinguished Space Scientist	Delivered lecture on - New Trends in Communication System Technology and career prospects for Graduate Engineers
2.	Smt. Mamata Sharma Chairperson, National Commission for women, Govt. of India	Chief Guest in the Annual function of the Institute
3.	Shri A. K. Bhargava Chief General Manager, BSNL, Rajasthan Circle	Guest of honour in the Annual function of the Institute

**C. Key Awards /citation received by students**

S. No.	Name of the student	Particulars
1.	Ms. Paridhi Jain, Ms. Rachita Agrawal and Ms. Namrata Sinha (BE, VIII Sem, ECE )	First Prize awarded in poster presentation in National Conference on "Advancements in Microelectronics and Communication Technologies", organized by CEERI Pilani, IETE Jaipur and Swami Keshwanand Institute of Technology, Jaipur
2.	Mr. Chaitanya Pansare and Mr. Ankur Mundhra of BE VI Semester EEE	Secured 2nd spot in the National quiz organised by Rajasthan Renewable Energy corporation.
3.	Mr. Lakshya Arora of BE VI Semester (ECE)	Won best athlete award in the sport event organized by IIT Rajasthan, Jodhpur
4.	Ankit Verma II Sem. B.Sc. A&M	Won I Prize in inter-college Logo Designing Competition, Conducted by Neofusion Creative Foundation, Jaipur

**D. Summer Training Programme for External Students :**

5 external under graduate engineering students attended the programme conducted at institute during May-June 2013 in Electronics & Communication Engg., Electrical & Electronics Engg, & Computer Science Engg. Disciplines.



## KOLKATA



*Computer Lab.*

BIT Kolkata Campus was established in 1995. This Centre offers academic programmes in Computer Science and Business Management, Bioinformatics and Electronics and communication, Mathematics & Computing. The Centre, located in the southern part of the City, is well connected with the rest of Kolkata. The extensive 30,000 sq feet premises of the Centre includes spacious computer laboratories with dedicated server rooms, several lecture rooms, a seminar hall, and a well-equipped library with books, journals and subscription to various e-journals. Faculty members and the

student community have free access to online journals through ACM, IEEE, H.W. Wilson database and SIAM. The centre also have rich collection of E books of World Scientific, IET. The whole Centre is networked and Internet facilities are provided through a 3 Mbps and 10 Mbps dedicated line.

The computer laboratory has 230+ modern HP, Dell and Compaq machines, out of which 100+ machines are with the latest architectural features like Core-2 Duo processors, and TFT monitors. The network is well-protected through the latest Cyberoam 1000A firewall manager, and Quick Heal anti-virus software for each and every machine. The Centre will soon offer professional multimedia courses, for which the Dell PC's are specially configured. The latest software ranges from C, Turbo C++, Java, Visual Studio. Net, Microsoft Office suite, Oracle 10g, Photoshop 9, Adobe Writer, Macromedia Flash 8, Dreamweaver 8 and Rational Rose.

The campus has a placement cell to guide students about their career plan, to train them and to facilitate their placement in reputed organizations. The focus of the Placement Cell is to train and equip students through regular Competency Development Programmes (CDP) in such a way that they are gladly accepted by the best organizations & industry. The cell operates in close guidance with the Placement Cell of our main campus at Mesra, Ranchi.

Some of the recent placements for BBA/BCA batches were in reputed companies like : CTS, TCS, Satyam, Wipro Technologies, Reliance etc.

Students of MCA secured campus placements in reputed organizations such as Aricent, CTS, TCS, HP, Sapient, Tech Mahindra, I-Gate, Direct I, Oracle, Electra Design Automation, Birla Soft, IBM, Accenture, Tech Mahindra, Wipro, Head strong, Infosys, RS Software etc. All students are also encouraged to do in house projects in their fifth/sixth semester under the guidance of the faculty members.

The faculty at the Centre has a range of teaching, research experience in Digital Image Processing, Mobile Computing, Distributed and Parallel Computing, Agile Programming, Data Warehousing and Mining, Industrial Marketing, Corporate Finance, HR and Organizational Behaviour, Entrepreneurship, and Industrial Relations. Many of them are also actively involved in training and development programmes. Guest lectures are also delivered regularly by eminent faculties from IIT Kharagpur, Jadavpur University, Calcutta University, Burdwan University, B. E. College (Shibpur), University of Calcutta etc.



**SPONSORED PROJECTS****PROJECT SANCTIONED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of Dynamic GIS enabled Forward Cost Modeling (FCM) of Land Reclamation, Control and Monitoring of Acid Mine Drainage problems in the context of continuation and expansion the Coal Mining in Assam – an Information & Communication Technology (ICT) based environment management solution.	Prof. Abhijit Kundu / Prof R T Goswami / Dr Ruchira Mukherjee, Dr Ambar Dutta, Prof. Rohit kamal Chatterjee, Ms. Sayantika Nath, Mr. Subhajit Das, Ms. Tania Saha, Ms Mousumi Kundu, Mr. Sharath Kumar (left after working for nine months)	Coal India Limited	February, 2013	96 Lakh	2 years

**ONGOING PROJECTS**

Sl. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of Dynamic GIS enabled Forward Cost Modeling (FCM) of Land Reclamation, Control and Monitoring of Acid Mine Drainage problems in the context of continuation and expansion the Coal Mining in Assam – an Information & Communication Technology (ICT) based environment management solution.	Prof. Abhijit Kundu / Prof R T Goswami / Dr Ruchira Mukherjee, Dr Ambar Dutta, Prof. Rohit kamal Chatterjee, Ms. Sayantika Nath, Mr. Subhajit Das, Ms. Tania Saha, Ms Mousumi Kundu, Mr. Sharath Kumar (left after working for nine months)	Coal India Limited	February, 2013	96 Lakh	2 years

**SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	CMOS Design Layout with MICROWIND	Dr. Bharat Gupta	NI2 Design	3rd & 4th September, 2012
2.	ADS, RF System Design and Ptolemy Training	Dr. Bharat Gupta	Agilent Technologies & BIT, Mesra, Kolkata campus	16th & 17th January, 2013

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Bharat Gupta (With Prof. S. L. Maskara)	IETE FOUNDATION DAY	-	IETE Kolkata section	Kolkata	2nd November, 2012
2.	Ruchira Mukherjee	Staff Development Programme	AcademicStaff College Jadavpur University, West Bengal	Academic Staff College Jadavpur University, West Bengal	Jadavpur University Kolkata	26th June – 16th July 2013
3.	Tanmay Kumar Banerjee	2 <sup>nd</sup> Refresher course in Business Studies	AcademicStaff College Burdwan University, West Bengal	Academic Staff College Burdwan University, West Bengal		24th November – 14th December 2012
4.	Sohini Ghosh	Faculty Development Programme on “Effective Engagement Techniques”		Cognizant Technology Solutions, Kolkata	Unitech Facility in Cognizant Technology Solutions, Kolkata.	24th of May, 2013.
5.	Soumendra Bhattacharjee	Management of Labour Laws – Issues and Dimension		Indian Society for Training and Development, Kolkata Chapter.	Kolkata	03/11/12
6.	Soumendra Bhattacharjee	Effective Engagement Techniques		Cognizant Technology Solution (CTS), Kolkata	Kolkata	24/05/13
7.	Prof. R T Goswami, Prof. S Chaudhuri, Prof. S Mukhopadhyaya, Prof. Ajanta De Sarkar, Dr. Ambar Dutta, Prof. Rohit Kamal Chatterjee, Prof. Ranadeep Mukherjee, Prof. Saumya Ray, Prof. Khalid Ashraf	Third International Conference of Emerging Applications of Information Technology		CSI, Kolkata Chapter	ISI, Kolkata	Nov 28 – 30, 2012

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
8.	Prof. R T Goswami, Prof. S Chaudhuri, Prof. S Mukhopadhyaya, Prof. Ajanta De Sarkar, Dr. Ambar Dutta, Prof. Rohit Kamal Chatterjee, Prof. Ranadeep Mukherjee, Prof. Saumya Ray, Prof. Khalid Ashraf	International Conference on Intelligent Infrastructure		CSI, Kolkata Chapter	Science City, Kolkata	Dec 01 – 02, 2012
9.	Dr. Ambar Dutta, Prof. S Chaudhuri, Prof Rohit Kamal Chatterjee	National Seminar on Research Trends in Soft Computing Applications		Bankura Unnayani Institute of Engineering	Bankura Unnayani Institute of Engg	Sep 21 – 22, 2012

## PUBLICATIONS

### Published in International Journals

1. Ranadeep Mukherjee and **Ambar Dutta**, "An Improved Certified Email Protocol Based on Author Based Selective Receipt", International Journal on Cryptography and Information Security, Vol. 2, No.4, 59 – 65, 2012.
2. Deepanwita Das and Srabani Mukhopadhyaya, "Distributed Painting by a Swarm of Robots with Unlimited Sensing Capabilities and Its Simulation," International Journal of Information Processing (IJIP), vol. 7, no. 3, pp. 1- 15, 2013. [ISSN: 0973-8215]
3. **Ajanta De Sarkar** and Soumilla Sen, "*Implementation of Grid Conferences Using Jade Technology*", has been accepted for publication in International Journal of Grid Computing & Application, pp: 51-63, volume 3, No. 3, September 2012. \
4. Arindam Das and **Ajanta De Sarkar**, "*On Fault tolerance of resources in Computational Grids*", has been accepted for publication in special issue of Grid Computing in International Journal of Grid Computing & Application, pp: 1-10, volume 3, No. 3, September 2012.
5. Soumya Ray, **Ajanta De Sarkar**, Execution Analysis of Load Balancing Algorithm in Cloud Computing Environment" International Journal on Cloud Computing: Services and Architecture (IJCCSA), pp: 1-14, Vol.2, No.5, October 2012, ISSN: 2231-5853.
6. *Sanchita Ghosh, Amit Konar, Lakhmi C. Jain* "Automatic call management in a cellular mobile network by fuzzy threshold logic." *KES Journal* 16(1): 49-68 (2012)
7. Sanchita Ghosh, On Hydromagnetic Flow of an Oldroyd-B Fluid near a Pulsating Plate in a Rotating System International Journal of Mathematical and Computer Modelling, Vol.19, Issue.1, 2013
8. Vikram Saxena, Rohit Kamal Chatterjee, "*IN MEMORY ANALYTICS - A GAME CHANGER FOR DATA WAREHOUSING AND BUSINESS INTELLIGENCE*", Int. Journal of Research in Management, Economics and Commerce (IJRMEC) Volume2, Issue 11, Nov. 2012, ISSN: 2250-057X.

9. R. T. Goswami, Bimal Kumar Mishra et al, "Defending Polymorphic Worms in Computer Network using HoneyPot" *International Journal of Advanced Computer Science and Applications*, Volume 3, Issue.10, 2012, pp. 63 – 65.
10. Radha Tamal Goswami, Bimal Kumar Mishra "Information and dynamics of SEIR e-epidemic model for the spreading behavior of malicious objects in Computer Network" *International Journal of Engineering Science and Technology*, Volume 4, Issue 10, 2012, pp. 4275-4282.

#### Published in International Proceedings

1. Ranadeep Mukherjee and **Ambar Dutta**, "Certified Email protocol using an Offline TTP", Proceedings of Third International Conference of Emerging Applications of Information Technology, 420 – 423, Kolkata, India, 2012.
2. Alina Banerjee and **Ambar Dutta**, "Content Based Image Retrieval using Normalized Similarity Measure in Fuzzy Color Histogram", Proceedings of International Conference on Intelligent Infrastructure, Kolkata, India, 266 – 269, 2012.
3. Deepanweeta Das and Srabani Mukhopadhyaya, "Painting an Area by Swarm of Mobile Robots with Limited Visibility," in Proc. Sixth International Conference on Information Processing, 2012, **Communications in computer and Information Science (CCIS-292), Springer, Bengaluru, India, 2012. [ISBN: 978-3-642-31685-2]**
4. Sen Soumilla. and **Ajanta. De Sarkar**, "Design of Video Conferencing Solution in
5. Grid" in the Proceedings of the Second International Conference on Advances in Computing and Information Technology (ACITY 2012), July 13-15, 2012, Chennai, India, Volume -2, pp:445-457.
6. Siba Mitra, **Ajanta De Sarkar** and Sarbani Roy, "A Review of Fault Management System in Wireless Sensor Network", in the Proceedings of CUBE 2012 International Information Technology Conference, pp: 144-148, September 2012 .
7. **Ajanta De Sarkar**, Neha Biyahut, Sneha Kritika and Narendra Singh, "An Environment Monitoring Interface using GRASS GIS and Python", in the proceedings of Third International Conference on Emerging Applications of Information Technology (EAIT 2012), pp: 235-238, November 30 - December 01, 2012.
8. Arijit Ukil, **Ajanta De Sarkar** and Debasish jana, "Security Policy Enforcement in Cloud Infrastructure", in the proceedings of Third International Conference on Computer Science, Engineering and Applications (ICCSEA – 2013), May 24-26, 2013.
9. S. Chaudhuri & S. Nandy, "A Modified Physical Clock Synchronization Algorithm" [Proceedings Of The 3<sup>rd</sup> IEEE International Advance Computing Conference (IACC-2013), pages 34-39, February 22-23, 2013, New Delhi, India]
10. **Anirban Kundu, Rohit Kamal Chatterjee** "Retinal Vessel Segmentation Using Morphological Angular Scale-Space", **Published in IEEE International Conference EAIT 2012, held in ISI Kolkata, India.**
11. **Anirban Kundu, Rohit Kamal Chatterjee**, "Morphological Scale-Space based Vessel Segmentation of Retinal Image" Published in IEEE International Conference INDICON 2012, organized by IEEE Kochi section, at Kochi, India.

#### Published in National Journals

1. S. Chaudhuri, "Evolution Of Intel Microprocessors- A Quick Look" [Hard Copy, Newsletter of Computer Society Of India, Kolkata Chapter, Vol.48, Issue 2, June 2013, pages 3-4]
2. Ghosh, S. and Dutta, S., January-June 2013. Impact of Mergers and Acquisitions in Indian IT Sector-A Comaparative Study. JIS Management Vista. VII, (I), 29-47, ISSN: 0974-0872.

### Published in National Proceedings

1. Alina Banerjee and Ambar Dutta, "Fuzzy Matching Scheme on Fourier Descriptors for Retrieval of 2 dimensional shapes", Proceedings of IEEE National Conference on Computing and Communication Systems, Durgapur, India, 142 – 146, 2012

### BOOKS:

#### Book chapters

1. Sen Soumilla. and Ajanta. De Sarkar, "Design of Video Conferencing Solution in Grid" in the Proceedings of the Second International Conference on Advances in Computing and Information Technology (ACITY 2012), July 13-15, 2012, Chennai, India, Volume -2, pp:445-457.
2. Ajanta De Sarkar and Nandini Mukherjee, "Maintaining Performance Guarantee of Applications in Grid Environment", Lambert Academic Publishing, ISSN: 978-3-659-28949-1, January 2013.
3. Sanchita Ghosh, Amit Konar, Call Admission Control in Mobile Cellular Networks. Studies in Computational Intelligence 437, Springer 2013, ISBN 978-3-642-30996-0.

### AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. Srabani Mukhopadhyaya	Best Paper Award for the paper "Painting an Area by Swarm of Mobile Robots with Limited Visibility"	International Conference on Information Processing, August 10-12, 2012, Bengaluru, India.	August, 2012
2.	Rohit Kamal Chatterjee	"Special mention award" for the paper presented.	International Conference EAIT 2012	2012
3.	S Chaudhuri, Ambar Dutta	Editor, Hard Copy	CSI Kolkata Chapter	2013-14
4.	S Chaudhuri	Session Chair	Third International Conference of Emerging Applications of Information Technology	Nov 28 – 30, 2012

### STUDENTS' ACTIVITIES

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1	Industrial Visit at Hidustan Motors Ltd. Hind Motor-712233, Hooghly, W.B	Dr. S.K. Sengupta, Prof. Soumendra Bhattacharjee	11.3.2013 to 15.3.2013 5 Days.

### Academic Committee

- |                             |                |
|-----------------------------|----------------|
| • Dr. Srabani Mukhopadhyaya | Chairperson    |
| • Prof. R.T .Goswami        | Invited Member |
| • Dr. Ajanta De Sarkar      | Member         |
| • Dr. Bharat Gupta          | Member         |
| • Dr. Sraboni Dutta         | Member         |
| • Dr. Nabendu Chaki         | Ext. Member    |
| • Dr. Debasish Jana         | Ext. Member    |



## 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 off campus, Lalpur.

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 possess 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.

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.

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

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	"Exploring the Career Journey of High Flyer Managerial Women Professionals: Tribal & Non Tribal in Jharkhand	Anupma Sahai	ICSSR, MHRD, New Delhi	1 <sup>st</sup> February, 2010	5,42,875	3 years



**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Pranab Kumar	Tenth AIMS International Conference on Management	-----	IIM, Bangalore	IIM, Bangalore	6-9 Jan., 2013
2.	O. Tigga	Data Mining & its Industrial Application	SQC & OR Unit of ISI, Kolkata	SQC & OR Unit of ISI, Kolkata	ISI Kolkata	21 – 23 March 2013
3.	Dr. A.R. Srivastava	<i>Sustaining Success-A Tight Rope Walk</i>	BIT, Mesra	GLA University	Mathura	Feb 23-24, 2013
4.	Anupma Sahai	Workshop on Case Study	ICSSR Project	IIM Calcutta, Case Study Research Centre	IIM Calcutta	14 – 15 June, 2013
5.	N P Tiwary	73 <sup>rd</sup> Orientation Programme	UGC	UGC-Academic Staff College RUR	Academic Staff College, RUR	07-06-2013
6.	Dr. Sandeep N. Sahdeo	Orientation programme	UGC	Ranchi University	Academic Staff college	07-06-13 to 04-07-13
7.	Mili Dutta	UGC 70 <sup>th</sup> Orientation programme	UGC	Academic staff college	Ranchi University	26 <sup>th</sup> Novemer-22 <sup>nd</sup> December 2012
8.	Jaya Pal	DATA MINING AND ITS INDUSTRIAL APPLICATIONS	SQC & OR unit, ISI Kolkata	SQC & OR unit, ISI Kolkata	Indian Statistical Institute, Kolkata	21-02-2013 to 23-02-2013

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

1. A.N. Jha, Soumitro Chakravarty "Viability of credit scoring in Microfinance for developing countries" in the journal "International Review of Social Sciences & Humanities" Vol.3 No.1(2012) ISSN: 2248-9010(online), 2248-0715(print) <http://www.irssh.com>,
2. A.N. Jha, Soumitro Chakravarty, Anant Kumar. "Women Empowerment in India: Issues, Challenges & Future Directions" in the journal "International Review of Social Sciences & Humanities" Vol.5 No.1(2013) ISSN: 2248-9010(online), 2248-0715(print) <http://www.irssh.com>
3. V. Singh, V. Bhattacharjee and Kunj Bihari Jarika, "Analytical Evaluation of Class Complexity Metric" International Journal of Advance Research in Computer Science and Software Engineering Volume 3 Issue 6 June 2013
4. S. Gupta, V. Bhattacharjee and Madhumita S. Neogi, "Pair Programming "Potential Benefits and Threats", International Journal of Advanced Computer Research (IJACR), Vol.-3 No.-1 Issue-8 March 2013, ISSN (print): 2249-7277 ISSN (online): 2277-7970.

5. V. Singh and V. Bhattacharjee, "Evaluation and Application of Package Level Metrics in Assessing Software Quality", International Journal of Computer Applications 58(21):38-46, November 2012. Published by Foundation of Computer Science, New York, USA
6. E. Rashid, S. Patnaik and V. Bhattacharjee, "Software Quality Estimation using Machine Learning: Case-based Reasoning Technique" International Journal of Computer Applications 58(14):43-48, November 2012. Published by Foundation of Computer Science, New York, USA
7. E. Rashid, S. Patnaik and V. Bhattacharjee, "A Survey in the Area of Machine Learning and Its Application for Software Quality Prediction" ACM SigSoft Software Engineering Notes Volume 37 Issue 5, September 2012
8. S. Joardar, V. Bhattacharjee and D. Giri "A Swarm Inspired Multipath Data Transmission with Congestion Control in MANETs using Probabilistic Approach" International Journal of Wireless & Mobile Networks (IJWMN), ISSN: 0975-3834, Volume 4, Number 4, pp109-121, August 2012.
9. M. S. Neogi, S. Chakraborty and V. Bhattacharjee "Modeling the Response to Questionnaire in Software Development: Multinomial or quasimultinomial? International Journal on Computational Sciences & Applications (IJCSA) Vo2, No.4, August 2012
10. M. S. Neogi, V. Bhattacharjee and R. Mahanti "Factors Affecting the Choice of Software Life Cycle Models in the Software Industry-An Empirical Study" Journal of Computer Science, 8.8 (2012): 1253.

#### Published in International Proceedings

1. S. Joardar, V. Bhattacharjee and D. Giri "Probabilistic Approach Based Congestion Aware Swarm Inspired Load Balancing Multipath Data Routing in MANETs" International Conference on Advanced Computing, Networking and Informatics (ICACNI 2013) June 2013
2. S. Joardar, V. Bhattacharjee and D. Giri "A Swarm inspired Probabilistic Path Selection with Congestion Control in MANETs" In Proceedings of second international conference on Computer Science, Engineering and Application, Springer-Verlag, Vol.2, pp 617-626, 2013
3. J. Pal and V. Bhattacharjee "Application of fuzzy clustering on software quality using max – min method" International conference on Communication, Computing & Security (ICCCS 2012), NIT, Rourkela, October 6-8, 2012
4. S. Joardar, V. Bhattacharjee and D. Giri "A Swarm Inspired Probabilistic Path Selecti with Congestion Control in MANETs" Advances in Intelligent Systems and Computing Volume 167, 2012, pp 617-626
5. Sharma, M., Priyam, A., 2013. Image Matching Algorithm Based on Human Perception, International Journal of Innovative Research in Science, Engineering and Technology, 2, 1505- 1510.
6. Sunita, Priyam, A., 2013, Numerical Characterization of Gene Sequences Based on Chaos Principle, International Journal of Innovative Technology and Exploring Engineering (IJITEE), 2, 116-119.

#### Published in National Journals

1. Pranab Kumar, "Prominence of Female-Friendly QWL in Corporate India "; "Personnel Today", April-June, 2013.
2. Pranab Kumar, "Social Support: Moderator for Roles Stressors"; "Synergy: I.T.S. Journal of I.T. and Management", Vol., No., July, 2013
3. Pranab Kumar, "Life Satisfaction – A Critical Literature Review"; International Journal of Contemporary Business Studies, Vol. 4, Issue No. 2, February, 2013.
4. Pranab Kumar, "Emotional intelligence and gender dependent leadership"; Pacific Business Review International; Vol. 5, Issue 12, June 2013.

5. Pranab Kumar, "Conceptual Study on Role Stressors, their impact and Strategies to manage Role Stressors"; IOSR Journal of Business and Management; Vol. 4, Issue 1, 2012.
6. Pranab Kumar, "Safeguarding Employees Impetus – A Bearish Phase Challenge to Employers"; Pacific Business Review International; Vol.5, Issue 2, Year-2012.
7. Pranab Kumar, "The Role of Emotional Intelligence in Securing High Service Quality in Indian Service Sector"; Management Dynamics. Vol.12, No.1, Year-2012
8. A.R. Srivastava, Saumya Singh, "Impact of Technology in Attracting Retail Customers"; Journal: Prastuti, Vol. 1, No. 1, 2013;
9. A.R. Srivastava, Saumya Singh "Role of Price & Variety in Success of Organised Retailing-An Empirical Study; Journal: Optimization, Vol. 6, No. 2, 2013;
10. A.R. Srivastava, Saumya Singh "Convenience as a Success Factor in Organised Retailing-A Study of Jharkhand Region"; Bizcraft, Vol. 6, No. 2, Sept 2012-Feb 2013;
11. S.N. Sahdeo ' Resonance" vol.1.1, ISSN NO.-2320-7116,"Emerging trends in Indian Retail sector and future prospects of Retailing inIndia".
12. N.P.Tiwary and G Sahoo, "Secure Data Storage On Web Using Matrix Based Cryptosystem," in International Journal of Engineering Research &Technology Vol.2 Issue 6, June 2013
13. Swati Priyadarshani, Pravara Management Review, January - June 2013 (Vol:12,No:1) How Quality Of Work Life Affect Work Life Balance



## NOIDA

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, has established one of its extension centres at NOIDA.

Since then the institute has set landmark in four major areas of academic excellence - world-class infrastructure, highly accomplished faculty, a motivated student body and distinction in research. Through its commitment and professionalism, BIT Noida is nurturing management professionals who are more than ready to manage and lead in today's dynamic, volatile and challenging business environment.



*Main Building*

### DEPARTMENT OF ANIMATION & MULTIMEDIA

BIT, Mesra launched the 3 year B.Sc. Degree programme in Animation and Multimedia in the year 2005 in the Noida Campus which was upgraded to 4 years B.Sc (Hons.) from the year 2011. The year 2009 the PG curriculum began in the department. Research activities began primarily in the Jaipur campus. The Noida campus too is capable of offering Ph.D supervision in domains related to Animation & Multimedia.

BIT Noida Campus amongsts other facilities, also has a studio for film shooting with proper lighting and chroma facilities. This studio is often used for professional advertisements or short film shoots also.

### DEPARTMENT OF COMPUTER SCIENCE

Computer Science Department at BIT Noida campus endeavours to be an important regional, national, and international resource center for the development of computing and IT systems and applications. The mission of the department is to impart quality education, to produce innovative and globally competent technocrats having sound knowledge in the fields of Computer Science.

Department of Computer Science launched 5 yrs Integrated MCA programme w.e.f. July 2011 with the curriculum specifically designed to reflect the depth and breadth of latest technologies and innovations in computer science. Department also offers 3 Yrs Full Time MCA Programme and Slow pace M.Tech. programme. The department provides extensive computing resources for research and education. In order to build the intellectual capital of researchers, the department also runs Doctoral programme in Computer Science.

### DEPARTMENT OF MANAGEMENT

BIT Noida Management department offers 2yrs MBA Full time, 3yrs MBA Part time, 5yrs Integrated Masters in Business Administration Programme, 5yrs Integrated Masters in Business Economics Programme, 3 yrs BBA 3 yrs BBE Programme . The curricula of all the credit based flexible programmes are carefully reviewed, updated, upgraded, diversified and in pace with the needs of the industrial scenario of this country, with the help of BIT main campus. The department also offers Doctoral programme in management which aims at developing world-class managers capable of solving complex managerial problems.



The pedagogy used (team-based projects, case-studies, field studies, formal and informal in-class presentations) are designed to cater to many of the specific demands coming from the private sector arenas, including problem-solving, creativity, communication, motivation and negotiation, the ability to make decisions and the capacity to learn from personal experience.

#### **Programmes Offered:**

1. Bachelor in Business Administration (BBA) – 3 years
2. Bachelor in Computer Applications (BCA) – 3 years
3. Bachelor in Business Economics (BBE) – 3 years
4. B.Sc. in Animation & Multimedia (Hons.) - 4 years
5. Masters in Business Administration – 2 years
6. Masters in Business Administration (Slow Pace) - 3 years
7. Masters in Computer Applications – 3 years
8. M.Tech in Computer Science – 2 years
9. M.Tech in Computer Science (Slow Pace) – 3 years
10. Masters in Animation & Multimedia – 2 years
11. Ph.D. in Management & Computer Science (Full Time & Part Time)

### **SPONSORED PROJECTS**

#### **PROJECT SANCTIONED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Smart use of Web Analytics and Data Mining technique for improving online Information Retrieval.	Dr Shruti Kohli	UGC	1.4.13	10,48,300/-	3 years
2	"Green Buildings in India: A study of Issues, Challenges & Prospects for Sustainable Development	Dr. Meenakshi Sharma	UGC	April 1,2013	Rs.6,54,600/-	2 Years

#### **SEMINAR / CONFERENCES / SHORT – TERM COURSES CONDUCTED BY THE DEPARTMENT**

S. No.	Title of Seminar / Conferences / Short – term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Workshop on Structural Equation Modelling (SEM) – An Advance Research Technique for Data Analysis	Dr. Vandna Sharma, Ms. Charu Wahi	Participants from Academia & Industry	07-08 Dec 2012

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
2.	Faculty Development Programme on Entrepreneurship Development	Dr. Arun Mittal	DST, Ministry of Science & Technology, GOI	07 <sup>th</sup> Jan. to 19 <sup>th</sup> Jan. 2013 (two weeks)
3.	<i>Journey of Colors I</i>	Dr. Suparna Dutta and Partho Acharya	Vigyaan Prasar, Govt. of India (Wing of DST) and Foremost Agencies Pvt. Ltd.	25-27 Feb 2013
4	Faculty Development Programme on Entrepreneurship Development	Dr. Arun Mittal	DST, Ministry of Science & Technology, GOI	04th March to 16 <sup>th</sup> March, 2013 (two weeks)

#### CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Munish Makkad	Global Business & Technology Association's Fourteenth Conference		GBATA	Hotel Hilton, New York	July, 2012
2.	Dr. Arun Mittal	Faculty Development Program on "Cross Cultural Issues in Global Marketing Management"		Il India Management Association, New Delhi	AIMA, New Delhi	3-14 July 2012
3.	Charu Wahi	International Conference on Cloud Computing and E-Governance	BIT	ASDF	Bangkok, Thailand	26-28 July'2012
4.	Amresh Kumar	EPPICTM in Gautam Buddha University, Greater Noida		GBU	Greater Noida	26 <sup>th</sup> - 28 <sup>th</sup> July, 2012
5.	Dr. K.B.Singh	UGC-National Seminar on 'Mergers and Acquisition in Global Scenario'		Kamla Nehru College, University of Delhi	Kamla Nehru College, University of Delhi	Aug 17-18, 2012
6.	Dr. K.B.Singh	UGC-National Seminar on 'Corporate Social Responsibility Issues & Challenges'		Kirori Mal College, Delhi University	Kirori Mal College, Delhi University	Aug 24-25, 2012
7.	Anil Kumar	National Conference in Computational & Information Technology		SRM University & DRDO	New Delhi	7-8 Sep 2012
8.	Amresh Kumar	Workshop on Research Methodology		IGNOU, New Delhi.	New Delhi	12 to 14 Sep'12

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
9.	Charu Wahi	Workshop on NPTEL- Role of Programme in Enhancing Engineering Education	BIT	IIT Kharagpur	Kharagpur	20-21 September' 2012
10.	Dr. K.B. Singh	National conference on 'Contemporary Issues in Business, Management & Finance'		Department of Business & Financial Studies, University of Kashmir, Srinagar	University of Kashmir, Srinagar	Sept 21-23, 2012
11.	Charu Wahi	Springer Road Show on Changing Dimensions in e-resources	Self		Delhi	24, September' 2012
12.	Dr. K.B.Singh	National Seminar on 'Corporate Social Responsibility: A gender perspective'		Lady Shri Ram College, University of Delhi	Lady Shri Ram College, University of Delhi	Oct 26, 2012
13.	Dr. K.B.Singh	Conference on 'FDI in India: Response and Challenge'		Shaheed Bhagat Singh College, University of Delhi	Shaheed Bhagat Singh College, University of Delhi	Nov 5-6, 2012
14.	Amresh Kumar, Pallab Sikdar	65 <sup>th</sup> All India Commerce Conference (AICC) of the Indian Commerce Association (ICA)		ICA	KPB Hinduja College, Mumbai	9 <sup>th</sup> -11 <sup>th</sup> November, 2012
15.	Dr. Munish Makkad, Dr. K.B.Singh	International conference BFSCON 2012		International Management Institute	IMI, Campus, New Delhi	December, 2012
16.	Anil Kumar	Pre-Symposium Tutorial on Computational Intelligence in Remote Sensing		Indian Society of Remote Sensing	Agricultural Physics Indian Agricultural Institute, New Delhi	3-4 Dec 2012
17.	Dr Shruti Kohli	International Conference on Web Intelligence and Intelligent Agent Technology		Organized by IEEE/WIC/ ACM <b>Indexing:</b> IEEE INSPEC	Macau, China	04-07 December 2012
18.	Anil Kumar, Neha Gupta, Amresh Kumar	Two days National Workshop on Structural Equation Modelling		Management Department, BIT Noida	BIT Noida	7-8 Dec 2012

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
19.	Pallab Sikdar	International Conference on Banking & Finance (BFSCON)		IMI & ESCP Europe	IMI Delhi	13 – 15 Dec' 2012
20.	Md. Moddassir Alam	Entrepreneurship Development		DST, government of India	BIT –NOIDA	7 – 19 Jan 2013
21.	Dr. Suparna Dutta, Anil Kumar & Niket Mehta	International Author Workshop by Springer & Edanz		IGNOU, New Delhi	IGNOU, New Delhi	25 Jan 2013
22.	Dr. B. B. Sagar	International Conference on Advance Engineering & Technology (ICAET-2013)		Institute of Research and Development (IRD) India, Mysore	Karnataka, India	27 Jan 2013
23.	Dr. K.B.Singh	International conference on 'Innovative ways of Managing Business in the Post Liberalized Era'		Bharati Vidyapeeth University, New Delhi	BVIMR, New Delhi	Feb 2-3, 2013
24.	Dr. K.B.Singh	International conference on 'Transforming the Global Economy through strategic Innovation and Entrepreneurship'		organized jointly by JIMS, Kalkaji, PHD chamber of commerce and KAS, Germany	PHD chamber of commerce, New Delhi	15 Feb, 2013
25.	Anil Kumar	Faculty Development Programme on Network Simulator (ns2)		Department of IT	AKG Engineering College	15-16 Feb 2013
26.	Charu Wahi	Workshop on Open Source Technology	Self	NITTTR Chandigarh	Chandigarh	18-22 Feb'2013
27.	Amresh Kumar, Pallab Sikdar	BIT International Conclave on Innovations in Engineering and Management (ICIEM)		BIT-Patna	Patna	22 <sup>nd</sup> -23 <sup>rd</sup> February, 2013
28.	Dr. Munish Makkad	International Conclave on Management and Technology – Innovations in Engineering and Management		BIT Mesra, Patna Campus	BIT Mesra, Patna Campus	Feb, 2013
29.	Dr. Suparna Dutta	INTED (International Conference on Technology, Education and Development), Spain	P.D. Fund	INTED	Valencia, Spain	4-6 March 2013

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
30.	Anil Kumar	A National workshop on Big Data Analytics: Insights & Innovations		Amity school of Engineering & Technology	Amity University	8 March 2013
31.	Dr. B. B. Sagar	IEEE International Conference on Circuits, Power and Computing Technologies (ICCPCT-2013)		IEEE Madras Section & Noorul Islam University, Nagercoil, Tamilnadu	Tamilnadu, India	21-22 March 2013
32.	Dr.Meenakshi Sharma, Dr. Monika Bisht, Mrs. Preety Bajaj, Dr Shruti Kohli	Faculty Development Program on Case Study Methodology		IIT Delhi	IIT Delhi	22-24 March '13
33.	Niket Mehta	Conference on Educational Reforms	Self	IIM Kashipur	New Delhi	25-26 March 2013
34.	Dr. K.B.Singh	UGC-National Seminar on 'Public Private Partnership in global perspective'		Kirori Mal College, Delhi University	Kirori Mal College, Delhi University	April 22-23, 2013
35.	Dr. Monika Bisht	MDP on Corporate Social Responsibility of PSUs including New Provisions under Companies Bill, 2012		Asia Pacific Institute of Management, New Delhi	Asia Pacific Institute of Management, New Delhi	25-26 April, 2013
36.	Amresh Kumar	Workshop on Capacity Building Programme For Social Sciences on Research Methodology		BVIMR, New Delhi	New Delhi	6 <sup>th</sup> May to 18 <sup>th</sup> May, 2013
37.	Pallab Sikdar	Enhancing Skills of Faculty Members in Banking, Financial Services and Personal Wealth Mgt.		FORE SOM Delhi	FORE SOM Delhi	15 May' 2013
38.	Dr. K.B.Singh	AICTE sponsored FDP on "Application of Econometrics & Time Series techniques in Business" (two weeks)		College of Management, SMVD University, Katra (J&K)	SMVD University, Katra (J&K)	May 20 – June 2, 2013
39.	Dr. K.B.Singh	QIP on Contemporary topics in Finance (one week)		VGSOM-IIT, Kharagpur	IIT, Kharagpur	24-30 June 2013



## PUBLICATIONS

### Published in International Journals

1. Sanjay K. Sonbhadra, Charu Wahi, "Performance evaluation of routing protocols with variation in node speed for mobile ad-hoc networks", International Journal of Computer Networking, Wireless and Mobile Communications (IJCNWMC), Vol.3, ISSN- 2250-1568, March 2013.
2. Shruti Kohli, Pankaj Sharma, "Performance Analysis of Routing Metrics in Manet", International Journal on AdHoc Networking Systems (IJANS), in January 2013, Volume 3, Number 1, ISSN : 2249 - 0175 [Online] ; 2249 – 2682 Print]
3. Shruti Kohli, Pankaj Sharma, "An Analytical Study of Intrusion detection Systems in MANET", International Journal of Research in Engineering and Technology (Impact factor 1.962), 2013.
4. Shruti Kohli, Pankaj Sharma, "Decision Support System (Dss) For Dsr In Manet Using Fuzzyfied Ann", International Journal of Engineering and Innovative Technology (IJEIT,) Volume 2, Issue 9, March 2013.
5. Sampath.S, Bharat Bhushan Sagar, Nanjesh B R " Performance Evaluation and Comparison of Message Passing Interface and Parallel Virtual Machine" International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3 (1), pp 200-206, January 2013.
6. Sampath S, Nanjesh B.R, Bharat Bhushan Sagar, C.K Subbaraya, "Performance Comparison of Row per Slave and Rows Set per Slave Method in PVM based Parallel Matrix Multiplication", International Journal of Research in Engineering and Technology (IJRET), Volume 02, Issue 12, Page no 248-253, December, 2013
7. Sharad Pratap Singh and Bharat Bhushan Sagar (2013), "Stuck- at Fault Detection in Combinational Network Coefficients of the RMC with fixed polarity (Reed-Muller Coefficients)" International Journal of Emerging Trends in Electrical and Electronics (IJETEE) Vol.- 1, Issue- 3, March 2013.
8. Makkad Munish, Sikdar Pallab (2013), "Risk Management in Commercial Banks – A Perspective on Indian and Global Banks", Journal of Business & Economics, Academic Star Publishing (USA), ISSN: 2155-7950, Vol-4, Issue-4, pp 320-328.
9. Sikdar Pallab, Makkad Munish (2013), "Internet Banking in India – A Perspective on Benefits and Challenges Involved", International Journal of Engineering, Business and Enterprise Applications (IJEBA), IASIR Georgia (USA), ISSN 2279-0020 Vol. 1 Issue 5. pp 15-23.
10. Sharma, Vandna (2012), "A perceptual study on KM Orientation in Indian Private Engineering Institutions", International Journal of Educational Management, Vol. 26, No.3, pp.234 – 251, Emerald Group Publishing Limited, U.K.
11. Malhotra Bhupesh, Sharma Vandna (2013), Post-Merger performance and its effect on other business functions & Suppliers (Focus on IT industry in India), *International Journal of Science Commerce and Humanities*, ISSN: 2052-6164, Vol.11, No.2, pp.85-97.
12. Malhotra Bhupesh, Sharma Vandna (2013), Impact of Mergers and acquisitions on Human Resource Practices in IT industry, *International Journal of Emerging Research in Management and Technology (IJERMT)*, ISSN: 2278-9359, Vol.11, No.2, pp.85-97.
13. Sharma Meenakshi, Singh Anamica (2013), "Green IT Readiness-A conceptual framework for sustainable IT", *International Journal of Management, IT & Engineering*, ISSN: 2249-0558, Vol.3, No.4, pp. 141-154.
14. Sharma Meenakshi, Singh Anamica (2013) "Relevance of Branding of Green IT for sustainable development of IT companies", ICREE 2013, *Journal of Clean Energy Technologies* ISSN: 1793-821X, Vol.1, No.3, pp.194-197.

15. Sharma Meenakshi, Singh Anamica (2013), "Green IT For Environmental Sustainability- Indian Context" *International Journal of Applied Engineering Research*, ISSN 0973-4562, Vol. 8, No.3, pp.7-10.
16. Sharma Meenakshi, Singh Anamica (2013), "Green Buildings in India: an imperative for Resource Efficient Future", *International Journal of Civil Engineering and Applications*, ISSN 2249-426X, Vol. 3, No 6, pp. 28-31.
17. Sharma Meenakshi, Sharma Prabudh, "Carbon Dioxide Capture Using Micro-Algae Precipitation", *International Journal of Environmental Research and Development*, ISSN 2249-3131, Vol 3, No 6, pp 52-55, 5<sup>th</sup> & 6<sup>th</sup> June 2013.
18. Singh, K. B, Singh, S.K., and Singh, Abhishek (2013), "Does Mergers improve Shareholders Wealth? A Study of selected Indian Banks" *Global Journal of Finance and Management*; Vol. 5, No 3, May 2013 (ISSN 0975-6477).
19. Singh, K.B. (2012) "Post-Merger Financial Appraisal of Selected Firms", *International Journal of Business Economics and Management Research* (ISSN 2229-4848), Vol. 3, No.1, Jul 2012.
20. Singh, K.B. and Singh, S.K. "Impact of FII's Investment on the Indian Capital Market", *International Journal of Research in Commerce & Management* (ISSN 0976-2183), Vol. 3, No. 12, Jul 2012.
21. Srivastava Garima, Mittal Arun, (2013), Customer's expectation from service quality of private and public sector bank: A Comparative study, *International Journal of Customer Relationship* (A Peer reviewed Journal-ISSN:2320-7515), Vol.1, No.1, pp.38-51.

#### **Published in International Proceedings**

1. Suparna Dutta & Acharya, Partho: Innovating ICT for Gender Sensitive Development Communication in India, *International Journal of Research in Computer Application and Management*, ISSN- 2231-109, 31 March 2013, Jagadhari Haryana.
2. Charu Wahi, Sanjay Kumar Sonbhadra, Dr. Shampa Chakraverty, Dr. Vandana Bhattacharya, "Performance evaluation of MANET routing protocols for mobility using QualNet", *Int. Conf. on Cloud Computing and E-Governance (ICCCEG)*, 26-28<sup>th</sup> July'2012, Bangkok.
3. Charu Wahi, Sanjay K. Sonbhadra, Dr. Shampa Chakraverty and Dr. V. Bhattacharya, "Effect of Scalability and Mobility on On-Demand Routing protocols in a Mobile Ad-Hoc Network", 2012 International Conference on Software and Computing Technology (ICSCT 2012), 21-22<sup>nd</sup> Dec'2012, Malaysia.
4. Makkad Munish, Sikdar Pallab (2012), "Risk Management in Commercial Banks – A Perspective on Indian and Global Banks" Mapping the Global Future: Evolution Through Innovation and Excellence, *Published by Global Business and Technology Association (GBATA)*, New York (USA) with EBSCO Publishing ISBN:1-932917-08-X, pp 518-526.
5. Sikdar Pallab, Makkad Munish (2013), "Implementation of Basel III Guidelines – A Study of Select Domestic and Foreign Commercial Banks in India" *Globalizing Business for the Next Century: Visualizing and Developing Contemporary Approaches to Harness Future Opportunities*, *Published by Global Business and Technology Association (GBATA)*, New York (USA) with EBSCO Publishing ISBN:1-932917-08-X, pp 610-617.
6. Nirmalya Chakraborty, Jayanthi Ranjan, Vandana Sharma (2012) "New Trends in Security Solution Architectures and Risk Assessment Strategies", *Proceedings of International conference FOBE 2012*, Nov 29-30. Bloomsbury publishers.
7. Nirmalya Chakraborty, Jayanthi Ranjan, Vandana Sharma.(2012), Federated RHIO Solution for HR Healthcare Data Protection, *Proceedings of 3rd World Congress on BABE*, 26-28 March 2012, Hyderabad.

8. Gupta S.L., Sharma Meenakshi (2012), *"The Imperatives of Pricing Strategy of Indian Real Estate"*, International Conference at 2012 Hong Kong Economic Association 7th Biennial Conference held at Lingnan University on 13<sup>th</sup> and 14<sup>th</sup> December 2012.
9. Sharma Meenakshi, (2013) *"The dynamics of Promotion Strategy of Indian Real Estate"*, BIT International Conclave on "Innovations in Engineering & Management", 22<sup>nd</sup>-23<sup>rd</sup> February, 2013.
10. Naik Yogesh N., Bisht Monika (2012) *"Emotional Intelligence of Technical Managers: An empirical study of Information Technology Industry,"* in Proceedings of the International HR conference on Business Transformation by Human Capital Management- Global Trends and Challenges, Dec 2012. ISBN: 978-93-5097-709-5, Pp. 281-296.
11. Amresh Kumar, S.L Gupta (2012), *"An Empirical insight of retail branding from consumers perspective and its impact on customer patronage"*, *Review of Business and Technology Research [RBTR] (EPPICTM) [ISSN-1941-9406]*

#### Published in National Journals

1. Sikdar Pallab, Makkad Munish (2013), *"Role of Non Performing Assets in Risk Framework of Commercial Banks – A Study on Select Indian Commercial Banks"*, AIMA Journal of Management and Research (AJMR), AIMA New Delhi, ISSN 0974-497, Vol. 7 Issue 2/4.
2. Malhotra Bhupesh, Sharma Vandna (2013), *"An Exploratory study on Successful Management of International Mergers and Acquisitions in IT Industry"* Indian Streams Research Journal, Vol.3, No.4, ISSN:2230-7850.
3. Gupta S.L., Sharma Meenakshi (2012), *"The Determinants of Pricing Strategy of Indian Real Estate"*, Indian Journal of Commerce, Vol.65, No.4, pp.64-74.
4. Singh K.B. (2013), *"The impact of Mergers & Acquisitions on Corporate Financial Performance in India"* Indian Journal of Research in Management and Social Science, Vol.2, No.13. (ISSN 2319 – 6998)
5. Naik Yogesh N., Bisht Monika (2013), *"Key personal competencies for Technical Manager's Effectiveness: An Empirical study in Information Technology Industry,"* in Indian Institute of Industrial Engineering (IIIE) Journal, Jan 2013 (ISSN 0970 – 2555) Vol.6, No.1, pp.14–19.
6. Mittal Arun, Srivastava Garima (2013), *Study on Customer Perception and consumption Pattern of e-Banking services-A Comparative study of Private vis-à-vis Public Sector Banks*, *Asia Pacific Marketing Review* (Refereed Journal, ISSN:2277-2057), Vol.2, no.1, pp.73-85.
7. Srivastava Garima, Mittal Arun (2013), *"Study and Impact of Service quality dimensions w.r.t. customer perception and consumption pattern - A comparative study of private vis-a-vis public sector banks"* Indian Journal of Commerce, Apr-June 2013.

#### Published in National Proceedings

1. Kumar Anil (2012), *"Predictive Modelling for analyzing women feticide in India: A Data Mining Approach"*, Proceedings of National Conference on Research & Development in Computational & IT, SRM University & DRDO, New Delhi.

#### Books edited

1. Malhotra Bhupesh, Sharma Vandna (2012), *"A Study To Access Impact Of Mergers And Acquisitions On Organizational Culture & Development"*, edited by Rakesh Chopra, Jayanthi Ranjan, Sandeep Puri, Neeraj Awasthy, Beyond Norms Strategies for Excellence, Bloomsbury Publishers.

2. Sharma Meenakshi, Chaturvedi D.D. (2012), *"Economic Recession and Indian Real Estate-Hopes and Implications"*, Mapping the Global Future Evolution Through Innovation and Excellence, Published by Global Business and Technology Association with EBSCO Publishing ISBN:1-932917-08-X, pp-79.
3. Sharma Meenakshi, Amitabh Aachal (2012), *"Factors Affecting Consumer Buying Behavior towards Branded Jewellery: An Empirical Study"*, Integrated Marketing Communications-A research agenda, Published by Global Publishing House India -Guwahati ISBN 978-93-81563-24-3, Chapter 17, Pp 196-210.
4. Amitabh Aachal, Sharma Meenakshi, Mittal Arun (2013), *"A Few Carats of Sheen: Jewellery Sector a Propelling Force for the Indian Economy"*, Published by Bharti Publications, ISBN No.978-93-81212-39-4, Pp. 192-200.
5. Srivastava Garima, Mittal Arun., (2013), *Customer's perception about internet banking of public sector bank in India: an empirical study*, Emerging issues in Finance and Business Management, Bharti Publications, Delhi; First edition (ISBN:978-93-81212-33-2), pp.308-314.
6. Mittal, Arun, (2012) *"Factors Affecting the Customers' Bank Selection Criteria: An Empirical Study of Delhi-NCR"* and received the *"Best Research Paper Award"* in marketing session, Emerging issues in Finance and Business Management, Bharti Publications, Delhi; First edition (ISBN:978-93-81212-33-2), pp.308-314.
7. Mittal, Arun (2013), *"Spiritual Advertising: Conceptual Framework and Indian Experience"*, Marketing by Consciousness, Published by: Spiritual Management Forum, Edited by Rohit Puri, ISBN – 978-81923275-5-6, Pp. 47-59.
8. Mittal, Arun (2013), *"Emotional Barding: Concept and Practice"*, Marketing by Consciousness, Published by Spiritual Management Forum, Edited by Rohit Puri, ISBN – 978-81923275-5-6, Pp. 93-107.

**AWARD / RECOGNITION BESTOWED ON FACULTIES ( STATE / NATIONAL / INTERNATIONAL )**

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. Arun Mittal	Best Research Paper Award	Society for Technical and Management Professionals	2012-2013

**STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Date/Duration
1.	Mobile Apps incubator cell- SKJ Technologies	July 2012
2.	Two day workshop sponsored by Black Berry	July 2012
3.	Guest Lecture on "Expectations of Industry from MBA students Mr. Sanjeev Kumar, Vice President-HR, Moser Baer India Ltd.	8 <sup>th</sup> Sep 2012
4.	Seminar on "How to do well in Personal Interview"	10 Sep 2012
5.	Students' Film Festival (International and Nationally Acclaimed Film Directors interaction with students)	13 to 15 Sept. 2012
6.	Guest Lecture on "Microeconomics- Prof. Partha Bose, IIT Kharagpur	1st Oct 2012
7.	Entrepreneurship Orientation Programme (EOP)- National Small Industries Commission (NSIC), Aligarh, U.P.	4 <sup>th</sup> Oct 2012

S. No.	Name of the Activity	Date/Duration
8.	Workshop on "Preparation of Project Feasibility Report- Prof. (Dr.) Kanhaiya Singh, Fore School of Management	4 <sup>th</sup> Oct 2012
9.	Seminar on "How to do well in Extempore & Public speaking"	8 <sup>th</sup> Oct 2012
10.	A Gaming Workshop by Rajat Ojha (A Gaming Expert)	26 <sup>th</sup> Oct'2012
11.	Industrial visit- Parle Industries	1 <sup>st</sup> Dec 2012
12.	Simulation Game "Icebreaker"	4 Dec 2012
13.	OPEN CLASS- Blackberry Apps.	14 <sup>th</sup> and 15 <sup>th</sup> Dec '12
14.	NOKIA ASHA DAY	2 <sup>nd</sup> Feb 2013
15.	Guest Lecture on "Quality Assurance in Marketing: Special Reference to BPCL- Dr. PVSL Narasimham, Chief Manager Quality Assurance, Head Quarters, BPCL	5 <sup>th</sup> Feb 2013
16.	Entrepreneurship Awareness Programme - MSME (Micro, Small & Medium Enterprises) Development Institute, Delhi	8 <sup>th</sup> Feb 2013
17.	Guest Lecture on "Contemporary Marketing Trends"	18 Feb 2013
18.	Workshop on "Content writing"	22 March 2013
19.	Workshop on Six Sigma by KPMG	23 April 2013

#### Board of Studies : Animation & Multimedia

S. No.	Name	Affiliation
1	Prof. Hemant Joshi	IIMC, New Delhi
2	Prof. Shaibani Azam	JamiaMilia University
3	Sh. R.K. Srivastava	Director NCDPD (National Centre for design and product development)

#### ACADEMIC COMMITTEE

##### Animation & Multimedia Department Academic Committee

1. Dr. Munish Makkad, Director, BIT Noida
2. Prof. Shradha Shivani, Professor Management BIT Mesra and Coordinator, Animation and Multimedia Programme.
3. Dr. Suparna Dutta, Associate Professor Humanities and Co-Coordinator, Animation and Multimedia Programme at BIT Noida Campus.
4. Mr. Lalit Bhatt, Animation and Multimedia Dept., BIT Noida
5. Mr. Kiran A. Shetti, Animation and Multimedia Dept., BIT Noida
6. Mr. Niket Mehta, Animation and Multimedia Dept., BIT Noida



**Ph. D. Departmental(Management) Academic Committee**

1. Dr. Munish Makkad, Professor & Director -Ex Officio Chairman
2. Dr. Asha Prasad, Professor - Member (Management)
3. Dr. Vandana Sharma, Associate Professor - Member (Management)
4. Dr. Ila Sahay, Associate Professor - Member (Comp. Sc.)
5. Dr. Shruti Kohli, Assistant Professor - Member (Comp. Sc.)
6. Dr. Nawal Kishor, Professor, SOMS, IGNOU -External Member (Management)
7. Dr. Rajiv Nag, Chairman, CyberQ Consulting -External Member (Computer Sc.)

**Other important information**

1. One student has submitted her thesis under joint supervision of Dr. Munish Makkad and Dr. U.S. Pandey,  
"Design and Development of Mobile Transactions Model of Payment in Mobile Commerce Environment:  
Vibha Kaw Raina

## PATNA

Birla Institute of Technology, Mesra, Ranchi was founded by the industrialist and philanthropist Late Shri B.M. Birla in 1955. A sprawling Patna Extension Campus came into existence through Public-Private Partnership mode in the year 2006 along with the initiative of Government of Bihar. 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



*Main Building*

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. 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.

### COURSES OFFERED:

**The Patna Campus currently offers 4 Years B.E. programs in the following disciplines:**

- Computer Science & Engineering
- Electronics & Communications Engineering
- Electrical & Electronics Engineering
- Production Engineering
- Civil Engineering
- Information Technology
- Mechanical Engineering

**In addition to the above programmes BIT Patna Campus offers following courses:**

- Bachelor of Architecture
- Integrated M.Sc. in Physics and Mathematics
- Ph.D. in Engineering, Science & Management

### FACILITIES:

- State-of-the-art Auditorium,
- Ultramodern Laboratories,
- Well equipped Workshops,
- Staff- Canteen
- Guest-House,
- Transport facility for students & staffs
- Seminar Hall, Dispensary,
- Central Library, Play Ground,
- Wi-Fi Campus, Cafeteria,
- Language Lab, Gymnasium,
- Staff Quarters,



**CENTRAL LIBRARY:**

The Learning Resource Centre is the nerve centre of BIT Patna. The institute takes pride in its state-of-the-art library infrastructure and resources. The full air-conditioned Lab., well furnished and spacious reading room forms part of it. The library is entirely devoted to the academic needs of the students and faculty.

It offers a wide range of books and national & international journals and periodicals. Important local, regional and national dailies in English and Hindi are also an important part of Newspaper section of the library.

The Library is well equipped with LIBSYS software and having 33,881 books (all bar-coded). The facility for video conferencing is established and E- library is being developed.

**ONLINE RESOURCES:**

EBSCO Art & Architecture (complete) is accessible in E-library. IEEE, ASCE and ASME online journals are under subscription process.

Print Journals : 39

Magazines : 18

**TRAINING & PLACEMENT CELL:**

The Training & Placement office at Patna is well equipped and designed to smoothly handle and support the Campus placement procedure at every stage. Arrangements for Interviews, Pre-placement talks, Group discussions and Tests are handled by the T&P Cell staff and Student placement coordinators. The Training and Placement Cell round the year organizes Training & Career Development Programs for the students of BIT Patna who are aspiring to enter the corporate world and introduces them to the prospective employers according to their aspirations and background.

**SPONSORED PROJECTS****PROJECT SANCTIONED**

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Scale-up of the process to fabricate acid catalysed polyfurfuryl alcohol based biopolymers sheets	P.I. - Dr. Rajnish Kr. Co-P.I. - Dr. Rakesh Kr.	UGC	8 March, 2013	6 Lacs	2 Years
2.	Incorporation of functionalized polybutadiene in polyfurfuryl alcohol based biopolymers sheets for improved properties	P.I. - Dr. Rakesh Kumar Co- P.I. -Dr K. Sharma	UGC	12 March, 2013	2.69 Lacs	3 Years
3.	Flow of fluids over a stretching surface: theoretical and experimental considerations	P.I. - Dr. Rajnish Kr. Co-P.I. - Dr. Rakesh Kr.	UGC	8 March 2013	6 Lacs	2 Years

S. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
4.	Transport Phenomena due to Heat and Mass Transfer in a composite System.	P.I. - Dr. Trishna Paul	D.S.T.	28 June 2013	7.5 Lacs	3 Years
5.	Energy Audit of 11KV feeder PESU	Mr. S.M Sahay	BREDA	Sep 2012	4.75 Lacs	July 2014
6.	A Study on Imperatives for Quality and Effective Teaching in Indian- B-Schools	P.I. - Dr. S.L. Gupta Co- P.I. - Dr. Vijay Agrawal	UGC	23 Nov. 2012	5.14 Lacs	2 Years

**PROJECTS COMPLETED**

S. 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 Charecterization of doped Lithium Titanate pebbles for low activation ener.	Dr. S.K. Sinha	BRFST (Dept. of Atomic Energy) Govt. of India	Aug. 2010	30 Lakh	Sept. 2013

**SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENTS**

S. No.	Title of Seminar / Conferences / Short - term Courses / Workshop	Department	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	International Conclave on Engineering & Management	Engineering & Management	Prof. (Dr.) S.L. Gupta	Self	22 <sup>nd</sup> 23 <sup>rd</sup> Feb. 2013
2.	Application of Biobased Materials in The Field of Polymer and Biotechnology	Applied Chemistry	Dr. Rakesh Kumar	Self funding	10 <sup>th</sup> May 2013
3.	28 <sup>th</sup> Annual conference of the mathematical Society- Banaras Hindu University on "Recent trends in Mathematical Analysis and Modeling	Applied Mathematics	Dr. Trishna Paul	D.S.T., D.R.D.O, C.S.I.R.	3 <sup>rd</sup> and 4 <sup>th</sup> Dec., 2012
4.	National Conference on Environmental Friendly Sustainable Construction - Need of the Hour	Applied Physics/ Architecture	Dr. A. K. Singh And Dr. S. K. Sinha	Hindustan Industries and Mining Corporation, Kolkata, Ultra Tech Cement, Ambuja Cement etc.	02 -03 March 2013

S. No.	Title of Seminar / Conferences / Short – term Courses / Workshop	Department	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
5.	National Conference on Environment Friendly Sustainable Construction – Need of the Hour	Civil	Prof. S.K. Sinha	Local Sponsors	02-03 March, 2013
6.	Advances in Communication Technology, Workshop	ECE	Mr. Shahiruddin		23 <sup>rd</sup> February, 2013
7.	A Workshop on ethical hacking	EEE	Dr. Nirmala Soren	IEEE Student fund	13 <sup>th</sup> & 14 <sup>th</sup> Oct. 2012
8.	Abhivyakti 12- “Recent Advancement in Technology”	EEE	Dr. Nirmala Soren	BIT, Patna & IEEE student fund	8 <sup>th</sup> & 9 <sup>th</sup> Dec. 2012
9.	EDP for Finance and Non Finance	Management	Dr. Vijay Agrawal	Self-Finance	28-06-2013-30-06-2013
10.	Effective teaching & research	Mechanical	Mr. S.K.Pradhan	Self	24-29 December 2012
11.	Matlab	Mechanical	Mr. M.A.Hassan	Self	Jan, 2013
12.	Nanomaterials	Mechanical	Mr. S.K.Pradhan	BIT Patna	29.9.2012
13.	Mock Interviews	T & P Cell	Career Launcher	Career Launcher	28 <sup>th</sup> -July-12
14.	National workshop on GD & Interview skills	T & P Cell	Mr. Suneel Keshwani	Institute	3 <sup>rd</sup> -5 <sup>th</sup> Oct 12
15.	20 days certificate course in Network Management	T & P Cell	Netcamp	Self Financed (Students)	26 <sup>th</sup> Nov- 15 <sup>th</sup> Dec 12
16.	National workshop on Entrepreneurship Development	T & P Cell	Dr. S K Jain	Institute	6 <sup>th</sup> Dec 12
17.	Winter school on Facing Campus Interview & GD	T & P Cell	Suprayas, New Delhi	Institute	8 <sup>th</sup> – 13 <sup>th</sup> Dec 12
18.	Inspirational Lecture	T & P Cell	Tehelka	Tehelka	18 <sup>th</sup> Jan-13
19.	Business Simulation Workshop	T & P Cell	Mr. Manish Behl	Institute	18 <sup>th</sup> Jan & 22 <sup>nd</sup> Feb 13
20.	HR Seminar on Grooming Freshers	T & P Cell	NHRDN	NHRDN	23 <sup>rd</sup> Feb 13
21.	Microsoft App fest workshop on Windows 8	T & P Cell	Microsoft	Microsoft	26 <sup>th</sup> Feb-13
22.	Microsoft Tech days seminar	T & P Cell	Microsoft	Microsoft	27 <sup>th</sup> Feb-13
23.	Employability Assessment Test	T & P Cell	BIT Mesra	Institute	2 <sup>nd</sup> March 13



**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty & Dept.	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr Rakesh Kumar (Applied Chemistry)	International Conference on Recent Advances on Composite Materials 2013	CPDG, BIT Patna	Department of Mechanical Engineering, IIT BHU, Varanasi	Goa, India	18-21 February, 2013
2.	Mrs. Anubha Singh (Applied Chemistry)	International Conference on Anthropogenic Impact on Environment and Conservation Strategy	Self sponsored	St. Xavier's College, Ranchi	Ranchi, Jharkhand, India	2-4 November, 2012
3.	Dr. Rajnish Kr./ Dr. Premlata Singh/ Dr. Purnima Srivastava (Applied Mathematics)	28 <sup>th</sup> Annual conference of the mathematical Society- Banaras Hindu University on "Recent trends in Mathematical Analysis and Modeling	N.A.	Dept. Of Appl. Maths, B.I.T., Patna	B.I.T., Patna	3 <sup>rd</sup> and 4 <sup>th</sup> Dec., 2012
4.	Dr. A. K. Singh (Architecture)	National Conference on Sustainable Construction: Need of the Hour		BIT Mesra, Patna Campus	B I T Patna	02 -03 March 2013
		BIT International Conclave 2013 on Innovations in Engineering and Management		BIT Mesra, Patna Campus	B I T Patna	22- 23 Feb., 2013
5.	Ar. Anamika Nandan (Architecture)	National Conference on Sustainable Construction: Need of the Hour		BIT Mesra, Patna Campus	B I T Patna	02 -03 March 2013
		BIT International Conclave 2013 on Innovations in Engineering and Management		BIT Mesra, Patna Campus	BIT Patna	22- 23 Feb., 2013

S. No.	Name of the Faculty & Dept.	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
6.	Ar. Md. Danish (Architecture)	National Conference on Sustainable Construction: Need of the Hour		BIT Mesra, Patna Campus	BIT Patna	02 -03 March 2013
		BIT International Conclave 2013 on Innovations in Engineering and Management		BIT Mesra, Patna Campus	BIT Patna	22- 23 Feb., 2013
		Recent Advancement in Civil Engineering		NIT Patna	NIT Patna	13-14 June, 2013
		Emerging Trends of Energy Conservation in Building		CBRI, Roorkee	CBRI, Roorkee	November 1-3, 2012
7.	Mrs. Indu Singh (Architecture)	FDP on Intellectual Property Rights		BIT Patna	BIT Patna	05 Dec., 2012
8.	Dr. Nirmala Soren (EEE)	Short Term Course on Smart Grid	UGC (SAP)	BIT, Mesra	BIT, Mesra	7 <sup>th</sup> & 9 <sup>th</sup> March. 2013
9.	Dr. Nirmala Soren (EEE)	International Conclave on Innovation in Engineering and Management at BIT, Patna	BIT, Patna	BIT, Mesra Patna Campus	BIT, Mesra Patna Campus	22 <sup>nd</sup> – 23 <sup>rd</sup> Feb 2013
10.	Ms. Shradha Kishore (EEE)	International Conclave on Innovations in engineering and management 2013	TEQIP	BIT, Patna	BIT, Mesra Patna Campus	22 <sup>nd</sup> -23 <sup>rd</sup> Feb 2013
11.	Ms. Shradha Kishore (EEE)	1 week FDP on Engineering optimizations, Innovations and application17	TEQIP	NIT, Patna	NIT, Patna	17 – 21 June 2013
12.	Mr.Sanjay Kumar (EEE)	International Conclave on Innovation in Engineering and Management at BIT, Patna	BIT, Patna	BIT, Mesra Patna Campus	BIT, Mesra Patna Campus	22 <sup>nd</sup> – 23 <sup>rd</sup> Feb 2013

S. No.	Name of the Faculty & Dept.	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Date
13.	Mr. S.K. Pradhan (Mechanical)	NPTEL	IIT	IIT, Kgp	IIT, Kgp	20-21 Sep 2012
14.	Mr. G.Pathak, Mr. S.K. Pradhan,Mr. S.Mandal,Mr. C.Kumar, Mr. Ravi (Mechanical)	Supply Chain Management	BIT Mesra Patna	BIT Patna	BIT Patna	14 Dec. 2012
15.	Mr. G. Pathak, Mr. S. Mandal (Mechanical)	Effective Teaching & Research	Self	BIT Patna	BIT Patna	24-29 Dec 2012
16.	Mr. S. Mandal (Mechanical)	Fab.Adv. material	IIT Guwahati	IIT Guwahati	IIT Guwahati	Dec 10-13 2012
17.	Mr. M.A. Hassan (Mechanical)	Adv HT &FD	AMU	AMU	AMU	23-24 March12
18.	Mr. Raj Kumar	National Workshop on Supply Chain Management	BIT Patna	BIT Patna	BIT Patna	14 <sup>th</sup> Dec 12
19.	Mr. Raj Kumar (Coordinator)	HR Seminar	NHRDN	NHRDN	BIT Patna	23 <sup>rd</sup> Feb 13
20.	Mr. Raj Kumar (T & P)	BIT International Conclave 2013	BIT Patna	BIT Patna, Cybotech & NSIT	BIT Patna	22 <sup>nd</sup> & 23 <sup>rd</sup> Feb 2013
21.	Ms. Subha Sinha (Civil)	FDP on 'Numerical Techniques in Water Resources and Environmental Engg.' Rainfall-Runoff	Self	Dept. of Civil Engg., NIT Patna	Patna	16-20 Dec., 2013
23.	Ms. Subha Sinha (Civil)	Modelling by SCS Method Using RS & GIS in National Conference on Recent Advancement in Civil Engg.	Self	Dept. of Civil Engg., NIT Patna	Patna	13-14 June, 2013

## PUBLICATIONS

## Published in International Journals

1. Ranvijay kumar and Kaushlendra Sharma; "Biodegradable polymethacrylic acid grafted psyllium for controlled drug delivery systems", *Front. Chem. Sci. Eng.* 2013, 7(1): 116-122. January 2013.
2. Ranvijay Kumar and Kaushlendra Sharma, K.P. Tiwary and Gautam Sen; "Polymethacrylic acid grafted psyllium (Psy-g-PMA): a novel material for waste water treatment" *Appl. Water Sci.* (2013) 3:285-291. March 2013.
3. Kumar R., Moyo D., "Fabrication and Properties of PLA Fabric Based Sandwich Panels with Arylated Soy Protein Isolate as the Binder", *Journal of Biobased Materials and Bioenergy*, (IF 1.4), Vol 6 (5), pp521-530, October 2012.
4. Kumar R., Anandjiwala R.D., "Compression Moulded Flax Fabric Reinforced Polyfurfuryl Alcohol Bio-composites: Mechanical and Thermal Properties", *Journal of Thermal Analysis and Calorimetry* (IF-1.63), Vol 112, pp755-760, May 2013.
5. A. Jayswal, Rajnish Kumar, D. Kumar, Multiobjective fractional programming problem involving  $(p, r) - \rho - (\eta, \theta)$ -invex function, "Journal of Applied Mathematics and Computation", 39(1-2) (2012), 35-51.
6. B. G. Prasad, Rajnish Kumar, MHD Convection Flow in a vertical slot through a Porous Medium, "Theor. Appl. Mech. Lett.", 2, 052003 (2012).
7. B. G. Prasad, R. Kumar, and R. S. Prasad, "MHD Forced Convection with Laminar Pulsating Flow in Saturated Porous Circular Tube", *Int. J. of Appl. Math and Mech.* 9 (1) (2013) 17-28.
8. Singh, P., Yadav, S., and Kumar, N. "One-Dimensional Pollutant's Advective-Diffusive Transport from a Varying Pulse-Type Point Source through a Medium of Linear Heterogeneity." *J. Hydrol. Eng.*, (ASCE) 17(9), 1047-1052. (2012).
9. Studies of  $\text{Sr}^{2+}$  ion substitution on ferroelectric properties and piezoelectric properties of PZT nanocrystalline, P. Kour & S.K. Sinha, *Ceramica*, 59(2013) 34-38.
10. Dielectric, ferroelectric & piezoelectric properties of  $\text{La}^{3+}$  substituted PZT ceramics, P. Kour & S.K. Sinha, *Digest journal of Nanomaterial and Biostructure*, 17(2013) 1327-1332.
11. K. P. Tiwary, Shiv Kumar Choubey, K. Sharma, Structural and optical properties of ZnS nanoparticles synthesized by microwave irradiation method. *Chalcogenide Letters*, Vol. 10, No. 8 (2013) 319-333.
12. Ranvijay Kumar, K. Sharma, K.P. Tiwary, Gautam Sen, Polymethacrylic acid grafted psyllium (Psy-g-PMA): A novel material for waste water treatment, *Applied Water Science*, Vol. 3 (2013) 285-291.
13. B. Bhushan, T. Kundu, B. P. Singh, "Nonlinear optical properties of two different nanoassemblies of polydiacetylene (PDA): PDA nanovesicles and PDA nanocrystals", *Optics and Photonics Journal* 3, 278-286 (2013)
14. B. Bhushan, T. Kundu, B. P. Singh, "Synthesis and nonlinear optical response of silver nanoparticles decorated polydiacetylene composite nanovesicles", *Optics Communications* 312, 127-133 (2014)
15. Binay Bhushan, Asima Pradhan, "Detection of Breast and Cervical Cancer using Raman Spectroscopy", *International Journal of Innovative Research in Science, Engineering and Technology* 2, 3420-3425 (2013)
16. Sahay, R. R. and Sehgal, V. (2013) Wavelet regression models for predicting flood stages in rivers: a case study in Eastern India. *J. of flood risk management*, Vol. 6, pp. 146-155.

17. Samant Saurabh and Ashok Singh Sairam, Professors – The new YouTube stars: Education through Web 2.0 and Social Network, the international Journal of Web Based Communities, Inderscience, Special Issue on: "Social Networking and Web-based Communities for Education" vol. 9, no. 2, 2013.
18. Abu N. Ghazali and Srikanta Pal, "UWB-BPF with application based triple notches and suppressed stop band",PIERC, Vol. 39, 149-163, 2013
19. Ritesh Kumar Badhai and Nisha Gupta, "Compact Dual Sinc-Shaped Monopole Antenna for Dual Band Wireless Applications",Microwave and Optical technology letter, Vol. 55, p.p. 2883-2888, 2013.
20. Abu N. Ghazali and Srikanta Pal, "Analysis of a small UWB filter with notch and improved stopband,"PIERL, Vol. 34, 147-156, 2012.
21. Nirmala Soren, Ramesh Kumar, D. N. Vishwakarma, "An Overview-Protection of Transmission Line Using Artificial Intelligence Technique", Mr. Ram Kumar Karsh,, International Journal of Engineering Research & Technology (IJERT), Vol.2 Issue 1, January-2013 ISSN 2278-0181, Pp 1-9
22. Ms Chhaya Yadav, K. Lal published paper " A Survey of Birla Institute of Technology, Patna campus Central Library" in International Journal of Physical and Social sciences, vol-3, No-2, February 2013, ISSN 2249-5894, pg-92-100.
23. S. P. Dash, V. Agrawal, A. Sinha, "Inclusion of human capital in the calculation of WACC", European Scientific Journal, Vol. 9, No.28 (2013) 405-421.
24. Agrawal Vijay, Factors to be Reported for Sustainability Reporting in Indian Chemical Industry– The Way Industry Thinks-International Journal of Accounting and Financial Management Research (IJAFMR) ISSN(P): 2249-6882; ISSN(E): 2249-7994 Vol. 3, Issue 5, Dec 2013, 11-24, (2013)
25. Mitra Pradip Kumar and Agrawal Vijay, Importance and Perception Towards Sustainability Reporting – A study through Literature Overview in Paripex – Indian Journal of Research Vol.2 No.5 Feb, 2013 (pp.35-39). Sara Publishing Academy, Ahmedabad. ISSN: 2250-1991, 2013
26. Ahmad, I., 'Major impediments in the growth of B2B e-commerce market in Kuwait: An empirical study from industrial perspective', International Journal of Business Management and Research, Vol. 3; Issue 6, pp 57-65, 2013.
27. M.A.Hassan,"Natural convection of viscoelastic fluids in a square enclosure",ASME journal of HT,vol135,2013.

#### **Published in International Proceedings:**

1. Rakesh Kumar, "Biobased Sandwich Panels with PLA Fabric Skin and Soy Protein Isolate as Binder (OP-89)" by Kumar R Presented in 4<sup>th</sup> International Conference on Recent Advances on Composite Materials 2013, 18-21 February, 2013, Goa, India, pp 49
2. Saif, A. H. and Sahay, R. R, Predicting monsoon flows in Kosi River using ANN and ANFIS techniques. Proc. of International meet on Impact of climatic change on water resources, 17-18 Aug'2012 in Karunya university, Coimbatore, Tamil Nadu.
3. Acharya, S. P., A. Burman, Sahay R. R. and Maity D., Slope Stability Analysis Using Finite Element Method and Limit Equilibrium Methods. International Congress on Computational Mechanics and Simulation (ICCMS), IIT Hyderabad, 10-12 December 2012.
4. A.Kumar and S.K Sinha. Utilisation of Solar Energy for Passive House Design, International Conference on Environmentally Sustainable Urban Ecosystems, I.I.T Guwahati, 24<sup>th</sup>-26<sup>th</sup> Feb. 2013.



5. Kumar Prashant, Kumar Preetam, "Performance evaluation of modified OFDM for underwater communications", IEEE International Conference on Communication, Vol. no. p.p. 967, 971, 9-13 June, 2013, Budapest, Hungary.
6. Kumar Prashant, Kumar Preetam, "WH Spread OFDM for Underwater Acoustic Communication with Transmit Diversity", in the proceedings of 4<sup>th</sup> International Conference on Underwater Systems, USYS'12, ISBN-978-983-43178-6-7, 4-6 December, 2013, Budapest, Hungary.
7. Kumar Prashant, Kumar Preetam, Poonam Priyadarshini "Underwater Acoustic Sensor Network for Early Warning Generation", in the proceedings of 4<sup>th</sup> International Conference on Underwater Systems, Oceans, 2012, vol. no. pp 1-6, 14-19 October, 2012, Virginia, USA.
8. Kumar Prashant, Kumar Preetam, "Performance Evaluation of DFT Spread OFDM and DCT spread OFDM for Underwater Acoustic Communication", Vehicular Technology Conference (VTC Fall), 2012 IEEE, vol. no. pp 1-5, 3-6 Sept, 2012, Quebec, Canada.
9. Ms. Chhaya Yadav, S P Lal "Sustainable Indicators for Building Sustainable Organization" in Proceedings of International conference on Innovation & Research in Technology for Sustainable Development (ICIRT 2012), Nov. 2012, ISBN 978-93-82338 -21 -5, Pg 62-66.

#### Published in National Journals

1. Kumar R., Tiwary S, "A Short Review on Chitosan-based Nanocomposites", Nano Trends: A Journal of Nanotechnology and its Applications, Vol 14(1), pp 1-7, January 2013.
2. Anubha Singh, "Assessment of Coal Mines Pit Water a By Product of Coal mining Sector and Its Uses for Domestic and Agricultural Purpose", The Ecoscan, Vol 6, pp 51-55, 2012.
3. Anubha Singh, "An Assessment on Economic Importance of Damodar River Water in Comparison with Ground and Mine Water", The Ecoscan, Vol 7, pp 37-44 2013.
4. B. G. Prasad, Rajnish Kumar, Rajshekhar Prasad, MHD forced convection with laminar pulsating flow in a saturated porous channel, "Journal of Indian Mathematical Society", 80 (1-2) (2013), 157-171.
5. Sahay, R. R. Estimating Stream Depletion due to a Nearby Well Pumping (DOI: 10.1007/s40030-013-0036-9), Journal of The Institution of Engineers (India): Series A. 94(1):15-21, Print ISSN 2250-2149; Online ISSN 2250-2157 Publisher Springer India, 2013
6. Sahay, R. R., Ravi Prakash, Amrit Anand, Prashant Koushik, Modeling Evapotranspiration Using Artificial Neural Networks, Recent Trends in Civil Engineering & Technology ISSN: 2249 -8753, 1-7, 2013
7. Ms Rajni Singh, Rani Asthana "Impact of Mahatma Gandhi National Rural Employment Guarantee Scheme: With Reference to Jharkhand" in V.B. Journal of Economics, vol-3, No-1, 2012, ISSN- 0975-7473, 2013
8. Gupta, N. and Agarwal, V., A study of the Constituents of domestic savings and investments in urban cities with special focus on Mumbai and Delhi. Indian Journal of Finance. 7(2), 17-26, 2013a.
9. Agarwal, V., Gupta, N. and Sachdeva, J., Interrelationship among stock indices, economic indicators and quality of Life: A study through review of literature. "Growth" - A Quarterly Journal of Management Training Institute of SAIL, Ranchi. 40 (4), 1-8, 2013
10. Gupta, N. and Agarwal, V., Savings and Investment Pattern in Largest Cities of India. Communicated and accepted for publication in "The Alternative" - Biannual Journal of Management Studies and Research, BIT, Mesra, Ranchi. XII (2), March - Sept 2013, 2013b.

11. Agarwal Vijay, Factors influencing economic aspect of subjective quality of life in metro cities of India. - Indian Journal of Commerce- Quarterly publication of Indian Commerce Association.Vol.66 No.02 April-June,2013, ISSN: 0019-512X, (2013)

#### Published in National Proceedings

1. T. Paul, A.K. Singh, R. K. Singh, Double diffusive convection between two vertical walls, Proc. of Math. Soc., B.H.U., 2013.
2. A.K. Singh, Quantification of Mine Induced Landscape around Bauxite mines of Lohardaga district, Jharkhand using Remote Sensing & G.I.S. ; "National Conference on Sustainable Construction: Need of the Hour" organised by BIT Mesra, Patna Campus on 2<sup>nd</sup> – 3<sup>rd</sup> March 2013.
3. Ar. Anamika Nandan, "Re Development of Housing Sector of Patna through Effective Strategies of Citizen Participation & Good Governance" for BIT International Conclave 2013 on Innovations in Engineering and Management.
4. Ar. Anamika Nandan, "Key Concepts & Considerations Underpinning the Idea of Symbiotic Housing" for National Conference on Environment Friendly Sustainable Construction: Need of the Hour, B.I.T. Patna, March 2-3, 2013.
5. Ar. Anamika Nandan, "Master Plan of Patna: a solution to traffic chaos", presentation at Conference on Patna Traffic Management "Bottlenecks and Solutions" by Indian Chamber of Commerce, August 21, 2013 at Patna.
6. Ar. Md. Danish, "Immersed Tunnel Technology under Ganges at Patna" for National Conference on Recent Advancement in Civil Engineering, N.I.T. Patna, June – 13-14, 2013.
7. Ar. Md. Danish, "Vertical Shaft Brick Kiln Technology : An Eco Friendly Alternative for Brick Manufacturing" for National Conference on Sustainable Construction: Need of the Hour, B.I.T. Patna, March 2-3, 2013.
8. Ar. Md. Danish, "Ethanol : An Innovative Domestic Fuel for Rural India" for ICIEM, B.I.T. Patna, February 22- 23, 2013.
9. Ar. Md. Danish, Accepted for publication on the topic "Accessibility Level Planning of Health Facilities – Case Study Patna" for IJERT, Jan. 2013.
10. Ar. Md. Danish, "Dhajji Wall Construction" at National Conference on Emerging Trends of Energy Conservation in Building, CBRI, Roorkee, November 1-3, 2012.
11. Vinit Sehgal, Kaushik Tripathi, Rajeev R. Sahay, Improving reliability of wavelet based hydrological models by sustainable mother wavelet selection. National Conf. on Environment Friendly Sustainable Construction- Need of the Hour, 2-3 March 2013, organized by Civil Engineering Department, BIT Patna, India.
12. Sehgal, V., Raj, A. and Sahay, R. R., Efficiency of discreet wavelet transform in high flood stage forecasting". Proc. National Conf. on Advanced Techniques in Civil Engineering, 15-16 Mar 2013. Dept. of Civil Eng., Karpagam University, Coimbatore, Tamil Nadu.
13. Shri Upendra Kumar and Shri Ragahav Mallik, Defending against blackhat community on computer network using HoneyNet; National Seminar on science for shaping the future of India, 30<sup>th</sup> Sep-01<sup>st</sup> Oct. 2012, BTIRT Sironja Sagar (MP).

#### Books

1. A Text Book of Nanoscience (Publisher: Kataria & sons, ISBN- 9350144042) 2013 by Dr. Rakesh Kumar and Dr. K. P.Tiwary
2. Formwork for Civil Engineering Construction Works by Dr.J.Jha and Prof. S.K.Sinha, Laxmi Publication, New Delhi, 2013.

### Book Chapters

1. Dr Rakesh Kumar, Chapter 21, pp 645-671. Chapter, Entitled "Rheo-optical Characterization of Biopolymer Systems" by Liu D., Kumar R., Tian D., Lu F., Chen M., being Edited by Sabu Thomas, Dominique Durand, Christophe Chassenieux, and P. Jyotishkumar in a book published entitled " Handbook of Biopolymer-Based Materials: From Blends and Composites to Gels and Complex Networks" (ISBN: 978-352732-844-0)" from a Wiley-VCH Verlag GmbH & Co ([www.wiley.com](http://www.wiley.com)). Published April 2013.
2. Dr Rakesh Kumar, Chapter 4, pp 129-144. Chapter, Entitled "Modified Biomass Based Alternative Fuels" by Kumar R., being Edited by Dr Rakesh Kumar in a book published entitled "Fossil Fuels: Sources, Environmental Concerns and Waste Management Practices" (ISBN: 978-1-62808-412-2)" from a Nova Publisher ([https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=43811](https://www.novapublishers.com/catalog/product_info.php?products_id=43811)). Published June 2013.
3. Ms. Chhaya Yadav & Prof.(Dr.) S P Lal, contributed one chapter "Information Communication Technology in Sustainable Agriculture" book entitled "Inclusive Growth: challenges and prospects" by IDS publishers 2012, India . ISBN: 978-81-923515-1-3, Pg. 190-200

### Books Edited

1. Dr Rakesh Kumar, "A Text Book of Nanoscience" (ISBN: 978-93-5014-404-6) by Kumar R., Tiwary K. P., from S. K. Kataria and Sons, New Delhi ([www.skktariaandsons.com](http://www.skktariaandsons.com)). Published February 2013.
2. Dr Rakesh Kumar, "Fossil Fuels: Sources, Environmental Concerns and Waste Management Practices" (ISBN: 978-1-62808-412-2)" being Edited by Dr. Rakesh Kumar from a Nova Publisher ([https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=43811](https://www.novapublishers.com/catalog/product_info.php?products_id=43811)). Published June 2013.

### PATENTS (APPLIED / GRANTED)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr Rakesh Kumar and Dr Rajesh Anandjiwala	Process for Preparing Polyfurfuryl Alcohol Products	WO 2012/123902 A1	September 2012

### STUDENTS' ACTIVITIES:

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration	Dept.
1.	Environmental Friendly Material Research Society (EFMRS)	Sourav Tiwary	August 2012/ till date	Applied Chemistry
2.	Model Display and Poster presented in <b>ICIEM, B.I.T. Patna</b> Blood Donation at Rotary Patna Participated in ZONASA, Kolkata Participated in Various Trophies in Annual NASA at Hyderabad Model display on the occasion of Eco friendly week	Aakanksha Singh Sajal Saket Saba Aram Akshay Kapoor Shivansh Pandey	February 22- 23, 2013 September 10, 2013 September 19, 2013 January 26 - 29, 2014 January 31, 2014	Architecture
3.	Google student Ambassador	Sweta (2 <sup>nd</sup> yr CSE)	Session 2012-2013	CSE
4.	NASA Lunar robotics	Amit, Rakesh	23 May, 2013	Mechanical

## Other Important Information

### Sports:

- As an Institute, with a vision BIT Patna Campus promotes sports and games among students and staffs.

S. No.	Description
1.	<b>Activities Inter branch – Successfully organized following tournaments: -</b> <ol style="list-style-type: none"> <li>1. Volley Ball Tournament 2012-13 – Boys &amp; Girls</li> <li>2. Basket Ball Tournament – Boys &amp; Girls 2012 -13</li> <li>3. Cricket Tournaments 2012-13 - Boys</li> <li>4. Foot Ball Branch Tournament 2012-13</li> </ol>
2.	<b>Courses Awareness –</b> Theory – Covering following subjects: <ol style="list-style-type: none"> <li>1. Health education – Physical, Mental and Social health.</li> <li>2. About Balance diet and nutrition.</li> <li>3. About First Aid, Sports Injury, Prevention and Treatment.</li> <li>4. General knowledge of Bones, muscles and joints.</li> <li>5. Pasture – Pastoral deficiency and treatment.</li> <li>6. Advantage of warming up.</li> </ol>
3.	<b>Practical –</b> <ol style="list-style-type: none"> <li>1. Aerobic exercises</li> <li>2. Anaerobic exercises</li> <li>3. Isometric exercises</li> <li>4. Isotonic exercises</li> <li>5. Isokinetic exercises</li> <li>6. Egility development exercises</li> <li>7. Weight training</li> <li>8. Recreational games and sports.</li> </ol>

- Apart from above, BIT Patna Campus trying Hands on experience with the most powerful CAD tool for Integrated Circuits design 'CADENCE 180nm technology':- The software tools have been purchased and successfully installed and the ECE fraternity have submerged themselves immensely towards exploring the intricacies of this CAD tool.
- The Energy Cell was set up vide letter no. BITP/92/12-13 dated 13.10.12 for undertaking various activities related to Energy Conservation, Energy Audit and Renewable Energy.
- A proposal is in the pipeline to establish a Solar Testing Centre in the Campus of BIT, Patna by Bihar Renewable Energy Development Agency, Energy Department and Government of Bihar. Nearly 1800 sq ft space for this centre has already been marked. The officials of the department have already visited our campus site.





## **OFF-SHORE CAMPUSES**



## MUSCAT

Waljat College of Applied Sciences (WCAS) in academic partnership with Birla Institute of Technology as its International Centre was founded by H.E. Dr. Omar Bin Abdul Muniem Al Zawawi in 2001 with an aim to promote high international quality education that prepares students for modern, high quality employment and occupies a pride of place among the technical colleges in the Sultanate of Oman.



*BIT Off-shore Campus Muscat*

The College campus is located in Knowledge Oasis Muscat, Rusayl with state-of-the-art teaching facilities, laboratories, library and student services. All academic programs are conducted in English and admissions are open to all nationalities.

Our vision is to impart affordable high quality professional education and to become a centre of academic excellence that is a preferred choice of talented students. Wisdom, Commitment, Achievement and Service are the core values to realize our vision. WCAS believes in the holistic development of its students and offers a content and activity rich curriculum with emphasis on knowledge development, communication & interpersonal skills, projects and training activities. The College has a dedicated Quality Assurance Department for implementing recommendations and suggestions of Oman Accreditation Council and Ministry of Higher Education, Sultanate of Oman.

WCAS was included in The Guide to Excellence: Global Education and Opportunities, 2013 Edition published by Cambridge University Students' Union. It was also incorporated in Socrates Almanac of world universities published from Oxford, UK in 2013, from this part of the world. The Engineering entrance test of WCAS has been recognized by Technical Universities in Austria (NIMSA) for admission of sponsored Omani students.

### **The College offers the following academic programmes of the Institute:**

1. Bachelor of Engineering in
  - Biotechnology
  - Computer Science
  - Electronics & Communication Engineering
2. Bachelor of Computer Applications (Hons.)
3. Bachelor Business Administration (Hons.)
4. Bachelor of Computer Applications
5. Bachelor of Business Administration\*
6. Masters of Business Administration
7. Executive MBA

*\* Also offered as a part-time programme for working candidates.*

## RESEARCH ACTIVITIES

The research activities in various departments have been initiated and laboratories are being modified to carry out meaningful R&D activities. The Research Council (TRC), Oman has accepted our College as a Research Centre and the hub has been created in the college to interact with the TRC.



## DEPARTMENT OF BIOTECHNOLOGY

Department of Biotechnology was actively involved in providing quality education and research environment to its students, besides exposure to related Industries. The course BE Biotechnology offered by the department trains students for employment in biotechnology related processes and products industry and higher education & research. The undergraduates strengthen their knowledge by studying core subjects in Cell & Molecular Biology, Genetic Engineering, Microbiology, Immunology, Enzyme Technology, Protein Engineering, Genomics, Chemical Engineering and subjects with application of Chemical Engineering to Bio-systems industrial processing like Bioprocess Engineering, Bioreactor Design, Bioseparations Engineering and Biological Waste Management. The Department imparts knowledge through class room interaction, experimental exposure and practice in laboratory facilities and finally implementing the learning outcomes for project work.

The laboratory facilities consist of Microbiology, Molecular Biology, Cell Biology, Genetic & r DNA technology, Biochemistry, Immunology, Bioinformatics Labs, Bioseparations Technology Lab, Environmental Technology labs, Bioprocessing Labs, and Chemical Engineering Labs that include Fluid Flow, Heat Transfer, Mass Transfer studies. The major Equipments & Kits and Software available are Bench Top 3 l Fermentor, UV Spectrophotometer, Multifuge, Refrigerated centrifuge, Omni PAGE Mini, Gel documentation system, Horizontal electrophoresis unit, Elisa strip Reader, Thermocycler, TLC Unit, Bacteriological Incubator, Laminar Flow Chamber, Inverted Microscope, COD and DO meters etc.

The Biotech Department has successfully recycled paper in its lab and is further working on it to improve the paper quality. The Department presented the First Hand- Made paper from waste to mark the Environment Day in the College.

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The Department offers quality courses and programs in Computer Science & Engineering. Consistent with the objectives the Department gives high priority to quality research and effective teaching.

The Department gives importance for faculty research & advanced learning of new Computer Science technologies to build up strong academic programs. The Department also believes that combining scientific research with teaching raises the quality of teaching and the learning experience of students.

As the requirements of Computer Industries are continuously changing, various new courses and electives are offered in CSE Department from time to time.

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The Department of Electronics & Communication Engineering has well qualified and experienced faculty members and technical staff. Students can avail dual degree program with the University of Leeds, UK. The Department has augmented its existing laboratory facilities by adding digital storage oscilloscopes, function generators, simulators, FPGA trainer kits, microwave benches, communication trainer kits etc. This will enable students to carry out a wide range of experiments related to their course curriculum and keep them up-to-date with the developments in the field of electronics, communication, fiber optics, control systems.

Faculty members are involved in research activities in the areas of MIMO estimation, SOI MOSFET modeling, neural network, embedded technology, smart antenna, plasma physics, non-linear dynamics etc.

Recently, National Instruments' software LabView has been added in the lab to strengthen the department's research activity. Department is in the process to set up Virtual as well as VLSI lab to further augment its existing lab facilities.

## DEPARTMENT OF MANAGEMENT

The Department of Management offers academic programs at Bachelor and Master level leading to BBA and MBA degrees. The EMBA program is also offered to executives and working professionals. Faculty members are actively engaged in conducting research in the areas of E-Marketing, Value Chain, Data Envelopment Analysis, Performance Management, 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, Women's Labour Force Participation, Word of Mouth & Trust in Online Media and Online Social Networking.

## DEPARTMENT OF MECHANICAL ENGINEERING

The Department is committed to support the other engineering departments as per the requirement of curriculum. The objective of the Department is to develop best academic facilities and active interaction with industry to make the course perfectly suitable for the industry. The Department offer the core subjects like, Engineering Mechanics and Principle of Mechanical Engineering to the students of engineering programmes.

The Department has three laboratories, and a workshop viz., Engineering Mechanics Lab., and Engineering Graphics Lab, and CAD Lab. All the laboratories are fully equipped with the modern equipments as per the requirements of syllabus. Our workshop is a state-of-the-art facility with the required infrastructure.

## DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers comprehensive courses in different fields of applied mathematics for various disciplines of main course and for Foundation Program. It offers support to other Departments to conduct various quantitative and mathematical courses. The main aim of the Department is to prepare a sound mathematical background for students of various disciplines for better understanding of respective discipline.

## LEARNING RESOURCE CENTRE (LRC):

The LRC has more than 38,000 documents including Project Reports and is subscribing to 22 core Journals. The LRC, has a large number of e-learning resources including E-books and Articles. The Centre is automated and uses RFID and Library Management System (LMS). There is an OPAC (Online Public Access Catalog) which allows library members to go through the books and journals available in the Centre. The users can also access Book data base, Articles indexed which are available in the database and also access their accounts and get the information regarding the number of books borrowed from the library and also can reserve the books.

The LRC actively subscribes to the DELNET (Developing Library Network) which has been established with the prime objective of promoting resource sharing among the libraries through the development of a network of libraries. The Centre also has access to learning resources of The Research Council, Oman.

## SMART CLASSROOMS:

The College has smart classrooms, which are equipped with interactive whiteboards, PCs and advanced audio visual equipments. Smart classrooms facilitate teachers to use their creativity to make the classes more interactive. Both the students and teachers benefit from using a Smart Board in the classroom. This innovative technology promotes interaction and offers a world of learning possibilities. Teachers can reach out to students of all classes and learning levels in a language they clearly understand.

## VIDEO CONFERENCING SYSTEM:

The College has an advanced multipoint video conferencing system, Polycom HDX 8000, for distant learning, with 4 dedicated ISDN lines. Video conferencing facility helps to enable interaction between students and



remote faculty during research or conference, guest lecturers to interact in the classroom from distant locations / other institutions, and faculty and the administration to collaborate with colleagues at other institutions.

### LANGUAGE LAB:

The College has established a new advanced Language Lab with 36 computers, necessary software and audiovisual equipments for the students to learn the language using advanced methods. Robotel SmartClass+ is a new age, highly-flexible language lab platform that was developed to address all learning environment variations and support both the instructor-led and self-study situations. The language laboratory is very useful for assessing students' knowledge of the language through listening and speaking. It provides students with the technical tools to get the best samples of pronunciation of the language. The student will get the experience of interacting with native speakers through the laboratory.

### SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE DEPARTMENT

S. No.	Title of Seminar / Conferences / Short term Courses/Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	Controlled Thermonuclear Fusion	Dr. Rajeev Kumar	WCAS	12.09.2012
2.	Establishing a Small Enterprise in Oman	Mr. Salah Bin Ma'awali	Ministry of Commerce	18.09.2012
3.	A case study on success of Standard Chartered Bank	Mr. Lamin Kemba Manjang	Standard Chartered Bank	22.09.2012
4.	Mobile Agent – Basic Issues and Applications	Mr. Sounak Paul	WCAS	26.09.2012
5.	Time Management	Mr. Mohd S Jabur	Ministry of Commerce	02.10.2012
6.	HR Managers Meet	Mr. Ibrahim Al Jahwary	WCAS	08.10.2012
7.	Stress Management for Youth	Mr. Saket Kakkar	Ernst & Young	10.10.2012
8.	Hands-on Training on AutoCAD	Mr. Praveen Sanga	WCAS	17.10.2012
9.	Macromedia Flash	Mrs. Vijaya & Mrs. Sarika	WCAS	21.11.2012
10.	Career Options in Teaching & Research	Mr. Mithun Shrivastava	WCAS	01.12.2012
11.	Communication Skills	Mr. Syed Aulia	WCAS	02.12.2012
12.	Shell Career Awareness Programme	Dr. G.P. Mishra	Shell Development Oman	02.12.2012
13.	What is Engineering?	Dr. Andrew H Kemp, University of Leeds	University of Leeds, U.K.	03.12.2012
14.	Consumer Behavior in Hospitality Industry	Dr. Seema Varshney	WCAS	05.12.2012
15.	Internal Auditing – A Career Choice to Make"	Mr. Kirumira Julius	Standard Chartered Bank	09.12.2012

S. No.	Title of Seminar / Conferences / Short term Courses/Workshop	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
16.	Building Enterprises	Mr. Arindam Dutta	WCAS	18.12.2012
17.	Introduction to Quantitative Data Analysis	Mr. Mithun Shrivastava	WCAS	19.12.2012
18.	A Conceptual Framework for Consumer Purchase Intention: eWOM perspective	Mr. Mithun Shrivastava	WCAS	13.02.2013
19.	"Academic Plagiarism: Interpreting Turnitin Reports"	Mr. Mithun Shrivastava	WCAS	24.02.2013
20.	Tweening and symbols using Macromedia Flash	Ms. Sinymol	WCAS	27.02.2013
21.	Shadowing and Onion Skinning using Macromedia Flash	Ms. Vallikannu	WCAS	27.02.2013
22.	Event Handling Actionscript	Ms. Cimi	WCAS	20.03.2013
23.	Masking and Mouse Function in Actionscript	Ms. Alycia	WCAS	20.03.2013
24.	Problem Solving through effective communication skills	Prof. Manju Bhagat	BIT	23.03.2013
25.	Electromagnetic Interference and Electromagnetic Compatibility	Dr. Nisha Gupta	BIT	24.03.2013
26.	Linear Programming	Dr. S.K. Jain	BIT	25.03.2013
27.	An Introduction to the Oil Business: Overview of PDO	Mr. Dhiya Mustafa Mohd Said	WCAS	02.04.2013
28.	Stress Buster and Stress Management	Ms. Kusumlata & Ms. Neelufer	WCAS	03.04.2013
29.	CV writing	Mr. Faiz Al Maskary	WCAS	09.04.2013
30.	Effective Communication Lecture	Mr. George Thomas	WCAS	09.04.2013
31.	Ayurveda and Yoga	Dr. Jaykrishnan	Muscat Ayurveda & Yoga	14.04.2013
32.	Interview Skills	Mr. Syed Aulia	WCAS	15.04.2013
33.	Trends in Integrated Circuit Technology	Mr. Akhilesh Kumar Roy	WCAS	17.04.2013
34.	Faculty Mentored Undergraduate Research Award Programme	Dr. Padmini	The Research Council of Oman	22.04.2013
35.	Sports Economics and Management: What are the peculiarities in comparison with other sectors"	Dr. N. Scelles, University of Poitiers, France	University of Poitiers, France	24.04.2013

**CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES/ ATTENDED**

S. No	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. G.P. Mishra	Statistical Analysis for Engineers	WCAS	Indian Institute of Technology, Kanpur	Kanpur	July 2-6, 2012
2.	Dr. Mohan Varma	National Research Council, Canada	WCAS	9 <sup>th</sup> International Symposium on Special Topics in Chemical Propulsion (ISICP),	Qubec, Canada	July 9-13, 2012
3.	Mr. Mithun Shrivastava	Faculty Development Programme on Management Teacher 2015- New Age Teacher	WCAS	Association of Indian Management Schools (AIMS)	New Delhi	July 17, 2012
4.	Mr. Jyoti Chandel	Faculty Development Programme on Advanced Data Analysis for Management Research	WCAS	IIITM, Gwalior	Gwalior	July 23-29, 2012
5.	Dr. A. Prakash	International Conference on Business Management	WCAS	Dhofar University	Salalah	Nov. 7-8 2012
6.	Ms. Sharmila Queenthly	Importance of Certified Professional Development in Teaching	WCAS	Oman Quality Network in Higher Education	Muscat	Nov 11, 2012
7.	Dr. Mohan Varma	39 <sup>th</sup> Korean Society of Propulsion Engineers Conference	KSPE, Korea	KSPE, Korea	Yeadu, Korea	Nov. 22-23 2012
8.	Dr. G.P. Mishra	12 <sup>th</sup> International Business and Economy Conference	WCAS	University of CAEN, BASSE NORMANDY,	France	Jan 9-12, 2013
9.	Mr. Mithun Shrivastava	Digital Marketing	WCAS	Khimji Ramdas	Muscat	Jan 21-22, 2013
10.	Mr. Syed Aulia	A Masters-NLP programme	WCAS	Sue Knight – An internationally renowned Trainer in NLP domain	Kochi	February 1-10 2013
11.	Dr. G.P. Mishra & Mr. Sushil Kumar	Fifth Conference on Small and Medium Enterprises for 2013	WCAS	Oman Chamber of Commerce	Muscat	Feb. 11-13, 2013
12.	Dr. Nutanlata Nath, Ms. Vijaya, Mr. Sanjay, Dr. Santosh, Mr. A.K. Choudhary, Mr. Mithun Shrivastava	Uplifting Local Workforce Qualification	WCAS	Public Establishment for Industrial Estate (Ministry of Commerce & Industry)	Muscat	February 19, 2013

S. No	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
13.	Mr. Mithun Shrivastava	Quantum Teaching	WCAS	College of Banking & Financial Studies	Muscat	March 5, 2013
14.	Mr. Mithun Shrivastava	Encouraging Progressive Pedagogy	WCAS	Oman Quality Network in Higher Education	Muscat	March 19, 2013
15.	Dr. Arvind Hans	Entrepreneurial Higher Education for Sustainable Development(The Role of Higher Education).	WCAS	Ministry of Higher Education, Sultanate of Oman	Muscat	March 25, 2013
16.	Dr. G.P. Mishra	Entrepreneurship Education and SME Development	WCAS	Caledonian College of Engineering, Muscat	Muscat	May 12-13, 2013

## PUBLICATIONS

### Published in International Journals

- Hans, A., Al Bariki, A.S.H. " Conflict Management Styles in Oil & Gas sector in Sultanate of Oman" International Journal of Information Technology and Business Management – 4(1),2012 pp. 01-015.
- Jyoti K Chandel, "Technology Acceptance Model for the Use of Learning Through Website Among Student in Oman" International Journal of e-Technology, 3 (1) January 2013.
- Paul S, Mishra B.K.(2013) "Selection of Next Generation Anti-Virus against Virus Attacks in Networks Using AHP", International Journal of Computer Network and Information Security, vol 5, No.2 pp. 29-35
- Hans, A., & Akhter, S (2013) Emerging Trends in Teacher's Education. The Macrotheme Review, 2(2), 23-31
- P.Vijaya, G. Raju, Santosh Kumar Ray, "An Ontology Based Meta-Search Engine for Effective Web Page Retrieval, in International Review on Computers & Softwares, vol 8, No.2, Page 533-541, ISSN 1828-6003, February 2013.
- Sameena Begum, A study on conventional banking, Islamic banking and its treatment of profit and loss account, in Internal Journal of Research in Commerce and Management, Volume Nol.4 (2013), Issue No.4, Pp No. 59-62.
- Soofi, A.M., Azeem, MA (2013) Training and Development of Non Executives in Tourism Sector – A study of APTDC, India. International Journal of Management, IT and Engineering, vol.3, Issue 6, Pg 395-414.
- G.P. Mishra "Promotion as Job Satisfaction, A study on Colleges of Muscat, Sultanate of Oman ",European Journal of Business and Management ISSN 2222-1905, Vol.5, 2013, 56-62.
- G.P. Mishra,"Organizational Effectiveness of Listed Companies in Food and Beverage Sector, Sultanate of Oman" European Journal of Business and Management Research ISSN 1839-0846, Vol.2, No. 10, 26-30.

**Published in International Proceedings**

1. Mohan Varma and B.V.S. Jyoti, "Ignition and Combustion Studies of Heterogeneous UDMH-RFNA Gel Propellants", presented at 9<sup>th</sup> International Conference on Special topics in Chemical Propulsion, Quebec, Canada, July 9-13, 2012.
2. S.D. Khan, and Dr. Seema Varshney, "Professional Ethics in Library Science" in the proceedings of "International Conference on Creating Wisdom and Knowledge through Shared Learning: Role of Libraries and Information Managers" held at IIM- Indore from October 11-13, 2012.
3. Mohan Varma "Advanced Gel Propulsion: Advantages and Challenges" at Korean Advanced Institute of Science and Technology (KAIST), Republic of Korea in Nov. 23, 2012.
4. Kusum Lata Mishra, and Dr. G.P. Mishra, "Establishing Relationship between "Stress" and "Eating" leading to overweight among college students in Oman" in the 12<sup>th</sup> International Business and Economy Conference held at France from 9-12 January 2013.
5. Paul S., Mishra, B.K, "Honeypot based signature Generation for Defense Against Polymorphic worm attacks in networks" in proceeding of IEEE international Advanced Computing Conference (IACC), February 2013.
6. Vallikannu, "Survey of Text Mining" at International Conference on Technology and Business Management" held at American University, Dubai from 18-20 March, 2013.
7. Smitha Felix, "Revolutionary Cloud" at the International Conference of Educational Technology (ICOET2013) organized by the Omani Society of Educational Technology on 26-27 March 2013.

**Published in National Proceedings**

1. Srilekha Goveas, "Growth in the Number of Female Doctors in Oman- What are the reasons?" The Sultan Qaboos University Medical Journal at ISS3, Vol 2 PP 380-381, August 2012.
2. Srilekha Goveas, "Women Outshine in Medical Labour force in Oman" in the Horizon, Department of Public Relations and Information, Sultan Qaboos University, issue 264, March 2013.
3. A. Prakash "A Study on effect of Economic Growth on Economic Development with reference to Oman" International Conference on Business Management – 2012 Omani Economy & Globalization: Emerging Modernization & Benchmarking held on 7 -8 November 2012 at Dhofar University, Salalah.

**BOOKS****Book Chapters**

1. **Books edited** - Mr. Thompson David Manohar, Asst. Professor, Department of English published a short story titled "Rajan" in a "Talking Book Series", (2012) which has been recommended by the Ministry of Higher Education, Oman for teaching in Foundation course students.

**AWARD/RECOGNITION BESTOWED ON FACULTY :**

S. No.	Name of the Faculty	Title of the Award/Honours	Organization	Year
1.	Dr. Mohan Varma	"Certificate of Recognition" for Life time contributions in research	Korean Society of Propulsion Engineers, Korea	2012



**STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Date/Duration
1.	Red Bull - Be the Driver: driving activity	16.09.2012
2.	International Day for the Preservation of the Ozone Layer	17.09.2012
3.	Fresher's party held in the Campus	03.10.2012
4.	Red Bull Oman – Reaching Can inter-college event.	07.11.2012
5.	Students election held	12.11.2012
6.	National Day celebration	19.11.2012
7.	Cricket tournament held	21.11.2012
8.	Traditional Day held. Competition for Henna, Rangoli, Folk Dance, Tug of War and Traditional Omani games were held	26.11.2012
9.	Singing Competition held among the students	26.11.2012
10.	Environment Club conducted Paper Recycling Campaign	03.12.2012
11.	Omantel conducted promotional workshop on high speed internet and fourth generation technology, which includes entertainment and competition for students	17.12.2012
12.	Adventure Club of the College held a trekking cum path clean up programme	19.12.2012
13.	College Picnic	20.02.2013
14.	Participation in 1st Inter-Collegiate Public Speaking Competition, 'MECORATOR-2013' for General Foundation Programme organized by Middle East College English Club of Languages Centre	11.03.2013
15.	Blood Donation Program	26.02.2013
16.	Mother's Day celebration	12.03.2013
17.	Talent Hunt Contest	10.04.2013
18.	Cultural Show during International Business Society (IBS), Nizwa Open day conducted at College of Applied Science, Nizwa	15.04.2013
19.	Collage Contest	16.04.2013
20.	Participation in the Fifth Tournament of University Football at Sultan Qaboos Complex in Boushar organized by Majan College	20.04.2013
21.	Community Service Programme at Barka	14.04.2013
22.	College Open Day	27-28.04.2013

\* All students activities were organized by Student Council and Club Members.

**BOARD OF STUDIES (UG/PG)****UNDER GRADUATE PROGRAMMES**

- Dr. Mohan Varma
- Dr. Padmini Padmanabhan
- Mrs. Vijaya P
- Mr. Jyoti K Chandel
- Mr. Akhilesh Kumar Roy

**POST GRADUATE PROGRAMMES**

- Dr. Mohan Varma
- Dr. Padmini Padmanabhan
- Dr. G.P. Mishra
- Dr. Santosh Kumar Ray
- Dr. Rajeev Kumar

***DEPARTMENTAL ACADEMIC COMMITTEE***

**BIOTECHNOLOGY**

- Prof. Padmini
- Dr. Sadaf Zehra
- Mrs. Sharmila
- Dr. Rajeev Kumar
- Mrs. Vijaya

***DEPARTMENTAL ACADEMIC COMMITTEE***

**COMPUTER SCIENCE**

- Mrs. Vijaya P
- Mr. Sounak Paul
- Mr. Sanjay Kumar
- Mr. Vikash Sharma
- Dr. Prabal Datta

***ELECTRONICS & COMMUNICATION ENGINEERING***

- Mr. Akhilesh Roy
- Dr. Rajeev Kumar
- Mr. Mohd. Mohatram
- Mrs. Vijaya

***MANAGEMENT***

- Mr. Jyoti Chandel
- Dr. G.P. Mishra
- Mr. Mithun Shrivastava
- Mr. Vikash Sharma
- Dr. Prabal Datta
- ENGLISH
- Mrs. Indrani Basu
- Mr. David Manohar
- Mrs. Smita Prasad
- Mrs. Vijaya P
- Dr. Prabal Datta

### Other important information

1. Some of our faculty members and students attended the lecture and interacted with Sir Tim Berners-Lee, the man who invented the World Wide Web (www) during a lecture session at Sultan Qaboos University on 4.12.2012.
2. Ms. Farah Hamdan Al Humaidi, student of BBA 6<sup>th</sup> Semester got selected in top five in the Business Administration Category of Ernst & Young Student Excellence Award 2013.
3. Our students participated in the Third National Symposium of Engineering Final Year Projects at University of Nizwa, (NSEFYP) on 12th May 2013 and won prizes in the following categories.
  - The team of Samreen Sami, Syeda Assiya Mariam and Zuha Mohammed Zubair won the prestigious First prize under Electrical Engineering Category for the project entitled "Design of Safe Intelligent Water Level Monitoring System Used in Dams".
  - The team of Aneesa Nizar, Afreen Mohammad Ashraf and Kanhaiya Pradeep Deshpande won prize under Electrical Engineering category for their project entitled "Automatic Vehicle Accident Detection".
  - The team of Femitha Nazeer and Anoop Murali won prize under Chemical Engineering Category for the project entitled : Extraction and Study of Antibacterial and Antifungal Activity of Clove Oil."
  - The projects submitted by Apurva Desai, Arun Raviendran, Sagar Jinachandran, Syed Bilal Haider Rizvion "Intelligent Traffic Control System"
  - Aparna Raghunath, Anushya Ramanujam, Tina Rachel Thomas, Aravindan Vallinayagam, " Passive Infrared Based Device For Efficient Power Utilization"
  - Anfal Shamsudeen, Ramya Ravi, Neethu T.N,"Smart Wheelchair "
  - Samuel Hyginus, Sanidhya Mohan Sharma,Salman Ul Faris, Aniruddha Biswas , "Intelligent Car Parking Management System "
  - M. Avanthi, Lavanya P. and Seemab Sultana entitled "Smart Irrigation System" were highly appreciated by the judges under Electrical Engineering Category.

### CLUBS

#### **ADVENTURE CLUB:**

Adventure club was established in the College to encourage the habits of active living, fitness and participation in different adventure related activities. Apart from training schedules, the club is active in the eco-friendly and safe adventure activities, and many trekking path cleanup programs are organized every year.

#### **CULTURAL CLUB:**

The primary role of this club is to organize and encourage students in various activities such as, music, dance, talent show, cookery contest, etc. The club encourages students in bringing out their creativity, teamwork, and organizing qualities in many cultural activities throughout the year.

#### **ENGLISH CLUB:**

The Club plays an important role in encouraging, enhancing and honing the English Language skills of the students thus inculcating self -confidence, leadership qualities and team spirit among them; through various activities throughout the year.

#### **ENVIRONMENT CLUB:**

The goal of the Environment club is to create awareness about the conservation of the Environment through various activities like plantation event, paper recycling campaign, Earth Hour, World Environment Day, Ozone Day, etc.

**MUSIC CLUB:**

The Music club organizes various programs like singing competition, band performances, talent hunt, Antakshari, musical get-together, etc., from time to time for students and staff members.

**PHOTOGRAPHIC CLUB:**

The club is involved in photography of almost all the events of the college. It is also a platform to learn new skills and techniques in Photography. Apart from its own activities, it works in sync with all other clubs to capture the special moments at WCAS.

**SOCIAL CLUB:**

The Social Club of WCAS has a mandate to bring together the staff members of different Nationality Culture, and Ethnicity by organizing various social activities like picnic, sightseeing, and parties etc., on different occasions.

**SPORTS CLUB:**

The sports club is involved in organizing tournaments of badminton, volleyball, carrom board, cricket and football, etc., at different levels for staff & students.

**TECH CLUB:**

The Tech-Club promotes Electronics, Computers and Information Technology through various simple games, and quizzes. It was established keeping in mind the rapidly expanding nature of these technologies. The club involves all the students irrespective of their branch of study.

**ENTREPRENEURSHIP CLUB:**

The club has been started in 2013 to encourage the students to get exposed to successful entrepreneurs, entrepreneurship trainers and Government and Private Societies who encourage and mentor young men and women to start their own business after graduation.

## RAS AL KHAIMAH

BIT Offshore Campus at Ras Al Khaimah started its operation from September 2005. The campus offers undergraduate programs in Electronics & Communication, Electrical & Electronics, Computer Engineering, Architecture, Management and a six - year integrated program in Engineering after ten years of schooling. Apart from this, two years of MBA and EMBA programs are also conducted by BIT IC. MBA is a regular day-time program, while EMBA is a week-end program.



BIT Off-shore Campus RAS AL Khaimah

### SEMINAR / CONFERENCES / SHORT - TERM COURSES CONDUCTED BY THE CENTER:

Sl. No.	Title of Seminar / Conferences / Short - term Courses	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short - term Courses
1.	National Conference on Emerging Technologies-2013	Dr. D.J Biswas	None	26 <sup>th</sup> May, 2013

### CONFERENCES/ SEMINARS/ WORKSHOPS/ STAFF DEVELOPMENT PROGRAMMES ATTENDED:

S. No.	Name of the Faculty	Title of the Conference / Seminar	Funding Agency	Organizer	Venue	Month Date, Year
1.	Mr. Soofi Anwar	International Conference on Technology Management		Indian Institute of Sciences (IISC)	Bangalore	July 18-22, 2012
2.	Mr. Soofi Anwar	Workshop on Digital Marketing		Westford School of Management	Sharjah	11th May 2013

## PUBLICATIONS

### Journal publication:

1. Soofi Anwar, Factors Contributing to Teachers' Attitude towards Knowledge Sharing" research paper published in Springer Ltd, ISBN-978-81-322-07450- July 2012.

### Proceedings:

1. P.K Upadhyay, "Theoretical and Mathematical approach towards the development of a Wave Energy yielding device" in National Conference on emerging technologies, May 2013 held at Birla institute of technology, RAK(UAE).
2. Chetna Nagpal, "High Security Data Hiding on Color Images " in National Conference on emerging technologies, May 2013 held at Birla institute of technology, RAK(UAE)
3. Reshma Gopi, "Mathematical modeling and Simulation of Solar Photo Voltaic cell" published in conference proceedings of International Conference on Electrical Engineering (ICEE-2013) held at Hyderabad, India on 6 -7 th July 2013.



**STUDENTS' ACTIVITIES**

S. No.	Name of the Activity	Department	Date/Duration
1.	Training on Export-Import Documentation Process by Dubai Trade, UAE	MBA & BBA	9 <sup>th</sup> & 10 <sup>th</sup> April 2013
2.	Visit to Dubai Global Energy Forum 2013 (DGEF-2013)	EEE and ECE Department	15th April 2013
3.	Guest Lecture on 'Introduction to Automation System & PLC and Programming of PLC'	EEE and ECE Department	21 st April 2013.
4.	Industrial visit to "Eternity Technologies, RAK Free Trade Zone", UAE	EEE and ECE Department	April 23 rd and 24 th, 2013
5.	Guest Lecture on General approach of handling any architectural Project by Mr. Samjad C Kandilat, Design Consultant, Dubai	B. Arch	07.04.2013
6.	Guest Lecture on Civil Engineering approach and understanding for Architectural Mega projects by Mr. Uday Dinkar Chande, Mumbai.	B. Arch	07.03.2013
7.	Workshop on Islamic Banking & Finance Dr. Hatim El Tahir Director-Deloitte ME Islamic Finance Knowledge Center, Bahrain	MBA & BBA	1 <sup>st</sup> May 2013
8	Guest Lecture on Talent Management & Staying Successful in Corporate World Prof. Lekha Shista PGP (IIM-B) Management Consultant	BBA & MBA EMBA	3 <sup>rd</sup> Oct 2012 5 <sup>th</sup> Oct 2012
9	Guest Lecture on Change in the services requirements for present day Hospital, case study Dubai hospitals Mr. Pradip Mody, Sr. Project Architect, Dubai	B.Arch	21 <sup>st</sup> Nov 2012
10	Guest Lecture on Statistical Process Control (SPC) Training by IRCA Middle East	MBA students	22-23 November 2012
11	Guest Lecture on Networking and Security	CSE & ECE	29 <sup>th</sup> November 2012
12	Guest Lecture on "Basics of SCADA and PLC and their industrial applications by Mr. Kelvin, university of Bolton, RAK.	EEE and ECE Department	9th December, 2012
13	Industrial Visit – Gulf Pharmaceutical Industries LLC (Jolphar) RAK	MBA students	10 <sup>th</sup> December 2012

**DEVELOPMENT OF LEARNING MATERIALS (E- CONTENTS, PEDAGOGY, STUDENT - CENTRIC LEARNING, VIRTUAL LAB, TECHNOLOGY- ENHANCED LEARNING, ETC.)**

Learning materials	Name of Subject/Course /Programme	Where and When used
Pedagogy	Lecture Hand -outs/ PPT/ Case Analysis/ Seminars/Assignments	Combination of these used in teaching different subjects for Engineering and Management Students
Student - centric Learning	Role Plays (Sales & Distribution Mgt) Group Presentation (Marketing Management/) Team Building Workshop for MBA-IV (HRM)	Used as a part of teaching selling skills Used for MBA/BBA students To improve student team working abilities



## UNIVERSITY POLYTECHNIC



With growing popularity, it has become the first choice of students for Technical education at diploma level which is evident from the fact that the percentage of cut off marks for admission was as high as 88.33% for Unreserved and OBC category and 65.33 & 72.67 percent respectively for ST & SC category students.

Admission process for both Diploma in Engineering & Medical Lab Technology courses for 2013 batch was completed as per schedule and their regular classes started off in July, 2013.

Students of Manufacturing & Mechanical engineering were sent for two months training at Tata Motors. Students were sent for industrial visit and summer training to Usha Martin, Schenk Process & Controls, Ranchi, BSL, Bokaro, BSNL Advanced Training Centre, Ranchi, Jharkhand Govt. Mini tool Room, Ranchi etc. and companies like SNL, Ranchi, Tata Motors, Jamshedpur, Schenk Process & Controls, Ranchi, Dr Jain Video on Wheel, Patna and APOLO Shine, Ranchi recruited Diploma and Medical Lab. Technology students through campus interview.

### Industrial Visits

1. Scheck Process & Controls Ltd., Ranchi
2. Jharkhand Government Tool Room & Training Center, Ranchi
3. Sikidiri Thermal Power Plant, Sikidiri

### Training

1. A one months training was arranged for Automobile Engineering students, 2011 batch students at TATA MOTORS Ltd., Jamshedpur.
2. Usha Martine Industries Ltd., Ranchi
3. Patratu Thermal Power Station, Patratu, Hazaribagh
4. Bokaro Steel Limited, Bokaro
5. Steel Authority of India Limited, Bokaro
6. Advanced Training Center, BSNL, Ranchi

### PLACEMENT DETAILS FOR 2008-11 BATCH

100 students successfully completed their Diploma and MLT in 2011-12. Forty Five students got jobs through campus interview & as per information 30 students have taken admissions in various reputed colleges of the country. Given below is the list of students who have taken up jobs in various industries through campus interview:

Company	No. of students
GMMCO	06
Schenck Process & Controls Ltd.	03
Usha Martine Industries Ltd., Jamsedpur	01
Saint Gobain Ltd.	01
Total	11



**SPONSORED PROJECTS****SANCTIONED PROJECTS**

1.	Evaluation of antimicrobial activity of cationic lipidic emulsions.	Mrs. Neeru Singh	UGC- MRP	1 July 2012	1.6 Lac	Two Years
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**SEMINAR / CONFERENCES / SHORT-TERM COURSES CONDUCTED BY THE DEPARTMENT**

A two days workshop on “Ethical Hacking” was organized by the Training & Placement Cell, University Polytechnic, on 27 & 28 April, 2013.

**CONFERENCES / SEMINARS / WORKSHOPS / STAFF DEVELOPMENT PROGRAMMES ATTENDED**

S. No.	Name of the Faculty	Title	Funding Agency	Organizer	Venue	Date
1.	Mrs. Neeru Singh	Recent innovations in drug delivery- addressing the Bio-availability problems	AICTE	Deptt. Of Pharmaceutical Sciences, BIT Mesra	BIT Mesra	11-24 June 2013
2.	Mrs. Neeru Singh	Prospects and Confronts for Nanotechnology products in drug delivery, cosmetics and nanomedicines	AICTE	Deptt. Of Pharmaceutical Sciences, BIT Mesra	BIT Mesra	1-14 Oct 2012
4.	Mr. G. M. Ansari	Differential e-SEIRS model of virus and worms in Computer Network	Self	Deptt of MCA, Vinoba Bhave University, Hazaribagh	Vinoba Bhave University, Hazaribagh	11 Oct 2012
3.	Mr. G. M. Ansari	Horizontal & vertical transmission of malicious objects in computer network with two time delays and non-linear incidence	Self	Computer Science Department, Orissa Engineering College, Orissa	Orissa Engineering College, Orissa	22-23 Nov 2012
4.	Mrs. Rekha Kumari	Process Optimization of Electric Discharge Machining of Aluminum foam using Taguchi technique	Self	Jadavpur University, Kolkata	Production Engineering Department, Jadavpur University, Kolkata	14-16 Dec. 2012
3.	Mrs. Meena Singh	On demand Simulation of Input-Output Resistance of MOSFET Amplifier	Self	TEICC	Bikaner, Rajasthan	27-28 Dec, 2012

**Publications:**

- Daya Shankar Verma, Abhay Kumar, Amarto Chakrabarty, Haider Banka, Amrita Priyam, “Modeling For Runtime Locality Optimizations of Distributed JavaApplications Using Dynamic Localization Algorithm”, International Journal of Advanced Computer Research (ISSN (print): 2249-7277 ISSN (online): 2277-7970) Volume-3 Number-1 Issue-8 March-201391



2. Neeru Singh, S. M. Verma, Sandeep K. Singh, P. R. P. Verma, Mohd. Neyaz Ahsan, "Antibacterial activity of cationized & non-cationized placebo lipidic nanoemulsion using transmission electron microscopy", Journal of Experimental Nanoscience. DOI: 10.1080/17458080.2013.830199.
3. Neeru Singh, S. M. Verma, Sandeep K. Singh, P. R. P. Verma, "Antibacterial action of lipidic nanoemulsions using atomic force microscopy and scanning electron microscopy on *E. Coli*", Journal of Experimental Nanoscience. DOI: 10.1080/17458080.2013.838702.
4. G. M. Ansari, "Differential epidemic model of virus and worms in computer network", International Journal of Network Security, Vol.14, No. 1, 2012, pp. 88-94

#### **AWARD/ RECOGNITION BESTOWED ON FACULTIES (STATE / NATIONAL / INTERNATIONAL)**

S. No.	Name of the Faculty	Recognition	Organization	Year / Duration
1.	Dr. Satish Kumar	Appointed as reviewer of International Journal "Desalination" published under Elsavier.	Elsavier	2012-13
2.	Dr. Satish Kumar	Appointed as reviewer of International Journal "Environmental Monitoring & Assessment" published under Springer.	Springer	2012-13

#### **PURCHASE / FACILITY ENHANCEMENT**

1096 volumes on 153 titles, worth Rs. 4 Lacs were added to the institute library by the Department of Welfare.

#### **DEPARTMENTAL STUDENTS' ACTIVITIES**

##### **CULTURAL EVENTS**

Unifesto '13 was organized in University Polytechnic on 2<sup>nd</sup> March, 2013. Large number of students had participated in the programme. Art-and-craft exhibition was also organized on the same day.

##### **ANNUAL ATHLETIC MEET 2013**

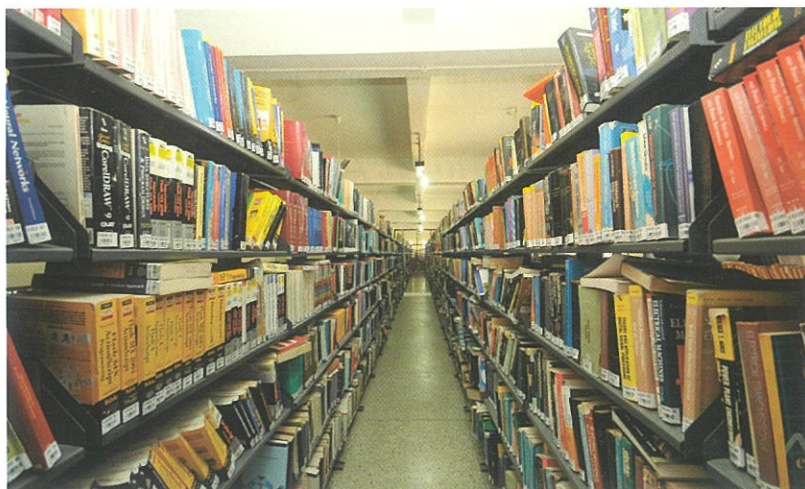
University Polytechnic organized its 6<sup>th</sup> Annual Athletic Meet on 21<sup>st</sup> and 22<sup>nd</sup> February, 2013. Dr P. K. Barhai, then Vice-chancellor was the Chief Guest at the inaugural ceremony. Mr. Dipak Singh, IFS, Special Secretary, Department of Welfare, Govt. of Jharkhand was Chief Guest at the closing ceremony. Electronics branch stood as the winning team. Mr. Rajesh Kumar (Automobile branch) and Ms. Anjali Toppo (Electronics) were individual champions in Men and Women categories respectively.



## CENTRAL LIBRARY

### CENTRAL LIBRARY, BIT-MESRA

*(Let knowledge cherish from BIT-Central library to end-user; and so be human life enhanced)*



### INTRODUCTION

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	:	1,37,649
• Total Titles	:	43,380
• Print Journals/Magazine	:	25
• Indian	:	21
• Foreign	:	00
• Magazine	:	04

**Electronic Journals, Conference**

• Proceedings, Standards	:	17947
• CD/ DVD	:	3,200
• Bound Volumes	:	18,834
• Library home page	:	<a href="http://bitmesra.ac.in/library/default.asp">http://bitmesra.ac.in/library/default.asp</a>
• Library Services	:	Bibliographic services Document Lending Services E Document Delivery Services Inter Library Loan Language Laboratory Literature search New arrivals News clippings Off Campus Service ON/Off line database search Reference Referral Reprographic

**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 following consortium

- AICTE-INDEST
- UGC-INFONET

## Institutional Membership

- American Library Kolkata
- DELNET, New Delhi

## DEPARTMENT WISE BOOKS AS ON MARCH 2013

S. No	Course	#Titles Available	#Volumes Available
1.	Applied Chemistry	1995	8139
2.	Applied Mathematics	2056	8987
3.	Applied Mechanics	2880	5641
4.	Applied Physics	2598	6934
5.	Architecture	1649	2327
6.	Biotechnology	1793	3081
7.	Civil Engineering	2495	7139
8.	ECE	2787	12223
9.	CSE	5816	21751
10.	IT & MIS	3288	8327
11.	EEE	2459	9423
12.	Environmental Science & Engineering	760	1262
13.	HMCT	571	2921
14.	Management	2327	12213
15.	Mechanical Engineering	2358	10426
16.	Pharmacy	2740	6218
17.	Polymer Engineering	549	3481
18.	Production & Engineering	2428	3254
19.	Remote Sensing	587	1073
20.	Space Engineering & Rocketry	640	1089
21.	Others	604	1740
<b>Total</b>		<b>43,380</b>	<b>1,37,649</b>

**DETAILS OF PRINT JOURNALS/ MAGAZINES**

S. No	Title of Journals	IND / INT	Jr./Mag
1.	Express Hospitality (Magazine)	IND	Mag
2.	Business Today (Magazine)	IND	Mag
3.	Outlook traveller (Magazine)	IND	Mag
4.	Time (Magazine)	IND	Mag
5.	Air-Conditioning & Refrigeration	IND	Jr.
6.	Civil Engg. & Construction Review	IND	Jr.
7.	Data Quest	IND	Jr.
8.	Digital	IND	Jr.
9.	Express Computer	IND	Jr.
10.	Harvard Business Review	IND	Jr.
11.	IMS Jr of Mechanical Engg.	IND	Jr.
12.	IMS Jr. of Embedded Systems	IND	Jr.
13.	IMS Jr. of Civil Engg.	IND	Jr.
14.	IMS Jr. of Structural Engg.	IND	Jr.
15.	IMS Jr. Of Electrical Engg.	IND	Jr.
16.	Indian foundry Jr.	IND	Jr.
17.	Indian Jr. of Biochemistry & Biophysics	IND	Jr.
18.	Indian Jr. of Engg. & material Science	IND	Jr.
19.	Journal of Indian Inst of Science	IND	Jr.
20.	Jr. of Scientific & Industrial Research	IND	Jr.
21.	P C Quest	IND	Jr.
22.	University News	IND	Jr.
23.	IASLIC Bulletin	IND	Jr.
24.	Pure and Applied Mathematics Science	IND	Jr.
25.	INFOLIB	IND	Jr.

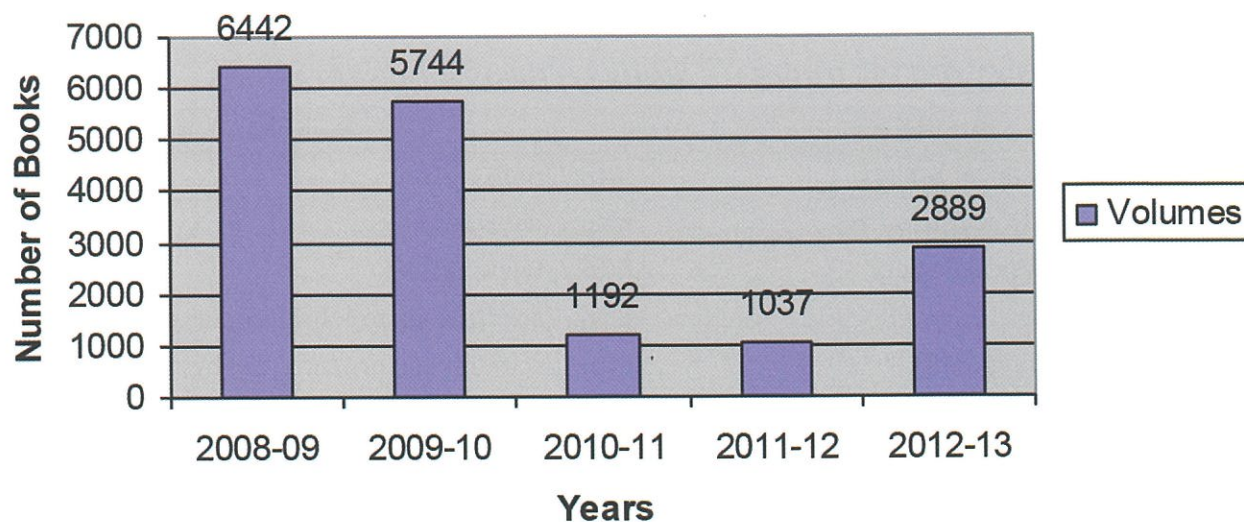
**ABSTRACT/ FULL TEXT ONLINE JOURNALS/BOOKS/THESIS & DISSERTATIONS**

S. No	Publishers	Web Link
1.	American Chemical Society	<a href="http://pubs.acs.org">http://pubs.acs.org</a>
2.	American Institute of Physics	<a href="http://www.aip.org">http://www.aip.org</a>
3.	American Physical Society	<a href="http://www.aps.org">http://www.aps.org</a>
4.	ASCE Journals	<a href="http://scitation.aip.org/browse/by_publisher#ASCE">http://scitation.aip.org/browse/by_publisher#ASCE</a>
5.	ASME (including AMR)	<a href="http://scitation.aip.org/browse/by_publisher#ASME">http://scitation.aip.org/browse/by_publisher#ASME</a>
6.	Annual Reviews	<a href="http://www.annualreviews.org">http://www.annualreviews.org</a>
7.	Bentham Science	<a href="http://www.ingentaconnect.com/content/ben">http://www.ingentaconnect.com/content/ben</a>
8.	Cambridge University Press	<a href="http://journals.cambridge.org">http://journals.cambridge.org</a>
9.	Cambridge Online Books	<a href="http://ebooks.cambridge.org">http://ebooks.cambridge.org</a>
10.	Ebrary(online Books)	<a href="http://site.ebrary.com/lib/bitmesra">http://site.ebrary.com/lib/bitmesra</a>



S. No	Publishers	Web Link
11	EBSCO Databases(Business Source Elite, Art & Architecture, Hospitality & Tourism Complete)	<a href="http://search.epnet.com">http://search.epnet.com</a>
12.	Economic & Political Weekly	<a href="http://www.epw.in">http://www.epw.in</a>
13.	Elsevier's Science Direct	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
14.	Emerald (Management)	<a href="http://www.emeraldinsight.com">http://www.emeraldinsight.com</a>
15.	GALE Gale Cengage Learning	<a href="http://lr.cengage.co.in">http://lr.cengage.co.in</a>
16.	IEL Online (5 Users)	<a href="http://ieeexplore.ieee.org/Xplore">http://ieeexplore.ieee.org/Xplore</a>
17.	Institute of Physics	<a href="http://iopscience.iop.org/journals">http://iopscience.iop.org/journals</a>
18.	ISID (Bibliographic Database)	<a href="http://isid.org.in">http://isid.org.in</a>
19.	JCCC (Bibliographic Database)	<a href="http://www.jccc-ugcinfonet.in">http://www.jccc-ugcinfonet.in</a>
20.	McGraw Hills Access Engineering	<a href="http://www.digitalengineeringlibrary.com">www.digitalengineeringlibrary.com</a>
21.	Oxford University Press	<a href="http://www.oxfordjournals.org">http://www.oxfordjournals.org</a>
22.	Project Muse	<a href="http://muse.jhu.edu/browse">http://muse.jhu.edu/browse</a>
23.	ProQuest Dissertation & Theses	<a href="http://search.proquest.com">http://search.proquest.com</a>
24.	Royal Society of Chemistry	<a href="http://www.rsc.org">http://www.rsc.org</a>
25.	SciFinder Scholar (Bibliographic Database)	<a href="http://cas.org/products/scifindr/index.html">http://cas.org/products/scifindr/index.html</a>
26.	SIAM	<a href="http://epubs.siam.org">http://epubs.siam.org</a>
27.	Springer Link	<a href="http://www.springerlink.com">http://www.springerlink.com</a>
28.	Taylor & Francis	<a href="http://www.tandfonline.com">http://www.tandfonline.com</a>
29.	Web of Science (Bibliographic Database)	<a href="http://apps.webofknowledge.com">http://apps.webofknowledge.com</a>
30.	Wiley-Blackwell	<a href="http://onlinelibrary.wiley.com">http://onlinelibrary.wiley.com</a>

### Books Procurement Last 5 Years



Year wise Books Procurement (including Book Bank)

## Library Team

Name	Designation
• Dr. Vijayakumar M	Librarian – Acting
• Ms Rita Sinha	Assistant Librarian
• Mr. Debojyoti Nath	Information Scientist
• Ms. Shamida Lakra	Assistant Librarian
• Mr. Mohan Mahto	Senior Library & Information Assistant
• Mr. Amitabh Kumar Manglam	Library & Information Assistant
• Mr. Brajesh Kumar	Library & Information Assistant
• Ms. Rameswari Pandey	Library & Information Assistant

## Library Statistics of 2012-13

- Total Books Added : Title - 787 & Volumes - 2889
- Total Journals Procured : Print - 25 & Online – 17,947
- Total Number of Membership enrolled : 1,448
- Total Number of Books Issued : 75114
- Total Number of Books Returned : 72667
- New Implementation : 20 New Computers procured for Digital Library.

## Library Achievements:

1. Workshop Director for 3 days national workshop training on “Open Source Software: A Tool to Manage Research Outputs” during 23-25 September 2013, held at Central Library, Birla Institute of Technology, Mesra, Ranchi, Jharkhand, INDIA (NASSDOC-ICSSR Sponsored).
2. Workshop Director for 3 days national workshop training on “Expansion in Developing and Organising Digital Information Resources” during 24-26 September 2012, held at Central Library, Birla Institute of Technology, Mesra, Ranchi, Jharkhand, INDIA (NASSDOC-ICSSR Sponsored).

## STAFF ACHIEVEMENTS

### DR. VIJAYAKUMAR M

#### Invited Lectures

1. Open Source for Software for Library Automation. Training Course on Creating of Electronic Library for Collection of Information. On 28<sup>th</sup> August 2012. Conducted by Indian Audit and Accounts Department, Regional Training Institute, Government of India, Ranchi, Jharkhand.
2. Koha: Open Source Software for Library Automation. Training Course on Creating of Electronic Library for Collection of Information. On 28<sup>th</sup> August 2012. Conducted by Indian Audit and Accounts Department, Regional Training Institute, Government of India, Ranchi, Jharkhand.
3. Strategies for Promoting Digital Information Resources. 3 days National Training workshop on “Expansion in Developing and Organising Digital Information Resources” during 24-26 September 2012 conducted by central library, Birla Institute of Technology, Mesra, Ranchi.
4. Empowerment of Library Users through IT Literacy. Two days national seminar on “Information Literacy in Promoting E-Resources and its Empowerment for LIS Professionals” during 2-3 November 2012 conducted by Don Bosco Institute of Technology, India, Karnataka, India



5. Public libraries as a community information centers. 7 days National Library week during 14-20 November 2012 conducted by Chitradurga District Central Library, Chitradurga, Karnataka, India

### **Publications**

1. Vijayakumar M, MARC: A Tool to share bibliographical information of Jharkhand Libraries, INFLOIB, 2013, Vol 6 (1-2) p 6-9 (ISSN 0974686)
2. Vijayakumar M and Kenchappa, A Comparative Analysis of Web Based Search Engines. ISST Journal of Advances in Librarianship, 2012, Vol. 3 (2) p 27-36, [ISSN: 0976-9021]
3. Vijayakumar M, Sunil Singh Chandel, Vijalanand SK, Assessment of Training needs for R&D Library Professionals: A Survey. INFOLIB: A Quarterly bulletin, 2012, Vol. 5, (1-2), p 19-22 [ISSN: 0974-686]
4. Vijayakumar M and Kannappanavar, BU, Assessment of ICT Skills among R&D Library Users: A Survey. ISST Journal of Advances in Librarianship, Voll. 3, (1), 2012, p 51-55 [ISSN: 09769021]
5. Vijayakumar M, Webometric analysis of university websites in Srilanka. International Journal of Information Dissemination and Technology, 2012,2(3), 77-81 [ISSN 2229-5984 (P) 2249-5576 (e)]
6. Vijayakumar M., B.U. Kannappanavar and Santosh Kumar K.T. Webometric Analysis of Web Presence and Links of SAARC Countries. DESIDOC Journal of Library & Information Technology. Vol 32, No 1, 2012. [ISSN: 0976-4658]
7. Exploring the electronic journals: A Survey. Paper presented in International Conference on Library, Information and Knowledge Management conducted by Nepal Library Association during 29-30 December 2012 at Kathmandu, Nepal
8. Use and Perception of IT Applications by R&D Library Professionals: A Survey, paper presented in the UGC Sponsored 4th KSCLA National Conference on Impact of Information Technology on Library Services during 27th 28th December, 2013, Shimoga, Karnataka, India

### **Conferences/ Workshop Participated**

1. International Conference on Library, Information and Knowledge Management conducted by Nepal Library Association during 29-30 December 2012 at Kathmandu, Nepal
2. National conference on "Trends in Developing and Managing E-Resources in Libraries" on 25-26 May 2012, conducted by Visvesvaraya Technological University, Belgaum, Karnataka
3. UGC Sponsored 4th KSCLA National Conference on Impact of Information Technology on Library Services during 27th 28th December, 2013, Shimoga, Karnataka, India
4. National Seminar on Library and Information Services at Every Doorstep of Jharkhand on 26<sup>th</sup> August 2012 conducted by Jharkhand Information and Library Association at Ramanjuam Institute of Technology, Ranchi, Jharkhand, India
5. National Workshop on Web-Scale Discovery Services: Single Window Access to Library e-Resources held at Central Library IIT Kharagpur on 10th Jan 2014.

## TRAINING & PLACEMENT DIVISION

### CAMPUS PLACEMENTS 2012-013

In the Campus Recruitment Programme 2012-13, the recruiters, yet again, showed their confidence and enthusiasm about hiring BIT, Mesra students and the year ended with visits of as many as 100 recruiters. The sector-wise break-up of the recruiters showed some interesting trends as compared to the earlier years. Most of the trends, expectedly, are the result of the economic slowdown which has impacted most sectors of the Industry.

The Automobile and Infrastructure sector showed a downward trend in terms of the offers per recruiters, the recruiters from the Engineering sector showed an upward growth with the recruiters increasing to almost double as compared to the last year.

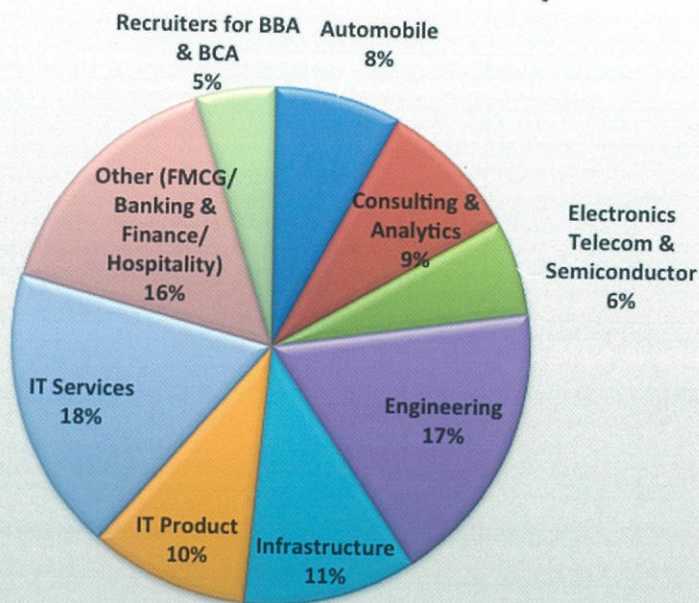
The number of recruiters from the Consulting & Analytical and IT Services sector came down expectedly and IT Services, the largest, in terms of overall numbers picked from across all Tech campuses, recruited lesser numbers overall. The reduction here was apparent more in the PG streams as MCA and ME/M.Tech as compared to the earlier years.

The BE students, a total of 391 eligible students, received a total of 506 offers. The highlight of this year's placement, in line with the earlier years, has been the success of efforts made towards sector specific placements. 90% of the Mechanical Engineering students got offers from Core Engineering companies while the rest chose the high-end Consulting & Analytical and IT companies. Likewise, 85%, 67% and 56% of students from Production, Chemical & Polymer and Electrical Engineering respectively opted for jobs in Core sector.

The slowdown in the Infrastructure sector did reflect in lesser number of core placements for Civil Engineers. However, several of them got placed with leading Consulting & IT sector companies.

The sector-wise break-up of companies which visited the campus during the year is depicted in the graph below.

**Sectorwise Recruiters on Campus**



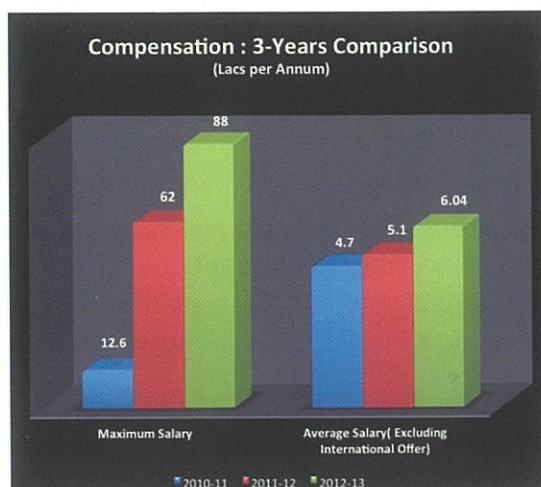


Relationships were established with as many as 22 new recruiters this year while a large number of our regular recruiters revisited the campus this year in spite of overall economic uncertainties..

Overall a total of 1322 offers were generated through the Campus Recruitment process. The number of International offers increased by way of offers from top global recruiters like Facebook and EPIC, USA picking up as many as 9 students.

The Campus Placement Programme was also organized at the BIT, Patna, BIT, Jaipur and BIT, Noida campuses through visits by selected recruiters. The BE campus placements generated the best results from Mesra followed by Jaipur, Patna and Deoghar.

The average salaries went up from 5.05 lakhs last year to 6.04 lakhs per annum this year. The highest salary in Indian rupees was 20.0 lakhs while the highest International offer exceeded US \$1.1 lakh. This has been the highest ever average and top salary fetched by a BIT student.



### **LIST OF RECRUITERS AND NUMBER OF OFFERS (SECTOR-WISE)**

Sector	Company	Offers Made
Automobile	Caterpillar	3
Hero MotoCorp	5	
Honda Scooters *	2	
Mahindra & Mahindra	4	
Maruti Suzuki	8	
Tata Motors	10	
Telcon	1	
Volvo Eicher *	7	
<b>Automobile Total</b>		<b>40</b>
Consulting & Analytics	Accenture	15
D E Shaw *	2	
Directi	6	
EXL Services	13	
Futures First	3	
Goldman Sachs	5	

Sector	Company	Offers Made
MuSigma	13	
Nomura	3	
PWC	11	
<b>Consulting &amp; Analytics Total</b>		<b>71</b>
Electronic, Telecom & Semiconductor	Airtel	2
Emerson Network *	2	
Ericsson India	8	
Freescale	2	
Idea Cellular	4	
LG Electronics	2	
<b>Electronic, Telecom &amp; Semiconductor Total</b>		<b>20</b>
Engineering	Adunik Group	6
Avtec *	3	
Balkrishna Industries Ltd. *	3	
Exide Industries Ltd.	5	
Gmmco Ltd.	8	
IFB	3	
JCAPC *	3	
L&T Ltd.	2	
McNally Bharat	2	
Metalsa	0	
NEI	2	
Reckitt Benckiser	1	
Shahi Exports Pvt. Ltd *	5	
Tata Technologies Ltd.	6	
Tayo Rolls Ltd. *	2	
TCE	4	
Trident Group *	4	
Vedanta	3	
<b>Engineering Total</b>		<b>62</b>
Infrastructure	ACC Ltd.	6
Aspirants	5	
Bharti Infratel	5	
Bhushan Steel	13	
DVC Ltd.	9	
Essel Mining *	2	
IOCL India	7	
L&T ECC.	14	

Sector		Company	Offers Made
Sobha Developers Ltd.		4	
Tata Bluescope *		6	
Tata Steel		12	
Infrastructure Total			83
IT Product		EPIC *	6
Facebook *		3	
Filpkart *		4	
Microsoft		9	
Nagravision		6	
Oracle		15	
Oracle Server		7	
Samsung SEL		9	
Samsung SISO		9	
SAP LAB		6	
IT Product Total			74
IT Services	Amdocs		10
	Appstudioz		2
	Aricent		138
	Atos India		17
	Atos Tech		1
	CA Technologies		5
	Cognizant		284
	Cybage		10
	Headstrong		47
	IBM		202
	IP Infusion *		2
	Mindtree		13
	NIIT Technologies		3
	QA InfoTech *		1
	Sapient		6
	Tectura *		3
	Verizon		38
	Wipro		31
IT Services Total			813
Others (FMCG, Hospitality, Banking & Finance etc.)		Britannia Industries	1
Nestle India Ltd. *		7	
Pensol Ind. *		6	
Jharcraft		4	



Sector	Company	Offers Made
Kaziranga University	0	
Accor Group of Hotels	3	
Dominio's	3	
Ideal Tower by Rivatas	9	
Lemon Tree Hotels	5	
Main Land China	12	
Pride Group of Hotels	10	
The Oberoi Hotel	5	
Axis Bank	2	
Federal Bank *	7	
ICICI Securities	7	
SBI General Insurance *	1	
<b>Others Total</b>		<b>82</b>
Recruiters for BBA & BCA	Aricent	2
Wipro Tech	17	
Wipro BPO	10	
Wipro Wase	48	
Recruiters for BBA & BCA Total		77

\* These companies were the "First time" participants in the Campus Recruitment Programme of BIT.

#### Other Activities:

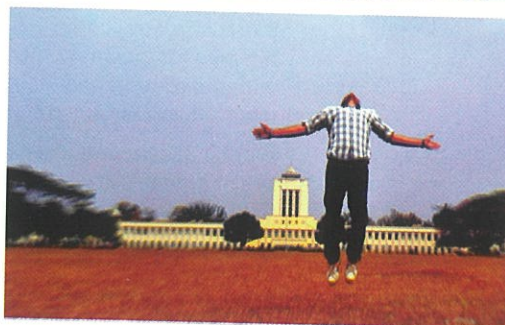
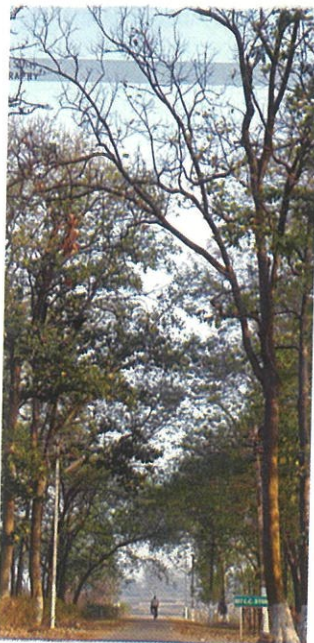
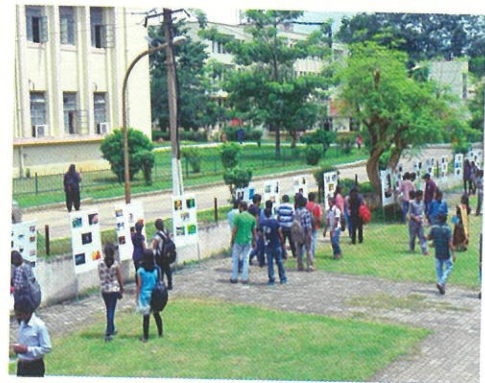
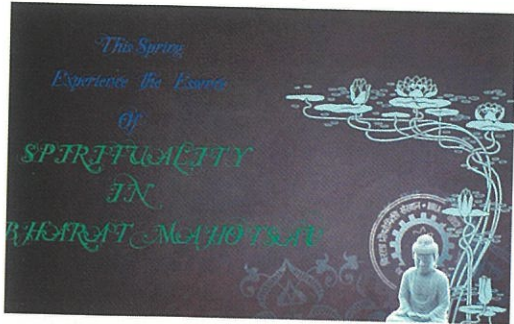
1. The Ericsson 'Empower' Programme for competency building a Certification for ECE students was organised for the third consecutive year.
2. Mahindra 'Igniters Day' was organised at Mesra Campus with events from Auto Quiz, Design Competition, Paper Presentation etc.
3. T&P Division, with Cognizant Technology Solutions organised the 'Cognizant CEO's Challenge' Programme across 3 centres (including Mesra), and the 5 selected students shall be given the opportunity to work on a live project.
4. The Regional Rounds of 'Mahindra Auto Quotient Quiz' was organised at the Mesra Campus.
5. Student Workshops in Technical & Non-Technical areas were organised in collaboration with TCS.
6. The academic interface programme of TCS to give away the Best Student and Best Project Awards consisting of Gold Medals and cash prizes is under process.
7. The NGO 'Tech for India' was invited on campus to interact with the final year students.
8. The Training & Placement Division conducted a PAN-BIT assessment exercise for the pre-final year students. This time through the leading assessment services provider, i.e. Aspiring Minds. The results of the process with the identified areas of improvements were shared with the academic departments and detailed feedback was provided individually to all the students.
9. Subsequently, Competency Development Programme for improvement of soft skills was conducted for UG & PG students (including students from weaker sections) at BIT Mesra in different aptitude subject

areas as well as personality development. The results of this programme have been very encouraging and this has up-scaled under TEQIP Phase II.

10. Other Centres shall be encouraged to conduct such programmes with the same working model for weaker students based on the scores of AMCAT Test and previous academic records.
11. The LG scholarship has been awarded to 1 PG student.
12. An MoU has been finalized for signing with Mahindra & Mahindra Ltd.
13. The Placement Processes was continued uninterrupted even while the normal working of the Institute was disrupted during the first fortnight of January 2013.



## STUDENTS' ACTIVITIES





The calendar of events organised by various students clubs and societies are as follows:

S. No.	Event Name	Club Name	Date	Venue	Event Description
1.	Seminar on "Paper Presentation"	I.E.I (Production)			A seminar on paper presentation techniques & internship opportunities in India and abroad.
2.	Workshop On "Engineering Drawing"				A workshop on Engineering Drawing(ED) exclusively for first years.
3.	Technical Paper Presentation Competition		29/9/13 (Pantheon)		
4.	Design "X"		30/9/13 (Pantheon)		Every team had to design a boat from material provided by the organizers in a time constraint of 2hours. The boat which crossed the water tank (in hydraulics lab) with maximum load in a minimum time was awarded the 1st place.
5.	Fly farthest		29/9/13 (Pantheon)		The participants had to make a paper plane in 30 minutes and the one with longest flight range was the winner.
6.	Technical Paper Presentation competition		15/3/13 (Bitotsav)		A total of 18 entries came out of which 14 papers were selected for final presentation round. It was evaluated by a jury of seven professors from various departments.
7.	Bull's Eye		14/3/13 (Bitotsav)		The teams had to make a catapult using given materials in a 2hrs time and then hit three targets at different distances. The one hitting farther and most accurately got the 1st position.
8.	Sudoku Geek		15/3/13 (Bitotsav)		A Sudoku puzzle game. The team (4 members) which solved maximum number of Sudoku problems of varying difficulty level was the winner.
9.	Industrial Visit to Alcast Pvt. Ltd				
10.	Industrial Visit to Jindal Steel Plant			Patratu	
11.	MATLAB Workshop	I.E.T			The participants were introduced to the basics of MATLAB during the two-day workshop.
12.	Workshop on C/C++				The workshop primarily aimed at providing a head-start to the students for the related subjects in the curriculum.
13.	Two workshops on ARDUINO				The workshops made the participants familiar with the applications of ARDUINO in Robotics with hands-on experience and live demonstrations.
14.	Workshop on Industrial Automation				The focus of the workshop was to introduce the concepts of automation at the industrial level which is of increasing importance in the present scenario.
15.	Workshop On Python				A workshop on Python programming language was held for the computer science enthusiasts.
16.	Workshop on Automobiles				Workshop was conducted by experienced students in the field for the newcomers to make them come to terms with the process of building an automobile, the steps involved and the key concepts behind it.
17.	Adobe Photoshop Workshop				Workshop was organised in which over 70 participants learnt how to use Photoshop.
18.	Workshop on Adobe Flash				The participants learnt to use Flash which has vast applications in web designing, etc.

S. No.	Event Name	Club Name	Date	Venue	Event Description
19.	Workshop on Control Systems				A workshop on Control Systems was held which focussed on the different classes of control systems presently used in industrial production.
20.	Workshop on Digital Image Processing				A workshop on Digital Image Processing was conducted which detailed the image processing concepts and its application in various areas. The participants learnt image processing tools to implement face recognition, etc using MATLAB. Over 40 students attended the workshop.
21.	CIRCUIT ANALYSIS (ANALOGICS)				This technical event was a circuit making contest consisting of 2 rounds: a preliminary written round with basic circuital questions and a final round which tested the practical skills of the contestants with actual circuit components. The event was a huge success in both Pantheon and Bitotsav.
22.	GOOGLE-IT-OUT				This one of a kind technical event witnessed 50 enthusiastic participants using smart techniques to use Google search engine and find out answers to the 30 questions in 30 minutes. The event attracted huge participation and proved to be a success.
23.	BLITZKREIG				This unique event tested the timing, coordination and management of the participants as a team of 5 had to distribute themselves among the five venues with challenging events going on in all the different rooms and then redistribute themselves according to the rules of the game and successfully complete all the five testing events. It was the most widely participated event in both the fests.
24.	Gateway To Robotics (Workshop)	Robolution	15TH - 17TH August '12	LH-1 & 2	
25.	Robolution Induction Test 2012		18th-19th August '12	LH-1 & 2	
26.	I-Robot (Workshop)		5th - 7th October '12	Simulation Lab (R n D)	
27.	Robo-Billiards		30/09/12 (Pantheon)	Near LH-3 & 4	Problem Statement: The aim of the participants was to design a manually operated bot able to play billiards against an opponent bot in accordance with the rules specified in this problem statement.
28.	Robo-Rash		29-09-2012 (Pantheon)	R&D building 2nd floor	Problem Statement: To design an autonomous line-follower bot to cruise through the given arena in shortest possible time.
29.	Entanglement		15-03-13 (Bitotsav)	LH-3-4	Problem Statement: To design an automatic line-follower robot capable of traversing a given "mesh", taking the longest possible path.
30.	AGNI-SHAMAK		14-03-13 (Bitotsav)	Near IC	Problem Statement: To design a manually operated bot that is capable of moving on water surface and extinguish candles.
31.	IRIDESCENT BLOCKS		16-03-13 (Bitotsav)	LH-3	Problem Statement: To design an autonomous line follower bot which can digitally process images to identify the color and shape of the various objects encountered on the way. This information needs to be displayed on an LCD. The bot which can accomplish the task in the shortest time will be declared winner.



S. No.	Event Name	Club Name	Date	Venue	Event Description
32.	EMBEDDED SYSTEMS WORKSHOP		27th Jan–1st Feb'13 (6 days)	CAD Lab (Mech Dept) & Circuit Simulation Lab(RnD)	It was a 6 day workshop with emphasis on concept building. Demonstration Bots were also shown will proper explanation of its working for DTMF, RF, ADC and Accelerometer interfacing. Line sensors were explained along with its design and constructional features.
33.	Team PRATYUNMIS				Every year, the tasks to be completed during the competition is based on a certain theme. This year's Robocon was themed as "The Green Planet". The Problem Statement in Brief: This year's problem statement required the functioning of 2 different robots working in co-ordination with each other within a given frame of time, in which one of the robots was to be controlled manually by an operator and thus the "Manual Bot" and the other being completely pre-programmed, the "Autonomous Bot". The basic task that had to be performed was to pick and place certain cylindrical objects called "Leaf" at certain locations, called "Rings", in the main Arena. The final task that was to be completed by the Team was to throw an object called the "Bud" onto a circular platform called the "Moon" using the Manual Bot, thus achieving "The Green Planet".
34.	Outgoing Batch Farewell	BIOTS		Community Hall	Conducted the farewell ceremony for outgoing batches of 2012
35.	Prakriti				A biotech quiz, in Pantheon 2012
36.	Frankenstein				An event in Bitotsav 2013
37.	Game of Life				An event in Bitotsav 2013
38.	Mentorship Programme				Initiated a mentorship program for members of BIOTS.
39	Mock CAT Workshop	IEEE			Mock cat workshop was organised in association with BYJU classes which was open to students from all years and gave them a real-world exposure of the CAT exam, for applying to some of the best management institutes in India and the world.
40	Workshop on Search Engine Optimization				The workshop taught students the tips and tricks behind the working of major search engines like Google and how to make a website rank higher in their search results
41	Workshop on Adobe Photoshop				A workshop on Adobe Photoshop, one of the most popular image editing and creating software's currently used, was organized. The basics of the software including concepts of layers, masks and filters, were taught and advanced concepts too.
42	Aptitude workshop				A workshop was done to how to clear aptitude tests in CAT and how to handle with Group discussions. Students were taught tricks to crack aptitude questions and some papers were also given as practice.
43	Workshop on Website Development				The workshop taught basics behind Word Press, one of the most popular content management and blogging systems in the world and how to customize the features available to get a professional website up and running in no time, was taught. Students who took part in workshop were able to build a website in less than 10 minutes.
44	Ethical hacking				Students were offered Ethical Hacking and Information security workshop. Course curriculum had understanding of hacker's mind, Attacks on E-mails, Virtualization, Trojans and hacking, Cyber Laws. Each student has been certified by AISEC, IIT Kharagpur.

S. No.	Event Name	Club Name	Date	Venue	Event Description
45	Workshop on c/c++ and DS				A workshop on c/c++ and DS was conducted to create basic awareness of programming to freshers of BIT Mesra who were new to programming field. Students were made to do basic programs themselves they were given a practical experience of programing.
46	PHP and MySQL Workshop				It was started with the basics of using PHP and MySQL and then explained how to combine the two softwares to create dynamic and interactive webpages at a professional level. 80 students have taken part in workshop.
47	Android Workshop				Android applications are the rage of the day. Developing an android application is a skill you can be paid for. All these students had to know is basics of C and they can get started with making their own application. They were given software package include OS, e-books and presentations.
48	Digital Imaging & Photography Workshop				IEEE Student Branch –BIT Mesra and Ethereal Colors organized Workshop on Digital Imaging and Photography at BIT Mesra. Workshop has been followed by a submission event in which the students have submitted three photographs based on what they have learnt.
49	Cash Flow (Pantheon)				Cash flow was an event that resembled present day money world with all the components like liabilities, properties, shares etc. were students has to buy and sell with the limited money given to them. In addition to this, there were also rounds in which as per current circumstances the value of their share went up and down. Winner was decided as the student having highest property value at the end of competition.
50	Da Vinci Code (Pantheon)				Da Vinci code was an event in which students had to solve different puzzles. There were five rounds in the event, each in a different class; if a student has finished any puzzle correctly, he goes to next room and so on. Student who finishes all the puzzles in minimum time is considered as winner.
51	Tech Charades (Bitotsav)				It was to check the knowledge of students about the new ongoing technologies. It consists of three rounds: a written test, 20 questions on new upcoming technologies had to be answered. The final round has three parts in which video, audio were played simultaneously and they had to relate them with a pic and find the technology.
52	UP IN THE AIR (Bitotsav)				In this event, student has to make a structure that can fly in air. Students were given a sheet of thermocol, tape, cutter etc. Teams will need to design an aerodynamic and structurally stable flight-taking object using common items. The design was tested on the range it covers in flight as well as other parameters. Winner was designed on time of flight, distance covered and stability of their structure.
53	SAE Registration	SAE			Registration for the 2012 batch students was conducted in the month of July/ August. A total of 120 students joined the SAE student chapter this year.
54	Team Srijan				Team Srijan participated in SUPRA SAE India 2012 held at the Buddh International Circuit, Noida from 5th to 9th September, 2012. Their car was adjudged the 2nd lightest car in the competition.

S. No.	Event Name	Club Name	Date	Venue	Event Description
55	Team Firebolt 3.0				Team Firebolt participated in BAJA SAE India 2013 held at NATRAX, Pithampura, Indore from 14th to 17th February, 2013. They won the 3rd prize in the ANSYS Best CAE Event. Their car was among the 20 teams that cleared the Technical Inspection and completed the 4 hr. Endurance race out of 120 teams that participated in the event.
56	Workshop on Basics of Automobile Engineering				Team Firebolt conducted a workshop on basics of automobile engineering and fundamentals of designing an All-Terrain Vehicle (ATV) for the 2011/2012 batch students. The workshop was attended by around 50 students from all branches.
57	Workshop on the Basics of Motorsports				Team Srijan in association with IET conducted a workshop on the basics of motorsports and fundamentals of designing a Formula car for the 2012 batch students. The workshop was attended by around 50 students.
58	Workshop about the SAE manufactured car				Team Firebolt conducted a 2-day workshop for the 2011/2012 batch students to familiarize them with the BAJA SAE India event and to display the manufactured car and explain the various parts and mechanisms of the car. It was attended by over 60 students.
59	Auto Quiz				This was a quiz on automobiles in which teams of 2 had to participate. The event saw enthusiastic participation from around 30 teams.
60	Save the Egg				This was team event in which teams of 3 were given cutout sheets of plastic and thread to make a parachute that was attached to a plastic cup in which was kept an egg. The entire thing was dropped from a height and the teams that saved the egg and took the most time to reach the bottom were the victors. This event saw a massive participation from over 70 teams.
61	Invent a thing				This was a team event in which teams of 3 had to present an innovative idea on anything related to the field of automobiles. This event had a huge participation.
62	Rube Goldberg				This was a team event in which teams of 3 had to use the materials given to transport a ball from one point to another in the maximum possible time akin to a Rube Goldberg mechanism. This event was widely participated in and was a success.
63	Auto Quiz				Teams of 2 participated in this quiz based on automobiles. The quiz was held in two stages. The written prelims saw a huge participation from over 50 teams. From the written prelims, 6 teams qualified for the final stage round.
64	Workshop on Disaster Management	EPAC	Septamber '12	Campus	Conducted a three-day 'Disaster Management Training program' in the college campus itself in association with All Rounder Adventure, a leading sports organization that conducts adventure activities, disaster management and Himalaya camps for school, colleges and corporates. Events included: Leadership Games, Rappelling, Ladder Bridge, Commando Net, Commando Bridge, Monkey Crawling, Jummaring and Shooting & Archery.
65	Pottery Workshop				EPAC organized a "Pottery Workshop" during Pantheon '12 and the exhibits were also displayed

S. No.	Event Name	Club Name	Date	Venue	Event Description
66	Jharkhand Science and Environment Festival		2/12/12		Around 30 schools from and outside Ranchi participated in the Festival which included events such as Science Exhibition, Debate, Quiz and Informal Events at IC - all based around the central theme of Environment Protection and Awareness.
67	E-Walk		14/3/13 (Bitotsav)		E-Walk was basically designing an attire from scrap and then a fashion parade was conducted. Almost 30 teams participated in this event with BIT Oman hailing as the winner of this event. The event was graced by the kind presence of Respected Dean sir, Prof. Gopal Pathak.
68	Hari Potter		15/3/13 (Bitotsav)		Hari Potter, was a series of three events, which included a race to fill up buckets with water taken in a freshly-made pot, slow cycling race and a sack race. 52 teams participated in this event.
69	R3 (Re-use, Re-innovate & Recreate)		16/3/13 (Bitotsav)		R3 witnessed some of the best creative models made out of junk on the given theme 'Heritage India'. 30 teams participated in this event. The winning team made puppets out of junk materials and even, displayed a puppet show.
70	The Fringe	ECESoc	30/9/12 (Pantheon)		This event was organized in the Inter College Fest PANTHEON'12. The event focused on testing the problem solving skills of the students in varied topics such as Electricity & Magnetism and Analog & Digital Electronics
71	The Zonal Electro Magnetics Olympiad		6/1/13		It was organized in association with IEEE Kolkata Chapter. The Olympiad witnessed participation of students from many Engineering colleges of Bihar & Jharkhand.
72	Inventronix		15/3/13 (Bitotsav)		This event was organized in BITOTSAV'13". This event required the participants to design efficient and cost effective circuits/models for specified problems. The event witnessed good participation with the students showcasing their innovative skills in electronics circuit designing.
73	Code Quotient Matches (CQMs)	ACM			Weekly intra-college programming contests conducted every Saturday night from 10:00 PM to 1:00 AM (Sunday). Participants can compete in teams of upto 3 people and can code from their own hostel rooms. The Aurora Online Judge is used to distribute the problems and submit solutions, which if correct, result in points being added to that team's account.
74	Data Structures & Algorithms Workshop		28/7/12		
75	Introduction to Coding Workshop		16/8/12		
76	Number Theory & Game Theory Workshop		1/9/12		
77	The Basics of C Programming Workshop		1/9/12 & 2/9/12		
78	Recursion & Dynamic Programming Workshop		6/9/12		

S. No.	Event Name	Club Name	Date	Venue	Event Description
79	Bug Hunt (Pantheon)		29th September 2012		a technical treasure hunt involving coding puzzles, where the solution for each level pointed to the location of the next.
80	CodeZilla (Pantheon)		29/9/12 (Prelims) & 30/9/12 (Finals)		an algorithmic programming contest consisting of a written test followed by an on-site coding round
81	Byte (Pantheon)		30/9/12		A unique subjective test in which participants were required to figure out real-world programming problems
82	Bug Hunt (Bitotsav)		16/3/13		A technical treasure hunt involving coding puzzles, where the solution for each level pointed to the location of the next.
83	Build from Scratch (Bitotsav)		15/3/13		An extended on-site software development contest with no restriction on the technology that could be used.
84	Hackathalon (Bitotsav)		16/3/13		A unique contest where participants were required to hack into a designated server.
85	Overnite Coding (Bitotsav)		16/3/13		A global algorithmic programming contest conducted on CodeChef.

## ALUMNI EVENTS DURING THE YEAR 2012-13

### ALUMNI RELATIONS GROUP

The Alumni Relations Group supported the organisation of the Golden Jubilee and Silver Jubilee Alumni Meets at Mesra. Both the Golden Jubilee and Silver Jubilee Batches celebrated reunions attended by a large number of alumni from all over the globe.

#### Prominent alumni events organised during the year 2012-13 were:

- The 1962-66 Batch of Alumni celebrated their "Golden Jubilee Reunion" at the BIT Mesra Campus from the 16<sup>th</sup>-18<sup>th</sup> of November 2012.
- First Ever Silver Jubilee Alumni Meet of the MBA Batch of 1985-87, celebrated on December 14<sup>th</sup> – 15<sup>th</sup>, 2012.
- The 1983-87 Batch celebrated their "Silver Jubilee Reunion" at the BIT Mesra Campus from the 25<sup>th</sup> -26<sup>th</sup> December 2012.
- The 1957-62 Batch celebrated their "Golden Jubilee Reunion" at Ranchi with a day's activity at the Mesra Campus from the 25<sup>th</sup> -26<sup>th</sup> December 2012.



## **ANNEXURES**



## MEMBERS BY REPRESENTATIVE

### **Shri R.D. Sahay**

Director (Central University)  
Dept. of Higher Education  
Shastri Bhawan, New Delhi- 110 001

### **Prof. R. P. Kaushik**

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### **Shri H. K. Mittal**

Adviser & Head (NEB)  
Department of Science & Technology, Govt. of  
India  
New Delhi- 110016

### **Dr. Pradipta Banerjee**

Director  
IIT, Roorkee- 247 667

### **Dr. A. K. Pandey IAS**

Additional Chief Secretary  
Department of Science & Technology Govt. of  
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Ranchi

### **Shri S. S. Jajodia Ji**

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Kolkata - 700 019

### **Dr. P. K. Barhai**

Vice-Chancellor  
B.I.T, Mesra, Ranchi

## ALUMNI MEMBERS

### **Dr. H. S. Sagar**

Director

### **Sant Baba Bhag Singh**

Institute of Engineering & Technology  
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Jalandhar 144033

### **Shri D. Sahay**

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## ANNEXURE – I

### MEMBERS OF THE GENERAL COUNCIL

#### I. Founder Members

##### **Shri C.K. Birla**

Chairman, Board of Governors  
Birla Tower (9<sup>th</sup> Floor)  
25, Barakhamba Road  
New Delhi- 110 001

##### **Shri S.L. Bhatner**

C/o Hindustan Motors Ltd.  
10<sup>th</sup> Floor, Birla Building  
911, R.N. Mukherjee Road  
Kolkatta- 700 001

##### **Dr. A. K. Chatterjee**

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Kolkatta

##### **Shri Sarosh Ghandy**

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Bangalore-560 025

##### **H. E. Dr. A. R. Kidwai**

Government of Haryana  
Raj Bhavan, Chandigarh

##### **Shri Rusi Modi**

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Kolkatta- 700 027

##### **Shri D. N. Patodia**

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DLF City Phase-II  
Gurgaon- 122 001

##### **Dr. Karan Singh**

3, Nyaya Marg  
Chanakyapuri  
New Delhi

#### II. Life Members

##### **Dr. H. C. Pande**

1197, 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. Oman Bin Abdul Muniem Al-Zawawi**

Oman Zawawi Establishment (OMAFST)  
P.O. Box. - 879  
P.C. 113, MUSCAT  
Sultanate of Oman

#### III. Corporate Members

##### **Shri Rohit Saboo**

Mis National Engineering Industries Ltd.  
Khatipura Road  
Jaipur- 302 006

##### **Shri M. L. Pachisia**

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Kolkatta- 700 001

##### **Dr. P Ghosh**

Mis Birla Science & Technology Centre  
Stature Circle  
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Kolkatta- 700 001

##### **Shri T. E. S. Vardhan**

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## ANNEXURE - II

### MEMBERS OF THE BOARD OF GOVERNORS

**Shri C. K. Birla**

Chairman  
Birla Tower (9<sup>th</sup> Floor)  
25, Barakhamba Road  
NEW DELHI- 110001

**Shri R. D. Sahay**

Nominee of MHRD  
Director (Central University)  
Govt. of India  
Dept. of Higher Education  
Shastri Bhawan  
NEW DELHI- 110 001

**Dr. (Mrs.) Renu Batra**

Nominee of UGC  
Joint Secretary  
University Grants Commission  
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**Dr. Pradipta Banerjee**

Nominee of AICTE  
Director  
Indian Institute of Technology  
Roorkee - 247 667

**Dr. A. K. Pandey, IAS (Ex-Officio)**

Additional Chief Secretary  
Dept. of Science & Technology  
Government of Jharkhand  
Nepal House  
Doranda, RANCHI

**Shri K. Vidyasagar, IAS (Ex-Officio)**

Principal Secretary  
Department of Human Resource Development  
Government of Jharkhand  
Project Bhawan, Dhurwa, RANCHI

**Dr. K. K. Khandelwal, I. A. S. (Ex-Officio)**

Commissioner  
South Chhotanagpur Division,  
Jharkhand, RANCHI

**Shri R.S. Poddar, I. A. S.**

Nominee of the Chancellor  
Principal Secretary to  
His Excellency the Governor of Jharkhand  
Raj Bhawan, RANCHI

**Shri M.L. Pachisia**

Nominee of HTC  
9/1, R.N. Mukherjee Road  
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**Shri Rohit Saboo**

Nominee of HTC  
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**Dr. P. K. Barhai**

Vice Chancellor  
BIT Mesra, Ranchi

**Dr. D. Jairath**

Institute Faculty  
Professor, BIT, Mesra, RANCHI

**Mr. Prem Prakash**

Institute Faculty  
Assistant Professor  
BIT, Mesra, RANCHI

**Shri D.N. Patodia**

Nominee of General Council  
45, Akash Neem Marg  
DLF City, Phase"  
GURGAON - 122 001

**Dr. P. Ghosh**

Nominee of the General Council  
M/s. B.M. Birla Science & Technology  
Statue Circle, JAIPUR - 302005



## ANNEXURE - III

### MEMBERS OF THE FINANCE COMMITTEE

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NEW DELHI- 110 001

**Dr. P. K. Barhai**

Vice Chancellor, BIT, Mesra  
RANCHI

**Prof. Jose Varghese**

Professor of Eminence  
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(Deemed University)  
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**Shri R. S. Poddar, IAS**

Principal Secretary to the Governor  
Governor Secretariat  
Raj Bhawan, RANCHI

**Col R. K. Verma (Retd)**

BIT, Mesra  
RANCHI- 835 215

**Shri Rohit Sa boo**

Mis National Engineering Industries Ltd.  
JAIPUR - 302017

**Shri S. S. Jajodia**

Honorary Treasurer, BIT, Mesra  
78, Syed Amir Ali Avenue  
KOLKATA-700 019

## ANNEXURE - IV

### THE WORKS COMMITTEE

**Dr. Gopal Pathak**

Chairman

Dean (Admin & Campus Development)

**Dr. (Mrs) Manjari Chakraborty**

Member

Professor & Head

Department of Architecture

**Mr. A. K. Singh**

Member

Dy Comptroller

**Mr. G. K. Sinha**

Member

Sr. Engineer

Planning & Development

## ANNEXURE - V

## TECHNICAL COUNCIL

S. No.	Members of the Technical Council
1.	Dr. P.K. Barhai, Vice Chancellor
2.	Dr. J.K. Prasad, Professor, Space Engg. & Rocketry
3.	Dr. N.C. Mahanti, Professor Emeritus
4.	Dr. D. Sasmal, [Dean (Admn. & Acad. Coord.)]
5.	Dr. D. Jairath, HoD, Appl. Physics
6.	Prof. R.K. Narayan, Professor, Electrical & Electronics Engg.
7.	Dr. G. Sahoo, HoD, Information Technology
8.	Dr. P.C. Joshi, Dean (PG & Doctoral Research)
9.	Dr. (Mrs.) Mandira Mukherjee, HoD, Chemical & Polymer Engg.
10.	Dr. Gopal Pathak, Dean (Campus Dev. & Admn.)
11.	Dr. R. Suresh Kumar, HoD, Computer Sc.& Engg.
12.	Prof. A.K. Ray, HoD, Appl. Mechanics
13.	Dr. (Mrs.) Usha Jha, HoD, Appl. Chemistry
14.	Dr. (Mrs.) M. Chakraborty, HoD, Architecture
15.	Dr. P.R.P. Verma, HoD, Pharm.1 Sciences
16.	Dr. S.K. Bose, In-charge, Management
17.	Dr. (Mrs.) Nisha Gupta, Assoc. Dean (Sponsored Research)
18.	Dr. A.S. Vidyarthi, HoD, Biotechnology
19.	Dr. S.K. Ghorai, HoD, Electronics & Comm. Engg.
20.	Dr. Swapan Kr. Konar, Professor, Appl. Physics
21.	Dr. Nilanchal Patel, In-charge Remote Sensing
22.	Dr. Balram Singh, HoD, Civil Engg.
23.	Dr. S.K. Chakraborty, HoD, Appl. Maths.
24.	Dr. B.N. Sinha, Professor, Pharm. Sciences
25.	Prof. Anand Kumar Sinha, Dean (Students)
26.	Dr. Arbind Kumar-I, HoD, Mech. Engg.
27.	Dr. Kunal Mukhopadhyay, Professor, Biotechnology

S. No.	Members of the Technical Council
28.	Dr. Utpal Baul, Professor, Management
29.	Dr. Amar Nath Jha, I/c. Lalpur Ext. Centre
30.	Dr. Subir Samanta, Professor, Pharm. Science
31.	Dr. S. Jha, Professor, Pharm. Science
32.	Dr. D.K. Mohanta, Professor, EEE
33.	Dr. Manju Bhagat, Professor, Management
34.	Dr. Shradha Shivani, Professor, Management
35.	Dr. R.C. Jha, Professor, EEE
36.	Dr. T. Ghose, HoD, EEE
37.	Dr. Bijay Kr. Singh, HoD, Prod. Engg.
38.	Dr. S.K. Jain, Controller of Examinations
39.	Dr. A.P. Krishna, Professor, Remote Sensing
40.	Dr. Jeganathan Chockalingam, Professor, Remote Sensing
41.	Dr. Rajeev Ranjan Sahay, Professor, Civil Engg.
42.	Dr. N.R. Mandal, Professor, Architecture
43.	Dr. Vinay Sharma, Professor, Prod. Engg.
44.	Dr. (Mrs.) Sunita Keshri, Professor, Appl. Physics
45.	Dr. R.N. Gupta, Professor, Pharm. Science
46.	Dr. Sreekanta Paul, Professor, ECE
47.	Dr. Vibha R. Gupta, Professor, ECE
48.	Dr. B.B. Das, Research Professor
49.	Dr. Sudeshna Chakraborty, Professor, Civil Engg.
50.	Dr. Arvind Kumar-II, Professor, Mech. Engg.
51.	Dr. Bimal Kumar Mishra, Applied Mathematics
52.	Sri M.P. Chopra, In-charge, Food Processing & Technology
53.	Mr. P. Srivastava, In-charge, HMCT
54.	Sri B.B. Pant, Dean (CPD)
55.	Sri D.K. Jain, Director, University Polytechnic
56.	Registrar, Member Secretary

## CHANCELLOR'S NOMINEES

### 1. Engineering :

**Shri Siddh Nath Singh**

B-203, Siddhi Vinayak Apartment 2480534  
Behind Hotel Yuvraj Palace, Doranda  
RANCHI – 834 002.

### 2. Science :

**Dr. Madhukar S. Bhat**

A-3 New A.G.  
Co-operative Colony,  
Kadru, RANCHI.

### 3. Humanities :

**Dr. Krishna Kumar**

"Ashray"  
30, Kalibabu Street  
Behind Civil Court  
Ranchi – 834 001.

## ANNEXURE - VI

## HEAD OF THE DEPARTMENT

S. No.	Name	Department
1.	Dr. (Mrs.) Manjari Chakraborty	Arch itecture
2.	Dr. (Mrs.) Usha Jha	Applied Chemistry
3.	Dr. S. K. Chakraborty	Applied Mathematics
4.	Prof. A. K. Ray	Applied Mechanics
5.	Dr. O. Jairath	Applied Physics
6.	Dr. Kunal Mukhopadhyay	Biotechnology
7.	Dr. Balram Singh	Civil Engg.
8.	Dr. (Mrs.) Mandira Mukherjee	Chemical & Polymer Engg.
9.	Dr. R. Sukesh Kumar	Computer Science & Engg.
10.	Dr. S. K. Ghorai	Electronics & Communication Engg.
11.	Dr. T. Ghosh	Electrical & Electronics Engg.
12.	Mr. Praveen Srivastava	HMCT (In Charge)
13.	Dr. G. Sahoo	IT
14.	Dr. S. K. Bose	Management
15.	Dr. Arbind Kumar	Mechanical Engg.
16.	Dr. P. R. P. Verma	Pharmaceutical Sciences
17.	Dr. Bijay Kumar Singh	Production
18.	Dr. N. Patel	Remote Sensing
19.	Dr. J. K. Prasad	Space Engg. & Rocketry
20.	Dr. Gopal Pathak	Environmental Science & Engg. Group
21.	Dr. Rakesh Kumar Sinha	Biomedical Instrumentation (Incharge)



## ANNEXURE - VII

### ADDRESS OF THE CAMPUSES

S. No.		S. No.	
1.	<b>BIT Off Campus, Allahabad</b> B-7, Industrial Area P.O. TSL, Naini Allahabad – 211 010 (U.P) Phone :0532- 2686668/2687363 Fax: 2687554	6.	<b>BIT Off Campus, NOIDA</b> A-7, Sector-1 Noida-201301 Phone : 0120-2543484/2553661/ 3662 Fax: 2554146
2.	<b>BIT Off Campus, Deoghar</b> Jasidih Deoghar- 814132 Fax : 06432- 292565	7.	<b>BIT Off Campus, Patna</b> Near Patna Airport, P.O. Bihar University College Patna -800014 Phone : 0612- 2223545 /3200853 Fax: 2223545
3.	<b>BIT Off Campus, Jaipur</b> B.S.I.R. Campus 27, Malviya Industrial Area Jaipur – 302017 Phone : 0141- 4019798/4019812 Fax: 2751614	8.	<b>BIT Off-Shore Campus, Muscat</b> Waljat College of Applied Science P.O. Box No. 197, Rusayal Postal Code – 124 MUSCAT, Sultanate of OMAN Phone : 00968-24449193 Fax : 00968 - 24449196
4.	<b>BIT Off Campus, Kolkata</b> Southend Conclave (4 <sup>th</sup> Floor) 1582 Rajdanga Main Road (on Gariahat-EM bypass connector) Opp. Siemens Building Kolkata-700107 Phone: 033-24414542/24414456 Fax:24414299	9.	<b>BIT Off-Shore Campus, UAE</b> C/O Royal College of Applied Science & Technology Knowledge Centre RAK Free Zone Ras Al Khaimah, U.A.E. Phone : +971504862900 (M) +97172272203
5.	<b>BIT Off Campus, Lalpur</b> Lalpur Chowk Ranchi-834001 (Jharkhand) Phone: 065- 2531817/2531676 Fax : 2531658 /2531676		

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XXIII दीक्षान्त समारोह  
बिरला प्रौद्योगिकी संस्थान  
मेसरा, रांची  
अप्रिल १०, २०१३



XXIII CONVOCAATION  
BIRLA INSTITUTE OF TECHNOLOGY  
MESRA, RANCHI  
APRIL 10, 2013



XXIII CONVOCAATION  
April 10, 2013



