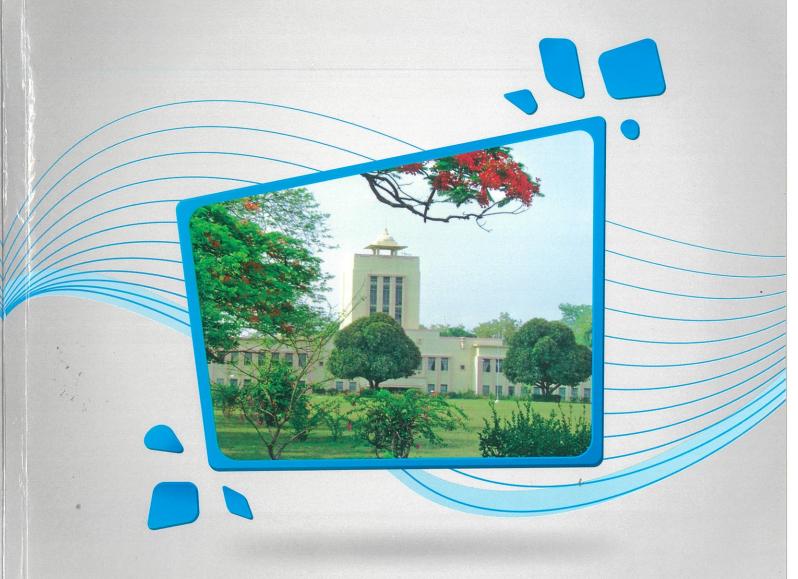
# ANNUAL REPORT 2011-12





BIRLA INSTITUTE OF TECHNOLOGY (Deemed University)

Mesra, Ranchi - 835215 Jharkhand, India



### THE INSTITUTE PRAYER

# प्रार्थना

समुपासते शिव इति ब्रह्मेति वेदान्तिनो शैवाः कर्तेति नैय्यायिकाः इति प्रमाण पटवः बुद्ध कर्मेति अर्हन नित्यथ जैन शासनताः सोऽयं नो विदधातु वांच्छित फलं त्रौलोक्य 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 त्रता, विश्व विधाता, हे सुख शांति निकंतन हे । प्रेम के सिन्धु, दीन के बन्धु, दुःख दिरद्र 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 ।

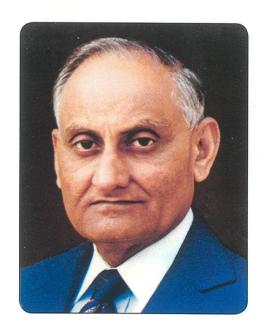
You are the saviour and the creator of the Universe, the abode of peace and happiness, the ocean of love, the friend of the helpless, the reliever of sorrows and afflictions. You are the external, the indivisible and the infinite. You are the complete universe and the prime Being. You are the shelter, 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.

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Shri B. M. Birla Founder of the Institute



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

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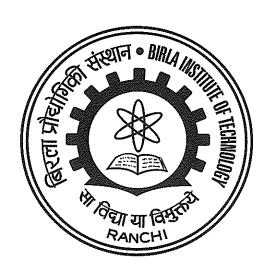




Shri C. K. Birla
Chairman of the Board of Governors

# ANNUAL REPORT

2011-12



# **BIRLA INSTITUTE OF TECHNOLOGY**

(DEEMED UNIVERSITY)
MESRA, RANCHI - 835215
JHARKHAND, INDIA

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# THE VICE-CHANCELLOR'S REPORT

Birla Institute of Technology, Mesra, Ranchi founded by the industrialist and philanthropist Late Shri B.M. Birla in 1955, attained the status of a Deemed University 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 2011-12 are as follows:

#### 1.0 BOARD OF GOVERNORS

The board of governors of the institute in its 43<sup>rd</sup> Meeting deliberated on the following matters related to the functioning of the institute.

The Institute has entered into an agreement with M/s Birlasoft for implementation of the Peoplesoft Campus Solution, a product of M/s Oracle. The implementation process is under progress and as per the agreement the work is expected to be operational by August 2012.

Under National Knowledge Network (NKN) programme of MHRD, GOI, 1 GBPS internet connectivity has been extended to this Institute

Steps have been initiated to set up an Extension Centre for Bio & Life Sciences at Bangalore.

Construction work for expansion of the Institute Dispensary building has been completed and procurement of equipment, ambulances, etc. for enhanced medical facilities is in the process. Action has been taken for modernization of Dispensary, setting up of pathology lab, training and recruitment of manpower.

As it has been decided to adopt UGC (Institutions Deemed to be Universities) Regulation 2010 in the institute, a new MoA and Rules & Regulations of the Institute are being finalized.

The Board approved the proposal for ammendment of leave rules as effective from 23<sup>rd</sup> January 2012. It was resolved that a permanent (confirmed) female employee shall be eligible for 180 days Maternity Leave with full pay, to be availed twice in her entire service period. Maternity leave may also be granted in case of miscarriage

including abortion, subject to condition that the total leave granted in this respect is not more than 45 days in her entire career and application for grant of such leave is supported by appropriate medical certificates. Further the Maternity leave may be combined with earned leave, half-pay leave or extra ordinary leave, but any leave applied for extension of Maternity leave may be granted if the request is supported by appropriate medical certificate.

As prevalent in other reputed Institutions, a faculty member of the Institute will be entitled to 04 months of sabbatical Leave (or part thereof) with full pay and allowances on completion of every six years continuous service for improving his academic standard. An eligible employee of the Institute on completion of a minimum period of five years uninterrupted service should be entitled for encashment of accumulated earned leave on superannuation. The encashment will be up to a maximum of 300 days as per UGC guidelines.

The Board considered and approved the proposal for appointment of faculty as Deans/HoDs on rotational basis as per UGC (Institutions deemed to be Universities) Regulation 2010. The normal tenure of Dean/HoDs should not exceed three years. Further they may be appointed initially for two years and in exceptional case, the tenure may be extended for another year.

The Institute introduced the All India Admission test for its Ph.D. program through open advertisement since Jan, 2011. The Institute also offered Institute Research Fellowship of value Rs. 16000 / 18000 pm and High Value Fellowship ranging up to Rs. 40000.00 pm since Jan 2011 to motivate academically sound young graduates to participate in research/teaching. A Professional Development Grant of Rs. 3.0 lakh for a block period of 3 years has been introduced with effect from 01st June 2011 for faculty members of the institite.

A revised format (i.e. only in English) of Degree Certificate has been introduced in the Institute from this academic year.

The employment status of 852 (Eight hundred fifty two) non-teaching staff members who were earlier either "On Contract" or "Consolidated", has been regularised. 37 (Thirty Seven) Faculty Members, 2 (Two) Deputy Registrars, 6 (Six) Assistant Registrars have been recruited during the year.

#### 2.0 ACADEMIC ACHIEVEMENTS:

#### 2.1 R&D PUBLICATIONS AND PATENTS

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

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

Ph.D. Institute Fellowship : 78
Ongoing R&D Projects : 111
Patent Granted : 03
Patent Filed : 04

Altogether 260 faculty members were supported by the Institute to attend National Seminars and 12 faculty members were offered financial support to attend international conferences.

#### 2.2 INFRASTRUCTURE DEVELOPMENT

- Keeping in line with the expansion of its academic programmes, the Institute continues its efforts to consolidate academic and infrastructural support in the form of equipment, learning resources and space. A few of them are as follows:
- Department of Space Engineering & Rocketry has procured 3 Component Strain Gage Balance, 6
   Components Strain Gage Balance, DC Power Supply, Signal Conditioner, Variable Frequency Drive,
   Bench top Digital Multimeter, Digital Bomb Calorimeter, Industrial PC.
- Department of Bio Technology procured Orbital Shaking Incubator and TLC Viewing cabinet with UV lamp.
- Department of Applied Chemistry procured Polarimeter with documentation facility, Flash Chromatography System (NO:2), Chemical refrigerator (-200C), Rotary Evaporator with Chiller, Ice Machine, UV Spectrophotometer, Jar test apparatus, Multi Vessel Dip coating System.
- New Biomedical Instrumentation lab is developed in the Dept. of EEE in the current year.2-channel bio-amplifier mobile unit, Lab view 11 and PC based RF power meter are added to the laboratories of the Dept. of EEE.
- Department of Applied Physics procured Nano Indenter, Raman Spectrometer, P~E loop tracer, High Temperature Furnace, PID Controlled Vacuum Furnace, Magnetic Stirrer cum Heater, Analytical Balance.
- Department of ECE procured Cadence Software, Specifications: GPDK45nm, 90nm, 180nm, Silvako Software, Specifications: Athena, Atlas and Embedded system design lab was set up.
- Department of Remote Sensing procured PC-Desktop (5 numbers) under LULC50K project Department of Pharmaceutical Sciences procured Mindray SemiAutoAnalyzer, Flash Chromatograph, Recore Modelling software.
- The up-gradation of the existing 12 bedded dispensary to 24 bedded is almost in completion phase.
   Presently the dispensary has two bedded fully equipped ICU, one fully equipped modern pathological lab., one Cardiac ambulance, three general purpose ambulance, one high power ultrasonography machine, 100 MA, X-ray, Modern ECG machine have already been procured.
- Department of Mechanical Engineering procured Kaplan Turbine.
- Centre for climatology procured Mini Boundary Layer Mast- 15 m Tower equipped with weather system, Phased Array SODAR System, 3-D Fast Response Sonic Anemometer.
- Patna Extension Centre procured Digital Colony Counter, Digital Dissolution Rate Taste Equipments,
   Microwave Test Bench, Antenna Kit, CRO, Function Generator, Density Meter, Oven, Viscosity
   Meter.
- Department of Chemical & Polymer Engineering Procured Haake Minilab Micro Compounder and Haake Minilab micro injection Moulding, Air Bearing Rotational Rheometer, Malvern, 25 ton Manual Carver Press for sample preparation.
- Deoghar Extension Centre procured Pelton wheel turbine, Reciprocating pump testing, Centrifugal pump testing, Surface Policing Machine, Profile Projector, Microscope, Furnace, UPS Rectifier kit, Relay testing kit, Project item kits, Power system lab equipment (power factor control kit).

#### 2.3 MOU

- Department of Information Technology signed MOU with IAA (Institute of Accountancy, Arusha)
   Tanzania for Post Graduate Studies.
- Department of Computer Science & Engineering has signed an MOU with Queens University,
   Kingston, Canada in March 2012 for 'International Twinning Program'.
- MOU has been signed on 05.12.2011 between Dept. of EEE, BIT, Mesra and Dept. of EEE, Padova
  University, Italy in the fields of teaching and research in the framework of international co-operation.
- MOU between the Institute and the British Council for Staff exchange programme under UKIERI [UKIndia Education & Research Initiative] for short term exchange visit of staff between Department of
  Architecture, BIT, Mesra and Built Environment Research Institute, Jordanstown campus, University
  of Ulster, N. Ireland, UK.
- Department of Chemical & Polymer Engineering has signed MoU with UTRC.
- Department of ECE is having MOU with Microelectronics Research Centre, University of Texas University of Utah, Central Mines Research Institute, Dhanbad, Dept of EECE, University of Birmingham, UK, Research, Microwave Engg, I.I.T. Kharagpur, Signal transformations, DRDL Hyderabad, WSU University London.

#### 2.4 CONSULTANCY

- Department of Applied Chemistry was the consultant to Coal India Subsidiaries for "Water quality monitoring and control" during April 2011 to March 2012.
- Dr. Arbind Kumar is consultant for JREDA, Ranchi for Preparation of DPR, Evaluation of tender documents of small Hydro projects & Solar power plant for the period 01.02.2011 to 31.5.2012.
- Department of Architecture is consultant of Government of Jharkhand for Redevelopment of Pahari Mandir, Ranchi.
- Department of EEE of BIT EC Patna was consultant to BSEB/PESU, Patna, BREDA, Patna for the period 2011-12.
- Department of Remote Sensing was consultant to NATIONAL REMOTE SENSING CENTRE, ISRO, Hyderabad for Mapping and Identifying Changes in the Land Use and Land Cover in Bihar State for the period Feb 2012 to August 2013.
- Department of Remote Sensing was consultant to NRSC for Rajiv Gandhi National Drinking Water Mission Phase-IV Groundwater Quality Mapping for the period April2011-Dec 2012.
- Dr. Soumya Banerjee is consultant to Yahoo Research, Spain for Project Consultancy on Social Network Analysis from 2011.

#### 2.5 NEW PROGRAMMES AND REVISION IN COURSE

The University has started the following new programmes:

- An M.Tech. Course in Biomedical Instrumentation is approved by the Institute.
- Department of Applied Physics started 5 Year's Integrated M. Sc.
- Kolkata Extension centre introduced Five year Integrated MSc in Mathematics and Computing.

- Kolkata Extension centre introduced ME(wireless communication) with flexible timing 2 / 3 / 3.5 years.
- Department of Applied mathematics introduced Integrated M.Sc in Mathematics and Computing.
- Centre for Climatology started Integrated M.Tech. Ph.D. Course on Atmospheric Science & Technology.
- BE (Chemical Engineering) has been introduced from July 2011 in the Department of Chemical & Polymer Engineering.
- BIT Extension centre NOIDA started 5-Year Integrated Master in Computer Applications (IMCA) and
   5-Year Integrated Master in Business Administration (IMBA).

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

A total of 95 faculty members visited various Institutes and R & D organization in India and Abroad to deliver lectures and and to collaborate in Research projects.

#### 3.0 CAMPUS PLACEMENTS

The efforts placed towards teaching and training find their true reflection in the acceptance by the Industry. BIT has a good track record of campus placements. This year was even better. A total of 1909 offers have been generated so far through the campus visit of 101 premier organizations representing all sectors of the Industry. This number is the highest ever and reflects well on the quality of the students from Mesra and all the centres as well as the effort towards their preparation, training and nurturing of relationships by the Training & Placement Division. Visits organised across 4 campuses- Mesra, Patna, Jaipur & Noida. The highest ever salary package was

International : US\$ 119,000 (approx 62 lacs pa)

National : Rs. 16 Lacs pa

#### 4.0 VISIT OF NBA, UGC TEAM

- A team of 10 experts headed by Prof (Dr) K. L. Chopra (Padamshri) visited BIT Mesra on March 25-27, 2011 for accreditation of BE(Mech), BE(ECE), ME(Instrumentation), and ME(Microwave Engg) and all the programmes were accredited.
- A team of 10 experts headed by Prof (Dr) K. L. Chopra (Padamshri) visited BIT Mesra on Sep 23-25, 2011 for accreditation of BE(EEE), BE(Prod Engg), ME(Control System), ME(Power System), ME(Prod Engg), and ME(Aerodynamics) and all the programmes were accredited.

#### 4.1 VISIT OF OTHER EMINENT PERSONALITIES

- A total of 70 eminent personalities visited BIT and its Extension Centers which Includes
- 2. Dr. John Mather, Nobel Laureate
- 3. Prof. Peter Atkinson, Head, School of Geography, University of Southampton
- 4. Dr. Jaap Haartsen, Inventor of Bluetooth
- 5. Dr. Ramesh Raskar from MIT

- 6. Dr. U.N. Singh, Chief Technologist, NASA
- 7. Dr. Stephen Sweeney, University of Surrey, UK
- 8. Dr. Tarun Khanna from Harvard Business School
- 9. Mr. Soumitra Dutta form Cornell University
- Sir Martin Rees from Cambridge University
- 11. Dr. George Komar from NASA
- 12. Ms. Claudia Roselli, University of Firenze, Florence, Italy

#### 5.0 AWARD / DISTINCTION / FELLOWSHIP / MEMBERSHIP / HONOURS RECEIVED

- 1. Highlight of some of the achievements of our faculty members and students are as follows:
- 2. Prof. Gopal Pathak was appointed as a Visiting Scholar at Centre for Sustainable Development and Global Competitiveness, Stanford University, USA during spring 2011.
- 3. Dr. Kirti Avishek, Asst. Prof. has been granted Postdoctoral Fellowship by Chinese Academy of Science, Beijing, China.
- 4. Dr. A. K. Chatterjee has been appointed as Chairman, Bihar & Jharkhand Section, ISTE, Delhi, appointed Member, Aerospace Engineering Division Board, IE(I) and appointed Reviewer of the Indian Journal of Technical Education, ISTE.
- Dr. J. K. Prasad won the Best Paper Award (Gold Medal) in Journal of Institution of Engineers 2010-11, appointed as Reviewer Defence Science Journals and elected as Vice President, National Society FMFP.
- 6. Dr. Sudip Das won Best Paper Award (Gold Medal) in Journal of Institution of Engineers 2010-11.
- 7. Dr. R. Poddar received Postdoc Research fellowship, sponsored by national Institute of EYE and national institute of Health [NIH], USA (Jan 2012 to Dec 2013).
- Dr. G. Sahoo and Mr. Rajesh Kumar Tiwary published paper in the International of "Internet Technology and Secure Transactions" which has been considered as as a discovery in the data hiding domain.
- 9. Dr. Sumit Mishra was awarded with DST Young Scientist under fast track scheme 2012.
- 10. Dr. Amiya Priyam was awarded with DST Young Scientist under fast track scheme 2012.
- 11. Dr. Rafique ul Islam was awarded with DST Young Scientist under fast track scheme 2012.
- 12. Dr. A. Sharon became Publication Committee Member in ICAR (International Conference of Antiviral Research) and appointed as Reviewer, American Chemical Society Publications.
- 13. Dr. B.B. Das was awarded with ISRO merit award by Dept. of Space, Govt. of India.
- 14. Dr. T. Ghose was selected as Member, Advisory Board Transmission and Distribution Loss Reduction of Jharkhand State, Nominated by Jharkhand State Electricity Regulatory Commission (JSERC), elected as Board Member, IET (UK), Kolkata Local Committee.
- 15. Dr. D. K. Mohanta was selected as National Technical Board Members, International Conference on Innovative Science & Engineering Technology and elected as Member, International Advisory Board, IET International Conference named Sustainable Energy and Intelligent Systems (SEISCON 2011.

- 16. Dr S K Rout was awarded with Bharat Jyoti Award (Conferred by India-International Society), selected as Summer Teacher Research Fellow by Indian Academy of Sciences, became Associate Editor of Physics Express and became Guest Editor of Journal of Nano materials.
- Prof. Srikanta Pal received Honorary Research Fellow, University of Birmingham, UK, (May, 2010, to May, 2012) and awarded with Pride of Bengal, by Bankura Zilla United Forum of Educational Personalities.
- 18. Arpita Sen and Dr. Neela Chattoraj received Interscience best Investigator award for best presentation and content on "Quadruple-Frequency Microstrip Antenna for Wireless Applications and its Equivalent Circuit", International Conference on Electronics and Communication Engineering, ICECE-2012, Kolkata, 24 March, 2012.
- 19. Dr. Nilanchal Patel became Associate Editor, Journal of Forestry Research (SPRINGER) till 2015, became Editor, STM Journal of Remote Sensing and GIS, became Editor, STM Journal of Recent Trends in Civil Engineering and Technology, became Editor, STM Journal of Ecology (Research and Reviews) and selected as a Visiting Scholar in the University of Aveiro, Portugal.
- 20. Dr. A.P. Krishna became Member to serve on the Abjudication Committee, Partnership development seed grant (PDSG) of SICI / CIDA / University of Calgary, Canada, became Member Programme Committee (as Additional Reviewer) for 4th International Symposium on Academic Globalization (AG 2011), July 2011, Orlando, Florida, USA and became Fellow of Geological Society of India [FGSInd] 2011-12.
- 21. Suman Sinha received DST-INSPIRE Fellowship.
- 22. Dr. R. N. Gupta received Dr.Bakul Bhaduri Pharma Achievement Award in Nov'11, elected as national Vice-President of Indian Pharmaceutical Association for 2012-2014, elected as Chairman at the scientific seminar at IPA convention held at Indore in March' 2011 and acted as Chairman of poster /scientific paper at IPA Convention at Manipal in March' 2012.
- 23. Dr. Vinay Sharma Chaired a session at International conference of Agile Manufacturing System.
- 24. Mr. Rajeev Agrawal became All India Advisor Engineering College Student Chapter IE (I), India.
- 25. Sraboni Dutta of Kolkata Extension centre received Full bright scholarship January 2012 to April 2012 at Pennsylvania USA.
- 26. Dr. Arbind Kumar was awarded with Best Innovation and practices by NPIU, New Delhi for Solar Powered Potter's wheel.
- 27. Dr.S.Padhi was felicitated by the Organizing Committee of the "National Seminar in Differential Equations and Their Applications" on February 10, 2011 at K K College, Velur, Taminladu.
- 28. Dr.Soubhik Chakraborty was selected for Shiksha Rattan Puraskar by the India International Friendship Society for the year 2012.
- 29. Dr.B.K.Mishra was selected for Guest Editor; Computer Virus: Theory, Methods and Models, Hindawi Publications and appointed in the Editorial Board of Australian Journal of Basic and Applied Sciences, Resarch Journal of Applied Sciences, Journal of Modern Mathematics and Statistics, and International Journal of Technology and Management.
- Ms. Smita Pati awarded Post Doctoral Fellowship by National Board for Higher Mathematics, DAE,
   Govt. of India in April 2012, received financial award from UNESCO to participate in the School

and Conference on Mathematics and Physics of Soft and Biological Matter, The Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy and received National Board for Higher Mathematics, DAE, Govt. of India travel grant to deliver a contributed talk in the 9th Colloquium on Qualitative theory of differential equations in Bolyai Institute, University of Szeged, Szeged, Hungary during the period 28th June to 1st July 2011.

- 31. Ms. Jyotsna Singh received DST Travel Grant to attend EGU General Assembly 2011, Austria Center Vienna, Austria, April 03 to April 08, 2011.
- 32. Dr. S.P.Lal appointed as Chairman, Education & Research Committee of Patna Extension Centre.
- 33. Dr Akhil Sen received 2<sup>nd</sup> National Awards (2012) for Innovations in Polymeric Materials, conferred by Ministry of Chemicals and Fertilizers, Govt. of India.
- 34. Dr. Rajeev Kumar, NSS programme co-ordinator and Prof. Abhinav Kumar Shandilya has been nominated National Level monitors for rural development programme from Ministry of Rural Development Programme, Government of India.
- 35. Dr. Soumya Banerjee was invited to deliver lecture at Intelligent Systems Design & Application (ISDA) 2011 at Cordoba, Spain, in Advanced Machine Learning Technologies & Application, AMLTA 2012 at Cairo, Egypt and in Soft Computing Models in Industrial & Environmental Applications OSTRAVA, CZECH REPUBLIC during the year.
- Dr. Rama Shankar Singh, Senior Sports Officer, BIT, has been awarded "Bishit Seva Samman" during Bihar Satabdi Mahotsav at Surat (Gujrat) on 6th May 2012.
- 37. Bratati Chaudhury (Ph.D.) received 1st Prize in Oral Presentation at IYSC, 2011.
- 38. Nandini Patowari (BE/1276/08) won TCS Best Student Award 2011-12.
- 39. Ujjwal Kant, student of EEE department of 2K7 batch secured AIR-46 in UPSC exam 2011.
- 40. Preeti kumari, student of Pharmacy was awarded 2nd prize in poster presentation by M.Pharm.4<sup>th</sup> semester in National Seminar organized at Dr. B.C. ROY COLLEGE of Pharmacy, Durgapur in April'12.
- 41. Saurav Kumar Murarka (8th Sem) Puja Mahanty (6th Sem) of Patna Extension Centre Won 2nd Prize at BRY Air Awards (ASIA) in Student Design Category, The prize include Citation, Momento, and Cash worth Rs. 50,000/-.
- 42. Rajat Tyagi (8<sup>th</sup> Sem) and Seven more students participated in 5<sup>th</sup> Lunabotics Mining Competition at NASA Kennedy Space Centre, Florida, USA (20-28 May, 2011).
- 43. Students of BIT Extension Centre Patna participated in NASA Lunabotics Mining Competition, 2012 during 21<sup>st</sup>-26<sup>th</sup> May, 2012 held at Kenedy Space Centre, Florida, USA. BIT students made it to the final round and were among the top 15 out of 57 contestants from top universities of the world. Their Mechanical design was adjusted one of the best ones.
- 44. Devesh Kumar, Abhishek Kumar, Amit Kumar Sharma were Winner of Microsoft Imagine Cup- 2012, India and also chosen as "Ambassador of India for the final Competition to be held in Sydney, Australia".
- 45. Ajay Pratap Singh is to represent India as the "Minister of Development" in G-8 & G- 20 Youth Summits for Policy & Welfare -2012, to be held at Washington DC, USA from June 03-09, 2012.

- 46. Aman Kumar and Imdad Uddin Ahmed student of Department of Architecture won 1st Prize Contemporary Architecture: beyond Corbusierism, YAF at Chandigarh.
- 47. Deepak Kumar, Mudassar Rehan and Risabh Sharma student of Department of Architecture secured 1st, 2nd and 3rd prize 'Yuvaratna' Eastern Zonal level.
- 48. Gauri Mathur student of Department of Architecture is Winner of Fourteenth Berkeley Prize Essay Competition, 2011.
- 49. Satish Kumar, Amit Kumar and Deo Kumar Raj student of Department of Architecture won 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'.
- 50. Students of Department of Architecture won ZONASA Overall Runner Trophy CET Bhubaneswar.
- 51. Gauri Mathur secured Second Runner-up Trophy, 14th Berkeley Prize, Architectural Design Excellence Essay Competition, 2012.
- 52. Dominic Mathew received Berkeley Travel Fellowship 2012 to visit BMW Guggenheim Museum, Germany.
- 53. Ms Ankita Singh, Final year student of BE (Chemical and Polymer Engg) has won the Gold Trophy for Plasticon Award 2012 in the category of Best Under-Graduate Student sponsored by Indian Plastics Institute won 1st prize in Charles Goodyear Memorial National Quiz Contest at Polymer Quest-2011 held at IIT, Kharagpur, November 4–5, 2011, won Best Poster Award at PlastIndia International conference 2012 for presenting poster entitled "Biobased Cellulosic Plastics from Sugarcane Bagasse and awarded scholarship for PhD programme University of Massachusetts, Lowell in Plastics Engineering.
- 54. Anish M., M.Tech (Polymer Science & Technology) won 1<sup>st</sup> prize in Charles Goodyear Memorial National Quiz Contest at Polymer Quest-2011 held at IIT, Kharagpur, November 4–5, 2011.
- 55. Ms Kalpana Kiran, Research Scholar has won 2<sup>nd</sup> Prize in Poster presentation in Diamond Jubilee National Seminar Competition 2011 for Research Scholars at Polymer Quest-2011 held at IIT, Kharagpur, November 4–5, 2011 for presenting poster entitled "Synthesis of Fe(III) Oxide Nanoparticles Embedded Acrylic IPNS For Biomedical Applications".
- 56. Department of Chemical and Polymer Engineering won Gold Trophy for Plasticon Award 2012 in the category of Best Educational Institution Contributing to Plastics.

#### 6.0 SEMINAR / SYMPOSIA / SHORT TERM COURSES ORGANIZED

The Institute and its Extension / International Centres organized as many as 48 Seminars / Symposia / Workshops:

- 25<sup>th</sup> National Convention of Aerospace Engineers "Indian Aerospace Programmes: Technological Challenges beyond 2020 was organized by Department of Space Engineering & Rocketry during 4.11.11 to 5.11.11.
- International Symposium on "Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011)" was organized by Department of Bio Technology during Sep 28, 2011 to Oct 01, 2011.

- 3. Workshop on "Intellectual Property Right 2011 (IPR-2011)" was organized by Department of Bio Technology on Dec 02, 2011.
- 4. Department of Information Technology organized Inter–disciplinary lecture series on "IT and its Applications" from 16.3.2012 to 17.3.2012.
- 5. Department of Computer Science & Engineering organized MCIT-DIT Sponsored National Workshop on "Testing of Object Oriented Software" from 11th March 2012 to 13th March-2012.
- 6. Department of Applied Chemistry organized workshop on "water quality monitoring and control" from 24.5.11 to 25.5.11.
- 7. Department of EEE organized Workshop on Electrical Machines on 21.10.2011.
- 8. Department of Applied Physics organized National Conference cum Workshop on Recent Developments in Engineering Materials during May 12-14,2011.
- 9. Department of ECE organized yy Six Mission KYaaT from 28.04. 11 to 2. 6.11.
  - International Conference on Devices & Communications (ICDeCom-11) during 24. 02.11 25.
     02.11.
  - 8th standardization series GISFI meeting during 26. 03.11 28. 03.11.
  - International workshop on innovation and patenting in ICT on 12.12.11.
  - Workshop on Robotics from 3. 09.11 to 4. 09.11 and from 23.3.11 to 26.3.11.
  - Summer School on VLSI Design (SSVD\_2011) from 16. 06.11 to 26. 06.11 and from 16.12.11 to 26.12.11.
  - Summer School on VLSI Design (SSVD 2012) from 15.05.12 to 29.05.12.
- 10. Department of Pharmaceutical Science organized yy Short-Term course on "Nanotechnology based drug delivery systems" during 6.11.11 19.11. 11.
  - Short- Term course on "Recent Trends in Discovery, Development and Pharmacological screening of novel therapeutics" from 20.11.11 to 3.12.11.
  - Short-Term course on "Novel drug delivery systems in herbal drugs" from 4.12.11 to 17.12.11.
- 11. Department of Production Engineering organized 27th National Convention Of Production Engineers during May 25-26, 2012.
- 12. Department of Mechanical Engineering organized Workshop cum Training Program on Skill Development for Technician during 19.12.11 to 21.1.2012.
- 13. Department of Applied Mathematics organized National Conference on Mathematical and Statistical Modelling in Innovative Areas" during October 19-20, 2011.
- 14. Department of Architecture organized
  - Workshop on "Capacity building and training workshop on Universal Accessibility" from 4.4.2012 to 5.4.2012.
  - "Train the Trainer International Workshop on Building Physics and Energy Simulation" during July 11-14, 2012.

#### 15. NSS organized

- A lecture series on 150<sup>th</sup> birth anniversary of Swami Vivekananda entitled "Channelizing youth power towards right path through Spirituality on 2<sup>nd</sup> May 2011.
- A three days training programme on Gender Equity in collaboration with Rajiv Gandhi national Institute of youth development (RGNIYD), Sriprumbudur on 19<sup>th</sup> – 21<sup>st</sup> December 2011, for NSS programme officers for Chattisgrah, Orissa, West Bengal, Uttar Pradesh, Bihar.

#### 16. Kolkata Extension centre organized

- Seminar on "21st Century Learning-Educating students in a changing world" on 6th April, 2011.
- Workshop on Role of Computing in Better Governance during July 30 31, 2011.

#### 17. Patna Extension Centre organized

- Workshop on "Recent Advancement in Technology" during 1.4.12. 11.4.12.
- 8th GISFI Standardization Series Meeting from 26.3.12 to 28.3.12.
- Seminar on CFD on 8.1.12.
- 26<sup>th</sup> National Symposium of Plasma and Technology from 21.12.11 to 23.12.11.

#### Deoghar Extension Centre organized

- National Conference on Recent Trends in Chemical Science from Feb.18,2012 to Feb.19, 2012.
- Workshop on Marketing Strategies for Changing Indian Market Environment on Apr. 9, 2011.
- Workshop on Evolutionary & Hybrid E-learning Methodologies in Engg. in 2011.
- Conference on Intelligent Systems Design & Application (ISDA) from Nov. 22, 2011 to Nov. 24, 2011.

#### NOIDA Extension Centre organized

- Workshop on Entrepreneurship Development from Nov. 28th 2011 to Dec. 10th 2011.
- Workshop on Entrepreneurship Development from January. 2<sup>nd</sup> 2012 to January 14<sup>th</sup> 2012.
- Workshop on Future Trends of Research in Computer Science: FTRCS-2012 on 3<sup>rd</sup> March 2012.
- One Day summit on Entrepreneurship Challenges and opportunity on 7 / 04 / 2012.
- National Workshop on Science, Technology and Development Communication from 9<sup>th</sup> April 2012 to 10<sup>th</sup> April 2012.
- 20. Research Scholar's Day was celebrated at BIT, Mesra and its Extension Centres on 26th and 27th March 2011.
- 21. BIT Space Technology Cell was inaugurated on 23rd July, 2011.
- 22. A Science & Technology Festival was organized at BIT, Mesra on 4th and 5th of Nov, 2011.

#### 7.0 STUDENT ACTIVITIES

During the period the following Major Events were organized by the students BITOTSAV 2012, an inter-college techno cultural festival was organised from 29th February to 4th March 2012. It consisted of Heritage Nite, Cultural Nite, Dance Nite, Band Nite, and Pro Nite. The events included Battle of

the Bands, Acoustic Alchemy, Wordsworth and Scribe, Junkyard Wars, CAD Modelling, Car Buddy, Basic CATIA Workshop, Build from Scratch, Overnite Coding, Hackathalon, Seminar on Sustainable Habitat and many informal events. Guest performances by Padamshree Dr. Rita Ganguly, Jal the Band from Pakistan, Scribe Band, Rivaldo (Nitin Gupta) were also held during this festival. Guest lectures were delivered by Dr. S.K. Saha, Professor, IIT, Delhi and Arch. Aproov Vij, Executive from GRIHA, The Energy Resource Institute, New Delhi.

- Pantheon 2011, an intra-college techno cultural festival was organised from 21<sup>st</sup> to 23<sup>rd</sup> October 2011. It consisted of dance events Retrozap and Copycat, Hip-Hop workshop by the famous Just Dance star Abhash Mukherjee, food festival Fugiya, and dance competition Footlose.
- Ranchi Science and Environment Festival was organised by EPAC and Rotract Club on 4th December 2011, in which nearly 800 students from 20 different schools in Ranchi participated.
- A programme commemorating 150<sup>th</sup> birth anniversary of Swami Vivekananda was organised on 26<sup>th</sup> April 2012. A lecture was delivered by Swami Samarpananandaji Maharaj from Ram Krishna Mission, Belurmath, Howrah.
- In addition to the mentioned programmes, large number of students activities were organised by various Clubs and Societies.

# 7.1 Student exchange programme with national and international universities/ different organizations visited by the students:

- Ms. Vasundhara (5th Semester) from Department of Computer Science & Engineering, BIT, Mesra attended the BIT, Mesra – Mannheim University International Exchange Program in Germany for the period Aug 2011 – Feb 2012.
- 2. Ms. Ruchi Dhiman (7th Semester) from Department of Computer Science & Engineering, BIT, Mesra attended the BIT, Mesra Mannheim University International Exchange Program in Germany for the period Aug 2011 Aug 2012.
- Mr. Stefan Seltenreich (7<sup>th</sup> Semester) from Department of Information Sciences, Mannheim University (MUAS), Germany attended the BIT, Mesra – Mannheim University International Exchange Program in BIT, Mesra for the period July 2011 – Dec 2011.

#### 8.0 SPORTS ACTIVITIES

- Our Institute Athletic team won 6 Gold, 3 Silver, 4 Bronze Meal & Football team placed runner up in Inter Technical sports festival organized by I.T. B.H.U. Varanasi in February 2012. Sri Puspendra our Institute Athletic Captain was declared Individual Champion with two gold medals and one silver medal.
- 2. Our Institute Cricket team got Runner-up in 20<sup>th</sup> Chetan Devraj Cricket Tournament 2011-12 where as championship trophy lifted by BIT Extension Centre, Patna
- 26<sup>th</sup> Annual Athletic Meet was organized during 3 5 Febraury 2012 in which Amit Diwedi of ECE 4<sup>th</sup>
  Semester and Shukla Dey 8<sup>th</sup> Semester Declared individual champion Men and Women respectively.
- 4. Intramural sports activities were conducted and prizes were distributed by Chief Guest.

#### 9.0 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 at Mesra while the Noida Centre supported the organisation of events of the BITOSA Delhi Chapter. 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 1957-61 Batch of Alumni celebrated their "Golden Jubilee Reunion" at the BIT Mesra Campus from the 4th-6th of December 2011.
- The Batch of 1973 organised a 'Reunion' at Mesra on 24th December 2011.
- The 1982-86 Batch celebrated their "Silver Jubilee Reunion" at Ranchi with a day's activity at the Mesra Campus from the 26th-29th December 2011.
- A 'Leadership Summit' was successfully organised at Bangalore on the 10<sup>th</sup> of December 2011 by BITOSA Bangalore Chapter. The first such summit was organised in the year 2010.
- BITOSA Delhi organised a Panel Discussion on "Entrepreneurship- Challenges and Opportunity" on the 7<sup>th</sup> of April 2012. The venue was BIT Noida Centre.

#### 10.0 AWARD OF DEGREES

During 22<sup>nd</sup> convocation held on 3<sup>rd</sup> June 2012 a total of 3867 students have been awarded Degrees and Diplomas in various disciplines, out of which 139 students have received Post Matriculation 3 years Diploma, 2592 Graduate Degree, 1070 Post Graduate Degree, and 66 Ph.D. Degree. Shri R. Gopalakrishnan, Executive Director, Tata Sons Ltd, was the Chief Guest in Convocation of the Institute.

# 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. 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 terms of research and excellent academic programme led to its 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 reaffairming 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.



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 Institute Main Campus, Mesra, Ranchi

The main campus 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 annexure has covered area of 4,000 sq. mtrs. The laboratories and offices of the Department of Space Engineering & Rocketry are situated for securities 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.

In	stitute 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	-	2490
	& Cryogenic laboratory)		
•	Workshop sheds, General stores, Garage/ Godow	-	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
R	esidential Complex		
•	Staff quarters in different categories	-	422
•	Residential complex for supporting services	-	116
	Guards, Dairy Shopkeepers, Washer man etc.		



Research Scholars' hostel

hostel

Staff Quarter

#### **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.



Golden Jubilee Auditorium

#### **GAMES & SPORTS COMPLEX**

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

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

#### DISPENSARY - CUM - HEALTH CENTRE

#### **FACILITIES AVAILABLE**

O.P.D Services : 8 A.M to 12 .00 Noon

4.00 P.M. to 8.00 P.M.

Emergency Services : Round the clock

Total No. beds
 12 (Male -8, Female – 4)

X – ray :

E.C.G :

Oxygen Facilities

Suction Machine Facility

Medical Officers : 04Pharmacists : 04



Dispensary cum Health Centre

• Dressers : 01

• X – ray Technician : 01

Pathological Technician : 01

Staff Nurse : 01

#### **VISITING PHYSICIANS**

- 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, isllation 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, Laproxy 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.



The Shopping Centre

Consumer's co-operative stores

375 Sq. Mtrs.

NCC Block

**OTHERS** 

- 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 UG & PG

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

• 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
Bachelor of Engineering Degree Cours	ses		
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
Master of Engineering Degree courses			
Electrical Specialization –  1. Control system 2. Power system	1964	2 Years	24
Mechanical Specialization 1. Heat Power Engineering 2. Design of Mech. Equipment	1964	2 Years	12
Civil Specialization 1. Soil Mechanics 2. Structure & Foundation Engineeing	1964	2 Years	24
Electrical & Communication Engineering Specialization 1. Instrumentation 2. Microwave	1965	2 Years	24
Space Engineering &Rocketry Specialization 1. Rocket Propulsion 2. Aerodynamics	1965	2 Years	24

Computer Aided Design & Drafting Specialization 1. Comp. Aided Analysis & Design 2. Tribology	1999	2Years	18
Automated Manufacturing System	1996	2Years	25
Software Engineering	2000	2Years	15
Quality Engineering & Management	2002	2Years	25
Polymer	2003	2Years	18
Master of Technology Programme			
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
Master of Pharmacy		210010	.0
Specialization		2 years	36 + 8(QIP)
1. Pharm. Chemistry	1983	<b>2</b> yours	00 0(4.17)
2. Pharmaceutics	1983		
3. Pharmacology	2004		
4. Pharmacognosy	2002		
Master of Urban Planning	2006	2Year	12
Master of Science Programme	***************************************		1
Biomedical Instrumentation	1992	2 Years	20
Information Science	1993	2Years	30
Bio Informatics	2006	2Years	30
Geo Informatics	2006	2Years	10
Business Management Specialization			
Marketing			
Finance	1980	2 Years	120
System			
Human Resource			
Master of Computer Application	1984	3 Years	60
Bachlor of Food Processing Tecgnology	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:

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

#### PROGRAMMES OFFERED AT OTHER CAMPUSES

	Allahabad	Jaipur	Lalpur	Kolkata	Noida	Patna
Courses			Sanctione	d Strength		
B. E		80				120
ВСА	100	80	200	90	80	
ВВА	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		7
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 2011 - 2012, total of 9930 students were registered in various courses. The programme – wise enrolment is given below.

SI.No.	Course	No. of Students
1.	Bachelor of Engineering	4770
2.	Bachelor of Architecture	189
3.	Bachelor of Pharmacy	196
4.	Bachelor of Hotel Management & Cat. Tech.	97
	Bachelor of Computer Application	703
	Bachelor of Business Administration	827
	IMBA	369
	IMCA	145
	I.M.Sc.(Chemistry)	9
	I.M.Sc.(Maths)	12
	I.M.Sc.(Physics)	11
•	Bachelor of Technology (PT)	12
	B. Sc. (A&M)	255
	BBA (Business Economics)	76
	B.Tech(P.T.)	24
	B.Sc.(Food Technology)	28
	Master of Business Administration	557
	Master of Computer Applications	1026
	Master of Pharmacy	138
	Master of Engineering	303
	Master of Technology	303
	M.Sc.(Applied Chemistry)	8
	M.Sc.(Applied Mathematics)	4
	M.Sc.(Applied Physics)	10
	M. Sc. (Information Science)	10
	M. Sc.(Bio Medical Instrumentation)	18
	M. Sc. (IT)	33

Total	10079
Ph.D.	149
MUP	12
M.Sc. (Animation & Design)	29
M. Sc. (Geo-Informatics)	26
M. Sc. ( Bio-informatics )	30

# **ADMISSION DURING 2011 - 2012**

In the academic year 2011 - 2012, 1313 fresh students were admitted in various disciplines. The branch – wise backup is given below.

	Session 2011-12	
SI. No.	Programmes offered	Admissions
1	Undergraduate Programmes:	
	B.E. in Biotechnology	46
	B.E. in Chemical Engineering	27
	B.E. in Chemical & Polymer Engineering	27
	B.E. in Civil Engineering	60
	B.E. in Computer Science	132
	B.E. in Electrical & Electronics Engineering	67
	B.E. in Electronics & Communication Engineering	136
	B.E. in Information Technology	59
	B.E. in Mechanical Engineering	102
	B.E. in Production Engineering	30
	Total	686
2	B. Arch	45
3	B. Pharm	58
4	ВНМСТ	28
5	B.Sc. Food Processing Technology	6
	Total	137

	MBA & MCA Programmes:	
6	MBA	55 (seats offered 60)
7	MCA	51
	Total	106

	M.E. Programmes:			
8	Automated Manufacturing Systems	13		
9	Civil	8		
10	Computer Aided Analysis & Design – CAAD	9		
11	Electrical	37		
12	Electronics & Communication 41			
13	Mechanical 10			
14	Polymer 0			
15	Quality Engineering & Management 3			
16	Software Engineering 15			
17	Space Engineering & Rocketry	22		
	Total	158		

	Pharmacy				
18	M.Pharm in (P'Ceutics, P, Chem, P'cology, P'cognosy)	50			
19	M.Pharm in Clinical Research	3			
20	M.Pharm in Quality Assurance & Regulatory Affairs 1				
21	MS Clinical Research & Pharmacovigilance 3				
22	PG Diploma in Bio-analytical Techniques 0				
23	PG Diploma in Clinical Research	2			
24	M. Pharm under QIP	1			
	Total	60			

	M. Tech Programmes:			
25	Biotechnology	17		
26	Computer Science	16		
27	Energy Technology	5		
28	Environmental Science & Engineering	13		
29	Fuels & Combustion	0		
30	Information Security	15		
31	Nano Science & Nano Technology	8		
32	New Material & Processing Technology	0		
33	Polymer Science & Technology 5			
34	Remote Sensing 12			
35	Scientific Computing	0		
	Total	91		
	M.Sc. Programmes			
36	Applied Chemistry	1		
37	Applied Mathematics	0		
38	Applied Physics	1		

	M.Sc. Programmes		
36	Applied Chemistry	1	
37	Applied Mathematics	0	
38	Applied Physics	1	
39	M.Sc. Bioinformatics 16		
40	M.Sc. Biomedical Instrumentation 0		
41	M.Sc. Geoinformatics 11		
42	M.Sc. Information Science	6	
	Total	35	

43	Master of Urban Planning (Town Planning)	6

	Integrated M.Sc.	
44	Chemistry	11
45	Mathematics and Computing	12
46	Physics	11
	7	otal 34

	47	Integrated M.Tech-Ph.D.	-
Ì		Total Admissions	1313

# **ADMISSION AT OTHER CAMPUSES**

······································	Allahabad	Jaipur	Lalpur	Kolkata	Noida	Patna	Deoghar
Courses	Admitted						
B. E		147				306	253
BCA							
BBA						Water	
B. Sc.(A&M)		20			38		
MCA	38	16	89	40	34		
MBA		24	51	12	45		
MBA(PT)			3		11		
MCA(PT)							
M. Tech (CS), PT			15	24	20		
M. E.(P.T)							
M. Sc.(I.T)			33				
M. Sc. Bioinformatics				3	L		
IMBA	15	24	215	28	87		
IMCA	2	9	120	4	10		
M.Sc.(Animation & Design)		8			4		

### **ADMISSION IN Ph. D. PROGRAMME**

149 new scholars have been admitted for the Ph. D. Programme in the area of Engineering Science, Pharmacy and Management during the session 2011 – 2012. The details are given below:

SI. No.	Name	Roll No.	Title		
Depart	tment of Applied Cher	nistry			
1	Devendra. Chouhan	Ph.D/AC/1001/2011	"Computer aided structural biology and protein- ligand recognition studies of RIO-2 kinase mediated design and synthesis of plausible anti-malarial agent"		
2	Ranjana Jha	Ph.D/AC/1002/2011	"Studies on occurrence and removal of fluoride in ground water of Palamu region of Jharkhand"		
3	Harapriya Chakravarty	Ph.D/AC/1003/2011	"In-silico biology assisted modecular design and synthesis of modulators for calsequestrin polymerization as plausible antiarrhythmic agent"		
4	G. Usha Rani	Ph.D/AC/1004/2011	"Microwave based synthesis of novel graft co- polymers of Agar and their applications"		
		"Microwave based synthesis of graft copolymer of sodim alginate towards their application as a flocculent and viscosifiers"			
6	6 Afsana Parveen Ph.D/AC/1051/2011		"Design And Synthesis of Pyrano – Pyrazole and Pyranopyridine with Diketo Motif as Anti–HIV Agents"		
7	Srijita Bharti	Ph.D/AC/1052/2011	Microwave based Synthesis of graft copolymers of oatmeal, Its characterization and Applications		
8	Sweta Sinha	Ph.D/AC/1053/2011	Microwave based Synthesis of graft copolymers of Casein, its characterization and application		
9	Arfa Parween	Ph.D/AC/1054/2011	Synthesis Characterization and Reactivity study of Mn & Cu Complexes of Biological Importance		
10	Ashok Arige	Ph.D/AC/1055/2011	Synthesis of Dipeptidyl Peptidase-4 Inhibitors and Evaluation as Drug Candidate for Type 2 Diabetes"		
11	Mamta Jain	PHD / AM/1001/2011	Restricted three body problem with dissipative forces under celestial mechanics		
12	Ms. Sagarika Chandra	PHD/AM/1002/2011	"Planetary Boundary Layer Characterization VIS-À- VIS Land use changes using Micro Meteorological data and Remote Sensing Technique"		
13	Ms. Swarima Tewari	PHD/AM/1003/2011	"Some Studies in Computational Musicology in Hindustani Music"		
14	Ms. Gargi Akhoury	PHD/AM/1004/2011	"Hydrological modeling of Land Surface Atmoshperic transfer interaction along two extreme ends of monsoon trought of India"		

15	Tripta	PHD/AM/1005/2011	"Parameterization of Land Surface Processes Coupled with Atmosphere transfer Interaction"
16	Divya Prakash	Ph.D/AM/1006/2011	, and an application interaction
17	Neha Keshri	Ph.D/AM/1007/2011	"Mathematical Models and Simulation on the attack of malicious signals in sensor network"
18	Indu Tyagi	PHD / AM/1051/2011	Mathematical Models on the attacking behavior of malware in networks
19	Mr. Shashi Kumar	Ph.D/AM/1052/2011	Action Monitoring of health of structural buildings due to earthquake excitation
20	Mr. Kaushik Haldar	Ph.D/AM/1053/2011	A Study on Modeling and Simulation of the Attack and Defense of Malicious objects in wireless network
21	Km. Shweta	PHD / AM/1054/2011	Land Surface evapotranspiration & its recent trends over eastern part of India using techniques
Depai	rtment of Applied Med	hanics	
22	Mr. Bikash Routh	Ph.D/AMC/1051/2011	Design Analysis of 'Flex Spline' of 'Harmonic Drive' with Involute Gear set
Depar	tment of Applied Phy	sics	
23	Mr. Abhijit Ghosh	Ph.D/AP/1001/2011	"Application of Holographic optical elements for coherent imaging and beam shaping"
24	Mr. M. Reddikumar	Ph.D/AP/1051/2011	Development of high speed swept source optical coherence tomography (SSOCT) system for imaging of biological objects
25	Mr. S. Gopikishan	Ph.D/AP/1052/2011	Magneto-electric effect of metal and metal oxide thin films
Depart	tment of Architecture		
26	Rajan Chandra Sinha	PhD / AR/1001/2011	Development of Housing Quality Assessment Toolkit in Indian Context
27	Gajanand Ram	PhD/AR/1051/2011	Institutional Capacity Building for Sustainable Urban Planning & Development Management
28	Gaurav Chandra	PhD/AR/1052/2011	Redefining Sustainability Index for Water Management in Institutional Buildings in North India
29	Janmejoy Gupta	PhD/AR/1053/2011	Passive Solar Design for Low-Cost Dwelling Units in Jharkhand, considering Microclimatic Parameters for Comfort

Depar	tment of BioTechnolog	у	
30	Ms. Lopamudra Satapathy	Ph.D/BT/1001/2011	"Study of WRKY Transcription Factors to Elucidate their Role during Biotic and Abiotic Stress in Wheat (Triticum aestivum L.)"
31	Ms. Tapaswini Swain	Ph.D/T/1002/2011	In silico development of biosimilars of recombinant parathyroid hormone (rhPTH) and its in vitro production"
32	Ms. Rajani Sharma	Ph.D/BT/1003/2011	"Study of microflora associated with gallstones"
33	Ms. Pratibha Gupta	Ph.D/BT/1004/2011	"Biotechnological approaches for bio-prospecting of marine microorganisms for bioactive compounds"
34	Ms. Astha Agarwal	Ph.D/BT/1005/2011	"Biosynthesis of Indole Acetic Acid Using Free and Immobilized Cells of Thermostable Nitrilase Producing Microorganism"
35	Mr. Vijay Kant Pandey	Ph.D/BT/1006/2011	"Process Development for production of N-glycosylation Enzymes from Mosses"
36	Mr. Subodh Kumar	Ph.D/BT/1007/2011	"TLR 2 Gene Polymorphism and its Association with Immune Response and Different Economic Traits in Pigs"
37	Ms. Surabhi Singh	Ph.D/BT/1008/2011	"Microbial production and characterization of ferulic acid esterase"
38	Ms. Jyoti Pathak	Ph.D/BT/1009/2011	"Discovery, Validation and Characterization of SNPs in Wheat (Triticum aestivum L.) using Next- Generation Sequencing Data"
39	Ms. Madhumita Kumari	Ph.D/BT/1010/2011	"Stevioside Glycosides production from hairy root culture of Stevia rebaudiana"
40	Ms. Rati Kumari Sinha	Ph.D/BT/1051/2011	Structural and Kinetic Characterization of recombinant L-Asparaginase from Pseudomonas fluorescens
41	Mr. Satyajit Saurabh	Ph.D/BT/1052/2011	An RNAi approach to induce parthenocarpy in Trichosanthes dioica Roxb. by regulating phytohormones
42	Ms. Rashmi Mishra	Ph.D/BT/1053/2011	In vitro production and characterization of n-glycosylation enzymes from local mosses of Jharkhand
43	Ms. Alpanika Kumari	Ph.D/BT/1054/2011	In Silico Study and Design of an Effective Drug for hepatitis C:A Pharmacoinformatics Approach
44	Km. Shashi Bala	Ph.D/BT/1055/2011	Development of custard apple based food products and their Quality Assessment

	rtment of Civil Enginee	anng	
45	Shwetambara Verma	Ph.D/CE/1001/2011	"Performance Study of Fly Ash – Modified Concrete Mixes with Quarry Dust as Fine Aggregate"
Depa	rtment of Computer Sc	ience & Engineering	
46	Mukta Majumder	Ph.D/CS/1001/2011	"Noisy Text Analysis"
47	Mr. Vaibhav Soni	Ph.D/CS/1010/2011	"Routing in Wireless Sensor Networks"
48	Mr. Rakesh Patra	Ph.D/CS/ 1051/2011	Machine learning methods for efficient information extraction
49	Jyoti Gopinath Borade	Ph.D/CS/1052/2011	
Depa	rtment of Electronics 8	Communication En	gineering
50	Kumar Mohit	Ph.D/ EC/1001/2011	"Design & Development of Antennas using Magneto- Dielectric nano materials"
51	Akash Kumar Gupta	Ph.D/EC/1002/2011	"Some Studies on Spectrum Management using Cognitive Radio in Battle field Simulation"
52	Poonam Priyadarshini	Ph.D/EC/1003/2011	"Some Studies in Music Information Retrieval with Applications to Music Appreciation, Synthesis and Composition"
52	Atul Kumar Pandey	Ph.D/EC/1004/2011	"An Energy Efficient Adaptive Multilayer MAC (AML-MAC) Protocol for Wireless Sensor Networks"
54	Rupesh Kumar Sinha	Ph.D/EC/1005/2011	"Secure Data Communication using Nonlinear Dynamics"
55	Saba Firdous	Ph.D/EC/1006/2011	"Design and Development of Circuits for the Green Environment"
56	Babu Linkoon P Meenaketan	Ph.D/EC/1051/2011	Study of multi-dimensional transformation based modelling of object by inverse scattering methodology
57	Mr. Mukesh Kumar Ojha	Ph.D/EC/1052/2011	Signal Processing Approach for SSVEP Based BCI System
58	Md. Irfanul Hasan	Ph.D/EC/1053/2011	Investigation of mechanisms for SNR improvement in fading channels
59	V.Vivek Vardhan Guddati	Ph.D/EC/1055/2011	Design and fabrication of a Wireless Power Transfer System using a Magnetoinductive Waveguide based on Matamaterials
60	Mainak Basu	Ph.D/EC/ 1060/2011	"Embedded and Distributed Fiber Optic Sensing System for Structural Health Monitoring of Engineering Structures"

Depar	tment of Electrical and	d Electronics Enginee	ring	
61	Mr. Nirbhar Neogi	Ph.D/EE/1001/2011	"Studies on automated surface defect detection of steel strips using image processing techniques"	
62	Mr. Anshuman Prakash	Ph.D/EE/1002/2011	"Design of Biosignal Controlled Prosthetic Device"	
63	Sanjay Kumar	Ph.D/EE/1003/2011		
64	Mr. Prabhat Kumar Ranjan	Ph.D/EE/1004/2011	"The Role of Power Electronics in Distributed Generation System"	
65	Suddha Chakrabarty	Ph.D/EE/1051/2011		
66	Md. Aftab Alam	Ph.D/EE/1052/2011	Development of Remedial Techniques against Electro-Magnetic Interference in high Performance Drives	
Enviro	onmental Science & Er	ngineering Group		
67	Ms. Shambhavi Singh	Ph.D/ESE/ 1001 /2011	Change in Jharkhand: Observation and Model Projection	
68	Ms. Kanchan	Ph.D/ESE/1051/2011	Development of ANFIS model for Air Qual Forecasting on Regional Basis	
69	Ms. Mohini Verma	Ph.D/ESE/1053/2011	Assessing the environmental effects of municipal solid waste leachate and its treatment	
70	Mr. Kuldip Suman	Ph.D/ESE/1054/2011	Development of Multi-objective Optimization Model for Municipal Solid Waste Management	
Depar	tment of Information T	echnology		
71	Mr. Debjyoti Nath	Ph.D/IT/1001/2011	"Ranking of SAARC Country's Universities in S&T Sector for their research output (2001 to 2011) based on Bi-dimensional Analysis: IFQ2 A index"	
72	Ms. Rashmi	Ph.D/IT/1002/2011	"End-to-End Security Architecture and Self-Resilient\ Mechanism for Cloud Computing Environment"	
73	Ms. Shweta Sinha	Ph.D/IT/ 1051/2011	Spoken Hindi Language Processing for Information Access	
Depar	tment of Mechanical E	ngineering		
74	Ajay Kumar Kapardar	Ph.D/ME/1001/2011	"Mathematical modeling and performance analysis of a double pass solar air heater"	
75	Vikas Ramnath Khalkar	Ph.D/ME/1002/2011	"Investigation on Electromagnetic Radiation During Plastic Deformation and crack propagation in semiconductor materials"	
76	Mr. Praveen Sanga	Ph.D/ME/1004/2011	Design, development and performance analysis of Solar Cooking System	

Depar	tment of Management		
77	Mr. Shailendra Kumar Singh	Ph.D/MB/1051/2011	Perception of Indian Youth towards Employment in ITES-BPO Sector
Depar	tment of Production E	ngineering	
78	Sanjiv Kumar Tiwari	Ph.D/PE/1001/2011	"An integrated lean manufacturing and six sigma model for Improving the competitive advantage of manufacturing industries"
79	Rekha Kumari	Ph.D/PE/1002/2011	"Metallic Foam with additive for multifarious applications"
80	Ms. Arpita Roy Choudhury	Ph.D/PE/1051/2011	Study of Microwave Welding
Depa	rtment of Chemical & F	olymer Engineering	
81	Mr. Abhijit Jadhav	Ph.D/PL/1051/2011	"Active Carbon from Agro-waste and its utilization in the preparation of Polymer-Carbon composites"
Depa	rtment of Pharmaceuti	cal Sciences	
82	Mr. Kalyan Kr. Sethi	Ph.D/PH/1001/2011	"Design, Synthesis and Pharmacological Evaluation of some Human Carbonic Anhydrase Inhibitors"
83	Mr. Aadesh Upadhayay	Ph.D/PH/1002/2011	"Development of Herbal Based Compound Formulation for Wound Closure, Healing in Battle field Instant Injury"
84	Mr. Subham Banerjee	Ph.D/PH/1003/2011	"Fabrication & Assessment of Prophylactic Transdernmal Antidot against Acetyl Choline Agonist Toxin"
85	Jerome K. George	Ph.D/PH/1004/2011	"Design, Development and Evaluation of Nanocapsules Based Delivery System of Some Drugs"
86	Ms. Geeta Yadav	Ph.D/PH/1005/2011	"Synthesis and Study of Some Novel Benzimidazole Analogs"
87	Ms. Deepika	Ph.D/PH/1006/2011	"Studies on a few Natural Polysaccharides as Pharmaceutical Adjuvants"
88	Mr. Surendra Singh Jadav	Ph.D/PH/1007/2011	"Design and Synthesis of Antiviral Agents for Chikungunya Viral Infections"
89	Mr. T. Ajay Kumar	Ph.D/PH/1008/2011	"Design, Synthesis and Screening of Small Molecule Inhibitors against Dengue Virus"
90	Mr. Paramaguru R	Ph.D/PH/1009/2011	"investigation of Antidiabetic Potential of Pterospermum acerifolium (L) Willd." (Family: Sterculiaceae)
91	Mr. Santanu Kaity	Ph.D/PH/1010/2011	"Biopharmaceutical Evaluation of Chemically Modified Locust Bean gum oral Controlled Release Drug Delivery System"

92	Mr. Sameer D. Kulkarni	Ph.D/PH/1011/2011	"Studies on Lagenaria siceraria (Mol.) fruit extracts its Formulations"			
93	Ms. Deepanwita Maji	Ph.D/PH/1012/2011	"Design, Synthesis and Antidiabetic, Cardio Protective Studies on NIDDM Based Amino Acid- Substituted Thiazolidinedione and Peptide Analogues"			
94	Vishnu Nayak B.	Ph.D/PH/1013/2011	"Design, Synthesis and Biological Screening of Monoamine Oxidase Inhibitors"			
95	Mr. Ram Kumar Dubey	Ph.D/PH/1051/2011	Bioanalytical Method Development and Validation of a Few Selected Antihypertensive Drugs			
96	Mr. P. Mahesh Kumar	Ph.D/PH/1052/2011	In vitro characterization of microsponge loaded gel for wound healing-evaluation of safety and efficacy			
97	Mr. Padma Charan Behera	Ph.D/PH/1053/2011	Phyto-pharmacological Evaluations of Aerva lanata Linn A Plant Medicine for Urolithiasis			
98	Mr. B. Sanjeeb Kumar Patro	Ph.D/PH/ 1054 /2011	Pharmacological Evaluation of Flacourtia Sepiaria			
99	Mr. Biswaranjan Das	Ph.D/ PH /1055 /2011	Design, synthesis and study on some hybrid peptide based anti arthritic drugs			
100	Mr. Pankaj M. Pimpalshende	Ph.D/PH/1056/2011	Formulation and Evaluation of Lipid based Carrier for Nasal Drug Delivery System of some Anti depressant Drugs			
101	Mr. Tara Sasank T V N V	Ph.D/ PH/ 1057 /2011	Design and synthesis of antitubercular agents : exploring the conditionally essential targets			
102	Ms. Sabina Yasmin	Ph.D/PH/1058/2011	Design and synthesis of PPAR modulators as possible antidiabetic agents			
Depar	tment of Remote Sens	sing				
103	Mr. Amar Kumar Kathwas	PHD/RS/1001/2011	"Multicriteria Based Agronomic Land Suitability Classification using Geospatial Techniques"			
104	Mr. Kartar Singh	Ph.D/RS/1051/2011	A Geospatial and Microbial Approach to Flamingo Habitat Suitability: Sambhar Lake, A Ramsar Site, India			
105	Ms. Retinder Kour	Ph.D/RS/1052/2011	Assessment of the Impacts of Climate and Land Use/Land Cover Change on Hydrological Regime of Chenab Basin in Western Himalays Using Geoinformatics Techniques			
	ment of Space Engine	eering & Rocketry				
106	Pratim Kumar	Ph.D/SER/1001/2011	"Combustion Studies of Eco-friendly Composite Solid Propellant in Low Pressure Regime"			
107	Prashant G.K.	Ph.D/SER/1051/2011	Investigation on Combustion of selected liquid fuels			

		BIT Mesra Extension	Centre, Deoghar
108	Mr. Abhishek Pandey	Ph.D/CS/1004/2011	Assessment of Quality Test Case: An Evolutionary Algorithm Based Approach
109	Goldina Ghosh	Ph.D/CS/1005/2011	"Investigating Social Dynamics and Revolution of Social Network: An Itinerary of Human Computer Interaction and Hybrid Intelligence Approach"
110	Manash Sarkar	Ph.D/CS/1006/2011	"Investigating Adaptive Pattern of On-line Cyber Security: Preventive Measures using Hybrid Intelligence Metaphor"
111	Arup Roy	Ph.D/CS/1007/2011	"Developing Hybrid Intelligence based Recommendation System: A Search towards Machine Learning Components"
112	Rohit Srivastava	Ph.D/AC/1006/2011	"To Study the Evolution of Oscillations, Patterns and Chemical Chaos in Mixed Belousov-Zhabotinski (B-Z) System"
113	Saswata Mukherjee	Ph. D/CS/1008/2011	Identifying the Scope of Design Pattern in Software Paradigm: An Approach towards Validation, Tuning, and Measurement of performance
114	Mr. Nishikant Kumar	Ph.D/CS/1009/2011	Exploring the Prediction Mechanism of Software Reliability: Approach towards Machine Learning Methodologies
115	Rachna Kumari	Ph.D/EC/1007/2011	"Designing of Jamming Resistance GPS System"
116	Ritesh Kumar Upadhyay	Ph.D/ME/1003/2011	
		BIT Mesra Extension	on Centre, Jaipur
117	Mr. Bimalendu Pathak	Ph.D/IT/1004/2011	"Intelligent Agent based Ontology to handle large data set in distributed environment"
118	Kumar Satyam	Ph.D/MB/1001/2011	"A Critical Study on Interdependence of Conflict Productivity in the Hospitality Industry
119	Mr. Hardik Hemant Vora	Ph:D/MB/1055/2011	
120	Mr. Anup Prabhakarrao Chaple	Ph.D/MB/1056/2011	
121	Ms. Purvi Mathur	Ph.D/MB/ 1062/2011	An Analytical Study of Foreign Direct Investment in the Indian Multi-Brand Retail Sector and its Impact on Agri-Food Sector
122	Priyanshu Sharma	Ph.D/ MB / 1061/2011	Analysis of Special economic Zones (SEZ) for Gems & Jewellery in Jaipur with the Prespective of Systematic Promotion of their Manufacturing and Trade

123	Mr. Santosh Kumar	Ph.D/ CS / 1059/2011	Design of Adaptive Distributed Knowledge Based E-Learning System		
		BIT Mesra Extension	on Centre, Lalpur		
124	Mrs. Shruti Traymbak	Ph.D/MB/1060/2011	Stress Management Under Global Changing Scenario a Rational Emotive Thearpy Approach		
125	Jaya Pal	Ph.D/CS/1055/2011	Development of Soft Computing Models for Engineering Applications		
		BIT Mesra Extension	on Centre, Noida		
125	Ms. Neharika Srivastava	Ph.D/MB/1002/2011	A Study on Financial Implications of Carbon Credit Trading in Highly Polluting Indian Companies		
127	Ms. Upasana Diwan	Ph.D/MB/1052/2011	Valuation of Corporate Brand Equity in the Organized Retail Sector in India		
128	Mr. Debdutta Chattopadhyay	Ph.D/MB/1053/2011	A Study of Energy Mix for Sustainable Development of Power Sector in India		
129	Mr. Pallab Sikdar	Ph.D/MB/1054/2011	A Study on Financial Risks Faced and Risk Management Strategies Adopted by Select Public, Private and Foreign Commercial Banks in India		
130	Mr. Amresh Kumar	Ph.D/MB/1055/2011	A Study on Branding Strategies in Organized Retail and its Impact on Customer Loyalty		
131	Garima Srivastava	Ph.D/MB/1056/2011			
132	Prashant Kumar Singh	Ph.D/MB/1057/2011			
133	Mr. Ramesh Kumar	Ph.D/MB/1058/2011	A Study of Impact of Foreign Direct Investment in Organized Retail Sector in India		
		BIT Mesra Extension	on Centre, Patna		
134	Anish	Ph.D/CE/1002/2011			
135	Shridhar Kumar	Ph.D/CS/1002/2011			
136	Mr. Madhup Kumar	Ph.D/IT/1003/2011	An Efficient Association Rule Mining Algorithm to mine Text from the Web		
137	Adnan Mahmood	Ph.D/CS/1003/2011	A Novel Entity Extraction Tool to Mine an Entity from Web		
138	Mr. Bimal Nathiel Aind	Ph.D/ME/1051/2011			
139	Mr. Chandan Kumar	Ph.D/ME/1052/2011			
140	Mr. Prashant Prakash	Ph.D/PE/1052/2011	Investigation of friction stir welding of metallic Materials		
141	Smita Pallavi	Ph.D/IT/1052/2011	An Integrated Business Intelligence Framework to support OLP Mining Application in Educational CRM Scenario		

142	Sheel Shalini	Ph.D/CS/1053/2011	Mining Customer's Behavior using Temporal Association Rule			
143	Sachin Khedekar	Ph.D/EC/1008/2011	"Development of Real Time Adaptive Beam forming using FPGA"			
144	Sitakanta Maharatha	Ph.D/EC/1009/2011	"Development of DOA Estimation algorithms for daptive Array Antenna"			
145	Sweta Kumari	Ph.D./EC/1010/2011	"Wireless Body Area Network for Medical Application"			
146	Mr. Siva Suryanarayana Ch.	Ph.D/IT/1053/2011	Analysis of Software Cost Estimation Techniques using Soft Computing			
		BIT Mesra Internation	nal Centre, Muscat			
147	Mr. Satish Chander	Ph.D/CS/ 1054//2011	Application of Data Mining Techniques to Improve Academic Performance of Students			
148	Akhilesh Kumar Roy	Ph.D/EC/1056/2011				
149	Mr. Taslim Khan	Ph.D./MB/1059/2011	Job Satisfaction & Organisational Effectiveness of Selected Organizations with reference to Muscat, Sultanate of Oman			

## CONVOCATION, RESULTS, DEGREES / DIPLOMA AWARDED

Upon recommendation of the Board, all who have cleared their respective programme during 2011-12 were awarded Degree / Diploma in the convocation 2011-12 held on 3rd June 2012.

1	Doctor of Philosophy					Total
		Architectute				2
		Engineering				15
		Management				11
		Pharmacy				11
		Science		1		19
		Technology				8
	1			То	tal	66
2	Post-Graduate Degrees		ID	1	11	Total
	Executive Master of Business Administration	12	12	2	26	
	Master of Business Administration	112	234	11	357	
	Master of Computer Applications	132	152	7	291	

Master of Animation Design		7	13	2	22
Master of Engineering	Automated Manufacturing System	5	1		6
	Computer Aided Analysis & Design	3	2		5
	Civil	12	2	_	14
	Electrical	10	15	1	26
	Electronics & Communication	20	15		35
	Mechanical	10	10	1	21
	Polymer	1	0		1
	Quality Engineering Management	8	_		8
	Software	5	6		11
	Space Engineering & Rocketry	9	12		21
Master of Pharmacy	25	25		50	
Master of Science	Applied Chemistry	6	3	1	10
	Applied Mathematics	1	2		3
	Applied Physics	2	1		3
	Bio-Informatics	18	9	4	31
	Bio-Medical Instrumentation	4	6		10
	Clinical Research	1	11	_	12
	Geo-Informatics	10	4	1	15
	Information Science	4	3		7
	Information Technology	18	5		23
Master of Technology	Computer Science	7	12		19
	Environmental Science & Engineering	12	5		17
	Fuels & Combustion		2		2
	New Material & Processing Technology	2	4		6
	Polymer	2	2		4
	Remote Sensing	8	7		15
	Scientific Computing	4	3		7
Post-Graduate Diploma	Bio Analytical Techniques	1	1		2
		Tot	al		108

3	Under-Graduate Degrees		ID	ı	II	Total
	Bachelor of Architecture	29	10		39	
	Bachelor of Busines Administration	400	151	25	576	
	Bachelor of Busines Management	9	3		12	
	Bachelor of Commerce	18	19	6	43	
	Bachelor of Computer Applications	302	130	22	454	
	Bachelor of Engineering	Biotechnology	16	10	3	29
		Civil	61	24		85
		Computer Science	132	83	3	218
		Electrical & Electronics	96	62	3	161
		Electronics & Communication	181	114	14	309
		Information Technology	49	27	_	76
		Marine	_	4	_	4
·		Marine Technology	120	_	_	120
		Mechanical	56	35	1	92
		Polymer	6	2		8
		Production	21	11		32
	Bachelor of Hotel Management & Catering Technology	10	16	8	34	
	Bachelor of Pharamcy	36	3		39	
	Bachelor of Science	Animation & Multimedia	55	57	4	116
		BMLT	15	20		35
		Nautical Science	17	10		27
		Information Technology	40	2		42
		Food Processing Technology	6			6
	Bachelor of Technology	Civil	2	2		4
		Electrical & Electronics	7	5		12
		Mechanical	1	6		7
			Tot	al		2580

4	Diploma		ID	1	II	Total
	Diploma in Technology	Automobile Engineering	10	22		32
		Computer Science	14	16		30
		Electronics Engineering	23	20	2	45
		Manufacturing Engineering	13	17	1	31
	Diploma in Animation & Multimedia		1			1
			То	tal		139

Grand Total	3865	
	L	

# **FACULTY POSITION (Including India and Abroad)**

## **SUMMARY OF FACULTY STRENGTH**

SI. No.	Category	Number
1	Professor	60
2	Associate Professor	93
3	Reader	05
4	Lecturer (Selection Grade)	01
5	Senior Lecturer	05
6	Lecturer	368
7	Associate Lecturer	26
8	Scientific Officer	23
9	Res. Assoc. Cum Tutor	9
10	Others	69
11	Total	659

# DEPARTMENT / CENTRE WISE FACULTY POSITION DEPARTMENT OF APPLIED CHEMISTRY

SI. No.	Name	Designation
1	Prof. Dr. Usha Jha	Professor & Head
2	Dr. Bimal Verma	Associate Professor
3	Dr. J. P. Pandey	Associate Professor
4	Dr. A. Sharon	Assistant Professor
5	Dr. C. Bal	Assistant Professor
6	Dr. R. U. Islam	Assistant Professor
7	Dr. S. Naskar	Assistant Professor
8	Dr. Deepshikha	Assistant Professor
9	Dr. S. Mishra	Assistant Professor
10	Dr. G. Sen	Assistant Professor
11	Dr. A. Priyam	Assistant Professor
12	Mr. Rahul	Assistant Professor
13	Dr. S.S.Mahapatra	Assistant Professor
14	Dr. Poulomi Roy	Assistant Professor
15	Dr. Barnali Dasgupta	Assistant Professor
16	Dr. Pradeep Kar	Assistant Professor
17	Dr. R. P. Bhatnagar	Pr. Scientific Officer

## **DEPARTMENT OF APPLIED MATHEMATICS**

SI. No.	Name	Designation
1	Dr. S.K.Chakraborty	Professor &Head
2	Dr.S.K.Jain	Professor
3	Dr. S.S.Roy	Associate Professor
4	Dr.B.K.Mishra	Associate Professor
5	DrS.Padhi	Associate Professor
6	Dr. S.Chakraborty	Associate Professor
7	Dr. A.P.Ghorai	Associate Professor
8.	Dr.P.Kaur	Assistant Professor
9.	Dr.A.Tondon	Assistant Professor

# **DEPARTMENT OF APPLIED MECHANICS**

SI. No.	Name	Designation	
1	Prof. A.K.Roy	Professor & Head	,
2	Dr. Pradip Kumar Roy	Assistant Professor	
3	Prof. S. Bhaduri	Assistant Professor	

## **DEPARTMENT OF APPLIED PHYSICS**

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

#### DEPARTMENT OF ARCHITECTURE

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

## **DEPARTMENT OF BIO TECHNOLOGY**

SI. No.	Name	Designation
1	Dr. Ambarish S. Vidyarthi	Professor & Head
2	Dr. Kunal Mukhopadhyay	Professor
3	Dr. Pratyoosh Shukla	Associate Professor
4	Dr. Ramesh Chandra	Associate Professor
5	Dr. Dev Mani Pandey	Associate Professor
6	Dr. Vinod Kumar Nigam	Reader
7	Dr. Rajib Bandopadhyay	Assistant Professor (Sr. Lecturer)
8	Dr. Manish Kumar	Assistant Professor (Sr. Lecturer)
9	Dr. Raju Poddar	Assistant Professor (Sr. Lecturer)

10	Dr. Avneesh Pareek (On deputation)	Assistant Professor
11	Dr. (Mrs.) Shashwati Ghosh Sachan	Assistant Professor
12	Mr. Santosh Kumar Jha	Assistant Professor
13	Dr. Ashish Sachan	Assistant Professor
14	Dr. (Mrs.) Sheela Chandra	Assistant Professor
15	Dr. Hare Ram Singh	Assistant Professor
16	Ms. Koel Mukherjee (On deputation)	Assistant Professor
17	Dr. (Mrs.) Shubha Rani Sharma	Assistant Professor
18	Dr. Dinesh Prasad	Assistant Professor
19.	Mr. Debabrata Garai	Assistant Professor
20.	Mr. Saswata Goswami	Scientist
21.	Ms. Sneha Singh	Assoc. Lecturer
22.	Mr. Shankaracharya	Assoc. Lecturer

# DEPARTMENT OF CHEMICAL & POLYMER ENGINEERING

SI. No.	Name	Designation
1	Dr. M.Mukherjee	Professor & Head
2	Dr. Gautam Sarkhel	Assoc. Professor
3	Dr. S. Goswami	Assoc. Professor
4	Dr. Akhil Sen	Assoc. Professor
5	Dr. Arup Choudhury	Asstt. Professor
6	Dr. K.Kumar	Asstt. Professor
7	Dr. G.T.Mohanraj	Asstt. Professor
8	Dr. S. Dutta	Asstt. Professor
9	Mr.S.Jana	Asstt. Professor
10	Mr.P. Dutta	Asstt. Professor
11	Ms Debashree Ghose	Asstt. Professor
12	Mr. J.Sudeepan	Asstt. Professor
13	Dr. A.N.Mishra	Asstt. Professor

# DEPARTMENT OF CIVIL ENGINEERING

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

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

SI. 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.	Mr. 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.	Mr. 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

SI. No.	Name	Designation
1	Prof. S K Ghorai	Professor & Head
2	Prof. N Gupta	Professor
3	Prof. S Pal	Professor
4	Prof. V R Gupta	Professor
5	Mr. M Puri	Associate professor
6	Mr. K K Masand	Associate professor
7	Mr. B B Pal	Associate professor
8	Dr. Sanjay Kumar	Associate professor
9	Dr. S S Solanki	Associate professor
10	Dr. Mahesh Chandra	Associate professor
11	Dr. Shweta Srivastava	Reader
12	Dr. Neela Chattoraj	Reader
13	Mr. Kartik Mahto	Assistant professor
14	Mr. Vishal H Shah	Assistant professor

15	Mr. Sanjeet Kumar	Assistant professor
16	Mr. A Islam	Assistant professor
17	Mr. Janardan Sahay	Assistant professor
18	Mr. S K Dash	Assistant professor
19	Dr. R K Lal	Assistant professor
20	Mr. S S Tripathy	Assistant professor
21	Mr. Gajendra Mishra	Assistant professor
22	Mr. Pryinak Saxena	Assistant professor
23	Mr. Somnath Sengupa	Assistant professor
24	Mrs. S M Annapurna	Assistant professor
25	Mr. Dileep Kumar Upadhyay	Assistant professor
26	Dr. Vijay Nath	Assistant professor
27	Dr. Manoj Mukul	Assistant professor
28	Mr. A K Tiwary	Assistant professor
29	Dr. S S Sahu	Assistant professor
30	Dr. Bharat Gupta	Assistant professor
31	Ms. Swati Prasad	Assistant professor
32	Mr. R K Sinha	Associate lecturer
33	Mr. Santashraya Prasad	Associate lecturer
34	Mrs. Saba Firdous	Associate lecturer
35	Mrs. Soumya Sidhishwari	Associate lecturer

# DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

SI. No.	Name	Designation	
1	Dr. T. Ghose	Professor & Head	
2	Prof. R. K. Narayan	Professor	
3	Dr. R. C. Jha	Professor	
4	Dr. D. K. Mohanta	Professor	
5	Dr. Bijan B. Das	Research 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. Surendra Kumar	Assistant Professor
13	Mrs. Debomita Ghosh	Assistant Professor
14	Mr. G. S. Gupta	Assistant Professor
15	Mr. S. K. Mishra	Assistant Professor
16	Ms. Aparna Gautam	Assistant Professor
17	Mr. B. M. Prasad	Assistant Professor
18	Dr. Y. Aggarwal	Assistant Professor
19	Mrs. Anjana Dwivedi	Associate Lecturer
20	Mr. S. K. Das	Associate Lecturer
21	Mrs. Sushma Kadwane	Associate Lecturer
22	Dr. B. M. Karan	Visiting Faculty
23	Mr. N. Neogi	Visiting Faculty

## DEPARTMENT OF FOOD PROCESSING TECHNOLOGY

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

## **DEPARTMENT OF HOTEL MANAGEMENT & CATERING TECHNOLOGY**

SI. No.	Name	Designation	
1.	Prof. Sitesh P. Srivastava	Professor & Head	
2.	Mr. Praveen Srivastava	Asst. Professor	· ·
3.	Mr. Abhinav K. Shandilya	Asst. Professor	

4.	Mr. Abhishek Jana	Asst. Professor
5.	Mr. Nishikant Kumar	Asst. Professor
6.	Mr. Sanjeev Srivastava	Asst. Professor
7.	Ms. Rajeshwari	Asst. Professor
8.	Dr. Amit Saran	Asst. Professor
9.	Mr. Gautam Shandilya	Asst. Professor
10.	Mrs. Pratima Ekka	Asso. Lecturer
11.	Mr. Pranjal Kumar	Asso. Lecturer
12.	Mr. Rajesh Langiya	Bakery Chef

## **DEPARTMENT OF INFORMATION TECHNOLOGY**

SI. No.	Name	Designation
1.	Dr. G. Sahoo	Professor & Head
2.	Dr. S. Dutta	Associate Professor
3.	Dr.(Mrs.) Aruna Jain	Associate Professor
4.	Dr. Bhaskar Karn	Associate Professor
5.	Mr. V.K. Jha	Assistant Professor
7.	Mr. B.K. Sarkar	Assistant Professor
8.	Mr. A.K. Keshri	Assistant Professor
9.	Mr. R. Jha	Assistant Professor
10.	Mr. Kalyan Samanta	Assistant Professor
11.	Mr. I.D. Ram	Assistant Professor
12.	Mr. Subrajeet Mohapatra	Assistant Professor
13.	Mr. B.K. Chanda	Assistant Professor
14.	Ms. Debjani Mustafi	Assistant Professor
15.	Ms. Sabina Priyadarshini	Assistant Professor

#### **DEPARTMENT OF MANAGEMENT**

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

## DEPARTMENT OF MECHANICAL ENGINEERING

Name	Designation
Dr. Arbind Kumar	Professor &Head
Prof. P.K.Choudhary	Associate Professor
Dr. R.P.Sharma	Associate Professor
Dr. A.K.Roy	Associate Professor
Dr. Rajeev Kumar	Associate Professor
	Dr. Arbind Kumar Prof. P.K.Choudhary Dr. R.P.Sharma Dr. A.K.Roy

6.	Sri S.K.Sinha	Associate Professor
7.	Dr. D.B. Lata	Associate Professor
8.	Mrs. Richa Pandey	Assistant Professor
9.	Sri J. Singh	Assistant Professor
10.	Sri S.K.Dhiman	Assistant Professor
11.	Sri P. Mishra	Assistant Professor
12.	Sri Sabin Kumar MIshra	Assistant Professor
13.	Sri Sandip Kumar	Assistant Professor
14.	Sri B.S.Choudhary	Assistant Professor
15.	Sri O. P. Pandey	Assistant Professor
16.	Sri B.K.Prabhakar	Assistant Professor
17.	Sri Sujeet Kumar Mishra	Assistant Professor
18.	Sri Abhijeet Nag	Assistant Professor
19.	Sri Arun Dayal Udai*	Assistant Professor
20.	Sri L.S. Brar	Teaching cum Research Fellow
21.	Sri A. Bhaumik	Scientific Officer

<sup>\*</sup> On Study Leave

#### DEPARTMENT OF PHARMACEUTICAL SCIENCE

SI. No.	Name	Designation
1.	Dr. D. Sasmal	Professor & Dean Academic Coordination
2.	Dr. P.R.P. Verma	Professor & Head ( 9.4.2012- till date)
3.	Dr. B.N. Sinha	Professor & In-Charge (1.4.2011- 8.4.2012)
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.	Mr. D. Biyani	Assistant Professor
15.	Dr Manik	Assistant Professor
16.	Mr. A. Basu	Assistant Professor
17.	Mr. N. Mishra	Assistant Professor
18.	Dr. S.P. Pattanayak	Assistant Professor
19.	Mr. A. Dev	Assistant Professor
20.	Mr. B. Sarkar	Assistant Professor
21.	Dr T. Bal	Assistant Professor
22.	Dr. A. Pandey	Assistant Professor
23.	Dr Neelima Sharma	Assistant Professor
24.	Dr. Sandeep Kumar Singh	Assistant Professor
25.	Dr. Animesh Ghosh	Assistant Professor
26.	Dr.Uma Ranjan Lal	Assistant Professor
27.	Dr.Sugato Banerjee	Assistant Professor
28.	Dr. Kishanta Pradhan	Assistant Professor

## **DEPARTMENT OF PRODUCTION ENGINEERING**

SI. No.	Name	Designation
1.	Dr. B.K. Singh	Professor & Head
2.	Dr. Vinay Sharma	Professor
3.	Mr. Atul Anand	Associate Professor
4.	Mr. A. K. Thakur	Associate Professor
5.	Dr. Sanjay Kumar Jha	Associate Professor
6.	Dr. L.N. Pattanaik	Associate Professor
7.	Dr. Ritesh Kumar Singh	Associate Professor
8.	Dr. Vijay Pandey	Associate Professor

9.	Dr. S. C. Srivastava	Associate Professor
10.	Dr. Joyjeet Ghose	Associate Professor
11.	Sri Rajeev Agrawal	Assistant Professor
12.	Sri Binay Kumar	Assistant Professor
13.	Dr. Somak Datta	Assistant Professor

#### **DEPARTMENT OF REMOTE SENSING**

SI. No.	Name	Designation
1.	Dr. Nilanchal Patel	Professor & Head
2.	Dr. A.P. Krishna	Professor
3.	Dr. C. Jeganathan	Professor
4.	Dr. M.S. Nathawat	Professor (On Extra-Ordinary Leave)
5.	Dr. A.C. Pandey	Asso Profesor
6.	Dr. Mili Ghosh	Asst. Professor
7.	Dr. V.S. Rathore	Asst. Professor
8.	Dr. L.K. Sharma	Asst. Professor (On Extra-Ordinary Leave)
9.	Mr. S. Chelliah	Asst. Professor
10.	Mrs. Richa N. K. Sharma	Asst. Professor

#### **DEPARTMENT OF SPACE ENGINEERING & ROCKETRY**

SI. No.	Name	Designation
1.	Dr. A. K. Chatterjee	Professor &Head
2.	Dr. P. C. Joshi	Professor
3.	Dr. Mohan Varma	Professor (On Deputation)
4.	Dr. J. K. Prasad	Professor
5.	Dr. Sudip Das	Associate Professor
6.	Mr. Priyank Kumar	Assistant Professor
7.	Dr. Sumana Ghosh *	Assistant Professor

## **ENVIRONMENTAL SCIENCE & ENGINEERING GROUP**

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

#### **CENTRE OF EXCELLENCE IN CLIMATOLOGY**

SI. No.	Name	Designation
1.	Dr. Manoj Kumar	Lecturer (SG)
2.	Dr. (Mrs.) Sunita Verma	Asst. Professor (On Deputation at BITEC, Jaipur)
3.	Mr. Swagata Pyara	Scientific Officer (On Deputation at BITEC, Jaipur)

#### **DEPARTMENT OF PHYSICAL EDUCATION & SPORTS**

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

# FACULTY MEMBERS WITH BIT, MESRA OFF CAMPUSES ALLAHABAD CAMPUS

SI. No.	Name	Designation
1.	Dr. Rampal Singh	Professor & Director
2.	Shri Kumar Nikhil	Asst. Professor
3.	Shri S.S.Kumar	Asst. Professor
4.	Shri S.Kanungo	Asst. Professor
5.	Shri R.S.Pandey	Asst. Professor
6.	Mrs. A.Kushwaha	Asst. Professor
7.	Shri S.C.Pandey	Asst. Professor
8.	Shri K.N.Mishra	Asst. Professor

9.	Shri A.K.Keshri	Asst. Professor
10.	Dr. P.C.Srivastava	Asst. Professor
11.	Shri R. Mishra	Asst. Professor
12.	Mrs. A. Shukla	Associate Lecturer
13.	Shri N. Trivedi	Associate Lecturer
14.	Dr. Adhip Kumar Mahanty	Asst. Professor
15.	Dr. Sunil Kumar Pandey	Asst. Professor
16.	Shri P.Munda	Asst. Professor
17.	Sri Ashish Mohan Dubey	Asst. Professor
18.	Mrs. Sweta	Associate Lecturer
19.	Mrs. N.Tiwari	Associate Lecturer

# **DEOGHAR CAMPUS**

SI. No.	Name	Designation
1.	Dr. P. K. Srivastava	Professor
2.	Dr. R. K. Paul	Associate Professor
3.	Dr. Soumya Banerjee	Associate Professor
4.	Dr. Ashis Kumar Chakraborty	Associate Professor
5.	Dr. Mainak Mukhopadhyay	Assistant Professor
6.	Sri Babu Lal Shahu	Assistant Professor
7.	Ms. Sutapa Mondal	Assistant Professor
8.	Sri Sridhar Chintalala	Assistant Professor
9.	Sri Chinmay Chakraborty	Assistant Professor
10.	Sri Priyadarshi Suraj	Assistant Professor
11.	Sri Akash Kumar Gupta	Assistant Professor
12.	Sri P. K. Manoharan	Assistant Professor
13.	Sri Abhishek Kr. Singh	Assistant Professor
14.	Sri Piyush kumar Ojha	Assistant Professor
15.	Sri Pankaj Mishra	Assistant Professor
16.	Sri Srihari Gude	Assistant Professor
17.	Sri Deep Shekhar Acharya	Assistant Professor

18.	Sri Ritesh Kumar Upadhyay	Assistant Professor
19.	Sri Srinivasarao Gopisethi	Assistant Professor
20.	Sri Ashutosh Kumar	Assistant Professor
21.	Dr. Ashish Chandra Singh	Assistant Professor
22.	Dr. Arsad Kamal	Assistant Professor
23.	Dr. R. K. Sarkar	Assistant Professor
24.	Dr. Soumen Karmakar	Assistant Professor
25.	Dr. Sandip Ghosh Hazra	Assistant Professor
26.	Dr. Roushan Kumar	Assistant Professor
27.	Sri Bishnu Mohan Jha	Assistant Professor
28.	Sri Swapon Kumar Borat	Associate Lecturer
29.	Sri Saswata Mukherjee	Associate Lecturer
31.	Sri Nishikant Kumar	Associate Lecturer
31.	Mrs. Neena Jha	Associate Lecturer
32.	Sri Mahendra Kumar Das	Associate Lecturer
33.	Sri Surendra Kr. Mahto	Associate Lecturer
34.	Dr. S. S. Majhi	Associate Lecturer
35.	Dr. Amit Kumar	Associate Lecturer
36.	Dr. Ranjan Chattaraj	Associate Lecturer
37.	Mrs. Anindita Banerjee	Associate Lecturer
38.	Sri Prabhat Kumar Ranjan	Teaching cum SRF
39.	Sri Balaram Mandal	Teaching cum SRF
40.	Dr. Jayeeta Chattopadhyay	Research Scientist
41.	Mrs. Alka Srivastava	Music Teacher
42.	Sri D. Jha	Workshop Superintendent

#### JAIPUR CAMPUS

SI. No.	Name	Designation
1.	Dr. Abhinav Dinesh	Director
Computer Science Department		
2.	Dr.(Mrs.) Madhavi Sinha	Associate professor

3.	Mr. P.K. Sharma	Asst. Professor
4.	Mr. Bimalendu Pathak	Asst. Professor
5.	Mr. Shripal Vijayvargiya	Asst. Professor
6.	Mr. Piyush Gupta	Asst. Professor
7.	Mr. Madan Mohan Agarwal	Asst. Professor
8.	Mr. Alok Pandey	Sr. System Manager (Also having teaching assignment)
9.	Mr. Vivek Gaur	Asst. Professor
10.	Mr. Subhash Chand Gupta	Asst. Professor
11	Dr. (Mrs.) Archana Bhatnagar	Asst. Professor
12	Mrs. Seema Gaur	Asst. Professor
13	Mrs. Anju Sharma	Asst. Professor
14	Mr. Santosh Kumar Sharma	Asst. Professor
15	Mr. Santhosh Kumar Agarwal	Associate Lecturer
16	Mr. S.K. Sharma	Programmer (Also having teaching assignment)
	Electronics & Communication Eng	gineering Department
1	Mr. Jankiballabh Sharma	Asst. Professor
2	Mr. Deepak Chaturvedi	Asst. Professor
3	Mr. Jogananda Goswami	Asst. Professor
4	Mrs. Jyoti Sharma	Asst. Professor
5	Mr. Gaurav Jain	Asst. Professor
6	Mr. Snehanshu Shekhar	Asst. Professor
7	Mr. Puneet Sharma	Associate Lecturer
8	Mr. Jitendra Kumar Saini	Associate Lecturer
	Electrical & Electronics Engine	eering Department
1.	Mr. Surya Lal Mishra	Senior Scientific Officer (Also having teaching assignment)
2.	Mr. Prashant Singh Rathore	Asst. Professor
3.	Mrs. Aparajita Pandey	Asst. Professor
	Management Depa	artment
1.	Dr. Roopali Sharma	Associate professor
2.	Dr. Ritu Arora	Asst. Professor

#### LALPUR CAMPUS

SI. No.	Name	Designation	
Manage	Management Department		
1	Dr. A.N. Jha	Professor	
2	Dr. Pranab Kumar	Assistant Professor	
3	Mr. Arun Kr. Singh	Assistant Professor	
4	Mr. A.R. Srivastava	Assistant Professor	
5	Ms Anupama Sahai	Assistant Professor	
6	Mr. Somnath Mukherjee	Assistant Professor	
7	Mr. S.N. Sah Deo	Assistant Professor	
8	Mr. Ashutosh Mishra	Assistant Professor	
9	Mr. Syed Anis Haider	Assistant Professor	
10	Mr. Amitabh Chandan	Assistant Professor	
11	Mrs. Mili Dutta	Assistant Professor	
12	Mr. J.Bhagat	Associate Lecturer	
13	Mr. Soumitro Chakravarty	Associate Lecturer	
14	Mr. Satrajeet Choudhury	Associate Lecturer	
15	Mr. Avinash Sinha	Associate Lecturer	
16	Ms. Swati Priyadarshani	Associate Lecturer	
Compute	er Science & Engg. Department		
1.	Dr. Vandana Bhattacherjee	Associate Professor	
2.	Mrs. Amrita Priyam	Assistant Professor	
5.	Mrs. Onima Tigga	Assistant Professor	
3.	Mr. N.P. Tiwari	Assistant Professor	
5.	Ms. Jaya Pal	Assistant Professor	
6.	Mr. Sanjay Kumar	Assistant Professor	
7.	Mr. Amar Kumar	Assistant Professor	
8.	Mr. Partha Sarathi Bishnu	Assistant Professor	
9.	Mr. Binod Kumar Sharma	Assistant Professor	
10.	Mr. Kuntal Mukherjee	Assistant Professor	
11.	Mr. D.K. Mishra	Associate Lecturer	

12.	Mr. Umesh Prasad	Associate Lecturer
13.	Mr Harishwar Prasad	Associate Lecturer

## **NOIDA CAMPUS**

Departn	nent of Management	
1.	Dr. S. L. Gupta	Professor
2.	Dr. Munish Makkad	Professor
3.	Dr. Asha Prashad	Associate Professor
4.	Dr. Vandna Sharma	Associate Professor
5.	Ms. Rachana Pratik	Assistant Professor
6.	Dr. Meenakshi Sharma	Assistant Professor
7.	Dr. Suparna Dutta	Assistant Professor
8.	Ms. Harpreet Charanjit	Assistant Professor
9.	Ms. Ritu Jain	Assistant Professor
10.	Ms. Preety Bajaj	Assistant Professor
11.	Dr. Arun Mittal	Assistant Professor
12.	Mr. K.B. Singh	Assistant Professor
13.	Dr. Monika Bisht	Assistant Professor
14.	Dr. Abhishek Singh	Assistant Professor
15.	Mr. Prashant Kumar	Assistant Professor
Departr	nent of Computer Science	
1.	Mrs. S. Mallika	Assistant Professor
2.	Mr. Pankaj Gupta	Assistant Professor
3.	Mr. Anil Kumar	Assistant Professor
4.	Mr. C.S. Suryanarayan	Assistant Professor
5.	Mrs. Mrinalini Mehta	Assistant Professor
6.	Dr. S.P. Singh	Assistant Professor
7.	Mrs. Vibha Kaw	Assistant Professor
8.	Mrs. Soma Sircar	Assistant Professor
9.	Dr. Shruti Kohli	Assistant Professor
10.	Mr. Aruna Malik	Assistant Professor

11.	Mr. Rayees Ahmed	Assistant Professor
12.	Mrs. Sheetal Dhir	Assistant Professor
13.	Mrs. Pramila Joshi	Assistant Professor
14.	Mrs. Muntaha Ahmad	Assistant Professor
15.	Mrs. Smitha Jha	Assistant Professor
16.	Mr. Anurag Joshi	Assistant Professor
17.	Mrs. Priti Sharma	Assistant Professor
18.	Mrs. Siba Mitra	Assistant Professor
19.	Ms. Charu Wahi	Assistant Professor
20.	Mrs. Seema Sharma	Sr. Software Engg.
21.	Mrs. Lipika Jha	Associate Lecturer
22.	Mr. Rakesh Singh	Associate Lecturer
Departm	ent of Animation & Multimedia	•
1	Lalit M Bhatt	Editor
2	Kiran A Shetti	Senior Animator
3	Das Mohan Singh	BG Artist
4	Obed Longwah	Editor
5	Niket Mehta	Assistant Professor
6	Partha Acharya	Faculty
7	Aroop Kerketta	Faculty
8	Rahul Dora	Sr. Animator
9	Manoj Kumar	Animator

#### PATNA CAMPUS

SI. No.	Name	Designation
1.	Prof. (Dr.) S. L. Gupta	Director & Professor
2.	Prof. (Dr.) S. P. Lal	Deputy Director & Professor
3.	Prof. K. P. Singh	Visiting Professor
4.	Prof. S. K. Sinha	Visiting Professor
5.	Prof. S. M. Sahay	Visiting Professor
6.	Dr. B. N. Jha	Visiting Professor
		1.6.1.19 / 10,0000.

7.	Dr. A. K. Singh	Associate Professor
8.	Dr. Pradeep Choudhary	Associate Professor
9.	Dr. Trishna Paul	Associate Professor
10.	Dr. S. K. Sinha	Assistant Professor
11.	Dr. K. P. Tiwary	Assistant Professor
12.	Dr. Binay Bhushan	Assistant Professor
13.	Dr. Bibekananda Sundaray	Assistant Professor
14.	Dr. Kaushalendra Sharma	Assistant Professor
15.	Dr. Rakesh Kumar	Assistant Professor
16.	Dr. Nirmala Soren	Assistant Professor
17.	Dr. Kanhaiya Lal	Assistant Professor
18.	Dr. Abhishek Santra	Assistant Professor
19.	Dr. Mohua Ghoshal	Assistant Professor
20.	Mr. Girish Pathak	Assistant Professor
21.	Mrs. Anubha Singh	Assistant Professor
22.	Mr. Ravi Shankar Anand	Assistant Professor
23.	Mr. S. K. Pradhan	Assistant Professor
24.	Mr. Amit Kumar	Assistant Professor
25.	Mr. Anand Kumar	Assistant Professor
26.	Mr. Soumen Mandal	Assistant Professor
27.	Mr. Chandan Kumar	Assistant Professor
28.	Mr. M. A. Hassan	Assistant Professor
29.	Mr. Sharan Chandran M.	Assistant Professor
31.	Mr. Shahiruddin	Assistant Professor
31.	Ms. Poonam Priyadarshini	Assistant Professor
32.	Ms. Megha Dadel	Assistant Professor
33.	Mr. Sudhanshu Verma	Assistant Professor
34.	Mr. Atul Kumar Pandey	Assistant Professor
35.	Mr. Ritesh Kumar Badhai	Assistant Professor
36.	Mrs. Shipra	Assistant Professor

37.	Mr. Prashant Kumar	Assistant Professor
38.	Mr. Sanjay Kumar- I	Assistant Professor
39.	Mr. Mayank Singh	Assistant Professor
40.	Mr. Rajesh Babu Mallela	Assistant Professor
41.	Mr. Kapildeo Prasad	Assistant Professor
42.	Mr. Bimal Nathniel Aind	Assistant Professor
43.	Mr. Thakur Abhinav Amar	Assistant Professor
44.	Mr. Anish	Assistant Professor
45.	Mrs. Subha Sinha	Assistant Professor
46.	Mrs. Sheel Shalini	Assistant Professor
47.	Mr. Shridhar Kumar	Assistant Professor
48.	Mr. Ashish Ranjan	Assistant Professor
49.	Mr. Samant Saurabh	Assistant Professor
50.	Mr. Abhiroop Das	Assistant Professor
51.	Mrs. Anamika Nandan	Assistant Professor
52.	Mr. Vijay Kr. Mandal	Associate Lecturer
53.	Mr. Prashant Prakash	Associate Lecturer
54.	Mr. Raj Kumar Mishra	Associate Lecturer
55.	Mr. Piyush Shankar Priya	Associate Lecturer
56.	Mr. Sanjay Kumar- II	Associate Lecturer
57.	Mrs. Paramjit Kour	Associate Lecturer
58.	Mr. Madhup Kumar	Associate Lecturer
59.	Mr. Raghav Mallik	Associate Lecturer
60.	Mr. Adnan Mahmood	Associate Lecturer
61.	Mrs. Smita Srivastava	Associate Lecturer
62.	Mr. Suresh Singh Yadav	Associate Lecturer
63.	Abu Nasar Ghazali	Teaching-cum-Research Fellow
64.	Mrs. Sweta Kumari	Teaching-cum-Research Fellow
65.	Mrs. Smita Pallavi	Jr. Teaching-cum-Research Fellow
66.	Mr. Ram Kumar Karsh	Jr. Teaching-cum-Research Fellow

67.	Mrs. Somali Fouzadar	Yoga Instructor
68.	Mr. K. C. Bajpai	Visiting Faculty
69.	Mrs. S. Bajpai	Visiting Faculty
70.	Mrs. Sudha Thakur	Visiting Faculty

# FACULTY MEMBERS ASSOCIATED WITH BIT MESRA OFF-SHORE CAMPUSES MUSCAT CAMPUS

SI. No.	Name	Designation
Manage	ment Department	
1	Mr. Iftekhar Ahmad	Assistant Professor
2	Mr. Jyoti K Chandel	Assistant Professor
3	Mr. Mithun Srivastava	Assistant Professor
4	Mr. Sayeed Aulia	Assistant Professor
5	Mr. Niraj Mishra	Assistant Professor
6	Mr. Sushil Kumar	Assistant Professor
7	Ms. Srilekha Goveas	Assistant Professor
8	Dr. Seema Varshney	Assistant Professor
9	Ms. Nupur Sen	Assistant Professor
10	Ms. Blossom Christina	Assistant Professor
11	Ms. Neelufer Aslam	Assistant Professor
12	Dr. A. Prakash	Assistant Professor
13	Ms. Soofi Asra Mubeen	Assistant Professor
14	Dr. Sheeba Khan	Assistant Professor
15	Ms. Sameena Begum	Assistant Professor
16	Mr. Arvind Hans	Assistant Professor
17	Dr. Ganesh Prasad Mishra	Associate Professor
18	Mrs. Kusum Lata Mishra	Associate Lecturer
19	Mr. Sultan Khan	Lecturer
Comput	er Science & Engineering	<u> </u>
20	Ms. P. Vijaya	Assistant Professor
21	Mr. Satish Chander	Assistant Professor
22	Mr. Sanjay Kumar	Assistant Professor

23	Mr. Shahid Ali	A		
		Assistant Professor		
24	Ms. Vallikannu R. M.	Assistant Professor		
25	Ms. S. B. Sinymol	Assistant Professor		
26	Dr. Santosh Kumar Ray	Assistant Professor		
27	Mr. Arbind Kumar Choudhary	Assistant Professor		
28	Ms. Nabila Saif Al-Ghenami	Information System Teacher		
29	Ms. Anu Manchanda	Assistant Professor		
30	Ms. Cimi Thomas	Assistant Professor		
31	Ms. Alycia Edwin	Assistant Professor		
32	Ms. Akrati Koul	Assistant Professor		
33	Mr. Sounak Paul	Assistant Professor		
Electronics & Communication Engg				
34	Mr. Akhilesh Roy	Assistant Professor		
35	Mr. Vikash Sharma	Assistant Professor		
36	Ms. Anasuya Patil	Associate Lecturer		
37	Ms. Priya C Rajan	Assistant Professor		
38	Ms. Smitha Felix	Assistant Professor		
39	Mr. Rajeev Ranjan	Assistant Professor		
40	Dr. Rajeev Kumar	Assistant Professor		
41	Mrs. Mallika Sadhu	Assistant Professor		
Mechan	ical Engineering			
42	Mr. Anil Kumar Sharma	Assistant Professor		
43	Mr. Praveen James Sanga	Assistant Professor		
Mathematics Department				
44	Dr. Prabal Datta	Assistant Professor		
Electrical Engineering				
45	Dr. Nutanlata Nath	Associate Professor		
46	Mr. Mohd Mohatram	Assistant Professor		

Biotechnology Department				
47	Dr. Padmini Padmanabhan	Professor		
48	Dr. Sadaf Zahra	Assistant Professor		
49	Ms. Atiya Tabassum	Assistant Professor		
50	Ms. Sharmila Queenthy	Assistant Professor		
51	Dr. Avneesh Pareek	Assistant Professor		
52	Ms. Koel Mukherjee	Assistant Professor		
53	Ms. Indrani Basu	Assistant Professor		
English Department				
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	Ms. Nejma Muhammed	Associate Lecturer		
59	Mr. Khalid Humaid Al-Gharibi	Language Teacher		
60	Mr. Roby Varghese	Associate Lecturer		

# RAS AL KHAIMAH, UAE

SI. No	Name	Designation		
Architecture Department				
1.	Dr. DJ Biswas	Associate Professor		
2.	Mr. Anuj Kumar Toppo	Assistant Professor		
3.	Mr. Sanjay Kumar	Assistant Professor		
4.	Ms. Shimna Shafeeq	Part-time Faculty		
5.	Ms. Vyjyantha	Part-time Faculty		
6.	Dr. F. Smith	Part-time Faculty		
Electrical & Electronics Engineering				
7.	Dr. P. K Upadhyay	Asst. Professor		
8.	Mrs. Reshma Gopi	Lecturer		
9.	Mrs. Veena Vinod	Lecturer		
10.	Mrs. Julia	Part-time		

Electro	nics & Communication Engg.		
11.	Mrs. Indu Nair	Sr. Lecturer	
12.	Mrs. Deepthy Manikantan	Lecturer	
13.	Mrs. Pampa Nandi	Lecturer	
14.	Mrs. Sangeetha Amit Kumar	Lecturer	
15.	Mrs. Vidya Ragesh	Part-time	
16.	Mrs. Nisha Mary Varghese	Part-time	
Comput	ter Science & Engineering		
17.	Mr. Ayaz Ahmed Shariff	Sr. Lecturer	
18.	Mr. K.N. Murugavel	Sr. Lecturer	
19.	Mr. Sambath Kumar	Assoc. Lecturer	-
20.	Mrs. Archana Pandita	Part-time	
21.	Ms Tina Francis	Part-time	
22.	Ms Suni Jose	Part-time	
Mechan	ical Engineering		
23.	Mr. Ranjeet Ranjan	Sr. Lecturer	-
24.	Mrs. Shimna Shafeeq	Visiting Faculty	
Manage	ment Department		
25.	Mr. Soofi Anwar	Asst. Profesoor	
26.	Ms. Shalini Bedi	Lecturer	
27.	Mr. CT Sunil Kumar	Visiting Faculty	
28.	Ms. Hyma Mathangi	Visiting Faculty	
29.	Ms. Aparajitha Das	Visiting Faculty	
Departn	nent of Science		
30.	Dr. Peeyush Tewari	Reader	

## **UNIVERSITY POLYTECHNIC**

SI. No.	Name	Designation
1	Mr Devendra Kumar Jain	Director
2	Mr Ramkesh	Assistant Professor
3	Mr Gulam Mursalin Ansari	Assistant Professor
4	Mrs. Meena Singh	Assistant Professor
5	Mr. Pradeep Toppo	Assistant Professor
6	Mr. Manish Oraon	Assistant Professor
7	Dr. B. N. Sanyal	Assistant Professor
8	Mr. Ramnish Sinha	Assistant Professor
9	Dr. Satish Kumar	Assistant Professor
10	Dr. (Mrs.) Sandhya Rani	Assistant Professor
11	Mr. Abhay Kumar	Assistant Professor
12	Mr Rajendra Mahto	Assistant Professor
13	Mr. Nand Kishore Mukherjee	Associate Lecturer
14	Mr. Rakesh	Associate Lecturer
15	Dr. Sumana Kumari	Associate Lecturer
16	Mrs. Neeru Singh	Associate Lecturer
17	Dr. Trilok Kumar Parashar	Associate Lecturer
18	Mr. Niraj Kumar	Associate Lecturer
19	Mrs. Rekha Kumari	Associate Lecturer
20	Ms. Nirupam	Associate Lecturer
21	Md. Maqbool Hosain	Associate Lecturer
22	Mr N.K. Singh	Sports Instructor

## **DEPARTMENT OF APPLIED CHEMISTRY**





Synthesis Lab

Students at work in research lab

The Department of Applied Chemistry was established in 1956 and is dedicated to providing a high quality chemistry education at both under-graduate & post-graduate level. The Department supports the Institute's under-graduate, post-graduate and Ph.D. programs in pure and applied chemistry.

Programs Offered	Intake
M.Sc. in Applied Chemistry -2 Year (4-Semester)	15
M.Sc. Chemistry (Integrated)-5 Year (10-Sem)	20
Ph.D. (in Pure & Applied Chemistry)	

The Department has started a five year Integrated M. Sc in Chemistry from Session 2011. The course curriculum is interdisciplinary in nature providing students with a strong foundation of fundamentals involving applied chemistry, applied physics, mathematics and biological sciences Particular attention is given to Industrial applications of chemistry so that students are completely equipped to move into careers in academic, industrial and commercial organizations. The lecture based course covers the various aspects of pure & applied chemistry. Laboratory courses are designed to provide a hand-on experience of working with various sophisticated instruments like ICP-AES, AAS, FTIR, GC, UV-Vis, GC-MS, HPLC, HPTLC, DSC, TGA, SEM, AFM and Electrochemical Analyzer. This will also fulfill the needs of the students regarding the limited exposure to modern instrumental techniques in various graduate and postgraduate courses, thus enabling them for employment in chemical, pharmaceutical industries, R & D laboratories, academic institution, forensic labs etc. Final semester is dedicated to thesis/dissertation work giving students experience in solving a real-life problem under the supervision of faculty members involved in pursuing research and development projects, usually related to industrial problems. Thus the aim of this course is to provide properly qualified man power for academic institutions, R&D and quality control laboratories of chemical / pharmaceutical industries & forensic labs.

The Department has quality research programs supported by UGC, DST, DBT, UNICEF and the World Bank. At present there are 15 ongoing projects funded by Government agencies: DST, DBT & UGC. There have been more than 30 publications from the Department in journals of high impact factor in the year 11-12. The Department has developed as a nodal centre to answer problems related to Qualitative and Quantitative Analysis of Various Environmental Pollutants and Engineering Materials. The Department is actively involved in promoting environmental awareness amongst the tribal and rural population in Jharkhand

## **SPONSORED PROJECTS**

## Project Sanctioned during July 2011- May 2012

SI. No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in Rs.)	Duration of the Project
	Synthesis, characterization and catalytic application of supported metal nanoparticles in carboncarbon bond formation	Dr. Rafique Ul Islam	DST, New Delhi, India	Considered and recommended for grant		3 years
2.	Synthesis of photosensitizer- loaded metallic nanoshells and plasmonic modulation of singlet oxygen generation: towards developing a non- invasive, bimodal nano- therapeutic tool	Dr. Amiya Priyam DST, New Delhi, India Considered and recommended for grant			3 years	
3	Synthesis, characterization and redox & photo-physical study of Ruthenium dyes for Dye Sensitized Solar Cell			20,00,000	2 Yrs	
4	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	Dr. Subhendu Naskar	CSIR, New Delhi, India	03.04.2012	14,24,400	3 Yrs
5	Synthesis, characterization and eletrochemical study of biologically acive manganese complexes		UGC, New Delhi, India	15.05.2012	11,45,800	3 Yrs
6	Microwave assisted synthesis of polyacrylamide grafted agar, characterizations and applications as flocculant for waste water treatment	Dr Sumit Mishra	UGC	2011	5,97,000	3 yrs
7	Preparation of Novel Poly (m-aminophenol)/ functionalised carbon nanotube nanocomposites selective sensing for aliphatic alcohol	Choudhury (PI, Chemical and Polymer Engineering	DST, Govt. India	Feb 2012	Around 25,00000	3 yrs.
8	Structure based discovery of novel antiviral molecules with potential to inhibit drug resistant viruses	Dr. Ashoke Sharon	DBT, New Delhi	2011-2014	25,00000	3 Years

9	Identification, characterization and synthesis of novel antiviral molecule(s) from an ethnomedicine and deciphering their mode of action by structure and analogs-based approach	Sharon	DBT, New Delhi	2011-2014	11,55000	3 Years
10	Synthesis and Evaluation of Carbocyclic Nucleoside Analogs with Exocyclic double bond as Anti-HBV HepDirect Prodrug	Bal	UGC, New Delhi	2011-2014	4,40000	3 Years
11	Winged Helix Domain- Oligonucleotide Recognition as an axis to develop PfRIO-2 specific Inhibitor		DBT, New Delhi	2011-2014	36,85000	3 Years

## **Ongoing Projects Sanctioned before July 2011**

SI. No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Ion Beam treated HAP coating on alumina for orthopaedic implants	Dr. Deep Shikha	DST, New Delhi	August 2010 Money Received on Feb 2012	17,05000	3 Years
2.	Discovery of HepDirect Nucleotide Prodrug as Anti- Hepatitis B Agent	Dr. Chandralata Bal	DST, New Delhi	2010-2013	18,83000	3 Years
3.	The target based discovery of carbocyclic nucleosides as an anti-HCV agent through computer assisted drug design and synthesis	Dr. Ashoke Sharon	DST, New Delhi	2010-2013	17,03000	3 Years
4.	Computer assisted design and synthesis of carbocyclic nucleosides as an anti- hepatitis agent	l .	UGC, New Delhi	2010-2013	5,94000	3 Years

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

SI. No	Name of the Faculty	Title of the Conference/ Seminar		Organized by	Venue	Date, Month, Year	
1.	Dr. Chandralata Bal	High	Resolution	Mass	Waters Global	Bangalore	May 14-20,
		Spectrom	etry (HRMS)	-Small	Services		2011
		Molecule /	Application		Bangalore, India		

2.	Dr. Ashoke Sharon, Invited Speaker	Quality Improvement Program for Faculty	Department of Pharmaceutical Technology, Jadavpur University, Kolkata, India	Jadavpur University Kolkata, India	July 22, 2011
3.	Dr. P. Kar	6th World Congress on Biomemitics, Artificial Muscles and Nano-Bio 2011, LPPI, Universite de Cergy-Pontoise, Cergy, France.	ESNAM	UCP, France	27-29th Oct. 2011
4.	Dr. Ashoke Sharon, Invited Speaker	Biotechnology in Pharmaceutical Sciences: Recent Avenues	Jadavpur University, Kolkata, India	Jadavpur University Kolkata, India	Dec 2- 3, 2011
5.	Dr. subhendu Naskar	Modern Trends in Inorganic Chemistry-XIV	University of Hyderabad	School of Chemistry UoH	10-13 Dec, 2011
6.	Dr. Amiya Priyam	International Conference on Nanomaterials and Nanotechnology, ICNANO-2011	University of Delhi	Delhi	18-21 Dec, 2011
7.	Dr. Rafique UI Islam	Recent Trends in Chemical Science & Technology, RTCST- 2012	Indian Institute of Technology, Patna	IIT Patna	3-4 March, 2012
8.	Dr. Amiya Priyam	Recent Trends in Chemical Science & Technology, RTCST- 2012	Indian Institute of Technology, Patna	IIT Patna	3-4 March, 2012
9.	Dr. P. Kar	Materials Today virtual conference: The frontiers of Microscopy	Elsevier	Online	21st March 2012
10.	Dr. Ashoke Sharon, Invited Speaker	Biopolymers, Bioactive Agents & Delivery Strategies	Gupta College of Technological Sciences, Asansol, India	Gupta College of Tech- nological Sciences, Asansol, India	April 7-8, 2012
11.	Dr. Ashoke Sharon	International Conference of Antiviral Research by ISAR	Sapporo, Japan	Sapporo, Japan	April 16-19, 2012:

## **PUBLICATIONS**

#### **Published in International Journals**

- S. Mishra, G. Sen, G. U. Rani, S. Sinha, Microwave assisted synthesis of polyacrylamide grafted agar (Ag-g-PAM) and its application as flocculant for wastewater treatment, Int. J. Biol. Macromol.49 (2011) 591 - 598.
- G. Sen, S. Ghosh, U. Jha, S. Pal, Hydrolyzed polyacrylamide grafted carboxymethylstarch (Hyd CMS-g-PAM): an efficient flocculant for the treatment of textile industry wastewater, Chem. Engg J. 171(2011) 495 501.
- 3. Bal, N. C.; Jena, N.; Sopariwala, D.; Balaraju, T.; Shaikh, S.; Bal, C.; Sharon, A.; Gyorke, S.; Periasamy, M., Probing cationic selectivity of cardiac calsequestrin and its CPVT mutants. Biochem J 2011,435 (2), 391-9.
- 4. Gadthula, S.; Rawal, R. K.; Sharon, A.; Wu, D.; Korba, B.; Chu, C. K., Synthesis and antiviral activity of cyclopropyl-spirocarbocyclic adenosine, (4R,5S,6R,7R)-4-(6-amino-9H-purin-9-yl)-7-(hydroxymethyl) spiro[2.4]heptane -5,6-diol against hepatitis C virus. Bioorg Med Chem Lett 2011,21 (13), 3982-5.
- 5. Yasmin, S.; Karampuri, S.; Sharon, A.; Bal, C., Integrase Strand Transfer Inhibitors as potential anti-HIV agent. GERF Bulletin of Biosciences 2011,2, 18-25.
- 6. Poulomi Roy, Steffan Berger, Patrik Schmuki, TiO2 Nanotubes and Their Applications A Review, Angewante Chemie, 50, 2011, 2904-2939.
- 7. Chittaranjan Das, Poulomi Roy, Min Yang, Himendra Jha, Patrik Schmuki, Nb doped TiO2 nanotubes for enhanced photoelectrochemical water-splitting, Nanoscale, 3, 2011, 3094-3096.
- 8. H. Jha, P. Roy, R. Hahn, P. Schmuki, Fast formation of aligned high-aspect ratio TiO2 nanotube bundles that lead to increased open circuit voltage when used in dye sensitized solar cells, Electrochem. Commun., 13, 2011, 302-305.
- 9. T. Dey, P. Roy, B. Fabry, P. Schmuki, Anodic mesoporous TiO2 layer on Ti for enhanced formation of biomimetic hydroxyapatite, Acta Biomaterialia, 7, 2011, 1873-1879.
- Poulomi Roy, Chitta Ranjan Das, Kiyoung Lee, Robert Hahn, Tobias Ruff, Mathias Moll, Patrik Schmuki,
   Oxide Nanotubes on Ti-Ru Alloys: Strongly Enhanced and Stable Photoelectrochemical Activity for Water
   Splitting Journal of American Chemical Society, 133, 2011, 5629–5631.
- 11. P. Kar, N.C. Pradhan, B. Adhikari, Ammonia sensing by hydrochloric acid doped poly(m-aminophenol)—silver nanocomposite, J. Mater. Sci. 46 (2011) 2905-2913.
- 12. P. Kar, N.C. Pradhan, B. Adhikari, Doping of processable conducting poly(m-aminophenol) with silver nanoparticles, Polym. Adv. Technol. 22 (2011) 1060-1066.
- 13. Rafique UI Islam; Michael J. Witcomb; Michael S. Scurrell; Willem Van Otterlo; Elma van der Lingen; Kaushik Mallick, Metal-polymer Hybrid Material as a Catalyst for the Heck Coupling Reaction Under Phosphine Free Conditions, Synthetic Communications, 41(2011) 3561–3572
- 14. Rafique UI Islam, Michael J Witcomb, Elma van der Lingen, Michael S Scurrell, Willem Van Otterlo, Kaushik Mallick, Conjugated polymer stabilized palladium nanoparticles as a versatile catalyst for Suzuki cross-coupling reactions for both aryl and heteroaryl bromide systems Catalysis Science & Technology, 1 (2011) 308-315

- 15. Rafique UI Islam, Michael J Witcomb, Elma van der Lingen, Michael S Scurrell, Willem Van Otterlo, Kaushik Mallick, In-situ synthesis of palladium-polyaniline hybrid catalyst for Suzuki coupling reaction, Journal of Organometallic Chemistry, 696, (2011),2206-2210
- S. Naskar, S. Naskar, H. M.Figge, W. S. Sheldrick, S. K. Chattopadhyay, Synthesis, X-ray crystal structures, spectroscopic and cyclic voltammetric studies of Cu(II) Schiff base complexes of pyridoxal, Polyhedron 30 (2011) 529–534
- 17. A. Choudhury, P. Kar, Doping effect of carboxylic acid group functionalized multi-walled carbon nanotube on polyaniline, Composites B 42 (2011) 1641–1647.
- 18. P.P. Sengupta, P. Kar, B. Adhikari, Influence of dielectric constant of the polymerization medium on the processability and ammonia gas sensing properties of polyaniline, Bul. Mater. Sci. 34(2011) 261-270.
- 19. P. Kar, A.K. Behera, N.C. Pradhan, B. Adhikari, Doping of the processable conducting poly(m-aminophenol) with inorganic acids, J. Macromol. Sci. B: Phys. 50 (2011) 1822-1833.
- 20. S. Pal, G. Sen, S. Ghosh, R. P. Singh, High performance polymeric flocculants based on modified polysaccharides Microwave assisted synthesis, Carbohydr. Polym. 87 (2012) 336 342.
- 21. S. Mishra, G.U. Rani, G. Sen, Microwave initiated synthesis and application of polyacrylic acid graftedcarboxymethyl cellulose, Carbohydr. Polym. 87 (2012)2255 2262.
- 22. G. Sen,S. Mishra, G. U. Rani, P. Rani, R. Prasad, Microwave initiated synthesis of polyacrylamide grafted psyllium (Psy–g–PAM) and its application as flocculant, Int. J. Biol. Macromol.50 (2012) 369 375.
- 23. P. Rani, G. Sen, S. Mishra, U. Jha, Microwave assisted synthesis of polyacrylamide grafted gum ghatti and its application as flocculant, Carbohydr. Polym. 89 (2012)275 281.
- 24. G. U. Rani, S. Mishra, G. Sen, U. Jha, Polyacrylamide grafted agar: synthesis and applications of conventional and microwave Assisted technique, Carbohydr. Polym. Accepted. (Available online 5 June 2012).
- 25. Chattopadhyay, D.; Mukherjee, H.; Paromita Bag; Ojha, D.; Konreddy, A. K.; Dutta, S.; Kumar, H. P.; Tapan, C.; Sharon, A.; Sekhar, C., Inhibition of NO2, PGE2, TNF-α, and iNOS EXpression by Shorea robusta L.: An Ethnomedicine Used for Anti-Inflammatory and Analgesic Activity. Evidence-Based Complementary and Alternative Medicine 2012, 14.
- 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, 407-408 (2012) 116-127.
- 27. 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, 23 (2012) 77-84.
- 28. A. Priyam, N.M. Idris, Y. Zhang, Gold Nanoshell Coated NaYF4 nanoparticles for simultaneously enhanced upconversion fluorescence and darkfield imaging, Journal of Materials Chemistry, 22 (2012) 960.
- 29. A. Chatterjee, A. Priyam, S. C. Bhattacharya, A.Saha, "Interaction of luminescent ZnS nanoparticles with flavins and flavoprotein: A fluorimetric investigation", Journal of Luminescence, 132 (2012) 545
- 30. B. Bhushan, D.Das, A. Priyam, N.Y. Vasanthacharya and S. Kumar, Enhancing the magnetic characteristics of BiFeO3 nanoparticles by Ca, Ba co-doping, Materials Chemistry and Physics, 135 (2012) 144-149

- 31. S. Naskar, S. Naskar, H. M.Figge, W. S. Sheldrick, M. Corbella, J. Tercero, S. K. Chattopadhyay, Study of copper(II) complexes of two diacetyl monooxime thiosemicarbazones: X-ray crystal structure and magneto-structural correlation of [Cu(dmoTSCH)Cl]2.H2O (dmoTSCH = monoanion of diacetyl monooxime thiosemicarbazone), Polyhedron 35 (2012) 77–86
- 32. B. Dasgupta, S. Banerjee, Preparation and evaluation of gas transport properties of poly(ether imide)—POSS nanocomposite membranes, Advanced Science Letters (In Press).

## Papers/Abstracts in Conference Proceedings

- Sharon, A., Balaraju, T. Bal, C., A molecular dynamics study of HIV-integrease towards anti-HIV drug discovery.; 15th International Conference by Indian Society of Chemist & Biologist, Saurashtra University, Rajkot, Feb 4-7, 2011.
- 2. Sharon, A.; Balaraju, T.; Bal, C., A Catalytic 3D Model Development of HIV-Integrase and Drug Resistance Understanding By Molecular Dynamics Simulation. Antiviral Research 2011,90, A14.
- A. Priyam, Luminescent nanomaterials for biomedical applications: A journey from quantum dots to upconversion nanocrystals, International conference on nanomaterials and nanotechnology, ICNANO-2011 (Invited Talk)
- A. Swarnkar, S. Pattanayak and A. Priyam, A facile synthetic route to anisotropic silver nanoparticles with highly tunable plasmonic properties, International conference on nanomaterials and nanotechnology, ICNANO-2011
- 5. B. Bhushan, A. Priyam and D. Das, Effect of rare earth ion doping on the magnetic and optical properties of BiFeO3 multiferroic nanoparticles, ,International Conference on Nanomaterials and Nanotechnology, ICNANO 2011
- 6. Bal, N. C.; Balaraju, T.; Jena, N.; Bal, C.; Sharon, A.; Periasamy, M. In Structural basis of functional differences in calsequestrin 1 and 2 isoforms, 243rd ACS National Meeting & Exposition, March 25- 29, 2012, San Diego, California, USA March 25- 29 2012; San Diego, California, USA 2012; p A14.
- 7. Balaraju, T.; Bal, C.; Sharon, A., HCV RdRp-Complex Simulation for the Understanding of Recognition Element Mediated by Pseudonucleoside Inhibitor. Antiviral Research 2012, A14.
- 8. A. Priyam, N.M. Idris, Y Zhang, Enhanced upconversion luminescence in gold nanoshell encapsulated NaYF4 nanocrystals: Making of an efficient bimodal bioimaging probe, Recent Trends on Chemical Science and Technology, RTCST-2012, IIT Patna, March 3-4, 2012
- A. Swarnkar, S. Pattanayak and A. Priyam, A simplified approach for synthesis of anisotropic silver nanoparticles with highly tunable double plasmon resonances, Recent Trends on Chemical Science and Technology, RTCST-2012
- R. U. Islam, M. J. Witcomb, K. Mallick, Synthesis of polymer-supported metal nanocomposites and its catalytic application in carbon-carbon bond formation, Recent Trends on Chemical Science and Technology, RTCST-2012, IIT Patna, March 3-4, 2012

#### **Books Authored**

 Ashoke Sharon, A. Jha, C. K. Chu. "Chapter 16: Current Status of Anti-HBV Agents" Analogues Based Drug Discovery II, Edited by Janos Fischer and C. Robin Ganellin; Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany; ISBN: 978-3-527-32549-8.

- G. Sen, Ashoke Sharon, S. Pal "Chapter 13: Grafted polysaccharides: smart materials of future. Synthesis and applications" Handbook of Biopolymers and their Applications, Publisher: Wiley-Scrivener Publishing
- S. Pal, S. K. Ali, G. Sen, R. P. Singh, Modification and Applications of Guar Gum in the Field of Green Chemistry, (Chapter 23) Editors: Rashmi Sanghi & Vandana Singh, Green Chemistry for Environmental Remediation, Publisher: Wiley - Scrivener Publishing. (2011). ISBN: 978-0-470-94308-3.
- 4. G Sen, A. Sharon, S. Pal, Grafted Polysaccharides: Smart Materials of the Future. Their Synthesis and applications, (Chapter 05) Editors: Susheel Kalia & Luc Averous, Biopolymers: Biomedical and Environmental Applications. Publisher: Wiley Scrivener Publishing . (2011).
- 5. S. Pal, S. K. Ali, G. Sen, R. P. Singh, Modification and Applications of Guar Gum in the Field of Green Chemistry, (Chapter 23) Editors: Rashmi Sanghi & Vandana Singh, Green Chemistry for Environmental Remediation, Publisher: Wiley Scrivener Publishing. (2011).

#### **Edited books**

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

- S. Banerjee, S. K. Sen, A. Ghosh, B. Dasgupta, Recent Advances in Fluorinated Polyimides: Synthesis and Properties, In: Polymer Synthesis, Ed. E. Kowsari, NOVA publishes, Chapter 4 (2011) (ISBN: 978-1-61324-672-6)
- A. Priyam, S. Ghosh, A. Datta, A. Chatterjee and A. Saha, "A brief overview on synthesis and size dependent photocatalytic behaviour of luminescent Semiconductor quantum dots" in "Recent Trends in Surface and Colloid Science", Edited by Bidyut K. Paul, World Scientific Publishers, Singapore (2012). ISBN: 978-981-4299-41-1

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

- 1. P. Kar, P. Banet, F. Tatard, C. Plesse, P.H. Aubert, C. Chavort, Modification of gold electrode with biomolecule and silver nanoparticle for electroanalysis, 6th World Congress on Biomemitics, Artificial Muscles and Nano-Bio 2011, LPPI, Universite de Cergy-Pontoise, Cergy, France, October 27-29, 2011.
- 2. P. Kar, A. Choudhury, Electron microscopic characterization of carboxylic acid group functionalized MWCNT doped polyaniline nanocomposite", Materials Today virtual conference: The frontiers of Microscopy on 21st March 2012.

## **Departmental Students' Activities**

S. No.	Name of the Activity	Students' co ordinator	Date/Duration
1.	Workshop on Water Quality Monitoring & Control	Usharani Grandhe Ankita Mukul	24th – 25th May

No. of summer trainees trained in the Department during July 2011 to June 2012: 06

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

Chairman: Dr. Usha Jha, Professor & Head of the department

## Members:

1. Dr. J P Pandey

2. Dr. A. Sharon

3. Dr. S. Mishra

4. Dr. S. Naskar

5. Dr. Deepshikha

6. Dr. Rafique ul Islam

7. Dr. Amiya Priyam

8. Dr. Gautam Sen

9. Dr.Mandira Mukherjee

10. Dr. P.C. Joshi

## Panel of experts from outside the institute

1. Dr. M. K. Bannerjee,

Professor, Dept. of Chemistry NIT Jamshedpur

2. Dr. M. K. Mishra,

Professor, Department of Chemistry, IIT Bombay

3. Dr. Ashok Kumar,

Head, Medicinal Chemistry, IPCA Lab Ltd.

4. Dr. Ian Cliffe,

Director- Head, Medicinal Chemistry,

New Drug Discovery Research, Ranbaxy laboratories ltd.

R & D Centre, R & D 111, Plot No 20 Sect 18,

Udyog Vihar Industrial Area,

Gurgaon 122015 Haryana

Ph.91-124-2397759,91-124-4194400

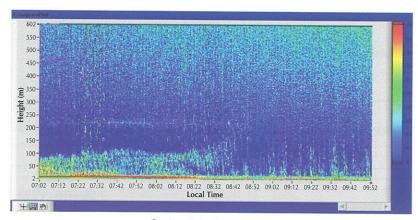
Email:ian.cliffe@ranbaxy.com

5. Dr. S. K Dubey, CEO, Fresinius Kabi India Pvt.Ltd.

## Other important information

No. of PhD students enrolled as on 30/05/12	No. of PhD Thesis Submitted during July'11 to June '12	No. of PhD awarded during July'11 to June '12
28	05	03

## **DEPARTMENT OF APPLIED MATHEMATICS**



Sodar data for analysis

Department of Applied Mathematics is one of the oldest Department of the Institute. It consists of 12 faculty members with expertise in different fields of research, such as: Operations research, Differential Equations, Difference Equations, Fuzzy sets, cyber-attack, Statistics, Sampling theory, Music Therapy, Fluid dynamics, Fluid Mechanics, Elasticity, Earth Quake Engineering, Seismology and Mathematical Modelling. The department has been receiving a NBHM library grant

for procuring books and journals to setup a departmental library. Faculties of the department are the recipients of several awards like, BOYSCAST, Glory of India, Shiksha Ratan Puraskar etc.. The faculties of the department publishes a good number of research papers in different journals of International and national repute. A two year programme M. Tech in Scientific Computing has been running in the department since 2002 and a five year Integrated M.Sc in Mathematics and Computing has been running by the department since 2011.

## SPONSORED PROJECTS:

## Ongoing projects Sanctioned before July 2011:

SI.	Project Title	PI	Funding	Date of	Sanctioned	Duration of
No.			Agency	Sanction	Amount	the Project
1	Green's function, existence and asymptotic behaviour of periodic solutions of functional differential equations	30 FOR ST. CO. ST. CO. S. CO.	National Board for Higher Mathematics	26. 02.2007	12 lakhs	5 year
2	Analyzing the structure and performance of Hindustani classical music through statistics	8	UGC	01.02.2011	Rs. 4,85,200.	Two year

#### **Projects Completed**

SI. No.	Project Title	PI	Funding Agency	Date of Sanction	Sanctioned Amount	Date of Completion of the project
1	Green's function existence and asymptotic behaviour of periodic solutions of functional differential equations	Padhi	National Board for Higher Mathematics	26. 02. 2007	12 lakhs	28 <sup>th</sup> March 2012.

## Seminar/ Conference/ Short-term Courses conducted by the department:

SI. No.	Title of the Seminar/ conference/short term course	Name of Coordinator	Funding/Sponsoring Agency	Date of the Seminar/ Conference/Short-term Courses
1	National Conference on	Dr. B.K.Mishra	Birla Institute of	October 19-20, 2011.
	Mathematical and Statistical		Technology, Mesra	
	Modelling in Innovative Areas			

## Conferences/Seminars/Workshops/Staff Development programmes/ Orientation programme/ refresher course etc. attended:

SI.	Name of the	Title of the Seminar/	Organised by	Venue	Date, Month, Year
No	Faculty	conference			
1.	Dr. P. Kaur	Decision Modeling in	Department of	IIT, Kharagpur	July 04-08,
		Facility planning	Industrial Engineering		2011
			and Management		
2.	Dr. P. Kaur	Fuzzy Sets, Rough sets,	Department of	NIT,Durgapur	21-25
		Uncertainity Analysis and	Mathematics,		November.
		Applications			2011
3.	Dr. S. Padhi	International conference	I.M.Sc, Chennai	I.M.Sc. Chennai	18-20,
		on Analysis and		1	January,
	***************************************	Applications			2012.
4.	Dr. S.	CIIT-2011	Pune	Pune	Nov. 07-08,
	Chakraborty				2011.
5.	Dr. S.	Chaired a session in	Department of	Department of	27-28 April,
	Chakraborty	the 5th International	Psychology, Bangalore	Psychology,	2012
		Conference on	University, Bangalore	Bangalore	1
		Psychology of Music and		University,	
		Mental Health		Bangalore	

#### **PUBLICATIONS**

#### National and International

- 1. S. Chakraborty and J. Dutta, An Empirical Study on Parameterized Complexity in Singleton Sort Algorithm, International Jour. on Computational Sciences & Applications, Vol. 2, No.2, 2012, 1-14
- 2. A. Kumari, R. Tripathi, M. Pal and S. Chakraborty, Linear Search versus BinarySearch: A Statistical Comparison for Binomial Inputs, International Journal ofComputer Science, Engineering and Applications, Vol. 2, No. 2, 2012, 29-39
- 3. S. Chakraborty and R. Sarkar, Binary Tree Sort is more robust than Quick Sort in average case, International Jour. of Computer Science, Engg and Applications, Vol. 2, No. 2, 2012, 115-123
- 4. K. K. Sundararajan, M. Pal, S. Chakraborty, B. Pal and N. C. Mahanti, K Sort Revisited for Negative Binomial Inputs, Algorithms Research, Vol. 1, No. 1, 2012, 1-4
- 5. M. Pal, S. Chakraborty and N. C. Mahanti, Shift-Insertion Sort, International Journal of Computational Cognition, Vol. 10, No. 1, March 2012, 64-66

- 6. P.K.Kaur, An Instuinstic fuzzy optimization approach for the vendor selection problem, Industrial Engineering Letters, USA, IISTE, 2012.
- 7. P.K.Kaur, An Additive intuitionistic Fuzzy simple Additive Weighting (IFSAW) method for selection of vendor,IOSR-Journal of Business Management, India, 2012
- 8. S. Padhi, J.Graef and Smita Pati, Periodic solutions of some models with strong Allee effects. Nonlinear Analysis: Real World Applications, 13(2012), 569-581.
- 9. Seshadev Padhi, Smita Pati, Multiple Positive Periodic Solutions for Nonlinear First Order Functional Difference Equations, Communications in Applied Analysis, 16(1), (2012), 97-112.
- 10. John R Graef, 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.
- 11. S.Padhi, Smita Pati and John R Graef, Periodic solutions of some models with strongallee effects. Nonlinear Analysis: Real World Applications, 13(2012), 569-581.
- 12. Bimal Kumar Mishra, Samir Kumar Pandey, Effect of Anti-virus Software on infectious nodes in Computer Network: A Mathematical Model Physics Letters A, Elseveir, 376, 2389-2393, 2012
- 13. Bimal Kumar Mishra, G.M.Ansari ,Differential epidemic model of virus and worms in computer network , International Journal of Network Security, 14(3), 149-155, 2012
- Bimal Kumar Mishra, Upendra Kumar, G. Sahoo, Fixed length of infective period for attacking worms in computer network - International Journal of Applied Engineering Research and Development, 2(2), 19-31, 2012
- 15. Bimal Kumar Mishra, Upendra Kumar, G. Sahoo, Defending polymorphic worms in computer network using honeynet International Journal of Engineering Science and Technology, 4(4),1408-1411, 2012
- 16. Bimal Kumar Mishra, R.T.Goswami, Defending polymorphic Worms in Computer network using Honeypot International Journal of Advanced Computer Science and Applications, Vol. 3, No. 10, 2012, pp 63-65
- 17. 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
- 18. Bimal Kumar Mishra, Aditya Kumar Singh, SIjRS e-Epidemic model with multiple groups of infection in computer networks International Journal of Nonlinear Science, 13, 357-362, 2012
- 19. Anil Sharma, Bimal Kumar Mishra, Ashok Misra, Abhinav Dinesh, 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
- Anil Sharma, Bimal Kumar Mishra, Ashok Misra, Abhinav Dinesh, Sensitivity analysis of a low grade energy assisted LiBr-H2O absorption cooling system International J. of Engg. Research & Indu. Appls. (IJERIA), Vol.5, No. IV (November 2012), pp. 109-120
- 21. Bimal Kumar Mishra, Samir Kumar Pandey, Dynamic model of worms with vertical transmission in computer network Applied Mathematics and Computation, 217,8438-8446, 2011
- 22. Bimal Kumar Mishra, Aditya Kumar Singh, Two quarantine models on the attack of malicious objects in computer network Mathematical problems in Engineering, In Mathematical Problems for Complex Networks, Hindawi Publishing Corporation, 1-14, 2011(doi: 10.115/2012/407064)

- 23. Upendra Kumar, Bimal Kumar Mishra and G. Sahoo, An e-Epidemic Model for Developing a Defense Mechanism against Computer Worms, CiiT International Journal of Networking and Communication Engineering, Vol 3(6), 433-435, 2011
- 24. Aditya Kumar Singh and Bimal Kumar Mishra, A Quarantine Model for Malicious Objects in Computer Network, CiiT International Journal of Networking and Communication Engineering, Vol 3(6), 436-440, 2011
- 25. Samir Kumar Pandey, Bimal Kumar Mishra and Prasanna Kumar Satpathy, A Distributed Time Delay Model of Worms in Computer Network, CiiT International Journal of Networking and Communication Engineering, Vol 3(6), 441-447, 2011
- 26. Hemraj Saini, Bimal Kumar Mishra, T.C.Panda, Computing the Spreading Power of a Business Portal to Propagate the Malicious Information in the Network, International Journal of Web Portals, 3(2), 14-22, 2011
- 27. Aditya Kumar Singh, Bimal Kumar Mishra, e-epidemic model for computer viruses, International Journal of Mathematical Modeling, Simulation and Applications, Vol 4(2), 201-208, 2011
- 28. Hemraj Saini, Bimal Kumar Mishra, H. N. Pratihari, T. C. Panda, Extended honeypot framework to detect old/new cyber attacks, International Journal of Engineering Science and Technology, 3(3), 2421-2426, 2011
- 29. Upendra Kumar, Bimal Kumar Mishra, G. Sahoo, Defending the transmission of viruses in computer network using directed graph, International Journal of Mathematical Modeling, Simulation and Applications, Vol 4(4),399-407, 2011
- 30. Bimal Kumar Mishra, Samir Pandey, Fuzzy e-epidemic SEIRS model for the transmission of worms in computer network, International Journal of Mathematical Modeling, Simulation and Applications, Vol 4(1), 17-27, 2011
- 31. Bimal Kumar Mishra, G.M.Ansari, Modeling the transmission of malicious objects in computer network with two time delays, International Journal of Mathematical Modeling, Simulation and Applications, 4(3), 277-286, 2011

#### BOOKS:

- 1. S.K.Chakraborty and B.K.Sarkar, Discrete Mathematics, Oxford University Press, 2011.
- 2. S. Dutta, S. Chakraborty and N. C. Mahanti, Using Raga as a Cryptographic Tool, D. C. Wyld et. al. (Eds.), CNSA 2011, CCIS 196, pp. 178-183, 2011, Springer-Verlag Heidelberg 2011
- Singh, N. K., Chakraborty, S.: Partition Sort and its Empirical Analysis, CIIT- 2011, CCIS 250, pp. 340-346, 2011. Springer-Verlag Heidelberg 2011
- 4. S. Tewari and S. Chakraborty, A Statistical Analysis of Raga Bhairavi, Acoustic Waves,
- 5. S. K. Srivastava, Kailash, K. Chaturvedi (Ed.) Shree Publishers and Distributors, New Delhi, p.329-336, 2011

### Awards/Recognition Bestowed on Faculty:

- Dr. S. Chakraborty received
  - a) "Shiksha Rattan Puraskar" by India International Friendship Society on 29th May, 2012
  - Received "Glory of India Gold Medal" by International Institute of Success Awareness on 29th May,
     2012 at New Delhi

- c) "Glory of India Award" by India International Friendship Society at Bangkok (Thailand) on 20th June 2012 (presented by the former Deputy Prime Minister of Thailand H.E. Korn Dabbransi)
- d) "Rajiv Gandhi Excellence Award" by India International Friendship Society on 29th August, 2012 at New Delhi.
- Dr. Bimal Kumar Mishra was
  - a) Key note speaker during
    - i Ist Bi-annual conference of Jharkhand Mathematical Society, Ranchi, November 22-23, 2012
    - ii National Conference on Recent Trends in Mathematics, Vinoba Bhave University, Hazaribag, December 21-22, 2012
    - iii Vedic Mathematics and its Applications during the visit of Jagatguru Shankaracharya of Puri Peeth in June 2012 at Ranchi
  - Appointed as an Editor-in-chief of International Journal of Mathematical Modeling and Computing, USA, 2012
  - c) Guest Editor: Computer Virus: Theory, Model and Methods (Special Issue of Discrete Dynamics and Nature and Society, Hindawi Publications), 2012
  - d) Organizing Secretary of National Conference on Mathematical and Statistical Modeling in Innovative Areas, October 19-20, 2011 at BIT, Mesra, Ranchi

#### Members of Board of Studies:

Head of the Department : Chairman
 Dr. S.S. Roy : Member
 D.S.K. Jain : Member
 Dr.R. Sukesh Kumar : Member
 Dr. S. Konar : Member

6. Prof. A.R.Roy : External member, IIT, Kharagpur

Prof. K.S. Choudhury
 External member, Jadavpur University
 Prof. Satyajit Roy
 External member, IIT, Madras, Chennai.

9. Prof. K.C. Prasad : External member, Ranchi University.

## **DEPARTMENT OF APPLIED MECHANICS**

The Department of Applied Mechanics was initiated in 1995. The objective for the creation of this department was to function it as a service department to all engineering students for teaching common subjects like Engineering Mechanics, Engineering Graphics etc. From July 1999, the Department started a full time ME programme in Computer - Aided Analysis & Design. The Department has well equipped Computer - Aided Design & Drafting laboratory with latest state-of-the-art software tools and a state-of-the-art Dynamics & Vibration laboratory to serve its ME and Ph.D. students.

## 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. Pradip Kumar Roy	International Conference entitled "Nanoscience, Engineering and Technology (ICONSET-2011)	Sathyabama University, Chennai, INDIA.	Sathyabama University	28 <sup>th</sup> – 30 <sup>th</sup> November, 2011
2	Dr. Pradip Kumar Roy	International Conference on Nanomaterials and Nanotechnology (ICNANO 2011)	University of Delhi	University of Delhi, Delhi	18 <sup>th</sup> –21 <sup>st</sup> December, 2011
3	Dr. Pradip Kumar Roy	National Conference entitled "Microstructure -2011 on Structure across length scale and material properties	I.I.T Roorkee, Roorkee, INDIA	I.I.T Roorkee, Roorkee, INDIA	4 <sup>th</sup> – 5 <sup>th</sup> Nov, 2011
4	Dr. Pradip Kumar Roy	Workshop on "Carbon Nanomaterials for Industrial Applications"	Sardar Patel University, Vallabh Vidyanagar, India.	Sardar Patel University, Vallabh Vidyanagar, India.	26 <sup>th</sup> August 2011
5	Dr. Pradip Kumar Roy	Workshop on "Thin Film Solar PV Technologies"	IIT Mumbai	IIT Mumbai	15 <sup>th</sup> to 17 <sup>th</sup> September 2011

#### **PUBLICATIONS**

#### **Published in International Journals**

- 1. P. K. Roy, "Synthesis of nano ZnO powder and study of its varistor behavior at different temperatures", Journal of Materials Science Research, 1 (4) (2012) 28-34.
- 2. P. Sahani, P. K. Roy, S. Mula, "Comparison between conventional, vacuum and microwave sintering of Cu-Cr-4wt.% SiC nanocomposites" Journal of Alloys and Compounds(Accepted).
- 3. P. K. Roy, J. Bera, "Study on electro-magnetic properties of Mg-Cu-Zn ferrite-Z5U dielectric composites" Materials Chemistry and Physics 132 (2012) 354–357.
- 4. P. Sahani, Suhrit Mula, P. K. Roy, P.C. Kang, C.C. Koch, "Structural investigation and vacuum sintering of Cu-Cr and Cu-Cr-4% SiC nanocomposites prepared by mechanical alloying" Materials Science and Engineering: A 528 (2011) 7781–7789.
- 5. Nandi, A., Neogy, S., Bhaduri, S., (2011), "Analysis of a Lorentz Force based vibration exciter using

- permanent magnets mounted on a piezoelectric stack", Sadhana Academy Proceedings in Engineering Science. Vol. 36, Part 1, pp. 87-107.
- 6. Nandi, A., Neogy, S., Bhaduri, S., Irretier, H., (2012), "Vibration attenuation by a combination of a piezoelectric stack and a permanent magnet", Shock and Vibration. (Pre Press).
- 7. Nandi, A., Neogy, S., Bhaduri, S., Irretier, H., (2012), "A combination of a piezoelectric vibrator and a permanent magnet for non-contact positive and negative damping of a beam", The International Journal of Mechanical Engineering Education (Accepted).

### **BOOKS**

#### P. K. Roy, J. Bera

• "NiCuZn Ferrite" Project Number: 59469 and ISBN: 978-3-659-18040-8, LAP LAMBERT Academic Publishing GmbH& Co. KG, Dudweiler Landstraße 99, 66123 Saarbrücken, Germany

## Patents (Applied / Granted)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1	G. Shukla, P. K. Roy	Photocatalytic composite layer coating	581/MUM/2012	5th March 2012
2	P. K. Roy, G. Shukla	Inexpensive solution based fabrication method for solar cell	722/MUM/2012	19th March 2012
3	P. K. Roy, Sawarkar Arvind, Guruguntla Nagarjuna	A real-time railway track fault detection system	1073/MUM/2012	2nd April 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	Engineering Mechanics/BE Programme	Mesra Campus in both Monsoon & Spring semesters
Pedagogy		
Student - centric Learning	e-content for Remedial classes for Engineering Mechanics for BE students	Mesra campus in Monsoon & Spring semesters

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

## Board of Studies for ME (CAAD) programme

#### **Internal Members:**

- 1. Prof. A. K. Ray
- 2. Mr. Sankha Bhaduri
- 3. Dr. R. P. Singh
- 4. Dr. J. K. Prasad
- 5. Dr. Indrajit Roy

## **External Members:**

- 1. Dr. Ranjan Bhattacharya, Professor & HOD, Department of Mechanical Engineering, IIT, Kharagpur
- 2. Dr. Gautam Pohit, Professor, Dept. of Mechanical Engg., Jadavpur University
- 3. Dr. Sibnath Maiti, Director Grade Scientist, Central Mechanical Engineering Reserch Institute, Durgapur.
- 4. Dr. K. P. Roy Sarkar, Grade G Scientist, Central Mechanical Engineering Research Institute, Durgapur

## **DEPARTMENT OF APPLIED PHYSICS**

The Department of Applied Physics was established in 1955 and it initially offered under-graduate courses in Physics for the B.E. programmes. The Department now also offers the following post-graduate programmes:

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

The Integrated M. Sc. in Physics programme is a new programme started in Monsoon 2011, with course structure and syllabus approved by the Board of Studies of the Department & Technical council of the institute.



Lorentz force measurement set up

The Department has received support under "Fund for Improvement in Science & Technology Infrastructure" (FIST) programme, Level-I, of the Department of Science and Technology, New Delhi and also support under "Special Assistance Programme" (SAP) of the UGC. The Department has also received support under TEQIP phase II.

During the 57 years of its existence, the students and faculty members of the Department have made themselves recognized nationally as well as internationally through excellence in research and teaching. At present the Department has 19 faculty members (including scientific officers), one (UGC-sponsored) visiting faculty, 13 full-time research scholars (3 women scientists, 02 SRFs and 08 JRFs), and 6 part-time research scholars (external candidates). Further, five research scholars were awarded the Ph.D. and 2 scholars have submitted their Ph.D. theses, in the current year.

The Department is engaged in research in the frontier areas of experimental and theoretical plasma physics, nanotechnology, photovoltaic 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, piezoelectric materials, fiber composite materials, electronic composite materials, magnetic composites, microwave dielectric ceramics, tailoring of properties of materials using ion beams, holography for NDE testing, nonlinear optics, soliton and light propagation, optical communication, photonic crystal fibres, optoelectronics etc.



He Ne laser based single slit diffraction set up

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 cosputtering, RF magnetron sputtering system, anodic vacuum arc deposition unit, nitriding system, plasma enhanced chemical vapour deposition systems (DC, RF and Microwave), salt spray chamber, metallurgical microscope (Leica Microscope). The Department also has a real-time holography laboratory for non-destructive testing of materials. In addition, it has facilities for optical coherence

tomography, fabrication of fiber composite plates, and optical characterization of materials. Recently, the Department has also purchased Micro-Raman spectrometer (Renisaw, UK), Nano-indenter (CETR, USA), Ferroelectric loop tracer (Radiant, USA). The Department has cryogenic, materials science and plasma thin films 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, graphene, photo-catalytic coating of TiO<sub>2</sub>, tribolgical coatings like CN, TiC, TiN, SiC Ti(Al)N, HfC, etc. The optics laboratory also has a Nd-YAG laser.

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

Dr. Sanat Mukherjee is doing Post-Doctoral work at University of Duisburg-Essen, Germany for one year. Dr. Indrani Banerjee has been awarded BOYSCAST fellowship for 2011-2012 of the Department of Science & Technology, Govt. of India, and is Visiting Scientist at University of California, Los Angeles, USA. Dr. Indrani Banerjee has also been given the "Career Award for Young Teachers" by the AICTE in 2012. Dr. S. K. Mahapatra is Visiting Scientist at the Department of Physics and Astronomy, at University of California, Los Angeles, USA, for one year. Prof. P. K. Barhai was the visiting scientist at Tel Aviv University, Tel Aviv, Israel under Indo-Israel project on photovoltaic solar cells, funded under Indo-Israel bilateral cooperation in Science & Technology during April 12-19, 2012. Prof. P. K. Barhai also visited Ningbo University, Ningbo, China on invitation from the Director, Foreign Affairs during July 29-31, 2012 for academic collaboration.

## SPONSORED PROJECTS

## Project Sanctioned during July 2011- May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in Lakhs)	Duration of the Project (Years)
1	Development of photovoltaic solar cell with nanostructured graphene-modified and doped zinc oxide electrodes, Indo-Israel Bilateral Cooperation on Science and Technology	(PI)	DST New Delhi	Sept. 2011	19.86	2
2	Simulation of Highly Nonlinear Photonic Crystal Fibers and Study of Nonlinear Optical Phenomena in These Fibers	Dr S. Konar (PI)	DST	Sept. 2011	12.87	3
3	Special Assistance Programme-UGC (SAP-UGC)		UGC	Sept. 2011	57.00 + one Project Fellow	5

4	Design and investigation of photonic crystal fibers with emphasis to the development of optical nonlinearity based devices	Dr. S. Konar (PI)	UGC	May 2012	10.43	3
5	Fabrication and Characterization of magnetically doped semiconducting mesoscopic quantum dots for possible spintronic applications	Mukherjee	UGC	May 2012	12.43 Lakhs	3 years
6	Developing and testing of nano scaled hetero structured Al2O3/TiO2 thin films for miniaturization of MOS devices	Dr. I. Banerjee	AICTE CAYT	June 2012	10.5 lakhs	3 years

## Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
7	Development of Atmospheric pressure plasma jet sources and their characterization	Dr. P. K. Barhai	BRNS (DAE)	March 2011	(in Lakhs) 24.385	(Years) 3
2	Study of Photocatalytic activity of nano-structured TiO <sub>2</sub> thin films produced by plasma assisted process and correlation with plasma parameters	(PI) Dr. Indrani	BRNS (DAE)	April 2009	19.8	3 + extended
3	Investigation of plasma instability and establish its correlation with deposited species during nitride and oxynitride coloured films deposition	Mahapatra (PI) Dr. Indrani	BRNS (DAE)	Nov. 2010	19.42	3
4	Modeling and Analysis of Mach-Zhender Interferometer based Nonlinear Waveguide Devices for All- Optical Switching and Logic Gates		DST	Feb. 2009	24.68	3.5

5	Indigenous development of 1µm swept source optical coherence tomography (SSOCT)setupfornoninvasive imaging of posterior segment of animal eye"		DST	Dec. 2010	24.8	2
6	Synthesis, dielectric and optical properties of rare earth doped lead free BZT relaxor ceramics	Dr. S.K.Rout (PI)	UGC, New Delhi	Jan 2011	9.828	3
7	Effect of ion implantation and gamma irradiation on wide band gap semiconductors		UGC- DAE CSR- Kolkata Centre	Sept 2009	4.31 + TA	3
8	Facile synthesis and characterizations of magnetically modulated luminescent nanocomposites	Mukherjee	AICTE	April 2011	8.5 Lakhs	2 years

## Projects Completed during the period July 2011-May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in Lac)	Date of completion of the Project
1.	Development and Characterization of multilayer thermal barrier coatings of Hafnium carbide (HfC) and Silicon carbide (SiC) for Aerospace Applications	` '	ISRO	Nov. 2008	12.09	2011
2.	Investigation of Optical Beam Propagation in Nonlinear Media: Spatial Soliton Formation and Their Interaction for All-Optical Devices	Dr. S. Medhekar (PI)	UGC	Dec. 2008	8.278	April 2012
3.	Developments of nano crystalline high permittivity lead free materials for microwave applications.	Dr. S.K. Rout (PI)	DST, New Delhi	Nov. 2007	23.35471	31.03.12
4.	Studies on ferromagnetic- ferroelectric composites and their electronic applications.	Dr. S. Keshri (PI) Dr. N. Gupta & Dr. V. R. Gupta (Dept of ECE) (Co-PIs)	DST, New Delhi	Feb. 2009	17.67	May 2012

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	National Conference cum Workshop on Recent Developments in Engineering Materials	Dr. S. K. Sinha	BRNS Mumbai, DST Jharkhand, CSIR, BIT Mesra	May 12-14, 2011

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

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
1.	Dr. P. K. Barhai	Nineteenth Annual International Conference on Composites / Nano Engineering (ICCE – 19)	Tongji University, Shanghai, China	WYNDHAM BUND EAST hotel 25 Ning Guo Road, Shanghai 200090, China	July 24-31, 2011
2.	Dr. S. Medhekar	1st International Science Congress (ISC-2011), from	Maharaja Ranjit Singh College of Professional Sciences	Maharaja Ranjit Singh College of Professional Sciences, Indore, MP, India	December 24 & 25, 2011
3.	Dr. S. Keshri	Moscow International Symposium on Magnetism (MISM– 2011)	Lomonosov Moscow State University & Russian Foundation for Basic Research	Moscow, Russia	21 – 25 August 2011.
4.	Dr. S. K. Sinha	Workshop on Atomic & Molecular Physics and Materials Science using Low Energy Ion Beam Facility (LEIBF)	Inter University Accelerator Centre (IUAC), New Delhi-110067	IUAC, New Delhi	October 21& 22, 2011
5.	Dr. S. K. Sinha	Workshop on the facilities of UGC-DAE Consortium for Scientific Research	Jointly organized by the UGC-DAE Consortium for Scientific Research, Indore and the Department of Physics, Utkal University, Bhubaneswar	Dept. of Physics, Utkal University, Bhubneshvar	March 23-24, 2012
6.	S K Rout	EMF 2011	University of Bordeaux, France	University of Bordeaux, France	June 26th – July 02, 2011
7.	Dr. S K Mahapatra	ICMCTF-2012		San Diego, California, USA,	April 2012
8.	Dr. I Banerjee	ICMCTF-2012		San Diego, California, USA,	April 2012

### **PUBLICATIONS**

### **Published in International Journals**

- P. Laha, I. Banerjee, A. Bajaj, P. Chakraborty, P. K.Barhai, S. S. Dahiwale, A. K. Das, V.N. Bhoraskar, D. Kim, S. K. Mahapatra, Irradiation effects of 6MeV electron on electrical properties of Al/Al2O3/n-Si MOS capacitors, Radiation Physics and Chemistry (In press).
- 2. 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 CdZnS" Advanced Science Letters (Article in press).
- 3. S.R. Nagaraja, S.G.Rakesh, J.K.Prasad, P.K.Barhai, G.Jagadeesh, Investigations on microblast wave assisted metal foil forming for biomedical applications, International Journal of Mechanical Sciences (In press).
- 4. S. Shwetanshumala, Noushin Asif, S. Konar, Anjan Biswas, Bright Spatial Solitons in Biased Centro-symmetric Photorefractive Medium Under Drift as Well as Diffusion Effects; Optik (In press).
- 5. Panda A.B, MahapatraS. K, Barhai P.K, Das A.K, Banerjee I, Understanding of gas phase deposition of reactive magnetron sputtered TiO2 thin films and its correlation with bactericidal efficiency, Applied Surface Science (In Press)
- 6. C.C. Wu, R. K. Choubey, C.W. Lan "Generation of Annularly Symmetric Periodic Ferroelectric Domains in Nd Doped Near Stoichiometric LiTaO3 Crystals by VTE Processing" Materials Letter 67, 88 (2012).
- 7. 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).
- 8. C.C. Wu, Z.B. Chen, R. K. Choubey, C.W. Lan "On the study of zinc doping in congruent LiTaO3 crystals" Materials Chemistry and Physics 133, 813 (2012).
- 9. 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.
- 10. P. Laha, A. B. Panda, P. K. Barhai, A. K. Das, S. K. Mahapatra, I. Banerjee, Development of rf plasma sputtered Al2O3-TiO2 multilayer broad band anti reflecting coatings and its correlation with Plasma parameters, Applied Surface Science, Volume 258 Issue 7 (2012) 2275-2282.
- 11 Rakhi Bhattacharya and S. Konar , Extremely Large Birefringence and Shifting of Zero Dispersion Wavelength of Photonic Crystal Fibers, Optics and Laser Technology 44 (2012) 2210-2216.
- 12. S Mukherjee, S Kumar, D Das, Spin disorder induced reentrant ferromagnetism in iron-based nanocomposites, Appl. Phys. A, 106 (2012) 507-510.
- 13. Samrat Mukherjee, Sanjay Kumar, Dipankar Das, Tailoring Magnetic Responses of Nanoscale Integrated Magnetite and Cadmium Sulphide: Microstructural, Magnetic and Hyperfine Studies, 4 (2012) 110-116.
- 14. Laila Girgis, Kaisar R. Khan, Daniela Milovic, Sihon H. Crutcher, Swapan Konar, Anjan Biswas; Adiabatic phase variation for optical Gaussons; Optics & Laser Technology 44 (2012) 1219 –1222.
- 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 (2012) 213–217.

- 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 (2012) 6084

  –6096.
- 17. Laha P, Banerjee I, Barhai P.K, Das A.K, Bhoraskar V.N, Mahapatra, S. K, Effects of 6 MeV electron irradiation on electrical properties and device parameters of Al/Al2O3/TiO2/n-Si MOS capacitors, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 283, (2012) 9-14.
- 18. 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 BaZrO3, , Ceram International, 38(3) (2012) 2129-2138.
- 19. 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 NixZn1-xFe2O4 prepared by auto combustion route, Physica B: Condensed Matter, 407(6) (2012) 935-942.
- 20. B Parija, T.Badapanda, S.K.Rout, S.Panigrahi, T.P.Sinha, Dielectric dispersion and impedance spectroscopy of lead free (Bi0.5Na0.5)TiO3 ferroelectric ceramics, Physics Express, 2 (2012) 21.
- 21. S. Parida, S. K. Rout, P. K. Barhai and J. Bera Influence of Ball Milling Parameters on the Crystallite Size of Ba(Ti1-xZrx)O3, , Ferroelectrics, 429 (2012) 22–30.
- 22. T.Badapanda, V Senthil, S.K.Rout, S.Panigrahi, T.P.Sinha Frequency-Temperature dependence of Dy doped Ba(Zr0.25Ti0.75)O3 Ceramic: Impedance and modulus spectroscopy, , Physics Express, 2 (2012)19.
- 23. T. Badapanda, V. Senthil, S.K. Rout, S. Panigrahi, T.P. Sinha Dielectric relaxation on Ba1-xBi2x/3Zr0.25Ti0.75O3 ceramic, , Mat. Chem. Phys, 133 (2012) 863–870.
- 24. B.Parija, T. Badapanda, V Senthil, S.K. Rout, S. Panigrahi Diffuse phase transistion, Piezoelectric and Optical study of Bi0.5Na0.5TiO3 ceramic, , Bull. Mat. Sci., 35 (2) (2012) 197-201.
- 25. S. Parida, S. K. Rouţ, V. Subramanian. P. K. Barhai N. Gupta. V. R. Gupta, Structural, microwave dielectric properties and dielectric resonator antenna studies of Sr(ZrxTi1-x)O3 ceramics, J Alloy Compd, 528 (2012)126-134.
- 26. Leena Joshi and Sunita Keshri, Extrinsic behavior in La0.67Ca0.33MnO3–BaTiO3 composites; Ceramics International (Elsevier Publication) 38 (2012) 5889–5896.
- 27. 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 ((Elsevier Publication) 38 (2012) 2355–2362.
- Ashutosh Kumar, J. B. M. Krishna, Dipankar Das and Sunita Keshri, Conductivity Modification of ZnO film by low energy Fe10+ ion Implantation; Applied Surface Science (Elsevier Publication) 258 (2012) 2237-2245.
- P. Laha, S. S. Dahiwale, I. Banerjee, S. K. Pabi, D. Kimd, P. K. Barhai, V. N. Bhoraskar, S. K. Mahapatra,
   MeV electron irradiation effects on electrical properties of Al/TiO2/n-SiMOS capacitors, Nuclear Instruments and Methods in Physics Research B 269 (2011) 2740–2744.
- 30. P. K. Barhai, Rishi Sharma, Vijay Chatterjee, N. Woehrl and Volker Buck, Synthesis and electron field emission studies of Nanocrystalline diamond films, Synthesis and electron field emission studies of nanocrystalline diamond films, World Journal of Engineering, Supplement 3 (2011) 93-94.

- 31. S. Devendra K. Verma and P. K. Barhai, "Design & development of programmable transceiver controller (a Nanotechnology device) for wimax/wifi wireless communication, World Journal of Engineering, Supplement 3 (2011) 1159-60.
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- Rishi Sharma, Nicolas Woehrl, Milan Vrućinić, Monika Timpner, Volker Buck, P.K. Barhai Effect of microwave power and C2 emission intensity on structural and surface properties of nanocrystalline diamondfilms, Thin Solid Films 519 (2011) 7632–7637.
- 34. S. K. Mukherjee, L. Joshi, P.K. Barhai, A comparative study of nanocrystalline Cu film deposited using anodic vacuum arc and dc magnetron sputtering, Surface & Coatings Technology 205 (2011) 4582–4595.
- 35. S. K. Mukherjee, P. K. Barhai, S. Srikanth, Comparative evaluation of corrosion behaviour of type K thin film thermocouple and its bulk counterpart, Corrosion Science Volume 53, Issue 9,(2011), 2881–2893.
- 36. H Khatun, A K Sharma and P K Barhai, Characterization of Vacuum Ultraviolet (VUV) Radiation for the Development of a Fluorescent Lamp, Plasma Science and Technology, 13,No.4 (2011).
- 37. S. K. Sinha, Amit Kumar Sinha, P. Kour and P.K. Barhai, Nickel doped PZT ceramics by a spray dried-PVA assisted method, Journal of Ceramic Processing Research. Vol. 12, No. 1, (2011) 93-95.
- Anjan Biswas, Engin Topkara, Stephen Johnson, Essaid Zerrad and Swapan Konar; Quasi-stationary optical Solitons in non-Kerr law Media with full nonlinearity; Journal of Nonlinear Optical Physics and Materials 20, (2011) 309–325.
- S Shwetanshumala, S. Konar, N. Asif and Anjan Biswas; Deflection of bright spatial soliton in a biased noncentrosymmetric two-photon photovoltaic photorefractive crystal due to first order diffusion and higher order drift; Physica Scripta 84 (2011) 025402.
- 40. S. Konar, Z Jovanoski and I. N. Towers; Two-color bright solitons in a three-level atomic system in the cascade configuration; Journal of Modern Optics 58, Issue 12 (2011) 1035-1040.
- 41. S. Konar, Z Jovanoski and I. N. Towers; Incoherent Spatial Optical Solitons in Photorefractive Media; Optics and Laser Technology 43, (2011) 1466.
- 42. S. Konar, Optical Spatial Solitons and Modulation Instabilities in Photorefractive Media, Physics Express 1, (2011) 139.
- 43. S. Shwetanshumala and S. Konar, "Modulation Instability of Plane Electromagnetic Beams in Centrosymmetric Crystals due to Two-Photon Photorefractive Effects", Physica Scripta 83, (2011) 025401.
- 44. Punya Prasanna Paltani and S. Medhekar, "Optimally Stabilized Beam Pairs", OPTIK, vol. 122, issue 1, (2011) 70-75.
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- 46. Arpita Srivastava and S. Medhekar, Switching of One Beam by Another in a Kerr Type Nonlinear Mach-Zehnder Interferometer, Optics & Laser Technology, vol. 43, issue 1, (2011) 29-35.
- 47. Arpita Srivastava, Ram Krishna Sarkar, Shraddha Prasad and S. Medhekar, Coupled tapered / uptapered optical beams" OPTIK, 122 (2011) 2039–2043

- 48. Arpita Srivastava and S. Medhekar Switching Behaviour of a Nonlinear Mach-Zehnder Interferometer; Saturating Nonlinearity" Optics & LaserTechnology 43 (2011) 1208–1211
- 49. Shraddha Prasad, Ram Krishna Sarkar, Arpita Srivastava and S. Medhekar, Coupled Propagation in Electromagnetically Induced Transparent Medium; Thirring Type Soliton Pairs and Breather Pairs" Journal of Electromagnetic Waves and Application, J. of Electromagn. Waves and Appl., Vol. 25, (2011) 923–933.
- D. B. Lata, A. Mishra and S. Medhekar, Investigations on the combustion parameters of a dual fuel diesel engine with hydrogen and LPG as secondary fuels, International Journal of Hydrogen Energy Vol. 36, (2011) 13808–13819.
- 51. Arpita Srivastava, Man Mohan Gupta, Signal amplification based on the local nonlinear Mach–Zehnder interferometer S. Medhekar, Optics & Laser Technology, Vol. 44, (2011) 492–496.
- 52. S. Goswami, K. Kiran, A. B. Panda, P.P. Sharma, S. K. Mahapatra, S. V. Bhoraskar, I. BanerjeeSynthesis of magneticallyactiveinterpenetrating polymer network for drug release, ,Int.J.Nano Dim. 2(1): (2011) 37-48.
- 53. N. Ibrahim, A. K. Yahya, S. S. Rajput, S. Keshri and M. K. Talari, Double Metal-Insulator Peaks and Effect of Sm3+ Substitution on Transport Properties of Hole-doped La0.85Ag0.15MnO3; Journal of Magnetism and Magnetic Materials (Elsevier Publication) 323 (2011) 2179-2185.
- 54. Sunita Keshri, Ashutosh Kumar and Debdulal Kabiraj, Effect of Annealing on structural, optical and electrical behaviours of WO3 thin films prepared by physical vapour deposition method; J. Nano-Electron Phys. (Sumy State University), 3 (2011), 260-267.
- 55. Y. S. Lo, R. K. Choubey, W.C. Yu, C.W. Lan "Shallow bath chemical deposition of CdS thin film" Thin Solid films 520, 217 (2011).
- 56. R Goswami, SC Chakravartty, JBM Krishna, E Bose, D Das, SK Chaudhury, S Mukherjee, P Saha, U Mukherjee, PK Das, R Banerjee, AC conductivity and dielectric analysis of graphite--clay nanocomposite Can. J. Phys, 89 (2011), 1255-1260.
- 57. 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, year 2012.

## Papers/Abstracts in Conference Proceedings

- Swati S. Pradhan, S. K. Pradhan and P. K. Barhai, Structure and morphology evolution of TiO2 films grown by sputtering, 2011. International Conference on Nanoscience, Technology 12 and Societal Implications, December 8 -10, 2011, Bhubaneswar, India, IEEE Xplore 978-1-4577-2037-6/11/\$26.00 ©2011 IEEE.
- 2. P. Kour, S. K. Sinha and P. K. Barhai, Study of Thermodynamic, Microstructure and Ferroelectric Properties of Ca doped PZT Nano Powder, 2011 International Conference on Nanoscience, Technology and Societal Implications, December 8 -10, 2011, Bhubaneswar, India, IEEE Xplore 978-1-4577-2037-6/11/\$26.00 ©2011 IEEE.
- 3. Sunita Keshri, Leena Joshi and Shailendra Singh Rajput, Magnetotransport Behaviours of Few La-based Manganites; in the proceeding of Moscow International Symposium on Magnetism (MISM–2011) held in Moscow, Russia during 21 25 August 2011.

4. A. K. Lal, S. K. Sinha, P. K. Barhai, K. G. M. Nair, S. Dash and A. K. Tyagi, "Influence of 90 keV nitrogen ion implantation in IMI834 and TiN coating on oxidation behaviour for aerospace application", Proceedings, ISBN 9789382062219, (2012) Page-77-81, in National Conference cum Workshop on Recent Developments in Engg. Materials held during 12-14 May 2011

#### **Books Authored / Edited books**

- 1. As Editor: Dr. S. K. Sinha, Dr. G. P. Singh, Proceedings of the National Conference cum Workshop on Recent Developments in Engineering Materials" held during May 12-14, 2011, Excel publisher, New Delhi, ISBN 9789382062219.
- 2. Dispersion Managed Solitons: In optical communication system with symmetric and asymmetric dispersion map" Authors: M. Mishra and S.Konar; Lambert Academic Publication (Price US\$ 99.00)

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

- 1. S. Goswami, K. Kiran, A. B. Panda, P. P. Sharma, S. K. Mahapatra, S. V. Bhoraskar, and I. Banerjee Book chapter entitled "Study of Drug Transport Properties of Acrylic Based Iron (III) Oxide Filled IPN", "Nano Medicine and drug delivery", Apple Academic Press, (AAP), Taylor & Francis Group, ISBN 978-1-926895-17-8, Canada, USA, published 2012.
- 2. P Laha, A B Panda, S K Mahapatra, P K Barhai, A K Das, and I Banerjee Book chapter entitled "Study of plasma induced gas phase growth mechanism of TiO2/Al2O3 multilayer thin films and its correlation with its morphological and electrical properties", , Book chapter of Advanced Nano materials, Apple Academic Press (AAP), Canada, Under review 2012.
- 3. Book chapter entitled "Study of plasma induced gas phase growth mechanism of TiO2/Al2O3 multilayer thin films and its correlation with its morphological and electrical properties", P Laha, A B Panda, S K Mahapatra, P K Barhai, A K Das, and I Banerjee, Book chapter of Advanced Nano materials, Apple Academic Press (AAP), Canada, Under review 2012.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. I Banerjee	Better Opportunities for Young Scientists in Chosen Areas of Science and Technology (BOYSCAST)	DST	2011
2.	Dr. I Banerjee	Career Award for Young Teachers (CAYT)	AICTE	2012
3.	Dr. S. K. Mahapatra	FACET Member	SLAC,	2012
			Stanford	
			University	

### MoUs / Collaborations with Academia/Industry

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Tel Aviv University Tel Aviv, Israel	Solar Photovoltaic	2011-2013/2 years

## 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
Manuals for Physics Laboratory	Physics / BE	During Lab Experiments
Soft copy of Physics Notes	Physics/ BE	During Theory Classes
PPT of Physics Lectures (Partial)	Physics/ BE	During Theory Classes
Tutorials, Questions Banks	Physics/ BE	For Tutorials Classes

## **Board of Study**

#### **Internal Members**

1. Dr. D. Jairath, Prof. & Head, Dept. of Applied Physics Chairman 2. Dr. P. K. Barhai, Dean, Faculty Dev. & Spon. Res. Member 3. Dr. S. Konar, Professor, Dept. of Applied Physics Member 4. Dr. S. Medhekar, Professor, Dept. of Applied Physics Member 5. Dr. (Mrs.) S. Keshri, Professor, Dept. of Appl. Physics Member 6. Dr. S. K. Rout, Asst. Professor, Dept. of Applied Physics Member 7. Dr. N. C. Mahanti, Emeritus Prof., Dept. of Appl. Mathematics : Member 8. Dr. (Mrs.) Usha Jha, Prof. & Head, Dept. of Appl. Chemistry Member 9. Dr. (Mrs.) Nisha Gupta, Prof. & Head, Dept. of ECE Member

## External Members (Any two of the following)

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

## **DEPARTMENT OF ARCHITECTURE**



Discussion with Experts

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

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

The department has attained a rare feat of being the first ever department of Architecture in the country to be awarded research grants under the Department Research Support (DRS) level of the Special Assistance Programme (SAP) of University Grants Commission (UGC). The department acquired latest computers and software with the help of this support and 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. Students come from varied backgrounds such as Architecture (B.Arch.), Civil Engineering (B.E./B.Tech.), Geography, Sociology and Economics (M.A./M.Sc.). 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. Since last three years.

The Department is the first in the country as an Architecture Department to publish an internationally refereed biannual research journal named ABACUS since August 2006. Eleven issues of the journal have been published.



Design Studio

## 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** 

### Ph.D students enrolled, submitted and awarded

No. of PhD students enrolled during July 2011 to May 2012	No. of PhD Thesis Submitted during July2011 to May 2012	No. of PhD awarded during July 2011 to May 2012
04	02	02

## SPONSORED PROJECTS

## Project Sanctioned during July 2011- May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
	Consultancy Projects					
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

## Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	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, R.C. Sinha Sanmarga Mitra, Parama Mitra, B.C.Roy.	MHRD via IIT Kharagpur	September 2009- ongoing	31.2 Lacs	3 Years
2.	Research support grant under DRS at level 1 of SAP, UGC. Projects undertaken: Formulating a Planning Approach for some of the Newly Made District Head Quarters at Ranchi, the Capital of Jharkhand state.	Prof. (Dr.) Manjari Chakraborty & Prof. N.R. Mandal, (Project Coordinator)	DRS scheme of the Special Assistance Programme (SAP), UGC	26th February 2007	33 Lacs. for 3 projects	5 years
The state of the s	<ul><li>b) GIS Mapping of Heritage</li><li>Sites in Jharkhand</li><li>c) Prototype Designs</li><li>for Rural Infrastructure</li><li>Buildings.</li></ul>		7			

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

SI.	Title of	Name of Coordinator	Funding /	Date of Seminar /
No.	Seminar / Conferences /		Sponsoring Agency	Conferences / Short
	Short – term Courses			– term Courses
1.	"Access for All" Capacity building and Training Workshop on Universal Accessibility	Convenor: Dr. Manjari Chakraborty, BIT Mesra Anjalee Agrawal (SAMARTHYAM) Organising Secretaries: Ms. Ritu Agrawal & Ms. Smriti Mishra	BIT Mesra & SAMARTHYAM, National Centre for Accessible Environments, New Delhi	4th - 5th April, 2012
2.	ECO-III Train the Trainer International Workshop on Building Physics and Energy Simulation	Convenor: Dr. Manjari Chakraborty, BIT Mesra Dr Ardeshir Mahdavi, Director. Department of Building Physics and Building Ecology. Vienna University of Technology. Organising Secretary: Prof. HS Lakra	USAID ECO-III Project's Educational Curriculum Enhancement Program	11th-14th July, 2011

## Workshops Conducted by the Department

SI. No.	Title of Workshop	Name of Coordinator	Funding / Sponsoring Agency	Venue	Date of Seminar / Workshops
1.	Rural Housing and Technology	Exhibition	Department of Architecture, BIT Mesra	Department of Architecture, BIT Mesra	24th April, 2012
2.	Creative Workshop on Sohrai Wall Painting	Ar. Shashi Shekhar	Department of Architecture, BIT Mesra	Department of Architecture, BIT Mesra	26th March, 2012
3.	Creative Workshop on Rendering Pen & Ink	Sri Tarak Shankar Das	Department of Architecture, BIT Mesra	Training & Placement Division Lawn, BIT Mesra	17th March, 2012
4.	Presentation and Workshop on Transportation Planning and Street Designing	Ar. Nitin Warrier ArAnuj Malhotra Vanishree, ITDP	Department of Architecture, BIT Mesra	Lecture Hall at Department of Architecture BIT Mesra	29th February, 2012

5.	Guest Lecture on "Architectural Practice in India"	Prof. Madhav Deo Bhakta	Department of Architecture, BIT Mesra	Lecture Hall at Department of Architecture BIT Mesra	11th February, 2012
6.	Creative Workshop on Pen & Ink Rendering and Water Colouring	Sri Tarak Shankar Das	Department of Architecture, BIT Mesra	Training & Placement Division Lawn	18th January, 2012
7.	Rural Technology Exhibition	Rocketry Department, BIT Mesra	Department of Architecture, BIT Mesra	Central Court, Main Building, BIT Mesra	4th -5th November 2011
8.	Introduction to Architectural Thesis	Mr. S. Chakraborty Architect –Planner, CMPDI	Department of Architecture, BIT Mesra	Lecture Hall at Department of Architecture BIT Mesra	30th July 2011

# Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended, For example:

S. No	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date, Month, Year
1.	Dr. Manjari Chakraborty	APNHR International Conference	APNHR, University of Hongkong	University of Hongkong	8th-10th Dec, 2011.
2.	Dr. Manjari Chakraborty	GRIHA: Green Building Rating System	MNRE & TERI	Capitol Hill, Ranchi	10th - 12th May, 2012
3.	All the Faculties of the Department of Architecture, BIT Mesra	Capacity Building and Training Workshop on Universal Accessibility	Dept. of Architecture, BIT Mesra and Samarthyam, Nationa Centre for Accessible Environments, New Delhi	BIT Mesra, Ranchi	4th & 5th April, 2012
4.	All the Faculties of the Department of Architecture, BIT Mesra	"Train the Trainer" Workshop on Building Physics and Simulation	USAID ECO – III project	BIT Mesra, Ranchi	11tht-14th July, 2011
5.	Harshit Lakra	Regional Workshop on 'Partnership Building'	United States –India Education Foundation (USIEF).	Bhubaneswar	5th -6th April, 2012
6.	Harshit Lakra	National Seminar on State of Secondary Education in the Tribal Zone on Central and Eastern India,	Jawaharlal Nehru University and Ranchi University	Ranchi University	24th -25th January, 2012.

7.	Ritu Agrawal,	Consultation on	Institute of	Hotel BNR	17th May,
	Harshit Lakra,	Sustainable Urban	Transportation and	Chankya,	2012
	Shashi Kant Pandey	Transport and	Development Policy	Ranchi	
	and Smriti Mishra	Integrated Urban	(ITDP) and Ranchi		
		Planning	Municipal Corporation		
			(RMC)		
		·			
8.	Shashi Kant Pandey	Regional Capacity	CEPT University,	Ranchi	22nd-23rd
		Building Hub	Ahmedabad & Ranchi	Municipal	May, 2012
		(RCBH) Project for	Municipal Corporation	Corporation	
		IT Applications (GIS)	(RMC))	(RMC)	
		in Region V (Bihar,	, , , , , ,	, ,	
		Jharkhand, Bengal,			
		Chhatisgarh)			
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### **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) Contemporary Architecture, Volume 06, Number 01, Spring 2011
   Editor-in-chief: Dr. Manjari Chakrabortylssue Editor: Mr. Sanmarga Mitra
- Building Science, Volume 06, Number 02, Monsoon 2011
   Editor-in-chief: Dr. Manjari Chakraborty
   Issue Editor: Mr. Janmejoy Gupta

## **Faculty Publications**

#### **Published in International Journals**

- Chakraborty Manjari, Natural Inheritance: Hilltop Heritage, ABACUS [ISSN 0973-8339 ABACUS], Vol. 06, No. 2, Monsoon 2011 Issue, pp 81-82.
- Shrivastava, R., Sinha, S. and Chakraborty, M. (2011), Concept Plan of Transport Infrastructure for Mid Sized City in India, Journal of Transportation and Traffic Studies, Vol.2, No. 3, ISSN 1906-8360, TSTS, September 2011.
- Mandal N R; 'Community Participation in Construction of Elementary School Buildings'; SPANDREL (Journal of SPA: New Dimensions in Research of Environments for Living), Issue 4, Spring 2012; pp 10 - 17; ISSN: 2231-4601
- Sarkar S., Approaching 'Need' in a Need Based Design for the Elderly, International Journal of Current Review and Research, Volume 4, Issue 12, June 2012, pp. 131 138.
- Mitra Sanmarga, "Urban Development Strategy for a Newly Constituted State Jharkhand, India" (Book Review), ABACUS: A Bi-annual International Journal on Architecture, Conservation and Urban Studies (ISSN-0973-8339 ABACUS); Vol.6 No.2; Monsson 2011; pp 84.

 Mitra Parama, "Mies van der Rohe – an Insight into a Genius" (Book Review), ABACUS: A Bi-annual International Journal on Architecture, Conservation and Urban Studies (ISSN-0973-8339 ABACUS); Vol.6 No.1; Spring 2011.

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

Mandal, N. R., Sarkar S.; 'Planning for India's Energy Demand in Housing Sector – Post 2025'; Journal
of the Institute of Town Planners, India; Vol 9 No. 1, January – March 2012, ISSN: 0537-9679, [RNI:
DELENG/2004/12725]

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

- Chakraborty Manjari, Nandan Anamika. "Symbiotic Housing: An Architectural approach towards a new Environmentally Conscious Design" paper presented at APNHR Conference at Hong Kong, during 8th-10th Dec, 2011.
- Shrivastava, R., Sinha, S. and Chakraborty, M. (2011), Concept Plan of Transport Infrastructure for Mid Sized City in India, Proceedings of International Conference of Thai Society of Transport Studies, Pattaya, Thailand, 14th -15th October, 2011.
- Lakra Harshit, 2011, "Higher Education Institutions, Local Labor and Regional Economic Competitiveness, Tribal and Development"; National Workshop by Rashtriya Manav Sanghrahliya and Sidhu Kanu University, Hazaribagh 15th -16th November 2011.

#### **Books**

 Mandal, N R., Participatory Delivery of Built Spaces for Social Infrastructure.LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany, 2011. ISBN-13: 978-3-8465-2513-5; ISBN-10: 3846525138; EAN: 97838465251355.

## MoUs / Collaborations with Academia/Industry

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1.	UKIERI Secretariat [UK India Education & Research Initiative], British Council for Staff Exchange Programme between Department of Architecture, BIT, Mesra and University of Ulster, N. Ireland, UK. Dr. N. R. Mandal of BIT, Mesra visited School of the Built Environment, Jordans town campus and Faculty of Art, Design and the Built Environment, Belfast Campus of the University of Ulster.	curriculum and pedagogy in the areas of sustainable architecture	24th April, 2012 2nd May, 2012

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

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	ZONASA at CET Bhubneshwar	Ashutosh & Pratik Jadojia	10 <sup>th</sup> - 12 <sup>th</sup> October, 2011
2.	Student's Tour - Maharastra & Gujarat	Arunav Nandy &Alisha Sinha	8 <sup>th</sup> – 17 <sup>th</sup> December, 2011
	South India	Suvro Ghosh &Kritika Prakash	11 <sup>th</sup> – 24 <sup>th</sup> December, 2011

# 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	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 –	The project began in September 2009 and was sanctioned for 3 years. It is funded by MHRD, the total amount being 31.2 lacs.
	Architecural Sociology,	
	Building Economics, Real Estate	
	Management & Marketing,	
	Energy Efficient Buildings,	
	Housing & Settlement Systems,	
	Structural Systems,	
	Vernacular Architecture	

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

### Internal

- 1. Dr. Manjari Chakraborty, Prof. & Head, Department of Architecture.
- 2. 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.
- 4. Mr. Rajiv Chadda, Professional Architect, Ranchi.

### Other important information

- The Department has ranked 7<sup>th</sup> in All India Ranking of Architecture Colleges 2012, conducted by the Outlook India. It ranks 2<sup>nd</sup> among all the private architecture colleges in India.
- First Prize in International Students Competition on Contemporary Architecture: Beyond Corbusierism, organised at the Young Architects Festival at Chandigarh won by Aman Kumar and Imdad Uddin Ahmed.
- 3<sup>rd</sup> position in the All India Quiz Competition titled Archumen and Bending Moments 2011 Susmita Sinha and Maharshi Bhattacharyya.
- 1st, 2nd and 3rd prize winner in the Eastern Zonal level of 'Yuvaratna', a competition organised by the Birla White Cement Ltd. December 2011 won by Deepak Kumar, Mudassar Rehan and Risabh Sharma.
- "College with Highest Number of Entry" in 'Yuvaratna', a competition organised by the Birla White Cement Ltd. December 2011.
- 3<sup>rd</sup> prize winner in the National level of 'Yuvaratna', a competition organised by the Birla White Cement Ltd. December 2011 won by Mayank Kumar.
- The Department of Architecture, BIT Mesra won the runners up trophy in ZONAL NASA held at CET Bhubaneswar on 10<sup>th</sup> -12<sup>th</sup> October, 2011. All together 55 Students from the department participated in the various event under the leadership of Unit Secretary- Ashutosh Prateek and Unit Designee- Pratik Jajodia.
- Semi-Finalist Essay Entry in the Fourteenth Berkeley Prize Essay Competition, 2012 Dominic Mathew,
   Gauri Mathur, Ushnata Datta, Insha Sharma and Dipon Bose.
- Gauri Mathur won the Third Prize (2500USD) in Berkley Prize Essay Competition, 2012 for her Essay "Jawahar Kala Kendra- The artist's haven".
- Dominic Mathew won the Berkley Prize for Travel Fellowship, 2012 to the BMW Guggenheim Lab in Berlin, Germany.
- 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.
- Maurisha Kumar, Ankur Podder and Shivani Gaikwad secured 3rd position in Journalism Trophy in NASA (National Association of Students of Architecture) held at Ahmadabad in January 2012.

### **DEPARTMENT OF BIOTECHNOLOGY**

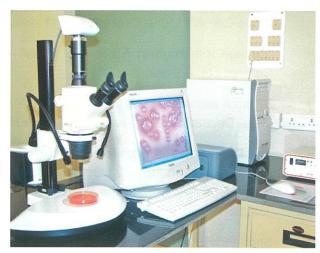


**Biotech Building** 

The Department has received magnificent financial support from both Union and State Government for establishing state-of-the-art facility for academic and research activities since its inception in the year 2002. Well-planned Department building situated on the bank of Suverna Rekha River has attracted almost every visitor of the Institute. The visitors composed of government officials, diplomats, technocrats, scientists and industrialists have recognized the department as centre of excellence for research based academics and expressed their 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. Fifteen 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 seven candidates have submitted Ph.D. thesis in this year. The PhD degree was awarded to five scholars. Fifteen students completed their projects on Bioinformatics at BTISnet Centre (DBT, GOI, New Delhi) of the department. An Orbital shaking incubator and TLC Viewing cabinet with UV lamp have been recently added to the list of instrumentation facility in the department.



Stereo-microscope

### SPONSORED PROJECTS

### Project Sanctioned during July 2011- May 2012

SI. No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Process optimization for bioemulsifier production by microorganisms	Dr. A. Sachan (PI)	University Grants Commission	40-160/2011 (SR) Dt. 22.06.11	5.01	Jul 11 to Jul 14

2.	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.)	University Grants Commission	40-171/2011 (SR) Dt. 22.06.11	8.678	Jul 11 to Jul 14
3.	Development of recombinant human Growth Colony Stimulating Factor	Dr. M. Kumar (PI)	University Grants Commission	40-186/2011 (SR) Dt. 05.07.2011	10.328	Jul 11 to Jul 14
4.	Exploring Biotechnological prospective of Indigenous Novel Hydrogen Producing Microalgae and their characterization	Dr R Bandopadhyay	Innovative Project Scheme for young scientists under PD programme of the institute	Ref No. GO/Con Ord/2011-12 Dt 05 Sep 2011	2.92	Nov 2012
5.	Discovery, annotation, validation and characterization of SNPs in Wheat (Triticum aestivum 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	Department of Biotechnology, Govt. of India	BT/PR3925/ BID/7/384/2011 Dt. 06.05.2012	BIT Share: 24.6	May 12 to Apr 15
6.	Development of LAMP based dipstick format biosensor for sensitive and specific DNA detection	Dr. Dinesh Prasad (PI)	Science and Engineering Research Board (SERB)	SERC/ LS/105/2011 Dt.16/02/2012	15.85	April 2012 To April 2014

### **Projects sanctioned recently:**

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	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)	University Grants Commission	41- 504/2012(SR) 17.07.2012	7.52	July 2012 To June 2015
2.	Process Optimization for gold nanoparticle production by microorganisms	Ms. Sneha Singh (PI) Dr. A. S. Vidyarthi (Co-PI)	University Grants Commission (Minor Research Project)	41-1336/2012 (SR) 08.08.2012	1.5	July 2012 To June 2014

## Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
	Establishment of Bioinformatics Cen- tre under BTIS Net scheme	_ · · · · · · - ·	Department of Biotechnology, Govt. of India	February 2004 BT/BI/04/065/04	68.0	Feb 05 to Mar 12
2.	Study of Antioxida- tive and DNA pro- tective properties of Anthocyanins	Mukhopadhyay	University Grants Commission	31-1 (JH) SR Dt. 10.01.2009	15.13	Jan 09 to Jan 12
3.	To understand the nature of diversity in lac insects of Kerria spp. in India and the nature of insect x host interaction	Vidyarthi (Co-	NAIP, ICAR	NAIP/Comp-4/ C3007/ 2008-09 Dt. 10.01.2009	BIT Share 66.50	Apr 09 to March 12

4.	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)	University Grants Commission	37-111/2009 (SR) Dt. 19.12.2009	7.82	Feb 10 to Feb 13
5.	Functional genomics approach towards validation of biologically important consensus promoter motifs in rice (Oryza sativa L.) under submergence	Dr. D. M. Pandey (PI)	University Grants Commission	37-113/2009 (SR) Dt. 19.12.2009	10.31	Feb 10 to Feb 13
6.	Production of Natural Flavour Compounds from Ferulic Acid by Microbial Transformation	Dr. S. Ghosh (Sachan) (P.I.) Dr. A. S. Vidyarthi (Co- P.I.)	University Grants Commission	37-115/2009 (SR) Dt. 19.12.2009	8.26	Feb 10 to Feb 13
7.	The culture of local mosses for production of glycosylation enzymes for use in in vitro post translational modification of mammalian proteins expressed in prokaryotes	Dr. R. Chandra (P.I.)	University Grants Commission	37-116/2009 (SR) Dt. 19.12.2009	11.31	Feb 10 to Feb 13
8.	Enhanced production of L-Asparaginase by Extractive Fermentation using aqueous two phase system	(P.I.)	University Grants Commission (Minor research project)	37-625/2009 (SR) Dt. 12/01/10	1.80	Feb 10 to Feb 12
9.	Potential assess- ment of CBM har- vesting in non-ex- tractable coal/lignite	Dr. A. S. Vidyarthi (P.I.)	OIDB	4/5/2009-OIDB Dt. 28.4.2010	169.05	Jul 10 to Jul 13

10.	Indigenous develop-	Dr. R. Poddar	Department	June 2010	25	Sep 10
	ment of 1µm swept	(P.I.)	of Science &	[No.IDP/		to
	source optical co-		Technology	MED/2010/10]		Sep 12
	herence tomography					
	(SSOCT) setup for					
	noninvasive imaging					
	of posterior segment					
	of animal eye					

## Projects Completed during the period July 2011-May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Overproduction of anthocyanin, the plant derived natural colourant, for food processing industries	Dr. A. S.	Ministry of Food Processing Industries	47/FMPI/ R&D/2006 Dt. 4.02.2008	45.00	31.08.2011

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	International Symposium	Dr. D. M. Pandey	BIT Mesra, IINRG, Ranchi;	Sept 28-Oct 01, 2011
	on Plant Biotechnology	(Organizing	IFP, Ranchi, CTR & TI,	
	towards Tolerance to	Secretary)	Ranchi; AoB PLANTS,	
	Stresses and Enhancing		Oxford University, UK;	
	Crop Yield (ISPB-2011)		Syngenta ,Syngenta	
			Biotechnology, USA;	
***************************************			Genetix Biotech Asia Pvt.	
			Ltd., New Delhi;	
			Scube, India;	
			CSIR, New Delhi;	
			INSA, New Delhi;	
			DRDO, New Delhi;	
			Jharcraft, GOJ Undertaking;	
			ISRO, Bangalore;	
			DBT, New Delhi	
	,		DST, GOJ	
			NABARD	

2.	Intellectual Property Right	Dr. R. P.	Controller General of	Dec 02, 2011
	- 2011 (IPR-2011)	Bhatnagar	Patent, Design and	
		(Convenor);	Trademark, Govt. of India;	
		Dr. K.	BIT Mesra	
		Mukhopadhyay		
		(Co-convenor)		

# 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. Dinesh Prasad, Mr. Shankaracharya	UGC Orientation Program	ASC, Ranchi Univ.	ASC, Ranchi	Mar 12- April 08, 2012
2.	Dr. H. R. Singh Dr. Dinesh Prasad, Mr. Shankaracharya	IPR Management in Knowledge Era	NRDC, New Delhi	BIT Mesra, Ranchi	Feb 21, 2012
3.	Dr. Shubha R Sharma	UGC-SPONSORED Refreshers Course in Life Science	Academic Staff College, University of Ranchi	ASC, Ranchi	Feb 06-26, 2012
4.	Dr. Sheela Chandra	AICTE sponsored QIP on Novel Drug Delivery systems	Dept. of Pharmaceutical Sciences, BIT Mesra	Dept. of Pharmaceuti- cal Sciences, BIT Mesra	Dec 04-17, 2011
5.	Dr. R. Bandopadhyay	National seminar on Genomics and Proteomics in Plant science Center of Advanced Study, Department of Botany, University of Calcutta	Center of Advanced Study, Department of Botany, University of Calcutta	Department of Botany, University of Calcutta	Mar 09, 2012
6.		UGC-SPONSORED Refreshers Course in Life Science	Academic Staff College, University of Ranchi	ASC, Ranchi	Feb 06-26, 2012
7.		QIP short term course on "Environmental genomics and Biotechnology"	Department of Biotechnology, Indian Institute of Technology, Kharagpur	Department of Biotechnol- ogy, Indian Institute of Technology, Kharagpur	Dec 02-09, 2011
8.	NOTE AND THE PROPERTY OF THE P	International Workshop on Algae Technology, Hydrogen Production and Use of Algae biomass,	Biofrosk, Netherland, Uppsala University, Sweeden and IIT, Kharagpur, Kolkata, India	Hotel Hyatt Regency, Kolkata	Oct 17-18, 2011

2 <sup>nd</sup> Disputationes on future	IIIT, Allahabad,	IIIT,	Sept	18-20,
technologies for health	River Publishers,	Allahabad	2011	
care	University			
	de Roma Tor			
	Vergata, Link			
	Biolnstitue,			
	CTIF, Syntech			
	Research			
	Laboratories			

### **PUBLICATIONS**

#### **Published in International Journals**

- A. Ahmad, S. Kaushik, V.V. Ramamurthy, S. Lakhanpaul, R. Ramani, K.K. Sharma, A.S. Vidyarthi, Mouthparts and stylet penetration of the lac insect *Kerria lacca* (Kerr) (Hemiptera:Tachardiidae), Arthropod Structure and Development, (2012). doi: 10.1016/j.asd.2012.04.001. (2012)
- 2. T. Mandal, P. Palit, S. Goswami, D. Mukhopadhy, B. Bhunia, Characterization methods of Bacteria, Pharmawave, (2012). (Accepted)
- 3. P.K. Singh, P. Shukla, Molecular modeling and docking of microbial inulinases towards perceptive enzyme-substrate interactions, Indian Journal of Microbiology, (2012). DOI: 10.1007/s12088-012-0248-0
- 4. S. Tikariha, S. Singh, S. Banerjee, A.S. Vidyarthi, Biosynthesis of gold nanoparticles, scope and applications: A review, Int. J. Pharm. Sci. & Rsch., 3(2012) 1603-1615.
- 5. R. Sharma, A. Kumar, N.K. Jha, S. Ghosh Sachan, A.S. Vidyarthi, S.R. Sharma, Probing into the prevalance and factors of gallstones formation in Jharkhand region in India, International Journal of Applied Biology and Pharmaceutical Technology, 3(2012) 36-41.
- P. Singhal, V.K. Nigam, A.S. Vidyarthi, Studies on Production, Characterization and Applications of Microbial Alkaline Proteases, International Journal Of Advanced Biotechnology and Research, 3(2012) 653-669.
- 7. Shankaracharya, D. Odedra, S. Samanta, A.S. Vidyarthi, Computational intelligence-based diagnosis tool for the detection of prediabetes and type 2 diabetes in India. Rev Diabet Stud, 9(2012) 55-62.
- 8. S. Chandra, Endophytic fungi: novel sources of anticancer lead molecules, Applied Microbiology and Biotechnology, 95(2012) 47-59.
- 9. S. Vijayvargiya, P.Shukla, A niched Pareto genetic algorithm for finding variable length regulatory motifs in DNA sequences, 3Biotech, 2(2012) 141-148.
- 10. M.V.K. Karthik, M.V.K.N. Satya Deepak, P. Shukla, Explication of interactions between HMGCR isoform 2 and various statins through In silico modeling and docking, Computers in Biology and Medicine, 42(2012) 156-163.
- 11. N. Chauhan, A.S. Vidyarthi, R. Poddar, Comparative Analysis of Different DNA Binding Drugs for Leishmaniasis Cure: A Pharmacoinformatics Approach, Chemical Biology & Drug Design, 80(2012) 54-63.
- 12. S. Chandra, Natural plant genetic engineer Agrobacterium rhizogenes: role of T-DNA in plant secondary metabolism, Biotechnol Lett, 34(2012) 407-415.

- B. Chaudhary, K. Mukhopadhyay, Induction of anthocyanin pigment in callus cultures of Solanum melongena
   L. in response to plant growth regulators and light, B. IOSR Journal of Pharmacy 2(2012) 76-80.
- 14. B. Chaudhary, K. Mukhopadhyay, *Syzygium Cumini* (L.) Skeels: A potential source of nutraceuticals, International Journal of Pharmacy and Biological Sciences, 2 (2012) 46-53.
- K. Mukhopadhyay, I. Haque, R. Bandopadhyay, S. Covert, D. Porter, AFLP based assessment of genetic relationships among shiitake (*Lentinula ssp.*) mushrooms, Molecular Biology Reports, 39(2012) 6059-6065.
- 16. P. Gupta, R.S. Singh, A. Sachan, A.S. Vidyarthi, A. Gupta, N. Tripathi, Study on biogas production by anaerobic digestion of garden-waste, Fuel, 95(2012) 495-498.
- 17. Shankaracharya, D. Odedra, M. Mallick, P. Shukla, S. Samanta, A.S. Vidyarthi, Java based diabetes type-2 prediction tool for better diagnosis, Diabetes Technol Ther., 14(2012) 251-256.
- 18. A. Mathur, Shankaracharya, A.S. Vidyarthi, SWIFT MODELLER v2.0: A platform independent GUI for homology modeling, J Mol Model,18(2012) 3021-3023.
- 19. A. Katiyar, S. Smita, D.M. Pandey, V. Chinnusamy, K.C. Bansal, Identification of miRNAs in sorghum by using bioinformatics approach, Plant Signaling & Behavior, 7(2012) 1-14.
- 20. S. Banerjee, S. Singh, S. Tikariha, A.S. Vidyarthi, A review on biological synthesis of gold nanoparticles and its applications, Pharmbit, Vol. XXIII & XXIV(2011) 11-17.
- 21. S. Shrivastava, P. Shukla, K. Mukhopadhyay, Purification and preliminary characterization of a xylanase from *Thermomyces lanuginosus* strain SS-8, 3 Biotech, 1(2011) 255-259.
- 22. D. Sahu, A. Kumar, D.M. Pandey, *In silico* analysis of enzyme involved in enrichment of citronella oil, Int. J. Computational Biology and Drug Design, 4(2011) 332-344.
- 23. K. Mukherjee, A. Kumar, D.M. Pandey, A.S. Vidyarthi, Study of Rice Telomere Binding Protein 1 (Rtbp1): An *In Silico* Approach, Int. J. Pharm. Sci. Review Res., 10(2011) 193-197.
- 24. M. Mallick, K. Mukherjee, N.A. Udayakumar, Homology Modelling of Polyphenol Oxidase from *Solanum Melongen*: Sequence analysis and Structural validation studies *In Silico*, International Journal of Pharma and Bio Sciences, 2 (2011) 319-328.
- 25. A. Kumar, A. Barik, M. Kumari, A.S. Vidyarthi, D.M. Pandey, *In silico* prediction and identification of anoxia responsive single exon genes and their expressed proteins in rice (*Oryza sativa L.*), Int. J. Bioinformatics Research and Applications, 7(2011) 376-389.
- 26. T. Destro, D. Prasad, D. Martignago, I.L. Bernet, A.R. Trentin, I.K. Ranu, M. Ferretti, A. Masi, Compensatory expression and substrate inducibility of g-glutamyl transferase GGT2 isoform in *Arabidopsis thaliana*, Journal of Experimental Botany, 62(2011) 805-814.
- 27. S. Vijayvargiya, P. Shukla, A Genetic Algorithm with Clustering for Finding Regulatory Motifs in DNA Sequences. International Journal of Computer Applications. IJCA Special Issue on "Artificial Intelligence Techniques Novel Approaches & Practical Applications, 1(2011) 6-10.
- 28. C. Banerjee, R. Bandopadhyay, P. Shukla, Microalgal biofuel towards sustainable development: promises and technologies for future, International Journal of Advanced Biotechnology and Research, 2(2011) 481-483.
- 29. M. Mallick, A.S. Vidyarthi, Shankaracharya, (2011) Tools for predicting metal binding Sites in Protein: A Review, Current Bioinformatics, 6(4): 444-449.

- 30. D. Jabin, A.S. Vidyarthi, Shankaracharya, Pharmacoinformatics of virtual inhibitor for Cdc2 analogues, Online J Pharmacol Kinetics, 7(2011) 24-31.
- 31. N. Chauhan, A.S. Vidyarthi, R. Poddar, Comparative multivariate analysis of codon and amino acid usage in three *Leishmania genomes*, Genomics Proteomics Bioinformatics, 9(2011) 218-228.
- 32. S.K. Ranjan, C.B. Mallick, D. Saha, A.S. Vidyarthi, R. Ramani, Genetic variation among species, races, forms and inbred lines of lac insects belonging to the genus *Kerria* (Homoptera, Tachardiidae), Genetics and Molecular Biology, 34(2011) 511-519.
- 33. A. Shukla, A.S. Vidyarthi, S. Samanta, Computer Aided Drug Design and Studies of Antiviral Drug against H3N2 Influenza Virus, World Academy of Science Engineering & Technology, 59(2011) 45-48.

### **Published in National Journal**

- 1. B. Bhunia, D. Mukhopadhy, S. Goswami, T. Mandal, A. Dey, Improved production, characterization and flocculation properties of poly (g)-glutamic acid produced from *Bacillus subtilis*. Journal of Biochemical Technology, (2012). (Accepted)
- 2. S. Goswami, A. Rani, R. Priyadarshini, B. Bhunia, T. Mandal, A Review on Production of Echinocandins by *Aspergillus sp.* Journal of Biochemical Technology, (2012). (Accepted)
- 3. R. Bandopadhyay, Wheat Chromosome Mapping: An Overview. Perspective in Cytology and Genetics, 15(2012) 199-204.
- 4. R. Bandopadhyay, P. Sinha, B. Chaudhary, Is Bt-brinjal ready for future food?-A critical study, Indian Journal of Biotechnology, 11(2012) 238-240.
- R. Bandopadhyay, A Botanist in 2011 Southern Ocean Expedition, Pallav, 6(2011) 70-72.
- 6. P. Shukla, R. Bandopadhyay, V. Kumar, C. Banerjee, A Report on the '51st Annual Conference of Association of Microbiologists of India (AMI) (December 14–17, 2010; Venue: Birla Institute of Technology, Mesra, Ranchi, India), Indian J Microbiol, 51(2011) 537-538.

### Papers/Abstracts in Conference Proceedings

### Publication in International Proceedings:

- V. Kumar, R. Bandopadhyay, M.M. Sharma, S. Chandra, *In vitro* and phytochemical screening of *Swertia chirayita* (Roxb.Ex Fleming) H. Karst: a critically endangered medicinal herb, International conference on current trends in medicinal plant research, Department of Botany, University of Pune, Pune, Jan 10-12, 2012. (Oral)
- 2. N.K. Khemka, A. Kumar, G.K. Prajapati, A. Wany, A. Kumari, D.M. Pandey, Study on Enzyme and its Coding Gene responsible for the medicinal importance in *Tinospora cordifolia*, International Conference on Current Trends in Medicinal Plant Research, University of Pune, Pune, Jan 10-12, 2012.
- 3. A. Wany, A. Kumar, A.S. Vidyarthi, V.K. Nigam, D.M. Pandey, Understanding New Paradigm of Plant Metabolomes through Secondary Metabolite Enrichment, International conference on Current Trends in Medicinal Plant Research, University of Pune, Pune, Jan 10-12, 2012.
- 4. P. Gupta, C. Banerjee, G. Sen, S. Mishra, P. Shukla, R. Bandopadhyay, Biomass collection from microalgae through flocculation, 2<sup>nd</sup> International Conference on Challenges in Biotechnology and Food Technology (ICBF-2012), Annamalai University, Jan 9-10, 2012.

- S. Mishra, A. Sachan, S.G. Sachan, Microbial Transformation of Eugenol into Value addedCompounds, 1st International Science Congress on Science and Technology for sustainable development (ISC-2011), Maharaja Ranjit Singh College of Professional Sciences, Indore, Dec 24-25, 2011.
- P. Sarkar, N. Panjiar, S.G. Sachan, A. Sachan, Optimization of different carbon sources for enhancing the production of biosurfactan by *Pseudomonas sp.*, 1<sup>st</sup> International Science Congress on Science and Technology for sustainable development (ISC-2011), Maharaja Ranjit Singh College of Professional Sciences, Indore, Dec 24-25, 2011.
- 7. S. Singh, V.K. Nigam, S.G. Sachan, A. Sachan, Isolation and screening of ferulic acid esteraseproducing microorganism, 1<sup>st</sup> International Science Congress on Science and Technology for sustainable development (ISC-2011), Maharaja Ranjit Singh College of Professional Sciences, Indore, Dec 24-25, 2011.
- 8. M. Kullu, S. Mishra, A.S. Vidyarthi, A. Sachan, S.G. Sachan, Effect of ferulic acid concentration on the production of biotransformed products, 1st International Science Congress on Science and Technology for sustainable development (ISC-2011), Maharaja Ranjit Singh College of Professional Sciences, Indore, Dec 24-25, 2011.
- 9. R.K. Kohli, A. Sachan, Microbial degradation of hydroxycinnmates, 1st International Science Congress on Science and Technology for sustainable development (ISC-2011), Maharaja Ranjit Singh College of Professional Sciences, Indore, Dec 24-25, 2011.
- 10. R. Bandopadhyay, Wheat chromosomal mapping: An overview, 15th All India Congress of Cytology & Genetics (AICCG) and Fogarty International Workshop on Arsenic contamination in ground water: Health effects, molecular epidemiology, susceptibility and mitigation, Dept of Botany, Magadh University Bodhgaya, Nov 21-23, 2011. (Oral)
- 11. P. Gupta, C. Banerjee, P. Shukla, R. Bandopadhyay, Beneficiary role of microalgae against arsenic contamination, AICCG and Fogarty Workshop organized by IICB, Kolkata and University of Barkley, Bodh Gaya, Nov 21-23, 2011.
- 12. U. Tripathi, A.K. Singh, C. Banerjee, P. Gupta, R. Bandopadhyay, P. Shukla, Biotechnological potential of microalgae from southern ocean: a preview of their culturing techniques, 52<sup>nd</sup> Annual International Conference of AMI and International Conference on Microbial biotechnology for Sustainable Development, Panjab University, Chandigarh, Nov 3-6, 2011.
- 13. K. Sudha, P.K. Singh, P. Shukla, Squalene epoxidase enzyme modeling for effectual treatment strategies against dermatophyte infection caused by *Epidermophyton flocossum*, 52<sup>nd</sup> Annual International Conference of AMI and International Conference on Microbial biotechnology for Sustainable Development, Panjab University, Chandigarh, Nov 3-6, 2011.
- D. Pasrija, P.Ranjan, S.K. Jha, H.R. Singh, V.K. Nigam, A.S. Vidyarthi, Production and Media optimization of L-Asparaginase from *Pseudomonas fluorescence* by Taguchi DOE Methodology, 52<sup>nd</sup> Annual International Conference of AMI and International Conference on Microbial biotechnology for Sustainable Development, Panjab University, Chandigarh, Nov 3-6, 2011.
- 15. A.N. Yadav, S. Ghosh, P. Verma, A. Suman, A.K. Saxena, Molecular diversity and functional annotation of psychrotolerant bacteria from Indian cold desert, 52<sup>nd</sup> Annual International Conference of AMI and International Conference on Microbial biotechnology for Sustainable Development, Panjab University, Chandigarh, Nov 3-6, 2011.

- C. Banerjee, P. Shukla, R. Bandopadhyay, ITS-region characterization of selected microalgae, International Workshop on Algae Technology, Hydrogen Production and Use of Algae biomass, Biofrosk, Netherland, Uppsala University, Sweden and IIT, Kharagpur, Kolkata, India, Oct 17-18, 2011.
- 17. V. Kumar, R. Bandopadhyay, S. Chandra, M.M. Sharma, Influence of Different phytohormones on Micro propagation of Swertia chirayita. Roxb. Ex Fleming.H.Karst-An Endengered Medicinal Herb, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 Oct 1, 2011.
- 18. A. Kumar, V.G. Malathi, J. Mathew, T. Abraham, D.M. Pandey, P. Ramachandran, Identification and characterization of viroid associated with tapping panel dryness syndrome in *Hevea brasiliensis*, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 Oct 1, 2011.
- 19. B. Pandey, J. Varshney, H. Sharma, S. Sheoran, R. Singh, R. Chatrath, D.M. Pandey, P. Sharma, Comparative analysis of AP2/EREBP gene family in selected plants, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 Oct 1, 2011.
- S. Smita,A. Katiyar, D.M. Pandey, V. Chinnusamy, K.C. Bansal, Analysis of abiotic stress responsive gene network in *Oryza sativa*, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 - Oct 1, 2011.
- 21. A. Katiyar, S. Smita, D.M. Pandey, V. Chinnusamy, K.C. Bansal, Computational pipeline for screening new miRNAs and their target genes in agricultural crops, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 - Oct 1, 2011.
- 22. D. Prasad, A.S. Vidyarthi, A.R. Trentin, D.M. Pandey, A. Masi, Multiple gene silencing by RNAi for assessing the functions of the gamma-glutamyl cycle in *Arabidopsis thaliana* plants, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 - Oct 1, 2011.
- 23. A. Kumar, S. Heuer, D.M. Pandey, In Silico Study on Differentially Co-Expressed Transcription Factor Genes Enriched by Promoter Motifs in Rice (*Oryza sativa L.*) under Submergence, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 Oct 1, 2011.
- 24. G. Shamim,S.K. Ranjan, D.M. Pandey,R. Ramani, Polyketide pathway in anthraquinone biosynthesis: A comparative analysis in phylogenetically diverse organisms, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 Oct 1, 2011.
- 25. A. Mishra,S.G. Sachan, D.M. Pandey, Studies on rhizosphere associated micro-organism to improve crop production, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 Oct 1, 2011.
- 26. A. Kumari, A. Kumar, D.M. Pandey, Co-Expression networking on less informative transcription factor genes in rice (*Oryza sativa L.*) under abiotic stresses, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28-Oct 1, 2011.

- 27. G.K. Prajapati, A. Kumar, D.M. Pandey, Study on Expression Analysis of DEG with Respect to GCC-Box and TCC-Box in Rice (Oryza sativa L.) under Anoxia, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28-Oct 1, 2011.
- 28. R.P. Pareek, V.K. Nigam, M.K. Mohan, S. Dey, R.K. Gothwal, P. Ghosh, Development of liquid biofertilizer formulation for rhizobium in Cicer arietinum, International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28-Oct 1, 2011.
- S. Smita, A. Katiyar, D.M. Pandey, V. Chinnusamy, K.C. Bansal, Expression Network Analysis of Abiotic Stress Responsive Myb in Rice, Proceedings of The 2011 International Conference on Bioinformatics & Computational Biology (BIOCOMP-2011), Las Vegas Nevada, USA. Editors: Hamid R. Arabnia and Quoc-Nam Tran. CSREA Press, USA, July 18-21, 2011. (Full Paper)
- 30. A. Katiyar, S. Smita, D.M. Pandey, V. Chinnusamy, K.C. Bansal, A Bioinformatics Approach for Identification of Type III Signal Anchored Proteins in Rice, Proceedings of The 2011 International Conference on Bioinformatics & Computational Biology (BIOCOMP-2011), Las Vegas Nevada, USA. Editors: Hamid R. Arabnia and Quoc-Nam Tran. CSREA Press, USA, July 18-21, 2011. (Full Paper)

### Publication in National Proceedings :

- A.N. Yadav, S.G. Sachan, P. Verma, A. Suman, A.K. Saxena, Diversity Analysis and Plant Growth Promoting Attributes of Culturable Psychrotolerant Bacteria from Leh Ladakh and Rohtang Pass. National Symposium on Microbes in Health and Agriculture, School of Life Sciences, Jawaharlal Nehru University New Delhi, Mar 12-13, 2012.
- 2. R.S. Thakur, R. Bandopadhyay, Revealing Dark Matters using Cloud Computing. Dept of Botany and bioinformatics Facility, University of North Bengal, BBCon2012, 17-19 Feb, 2012. (Oral)
- 3. K.K. Sharma, R.S. Thakur, R. Bandopadhyay, piRNA: The new dimension and future prospect, Dept of Botany and bioinformatics Facility, University of North Bengal, BBCon2012, 17-19 Feb, 2012. (Poster)
- R. Bandopadhyay, Advancement of molecular Biology and its use for sustainable agriculture: An Overview, Recent Advances in Agrobiotechnology and Sustainable Agriculture (RAAB 2012), Moolji Jaitha College, NMU, Jalgaon, Maharastra, February 5-6, 2012 (oral)
- A.N. Yadav, S.G. Sachan, P. Verma, A. Suman, A.K. Saxena, Diversity of Culturable Psychrotrophic Bacteria from Leh Ladakh and Bioprospecting for Cold-Active extracellular enzymes, National Seminar on Biotechnological interventions for the benefit of mankind, Anand Engineering College, Agra, India, Feb, 2-4, 2012. (Oral)
- V. Kumar, R. Bandopadhyay, S. Chandra, Biotechnological approaches for the Conservation of Swertia chirayita (Roxb. Ex Fleming) H. Karst: an endangered medicinal herb, National Symposium on Assessment & Conservation of Forest Genetic Resources through Biotechnological Interventions, Institute of Forest Productivity (Indian Council of Forestry Research and Education) Aranyodaya, NH-23, Lalgutwa, Ranchi, Dec 19-20, 2011. (oral)
- 7. P. Gupta, P. Shukla, R. Bandopadhyay, Isolation and media standardization for the microorganisms collected from southern ocean, 3rd IYSC, 2011, NASC Campus, New Delhi, Nov 3-5, 2011. (Oral)
- 8. A. Agarwal, A.K. Jain, V.K. Nigam, A.S. Vidyarthi, M.K. Mohan, Screening of Nitrilase synthesizing isolates for Indole Acetic Acid Production, National Conference on Biotechnology for Sustainable Development, Department of Biotechnology, DDU, Gorakhpur University, Gorakhpur, Nov 15-16, 2011.

- P. Ranjan, V.K. Nigam, D. Pasrija, S.K. Jha, A.S. Vidyarthi, Study On The Microbial Production Of L-Asparaginase, National Conference on Biotechnology for Sustainable Development, Department of Biotechnology, DDU, Gorakhpur University, Gorakhpur, Nov 15-16, 2011.
- 10. R.S. Thakur, R. Bandopadhyay, Cloud computing vs DNA cloud, MASMIA 2011, BIT, Mesra, Oct 19-20 2011. (oral)
- 11. K. Sudha, C. Banerjee, R. Bandopadhyay, P. Shukla, An insight into computational modeling approaches for bio-hydrogen production studies through homology modeling of hydrogen producing microorganisms, National Conference on Mathematical & Statistical Modeling in Innovative Areas, Birla Institute of Technology, Mesra, Ranchi Jharkhand, India, Oct 19-20, 2011.

### **Books**

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

V.K. Nigam, A.K. Khandelwal, A. Agarwal, M.K. Mohan, A.S. Vidyarthi, P. Ghosh Biotransformation of Nitriles. In: S.P. Tiwari, R. Sharma, R K Singh (eds.), Recent Advances In Microbiology Volume 1, NOVA Publications, USA, 2012 (Accepted)

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

S. Chandra, R. Chandra, M.M. Sharma, Transgenic Hairy roots: Development and Applications. In: H.P. Sharma, J.V.V. Dogra, A.N. Mishra (eds.), Plant tissue culture: Totipotency to transgenic. Publishers: Agrobios, Jodhpur, Rajasthan, pp 379-398, 2012.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. R. Poddar	•	University of California, Davis	Jan 2012 to Dec 2012
		sponsored by national Institute of EYE and national institute of Health		Dec 2012
		[NIH], USA	Department of Ophthalmology & Vision Science	

### Patents (Applied / Granted)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.			1562/KOL/2011 Dt. 19.12.2011 (Appl. Ref No. Temp/836/KOL/2011)	19.12.2011
2.	Mr. S. Goswami, Dr. A.S. Vidyarthi	An improved method for the fermentative production of Lovastatin	942/KOL/2011 Dt 13.07.2011 (Appl. Ref No. Temp/426/KOL/2011)	13.07.2011

### PhD students enrolled, submitted and awarded

No. of PhD students enrolled as on 30/05/12	No. of PhD Thesis Submitted during July'11 to June '12	No. of PhD awarded during July'11 to June '12
15	07	05

No of summer trainees trained in the Department during July 2011 to June 2012: 11

# Members on Board of Studies (UG/PG)

### **BOS (M.Tech Biotechnology)**

1. Dr. A. S. Vidyarthi

Head & Chairman

2. Dr. (Mrs.) M. Mukherjeee

Member

3. Prof. D. Bhagat

Member

4. Dr. P.R.P. Verma

Member

5. Dr. K. Mukhopadhyay

Member

6. Dr. D.M. Pandey

Member

7. Dr. A. Sachan

Member

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

1. Prof. P. Ghosh BISR Jaipur,

2. Dr. Z. A. Haider Coordinator

College of Biotechnology

Birsa Agricultural University

3. Dr. T. Madhan Mohan

Director

Dept. of Biotechnology, GOI

CGO Complex, New Delhi.

4. Dr. R. Sen

Dept. of Biotechnology

IIT Kharagpur

5. Dr. A. K. Panda

Scientist

**Product Development Cell** 

NII, New Delhi

6. Dr. S. K. Srivastava Deputy Director & Head

Professor & Head

School of Biochemical Engg.

IT, BHU, Varanasi

7. Mr. G. K. Sharma

GM (Production)

Ranbaxy Pvt. Limited

Poanta Sahib

Himachal Pradesh

8. Dr. R. Ramani

Director

IINRG, Namkum

Ranchi

9. Dr. B. N. Mishra

Professor & Coordinator

Biotechnology Prgramme

Institute of Engg. & Technology

Lucknow-226021

### **BOS (M. Sc Bioinformatics)**

1. Dr. A. S. Vidyarthi : Head & Chairman

2. Dr. R. Sukesh kumar : Member

3. Dr. G. Sahoo : Member

4. Dr. S. Padhi : Member

5. Dr. K. Mukhopadhyay : Member

6. Dr. D.M. Pandey : Member

7. Dr. A. Sachan : Member

8. Mr. Shankaracharya : Member

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

1. Prof T. Ghosh

Emeritus Prof., IIT Delhi

2. Dr. Z. A. Haider

Coordinator

Colllege of Biotechnology

Birsa Agricultural University, Ranchi

3. Dr. T. Madhan Mohan

Advisor

Dept. of Biotechnology, GOI

CGO Complex, New Delhi.

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

Hlmachal Pradesh

Dr. R. Ramani
 Director
 504, Delphi, Orchard Avenue
 IINRG, Namkum, Ranchi

### **BOS (M Sc Bioinformatics)**

1. Dr. A. S. Vidyarthi : Head & Chairman

2. Dr. P. Ghosh : Member

3. Dr. K. Mukhopadhyay : Member

4. Dr. P. Shukla : Member

5. Dr. D. Sasmal : Member

6. Dr. (Mrs.) M. Mukherjee : Member

7. Dr. V. P. Gupta : Member (Advisor DBT, GOI)

8. Mr. G. K. Sharma : Member (Ranbaxy)

### Other important information

### Awards/Citations received by students:

- Mr. U. Tripathi (B.E. Biotechnology 2009) has been awarded fellowship for his studies at Manheim Univ. of Applied sciences, Germany through an exchange program.
- Mr. R.S. Thakur (M.Sc. Bioinformatics 2010 batch) was awarded 1st prize for oral paper presentation competition at BITOTSAV 2012.
- Ms. P. Gupta (Ph.D. scholar) was awarded 2nd Prize in Oral Presentation at 3rd IYSC, NASC Campus, New Delhi, Nov 3-5, 2011.
- Ms. B. Chaudhury (Ph.D. scholar) was awarded 1st Prize in Oral Presentation at 3rd IYSC, NASC Campus, New Delhi, Nov 3-5, 2011.

# Lectures delivered by faculty members at various organizations:

- Dr. P. Shukla
  - Integrating computational enzyme design and structure based mutagenesis for enzyme engineering: Next frontier in microbial biotechnology. 52nd Annual International Conference of AMI and International Conference on Microbial biotechnology for Sustainable Development, Panjab University, Chandigarh, November 3-6, 2011.
  - Advances in microbial biotechnology: Enzyme Engineering through bioinformatics applications and structure based mutagenesis. DBT-MPCOST Hand's On Training on Microbial Biotechnology, Dr. H.S. Gour Central University, Sagar, MP, October 30-November 13, 2011.
  - iii. An Insight into potential applications of Biotechnological tools for understanding plant microbe interactions. Central Rainfed Upland Rice Research Station, Hazaribagh, ICAR, August 27, 2011.

#### Dr. R. Chandra

 Bioprocess Engineering for production of plant metabolites. AICTE sponsored QIP on Novel Drug Delivery systems, Dept. of Pharmaceutical sciences, BIT Mesra, Dec 4-17, 2011.

#### Dr. R. Bandopadhyay

- Information Technology joins hand with Biotechnology. Inter-disciplinary lecture series on Information Technology and its Applications, Dept of Information Technology, BIT Mesra, Ranchi, March 16-17, 2012.
- Advancement of molecular Biology and its use for sustainable agriculture: An Overview. Recent Advances in Agrobiotechnology and Sustainable Agriculture (RAAB 2012), Moolji Jaitha College, NMU, Jalgaon, Maharastra, February 5-6, 2012. (Chief guest and key speaker)
- iii. Wheat chromosomal mapping: An overview.15th All India Congress of Cytology & Genetics (AICCG) and Fogarty International Workshop on Arsenic contamination in ground water: Health effects, molecular epidemiology, susceptibility and mitigation, Dept. of Botany, Magadh University Bodhgaya, November 21-23, 2011.
- iv. Cloud computing and DNA cloud. National Conference on Mathematical and Statistical Modeling in Innovative Areas, Dept. of Mathematics, BIT Mesra, Ranchi, October 19-20, 2011.
- Dr. R. Bandopadhyay has been selected for the membership 2012 of NASI, Allahabad.
- Dr. R. Bandopadhyay has been nominated as Executive body member of All India Congress of Cytology & Genetics (AICCG).

### Students' contribution in Journal

- Devang Odedra (M.Sc. Bioinformatics 2009 batch) contributed in paper published in the Review of Diabetic Studies.
- Abhinav Mathur (BE Biotechnology 2006 batch) contributed in paper published in Journal of Molecular Modelling.
- Devang Odedra and Medhavi Mallick (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Diabetes Technology & Therapeutics.
- Medhavi Mallick (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Current Bioinformatics.
- D. Jabin (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Online Journal of Pharmacology and Pharmacokinetics.
- Divya Sahu (M.Sc. Bioinformatics 2009 batch)contributed in paper published in International Journal of Computational Biology and Drug Design.
- M. Mallick (M.Sc. Bioinformatics 2009 batch), N.A. Udayakumar (B.E. Biotechnology 2007 Batch, Muscat) contributed in paper published in International Journal of Pharma and Bio Sciences.
- A. Barik, M. Kumari (M.Sc. Bioinformatics 2007 batch) contributed in paper published in International Journal of Bioinformatics Research and Applications.
- A. Rani (Summer Trainee) and R. Priyadarshini (M. Tech Biotechnology 2010 batch) contributed in paper published in Journal of Biochemical Technology.

- M.V.K. Karthik (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Computers in Biology and Medicine.
- P.K. Singh (M.Sc. Bioinformatics 2009 batch) contributed in paper published in Indian Journal of Microbiology.
- P. Singhal (M. Tech Biotechnology 2010 batch) contributed in paper published in International Journal of Advanced Biotechnology and Research.

### Students contribution in conference proceedings

- M. Sc. Bioinformatics students participated in BBCon2012, Dept of Botany and bioinformatics Facility, University of North Bengal, 17-19 Feb, 2012.
- M. Tech. Biotechnology students participated in poster presentation in the National Conference on Biotechnology for Sustainable Development, Department of Biotechnology, DDU, Gorakhpur University, Gorakhpur, Nov 15-16, 2011.
- B.E. Biotechnology, M. Sc. Bioinformatics and M. Tech. Biotechnology students participated in poster presentation in the 52nd Annual International Conference of AMI and International Conference on Microbial biotechnology for Sustainable Development, Panjab University, Chandigarh, Nov 3-6, 2011.
- M. Sc. Bioinformatics students participated in National Conference on Mathematical & Statistical Modeling
  in Innovative Areas, Birla Institute of Technology, Mesra, Ranchi Jharkhand, India, Oct 19-20, 2011
- B.E. Biotechnology, M. Sc. Bioinformatics and M. Tech. Biotechnology students participated in poster presentation in the International Symposium on Plant Biotechnology towards Tolerance to Stresses and Enhancing Crop Yield (ISPB-2011), BIT, Mesra, Ranchi, Sept 28 - Oct 1, 2011.

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

### SPONSORED PROJECTS

### Project Sanctioned during July 2011- May 2012

SI. No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	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	12/01/2012	₹ 24,95,880/-	3 years

### Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in Lacs)	Duration of the Project
	Interpenetrating networks based on hydrophilic-hydrophobic acrylics	Dr. S. Goswami	DST-FAST TRACK	2009	14.4	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	2009	65.0	3 Years
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 I	3 years

5	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
6	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
7	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
8	Modernization and Removal of obsolenscence in Polymer Rheology laboratory	Dr. M.Mukherjee	AICTE	31.3.2011	15.00	3 years
9.	Setting up of Solar power based DCMD pilot plant, a joint project of BIT Mesra and United Technology Research Centre, CT,US	Dr. M.Mukherjee Dr S Dutta Dr Arbind Kumar(Mech)	Institute and UTRC funded	September 2011	-	2years

# Projects Completed during the period July 2011-May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in Lacs)	Date of completion of the Project
<b></b>	Design and Development of coir fibre based low cost air cooler	<b>{</b>	Coir Board, Govt. of India	2009	9.79	Years

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	1 week Training on CATIA	Mr J. Sudeepan		December 2011

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

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, Year
1	Dr Gautam Sarkhel	Malaysia Polymer International Conference 2011,	University of Kebangsaan, National University of Malaysia	Puttrajaya Malaysia	18-20 October 2011
2	Dr Sudipta Goswami	First International Conference on Plasma Processing of Organic Materials and Polymers PPOMP 2011,	Institute of Macrolecular Science and Engineering (IMSE)Kottayam, Kerala and Department of Surface Engineering and Optoelectronics, Jozef Stefan Institute,Slovenia	Kottayam, India	25-27 November,
3	Mr Sumit Jana	Indian chemical engineering congress CHEMCON – 2011,	Indian Institute of Chemical Engineers	Bangalore	December 27-29, 2011
4	Dr M.Mukherjee	Training on Aspen Plus: Process Modelling	Aspen Tech	Aspen Tech Pune	April 23rd- 25th, 2012

### **PUBLICATIONS**

#### **Published in International Journals**

- S.K.J Rahaman, M. Mukherjee, Gautam Sarkhel, Effect of Zirconium Phosphate on Structural, Thermal and Electrical Properties of Polyether Sulfone (PES) Membrane, International Journal of Polymeric Materials, 61, (2012) 655-668.
- Sudhir Kumar Saw, Gautam Sarkhel, Arup Choudhury, Dynamic Mechanical Analysis of Randomly Oriented Short Bagasse / Coir Hybrid Fibre-Reinforced Epoxy Novolac Composite, Fibers and Polymer, 12, 4(2011) 506-513
- Archana Kumari, Arup Choudhury, 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, 28, 3(2012) 111-126.
- Sudhir Kumar Saw, Gautam Sarkhel, Arup Choudhury, Preparation and Characterization of Chemically Modified Jute-Coir Hybrid Fibre Reinforced Epoxy Novolac Composites, Journal of Applied Polymer Science, 125, 4(2012)3038-3049.
- Archana Kumari, Arup Choudhury, Gautam Sarkhel, Preparation and Characterization of Polyvinylpyrollidone Incorporated Cellulose Acetate Membranes for Ultrafiltration of Metal Ion, Journal of Applied Polymer Science, 124, 1(2012) 300–308.
- 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, 68, 9(2012)2255-2267.

- 7. Sudipta Goswami, S. K. Maji, Sequential Interpenetrating Polymer Networks of Novolac Resin and Poly (2-ethylhexylacrylate)-thermal, mechanical and morphological study, Journal of Applied Polymer Science, 123, 5(2012) 3007-3016.
- 8. SudiptaGoswami,K.Kiran,A.B.Panda,P.P.Sharma,S.Mahapatra,S.V.Bhoraskar,I.Banerjee, Synthesis of magnetically active interpenetrating polymer network for drug release, International Journal of Nanodimension, 1, 4(2011)279-285.
- Sudipta Goswami, K.Kiran, Application of Kissinger analysis to the glass transition and study of the thermal degradation kinetics of Phenolic-Acrylic IPNs, Bulletin of Materials Science, 35, 4(2012).
- Sudipta Goswami, Siddhi Gupta, Arvind Sinha, A combined effect of freeze-thaw cycles and polymer concentration on the structure and mechanical properties of transparent PVA gels, Biomedical Materials, doi:10.1088/1748-6041/7/1/015006,2012
- 11. Kaushik Kumar, Goutam Pohit, Virtual manufacturing of various types of gears and validation of the technique using rapid prototype, Virtual and Physical Prototyping, 7, 2(2012)153-171.
- 12. Kaushik Kumar, Sanjeev Kumar, ISO 9001 or ISO 17025: Which is more important for an Air Borne Target Test Range Establishment Laboratory? International Journal of Management Studies, Statistics and Applied Economics, 2, I(2012) 95-106
- 13. Kaushik Kumar, Sanjeev Kumar, Development of documents for ISO 17025:2005 quality system for an Air Borne Target Test Range Establishment, International Journal of Engineering Research and Industrial Applications, 5, II(2012)1-16.
- B.Bharaniraja, Jayaram Kumar, C.M.Prasad, A.K.Sen, Different approaches of Katira Gum formulations for Colon Targetting,, Int. J. Bio. Mac., 49, 3(2011), 305-310.
- 15. Ankita Singh, Kapil 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.
- 16. A. K. Sen, S. Roy, V. A. Juvekar, On the Importance of Purification of Sodium Polystyrene Sulfonate, ISRN Analytical Chemistry, 2012, (2012) Art. ID:514509.
- 17. 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, 2012 (in press).
- 18. S.S Mahapatra, A. Dutta and J. Datta, Temperature dependence on methanol oxidation and product formation on Pt and Pd modified Pt electrodes in alkaline medium, International Journal of Hydrogen Energy 36 (2011) 14873-14883.
- S.S Mahapatra, A. Dutta and J. Datta, High performance PtPdAu nanocatalyst for ethanol oxidation in alkaline media for fuel cell applications, International Journal of Hydrogen Energy 36 (2011) 1489-14906.
- 20. S. S. Mahapatra, J. Datta, Characterization of Pt-Pd/C electrocatalyst for methanol oxidation in alkaline medium, International Journal of Electrochemistry, 2011 (2011) 1-16.
- 21. Papita Das Saha, Suman Dutta, Mathematical modeling 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
- 22. Kumar Anupam, Suman Dutta, Chiranjib Bhattacharjee, Siddhartha Datta; Adsorptive removal of chromium (VI) from aqueous solution over powdered activated carbon: Optimisation through response surface methodology, Chemical Engineering Journal 173 (2011) 135 143

- 23. Arup Choudhury, P. Kar, Doping effect of carboxylic acid group functionalized multi-walled carbon nanotube on polyaniline, Composites: Part B 42 (2011) 1641–1647.
- 24. P.P. Sengupta, P. Kar, B. Adhikari, Influence of dielectric constant of the polymerization medium on the processability and ammonia gas sensing properties of polyaniline, Bulletin of Materials Science 34 (2011) 261-270.
- 25. P. Kar, A.K. Behera, N.C. Pradhan, B. Adhikari, Doping of the processable conducting poly(m-aminophenol) with inorganic acids, Journal of Macromolecular Science, Part B Physics 50 (2011) 1822-1833.
- 26. P. Kar, N.C. Pradhan, B. Adhikari, Ammonia sensing by hydrochloric acid doped poly(m-aminophenol)—silver nanocomposite, Journal of Materials Science 46 (2011) 2905-2913.
- 27. Arup Choudhury, Synthesis and characterization of poly(o-toluidine)/functionalized multi-walled carbon nanotubes nanocomposites with improved electrical conductivity, Materials Chemistry and Physics 130, (2011) 231-236.
- 28. Arup Choudhury, Preparation, characterization and dielectric properties of polyetherimide nanocomposites containing surface-functionalized BaTiO<sub>3</sub> nanoparticles, Polymer International, 61, 5(2012) 696-702.

### Papers/Abstracts in Conference Proceedings

- S.K.Majhi, Gautam Sarkhel, Effect of compatibilizer on the dynamic mechanical and Electrical Properties
  of Kaolin Clay reinforced EPDM Rubber, Malaysia Polymer International Conference 2011, University of
  Kebangsaan, National University of Malaysia, 18-20 October 2011
- Sumit Kumar Jana, Asit Baran Biswas, Sudip Kumar Das, Prediction of Gas Holdup using Artificial Neural Network for Non-Newtonian Liquid in Tapered Bubble Column, INDIAN CHEMICAL ENGINEERING CONGRESS CHEMCON – 2011, Bangalore Regional Centre, Indian Institute of Chemical Engineers and Department of Chemical Engineering, M S Ramaiah Institute of Technology, December 27-29, 2011
- 3. M K Das, Kaushik Kumar, T.K. Barman, P Sahoo, Modeling and analysis of process parameters on MRR in EDM of EN 31 tool steel using response surface methodology, Proceedings of National Conference on Advances in Simulation & Optimization Techniques in Mechanical Engineering (NASOME-2012), School of Mechanical Engg., KIIT Univ., Bhubneswar, February 18-19, 2012.
- 4. Sudipta Goswami, K.Kiran, Effect of blend ratio (w/w) of hydrophilic and hydrophobic acrylic components in sequential IPNs on drug diffusion, APA International Congress on Advances in Human Healthcare Systems, Healthcare India 2012, poster presentation, IIT Delhi and Jamia Hamdard New Delhi, February 20-23, 2012.
- 5. P. Kar, Arup Choudhury, Electron microscopic characterization of carboxylic acid group functionalized MWCNT doped polyaniline nanocomposite, Materials Today, virtual conference: The frontiers of Microscopy, 21st March 2012.
- 6. Ankita Singh, A.K.Sen, Bio based Cellulosic Plastic form Sugarcane Bagasse, 8th International Plastics Exhibition & Conference, at PLASTINDIA 2012 New Delhi, India, 2-3 February 2012.
- Neha Kumari, A. K. Sen, Development of low cost non-hazardous fire retardant nano filler, National Conference cum workshop in recent developments in engineering materials (RDEM), BIT Mesra, 12-14th May 2011.

- Ankita Singh, Kapil Yadav, A. K. Sen, Modification of epoxy based coatings with lignin extracted from sal leaves, National Conference cum workshop in recent developments in engineering materials (RDEM), BIT Mesra, 12-14th May 2011.
- S. K. Ghosh, Gulzar Waghoo, K. Rajesh Kumar, Kapil Yadav, A. K. Sen, Improved coating performance via Surface modification of extenders using silane, National Conference cum workshop in recent developments in engineering materials (RDEM), BIT Mesra, Ranchi, 12-14th May 2011.
- P. Kar, P. Banet, F. Tatard, C. Plesse, P.H. Aubert, C. Chavort, Modification of gold electrode with biomolecule and silver nanoparticle for electroanalysis, 6th World Congress on Biomemitics, Artificial Muscles and Nano-Bio 2011, LPPI, Universite de Cergy-Pontoise, Cergy, France, 25-27 October, 2011.

### **Books**

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

- i. Sudipta Goswami, Study of Drug Transport Properties of Acrylic Based Iron (III) Oxide filled IPN ,Nanomedicine and Drug Delivery, Series, Advances in Nanoscience and Nanotechnology, Apple Academic Press, 2012, ISBN-978-1-926895-17-8.
- Suman Suman Datta, Water recycling in Process Industries, Recycling: Processes, Costs and Benefits, Series: Environmental Remediation Technologies, Regulations and Safety, Nova Publishers, 2011, ISBN: 978-1-61209-507-3.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1	Dr. A.K. Sen	2nd National Awards for Innovations in Polymeric Materials	Ministry of Chemicals and Fertilizers, Govt. of India	2012
2	Department of Chemical and Polymer Engineering	Gold Trophy for Plasticon Award 2012 in the category of Best Educational Institution Contributing to Plastics sponsored by Finolex Industries Ltd at Plastindia 2012, 8th International Plastics Exhibition and conference	PlastIndia Foundation [supported by Ministry of Chemicals and Fertilizers, Department of Chemicals and Petrochemicals, Government of India]	1st February

### MoUs / Collaborations with Academia/Industry

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	2009
		resin	
4	Rubber Technology Centre, IIT	Collaborative research on with Dr Gautam	2010
	Kharagpur	Sarkhel in the area of Thermoplastic elastomer	
5	United Technology Research Centre,	Joint Research in the area of Direct Contact	2007
	CT, USA	Membrane Distillation	
6	University of Houston, TEXAS, US	Dual Degree Programme	2009
7	Shalimar Paints, Mumbai	Collaborative Research with Dr Akhil Sen	2010
8	Indian Railways RDSO Lucknow	Collaborative research With Dr. Gautam Sarkhel	2011-12
9	National Chemical Laboratories Pune	Collaborative Research with Dr G.T. Mohanraj	2012

# Departmental Students' Activities (Please arrange chronologically)

S. No.	Name of the Activity	Students' coordinator, if any	Date/ Duration
1	Industrial Tour to HINDALCO	Dr. A.K.Sen, Dr. S.S.Mahapatra, Dr. S.Dutta &	19th October
		Mr. S.Jana	2011
2	Winning 1st prize in Charles Goodyear	Ms Ankita Singh,	Nov 4-5 2011
	Memorial National Quiz Contest	Final year student of BE (Chemical and Polymer	
	at Polymer Quest-2011 held at IIT,	Engg) & Anish M.,	
	Kharagpur	M.Tech (Polymer Science and Technology) student	
3	Winning 2nd Prize in Poster	Ms Kalpana Kiran,	Nov 4-5 2011
	presentation in Diamond Jubilee	Research Scholar	
	National Seminar Competition 2011		
	for Research Scholars at Polymer		
	Quest-2011 held at IIT, Kharagpur,		
	poster entitled "Synthesis of Fe(III)		
	Oxide Nanoparticles Embedded Acrylic		
	IPNS For Biomedical Applications".	N. O. alli in K Oh	409-1
4	PhD awarded on "Studies on natural	Mr Sudhir Kumar Shaw, research scholar	19th January 2012
	fibre reinforced epoxy novolac hybridcomposites"		2012
5	Plastindia 2012 visit	Dr. G.T.Mohanraj and Mr. Pulak Datta	Jan 30 to
3	Plastilidia 2012 visit	DI. G. I. Wollaniaj and Wil. Fulak Datta	Feb 4, 2012
			6 days
6	Winning Gold Trophy for Plasticon	Ms Ankita Singh,	1st February
	Award 2012 in the category of Best	Final year student of BE (Chemical and Polymer	2012
	Under-Graduate Student sponsored	Engg)	
	by Indian Plastics Institute. The Award		
	includes cash prize of Rs.30,000 in		
	addition to trophy.		

7	Winning Best Poster Award at		
'	Winning Best Poster Award at PlastIndia International conference	_	Feb 2012
	10040	one mical and Folymer	
	2012 for presenting poster entitled "Biobased Cellulosic Plastics		
	from Sugarcane Bagasse".		*
8	Presenting paper at APA International	Ms Kalpana Kiran, Research Scholar	Fab
	Congress on Advances in Human		February 20-
	Healthcare Systems, Healthcare India		23, 2012
	2012, organized by IIT Delhi and		
	Jamia, Hamdard, New Delhi		
9	Awarded scholarship for PhD	Ms Ankita Singh,	May 2012
	programme University of	Final year student of BF (Chemical and Polymer	ay <b></b> 0 1_
	Massachusetts, Lowell in Plastics	Engg)	
10	Engineering		
10	Summer Training in major Chemical	Students of IV and VII Semesters	May 2012
	Industires-IOCL Panipat, IOCL Haldia,		-
	Central Institute of Mining and Fuel		į
	Research, MECON, ONGC Bokaro,		***
11	LaOpala, ONGC Mumbai etc		
	Placement of students in Exide, Xpro, Bhushan Steel, Tata Motors etc.	Final year students	2011-12
12	Establishment of Indian Institution of		
'-	Chemical Engneers Students Chapter		September
	under Kolkata region.		2011
	and region.		

# Members on Board of Studies (UG/PG)

# $Board \, of \, Studies \, Under graduates \, BE (Chemical \, Engineering) \, and \, BE (Chemical \, and \, Polymer \, Engineering) \, and \, BE (Chemical \, Engineering) \, and \, BE (Chemical \, Engineering) \, and \, Engineering) \, a$

(a) Prof. (Mrs. ) M. Mukherjee : Chairman

(b) Dr. Gautam Sarkhel : Member

(c) Dr. (Mrs.) S. Goswami : Member

(d) Dr. Akhil Kumar Sen : Member

(e) Dr. G. T. Mohan Raj : Member

(f) Dr. Suman Dutta : Member

(g) Dr. A. Vidyarthi : Member

(h) Dr. J. K.Prasad : Member

### Panel of External Expert

Prof. A. K. Ghosh
 Centre for Polymer Science and Engineering, IIT, Delhi

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

5. Mr. K.K.Thakur,

Retd. G.M., Coal and Chemicals, MECON Ranchi.

6. Dr Samik Gupta

Senior Scientist, SABIC Global research Centre, Bangalore

### Board of Studies for BE (Petroleum Engineering)

(a) Prof M.Mukherjee – Member and Chairman

(b) De Gautam Sarkhel – Member

(c) Dr G.T.Mohanraj – Member

(d) Mr. Sumit Kumar Jana – Member

(e) Prof Arbind Kumar, Deptt of Mechanical Engg - Member

(f) Prof A. S. Vidyarthi, Deptt of BioTechnology - Member

### Panel of External Expert

1. Prof A.K.Pathak, Head Deptt of Petroleum Engg, ISM Dhanbad

2. Prof V.P. Sharma, Deptt of Petroleum Engg, ISM Dhanbad

Mr Sujit K. Sanyal, Retd GM Reservoir, ONGC

4. Mr. Kunal Niyogi, Retd. Group General Manager, ONGC

### **Board of Studies Posgraduate**

(a) Prof. (Mrs.) M. Mukherjee : Member & Chairman

(b) Dr. Gautam Sarkhel : Member

Member Dr. (Mrs.) S. Goswami (c) Member (d) Dr. Akhil Kumar Sen Member (e) Dr. G. T. Mohan Raj Dr. Suman Dutta Member (f) Member (g) Dr. A. S. Vidyarthi Member (h) Dr. J. K.Prasad

### **Panel of External Expert**

Prof. A. K. Ghosh
 Centre for Polymer Science and Engineering, IIT, Delhi

- Prof. A. N. Samanta
   Dept. of Chemical Engineering, IIT, Kharagpur
- Prof. P. Sarkar
   Dept. of Polymer Science and Technology, University of Kolkata
- Prof. Parthapratim Gupta
   Dean Research and Consultancy, Dept. of Chemical Engineering, NIT, Durgapur
- Prof. B. Adhikari
   Material Science Centre, IIT, Kharagpur
- Mr. K.K.Thakur,
   Retd. G.M., Coal and Chemicals, MECON Ranchi.
- Dr. Samik Gupta,
   Sr. Scientist, SABIC Global Research Centre, Bangalore

### Other important information

- Dr. Siddhartha G. Chatterjee, Associate Professor Department of Paper and Bioprocess Engineering, New York, SUNY-ESF Syracuce, US, was in the Department as Visiting Professor. Hetook classes on Transport Phenomenafor III and V Semester student, and participated in collaborative research in July 2011.
- 2. Prof Naresh Bhatnagar, Deptt of Mechanical Engineering, Delhi IIT delivered a talk on 'Microcellular Thermoplastic Composites Materials for future polymer applications' on 21st November 2011.
- 3. Prof A.K.Pathak and Prof VP Sharma, Deptt of Petroleum Engineering, ISM Dhanbad, Mr S.K.Sanyal, Former General Manager, Reservoirs, ONGC, Mr Kunal Niyogi, Ex Group General Manager, Geophysics, ONGC, Dehradun, attended a Board of Studies meeting in the Department on 2nd March 2012 to approve a BE(Petroleum Engineering) course structure and syllabus, proposed to be offered in the BIT overseas centre at Muscat, Sultanate of Oman.
- Dr. Sudipta Goswami was appointed an editorial board member of the American Journal of Polymer Science, Scientific and Academic Publishing, USA
- 5. Mr. Pulak Datta has registered for doctoral programme at Jadavpur University under the joint guidance of Prof. Chandan Guha and Dr. Gautam Sarkhel
- Mr. Sudeepan J. has registered for doctoral programme at Jadavpur University under the guidance of Prof. P.Sahoo, Dr. T.K.Barman and Dr. Kaushik Kumar

## Invited Talk by faculty members:

- Kaushik Kumar, Total Quality Management, Workshop on "Fundamental on Quality Management System and Test & Evaluation of Range Instrumentation" held on 1st & 2nd Sept, 2011 at DRDO, ITR, Chandipur.
- Dr. Sudipta Goswami, Effect of polymer blend ratio (w/w) in acrylic IPNs embedded with Iron oxide nanoparticles on Drug diffusion, First International Conference on Plasma Processing of Organic Materials and Polymers PPOMP 2011, 25-27 November, organized by Institute of Macrolecular Science and Engineering (IMSE)Kottayam, Kerala and Department of Surface Engineering and Optoelectronics, Jozef Stefan Institute, Slovenia

- 3. A.K.Sen, Organic/Inorganic Temporary coatings and their performance, Short term courses on Temporary Protection of Steel Tubes and longs TATA Steel, Jamshedpur on 20th December 2011
- A.K.Sen, Nanotechnology in Composites in relation to Railway applications, Biodegradable Polymer and Composite, Plastic and Electronic Waste, Short term courses on Alternative Materials and Fuels at IRIMEE, Jamalpur on 25th January 2012
- 5. Kaushik Kumar, TQM (5S), Jharkhand Government Mini Tool Room and Training Centre, Ranchi on 21.02.2012
- 6. Kaushik Kumar, QMS for the students of Jharkhand Government Mini Tool Room and Training Centre, Ranchi on 17.03.2012

### DEPARTMENT OF CIVIL ENGINEERING



Wooden Bridge

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 realm. The Civil Engineering discipline offers wide scope to students in terms of promising career opportunities and professional advancement.

### **Programmes offered**

- 1. B.E.
- 2. M.E. Soil Mechanics and Foundation Engineering
- 3. M.E. Structural Engineering



Civil Laboratory

### **Projects**

### **Projects Sanctioned**

Name of the Teacher	Title of the Project	Duration	Funding Agency	Amount (in Rs.)
Dr.Indrajit Roy	Slope Stability Study of Mahan opencast coal mine	3 months	Essar Power	3,50,000
Dr.Indrajit Roy	Slope Stability Study of Fatehpur opencast coal mine	3 months	Visa Power	3,50,000
Dr.Indrajit Roy	Slope Stability Study of Pakri Barawadih opencast coal mine	3 months	ACMM	3,50,000

### **Ongoing Projects**

Name of the Teacher	Title of the Project	Duration	Funding Agency	Amount (in Rs.)
Dr.Indrajit Roy	Development of Dragline Dump profile of all the dragline mines of Coal India	3 years	CIL	59,00,000
Dr. Siddhartha Influence of Stress Path on the Behaviour of Clayey Sengupta Soils under Plane Strain Condition		2 years	UGC	1,68,600

### **Projects Completed**

Name of the Teacher	Title of the Project	Duration	Funding Agency	Amount (in Rs.)
Dr.R.R.Sahay	'Flood Modeling of North Bihar Rivers Using Soft Computing Techniques.	2 years	AICTE	5,50,000
Dr.R.R.Sahay	Flood Estimation and Forecasting across multiple sites in Kosi River Using Artificial Neural Network'	2 years	UGC	1,00,000
Dr.Indrajit Roy	Slope Stability of Flyash- filled up in overburden dump of opencast coal mines of Coal India	24 months	CMPDI	6,50,000
Dr.Indrajit Roy	Slope Stability Study of Tadkeshwar lignite opencast mine	4 months	Gujrat Mineral Development corporation	5,50,000
Dr.Indrajit Roy	Slope Stability Study of Dudhichua opencast coal mine	6 months	Northern Coalfield Limited	3,50,000
Dr.Indrajit Roy	Slope Stability Study of Jhingurdah opencast coal mine	3 months	Northern Coalfield Limited	4,50,000
Dr.Indrajit Roy	Slope Stability Study of Bina opencast coal mine	1 months	Northern Coalfield Limited	2,00,000
Dr.Indrajit Roy	Slope Stability Study of Gondegaon opencast coal mine	3 months	Western Coalfield Limited	3,50,000
Dr.Indrajit Roy	Slope Stability Study of Ukni opencast coal mine	3 months	Western Coalfield Limited	3,50,000
Dr.Bindhu Lal	Study of climate changes due to global warming in Jharkhand and a new intelligent model for air pollutant concentration prediction	2 years	UGC	1,00,000

### Seminars/Conferences/Short Term Courses conducted by the Department

- 1. Prof.Somenath Ghosh, Retd.Professor, Dept.of Civil engineering, IIT Kharagpur delivered lectures on Water Resource Engineering (Flood Control& Irrigation Practices) on 7/8/2012 and 8/8/2012
- 2. Conducted seminar on Earthquake Resistant Structures on 10/01/2012
- 3. A three day technical festival 'AAROHAN' was organized by students of the Civil Engg. Dept. on January 27-29,2012

# Invited lectures delivered by members of the faculty elsewhere

- Dr.Indrajit Roy delivered a lecture "Presentation on Dragline Dump Slope Stability, Shovel-dumper dump stability and Pit Slope Stability" at a Workshop on Slope Stability at Northern coalfield Limited organized byNorthern coalfieldLimited on 14.07.11.
- Dr.Indrajit Roy delivered a lecture "Influence of different geo-engineering parameters on dragline dump slope stability of Northern coalfield limited" at a workshop on Environmental management on coal mine and Thermal Powerorganized by MP Pollution control board on 03.09.11

# Seminars/Conferences/Short Term Courses attended by the Faculty

Conference/Seminar	Venue	Date(s)	Participants
Workshop on "Outcome based Accreditation of Four Year Under Graduate Engineering Programmes"	KIIT University, Bhubaneswar	19/05/2012	Dr.Anand Kr.Sinha
Workshop on "New Accreditation Process and SAR Preparation	KIIT University, Bhubaneswar	26/05/2012	Dr.Anand Kr.Sinha
Training of Software packages: STRUDS and ESR-GSR	BIT Mesra	07/08/12-08/08/12	Mr.Koushik Paul
Workshop on "MISSION KYAAT", Knew Yourself as a teacher'	BIT ,Mesra	3/05/2011-5/05/2011	

### **PUBLICATIONS**

### International Journal

- Sahay, R. R. (2011) "Life forecasting of Getalsud reservoir based on sedimentation: a case study in India", Lake & Reservoirs: Research and Management, Wiley-Blackwell, 16:1-6.
- Misra, A. and Sahay, R. R.(2011) "Well Parameters' Estimation using Traditional and Non-traditional Methods". International Journal of Earth Sciences and Engineering, ISSN 0974-5904, Volume 04, No 06 SPL, October 2011, pp. 235-238.
- 3. Sharma, S., Jain, P. R. and Sahay, R. R. "Predicting Discharge in Tidally Affected Rivers Using Genetic Algorithm". International Journal of Earth Sciences and Engineering, ISSN 0974-5904, Volume 04, No 06 SPL, October 2011, pp.239-242.
- 4. Bindhu Lal, Tripathy S.S., "Prediction of dust concentration in open cast coal mine using artificial neural network". Atmospheric Pollution Research, ISSN 1309-1402, Vol.3,No.02,April 2012, pp211-218.
- 5. A. Burman, D. Maity and S. Sreedeep (2011) "Long term influence of concrete degradation on dam foundation interaction", International Journal of Computational Methods, Vol. 8 (3), 397-423.
- A. Burman, P. Agrawal, P. Nayak and D. Maity (2012) "Coupled Dam-Foundation Analysisusing a Simplified Direct Method of Soil-Structure Interaction", Soil Dynamics and Earthquake Engineering, Vol. 34, pp62-68.
- Jitu Kujur and B. Bhattacharjee, (2011) "Potentiodynamic linear sweep test for evaluation ofperformance of steel," International Journal of Earth sciences and Engineering, Vol. 4, No.6 pp. 592-595.

### National Journal

- 1. Sahay, R. R. (2011), "Prediction of one-day ahead flood-levels of Kosi River using neural networks". Journal of Soil and Water Sciences, Aug, 10, Vol. IV, No. 3 7-16.
- 2. Sahay, R. R. and Chakraborty. (2012), "Predicting river floods using discreet wavelet transform" Journal of Soil and Water Sciences, Feb, Vol. V No. 1 (2012), 29-41.

#### International Conference

- 1. Sahay, R. R. "Modeling river-stage using wavelet-neural network conjunction model". Proceed. International conf. on Environmentally Sustainable Urban Ecosystem, IIT Guwahati, 24-26 Feb'2012
- 2. I.Roy (2011), "Stability of dragline waste rock dump in an Indian opencast coal mine" 14th Asian Regional conference on Soil Mechanics and Geotechnical Engineering. Organised by Hong-Kong Polytechnic University, 23-27 May.
- 3. Jitu Kujur; Bulu Pradhan and B. Bhattacharjee, "Pozzolana and Slag Blended PortlandCement and Rebar Corrosion," Proceeding of the International UKIERI Concrete Congress on Concrete for High Performance Sustainable Insfrastructure, March 8-10,2011, IIT Delhi, India, Newlands, M. D. and Dhir, R. K. (eds.), Shroff (pubs.), 107-121
- 4. Jitu Kujur and B. Bhattacharjee, "Accelerated Carbonation Test on Pozzolana and Slag BlendedOrdinary Portland Cement in Presence of Sodium Nitrite -Corrosion Inhibitor," Proceeding of 2nd International conference on Advances in Mechanical Manufacturing and BuildingSciences (ICAMB 2012) held at VIT University, Vellore, India, during Jan 9-11, 2012.

#### **National Conference**

- 1. Sehgal, V. and Sahay, R. R. "River stage forecasting using discreet wavelet regression technique" Proc. National Conf. on Mathematical and statistical modeling in Innovative Areas, organized by Deptt. of Applied Math., BIT Mesra (Oct 19-20, 2011).
- 2. A. Burman, D. Maity, A. Kumar, S. Bhusan and S. Sankrit (2011) "FEM formulation of direct method of concrete gravity dam nonlinear foundation interaction", Proceedings of National Conference on Recent Advances in Civil Engineering (RACE 2011), October 14-16, 2011, ITBHU, pp. 486-495.
- 3. Jitu Kujur and B. Bhattacharjee, "Corrosion Monitoring Techniques for Evaluation ofPerformance of Steel in Reinforced Concrete Structure," Proceeding of national conferenceon Recent Advances in Civil Engineering (RACE-2011), held at IT BHU, Varanasi, Indiaduring October 14-16, 2011, pp. 234-238.
- 4. A. Burman, S. Acharya and R. R. Sahay, "Slope Stability Analysis Using Finite Element Method and Limit Equilibrium Methods", Paper accepted in ICCMS-12 due to be held in 2-12th December, IIT Hyderabad.
- I.Roy (2012) "Success Story of Jayant opencast mine in maintaining safe dragline dumpprofile" 4th
   Asian Mining congress. Organised by Mining and Metallurgical Institute of India, 29-31 January. Kolkata
- I.Roy (2012), "Investigation and Mitigation of Structural features in Jhingurdah opencastcoal mines—a case study" 4th Asian Mining congress organized by Mining Metallurgical Institute of India, 29-31 January. Kolkata
- 7. Singh B.K. (2011), "Academic Institute- Industries Interaction" National seminarorganized by Cambridge Institute of Technology and The Institution of Engineers Jharkhand State Centre, Ranchi

### **Students Activities**

- 1. Prasoon Krishna (BE/1256/2009) received Birla White Yuva Ratna Award 2011 in the National Competition held by Birla White for the concept note on "Innovative use of whitecement".
- 2. Karan Gupta (BE/1144/2009) authored an essay on "Ethics in Civil Engineering", published in a book titled 'Nirman'on the Asthapana Divas Samaroh Seminar conducted by C.I.T. Ranchi.
- A workshop on how to solve Rubik's Cube was organized by the final year students on23/08/2011 & 24/08/201

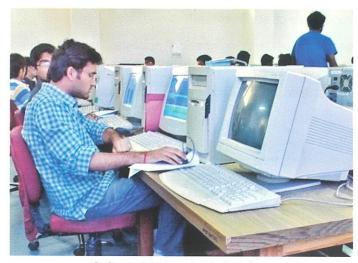
### Other Information

1. Education trip was undertaken to Ranchi Airport and to the new terminal of Ranchi Airport under construction for 2008 batch students (VIII semester) by Dr.Bindhu Lal on February 2012.

### PhD students enrolled, submitted and awarded

dents enrolled as 0/05/12	No. of PhD Thesis Submitted during July 2011 to June 2012	No. of PhD awarded during July 2011 to June 2012
8		1

# **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**



Software Engineering 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.

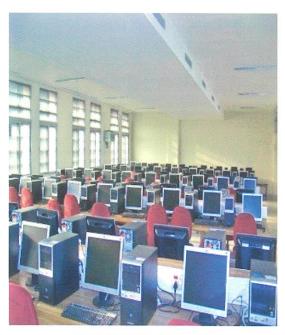
The Department currently offers the following programmes, all of which are accredited by the All India Council for Technical Education (AICTE).

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 etc.

**International Collaborations:** The department has academic collaborations with University of New Brunswick, Canada and University of Manitoba, Canada.



Central Computing Facility

# **Ongoing Projects Sanctioned before July 2011**

SI. No	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	"A Non Invasive method to treat brain blood clot through Nanorobot"		AICTE	April, 2011	4 Lakh	2 Years

# **PUBLICATIONS**

## **Published in International Journals**

- A.Mustafi, S.K.Ghorai, A Novel Blind Source Separation Technique using Fractional Fourier Transform for Denoising Medical Images, Optik - International Journal for Light and Electron Optics, Available online 16 February 2012, ISSN 0030-4026, 10.1016/j.ijleo.2011.11.052. (http://www.sciencedirect.com/science/ article/pii/S0030402611006899)
- 2. K.S.Patnaik, A.Sanober, "Plastic Surgery Facial Image Correspondence: A Near Set Approach, International Journal of Computer Applications, Vol-42, 16-22, March-2012.
- K.S.Patnaik, Pooja Jha, "Product Based Software Metrices", International Journal of Computer Science Information and Engg., Technologies ISSN 2277-4408, March-2012
- Suchismita Das, Shruti Garg, G. Sahoo, Comparison of Content Based Image Retrieval System using Wavelet Transform and Curvelet Transform, accepted for publication in International Journal of Multimedia and Its Applications(IJMA) by AIRCC.
- Suchismita Das, Shruti Garg, G. Sahoo, Comparison of Content Based Image Retrieval System using Wavelet Transform, published in proceedings of Second International Conference on Computer Science, Engineering & Applications (ICCSEA- 2012) held at Delhi, India, May 25 - 27, 2012
- 6. Suchismita Das, Shruti Garg, G. Sahoo, Relevance Feedback Technique in Context Based Image Retrieval System, published in International Journal of Graphics and Image Processing, Vol 1, Issue 2, Nov 2011
- 7. Rati Jha, Shruti Garg, G. Sahoo, Crack Filling in Old Digital Paintings, published in International Journal of Graphics and Image Processing, Vol 1, Issue 2, Nov 2011.
- 8. Sujan Kumar Saha, Pabitra Mitra, Sudeshna Sarkar, A comparative study on feature reduction approaches in Hindi and Bengali named entity recognition, Knowledge-Based System. 27(2012): 322-332.

# MoUs / Collaborations with Academia/Industry:

(Information about student exchange programme with national and international universities/ different organizations visited by the students)

- Ms. Vasundhara (5<sup>th</sup> Semester) from Department of Computer Science & Engineering, BIT, Mesra attended the BIT, Mesra – Mannheim University International Exchange Program in Germany for the period Aug 2011 – Feb 2012.
- Ms. Ruchi Dhiman (7<sup>th</sup> Semester) from Department of Computer Science & Engineering, BIT, Mesra attended the BIT, Mesra – Mannheim University International Exchange Program in Germany for the period Aug 2011 – Aug 2012.

- 3. Mr. Stefan Seltenreich (7th Semester ) from Department of Information Sciences, Mannheim University (MUAS), Germany attended the BIT, Mesra Mannheim University International Exchange Program in BIT, Mesra for the period July 2011 Dec 2011.
- 4. Ms. Estee Joe Mathew (5th Semester) from Department of CSE,BIT,Mesra joined Kingston, Ontario, Canada

## **Departmental Students' Activities**

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1.	ACM Student Chapter	Dr.K.S.Patnaik (Faculty Advisor), Pratyush Verma (President)	Code Quotient Matches,(Aug,2011 to Jan-2011) Workshop on Advanced Algorithms (23-24 Aug, 2011), ROBOCODE (14-17 Oct, 2011), Coding Week (19-23 March, 2012), Technieek 2011, Pantheon2011

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

The following board members

- 1. Dr. R.Sukesh Kumar
- 2. Dr. G.Sahoo
- 3. Dr. Nisha Gupta
- 4. Dr. D.K.Mallick
- 5. Prof. K.K.Senapati
- 6. Prof. A.Mustafi
- 7. Prof. I.Mukherjee

# DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



Instrumentation Laboratory

The Department of Electronics and Communication engineering established in the year 1955. This is one of the largest departments of the institute having the highest number of students and the faculty strength. Due to its modern infrastructure and exposure given to the students, it is one of the elite departments in India. The Department offers Bachelor in Engineering and several Master in Engineering Programmes in addition to Ph.D. Programmes within the field of electronics and communications engineering.

# **Bachelor in Engineering**

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 Fiber Optic Communication, Data and Computer Communication, Satellite Communication Systems, Mobile and

Cellular Communications, Telecommunication Switching Circuits, Antenna and Wave Propagation, Optical Fibre Networks, Intelligent Instrumentation, Bio-electronic Instrumentation, Advanced Microprocessor, Microelectronic Engineering, VLSI Design, Digital Signal Processing Architecture, Digital Image Processing, Random and Stochastic Processes, Information and Coding Theory 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 Communications 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, 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.



Communication Laboratory

# **SPONSORED PROJECTS**

# Projects sanctioned during July 2011-June 2012:

SI. No.	Project Title	PI/CO-PI/ Collaborator if any	Funding Agency	Date of sanction	Sanctioned amount	Duration of the Project
01	Health care monitoring system for rural peoples, IEI (India)	Prof. Vishal H Shah	IEI (India)	03 Aug, 2011	Rs. 60, 000	year

# Ongoing projects sanctioned before July 2011

SI. No.	Project Title	PI/CO-PI/ Collaborator if any	Funding Agency	Date of sanction	Sanctioned amount	Duration of the Project
1	Health care monitoring system for rural peoples, IEI (India)	Prof. Vishal H Shah	IEI (India)	03 Aug, 2011	Rs. 60 Thousands	1 year
2	Entrepreneurship Development Cell, AICTE	Prof. Vishal H Shah	AICTE	01Apr, 2011	Rs. 7 Lakhs	2 years
3	Design of Ultra Low Power CMOS Cell for Temperature Sensor, DST New Delhi & DRDL Hyderabad	Dr. Vijay Nath	DST New Delhi & DRDL Hyderabad	March, 2011	27 lakhs	2 years
4	GOI- ADA Project under NP-MASS, Govt. of India	Dr. Neela Chattoraj / Dr. S.S.solanki	Govt. of India	June 2010	Rs. 11 Lakhs	3 years
5	Microstrip Antenna for Wearable Applications, AICTE	Prof. Vibha Rani Gupta / Prof. Nisha Gupta	AICTE	22 July 2009	Rs. 6 Lakhs	3 years
6	Embedded Fiber Optic Sensor based Instrumentation for Structural Health Monitoring.	Dr. S. K. Ghorai / Prof. S. Sengupta, Dr. R. K. Lal	I.S.R.O.	21 July 2009	Rs. 16.36 Lakhs	2 years
7	National Mission Project Through ICT (E- learning Course development of VLSI Design, MHRD New Delhi	Dr. SS Solanki/ Prof. SS tripathy, Prof Pryiank	MHRD New Delhi	June, 2009	10.8 lakhs	3 years
8	National Mission Project Through ICT (E- learning Course development of VLSI Design, MHRD New Delhi	Dr. Vijay Nath	MHRD New Delhi	June, 2009	10.8 lakhs	3 years

# Seminar /Conference /Short term Courses conducted by the department

SI No.	Title of Seminar/ Conferences/ Short term Courses	Name of coordinator	Funding / Sponsoring Agency	Date of seminar / conference / short term courses
1	Industrial Training on Embedded System Design(ITESD_2012)	Dr. Vijay Nath & Dr. SS Solanki	BIT Mesra	16 June - 30 June 2012
2	Summer School on Robotics (SSR_2012)	Dr. Vijay Nath	BIT, Mesra	10June -15 June 2012
3	Summer School on VLSI Design (SSVD_2012, second phase)	Prof. A. Islam	BIT Mesra	20 May-25 May 2012
4	Summer School on VLSI Design (SSVD_2012, first phase)	Prof. A. Islam	BIT Mesra	15 May-19 May 2012
5	Workshop on Embedded Based Robotics(WER_2012)	Dr. Vijay Nath	BIT, Mesra	23 Mar-26 Mar 2012
6	Winter School on VLSI Design (WSVD_2011)	Dr. Vijay Nath	BIT Mesra	26 Dec - 30 Dec 2011
7	Winter School on VLSI Design (WSVD_2011)	Dr. Vijay Nath	BIT Mesra	21 Dec - 25 Dec 2011
8	Winter School on VLSI Design (WSVD_2011)	Dr. Vijay Nath	BIT Mesra	16 Dec -20 Dec 2011
9	International workshop on innovation and patenting in ICT	Dr. Sanjay Kumar	BIT, Kolkata	12 Dec, 2011
10	Workshop on Robotics(WR-2011)	Dr. Vijay Nath	BIT, Mesra	03 Sep-04 Sep 2011

# Conference/ seminar / workshops / staff development programmes / orientation programme / refresher course etc. attended

SI No.	Name of the faculty	Title of Seminar/ Conferences/Short term Courses	Organized by	Venue	Date, month, year
1	Dr. S S Solanki	Orientation program for design clinic schemes for MSMES	JSIA, Kokar, Ranchi	Ranchi	27 Apr, 2012
2	Dr. Sanjay Kumar	Workshop on DelNet	DelNet and BIT Mesra	BIT Mesra, Ranchi,	21 Apr, 2012
3	Prof. J Sahay	Workshop on DelNet at BIT Mesra	DelNet and BIT Mesra	BIT Mesra	21 Apr, 2012
4	Prof. S S Tripathy	STC on Practical Approach to Networking	BIT Mesar and IIT Kanpur	IIT Kanpur	12-15 Apr, 2012
5	Dr. Shweta Srivastava	Recent Advances in Information Technology International,	Indian School of Mines, Dhanbad	Dhanband	16 March,2012
6	Prof. Saba Firdous	International Conference on Recent Advances In Information Technology, (RAIT – 2012)	ISM Dhanbad	ISM Dhanbad	March 14- 15, 2012

7	Dr. Neela	NPMASS/NMDC(National	IISC Bangalore	IISC	29 Feb-01
The state of the s	Chattoraj	Program on Micro and smart systems.		Bangalore	March,2012
8	Dr. Vijay Nath	NCATCS-2K12	Dept of Computer Science, Ideal College of Science	BOS, Andhra University, Kakinada	24-25 Feb 2012
9	Dr. Bharat Gupta	National seminar on Intellectual property and innovation management in knowledge era.	NRDC and BIT Mesra	BIT Mesra, Ranchi,	21Feb, 2012.
10	Dr. Sanjay Kumar	National seminar on Intellectual property and innovation management in knowledge era.	NRDC and BIT Mesra	BIT Mesra, Ranchi,	21Feb, 2012.
11	Prof. Annapurna S M	National seminar on "Intellectual Property Innovation Management in Knowledge Era"	BIT Mesra	BIT Mesra	21Feb, 2012
12	Dr. Vijay Nath	National Conference of Analog & Digital Signal Processing	Dept. of Electronics	DDU Gorakhpur University Gorakhpur	21-22 Dec 2011
13	Prof. Srikanta Pal	HTS selective bandstop filter for radio astronomy, IEEE Applied Electromagnetics	IEEE, AEMC	Kolkata	18 –22 Dec, 2011
		conference (AEMC)			
14	Dr. Nisha Gupta	International workshop on innovation and patenting in ICT	BIT, Kolkata,	BIT, Kolkata,	12 Dec, 2011.
14	Dr. Nisha Gupta  Dr. Bharat Gupta	International workshop on	BIT, Kolkata, BIT, Kolkata,	BIT, Kolkata, BIT, Kolkata,	1
		International workshop on innovation and patenting in ICT International workshop on			2011. 12 Dec,
15	Dr. Bharat Gupta	International workshop on innovation and patenting in ICT  International workshop on innovation and patenting in ICT  International workshop on	BIT, Kolkata,	BIT, Kolkata,	2011. 12 Dec, 2011. 12 Dec,
15	Dr. Bharat Gupta Dr. Sanjay Kumar Prof. Vishal H	International workshop on innovation and patenting in ICT  International workshop on innovation and patenting in ICT  International workshop on innovation and patenting in ICT  International workshop on	BIT, Kolkata, BIT, Kolkata,	BIT, Kolkata, BIT, Kolkata,	2011. 12 Dec, 2011. 12 Dec, 2011. 12 Dec,

20	Prof. S. Sengupta	Workshop on Quality	IIT Kharagpur	IIT Kharagpur	16-17
		Enhancement for Teachers of			Nov,2011
		Engineering Education through NPTEL			
21	Prof . S	Strain Measurement in a Mach-	National PIET,	Rourkela	29-30 Oct,
	Sidhishwari	Zehnder Fiber Interferometer	Rourkela.		2011
	William	using Data Dependent System			
		Method,			
22	Dr. Shweta	IEEE Symposiun on Wireless	IEEE Society,	Malaysia	25 Oct, 2011
	Srivastava	Technology Applications	Malaysia	1	
23	Dr. S S Solanki	Microcontroller training	Free scale pvt.	Noida	5-8 July,
			Ltd. Noida		2011

# **PUBICATIONS**

# Published in international journals

- A. Islam and Mohd. Hasan, "Variability Aware Low Leakage Reliable SRAM Cell Design Technique," Microelectronics reliability, vol. 52, no. 6, June 2012, pp. 1247 – 1252.
- 2. Srikanta Pal, Michael Lancaster, HTS Microstrip Bandstop Filter for Radio Astronomy, IEEE Microwave and Wireless component letters, Vol. 5, No. 2, May 2012, pp. 1-3.
- 3. A. Islam and Mohd. Hasan, "Leakage characterization of 10T SRAM cell," IEEE Trans. Electron Devices, vol. 59, no. 3, March 2012, pp. 631 638.
- Sumana Kumari and Nisha Gupta, "Multisegment MPA with T-feed for Multiband Wireless Communication," International Journal of Electronics, vol. 99, March 2012, pp. 491-501.
- 5. Tanushree Bose and Nisha Gupta, "Design of an Aperture Coupled Microstrip Antenna using Hybrid Neural Network," IET Microwaves, Antennas and propagation, vol.6, issue 4, March 2012, pp 470-474.
- 6. Dileep Kumar Upadhyay, Dilip Kumar Choudhary and Srikanta Pal, "Design of Zeroth Order Resonator on Vialess CPW using Left Handed Metamaterial" International journal of engineering and innovative technology (IJEIT), Vol. 1, issue 3, March 2012, pp. 286-289.
- A. Islam and Mohd. Hasan, "A Technique to Mitigate Impact of Process, Voltage and Temperature Variations on Design Metrics of SRAM Cell," Microelectronics Reliability, vol. 52, no. 2, February 2012, pp. 405 – 411.
- 8. 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(ZrxTi1-x) O3 ceramics", Journal of Alloys and Compounds, 528(2012), pp.126-134.
- Sudhanya Chatterjee, Riju Chatterjee, Srikanta Pal, Kamal Pal, Surjya K. Pal, Adaptive chirplet transform for sensitive and accurate monitoring of pulsed gas metal arc welding process, International Journal of Advanced Manufacturing Technology, springer, Vol. 60(2012), pp.111-125.
- Shyam Lal, Mahesh Chandra, "Efficient Algorithm for Enhancement of Images Corrupted by Salt & Pepper Noise", WSEAS Transactions on Signal Processing, vol.8, no.3, 2012 pp.135-144.

- 11. 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, 2012, pp.1722-1733.
- 12. 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, 2012, pp. 303-309.
- 13. V. K. Gupta, Mahesh Chandra, Anirban Bhowmick "Speech Enhancement Using Adaptive Algorithms," International Journal of Mathematical Modelling, Simulation and Applications, Vol. 4, No. 4, 2012, pp. 343-351.
- 14. Shatabdi Chakraborty and Shweta Srivastava, "Gain Enhancement of Annular Ring Antenna sing Stacking and Air Gaps" IRE Journal on Communication Antennas and Propagation (IRECAP), Vol. 1. no. 5, 2012, pp. 457-464.
- 15. Bindhu Lal & Sanjaya Shankar Tripathy, "Prediction of dust concentration in open cast coal mine using artificial neural network" in Pro. of Atmospheric Pollution Research, Vol 3, Issue 2, 2012, pp 211-218.
- 16. A. Islam, Mohd. Hasan, and Tughrul Arslan, "Variation Resilient Subthreshold SRAM Cell Design Technique," International Journal of Electronics, 2012, pp. 1-15.
- 17. Sumana Kumari and Nisha Gupta, "Muli-segmant Printed Monopole Antenna for Multi Band Wireless Communication," Microwave Review, Vol. 17, No. 2, December 2011, pp 36-40.
- 18. Sumana Kumari, Nisha Gupta, "Multisegment Microstrip Patch Antenna with Y-shaped Feed," International Journal of RF and Microwave Computer Aided Engineering, Vol 21, No. 6, Nov. 2011, pp 558-664.
- 19. V. Janardhana, N. Chattoraj, S. Pamidighantam, J. S. Roy, K. S. Reddy, R. G. Kulkarni, "Experimental Investigations on a Surface Micromachined Tunable Low Pass Filter" Progress in Electromagnetics Research letters, PIER, Vol.27, Nov 2011 pp.171-178.
- 20. Shailendra Singh Rajput, Vibha Rani Gupta, Nisha Gupta, Sunita Keshri, Viktor Bovtun, Jan Petzelt, "Design of Microwave Dielectric Resonator Antenna using MZTO-CSTO Composite" Ceramics International, November 2011.
- 21. 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 BaZrO3", Ceramics International, October, 2011.
- 22. A.K. Tiwary and N. Gupta "Design Of Compact Coupled Microstrip Line Band Pass Filter with Improved Stopband Characteristics", Progress In Electromagnetics Research C, Vol. 24, Sep. 2011, pp. 97-109.
- 23. T. K. Parasar, and R K. Lal, "Modelling of GaAs/Al0.2Ga0.8As Quantum Well Gas Detector for LWIR Region", MIT International Journal of Electronics and Communication Engineering, Vol. 1, No 2, Aug 2011, pp. 97-100.
- 24. A. Islam and Mohd. Hasan, "Design and Analysis of Power and Variability Aware Digital Summing Circuit," ACEEE Int. J. on Communication, vol. 2, no. 2, Jul. 2011, pp. 6-14.
- 25. T. K. Parasar, and R K. Lal, "Theoretical Modelling of InP Based photodetector for Hydrogen Floride gas detection in short wavelength region", Optoelectronics and Advanced Materials-Rapid Communications, Vol. 5, No 7, July 2011, pp. 732-37.

- 26. Nisha Gupta, Pallabi Ghosh, Megha Toppo, "A Miniaturized Wilkinson Power Divider using DGS and Fractal Structure for GSM Appliacation, " Progress in Electromagnetic Research Letters, Vol. 27, 2011, pp.25-31.
- 27. A. N. Mishra, Mahesh Chandra, Astik Biswas, S. N. Sharan "Robust Features for Connected Hindi Digits Recognition", International Journal of Signal Processing, Image Processing and Pattern Recognition, Vol. 4, No. 2, 2011 pp. 79–90.
- A. Islam and Mohd. Hasan, "Single-Ended 6T SRAM Cell to Improve Dynamic Power Dissipation By Decreasing Activity Factor," The Mediterranean Journal of Electronics and Communications, vol. 7, no. 1, 2011, pp. 172–181.
- Vijay Nath, K.S. Yadav, L.K. Singh, "Modeling, Simulation and Layout design of CMOS Signal Conditioning Circuit with M/NEMS Sensors in VLSI" Lucknow National Journal of Science, Vol.8, No.1, (2011), pp.59-69.
- 30. R. Laik, V. Nath, R.N. Gupta, P. Shukla, A. S. Vidyarthi, H.R. Singh, "Design of Diagnostic Pathological System for Early Stage Detection of Cancer Biomarker with Nanoinformatics" Lucknow National Journal of Science, Vol.8, No.1, (2011), pp. 565-573.
- 31. Nithin V George, Kristy F Tiampo, Sitanshu Sekhar Sahu, Stephane Mazzotti, Lalu Mansinha, Ganapati Panda" Identification of Glacial Isostatic Adjustment in Eastern Canada Using S Transform Filtering of GPS Observations" Journal of Pure and Applied Geophysics, Springer, 2011.
- 32. Soumya Sidhishwari, S. K. Ghorai, "Strain Measurement in a Mach-Zehnder Fiber Interferometer using Data Dependent System Method," International Journal of Computer Applications, vol. 4, 2011, pp. 24-28.

# Published in national journals:

Dileep K. Upadhyay, Raushan K. Mahto, Ravindra Kumar, Abhiroop Mitra, "A novel technique of peak-to-average power ratio (PAPR) reduction in OFDM signal" Research Journal of Engineering and Technology (RJET), July-Sept. 2011, pp. 119-122.

# Papers/abstracts in conference proceedings

- SS Solanki, Rahul Ranjan, Vivek Keshari, "Image controlled Automatic Machine (ICAM)," Twenty-Seventh National Convention of Production Engineers and National Seminar on Advancements in Manufacturing-Vision 2020, page no.8, May 25-26, 2012.
- Sneha Shrivastava, Syed Azeemuddin and Nisha Gupta, "Design and Analysis of Cavity Antenna for In-Body Purpose," 4th International Conference on Electronics Computer Technology, Kanyakumari, India, April 6-8, 2012.
- 3. ASen N. Chattoraj, " "Quadruple-Frequency Microstrip Antenna for Wireless Applications and its Equivalent Circuitl.".International Conference on Electronics and Communication Engineering, ICECE-2012, Kolkata, India, 24th March 2012, pp.1-16-20.
- Chandan Kumar Jha and Nisha Gupta, "Design of a front end Low Noise Amplifier for Wireless devices," 2012 Student's Conference on Engineering and Systems, (SCES 2012), MNIT Allahabad, India, March 16-18, 2012.
- Sheelu Kumari, Shweta Srivastava, "Waveguide and Substrate Integrated Waveguide for Ku Band: A Comparison", Proceedings of First International Conference on Recent Advances in Information Technology (RAIT-2012), Indian School of Mines, Dhanbad, March 15-17, 2012.

- 6. A. Islam, Mohd. Ajmal Kafeel, S. D. Pable, and Mohd. Hasan, "Variation immune near threshold SRAM cell," IEEE International conference on recent Trend in Information Technology (RAIT), ISM, Dhanbad, India, vol. 2, pp. 286 291, March 15-17, 2012.
- 7. Saba Firdous, Vibha Rani Gupta, "Far End Crosstalk Reduction in Two Nearby Transmission Lines", in the proceeding of ", in the proceeding of 1st International Conference on Recent Advances In Information Technology, (RAIT 2012), ISM Dhanbad, India, pp. 249-252 March 14-15, 2012.
- 8. Vijay Kumar Gupta, Mahesh Chandra and S. N. Sharan, "Real Time Implementation of Adaptive Noise Canceller," Proc. ICSCI-2012, Pentagram Research Centre, Hyderabad, India, pp. 24-28, Feb. 15-18, 2012.
- Shyam Lal, Mahesh Chandra and Gopal Krishna Upadhyay, "Vision Based Real Time Object Tracking using Moving Camera", Proc. ICSCI-2012, Pentagram Research Centre, Hyderabad, India, pp.29-33, Feb. 15-18, 2012.
- 10. Sudhanya Chatterjee, Riju Chatterjee, Srikanta Pal, Kamal Pal, Surjya K. Pal, Accurate detection of weld defects using chirplet transform, Proc. in 4th International conference on computer and automation engineering (ICCAE), Mumbai, 14-15 Jan, 2012.
- 11. Dushyantt Garg, Shweta Srivastava, "Multiband Compact Bowtie Slot Antenna for WLAN Applications", Asia Pacific Electromagnetic Compatibility Symposium, APEMC, Singapore, 2012.
- A. Islam Mohd. Ajmal Kafeel, Ale Imran, and Mohd. Hasan, "Low Active Power High-Speed Cache Design", IEEE International Symposium on Electronic System Design (ISED), Kochi, Kerala, India, pp. 254–259, December 19-21, 2011.
- 13. Srikanta Pal, Michael Lancaster, HTS selective bandstop filter for radio astronomy, Proc. In IEEE Applied Electromagnetics conference (AEMC), Hyatt Regency, Kolkata, 18-22 Dec, 2011.
- 14. Aakashdeep, Saurav Kr. Basu, G. V. Ujjwal, Sakshi Kumari, Vibha Rani Gupta, "Measurement of Effective Dielectric Constant: A Comparison", in the proceeding of IEEE Applied Electromagnetics Conference AEMC, Kolkata, India December 18-22, 2011.
- 15. A Sen N. Chattoraj, "Multi-Frequency Microstrip Antennas for Wireless Applications and its effect on fraud", IEEE AEMC and IEEE IAW 2011, Kolkata, India, pp1-5, Dec. 18 22, 2011.
- A. Islam Ale Imran and Mohd. Hasan, "Robust Subthreshold Full Adder Design Technique," IEEE International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT), AMU, Aligarh, India, pp. 99 – 102 December 17-19,2011
- 17. Ale Imran, A. Islam, and Mohd. Hasan, "Optimized Design of Hybrid CMOS and CNFET 32 nm Dual-X Current Conveyor," IEEE International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT), AMU, Aligarh, India, pp. 76 79, December 17-19, 2011.
- 18. A. Islam and Mohd. Hasan, "Performance and variability improvement of subthreshold SRAM cell using DTMOS and cell content body bias techniques," International Conference on Meta Computing (ICoMec), National Institute of Oceanography, Dona Paula, Goa, India, pp. 29–32, December 15-16, 2011
- 19. Leena Varshney, Vibha Rani Gupta, Priyadarshi Suraj, Utsav Gupta, "Parametric Study of the Electromagnetic Band Gap Structure", in the proceeding of 7th International Conference on Microwaves, Antenna, Propagation and Remote Sensing (ICMARS-2011), International Centre for Radio Science, Jodhpur 7th 10th December 2011.

- Leena Varshney, Vibha Rani Gupta, Priyadarshi Suraj, Akash Verma, "Design of Microstrip Antenna With EBG Structure", in the proceeding of 7th International Conference on Microwaves, Antenna, Propagation and Remote Sensing (ICMARS-2011), International Centre for Radio Science, Jodhpur 7th – 10th December 2011.
- 21. Leena Varshney, Vibha Rani Gupta, Priyadarshi Suraj, Abhishek Yaduvanshi, "Design and Development of UWB Microstrip Antenna", in the proceeding of 7th International Conference on Microwaves, Antenna, Propagation and Remote Sensing (ICMARS-2011), International Centre for Radio Science, Jodhpur 7th 10th December 2011.
- 22. Priyadasshi Suraj, Vibha Rani Gupta, Leena Varshney "CPW FED Monopole Patch Antenna For Lower Range of UWB Application", in the proceeding of 7th International Conference on Microwaves, Antenna, Propagation and Remote Sensing (ICMARS-2011), International Centre for Radio Science, Jodhpur 7th – 10th December 2011.
- Vandna Sehgal, N. Chattoraj "Effects of dielectric superstrate on gain of an Equilateral Triangular Microstrip patch antenna", Proc. of ICMARS- 2011, Jodhpur, pp.107-108 Dec. 7-10, 2011.
- 24. Qurratulain, N. Chattoraj "A small miniaturized novel tapered U slot Ultra-wideband antenna", Proc. of ICMARS-2011, Jodhpur, pp.89, Dec. 7-10, 2011.
- Vandna Sehgal, N. Chattoraj "Helical Antenna Design for Signal Enhancement", Proc. of ICMARS-2011, Jodhpur, Dec. pp.79-80, 7-10, 2011.
- 26. Sakshi Kumari Vibha Rani Gupta, "Characteristic of Planar Inverted F Antenna on Metallo dielectric Substrate", in the proceeding of International Radar Symposium India 2011 (IRSI-11), Bangalore, India, November 30 – December 04, 2011.
- 27. Qurratulain, N. Chattoraj "Design & Development of small tapered U slot ultrawideband antenna with differnent dielectric substrates", Proc. of ICMARS-2011, Jodhpur, pp 119-120, Dec. 2011.
- 28. Rajesh Laik, Vijay Nath, A.S. Vidyarthi, R.N. Gupta, Rajiv kumar, Chandra Kant, S.P. Songca, "Design & Development of System biology for Early stage detection of Cancer with Bioinformatics approach" National Conference on Frontiers Electronics, Communication & Instrumentation Technology (FECIT-2011) organized by Dept. Of ECE, ISM Dhanbad, India from 3-4th Nov.2011.
- 29. Tejaswita Kumari, Vijay Nath, "High Speed CMOS Flash A/D Converter for Wireless Communication System on Chip (SoC)" National Conference on Frontiers Electronics, Communication & Instrumentation Technology (FECIT-2011) organized by Dept. Of ECE, ISM Dhanbad, India from 3-4th Nov.2011.
- Ruchika Kumari, Vijay Nath, R.N. Gupta, "The Study and Design of a CMOS SCC for Cardiac Pacemakers with Bio-Sensors in VLSI Technology" National Conference on Frontiers Electronics, Communication & Instrumentation Technology (FECIT-2011) organized by Dept. of ECE, ISM Dhanbad, India from 3-4th Nov.2011.
- 31. Rajesh Kumar, Vjay Nath, "Design of Low Power CMOS Amplifier" National Conference on Frontiers Electronics, Communication & Instrumentation Technology (FECIT-2011) organized by Dept. of ECE, ISM Dhanbad, India from 3-4th Nov.2011.
- 32. Mainak Basu, Ashish Kumar Sharma, S. K. Ghorai, "Real-Time Health Monitoring of Composite Structures using Embedded Fiber Bragg Grating Sensor", Proc. Of The NationConference on Frontiers in Electronics, Communication and Instrumentation technology(FECIT-2011), Dhanbad, November 2011.

- 33. Soumya Sidhishwari, S. K. Ghorai, "Strain Measurement in a Mach-Zehnder Fiber Interferometer using Data Dependent System Method", Proc. of The National Conference on Computing, Communication and Sensor Network (CCSN-2011) PIET, Rourkela, October 29-30, 2011.
- 34. A. Islam A. Imran and Mohd. Hasan, "Variability Analysis and FinFET-based Design of XOR and XNOR Circuit," IEEE 2nd International Conference on Computer and Communication Technology (ICCCT), MNNIT, Allahabad, Uttar Pradesh, India, pp. 239 245, September 15-17, 2011
- 35. Sakshi Kumari, Vibha Rani Gupta, "PIFA with Improved Characteristics for Wireless Communication", in the proceeding of International Conference on Advances in Recent Technologies in Communication and Computing, ARTCom 2011, Bangalore, India September 14-15, 2011.
- 36. Shatabdi Chakraborty and Shweta Srivastava, "Performance Enhancement of annular ring antenna using air gaps in stacked substrate" IEEE Symposium on Wireless Technology and Applications, Langkawi, Malaysia, 5-8 Sep. 2011.
- 37. Pawan Kumar and Mahesh Chandra, "Hybrid of Wavelet and MFCC Features for Speaker Verification" Proceedings of World Congress on Information and Communication Technologies, Mumbai University, Mumbai, India, pp.1154-1158, 2011.

# Awards / Recognition bestowed on faculty (state/national/international)

SI No.	Name of the faculty	Title of the award/ Honours	Organization	Year/duration
1.	Prof. Srikanta Pal	Pride of Bengal, by Bankura Zilla United Forum of Educational Personalities	Citizens of Bankura, Sanskritik Samsad, Pranavananda Institute of Education.	03 July, 2011
2.	Prof. Srikanta Pal	Honorary Research Fellow	University of Birmingham, UK	May, 2011-May, 2012.

# MOU/ collaborations with academia/industry

SI No.	Name of the organization/ university	Purpose/area	Year/duration
1.	Microelectronics Research Centre, University of Texas	Research & Development	Under Process
2.	University of Utah	Research & Development	Under Process
3.	Central Mines Research Institute, Dhanbad	Research & Development	Under Process
4.	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
5.	DRDL Hyderabad	Design of Ultra Low Power CMOS Cell for Temperature Sensors in VLSI	May 2011 - May 2013
6.	I.I.T. Kharagpur, Signal transformations	Research & Development	2010 -2013
7.	Dept of EECE, University of Birmingham, UK, Research, Microwave Engg.	Research & Development	- 2013

### Departmental student's activities

SI No.	Name of the activity	Student coordinator, if any	Date/ duration
1.	The young Investigator award for best presentation and	Dr. Neela Chattoraj	24 March,
	content on "Quadruple-Frequency Microstrip Antenna for		2012.
	Wireless Applications and its Equivalent Circuit", International		
	Conference on Electronics and Communication Engineering,		
	ICECE-2012, Kolkata, (Arpita Sen )		

## **Development of learning material**

Learning materials	Name of the subject/course/programme	Where and when used
E contents	Nil	
pedagogy	Intelligent instrumentation	IIT Kharagpur, 2010
	(Dr. SS Solanki)	
	VLSI Design Course	
	(Dr. Vijay Nath)	

Number of summer trainees trained in the department during July 2011 to June 2012: 175

# Members on Board of studies (UG/PG):

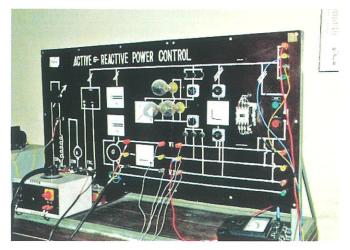
# Panel for proposed BOS

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 Prof. R. C. Jha 8. Member

## Panel for expert from outside

- 1. Prof. G Panda, IIT Bhubaneshwar
- 2. Dr. V Kumar, ISM, Dhanbad
- 3. Prof. S Sanyal, IIT Kharagpur
- 4. Dr. S Chakravarty, IIT Kharagpur
- 5. Dr. S K Patra, NIT Rourkela
- 6. Dr. Tapas Chakravarty, TCS, Kolkata

# **DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**





Power System Laboratory

Machine Laboratory

The Department of Electrical and Electronics Engineering offers courses in B.E. in Electrical and Electronics Engineering, M.E. in Electrical Engineering with three different specializations namely Power system, Control system and Power electronics. The Centre for Biomedical Instrumentation under this department offers a M.Sc. course in Biomedical Instrumentation. The Department also offers Ph.D. programmes in various specializations. During this financial year our department of EEE has received a grant of 1.15 Crore under FIST and SAP scheme to strengthen the research facility for the development of test bed of Smart Grid and Electrical Motor Drives. The Department is also going to introduce M.Tech. course in Biomedical Instrumentation in the next academic year. Departmental library is established to cater to the needs of students and faculties for ready reference. A Lab view based distribution system protection scheme is setup in virtual instrumentation lab. 2-channel bio-amplifier mobile unit, Labview 11 and PC based RF power meter are added to the laboratories of the Dept. of EEE. Hardware implementation of boost, multilevel converter for hybrid electric vehicles and development of smart grid are in progress.

## SPONSORED PROJECTS

#### Project Sanctioned during July 2011 – June 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	UGC SAP (DRS) grant for doing research on test bed development for smart grid	Dr. T. Ghose	UGC (SAP)	July, 2012	61 lacs	5 Years
2.	MODROB Grant for Measurement Lab	Dr. T. Ghose	AICTE	1 <sup>st</sup> March, 2012	9 lacs	1 Years
3.	FIST Grant for doing research on Smart Grid and Drive.	Dr. T. Ghose	DST, Govt. of India (FIST)	20 <sup>th</sup> December, 2011	54 lacs	5 Years
4.	Hardware Development and Implementation of Microcontroller Based Boost Converter for Hybrid Electric Vehicles		UGC	5 <sup>th</sup> June, 2012	12 lacs	3 Years

# Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. In Lac.)	Duration of the Project
1.	Hardware Design of Boost Converter for Hybrid Electric Vehicle	Dr. P. R. Thakura	UGC Delhi	June, 2012	12.65	3 Years
2.	Design , development and characterization of magneto-optic material based current sensor for industrial application	Dr.(Mrs.) S. Chakraborty	DST, Ministry of Science of Technology, Govt. of India	January, 2009	25.982	2 Years and 6 months (extended)
3.	Electroencephalogram and Electrooculogram based Hand-Eye Coordination System for Hybrid Brain- Computer Interface	Dr. Yogendra Agrawal / Dr. R. K. Sinha	UGC	2011	1.10	2 Years
4.	Soft Computing and Phonocardiogram Based Automated System for Diagnosis of Heart Valve Diseases	Dr. R. K. Sinha / Dr. Yogendra Agrawal	AICTE	2009	6.90	3 Years
5.	Voluntary event related brain signal classification	Dr. R. K. Sinha / Dr. Yogendra Agrawal	UGC	2009	11.478	3 Years
6.	Development of suitable pedagogical contents and e-learning through ICT	Mr. K.C. Jana	MHRD	February, 2008	2 Lacs	On-going

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Workshop on Electrical Machines	Mr. Prem Prakash, Dr. P. R. Thakura, Mr. K. C. Jana	Dept. of EEE	21/10/2011 to 22/10/2011

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

S. No.	Name of the Faculty	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Month Date, Year
1.	Dr. T. Ghose	National Workshop on Accreditation	NBA New Delhi	Jadavpur University	Jadavpur University	20-21 August, 2011
2.	Dr. T. Ghose	Special Workshop on New Accreditation Process	NBA New Delhi	KIIT, Bhubneshwar	KIIT, Bhubneshwar	25 June, 2012

3.	Dr. P. R. Thakura, Dr. (Mrs.) V. Laxmi	Workshop on Intellectual Property Right	NRDC, Delhi	BIT, Mesra	BIT, Mesra	February, 2012
4.	Mr. S. K. Mishra	National Workshop on Swarm Intelligence: Theory and Applications (SITA-2012)	-	IIT, Bhubaneswar	IIT, Bhubaneswar	May 25-27, 2012
5.	Dr. (Mrs.) S. Chakraborty	DST-SERC school on Lasers, Optical Engineering and Applications	DST, Govt. of India	University College of Technology, Department of Applied Optics and Photonics	University of Calcutta	December 19, 2011-January 6, 2012
6.	Dr. D. K. Mohanta	11th International Conference on Environment and Electrical Engineering (Remote Session)	Wroclaw, Italy	Wroclaw University of Technology, Poland, Italy	Venice, Italy	18-25 May, 2012

#### **PUBLICATIONS**

#### Published in International Journal

- 1. T. Ghose, Sachin Singh, S. K. Goswami, Optimal Feeder Routing based on Bacterial Foraging Technique, IEEE Transaction on Power Delivery, Vol. 27, January 2012, pp. 70-78.
- 2. T. Ghose, Ankita Samui, Sachin Singh, A Direct Approach to Optimal Feeder Routing for Radial Distribution System, IEEE Transaction on Power Delivery, Vol. 27, January 2012, pp. 253-260.
- 3. V. Laxmi, M. Das, D. K. Mohanta, B. M. Karan, "Comparison of Different Wavelets for Automatic Identification of Vehicle License Plate", IET Intelligent Transport Systems, December 2011 -- Volume 5, Issue 4, p.231–240.
- 4. S. Chakraborty, S.C. Bera and A.K. Chakraborty, Simulation of a polarization pupil filter using magneto-optic lens under elliptically polarized illumination, OPTIK, Vol. 122, 2011, pp 549-552, Elsevier Publication.
- 5. S.C. Bera, S. Chakraborty, Study of Megneto-Optic Element as a Displacement Sensor, Measurement 44(2011) 1747-1752, Elsevier Publication.
- 6. Aggarwal, Y., Gupta, T. and Sinha, R. K. (2012) Physiological and genetic basis of thermoregulation under heat stress, World Journal of Pharmaceutical Research, 1,107-142.
- 7. Aggarwal, Y., Singh, N., and Sinha, R. K., (2012) Electrooculogram based study to assess the effects of prolonged eye fixation on autonomic responses and its possible implication in man-machine interface, Health & Technology, 2, 89-94.
- 8. Sachin V. Rajani, Dr. R.C. Jha, Prem Prakash, Deeper and extended voltage sag mitigation by dynamic voltage restorer interfaced with ultra capacitor, International journal of Advanced Engineering Technology, Vol. III, Issue I, January-March, 2012, 230-233.

- Prajna Parimita Dash, Dipti Patra, Satya Ranjan Behera, Subhendu Kumar Behera, Sudhansu Kumar Mishra, "Comparative Performance Evaluation of Three Object Tracking Methods", International Journal of Emerging Technology and Advanced Engineering, (IJETAE), ISSN 2250-2459, Vol. 2, Issue 5, May 2012.
- Prajna Parimita Dash, Dipti Patra, Sudhansu Kumar Mishra, "Kernel based Object Tracking using Color Histogram Technique" International Journal of Electronics and Electrical Engineering (IJEEE), ISSN: 2277-7040 Vol. 2, Issue. 4, PP.28-35, April 2012.
- 11. Keshri, A. K., Sinha, R. K., Singh, A. and Das, B. N. (2011) DFASpike: A new computational proposition for efficient recognition of epileptic spike in EEG, Computers in Biology and Medicine, 41, 559-564.
- Keshri, A. K., Das, B. N., Mallick, D. K. and Sinha, R. K. (2011) Parallel algorithm to analyze the brain signals: application on epileptic spikes, Journal of Medical Systems, 35, 93-104.
- Velaga Sreerama Murthy, D. K. Mohanta, S.Gupta, "Power system insulator condition monitoring automation using mean shift tracker-FIS combined approach, International Journal of Vehicle Autonomous Systems, Computer Aided Engineering and Technology, 2011.
- M. Jaya Bharata Reddy and D. K. Mohanta, "A Modular Approach for Classification and Location of Arcing and Non- Arcing Faults on Transmission Lines", International Journal of Energy Technology and Policy, Vol. 7, No.4, pp. 309-324, 2011.
- D. K. Mohanta, D. Sinha Roy, "Importance and uncertainty analysis in software reliability assessment of computer relay", Journal Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, Vol. 225(1), pp. 50-61, 2011.
- Velega Sreerama Murthy, D. K. Mohanta, Sumit Gupta, "Distribution System Insulator Monitoring Using Video Surveillance and Support Vector Machines for Complex Background Images", International Journal of Information and Communication Technology (IJICT), Vol. 3(1), pp. 11-31, 2011.

# Papers/ Abstracts in Conference Proceedings

- A Alam, S Upadhya, Ch Murthy, M Jaya Bharata Reddy and Dusmanta Kumar Mohanta, "Reliability Evaluation of Solar Photovoltaic Microgrid", Accepted for publication in IEEE International Conference on Environment and Electrical Engineering, (EEEIC-2011), 18-25th May 2012, Venice.
- A. K. Nayak, Dusmanta Mohanta and M Jaya Bharata Reddy, "Generation Reliability Evaluation Incorporating Maintenance Scheduling and Load Forecasting", Accepted for publication in IEEE International Conference on Environment and Electrical Engineering, (EEEIC-2011), 18-25th May 2012, Venice.
- Solaiappan KT, C.H Murthy, M Jaya Bharata Reddy and Dusmanta Kumar Mohanta, "Impact of Distributed Energy Resourses on Distribution System Reliability", Accepted for publication in IEEE International Conference on Environment and Electrical Engineering, (EEEIC-2011), 18-25th May 2012, Venice.
- 4. Gopakumar Pathirikkat, Surya Chandra Gulipalli, M Jaya Bharata Reddy and Dusmanta Kumar Mohanta ,"Optimal Placement of Phasor Measurement Units for Tamil Nadu State of Indian Power grid", Accepted for publication in IEEE International Conference on Environment and Electrical Engineering, (EEEIC-2011), 18-25th May 2012, Venice.
- Sudhansu Kumar 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), 4th -6th July, London, U.K, 2012.

- 6. Sudhansu Kumar Mishra, Ganapati Panda, Sukadev Meher, Ritanjali Majhi, Mangal Singh, Portfolio Management Assessment by four Multiobjective Optimization Algorithm, IEEE, International conference (RAICS-2011), Trivandrum India, 23-25 September 2011, pp.326-331.
- 7. P. R. Thakura, K. C. Jana, G. Buja, Cascaded Multilevel Inverter for Hybrid Electric Vehicles, IEEE IICPE-2010, NSIT New Delhi, 28-30 Jan. 2011, pp. 1 6.
- 8. P. R. Thakura, D. N. Badodkar, Role of High Power Semiconductor Devices on Hybrid Electric Vehicles, IEEE IICPE-2010, NSIT New Delhi, 28-30 Jan. 2011, pp. 1-7.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organization	Year / Duration
1	Dr.(Mrs.) S. Chakraborty	Fellow	Optical Society of India	2012 /(Life)
2	Dr. B.B .Das	ISRO merit award	Dept. of space, Govt. of India	For the year 2009 received in 2012
3	Dr. T. Ghose	Member, Advisory Board Transmission and Distribution Loss Reduction of Jharkhand State, Nominated by Jharkhand State Electricity Regulatory Commission (JSERC).	Jharkhand State Electricity Regulatory Commission (JSERC)	2011-12
4	Dr. T. Ghose	Board Member, IET(UK), Kolkata Local Committee.	Local Committee of IET, Kolkata	2011-12
5	Dr. T. Ghose	Co-ordinator of the MOU Signed between Dept. of EEE, Padova University, Italy and Dept. of EEE, BIT, Mesra, Ranchi	Dept. of EEE, BIT, Mesra, Ranchi	2011
6	Dr. D. K. Mohanta	National Technical Board Member, International Conference on Innovative Science & Engineering Technology (ICISET 2011), 08-09 April 2011, V.V.P. Engineering College, Rajkot, India	V.V.P. Engineering College, Rajkot	2011-12
7	Dr. D. K. Mohanta	Member, International Advisory Board, IET International Conference on Sustainable Energy and Intelligent Systems (SEISCON 2011), Dr.MGR University, Chennai, India	Dr.MGR University, Chennai, India	2011-12
8	Dr. D. K. Mohanta	Member of Working Group for IEEE P2030.4™ - Guide for Control and Automation Installations Applied to the Electric Power Infrastructure	IEEE, Standard Organization	2011-12
9	Dr. D. K. Mohanta	Member of Working Group meeting for IEEE P3004. 8 RP for Motor Protection in the Industrial & Commercial Power Systems	IEEE, Standard Organization	2011-12

10	Dr. D. K. Mohanta	Program Committee Member, 7th International Conference on Natural Computation (ICNC'11) and the 8th International Conference on Fuzzy Systems and Knowledge Discovery	IEEE, Shanghai, China	26-28 July 2011
11	Dr. D. K. Mohanta	Program Committee Member, 11th EEEIC International Workshop on Environment and Electrical Engineering	Wroclaw University of Technology, Poland, Italy	18-25 May 2012
12	Dr. D. K. Mohanta	Member, Board of studies, School of Electrical Engineering	KIITS, Bhubaneswar	2011-12
13	Dr. D. K. Mohanta	Member, National Advisory Committee, All India conference on environmental impacts of Electrical & electronics Engg.	CSIT, Durg	20-21 Jan2012
14	Dr. D. K. Mohanta	Member, IEEE Power Engineering Society, Risk Reliability and Probability Application (RRPA) subcommittee	IEEE, PES	2011-12
15	Dr. D. K. Mohanta	Certificate of Award for Review Board Member for International Journal of Applied Intelligence	Springer	2011-12

# MoUs / Collaborations with Academic/Industry

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	Department of Electrical Engineering, Padova University, Italy	Teaching and Research	December 2011

# 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
Student-centric Learning	Lab manual of different existing lab.	For UG and PG Students
Technology-enhanced Learning	Introduced Electric Drives and Traction for Mechanical 8th Semester	IRIMEE, Jamalpur, June, 2012

# Members of 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**

- i. Dr. J. Pal, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
- ii. Dr. A. K. Sinha, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
- iii. Dr. D. Das, Prof. & Head, Dept. of Electrical Engineering, IIT, Kharagpur
- iv. Dr. S. K. Biswas, Professor, Dept. of EE, Jadavpur University, Kolkata
- v. Dr. S. K. Goswami, Professor, Dept. of EE, Jadavpur University, Kolkata
- vi. Dr. S. C. Bera, Professor Dept. of Applied Physics, Instrumentation Engineering Section Calcutta University, Kolkata
- vii. Dr. S. Basu, Mg. Director, Electronics Res. & Dev. Centre. Bose Res. (P) Ltd. Banglore
- viii. Mr. S. B. Prasad, GM, MECON, Ranchi
- ix. Mr. Sandeep Dhir, Chief Employee Training & Development, TISCO, Jamshedpur.
- x. One student representative each from UG, PG and Ph.D. Programme.
  - a. Md. Aftab Alam, Research Scholar, Dept. of EEE
  - b. Mr. Maibam Shillakanta Singh, M.E. Student, Dept. of EEE
  - c. Mr. Nitesh Kumar, B.E. Student, Dept. of EEE

#### Other important information

- i) Dr. D. K. Mohanta, Invited Speaker for workshop on "Modern Power System Protection", 19th March 2012, Electrical Engineering Department, KIIT University, Bhubaneshwar.
- ii) M. Tech. course in Biomedical Instrumentation is going to be introduced in the next session.
- iii) Dr. P. R. Thakura delivered Guest Lecture on High Power Semiconductor Switches on Industrial Training on Embedded System Design, BIT, Mesra, Ranchi, June, 2012.
- iv) Dr. P. R. Thakura delivered Inaugural Speech on World Environment Day in DAV College of Engineering, Daltonganj, 18th June, 2012.
- v) 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.

# DEPARTMENT OF FOOD PROCESSING TECHNOLOGY







Food Processing Laboratory

Twin Screw Extruder

Sauces made at the Lab

The Department has a food Processing Laboratory and Quality Control Laboratory, B.Sc. in Food Processing Technology programme from January 2009. The Food Processing Laboratory is equipped with: all the basic / necessary machines & equipments example sealing Machines, Homogenizer, Can Body Reformer, Hand Can Flanger, Exhaust Box 6' x 1.5', S.S. Vacuum Evaporator, Baby Boiler, Can Seamer, Steam Jacketed cooking Pan, Vacuum Bottle Filling Machine, Fill Pack Machine, Bottle Washing Machine, Canning Retort, Fruit Mill, Pulpur, Juicer, Twin Screw Extruder, etc. The Quality Control Laboratory is equipped with: Lyophilizer. Polarimeter, Laminar flow clean Air workstation, Autoclave, Hot Air Oven, Lab. Centrifuge, Melting Point apparatus, Digital Colorimeter, Flame Photometer, UV-VIS Spectrophotometer, Precision Balance, Seven Easy pH Meter, Muffle Furnace (1050°C), Water Bath, BOD Incubator, Compound Microscope, HPLC, MP based Conductivity Meter, Digital Photoflurometer, etc. Other required equipments are available in the allied Departments of Pharmaceutical Sciences, Biotechnology and Central Instrumentation Facility. Apart form basic subjects such as Chemistry, Mathematics, Electrical & Electronic Engineering, Energy, Ecology & Environment Science, Material Science, Heat & Mass Transfer, the students are taught about Food Plant Sanitation, Food Microbiology, Food Composition & Chemistry, Food Bio Chemistry & Human Nutrition, Storage Engineering, Food Preservation, Food Analysis, Fruits & Vegetables Processing, Packaging Technology, Waste Management, etc, with corresponding laboratory courses, and Industrial Tour and Project in final semester. Electives include Dairy Technology, Instrumentation Methods of Food Analysis, Post Harvest Technology, Food Biotechnology and Oil Seed & Pulses Technology. The laboratory of the department is a registered unit under F.P.O. Act. Some of the food items prepared at the centre are being sold at B.I.T.C.C.Stores and well accepted by the residents.

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

#### **Programme Offered:**

B.Sc. Food Processing Technology - 3 – year (6- semester). First batch of students were admitted in January 2009 and second batch of students in July2009. Thereafter students are admitted in July every year. The Department plans to start B.Tech. and M.Tech /M.Sc. level programmes in future.

# **SPONSORED PROJECTS**

# **Ongoing Project**

SI. No.	Project Title	PI / Co-PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in Rs.)	Duration of the Project
1.	Setup of Quality	Prof. S. P.	Govt. of India	1st MFPI/		
	Control Laboratory	Bhatnagar	Ministry	Labs/2004/150		
	for Food Products		of Food	Dated: 28.03.2005		
	in Jharkhand		Processing	&	50,00,000.00	
			Industries,	2nd MFPI/	**************************************	
			New Delhi	Labs/2004/150		
				Dated: 14.10.2009		

# **Project Completed**

SI. No.	Project Title	PI / Co-PI / Collaborator,	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
		if any			(in Rs.)	
1.	Creation of	Prof. S. P.	Govt. of India	1st		
	Infrastructure	Bhatnagar	Ministry	5-19/2004-HRD		
	Facilities for		of Food	01.11.2004 &		
	Diploma in Food		Processing	2nd	50,00,000.00	100
	Processing		Industries,	5-19/2004-HRD		
	Technology		New Delhi	01.11.2004		

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

SI. No.	Title of Seminar / Conferences / Short-term Courses	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short-term Courses
1.	Food Processing and	Prof. S. P. Bhatnagar	Tribal Welfare,	1st Batch: FROM: 01 October2008 to
	Preservation		Govt. of	25th March 2009.
			Jharkhand	2nd Batch: FROM: 27th January
				2009 TO 7th July 2009.

# Conferences / Seminars / Workshops / Staff Development Programmes Attended

SI. No.	Name of the Faculty	Title of the Seminar / Conferences	Funding Agency	Organizers	Venue	Month, Date, Year
1.	Mr. Amit Kumar Tiwari	Presented a Poster (Research paper) on "STUDIES ON WINE PRODUCTION FROM RIPE JACKFRUIT" in the National Seminar On Applications Of Biotechnology And The Development Of Bihar.	B.I.T. Mesra	C.U. Bihar and Department of Biotechnology, B.I.T. Mesra, Ranchi	B.I.T. Patna (Extension centre), B.I.T. Mesra, Ranchi.	22nd March to 24th March 2010
2.	Mr. M.P Chopra	Oral Presentation on "Antipsychotic Rehabilitation Survey in Patients with Schizophrenia in a Psychiatric Hospital".		Delhi Institute of Pharmaceutical Sciences & Research, New Delhi.	DIPSAR New-Delhi	14-15th March 2009

#### **PUBLICATIONS**

- 1. Anti Inflammatory Activity of Unriped Fruit of Carissa Carandas Linn. M.P. Chopra (Pharmbit, "Indexing in Chemical abstract", Vo1 XIX. No. 1 Jan-Jun, 2009).
- 2. "Antipsychotic Rehabilitation Survey in Patients with Schizophrenia in a Psychiatric Hospital". Chopra M.P, Pattanayak S.P, Mitra Mazumder P, Gupta S, Kumar R, Birla Institute of Technology, Mesra Ranchi. ICPPS & IPA Convention -2009' issue of Congress Chronicle (OP 09, Page 5)
- Preparation of Jelly from Dietary Fiber Isolated from Cassia fistula and Tamarindus indica seeds. S.Jha 1\*, Ashutosh Mishra 1 and Amit Kumar Tiwari 2 Pharmacognosy Magazine ISSN: 0973-1296 Phcog Mag. Vol 4, Issue 15, Jul-Sep, 2008
- 4. Production of Jackwine A Wine from Ripe Jackfruit. A. K. Tiwari, and A.S. Vidyarthi, Pharmabit ISSN:0973-6204, Vol. XXII. No.2, Jul-Dec, 2010

No. of summer trainees trained in the Department during July 2010 to June 2011: 2

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

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

# **HOTEL MANAGEMENT & CATERING TECHNOLOGY**



Ready to serve

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

The Department provides Training & Consultancy services in various aspects of Hospitality & Tourism.

The Department of Hotel Management & Catering Technology was established in January-2003. In a very short span of time the Department has acquired a worthy reputation in the field of hospitality in the country. The department has a well-qualified team of faculty members with a blend of industry experience and academic excellence who are consistently involved in various training, consultancy and research activities. The faculty members put in immense effort for both academic and practical training of the students.



The Master Chef

Various Short term Training programmes and Seminars are organised from time to time. It conducts six-month certificate course in Accommodation Operation for the students sponsored by Department of Welfare, Govt. of Jharkhand.

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Workshop on Vegetable	Mr. Abhinav Kr. Shandilya	Dept. of HMCT,	19th Sept.' 11
	and Fruit Carving		BIT Mesra	

Conferences/ Seminars/ Workshops/ Staff Development Programmes/ Orientation programme/ Refresher Course etc. attended, For example:

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date , Month, Year
1.	Mr. Praveen	Orientation Program	Ranchi	Academic Staff	21st May'12 -
	Srivastava	1410	University	College – Ranchi	17th June'12
				University	

2.	1.4 P	11000			l
	Mr. Praveen Srivastava	UGC Sponsored National Seminar on "Foreign Direct Investment in Indian Hotel Industry – Issues and Challenges"	Dept. of commerce, Karim City College, Jamshedpur	Karim City College, Jamshedpur	27th and 28th March '12
3.	Mr. Nishikant Kumar	Orientation Program	Ranchi University	Academic Staff College – Ranchi University	21st May'12 – 17th June'12
4.	Mr. Sanjiv Kr. Srivastava	UGC Sponsored National Seminar on "Foreign Direct Investment in Indian Hotel Industry – Issues and Challenges"	Dept. of commerce, Karim City College, Jamshedpur	Karim City College, Jamshedpur	27th and 28th March '12
5.	Mr. Nishikant Kumar	Tourism Development in Jharkhand	INTACH	Pragrati Maidan, New Delhi	12th Nov. '11
6.	Mr. Abhinav Kr. Shandilya	Workshop on Vegetable and Fruit Carving	Dept. of HMCT, BIT Mesra	Dept. of HMCT, BIT Mesra	19th Sept.'11
7.	Mr. Rajesh Langiya	Workshop on Vegetable and Fruit Carving	Dept. of HMCT, BIT Mesra	Dept. of HMCT, BIT Mesra	19th Sept.'11
8.	Ms. Rajeshwari Chatterjee	Interface of Science & Environement : Emerging Public Health Challenge	Kolkatta School of Tropical Medicine, All India Institute of Hygiene and Public Health , Indian Institute of Social and Business Management	Kolkatta	24-26th Nov. 2011
9.	Ms. Rajeshwari Chatterjee	National Seminar on Advancement in Manufacturing – Vision 2020	Production Engineering Division Board (BIT Mesra), Institutes of Engineers	BIT Mesra	25-26th May '11

## **PUBLICATIONS**

#### **Published in International Journals**

- Srivastava Praveen, Shandilya Kumar Abhinav, Application and Implementation of CRM in Hotels of Developing cities – A case study of Ranchi, International Journal of Management IT & Engineering, Vol. 2, Issue -1 (2012) 271-294.
- Shandilya, K Abhinav, Mishra, Kamleshwar, Study of customer preference to choose an organized retail outlet – A case study of Ranchi, International Journal of Management, IT & Engineering, Vol. 2 Issue 3 (2012) 302-318.
- 3. Chatterjee R., Sharma V, Kumar S, Resource Utilization and Environmental Impact of Biodiesel produced from Jatropha curcas, International Journal of Manufacturing technology and Research, Vol. 7, No (1) (2011), 87 92.
- 4. Chatterjee R., Sharma V, Kumar S, Eco-Efficiency from Cradle to grave design system based on atmospheric conditions in biodiesel manusfacturing sector produced from Jatropha Curcas for sustainable cleaner production, International Journal of sustainable Manufacturing, paper accepted for publication.

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

- Shandilya, K Abhinav, Srivastava, Praveen, Services at Restaurant: Expectation and service perception
  of guest: A case study of Ranchi. Journal of Hospitality Application and Research. Vol. VI, No. II (July
  2011) 36 45.
- 2. Shandilya, K Abhinav, Srivastava, Praveen, The attitudes of consumers toward organized food retailing: An application of Attitude-toward-object. Atna Journal of Tourism Studies Vol. VI, (December 2011) 128-141.
- 3. Chatterjee R., Treatment of the effluent generated from the pickling method and to remove their toxic property to make it ecofriendly, Journal of advances in Engineerign Science (2012) 1-12.
- 4. Srivastava Praveen, Awareness of customer relationship Management as a tool to retain customers in Hotel A case study of Jharkhand, Anusandhanika (Jan 2012) Paper accepted for publication.

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

- Chatterjee, R., Presented, Life cycle assessment of energy performance of biodieselproduced from Jatropha Curcas" in the conference "Interface of Science & Environement: Emerging Public Health Challenge. Kolkatta School of Tropical Medicine, All India Institute of Hygiene and Public Health, Indian Institute of Social and Business Management, Kolkatta, 24th-26th May '11.
- 2. Chatterjee, R., Recent development in Life cycle assessment in Biodiesel: A Review. National Seminar on Advancement in Manufacturing Vision 2020. Production Engineering Division Board and Institute of Engineers, BIT Mesra, 25th 26th May 2012

Departmental Students' Activities (Please arrange chronologically)

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	Food Festival on Halloween Theme		22nd – 24th Sept. '11
2.	Industrial Visit to Hotel Holiday Home, Kanka Ranchi	Prof. Sitesh P Srivastav	07th April'12

No of summer trainees trained in the Department during July 2010 to June 2011 : 21 (Twenty One)

Members on Board of Studies (UG/PG)

#### **UG - Board of Studies**

1. Prof. Sitesh P Srivastav Head, Dept of H.M.C.T. : Chairman

2. Sh. Praveen Srivastav, Assistant Professor, HMCT : Member

3. Sh. Nishikant Kumar, Assistant Professor, HMCT : Member

4. Dr. S. K. Bose, Prof. & Head, Dept of Management : Member

5. Dr. B.N.Sinha, Prof. & In-charge, Pharmaceutical Sc. : Member

6. Dr. Shaswati Ghosh Sachan, Asst. Prof., Biotechnology : Member

## **External Members (Any Two)**

1. Dr. B.K. Chakravarti Ex-Principal IHM, Patna : Member

2. Mr. Tarun Dacha, Corporate Chef, Sarovar : Member

Park Plaza, New Delhi.

3. Mr. Ranjit Chaudhury, Principal, Institute of Hotel : Member Management Catering Technology & Applied Nutrition

Taratola Road, Kolkata.

#### Student Members:-

Two students' member from Final year

# DEPARTMENT OF INFORMATION TECHNOLOGY

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



**Database Laboratory** 

# **Programmes offered**

The Department of Information Technology currently offers following programmes

Programmes Offered	Courses Started	Intake
B.E. Information Technology – 4 year (8-semester)	2001	60
Master of Computer Applications (MCA) – 3 year (6-semester)	1984	60
M.Sc. Information Science - 2 years (4 - Semester)	1993	20
M.Tech. Information Security – 2 Years (4 – Semester)	2010	18
Ph.D. Programmes		

#### **Facilities**



Computer Language Laboratory

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

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

## SPONSORED PROJECTS

# Project Sanctioned during July 2011- May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Sudy of radiation from	Prof. Nisha Gupta,	Ranchi	July, 2012	Equipments,	
	the mobile tower and	Prof. Shrikanta Pal,	Municipal		Contingencies	Six months
}	its ill effects on Man,	Kalyan Samanta	Corporation	**************************************	to be provided	(expected)
	Birds and Animals				by the sponsor	

# **Ongoing Projects Sanctioned before July 2011**

SI. No.	Name of the project	Project coordinator
1.	Need, Availability and Utilization of electronic resources and UGC INFONET Consortia in Universities of Eastern India (UGC)	Dr. Bhaskar Karn
2.	Local rainfall prediction using Hybrid Approach (UGC)	Prof. B. K. Sarkar

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Inter-disciplinary lecture series on "IT and its Applications"	Dr. Bhaskar Karn	BIT, Mesra	March 23-34,2012

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

SI.	Name of the	Title of the Conference/	Organized	Venue	Date, Month,
No.	Faculty	Seminar	by		Year
1	Dr. Bhaskar Karn	LIS Education at crossroads	IASLIC	Kashmir University, Srinagar	10-13, October 2012

#### **PUBLICATIONS**

#### Published in International Journals

- Tanushree Roy, Aruna Jain, "Windows Registry Forensics: An Imperative Step in Tracking Data Theft via USB Devices" International Journal of Computer Science & Information Technologies, June 2012, Vol-3(3), pp4427-4433, ISSN: 0975-9646.
- 2. Sirshendu Shekhar Ghosh, Dr (Mrs) Aruna Jain, "Web Latency Reduction Techniques: A Review Paper" International Journal of Information Technology & Network Applications, July 2011, Vol. 1No.2,pp.
- 3. Sudip Kumar Sahana, Dr (Mrs) Aruna Jain, "An Improved Modular Hybrid Ant Colony Approach for Solving Traveling Salesman Problem", "International Journal on Computing (JoC) ,Feb-11,Vol-1,Number-2, pp123-127,ISSN: 2010-2283, doi: 10.5176-2010-2283 1.249.

- 4. Singh S., and Karn B., "The implementation of Right to Information Act, 2005 in India", Journal of Law, Policy and Globalisation, IISTE, United States. ISSN 2224-3240 (print) ISSN 2224-3259 (online).
- 5. Singh S., and Karn B., "Genesis of Right to Information Act in India", Research Journal of Social Science & Management, Singapore. ISSN: 2251-1571
- 6. Paul, Prantosh Kumar, DipakChaterjee and BhaskarKarn "Cloud Computing: Issues and challenges with probable solution in Indian Perspectives" IJIDT International Journal of Information Dissemination &Technology,MMU,Ambala. Vol-2 .No-2.
- 7. Kumar Gunjan, G. Sahoo and R. K. Tiwari 'Identity Management in Cloud Computing- A Review', International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 1 Issue 4, June- 2012.
- 8. Kumar Gunjan, R. K. Tiwari and G. Sahoo, 'Cloud Computing- Security Requirements and Real World Threats', International Journal of Cloud Computing, Inderscience; communicated.
- Md.Amir Khusru Akhtar, G. Sahoo, "FUZZY SET THEORETIC APPROACH TO DETECT SELFISH NODE ATTACK IN MANETs", International Journal of Fuzzy Systems and Rough Systems, ISSN: 0974-858X, Vol4 Issue 1, June 2011, pp. 19-23.
- Md.Amir Khusru Akhtar, G. Sahoo, "Mathematical model for the detection of Selfish nodes in MANETs", International Journal of Computer Science and Informatics (IJCSI), ISSN (PRINT): 2231 -5292, Vol 1 Issue 3, Feb2012, pp 25-28.
- 11. Md.Amir Khusru Akhtar, G. Sahoo, "Mathematical Model for the Detection of Selfish Nodes in MANETS using K-Nearest Neighbor Technique", Pacific Asian Journal of Mathematics (PAJM), ISSN: 0973-5240, Vol 5 Issue2, Dec 2011, pp 117-123.
- 12. Shankar, T. N., Sahoo, G., Niranjan, S. 'Using the Digital signature of a Fingerprint by an Elliptic Curve Cryptosystem for Enhanced Authentication', Information Security Journal- A Global Perspective, Taylor and Francis, Vol.21, No.5, pp.-242-254,2011.
- 13. Shankar, T. N., Sahoo, G. and Niranjan, S. 'Stegnographic manipulations with elliptic curve cryptogarphy', International Journal of Electronic Security and Digital Forensics, Inderscience. To appear in 2012.
- Shankar, T. N., Sahoo, G., Niranjan, S. 'Fast Point Multiplication Using ASCII Code Representation', International Journal of Communication Networks and Distributed Systems, Inderscience. To appear in 2012.
- Yugal Kumar and G. Sahoo 'Analysis of Parametric & Non Parametric Classifiers for Classification Technique using WEKA, International Journal of Information Technology and Computer Science, 2012,7, 43-49
- 16. Pani, M. R., Verma, R. and Sahoo G. (2012) 'A heuristic method for supplier selection using AHP, entropy and TOPSIS', Int J. Procurement Management, Vol. 5, No. 6, pp.784-796.
- 17. Tapas Kumar and G. Sahoo 'Implementation of Cellular Automata for impulsive noise reduction in gray scale images', Int J of Signal and Image Systems Engineering
- 18. Suchismita Das, Shruti Garg, G. Sahoo, 'Comparison of Content Based Image Retrieval System using Wavelet Transform and Curvelet Transform, accepted for publication in International Journal of Multimedia and Its Applications (IJMA) by AIRCC

- 19. Suchismita Das, Shruti Garg, G. Sahoo, 'Content Based Image Retrieval using curvelet transform, communicated in International Journal of Multimedia Tools and Applications published by Springer
- 20. Shruti Garg, Rati Jha, G. Sahoo, 'Image Restoration of Digital Paintings', communicated in International Journal of Multimedia Tools and Applications published by Springer
- 21. Suchismita Das, Shruti Garg, G. Sahoo, 'Relevance Feedback Technique in Context Based Image Retrieval System, published in International Journal of Graphics and Image processing, Vol 1, Issue 2, Nov 2011.
- 22. Shruti Garg, Rati Jha, G. Sahoo, 'Crack Filling in Old Digital Paintings, published in International Journal of Graphics and Image Processing, Vol1, Issue 2, Nov 2011.
- 23. Amrita Sarkar, U. C. Sahoo and G. Sahoo, "Accident Prediction Models for Urban Roads", International Journal of Vehicle Safety.(Inderscience Publishers) (Date of Acceptance-17th April, 2012)
- 24. Sarkar, A., Sahoo, G., and Sahoo, U. C. (2012) 'Application of Fuzzy Logic in Transport Planning', Int. J. Soft Computing, Vol. 3, No. 2, pp. 1-21.
- 25. Rashmi, Shabana Mehfuz, G. Sahoo,' A five- phased approach for the cloud migration, International Journal of Emerging Technology and Advanced Engineering, Vol 2, Issue 4, April 2012.
- 26. K. Mukherjee, G. Sahoo, 'A Novel Methodology for secured c-governance using hadamard coding', International Journal of Cloud Computing ', vol1, nos. 2/3, 2012, pp 145-166, Inderscience.
- 27. Rajesh Kumar Tiwari and G. Sahoo "Microsoft Power Point Files: A Secure Steganographic Carrier File", International Journal of Digital Crime and Forensics, IGI Publications, USA, Vol. 3 No. 4, 2011, pp- 17-29.
- 28. R. K. Tiwari and G. Sahoo, "Data Hiding in Microsoft Document File", accepted for the publication in International Journal of Information and Computer Security, Inderscience Publisher.
- 29. Rajesh Kumar Tiwari and G. Sahoo, "A Novel Steganographic Methodology for High Capacity Data Hiding in Executable Files", International Journal of Internet Technology and Secured Transactions, Inderscience Publisher., Vol. 3, No. 2, 2011, pp- 210-222.
- 30. Rajesh Kumar Tiwari and G. Sahoo, "A Novel Methodology for Data Hiding in PDF File", Information Security Journal: A Global Perspective, Taylor & Francis Publication, Vol. 20, No. 1, 2011, pp. 1-13.

#### Published in National Journal

1. Bal Ram and Karn, Bhaskar (2011) "Application of Web 2.0: Tools and Techniques". INFOLIB a Quarterly Bulletin of Jharkhand Information and Library Association, vol.4, 3-4, pp.6-10.

# Papers/Abstracts in Conference Proceedings

## International Proceedings

- Paul, Prantosh Kumar, DipakChaterjee and BhaskarKarn "Cloud Computing: emphasizing its possible roles and importance in Information Systems and Centers" in IEM/IEEE sponsored international conference proceedings (IEMCON-12). P-345-348. [indexed, abstracted in Google Scholar[USA], Cite Ceer, EBSCO]
- 2. BalRam ,Karn, Bhaskar (2011) "Needs of electronic resources, their management through consortia and impact on society". International Conference on user Empowerment through Digital Technologies in Libraries, Archives & Museums in NIFT New Delhi, pp.651 -656.

- S. Das, S. Garg and G. Sahoo 'Comparison of Content Based Image Retrieval System Using Wavelet Transform', Advances in Computer Science, Eng. & Appl., AISC 166, pp. 639-648, Springer- Verlag Berlin Heidelberg 2012.
- 4. Shankar, T. N., Sahoo, G., Niranjan, S. 'Digital Signature of an Image by Elliptic Curve Cryptosystem' CCSIT- 2012, Part III, LNICST, Springer, 86, pp. 337-346.

## **National Proceedings**

- Paul, Prantosh Kumar, B BSarangi, BhaskarKarn, "Cloud Computing: emphasizing its Facet, Component and Green aspect with special reference to its utilization in the Information Hub" in National Conference on Emerging Trends in Computer Application &Management, Faculty of Computer Application and Management, AVIT (AICTE-NBA Accredited Engineering College) Dated-24-02-12, 25-02-12. P- 143-146
- 2. Paul, PrantoshKumar,BibhutiBhusanBhusanSarangi and BhaskarKarn "Information Systems & Networks :Emphasizing issues and challenges of subject based ISN" in IEEE sponsored- National Conference on Information and Software Engineering,AVIT,VMU, 9-10 March 12. Page-154-158.
- 3. Paul, Prantosh Kumar, DipakChaterjee and BhaskarKarn "Cloud Computing: beyond ordinary Information Transfer Cycle" Published in National Conference on Computing and Systems, Dept of Computer Science, Burdwan University. 15 March 2012. P- 189-192
- 4. Rashmi, Shabana Mehfuz, G. Sahoo, 'Cloud Computing: Changing the way we communicate, National Workshop on Science, Technology and Development Communication, In the proceedings of Communication Express: An Anthology of Essays on Communication, April 2012, Noida
- 5. Rashmi, Shabana Mehfuz, G. Sahoo, 'A software engineering approach for cloud migration', International conference on advances in cloud computing, july 2012, banagalore
- 6. Rashmi, Shabana Mehfuz, G. Sahoo, 'A new waterfall model for cloud migration', national Conference on Recent Advances in communication, control and computing technology, March- 2012, Surat, India.
- 7. K. Mukherjee, G. Sahoo, 'Security mechanism for c- governance using Hadamard matrices', pp 485-490, 2nd IEEE International Conference on computer and communication technology, MNIT, Allahabad, 15-17 Sept, 2011
- 8. K. Mukherjee, G. Sahoo, 'Security Framework for c\_governance', pp 205- 210, National conference on mathematical and stastical modeling in Innovative areas, BIT Mesra, October 19-20, 2011
- 9. Suchismita Das, Shruti Garg, G. Sahoo, 'Comparison of Content Based Image Retrieval System using Wavelet Transform, published in proceedings of Second International Conference on Computer Science, Engineering & Applications(ICCSEA- 2012) held at Delhi, India, May25-27, 2012.

# MoUs / Collaborations with Academia/Industry:

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	University of Accountancy, Arusha, Tanzania	Higher Education	3 yrs.

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

1. Dr.G.Sahoo : Chairman

2. Mr. S. Dutta : Member

3. Dr.(Mrs). Aruna Jain : Member

4. Mr.V .S. S. Sriram : Member

5. Mr., B. K. Sarkar : Member

6. Dr. N. C. Mahanti : Member

7. Dr. R. Sukesh Kumar : Member

## **External Experts**

Dr. C. Majumdar
 Department of Computer Science & Engg
 Jadavpur University, Kolkata

Dr. A. Mishra
 Department of MCA
 NIT, Jamshedpur

Dr. Rajib Mall
 Department of Computer Science & Engg.
 IIT, Kharagpur

Dr. B. Majhi,
 Department of Computer Science & Engg.
 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 more than thirty glorious years of its existence. The programmes offered by the department lay special emphasis on nurturing personal integrity and social responsibility among the students. With its massive infrastructure base of well-equipped library and computer labs, seminar and conference rooms, the Department of Management strives to impart better contemporary education to the students.

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

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

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

Sponsored projects: Ongoing Projects Sanctioned before July 2011

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

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date , Month, Year
	Dr.Vijay Agarwal	UGC Refresher Course on 'Financial management'	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	10/06/2011- 30/06/2011
	Dr. Anupam Ghosh	International Conference on Management in the New World Order	IIM Ranchi	Radisson Blu Hotel Ranchi	13-14, August, 2012
	Dr. Rajneesh Choubisa	First Czech Positive Psychology Conference, Brno (1st CPPC)	Masaryk University, Brno	Brno, Czech Republic	23-24 May 2012
	Dr. Rohit Pande	UGC Refresher Course on 'Financial Management'	UGC ACADEMIC STAFF College, Ranchi	UGC Academic Staff College, Ranchi	10/06/2011- 30/06/2011
	Shelly Srivastava	UGC Refresher Course on 'Financial Management'	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	10/06/2011- 30/06/2011
	Amitabh Verma	UGC Refresher Course on 'Financial Management'	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	10/06/2011- 30/06/2011

- Paranthire	Nitesh Bhatia	UGC Refresher Course on 'Financial Management'	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	10/06/2011- 30/06/2011
	Shelly Srivastava	UGC Orientation Course	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	21/05/2012- 18/06/2012
	Amitabh Verma	UGC Orientation Course	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	21/05/2012-
	Dr. P.C. Jha	UGC Orientation Course	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	21/05/2012
	Anand Kumar	UGC Orientation Course	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	21/05/2012
	Nitesh Bhatia	UGC Orientation Course	UGC Academic Staff College, Ranchi	UGC Academic Staff College, Ranchi	21/05/2012

#### **PUBLICATIONS**

# **Published in International Journals**

- V.V.Ravi Kumar ,P.V.Raghavan, S.K.Bose, "Extension of Technology Adoption Model (TAM) Intention to use Internet Banking: Evidence from India". International Journal of Finance and Policy Analysis, Vol. 3. No.1. Spring 2011, Brown Walker Press; USA
- Purnendu Paul, Rizwan Dhalla, S.K.Bose, "Efficiency Measurement of Indian Public Sector Banks: Non-Performing Assets as Negative Output", Asia Pacific Journal of Finance and Banking Research, Vol. 5 No. 5 Issue 2011, Published by Global Business Investments and Publications LLC, PO Bos 292, Mansfield Center, CT, 06250. USA
- 3. V.Kannan, N.G.Kannan, S.K.Bose, "An evaluation of ocean container carrier selection criteria: an Indian shipper's perspective". Management Research Review, Vol. 34 No. 7, pp. 754-772. Issue: 2011. Emerald Group, Publishing Ltd., UK
- 4. Dash, Sujata Priyambada & Agrawal Vijay, "Role of Human Capital Management in Economic Value Addition of Large Scale Organizations: A Literature Review", International Journal of Financial Management, Vol. 2 Issue 1 January 2012, pp. 63-74.
- 5. Mihir Ajgaonkar, Utpal Baul, 'A Model to Ascertain Relationships between Organizational Citizenship Behavior, Job Characteristics, EP & PO Expectancies, and Psychological Contract within Indian Industrial Environment', 'IFRSA Business Review (International Forum of Researchers Students and Academician)', Vol. 2, No. 1, March 2012.

#### Published in National Journal

- 1. V.Kannan, S.K.Bose, N.G.Kannan "Ocean container carrier selection criteria and their perceived importance in the Indian environment: a shipper-only study". The IUP Journal of Operations Management, Vol. 9 No. 4, pp. 35-51. Issue Nov., 2011. ICFAI University Press, Hyderabad, India
- 2. V.V.Ravikumar, S.K.Bose, "Deal with your Customer". Indian Management Vol. 50 Issue 3 March, 2011. All India Management Association.
- 3. Ghosh, A. Sustainable Business: A Tangible Reality, SAMVAD 3 (2011),35-41.

#### Papers/Abstracts in International Conference Proceedings

- 1. 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.
- 2. Choubisa, R & Slezackova, A. (2012). Well-being Promotion, Wellness Interventions and Interne t: Testimonials, Criticisms and Lessons to Be Learned. First Czech Positive Psychology Conference at Masaryk University, Brno, Czech Republic, May 23-24, 2012.
- 3. Oudenhoven, J.P., Raad, B., Boski, P., Carmona, C., Choubisa, R., Dominguez, A., et al. (2012). Virtues across 14 Nations. First Czech Positive Psychology Conference at Masaryk University, Brno, Czech Republic, May 23-24, 2012.

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

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

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

#### I MBA

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

Dr. N.C. Mohanty, Emiratus Professor, : Member

Deptt. of Applied Mathematics

Dr U Baul, Professor, Deptt of management : Member

Dr S Shivani, Assoc. Professor, Deptt of management : Member

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

Dr G. Sahoo, Prof.& Head, Deptt. of Inf. Technology : Member

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

## II ME QEM

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

Dr. N.C. Mohanty, Emiratus Professor, : Member

Deptt. of fApplied Mathematics

Dr. U Baul, Professor, Deptt of management : Member

Mr S C Mishra, Assoc. Prof., Deptt of Management : Member

Dr. Anjani Kumar, Prof. Deptt of Prod. Engg, : External Member

NIT Jamshedpur

Dr. R K Srivastava, Prof. Deptt of Prod. Engg, : External Member

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 careers centre on campus, which helps the students to get entry into Multinational companies.



Dual Fuel Diesel Engine Generator Set

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

(i) B.E. (Mechanical Engineering) sanctioned strength : 90

(i) M.E. (Mechanical Engineering) sanctioned strength : 12

Specialization: Heat Power / Design of Mechanical Equipment.

(iii) M.Tech. (Energy Technology) : 18

(iv) Ph.D. in Mechanical and Interdisciplinary field of research.



Solar Powered Spinning Wheel

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

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

## **SPONSORED PROJECTS:**

## Project Sanctioned :

S. No.	Project Title	PI/Co-PI/ Collaborator if any	Funding Agency	Date of sanction	Sanctioned Amount	Duration of the project
1.	Design and Development of Hydrogen Assisted Dual Fuel Engine (2009-11)	Sri D.B. Lata Dr. Ashok Misra	Deptt. of Industries, Govt. of Jharkhand	2009	Rs. 10.00 Lakhs	Two years
2.	Development of New Heath Care Monitoring system for Elderly using Emerging Communication Technologies (Vide letter No. SSD/NI/026/2008/ TIE dated Nov. 24, 2009 (December 2009-2012)	Mrs. Richa Pandey Dr. R.P. Sharma, Dr. Rajeev Kumar	DST	2009	Rs. 12.059 Lakhs	Three years

## **Ongoing Projects:**

S. No.	Project Title	PI/Co-PI/ Collaborator if any	Funding Agency	Date of sanction	Sanctioned Amount	Duration of the project
1.	Design and Development of Hydrogen Assisted Dual Fuel Engine (2009-11)	Sri D.B. Lata Dr. Ashok Misra	Deptt. of Industries, Govt. of Jharkhand	2009	Rs. 10.00 Lakhs	Two years
2.	Development of New Heath Care Monitoring system for Elderly using Emerging Communication Technologies (Vide letter No. SSD/NI/026/2008/ TIE dated Nov. 24, 2009 (December 2009-2012)	Mrs. Richa Pandey Dr. R.P. Sharma, Dr. Rajeev Kumar	DST	2009	Rs. 12.059 Lakhs	Three years

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

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

## **PUBLICATIONS:**

#### International Journals:

- U.C. Singh, Anant Prasad & Arbind Kumar (2011) "Integral Model for Development of Instant Interface Temperature of Cylindrical Additive Bath System", International Journal of Metallurgical and Materials Transactions B (in press).
- 2. J.P.Roy, M.K. Mishra, Ashok Misra (2011) "Parametric Optimization and Performance Analysis of a Regenerative Organic Rankine Cycle using Low Grade Waste Heat for Power Generation" International Journal of Green Energy, 8, (2) 173-196.
- 3. D.B.Lata and Ashok Misra (2011) "Analysis of Ignition Delay Period of a Dual-Fuel Diesel Engine with Hydrogen and LPG as Secondary Fuels" International Journal of Hydrogen Energy, 36, 3746-3756.
- 4. D.B. Lata and Ashok Misra (2010) "Experimental Analysis of Dual Fuel Diesel Engine with Hydrogen and LPG as Secondary Fuels" International Journal of Hydrogen Energy. (Under Review).
- 5. V.S. Chauhan, Ashok Misra (2010). "Electromagnetic radiation during plastic deformation under unrestricted quasi-static compression in metals and alloys". Int. J. Materials Research (Formerly: Zeitschrift furür Metallkunde) 101, 855 864.
- 6. V.S.Chuhan, Ashok Misra. "Assessment of lattice parameters and grain size in titanium alloy through electromagnetic radiation technique." Int. J. Microstructures and Mater. Prop. (2010) (in press).
- 7. Arbind Kumar, (2010) "Manufacture and Study of Physico-Chemical Properties of Karanja Bio-diesel", World Applied Sciences Journal (WASJ. org) June 21.
- 8. Ashok Misra, R.C. Prasad, V.S.Chauhan, Rajeev Kumar" Effect of Peierls' stress on the electromagnetic radiation during yielding of Metals". Mechanics of Materials 42 (5), (2010), 505-521.
- 9. Richa Pandey, S. Kumar, L.N.Pattanaik, "A Reverse Engineering based process for Contextualizing and digitizing ancient technical objects", J. Mamuf. Tech. Res. an International Journal, 6 (2010) 1-2.
- 10. P. Anil Kishan, S.K.Dash "Prediction of Circulation Flow Rate using Discrete particle Modeling, ISIJ International, 49, (2009) 495-504.
- 11. D.P.Mishra, S.K.Dash, P. Anil Kishan (2009) "Isothermal Jet Suction through the Lateral openings of a Cylindrical Funnel", J. Ship Research (accepted for publication).
- 12. K.P. Chander, M. Vashista, K. Sabiruddin, S. Paul, P.P. Bandhopadyay, "Effects of Grit Blasting on surface properties of Steel Substrates", Materials and Design, 30, (2009) 2895 2900.

#### National Journals:

1. K. Sabiruddin, S. Das, A. Bhattacharya "Application of Analytic Hierarchy Process for optimization of Process parameters in GMAW", Indian Building Journal, Vol. 42, 2009, 38-41.

#### **Proceedings:**

1. Arbind Kumar & S.K.Dhiman "Bio-fuel Plant for Rural Electrification" International Conferences on Advances in Renewable Energy, MANIT, Bhopal, June 24-26, 2010.

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

### Award/Recognition Bestowed on Faculties (Stte/National/International):

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

## **Departmental Students' Activities**

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

#### Ph.D. Students enrolled, submitted and awarded:

No. of Ph.D. students enrolled as on 30.5.2011	No. of Ph.D. Thesis submitted during July'10 to June'2011	No. of Ph.D. Awarded during July'10 to June 2011
16	02	01

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

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

## **Member from Allied Departments:**

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

## **External Experts:**

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

## Other important information

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

## DEPARTMENT OF PHARMACEUTICAL SCIENCES



Computational and Molecular Modelling 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 towards quality and innovative research.

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

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

#### Infrastructure Development:

## Addition of equipment:

- 1. Mindray Semi Auto Analyzer
- 2. Flash Chromatograph
- 3. Recore Modelling software

## Addition of faculty members :

- 1. Dr. Umaranjan lal
- 2. Dr. Sugato Banerjee
- 3. Dr. Kishanta Pradhan



Instrument Room

#### SPONSORED PROJECTS

Project Sanctioned during July 2011- May 2012

SI.	Project Title	PI / Co- PI/	Funding	Date of	Sanctioned	Duration of
No.		Collaborator, if any	Agency	Sanction	Amount	the Project
1.	Modernization of	Dr. P.R.P. Verma				
	Pharmaceutical laboratory	,	AICTE	March 2012	6.00 lacs	2 years

## Ongoing Projects Sanctioned before July 2011

SI.	Project Title	Principal Investigator	Funding	Date of	Sanction	Duration of
No.			Agency	Sanction	Amount	the project
1.	Identification and optimization of some Anticancer lead molecules as Ribonucleotide reductase- Histone deacetylase dual inhibitors	Dr. B. N. Sinha, and Mr. Arijit Basu	UGC	Dec 2009	10.063 lacs	3 years
2.	Design, Synthesis and study of some NIDDM based antidiabetics linear and cyclopeptides and non peptides	Dr. S. Samanta	UGC	Dec 20-09	10.818 lacs	3 years
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	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
5.	To understand the nature of diversity in lac insects of Kerria spp. In India and the nature of insect and host interaction	Dr. B.N. Sinha, Department of Pharm. Scs., BIT, Mesra Dr. A. S. Vidharthy, Department of Biotechnology, BIT Mesra Dr. Kunal Mukhopadhayay, Department of Biotechnology, BIT Mesra	ICAR	Jan 2009	66.5 lacs	3 years (Extended upto Dec.2013)
6	Evaluation of antidiabetic potential of the indigenous medicinal plants of chotanagpur region	Dr. P. M. Mazumder	UGC	Feb2011	11.08 lacs	3 years

7	Studies on immunotixic profile and proteomics of deltamethrin in murine thymocytes and spenocytes: Attenuation by herbals	Dr. N. Sharma	UGC	Feb 2011	9.29 lacs	3 years
8	Development of some selective Monoamine oxidase B inhibitors against alzheimer's disease.	Mrs. N. Misra	UGC	Jan 2011	1.65 lacs	2 years
9	Formulation and evalution of herbal antiwrinkle gel and its invitro studies	Dr. A. Pandey	UGC	Jan 2011	1.35 lacs	2 years
10	Standardization of ayurvedic preparations containing ghee	Mr. D. Biyani	UGC	Feb 2011	1.55 lacs	2 years

## Projects Completed during the period July 2011-May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	SAP :Improvement of Infrastructure for Total Quality Management (TQM) and Good Laboratory Practice (GLP)	Head, Department of Pharm. Scs., BIT, Mesra	UGC	Feb 2007	65 lacs	Feb 2012
2.	FIST: Advancement of Facilities for Undergraduate and Postgraduate Teaching and Research	Head, Department of Pharm. Scs., BIT, Mesra	DST	Feb 2006	38 lacs	Feb 2011
3	Gastroretentive floating drug delivery systems of antiretroviral drug-formulation and invitroealuation	Mrs. T. Bal	UGC	Feb 2010	1.30 lacs	Feb 2012
4	Design and development of AChE and MAO inhibitors possibly as dual inhibitors: A new insight for Alzheimer's disease treatment	Dr. D. Sasmal, and Mrs. N.Mishra	UGC	Jan 2010	1.3Lakhs	Jan 2012

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Nanotechnology based drug delivery systems	Dr. B. N. Sinha Programme Coordinators: Dr. R. N. Gupta and Dr. Sandeep Singh	AICTE	6th Nov 2011- 19th Nov 2011
2.	Recent Trends in Discovery, Development and Pharmacological screening of novel therapeutics	Dr. B. N. Sinha Programme Coordinators: Dr. S. Samanta and Mr.Ashok. Patnaik	AICTE	20th Nov 2011 - 3rd December 2011
3.	Novel drug delivery systems in herbal drugs	Dr. B. N. Sinha Programme Coordinators: Dr. K. Jayaram and Dr. Anima Pandey	AICTE	4th Dec 2011-17th Dec 2011
4.	Summer School - 2011 on "Quality Control and Quality Assurance",		Department of Pharmaceutical Sciences BIT, Msera	May 30 – Jun 11, 2011
5.	DRDO, Govt of India sponsored Seminar		DRDO, Venue : BIT, Ranchi	March'12

## 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.D. Sasmal	1.7 <sup>th</sup> FICCI Higher Education Summit 2011, New Delhi	FICCI	New Delhi	11th-12th Nov, 2011
2.	Dr.D. Sasmal	1 <sup>st</sup> World Summit on Accreditation, New Delhi		New Delhi	January 2012
3.	Dr.D. Sasmal	Training programme on quality initiatives in technical and higher education institutions, Hyderabad		Hyderabad	23rd-25th Jan 2012
4.	Dr. B.N.Sinha	(1) World Congress of Pharmacy and Pharmaceutical Sciences 2011-71 <sup>st</sup> International congress of FIP.	FIP, The Hague Netherlands	Hyderabad (India)	Sept. 03-08, 2011
		(As Special Invitee) (2)NationalConferenceonBiopharmaceuticals and Healthcare. (As Speaker)	MVIT, Bangalore	Bangalore (India)	Nov. 04-05, 2011
		(3) EU-INDIA S & T COOP DAYS' 2011 (As Speaker)	BMWF & CNRS, France	Vienna (Austria)	Dec. 01-02, 2011
		(4) 10th ICAV International Symposium (As Speaker)	ICAV, Canada	New Delhi (India)	Feb. 07-10, 2012

5.	Dr.S. Jha	Guest Lecture delivered in the Department	North	USA	June 13,
		of Plant Science and Human Health	Carolina		2012
			University,		
			Charlotte,		
			USA		
6.	Dr.R.N. Gupta	International Pharmaceutical Conference	Federation	Hyderabad	Sept'12
		as Host Committee member and Delegate	of Interna-		
			tional Phar-		
			maceutical		
			Association		
7.	Dr.R.N. Gupta	Indian Pharmaceutical Congress' 2012		Bangalore	Dec 2012
8.	Dr. S. Ganguly	MISSION KYAAT 2011	BIT, MESRA	BIT,	3rd-5th May,
				MESRA	2011
9.	Dr. S. Ganguly	Workshop on "Intellectual Property Rights	BIT,	BIT	Dec 02, 2011
»		(IPR-2011)"	MESRA	MESRA	
10.	Dr. K. Jayaram	Lecture delivered on "A new insight in	Sarada	K.M.	13th
		standardization of traditional medicines"	Vilas	Puram	March.2012
			College of	,Mysore	
			Pharmacy		
11.	Dr. K.	Lecture delivered on " Intelligent techiques	Srinivas	Valachil,	30th May
	Jayaram	in standardisation of traditional medicines"	College of	Mangalore	2011
			Pharmacy,.		
<u> </u>			on	h. 1500	
12.	Dr. P. Mit-	MISSION KYAAT 2011	BIT, MESRA	BIT,	3rd-5th May,
	ramazumder			MESRA	2011
13.	Dr. S. M.	Mission KYAAT, BIT, Mesra	BIT, MESRA	BIT,	26th – 28th
-	Verma			MESRA	April 2011
14.	Mr. D. Biyani	Mission KYAAT, BIT, Mesra	BIT, MESRA	BIT,	3rd-5th May,
45	D. M 11.	NAZ-AL-II	DIT MEODA	MESRA	Dan 00 0044
15.	Dr. Manik	Workshop on "Intellectual Property Rights	BIT, MESRA	BIT	Dec 02, 2011
	Ghosh	(IPR-2011)"		MESRA	
10	Da Marile	LICC appropried An Intendical linear	Janaak a dayya	lometrad	Cont 0.0
16	Dr. Manik Ghosh	UGC sponsored An Interdisciplinary National Seminar on Nutrition and Health	Jamshedpur Women's	Jamshed-	Sept 2-3, 2011
	Griosii	Care of Adolescent Girls,:		pur	2011
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17	Mr. A. Basu	EU-INDIA S & T COOP DAYS' 2011 for	EU-INDIA S	Vienna	01st -02nd
' '	wii. A. Dasu	poster presentation on Structure based	& T COOP	VIOLITIC	Dec., 2011
		discovery of antivirals for the treatment of			500., 2011
		Chikungunya virus infections			
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18.	Mr. S. P. Pattanayak	Anticancer Section: International Conference on Bioanalytical techniques, Burlingame, San Francisco, California, USA	California, USA	California	16th – 18th Dec. 2011
19.	Biswatrish Sarkar	6th International Workshop on Anthocyanins (IWA 2011)	Plants for Human Health Institute. North Carolina Research Campus, Kannapolis North Carolina USA	Great Wolf Lodge, Charlotte North Carolina, USA	11-14th September, 2011

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## Papers/Abstracts in Conference Proceedings

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- 4. Toshniwal V., Palva R., Sandeep Kumar Singh, Verma P.R.P., Evaluation of Lipid Based Nanoemulsion Using Full Factorial Design, Proceedings of 63rd Indian Pharmaceutical Congress, 2011.
- 5. Patel Hiren, Manik Ghosh, B. N. Sinha & Debarati Sengupta. "Natural Products as Lead for Development of Anti-Chikungunya Drugs", 99th Indian Science Congress, Bhubaneswar: Jan 3-7, 2012 (120)
- 6. Debarati Sengupta, Manik Ghosh, B. N. Sinha & Patel Hiren. "Natural Products as Lead for Development of Anti-Dengue Drugs", 99th Indian Science Congress, Bhubaneswar: Jan 3-7, 2012 (121)
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- 8. Debarati Sengupta, Hiren Patel, Manik Ghosh & B. N. Sinha. "Identification of Lead from Natural Products for Dengue Virus NS2B-NS3 Protease Complex", 63rd Indian Pharmaceutical Congress, Bengaluru: Dec 16-18, 2011 (B-33)

- 9. Abhimanyu Dev, R.N. Gupta, Release study of Non-classical 0139of Vibrio cholere from alginate/ HPMC microcapsules, IPA Convention 2012 held at Manipal in March'12,
- Piyush Jain, R.N. Gupta 'Formulation and In-vitro evaluation of Mouth Dissolving tablets of Omeprazole', National Seminar on "21st Century Quality Challenges in Pharma formulation Sector" at Durgapur in April '12.
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- 13. Kakumanu Kishore Babu, S. Murugesan and S. Ganguly, "Design and Docking studies of some nobel H1N1 neuraminidase inhibitors", Proceedings of National Conference on Chemical Sciences in New Millennium, Pacific University, Udaipur, Rajasthan, 8th January 2012.
- 14. Patel Hardik S. and Swastika Ganguly, "Molecular modeling studies of 3-(4- chlorophenyl)-4-(1Himidazole-1-yl)-5-phenyl-4,5-dihydrp-1H pyrazole derivatives as possible HIV-1-RT inhibitors" Proceedings of 63rd Indian Pharmaceutical Congress, 2011, B36.
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- 18. Baskar L, Papiya Mitramazumder, Dinakar Sasmal, Venkatesan Jayaprakash, Swastika Ganguly and Ashok K. Pattnaik, "Docking studies of some N-1 substituted imidazoles on M1, M2 and M3 receptors: An antidiarrheal efficacy" Proceedings of 63rd Indian Pharmaceutical Congress, 2011, B30.
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- 21. Vibha Sharma and Neelima Sharma, Biocompatibility studies of DLC coated PMMA Material, (Poster). IPC Bengaluru, December, 2011.
- 22. Ratna Ghosh, Reshma Xalxo, Bindu Kumari, Sougata Mishra & Manik Ghosh. "Determination of Heavy Metals in Vegetables using Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)", 63rd Indian Pharmaceutical Congress, Bengaluru: Dec 16-18, 2011 (F-388)

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- 24. Nibha Mishra, Bijay Kumar, Venkatesan Jayaprakash, Mahua Basub and Arijit Basu, Exploring the molecular basis of monoamine oxidase inhibition by scopoletin: a naturally occurring coumarin, 12th International Congress of Ethnopharmacology, Kolkata, Feburary 17-19, 2012.

### **Books**

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

- R. Sachdeva, S. Duggal, U. R. Lal, P. Khanna, M. Gulati, M. S. Umashankar. Preparation and characterization of aquasomes loaded with antidiabetic polypeptide from Momordica charantia seeds. In Polypeptide K and Biterin oil. Khanna P (Ed.). Melrose Press Ltd, Cambridgeshire, UK., 2011; p. 70-100. (ISBN-978-1907732218)
- J.K. Kumar, B.N.Sinha ,S.D.Kulkarni," "Lagenaria siceraria (Molina) Standley-A Natural Multi Therapeutic Agent" RPMP Volume 34: Ethnomedicine - Source & Mechanism-II Dr. Amani S. Awaad, Dr. J.N. Govil and Dr. V.K. Singh STUDIUM PRESS, LLC ,P.O. Box- 722200, Houston, Texas: 77072, USA , 2011

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

- D. Sasmal and B.P. Nagori, Manoj Goyal, Ayurveda the Ancient Science of Healing: An Insight, in Drug Discovery Research in Pharmacognosy, (Book Chapter).(ISBN: 978-953-51-0213-7 ), (DOI: 10.5772/31818) (Book Chapter).InTech, Available from: http://www.intechopen.com/books/drugdiscovery-research-inpharmacognosy/introduction-to-ayurveda-
- 2. Swastika Ganguly, QSAR, B. K. Razdan, Drug Design, CBS Publishers, New Delhi, 2012 (in press).
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- 4. J.K. Kumar, A.Datta, "Validated Novel FTIR method for estimation of vanslochan obtained from Bamboo in Productivity enhancement and Value addition of Bamboos". Excel India publishers New Delhi.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. B.N.Sinha	Nominated as member on Editorial Board	Indian Pharmaceutical Association	2012
2.	Dr. R. N. Gupta	Dr.Bakul Bhaduri Pharma Achievement Award	7.0000/41011	Nov'11
3.	Dr. R. N. Gupta	Elected national Vice-President of Indian Pharmaceutical Association for two year	IPA	2012-2014

4.	Dr. R. N. Gupta	Nominated by Pharmacy Council of India as member in Syllabus revision Committee	PCI, India	July 2011
5.	Dr. R. N. Gupta	Chairman of poster /scientific paper at IPA Convention at Manipal	IPA	2012
6.	Dr. R. N. Gupta	Re -nominated as Editorial Board member in Pharmatimes (indexing in Scopus & Embase)	Pharmatimes	Oct 2011

## Patents (Applied)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Dr. Swastika Ganguly and	THIAZOLIDINE-2,4-DIONE	75/KOL/2012	27/01/2012
	Mr. Radhe Shyam Bahare	DERIVATIVES, THEIR SYNTHESIS		
	_	AND USES		

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

## **External Members**

- 1. Dr. P.R. Vavia
- 2. Dr. Arup Mukherjee

## Internal Members

- 3. Dr. (Mrs.) UshaJha
- 4. Dr.KunalMukhopadhyay
- 5. Dr. D. Sasmal Professor
- 6. Dr. P.R.P. Verma Professor & Head
- 7. Dr. B. N. Sinha Professor
- 8. Dr. S. Samanta Professor
- 9. Dr. S. Jha Professor
- 10. Dr. (Mrs.) S.G. Panpalia-Associate Professor
- 11. Mr. A. K. Pattanaik Assistant Professor

## Other important information

- Dr. Damodar Gupta delivered a lecture on 'A Novel strategies for protecting cells against low-LET Radiations -Possible role of mitochondria in radiation protection' and
- Mr. Devinder Pal delivered a lecture on 'A Peep into the Future of Pharma World'.

## DEPARTMENT OF PRODUCTION ENGINEERING



Machine Shop

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

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



Wire EDM

## **Ongoing Projects**

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

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	27th National Convention of Production Engineers National Seminar on "Advancements in Manufacturing - Vision 2020"	Dr B K Singh	IE(I)	May 25 – 26, 2012

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

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date , Month, Year
1. 2. 3. 4. 5.	Rajeev Agrawal Vijay Pandey R.K. Singh Somak Datta Binay Kumar	27th National Convention of Production Engineers National Seminar on "Advancements in Manufacturing - Vision 2020",	IE(I), JSC in association with Department of Production Engineering BIT, Mesra, Ranchi	BIT, Mesra	May 25 – 26, 2012
5.	Dr. Joyjeet Ghose	International Conference on Mechanical and Aerospace Engineering (ICMAE 2011,) Bangkok, Thailand.		Bangkok, Thailand.	July 29-31, 2011.
6. 7. 8.	B.K. Singh Vinay Sharma Rajeev Agrawal	National Seminar on Academic Institutes-Industries Interaction	Jointly Organized by CIT, Ranchi & IE (I), JSC	CIT, Ranchi	24th-25th Dec, 2011.
9.	Dr. Vinay Sharma	International conference on Agile Manufacturing Systems	International Society of Agile Manufacturing	Dayal Bag College, Agra	18-20th December 2011.

## **PUBLICATIONS**

### **Published in International Journals**

- 1. Brijesh Ainapur, Ritesh Singh & P.R.Vittal, TOC Approach for Supply Chain Performance Enhancement, International Journal of Business Research and Management (IJBRM), Volume 2, Issue 4: 2011, 163-178.
- 2. R.K. Singh and Lyes Benyoucef, Fuzzy Logic and Interval Arithmetic Based TOPSIS Method for Multicriteria Reverse Auctions", Service Science, Vol. 4, No. 2, June 2012, pp. 1–17
- 3. 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, publish on line (http://dx.doi.org/10.1016/j.engappai.2012.03.013).
- 4. Brijesh Ainapur, Ritesh Singh & P.R. Vittal, Strategic Study on Enhancement of Supply Chain Performance, International Journal of Business Insights and Transformation, Volume 5, Issue 1, Oct 11 March 12.

- 5. L.N. Pattanaik and V. Kumar, "Product family formation for reconfigurable manufacturing using a bicriterion evolutionary algorithm", International Journal of Industrial Engineering- Theory, Application and Practice, Vol 18(9), 2011, pp. 493-505.
- V. Sharma, J. Ghose & S. Kumar, "Compressive and Acoustic Behavioural Analysis of Al-MMC Foam for industrial Applications" Journal of The Institution of Engineers (India): Series C (January–March 2012) pp 33–40
- 7. Sanjeev Kumar, Somnath Chattopadhyaya, Vinay Sharma, "Environmental Management for small Sized Indian Enterprises in Manufacturing" Manufacturing Engineering, Vol X, No2, 2011, pp54-56
- 8. Joyjeet Ghose, Vinay Sharma, Surender Kumar. "Acoustic Absorption Characteristics of Closed Cell Aluminium Foam" Applied Mechanics and Materials Vols. 110-116 (2012) pp 1145-1149
- Sanjeev Kumar, Somnath Chattopadhyaya, Vinay Sharma, "Sustainable Supply Chain Management: A Case Study From Indian Automotive Industry" Advanced Materials Research Vols. 472-475 (2012) pp 3359-3370
- Sanjeev Kumar, Somnath Chattopadhyaya, Vinay Sharma, "Green Supply Chain And Operations Practice and Performance Of Small Scale Rubber Product Manufacturing Unit" IJETSE International Journal of Emerging Technologies in Sciences and Engineering, Vol. 4, No. 2, July 2011, pp 1-8
- Joyjeet Ghose, Vinay Sharma, Nitin Kumar, Ajay Krishnamurthy, Surender Kumar, Zlatko Botak, "Taguchi-Fuzzy Based Mapping of EDM-Machinability of Aluminium Foam"Tehnički vjesnik 18, 4(2011), pp 595-600

## Papers/Abstracts in Conference Proceedings

- 1. Ishwar Bhiradi, Anamika Rai, Prof. Rajeev Agrawal, "Implementation of Advanced Planning and Scheduling Framework for small Scale Industry", ICAM-2011 "Agile Manufacturing Systems Approach for Enhancing Agility of Organizations and Processes", Organised by Dayalbagh Educational Institute (India) durin December 18-20, 2011, Page 168-174.
- Viraj Shah, Sudhir Kumar, Rajeev Agarwal, L N Pattnaik, Fuzzy Model For the Austenite Grain Refinement In the Plate Rolling Low Carbon Steel", ICAM-2011 "Agile Manufacturing Systems Approach for Enhancing Agility of Organizations and Processes", Organised by Dayalbagh Educational Institute (India) during December 18-20,2011, Page 641-646.
- Viraj Shah ;Sudhir Kumar, Rajeev Agrawal, L.N Pattanaik "Fuzzy Model For Optimum Pass Schedule In Plate Rolling Of Low Carbon Steel", 27th National Convention of Production Engineers National Seminar on "Advancements in Manufacturing - Vision 2020", organized by IE(I), JSC in association with Birla Institute of Technology, Mesra, Ranchi at the Department of Production Engineering, Birla Institute of Technology, Mesra, Ranchi during May 25 – 26, 2012
- 4. Prashant Kumar, Ishwar Bhiradi, Rajeev Agrawal "Finite Element Analysis On The Mechanical Properties Of Forged A356 Alloy", 27th National Convention of Production Engineers National Seminar on "Advancements in Manufacturing - Vision 2020", organized by IE(I), JSC in association with Birla Institute of Technology, Mesra, Ranchi at the Department of Production Engineering, Birla Institute of Technology, Mesra, Ranchi during May 25 – 26, 2012
- 5. Subhash Kumar, Rajeev Agrawal "Modeling of The Micro-thermal Actuators and Its Deformation", 27th National Convention of Production Engineers National Seminar on "Advancements in Manufacturing -

- Vision 2020", organized by IE(I), JSC in association with Birla Institute of Technology, Mesra, Ranchi at the Department of Production Engineering, Birla Institute of Technology, Mesra, Ranchi during May 25 26, 2012
- 6. Rajeev Agrawal, Koushik Kabiraj, Gagan Kishore Nand "A simplified approach to control a robotic arm using a training robot", 27th National Convention of Production Engineers National Seminar on "Advancements in Manufacturing Vision 2020", organized by IE(I), JSC in association with Birla Institute of Technology, Mesra, Ranchi at the Department of Production Engineering, Birla Institute of Technology, Mesra, Ranchi during May 25 26, 2012
- 7. Anamika Rai, Rajeev Agrawal "Development of an educational plan to assess student skill level: a review", National Seminar on Academic Institutes-Industries Interaction, Jointly Organised by CIT, Ranchi and by Institution of Engineers (India), Jharkhand State Chapter, 24th-25th Dec, 2011, Page 328-332.
- 8. Rajeev Agrawal, Siddharth G. Menon "Design, Simulation and Control of sophisticated hexapod robot", All India Seminar on Recent Advancements in Robotics & Mechatronics, Organised by Mechanical Engineering department, The Institution of Engineers(India) in association with Bengal Engineering & Science University (BESU), Shibpur, Howrah, August 19-20, 2011.
- 9. Anurag Bodra, Anamika Rai, Vijay Pandey and Prem Prakash Prasad."Artificial Intelligence tools in Manufacturing", Proceeding of 27th National Convention of Production Engineers and National Seminar on Advancements in Manufacturing Vision 2020, Institution of Engineers (I), Jharhkhand State Centre, IE(I), B.I.T., Mesra, Ranchi, May 25 26, 2012.
- 10. Anamika Rai, Mayank Pawar, Vijay Pandey and Prem Prakash Prasad." Printed Circuit Board Assembly Problem: A Review", Proceeding of 27th National Convention of Production Engineers and National Seminar on Advancements in Manufacturing Vision 2020, Institution of Engineers (I), Jharhkhand State Centre, IE(I), B.I.T., Mesra, Ranchi, May 25 26, 2012.

#### **Books**

## **Authored**

- 1. Dr. R.K. Singh, Waste Free Manufacturing Using Lean Paradigms: Case Study of a SME: Lean Manufacturing [Paperback], LAP LAMBERT Academic Publishing (9 Sep 2011), Saarbrücken, Germany, ISBN-10: 3845439874, ISBN-13: 978-3845439877.
- Vijay Pandey, Feature Recognition System: A Link Between Design and Manufacturing, 978-3-8465-2064-2, LAP LAMBERT Academic Publishing, 2011, Saarbrücken, Germany, ISBN 978-3-8465-2064-2.

## Patents (Applied / Granted)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
1.	Vinay Sharma,	Aluminium Metal foam and	1721/DEL/2012 dated 06/ 06/ 2012	2012
	J. Ghose,	a process for preparation		
	Surender Kumar	thereof,		

## Departmental Students' Activities (Please arrange chronologically)

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1.	A technical talk has been arranged in the Department of Production Engineering on the topic entitled "Design & drafting automation technique".	Karanveer Singh Bindra	11.02.2012 at 08.55 A.M.
2.	A technical talk has been arranged in the Department of Production Engineering on the topic Entitled "Mechatronics Software (Automation Studio) and Mechatronics kit".	BE/1002/09 AADARSH AGARWAL	17.02.2012 at 09.55 A.M.
3.	HEC industrial Visit	BE/1296/09 SHRIKRISHNA PUROHIT	27th august,2011
4.	Departmental News letter by IE(I)	Raghvendra Purwar	By every three month

## PhD students enrolled, submitted and awarded

No of PhD students enrolled as on	No of PhD Thesis Submitted	No of PhD awarded during July'11
30/05/12	during July'11 to June '12	to June '12
01	Nil	01

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

- 1. Head of the Production Engineering Department Chairman
- 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

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,

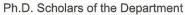
Department of Manufacturing Engg., NIFFT, Hatia

12. Er. S.K. Saxena,

G.M

## **DEPARTMENT OF REMOTE SENSING**







Researchers working for Integrated Watershed Management Project (IWMP) and Chandrayan Project

Department of Remote Sensing has been established to meet the increasing demand for qualified manpower in this rapidly developing field. The application of Remote Sensing techniques, Geographic Information System (GIS) and Global Positioning System (GPS) in various activities including resources evaluation, environmental monitoring and land use/land cover mapping etc, has grown considerably. Remote sensing data products are being increasingly used for plan formulation at all levels. Departmental academic and research activities adequately reflect this. In terms of academic courses, this department is offering M.Tech. in Remote Sensing and M.Sc. in Geoinformatics. Department is undergoing constant growth with ever improvising learning and research resources.

#### SPONSORED PROJECTS

#### Project Sanctioned during July 2011- June 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. In lakhs)	Duration of the Project
1.	Assessment of Irrigation	Dr. M. S. Nathawat	NRSA, DoS,	July 1,	1.99	6 Months
	potential	(On leave) &	Gol	2011		
		Dr. V.S. Rathore				
2.	Integrated Watershed	Dr. P.K. Barhai,	MoRD	20.09.11	594.21	5 years
	Management Programme	Dr. Gopal Pathak,				
		Dr. N. Patel &				
		Dr.V.S.Rathore				
3.	Understanding Lunar	Dr.V.S.Rathore &	SAC,	06.09.11	4.40	2 years
	Volcanism and Tectonism	Dr. Mili Ghosh	ISRO, Gol,			100000
	on Moon using		Ahmedabad			
	Chandrayaan-1 data					
4.	Land use/ land cover	PI: Dr. C.	NRSC,	March	30.00	18 months
	mapping, Bihar	Jeganathan	Hyderabad	2012		

## **Ongoing Projects Sanctioned before July 2011**

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in Lakhs)	Duration of the Project
1.	Ground Water Quality Mapping under-RGNDWM PH-IV	Dr.M.S. Nathawat (On leave) Dr. V.S. Rathore, Dr. A. C. Pandey	NRSA, DoS, Gol	June 2, 2011	45.25	20 Months
2.	Hybrid Polarimetric Signatures study under desertic environment under RISAT-UP	Dr. V.S. Rathore & Dr. Mili Ghosh	SAC, ISRO, Gol, Ahmedabad	September 2010-	13	2 Years
3.	Geo-informatics based glaciers retreat study in parts of great Himalayan range (J & K) with field validation in Pensilungpa	Pl: Dr. A.C. Pandey	DST, GOI	2011	21.03	2 Years
4.	Snow & Glaciers-Phase II	PI: Dr. A.C. Pandey	SAC	2011	32.15	3 Years
5.	NUIS-Dharmshala	PI: Dr. V.S. Rathore Co- PI: Dr. A.C. Pandey	NRSC	2010	2.83	6 Months
6.	SAP-DRS-1, Land & Water Audit studies	Dr. M.S. Nathawat (on leave) & Dr. A.C. Pandey	UGC	2007	36.00	Years

## Projects Completed during the period July 2011-June 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. In lakhs)	Date of completion of the Project
1.	NUIS (1:10K), Allahabad, U.P.	Dr. M. S. Nathawat (On leave) Dr. V.S. Rathore, Dr. A. C. Pandey & Mr. Nitish Kumar	NRSA, DoS, Gol	July, 2011	20	1 Year

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

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date , Month, Year
1.	Dr. A.P. Krishna	Seminar on Impact of Mining,	Society of	Hotel B.N.R.	22 April 2012
		Urbanisation and Industrialisation	Geoscientists,	Chanakya,	
		on Water Resources of Jharkahnd	Jharkhand	Ranchi	

#### **PUBLICATIONS**

## **Published in International Journals**

- Nilanchal Patel and Arnab Majumdar, Comparative Assessment of the Relationship of Satellite Data with the Above Ground Biomass of Sal Trees (Shorea robusta) Determined from Phenologically Different Time Periods, Geo-spatial Information Science (Springer), 14(3), pp.177-183, September 2011.
- 2. L.P. Sharma, Nilanchal Patel, M. K. Ghose and P. Debnath, Landslide Vulnerability Assessment and Zonation through Ranking of Causative Parameters Based on Landslide Density-Derived Statistical Indicators, Geocarto International (Taylor & Francis), 2011.
- 3. L.P. Sharma, Nilanchal Patel, M. K. Ghose and P. Debnath, Assessing Landslide Vulnerability From Soil Characteristics—A GIS-Based Analysis, Arabian Journal of Geosciences (Springer), January 2011.
- Mani Bhushan, Nilanchal Pateland Gadadhar Sahoo, Artificial Neural Network: A Tool For Classification of Land Use and Land Covers Using Satellite Images, International Journal of Computer Science and Information Technology, 2011.
- Nilanchal Patel and Amar Kumar Kathwas, Assessment of Spatio-temporal Dynamics of Soil Erosional Severity through Geo-informatics, Geocarto International (Taylor & Francis), Available online 22 August 2011, DOI:10.1080/10106049.2011.614359.
- Sangeeta Verma, Ravindra Kumar Verma, Rajani Kant Tiwari, Nilanchal Patel and Shankar Murthy, 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, 2012.
- 7. N. Parihar, A. Das, V.S. Rathore, M.S. Nathawat and S. Mohan, Analysis of L-band SAR backscatter and coherence for delineation of land use/land cover, Int. Jour. Remote Sensing, 2011 (Accepted)
- 8. Amit Kumar, A. C. Pandey, A.T. Jeyaseelan, Built-up and vegetation extraction and density mapping using WorldView-II. Geocarto International, DOI: 10.1080/10106049.2012.657695
- M. Rodríguez-Galiano,, Chica-Olmo, F. Abarca-Hernández, P.M. Atkinson and C. Jeganathan. Random Forest Classification of Mediterranean Land Cover Using Multi-seasonal Imagery and Multi-seasonal Texture. Remote Sensing of Environment, 121(2012), 93-107.
- 10. P.M.Atkinson, Dash, J., and Jeganathan, C.. Amazon vegetation greenness as measured by satellite sensors over the last decade. Journal of Geophysical Research Letters, 38 (2011), L19105, doi:10.1029/2011GL049118, http://www.agu.org/ pubs/crossref/pip/2011GL049118.shtml.
- 11. V.F. Rodríguez-Galiano, F. Abarca-Hernández, B. Ghimire, Chica-Olmo, M., Atkinson, P. M. and C. Jeganathan, Incorporating Spatial Variability Measures in Land-cover Classification using Random Forest. Spatial Statistics 2011: Procedia Environmental Sciences, 3(2011), 44-49.
- A.C. Pandey, Shashank Shekhar, M.S. Nathawat, Evaluation of Fluoride Contamination in Groundwater Sources in Palamu District, Jharkhand, India, Journal of Applied Sciences, Science Alert. DOI 10.3923/ jas.2012
- 13. A.C. Pandey, C. Pandey, Suraj Kumar Singh, M.S. Nathawat, Dipankar Saha, Assessment of surface and subsurface waterlogging, water level fluctuations, and lithological variations for evaluating groundwater resources in Ganga Plains, International Journal of Digital Earth, pp. 1-21, DOI: 10.1080/17538947.2011.624644.

- C. Jeganathan, Hamm, N.A.S., Mukherjee, S., Atkinson, P.M., Raju, P.L.N. and Dadhwal, V.K.. Evaluating a thermal image sharpening model over a mixed agricultural landscape in India. International Journal of Applied Earth Observation and Geoinformation, 13(2011), 178-191.
- C. Jeganathan, Roy, P.S. and Jha, M.N., RS & GIS based Multi-objective decision model for enhancing land resource planning in Shimla district. Journal of Environmental Informatics, 17(1), (2011) 15-24.

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

- A.K. Sharma, A.P. Krishna, V. Joshi, M.S. Rawat and K.K. Singh, Landslide hazard zonation using geoinformatics- a case study of Rong area, South Sikkim, Indian Landslides (ISSN 0974-5254), 4:2 (2011) 35-44.
- A.C. Pandey, Amit Kumar and A.T. Jeyaseelan, Urban Built-up Area Assessment of Ranchi Township using Cartosat-I Stereopairs Satellite Images, Journal of Indian Society of Remote Sensing, Springer. DOI 10.1007/s12524-012-0209-4.2012
- A.C. Pandey, Nathawat M.S and Ghosh, Swagata. Glacier Morphometric Control on Glacier area changes in Great Himalayan Range, Jammu & Kashmir, India. Current Science. Vol. 102, no 8 (2012), pp-1188-1193.
- 4. C. Jeganathan, Roy, P.S. and Jha, M.N., Bayesian modeling for land cover dynamics in Shimla District, India. Journal of Indian Forester, 37(2), (2011), 164-174.

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

- Nemika Kumari, and A.P. Krishna, Assessment of groundwater recharge locations using geoinformatics: a case study of parts of Ranchi urban area. In: Abstracts Proceedings of Seminar on Impact of Mining, Urbanisation and Industrialisation on Water Resources of Jharkahnd (Org. Society of Geoscientists, Jharkhand), Ranchi, April 22, 2012, pp. 40.
- 2. A.K.Sharma, S. Prakash, V. Joshi, A.P. Krishna and K.K. Singh, Applications of geoinformatics in disaster management a case study of Lingdok-Namphong area, Sikkim Himalaya, India, In: Abstracts Proceedings of National Conference and Field Study on Landslide Management (Org. NIDM, Gol & Disaster Management Faculty, Uttaranchal), March 22-24, 2012, Nainital, pp. 14.
- 3. A.P. Krishna, Landslide hazard monitoring for impact mitigation in the Eastern Himalayan state of Sikkim, India, In: Abstract Book of the Second World Landslide Forum (WLF2 2011– 0424), Pub. Italian National Institute for Environmental Protection and Research, Rome, Italy, 3-9 October 2011, pp. 232.
- 4. A.K. Sharma, A.P. Krishna, V. Joshi and K. Kumar, Natural disaster mitigation and management in Sikkim Himalaya, In: Proc. Regional Workshop on Rejuvenation of Springs by Artificial Recharge and Catchment Area Treatment, Gangtok, Sikkim (Org. Central Ground Water Board, Eastern Region, Kolkata), March 2011, pp. 8-25.
- Mili Ghosh and Ghosh, S.K., (2011). Normative Analysis for Educational Infrastructure Planning in Rural Area. Proceedings of International Conference on Infrastructure Finance (ICIF-2010), June 03-05,2010, IIT Kharagpur

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

- A.P. Krishna, Characteristics of snow and glacier fed rivers in mountainous regions with special reference to Himalayan basins, In: Singh, V.P., Singh, P. U.K. Haritashya (Eds.), Encyclopedia of Earth Sciences Series - Snow, Ice and Glaciers (ISBN 978-90-481-2641-5), Springer, The Netherlands, 2011.
- C. Jeganathan, Geoinformatics: An Overview and Recent Trends. In., Anbazhagan et al. (eds.) Geoinformatics in Applied Geomorphology, CRC Press, Pages 1-21, DOI: 10.1201/b10964-2. Taylor & Francis Group, 2011.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. Nilanchal Patel	Associate Editor	Journal of Forestry Research (SPRINGER)	Till 2015
2.	Dr. Nilanchal Patel	Editor	STM Journal of Remote Sensing and GIS	Since 2011
3.	Dr. Nilanchal Patel	Editor	STM Journal of Recent Trends in Civil Engineering and Technology	Since 2011
4.	Dr. Nilanchal Patel	Editor	STM Journal of Ecology (Research and Reviews)	Since 2011
5.	Dr. Nilanchal Patel	Visiting scholar	University of AVEIRO, PORTUGAL	2012
6.	Dr. A.P. Krishna	Member, Abjudication Committee, Partnership development seed grant (PDSG)	SICI/CIDA/ University of CALGARY, Canada	2011-2012
7.	Dr. A.P. Krishna	Member Programme Committee (as Additional Reviewer)	International Symposium on Academic Globalization (AG 2011), Orlando, Florida, USA	2011-12
8.	Dr. A.P. Krishna	Fellow of Geological Society of India [FGSInd]	Geological Society of India, Bangalore	2011-12
9.	Dr. A.P. Krishna	Life Member	Society of Geoscientists, Jharkhand	Since 2012

## Departmental Students' Activities (Please arrange chronologically)

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	Student Faculty Cricket match	Dr. V.S. Rathore	January, 2012
2.	Student's Field Exposure Visit (combined M.Tech & M.Sc)	Dr. N. Patel, Dr. A.P. Krishna,	February 5, 2012
	WI. 166 1 & WI.66)	Dr. A.C. Pandey	

# 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	SGI1009, SGI3005, SGI3017, TRS2035, TRS2039 (ppts and handouts – Dr. A.P. Krishna)	Classroom teaching during Mo2011, Sp2012
Pedagogy	-	
Student - centric Learning	Information Technology perspectives of Remote Sensing and Geoinformatics' (Dr. A.P. Krishna)	Interdisciplinary Lecture Series of Department of Information Technology, BIT Mesra (16 -17 March 2012)

## PhD students enrolled, submitted and awarded

No of PhD students enrolled as on 30/05/12	No of PhD Thesis Submitted during July'11 to June '12	No of PhD awarded during July'11 to June '12
28	6	2

## Members on Board of Studies (PG):

- 1. Dr. N. Patel
- 2. Dr. A.P. Krishna
- 3. Dr. C. Jeganathan
- 4. Dr. A.C. Pandey
- 5. Dr. V.S. Rathore
- 6. Dr. Mili Ghosh
- 7. Dr. G. Sahoo
- 8. Dr. N.C. Mahanti
- 9. Dr. S. Sengupta, External Expert
- 10. Dr. R.N. Sahoo, External Expert

## DEPARTMENT OF SPACE ENGINEERING & ROCKETRY



Aerodynamics Laboratory

The various Divisions under the Department are:

- 1. Aerodynamics Division
- 2. Rocket Propulsion Division
- 3. Propellant Technology Division
- 4. 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 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, which are housed in separate buildings around the main Administrative Building.



Liquid and Hybrid Test Facility

The Department has taken up sponsored R & D Projects from premier Agencies, like UGC, AICTE, DST, Ministry of HRD, ISRO, DRDO, CSIR, AR & DB (Min. of Defence), etc. It has successfully completed as many as 36 Projects and another 7 are currently under progress. The Department has also been recognized under Special Assistance Programme of UGC and has been working on development of a Cryogenic and Cryo-Hybrid Rocket Propulsion System in Phase II.

The notable current research activities of the Department include:

- 1. Development of Cryogenic Propulsion System
- 2. Droplet Combustion Studies on Selected Fuels
- 3. Development of Flight Hybrid Propulsion Systems
- 4. Flow Field Studies around Supersonic Air Intake
- 5. Development of High Regression Rate Hybrid Fuel
- 6. Parametric Study on Premixed Flame
- 7. Development of Cryo-Hybrid Rocket Propulsion System
- 8. Flow Field Studies around Slender Bodies at

- 9. High Angles of Attack
- 10. Flow Field Studies on Blunt Conical Bodies with Spikes at Supersonic Speeds
- 11. Measurements of Unsteady Pressures on HRV & Conical Bodies at Supersonic Speeds
- 12. CFD Studies of Subsonic/ Supersonic Flow Field around Protrusions, Slender Bodies and Intakes
- 13. Combustion Study of Hybrid Fuels with Nitrous Oxide Oxidizer
- 14. Renovation of Liquid Propulsion Section for use of Liquid Bipropellant and Solid Liquid Hybrid System

## **SPONSORED PROJECTS**

## Project Sanctioned during July 2011- May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (In lakhs)	Duration of the Project
1.	Investigation of Flow	Dr. J. K. Prasad	AR&DB	May 2011	11.40	3 years
	Behaviour on Winged body	Prof. Sudip Das				
	at Subsonic Speed	Prof. Priyank Kumar				

## **Ongoing Projects Sanctioned before July 2011**

SI. 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. A. K. Chatterjee Dr. P. C. Joshi	UGC (SAP - II)	Apr 2007	49.00	5 years
2.*	Measurement of Unsteady Pressures on Conical Region of a Missile at Supersonic Speed	Dr. J. K. Prasad	ASL DRDL	Mar 2007	8.20	2 years
3.	Augmentation of Supersonic Tunnel	Dr. J. K. Prasad Dr. Sudip Das Prof. Priyank Kumar	AR &DB Ministry of Defence	Jun 2009	19.38	3 years
4.	Measurement of Axial Force on Cone with Spike at Supersonic Speed	Dr. J. K. Prasad	ANSP DRDL	Dec 2009	10.80	1 years
5.	Investigation of Flow Field around Double Delta Wing at Subsonic Speed	Dr. J. K. Prasad Prof. Priyank Kumar Dr. Sudip Das	CSIR, New Delhi	Nov 2009	07.51	3 years
6.	Study of Flow Field Inside Air Intake With Flow Control	Dr. J. K. Prasad ′Dr. Sudip Das Prof. Priyank Kumar	RESPOND (ISRO)	Jan 2011	18.59	3 years

## Projects Completed during the period July 2011-May 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in Lakhs)	Date of completion of the Project
1.	Propellant Technology	Dr. A. K. Chatterjee	DST	Jan 2005	25.00	
	and Combustion Facility	Dr. Mohan Varma	(FIST)			

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

SI. No.	Title of Seminar / Conferences / Short- term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short- term Courses
1.	Aerospace Engineers "Indian	Dr. A. K. Chatterjee	ASL, CSIR ANSP, NAL, ISRO, DRDO, HEC MECON Ltd	Nov 04-05, 2011

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

S. No.	Name of the Faculty	Title of the Conference/Seminar	Organized by	Venue	Date , Month, Year
1.	Dr. A. K. Chatterjee	National Multi Conference on Technology and Management	L N College of Technology	Indore	Aug 18-20, 2011
2.	Dr. A. K. Chatterjee	Twenty Fifth National Convention of Aerospace Engineers	IE(I)	BIT Mesra	Nov 4-5, 2011
3.	Dr. A. K. Chatterjee	1st World Summit on Accreditation	NBA	New Delhi	Mar 25-28, 2012
4.	Dr. P. C. Joshi	Twenty Fifth National Convention of Aerospace Engineers	IE(I)	BIT Mesra	Nov 4-5, 2011
5.	Dr. P. C. Joshi	National Conference on Recent Trends in Chemical Sciences	BIT, Deoghar	BIT Deoghar	Feb 18-19, 2012
6.	Dr. P. C. Joshi	1st World Summit on Accreditation	NBA	New Delhi	Mar 25-28, 2012
7.	Dr. J. K. Prasad	Twenty Fifth National Convention of Aerospace Engineers	IE(I)	BIT Mesra	Nov 4-5, 2011
8.	Dr. J. K. Prasad	Fifth Symposium of Applied Aerodynamics and Design of Aerospace Vehicle (SAROD – 2011)	ADA & ADE	Eagelton Resorts, Bangalore	Nov 16-18, 2011
9.	Dr. J. K. Prasad	National Conference on Space Transportation Systems Opportunities and Challenges	VSSC, ISRO & - INAE	Trivandrum	Dec 16-18, 2011
10.	Dr. Sudip Das	Twenty Fifth National Convention of Aerospace Engineers	IE(I)	BIT Mesra	Nov 4-5, 2011

11.	Prof. Priyank Kumar	Twenty Fifth National Convention of	IE(I)	BIT Mesra	Nov 4-5,
		Aerospace Engineers			2011
12.	Prof. Priyank Kumar	38th National Conference on Fluid	MANIT,	MANIT,	Dec 15-17,
		Mechanics & Fluid Power	Bhopal	Bhopal	2011
13.	Shri Narendra	National Conference on Recent	BIT, Deoghar	BIT	Feb 18-19,
	Yadav	Trends in Chemical Sciences		Deoghar	2012
14.	Shri Narendra	Twenty Fifth National Convention of	IE(I)	BIT Mesra	Nov 4-5,
	Yadav	Aerospace Engineers			2011

#### **PUBLICATIONS**

#### Published in International Journals:

1. S. R. Nagaraja, J. K. Prsad and G. Jagadeesh, "Teoritical- experimental study of shock wave- assisted metal forming process using a diaphargmless shock tube", Proceedings of the Institution of Mechanical Engineers, Journal of Aerospace Engineering (2011).

#### Papers/Abstracts in Conference Proceedings:

- Revanth Reddy, L. Mallick and A. K. Chatterjee, "The Effect of TiO2 on Burning Rate and Thermal Decomposition on Composite Solid Propellant", National Seminar & Conference on Recent Trends in the Role of catalyst in Industry, Laxmi Narain College of Technology, Indore, Aug 18 – 20, 2011.
- 2. Revanth Reddy, L. Mallick and A. K. Chatterjee, "Mechanistics, Rheological and & Atomization Studies of RFNA Gel", National Seminar & Conference on Recent Trends in the Role of catalyst in Industry, Laxmi Narain College of Technology, Indore, Aug 18 20, 2011.
- 3. A. Manash, L. Mallick and A. K. Chatterjee, "Thermal decomposition and burning rate study of AP- HTPB based composite solid propellants", 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi Nov 4 5, 2011.
- 4. A. M. Nagarajeswaran, L. Mallick and A. K. Chatterjee, "The Effect of Catalyst on Burning Rate and Thermal Decomposition of Solid Propellants", 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi Nov 4 5, 2011.
- 5. R. Reddy A, L. Mallick and A. K. Chatterjee, "Mechanistic, Rheological and Atomization Studies of Kerosene Gel", 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi, Nov 4 5, 2011.
- 6. D. Shashikala and P. C. Joshi, "Combustion Studies of HTPB- Shellac Fuel in the Gaseous Oxidizer" 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi, Nov 4 5, 2011.
- 7. M. K. Ralh, R. Krishna Mohan Rao, S. Das, P. Kumar and J. K. Prasad "Effect of Spike Shapes on Drag of Hemispherical Body at Supersonic and Hypersonic Speed" 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi, Nov 4 5, 2011.
- 8. Rohit R., P. Kumar, S. Das and J. K. Prasad "Flow Field in the Interference Region of Multi Body at Supersonic Speed" 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi, Nov 4 5, 2011.
- 9. P. S. Vignesh Ram, S. Das, P. Kumar and J. K. Prasad "Flow Field Investigation on Cylindrical Protrusion of Different Heights with Vortex Generator at Supersonic Speed" 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi, Nov 4 5, 2011.

- S. Karthikeyan, P. Kumar, S. Das and J. K. Prasad "Effect of Fuselage on Reusable Launch Vehicle at Subsonic Speed" 25th National Convention of Aerospace Engineers (NCAE 2011), BIT Mesra, Ranchi, Nov 4 – 5, 2011.
- M. Venkatesan, N. Kannamanimuthu, S. Das, P. Kumar and J. K. Prasad "Flow Field Investigation over a Hemispherical Blunt Body with Different Spikes at Supersonic Speed", 38th National Conference on Fluid Mechanics & Fluid Power, NIT, Bhopal, Dec 15-17, 2011.
- P. S. Vignesh Ram, S. Das, P. Kumar and J. K. Prasad "Influence of Vortex Generator on Flow Field Around Cylindrical Protrusion at Supersonic Speed" 38th National Conference on Fluid Mechanics & Fluid Power, NIT, Bhopal, Dec 15-17, 2011.
- P. Kumar, Ch. Srikanth, S. Das and J. K. Prasad "Effect of Trips on Side Force on Slender Body at Large Angles of Attack" Fifth Symposium of Applied Aerodynamics and Design of Aerospace Vehicle (SAROD – 2011), Eagleton Resorts, Bangalore. Nov 16-18, 2011.
- 14. V. Jagadish Babu, P. Kumar, S. Das and J. K. Prasad "Effect of Notched Cowl Field Inside a Supersonic Air- Intake" Fifth Symposium of Applied Aerodynamics and Design of Aerospace Vehicle (SAROD 2011), Eagleton Resorts, Bangalore, Nov 16-18, 2011.
- N. Kannamanimuthu, S. Das, P. Kumar and J. K. Prasad "Flow Field around a Blunt Body with Spike at Supersonic Speed" Fifth Symposium of Applied Aerodynamics and Design of Aerospace Vehicle (SAROD – 2011), Eagleton Resorts, Bangalore, Nov 16-18, 2011.
- M. S. Chenji, P. Kumar, S. Das and J. K. Prasad "Effect of Control Deflection on the Aerodynamics of Reusable Launch Vehicle at Subsonic Speed" National Conference on Space Transportation Systems; Opportunities and Challenges, VSCC, (ISRO) Thiruvanathapuram, Dec 16-18, 2011.
- 17. Narendra Yadav, S. S. Majhi and P. K. Srivastava "Growth Mechanisms and Ordering of Spherulitic Textures in a Belousov- Zhabotinsky Type Reaction System" National Conference on Recent Trends in Chemical Sciences, BIT, Deoghar, Feb 18-19, 2012.

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1.	Dr. A. K. Chatterjee	Chairman, Bihar & Jharkhand Section	ISTE, Delhi	2011-12
2.	Dr. A. K. Chatterjee	Member, Aerospace Engineering Division Board,	IE(I)	2011-12
3.	Dr. A. K. Chatterjee	Reviewer of the Indian Journal of Technical Education	ISTE, Delhi	
4.	Dr. J. K. Prasad	Best Paper Award in Journal of the Institution of Engineers(I),2010-11 Gold Medal	IE(I)	2011
5.	Dr. J. K. Prasad	Reviewer of Defence Science Journals		
6.	Dr. J. K. Prasad	Vice President, National Society FMFP	National Society for FMFP	2011-12
7.	Dr. Sudip Das	Best Paper Award in Journal of the Institution of Engineers(I),2010-11 Gold Medal	IE(I)	2011

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

#### **Internal Members**

Dr. A. K. Chatterjee Chairman Dr. P. C. Joshi Member Dr. J. K. Prasad Member Dr. Sudip Das Member Dr. Sumana Ghosh Member Shri Priyank Kuma Member Dr. Arbind Kuma Member Dr. B. K. Singh Member

#### **External Members**

- Dr. Navtej Singh,
   Professor, IIT, Kharagpur
- Dr. B. Mazumdar, Jadavpur University, Kolkata
- Shri A. K. Chakrabarti,
   Director, DRDL, Hyderabad
- Shri M. C. Dattan,
   Director, SDSC, Shriharikota, Nellore

## **ENVIRONMENTAL SCIENCE & ENGINEERING GROUP**



Biomass estimation of Sal forest within BIT campus.

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

Department etc. Many faculties appointed as an external examiner, question setter and reviewer of various National & International Journals. The laboratory assignments of the Department are conducted in the allied Departments (Department of Applied Chemistry, Department of Remote Sensing, and Department of Polymer Engineering and CAAD Laboratory).

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

The past students of this course are well established in different organization like SESA Goa (SESA Groups), Metallurgical Engineering Consultants (MECON, Ranchi) and Tata Consultancy Services (TCS, Hyderabad) etc. and few have continued their research work to pursue the PhD. The students are allowed to carry out their thesis work in other industries or research organizations as per their suitability. During the next five years, ESEG



Weather Data monitoring Station at R&D building

plans to expand and get established as a Department with its own laboratories. The ESEG is also planning to start an M-Tech Programme on Sustainable Development Engineering.

#### SPONSORED PROJECTS

#### Project Sanctioned during July 2011- June 2012

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

#### Ongoing Projects Sanctioned before July 2012:

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

#### Seminar/Conference/ Short -term Courses Conducted by the Department:

SI. No	Title of Seminar/ Conferences/Short- term Courses	Coordinator	Funding/ Sponsoring Agency	Date of Seminar/ Conferences/Short-term Courses
1.	National Conference	Dr. Kirti Avishek		4-5th Dec, 2012
	on Sustainable	Dr. R. Naresh Kumar		
	Development and Global	Chairman:		
	compititiveness	Dr. Gopal Pathak		

#### Seminar/Conference/ Short -term Courses Conducted by the Department:

SI. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Month Date, Year
1.	Prof. Gopal	National Seminar on		TQMS	Christ	26-28Sep,
	Pathak	Academic Leadership for			University,	2012
		Heads of Departments	ļ		Bangalore	
2.	Dr.Kirti Avishek		·	ICIMOD,	ICIMOD,	5-7Sep, 2011
			****	NEPAL	NEPAL	
3.	Amit Kumar	Air Quality 2012	DST	University of	Athens	19-23 March,
	Gorai			Hertfordshire		2012

#### **PUBLICATIONS**

#### **International Journals**

- 1. 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).
- 2. Gorai, A. K., and Jawed, I. (2012). Approaches to Ground Water Vulnerability to Pollution: A Literature Review, Asian Journal of Water, Environment and Pollution, Vol. 9(1), pp.105-115.
- 3. 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.
- 4. Hazra, M., Avishek. K, Pathak G. (2011). Developing an Artificial Wetland System for Wastewater Treatment: A Designing Perspective. International Journal Environmental Protection. Vol.1 No.1. PP.8-18 www.ijep.org. World Academic Publishing

- Kirti Avishek, 2012. Challenges and opportunities for management of terrestrial ecosystem in Asia, UNEP POLICY SERIES 9, International Ecosystem Management Partnership.
- 6. Avishek, K, Yu Xiubo, Jian Liu(July 2012), Ecosystem Mangement in Asia Pacific: Bridging Science Policy gap, Environmental Development. Vol 3, pp 77-90.
- Jonstrup, M., R.Naresh Kumar, B. Guieysse, B.Mattiasson and M. Murto (in press). Decolourisation of textile dyes by Bjerkandera sp. BOL 13 using biomass as carbon source. Journal of Chemical Technology and Biotechnology.
- 8. Naresh Kumar, R., C.D.McCullough, M.A. Lund and M. Newport (2011). Sourcing organic materials for pit lake bioremediation in remote mining regions. Mine Water and the Environment. Vol. 30, 296–301.
- 9. Jonstrup, M., R.Naresh Kumar, B.Mattiasson and M. Murto (2011). Sequential anaerobic-aerobic treatment of azo dyes: Decolourisation and amine degradability. Desalination Vol. 280, pp. 339–346.
- Naresh Kumar, R., C.D. McCullough and M.A. Lund (2011). How does storage affect the quality and quantity of organic carbon in sewage for use in the bioremediation of acidic mine waters? Ecological Engineering, 37, pp. 1205–1231.
- 11. 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.
- 12. \*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.
- 13. \*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.
- 14. \*Naresh Kumar, R., McCullough, C.D. and Lund, M.A. (2011). Potential of sewage and green waste for acidic pit lake bioremediation. Proceedings of the International Mine Water Association Congress 2011, pp. 381–386, Aachen, Germany.
- 15. \*Naresh Kumar, R., McCullough, C.D., Lund, M.A. and Larranaga, S. (2011). Evaluating the factors limiting algal biomass in acidic pit lakes of Collie lake district, Western Australia. Proceedings of the International Mine Water Association Congress 2011, pp. 523–528, Aachen, Germany.
- 16. Naresh Kumar, R., McCullough, C.D. and Lund, M.A. (2011). Bacterial sulfate reduction based ecotechnology for remediation of acidic pit lakes. Short Course on Pit Lakes and Mine Closure: Design and Management, Mine Closure 2011 Conference, Lake Louise, Alberta, Canada.

#### **Proceedings:**

- 1. Gorai, A. K., Development of hierarchical fuzzy model for prediction of air quality index, 8th International Conference on Air Quality Science and Application, 19-23 March, 2012, Athens.
- 2. Pathak, Gopal, Arsenic Contamination in Groundwater: A Serious Threat, 21st Annual International conference on soils, sediments, water and energy, March. 14-17, 2011, San Diego, California, USA.

#### Book:

- 1. A Complete Guide for Mining Engineers' (ISBN:978-81-7956-120-1) Published by Lovely Prakashan, Dhanbad, 2012.
- 2. Naresh Kumar, R., C.D. McCullough and M.A. Lund (in press). Pit lakes in Australia. In: Acidic Pit Lakes Legacies of surface mining on coal and metal ores (Eds. W. Geller and M. Schultze) Springer publishers, Berlin, Germany.
- 3. Naresh Kumar, R., McCullough, C.D. and Lund, M.A. (2011). Bacterial sulfate reduction based ecotechnology for remediation of acidic pit lakes. In: Mine Pit lakes: Closure and Management. (Ed. C.D. McCullough) pp. 121–134, Australian Centre for Geomechanics, Perth, Australia.

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

S. No.	Name of the Faculty	Title of the Award/Honours	Organization	Year / Duration
1.	Dr. Gopal Pathak	Special invitation to attend the Meetings of the Minds (Special Invitation for 250 global Urban Sustainability Technological leaders from around the globe)	CISCO, USA	Oct 9-11, 2012
2.	Dr. Kirti Avishek	Young International Scientist	Chinese Academy of Sciences	July 2011 to June 2012.

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

S. No.	Name of the Activity	Students coordinator, if any	Date/Duration
1.	Privileged opportunity to meet and learn about global climate change with Dr. Terry Root, Senior Fellow- Woods Institute. Professor, by courtesy –Biology Department. Woods Institute for the Environment, Stanford, California (USA).	Shambhavi Singh	July-August 2012
2	Presenting a paper in the National Seminar Urbanization and Changing State of Environment	Kuldeep Suman Abhinav	24-25th sep, 2012
3	Participating in the 20th National Children Science congress	Reeti Kumari	Sep, 2012

#### **Development of Learning Materials**

Learning Materials	Name of Subject/ Course/ Programme	Where & When used	
e-contents	Air Pollution Quality & Control	In class room/ lab and for	
	2. Environmental System Engineering	distributing to students	
at unique	3. GIS lab manual		

#### Ph.D. students enrolled, submitted and awarded

No. of Ph.D. students enrolled as on 30/05/12	No. of Ph.D. thesis submitted during July 11 to June 12	No. of Ph.D. awarded during July11 – June 12
18	2	1

9.

Mrs. Bindu Lal

Reader, Dept. of Civil Engineering, B.I.T, Mesra.

## CENTRE OF EXCELLENCE IN CLIMATOLOGY

Looking at 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. 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, Thiruvanthapuram, MoES New Delhi have also attracted to study here in terms of sanctioning projects (total outlay 50 million rupees) to measure and analyse the data on aerosol, black carbon, land



Radiosonde observations for upper boundary layer

surface process study and boundary layer evolution in the higher atmosphere (upto 35 km) and it was felt that BIT is an ideal place in Jharkhand where an interdisciplinary centre together with a M.Tech. programme could be started for their larger participations to study different aspects of Meteorological/Atmospheric Sciences including 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.



Sunphotometer

The Board of Governors approved the setting up of new inter-disciplinary Centre of Excellence in Climatology to develop the capacity building in the relevant field of study. The centre has started an Integrated Course on Ph.D. (With M.Tech.) in Atmospheric Science & Engineering from the current session. The centre has become formally functional from March, 2011.

The 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 an 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

#### Project Sanctioned during July 2011- June 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Satellite Application in Land		Space	August,	20.0 Lakhs	2011-2014
	Study over Eastern Part of the Country (An INSAT-3D Data	Prof. N C Mahanti	Application Centre, Ahmedabad	2011		
	Retrieval observatory at Birla Institute of Technology Mesra, Ranchi)	Dr. A C Pandey		3		

2			Dr. Manoj Kuamr	MOES, New	August,	53.0 Lakhs	2011-2014	
	studies	coupled	with	(PI)	Delhi	2011		
	atmospher along east trough	ic transfer inter tern end of mo	raction	Prof. N C Mahanti (Co-PI)				

## Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI/ Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	ABLN&C programme at BIT Ranchi	Dr. Manoj Kumar- Pl Prof. N C Mahanti-Co-Pl	SPL, VSSC (ISRO)	April, 2010	55.0 Lakhs	2010-2013
2	An Network station at BIT Ranchi	Dr. Manoj Kumar- Pl Prof. N C Mahanti-Co-Pl	SPL, VSSC (ISRO)	Nov, 2009	35.0 Lakhs	2009-2013
3	Short term oscillation study of surface boundary layer during total solar eclipse on 22nd July, 2009 & 15th Jan 2010	Manoj Kumar	ISRO Hq.	22-5-2009	2.0 Lakhs	2009-11
4	PRWONAM Campaign activity and MBLM data analysis	N C Mahanti A C Pandey	ISRO HQ	21 March, 2011	22.7 Lakhs	3-5 Years
5	Dynamical Coupling and parameterization and its Role in the Energy and Momentum Budget of the Middle Atmosphere coupled with land surface processes along eastern end of monsoon trough	Dr. Manoj Kumar	ISRO Hq.	On Collaborative mode & Istrument mode	Istruments @ 1.0 Crore	Continued mode
6	Energy & Mass Exchange in Vegetative System Under Collaborative mode	Dr. Manoj Kumar	SAC, Ahmedabad	26-3-2008	10.0 Lakhs	2008-12
7	AERONET system and measurements: BITEC Jaipur	Dr Swagata Payra-Pl Dr Sunita Verma- co-Pl	GSFC, NASA	In collabo- ration	Instrumental mode	Continuous
8	Physical and Optical Properties of aerosols over an urban site in northwestern India	Dr Sunita Verma- Pl Dr Swagata Payra-co-Pl	DST, Govt of India, Delhi	Sept, 2009	34.05 Lakhs	2009-2013

## Projects Completed during the period July 2011-June 2012

SI. No	Project Title	PI / Co- PI/ Collaborator	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Observational study of land surface atmosphere interaction in the monsoon trough along its active eastern end	Prof. N C Mahanti (PI) Dr. Manoj Kumar (Co-PI)	DST, GOI	26-12-2006	66.59 Lakhs	31-12-2010
2	Short term oscillation study of surface boundary layer during total solar eclipse on 22nd July, 2009 & 15th Jan 2010	•	ISRO Hq.	22-5-2009	2.0 Lakhs	2009-11

## 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	STORM Workshop	MoES, GOI	IIT Kharagpur	15th May, 2011
		SAARC-STROM Workshop	MoES	Kathmandu, Nepal	December 23- 25, 2011
		Review workshop of PRWONAM projects	ISRO HQ	ISRO, Bangalore	19-20 Aug, 2012
ANNOVARIATION OF THE PARTY OF T		ISRO-GBP project "Energy and Mass Exchange in Vegetative Systems"	SAC, ISRO, Ahmedabad	Space Applications Centre, Ahmedabad	6th September 2011
		Annual Review Workshop on MOES-CTCZ project	MoES & IISc, Bangalore	IISC, Bangalore	26-27 November, 2011
		INSAT3D Project meeting	SAC Ahmedabad	SAC	7th 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
2.	Ms. Lipi	International Workshop cum Seminar series on "Challenges and Opportunities in Air Pollution and Climate Change (CHOP-C)"	Kanyakumari	Indo-German program	Jan 16-18, 2012

		National Conference on Mathematical and Statistical Modelling in Innovative areas	BIT Mesra	BIT Mesra	Oct 19-20,2011
WANT TO THE TAXABLE PROPERTY OF TA		National Conference on "Climate Change and its impacts on life and water resources"	Annamacha- rya Institute of Technol- ogy and Sci- ences (AITS), Hyderabad	Hyderabad	22- 23rd July 2011
		International Conference on Earth Dynamics - Perceptions and Deadlocks 2011 [EDPD- 2011]	Kanyakumari		7 - 11 September 2011
3.	KM.Shweta	Training on Microwave remote sensing & it's applications	NRSC (ISRO)	Hyderabad	4-22 May, 2012
4.	Ms. Gargi Akhoury	Workshop cum Brain storming meeting on "Tropical Tropopause Dynamics",	VSSC, Trivandrum	Thiruvanan- thapuram	24-25 January, 2012
5.	Ms. Sagarika Chandra	Workshop cum Brain storming meeting on "Tropical Tropopause Dynamics",	VSSC, Trivandrum	Thiruvanan- thapuram	, 24-25 January, 2012
		Annual Review Workshop of ARFI & NOBLE Projects	SPL, VSSC (ISRO),	Trivandrum	20-22 June, 2012
6.	Dr. Swagata Payra	PAC Annual Review DST Project	DST, Delhi	Hyderabad	7th Sept 2009
III AMAAAA		30th Annual Conference of American Association for Aerosol Research	AAAR, USA	Florida USA	3–7 October, 2011
		OCHAMP-2012	IITM Pune	Pune	21-26th February 2012
7.	Dr. Sunita Verma	Open Science Conference	WCRP, USA	Denver Colorado, USA	24-28th October, 2011
		PAC Annual Review DST Project	DST, Delhi	Dehradun	7-9 February, 2012
		OCHAMP-2012	IITM, Pune	Pune	21-26th February 2012

#### **PUBLICATIONS**

#### **Published in International Journals**

- 1. Kumari Lipi, Manoj Kumar, Mahanti, S. Sureshbabu "Aerosol Properties Over Ranchi Measured From Aethalometer" published in Atmospheric and Climate Sciences, 2011, 1, 91-94 doi:10.4236/acs.2011.13010 Published Online July 2011 (http://www.scirp.org/journal/acs).
- 2. Pandey, Swati, Manoj Kumar, S. Chakraborty, and N C Mahanti. 2011. Ananlyzing the variability of rainfall for drought in Jharkhand state: A statistical approach. Published online in Wiley Online Library (wileyonlinelibrary.com), DOI: 10.1002/ird.627: J. Irrigation & Drainage. Wiley Int. Publication.
- 3. Kumar, Manoj, A.M. Shekh and Vyas Pandey. 2011. Study of land surface processes over different soil surfaces over Semi arid region of India, Nava Gavesana ISSN:0976-9455 An International Research Journal.
- 4. Manoj Kumar, N C Mahanti, Vyas Pandey, A. M. Shekh1, Anil Kumar, A Wadood, Ms Lincey, and G S L H V Prasada Rao.2011. Short term fluctuations in crop behaviour and carbon uptake during total and annular solar eclipses, Int.Journal of Environmental Protection, ISRN Scholary, USA.
- Jyotsna Singh, Bimal K. Bhattacharya, and Manoj Kumar, 2011. Modeling Monthly Diffuse Solar Radiation Fraction and its Validity over Indian Sub-Tropics. International Journal of Climatology. DOI:10.1002/ joc.3408
- 6. 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.
- 7. 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.
- 8. S.Tiwari, Swagata Payra, Mohan, M., S. Verma, and D S Bisht, 2011, Visibility Degradation during Foggy Period due to Anthropogenic Urban Aerosol at Delhi, India, Atoms. Pollution Research, Vol 2, Issue 1, pp 116-120 (doi: 10.5094/APR.2011.014).
- 9. Gautam, R., N. C. Hsu, S. C. Tsay, K. M. Lau, B. N. Holben, S. Bell, A. Smirnov, C. Li, R. Hansell, Q. Ji, Swagata Payra, D. Aryal, R. Kayastha, and K. M. Kim, Accumulation of aerosols over the Indo-Gangetic plains and southern slopes of the Himalayas: distribution, properties and radiative effects during the 2009 pre-monsoon season, Atmos. Chem. Phys., 11, 12841-12863, doi:10.5194/acp-11-12841-2011, 2011.
- 10. 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.

#### Papers/Abstracts presented in Conference

- Manoj Kumar, Gargi Akhoury, A P Ghorai and N C Mahanti. An analysis on the impact of monsoon circulations on the upper troposphere and lower stratosphere over the two extreme ends of India. Workshop cum Brain storming meeting on "Tropical Tropopause Dynamics", Thiruvananthapuram, 24-25 January, 2012
- 2. Manoj Kumar, Sagarika Chandra, A C Pandey and Mita Pal. Comparison Between the Cirrus top altitude and Tropopause altitudes and Tropopause altitudes. Workshop cum Brain storming meeting on "Tropical Tropopause Dynamics", Thiruvananthapuram, 24-25 January, 2012.

- Kumar Manoj and Tripta. 2012. Land surface processes and influence of convection on tropospheric variation. Paper presented in Workshop cum Brain storming meeting on "Tropical Tropopause Dynamics" held at VSSC, Trivandrum on January 24-25, 2012.
- Jyotsna Singh, Manoj Kumar and Bimal K Bhattacharya. 2011 Trend and Modelling of Diffuse Solar Radiation for India's Sun City. National Conference on Mathematical and Stastistical Modeling October 19-20, 2011.
- Kumar Roushan & Manoj Kumar. 2011. Seasonal and diurnal variation of albedo and soil moisture over Ranchi. Paper presented in National Conference on Mathematical and Stastistical Modeling October 19-20, 2011.
- Tyagi, Bhishma, A.N.V. Satyanarayana1\*, Manoj Kumar2, N.C. Mahanti. 2011. Characteristics of Turbulent Kinetic Energy and surface meteorological variables during Pre-monsoon Thunderstorm Activity over Ranchi. Paper presented in National Conference on Mathematical and Statistical Modeling October 19-20, 2011.
- Sunita Verma and John Warden, Simulations of Black Carbon Aerosol over East Asia using a threedimensional General Circulation Model, OCHAMP-2012, IITM Pune, 21-26 Feb 2012.
- 8. Swagata Payra, Sunita Verma, Manas Soni, Divya Prakash and Brent Holben, Aerosols characteristics over an urban location in Northwestern India, OCHAMP-2012, IITM, Pune, 21-26 Feb 2012.
- Swagata Payra, Sunita Verma, Manish Soni, Divya Prakash and Brent N Holben, Seasonal Variability of Aerosols Parameters over an Urban Location in India, 30th Annual Conference of American Association for Aerosol Research, Orlando, Florida, 3–7 October, 2011.
- Sunita Verma, Swagata Payra, Manish Soni, Divya Prakash, Brent Holben, Assessment on Aerosols Optical Properties from the Observations During AERONET Campaign Over an Urban Location in India, WCRP Open Science Conference, Denver, Colorado, USA, 24 – 28th October, 2011.

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

- Singh, Jyotsna, Manoj Kumar, and Bimal K Bhattacharya. 2011. Solar energy potential of two metropolitan cities of India. In: Infrastructure-The Key to Development, Edited by Rudra P. Pradhan, Macmillan Publishers India Ltd., 652-663.
- 2. Verma, Sunita and Swagata Payra, 2011, "Carbonaceous Aerosols: an Overview based on Research in India" in "Soot: Sources, Formation and Health Effects" Nova Science Publishers, Inc, USA, Nov. 2011.

## Award / Recognition Bestowed on Faculty (State / National / International)- MoUs / Collaborations with Academia/Industry

S. No.	Name of Organization / University	Purpose / Area	Year / Duration
1.	Space Application Centre, Ahmedabad	Land surface and Agrometeorology	2008
2.	Indian Institute of Tropical Meteorology (Collaboration/MoU)	Aerosol monitoring system	2008
3.	Indian Space Research Organisations (Collaboration)	Atmospheric Sciences & Boundary Layer Study	2010

4.	India Meteorological Department, Ranchi	Joint project under MoES CTCZ Scheme	2010
5.	National Centre for Medium Range Weather Forecasting	Data sharing of CTCZ project	2010
6.	Indian Institute of Technology, Delhi/ Kharagpur	Joint research on CTCZ/STORM	2009
7.	Birsa Agriculture University	R & D Collaboration on Aerosol monitoring study under ISRO GBP project on ARFI	2009
8.	Indian Institute of Science, Bangalore	R &D collaboration in Atmospheric Sciences	2010
9	GSFC, NASA (Collaboration/MoU)	AERONET station	2009

#### Ph.D. students enrolled, submitted and awarded

No. of Ph.D. students enrolled as on 30/06/12 from July'11	No. of Ph.D. Thesis Submitted during July'11 to June '12	No. of Ph.D. awarded during July'11 to June '12
04	00	01

No. of summer trainees trained in the Department during July 2011 to June 2012: 02 (At M.Sc. Level)

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 - Memebr

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

- Prof. P.C. Pandey, Ex-Director, NCAOR Goa & Professor (Emeritus)-CORAL, IIT Kharagpur 721 302
   (WB)
- 2. Prof. U.C. Mohanty, Centre for Atmospheric Sciences, IIT Delhi, Hauz Khas, New Delhi 110 016
- 3. Dr. (Mrs.) Kusuma G. Rao, Scientist SG & Project Director (ASP), Indian Space Research Organisation, New Bell Road, Bangalore 560 231.

#### Other important information

The centre has achieved remarkable goal 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)
- 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. Completed 3 R &D projects successfully in Atmospheric Science & Technology and 7 are in operational.
- 8. Produced 3 Ph.D. and 5 are perusing.
- 9. Published more than 50 research papers & 15 Proceed, during last five years
- Centre is involved in ISRO's satellite programme also. Conducted special experiment on Atmospheric Science at BIT during successful launches of
- 11. PSLV-C17 launched GSAT 12 on July 15, 2011 (Successful), PSLV-C16RESOURCESAT 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

- 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

## Details of PhD thesis – On-going: 8 nos.

S. No.	Name of the Student	Title of the thesis/Project
1.	Mrs. R. Latha	Effect of aerosols on evapotranspiration – observations and model evaluation
2.	Ms. Jyotsna	Study of solar readiation trend over different climate types in India and its impact on vegetation in perspective of climate change
3.	Kumari Lipi	Aerosol radiative forcings over Indo-Gangetic plain of India
4.	Ms. Sagarika	Planetary Boundary Layer characterization vis-à-vis Land-use changes using Micro Meteorological data and Remote Sensing Technique
5.	Ms. Tripta	Parameterization of Land Surface Processes Coupled with Atmosphere transfer interaction
6.	Ms. Gargi	Hydrological modeling of Land Surface Atmospheric transfer interaction along two extreme ends of monsoon trough of India
7.	Ms. Shweta	Modeling of land surface atmosphere transfer interaction using satellite and ground data
8.	Mr Divya Prakash	The Characterization of Aerosols over an urban location in North-Western India

## **DEPARTMENT OF PHYSICAL EDUCATION & SPORTS**



Man with determination and stamina wins the race

Department of Physical Education and Sports is well equipped with good facilities for track and field events, gymnasium, weight training hall, yoga hall, table tennis boards in all hostels, bandminton (Indoor courts), basketball football, hockey, kabaddi, kho-kho, tennis, hand ball, cricket etc. of national/international level. Physical Training and Games is a part of curriculum from 1st to 4th semester. The Department is actively involved in developing/grooming the sportsmanship of the students. The Department regularly organizes training camp/course work for various sports/games. Following incentives are given to the students who are proficient in sport.

- 1. Students representing Institute team for any sports activity is provided extra grades in PT & Games.
- 2. When Students represent our Institute/University in other Institute their total expense, travel, food, uniforms, tracksuits etc are borne by the Institute.
- 3. During inter hostel tournaments the participants are provided with nutritious diet as prescribed by sports medical practitioner.
- 4. Every year the department organizes East Zone Inter Technical Chetan Devraj Memorial Cricket Tournament.

#### Prizes, Medals and Certificates:

- Best Sportsperson of the Year
- 2. Best Athlete Boy (During Annual Athletic meet)
- 3. Best Athlete Girl (During Annual Athletic meet)
- 4. Arnabh Sidharth Best Cricket award in Chetan Devraj memorial cricket tournament.

#### **Events Organized during the year 2011-12**

- 20<sup>th</sup> Chetan Devraj Memorial Inter Technical/Institutional East Zone Cricket Tounament was organized from 23.01.2012 to 26.01.2012, BIT Patna centre won the tournament and BIT Mesra was Runners 'up'.
- 2. 26<sup>th</sup> Annual Athletic meet 2011-12 was organized during 03<sup>rd</sup> February 2012 to 05<sup>th</sup> February 2012. In Boys section Hostel No. 10 and in Girls section 2011 batch emerged champions of the meet.
- 3. Our Institute Basketball, Football & Athletics team participated in spardha 2012, Organized by Institute of Technology, B.H.U., Varanasi from 23<sup>rd</sup> February to 26<sup>th</sup> February 2012. Our Basketball son Silver Medal, and Our Athletics team won 6 Gold, 3 Silver, 4 Bronze Medals in the said event.

#### Awards / Honours

- 1. Dr. Rama Shankar Singh, Senior Sports Officer of BIT Mesra, represented India as observer in World Wushu Championship, held at Ankara, Turkey from 08.10.2011 to 14.10.2011. Among 91 countries Indian contingent (team) won 2 Silver, 3 Bronze in the said championship.
- 2. Dr. Rama Shankar Singh wasawarded Bishist Seva Samman during Bihar Satabdi Samaroh Organized at Surat, Gujrat in 06th May 2012. The Award given by Honours Sri Narendra Bhai Modi, Chief Minister of Gujrat for his contribution in sports/adventure sports.
- 3. Dr. Ram Shankar Singh was nominated Senate Member of Vinoba Bhave University, Hazaribagh by Govt. of Jharkhand for the year 2011-2014.

#### Conferences / Seminar / Workshop staff development / programmer / organized refresher course.

- 1. Dr. Mahendra Kumar, Assistant Professor awarded Ph.D. in the month of October 2011.
- 2. Dr. Mahendra Kumar, Assistant Professor delivered Lecture on 17th March 2012 in Lecture Series Organized by IT Department, BIT, Mesra, Ranchi.
- 3. Paper published in International Journal on topic "Role of 5 GL Doctor's in injuries" in Asian Journal of Physical Education and Computer Sciences.

# TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP)

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

Accordingly MoU has been signed between BIT Mesra and Government of Jharkhand on 17th October 2011 in the required format and the same and has been submitted to NPIU by the SPFU, Jharkhand for further processing.

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. Out of this 45% of the total sanctioned amount is for procurement of equipment, software, furniture and minor civil work for the existing and new labs of ME/MTech, 20% is for providing teaching and research fellowship to ME/MTech and PhD scholars, 10% is for faculty and staff development, 5% is for R&D and 5% is for industry institute interaction. The Project is expected to be completed in December 2014.

In the first phase institute has received Rs. 2 crore on 12.05.2012 for initiating various activities of the project.

# NATIONAL CADET CORPS (NCC) JHARKHAND COMPOSITE TECH. COMPANY NCC, BIT MESRA





Guard of Honour

Speech by Vice-Chancellor

National Cadets Corps of BIT Mesra is one of the important components of the institute which impart military training to students for first 4 semesters. NCC has 200 cadets on its roll who are given basic knowledge in EME, Engineers and Signals. In session 2011-12, NCC has conducted apart from classes, 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 brought more colour and fanfare to the parade. The following major activities were conducted by the NCC.

- (i) Live firing of .22 Rifle by cadets.
- (ii) Participation in Republic Day and Independence Day Parade.
- (iii) Tree Plantation by cadets inside the BIT Campus.
- (iv) Blood Donation by the entire NCC Team incl the cadets.
- (v) 04 Cadets were awarded with 'Sahara Scholarship' in which theywere given Rs.30,000/- each.
- (vi) Ten Cadets were awarded Scholarship worth Rs.12,000/- each from 'Cadet Welfare Society.'

The unit is commanded by Col K. K. Prasad and has Associate NCC Offr Major Subir Samanta and other staff from Army and Civil.

## **NATIONAL SERVICE SCHEME (NSS)**

- 1. No. of Blood Donation Camps:
- One

(a) No. of Doners:

- 288
- (b) No.of units of Blood donated:
- 158
- (c) Date of Blood Donation Camp Held:
- 25.09.2011
- Orientation / Trg. Programme organized:- Every week 2
  hours orientation programme has been designed for first
  year NSS students to know about NSS activites and what
  is NSS. That course is designed from NSS manual. Two
  Teachers are involved for this prog. This Programme for first
  year NSS students. 98 students of first year NSS students
  involved in this program.



Prabhat Pheri

#### 3. Any Other Important Activities:

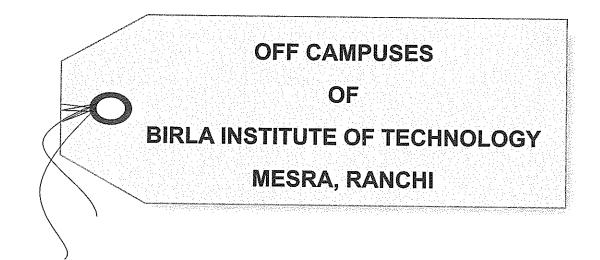
- (a) Evening schools are running nearby B.I.T. Mersa adopted villages by NSS for improvement of quality of education under the age of 11 years village going school students. 38 NSS students has been involved in this programme. 247 village students are benefiting from this prog.
- (b) In BIT high school + BIT middle school + +2 school, Monday to Friday every week 20 NSS students go to teach Science, Maths and English. Total 80 NSS students involved in this prog.



Community Service

- (c) On 17.09.11 NSS students involved in Vishwakarma Puja celebration in the institute. 400 NSS students involved in this prog.
- (d) Computer Literacy prog. is running Monday to Saturday in every month for nearby 10th pass students, village women and young youth. 26 participants and 28 NSS students are involved in this prog.
- (e) Coaching prog is running every week on Saturday and Sunday for 11th class students. 11 NSS students are involved and 22 participants are there.





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#### **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 starting B. Tech. Degree Programme in Civil, Mechanical and Electrical & Electronics Engineering for the working Engineering Diploma holders on part time basis. The first batch of students of B. Tech programme was admitted in January 1998 and so far, six batches of students have passed out.

In view of demand of trained computer and management personnel at National level and as also to provide job-oriented professional education and training to youth of the area, the Institute introduced



BIT, Mesra Off Campus Allahabad

(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 throughout the year.

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

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

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

- (i) 4-years (Full Time) BE in Electronics and Communication Engineering
- (ii) 4-years (Full Time) BE in Computer Science & Engineering
- (iii) 2-years (Full Time) Master of Business Administration (MBA)
- (iv) 2-years (Full Time) M.Sc. Information Technology

#### **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)

#### **Part Time Programme**

(i) B.Tech in Electrical & Electronics Engineering

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

Si. No.	Name of the Faculty	Title of the conference/seminar	Organized by	Venue	Date, Month, Year
1.	P.C. Srivastava	Introduction to Research Methodologies	IIT Bombay	Jaipur Engineering College, Kukas, Jaipur	25 June - 04 July, 2012
2.	Ratnesh Mishra	Data Communication & Computer Network Security	Sam Higginbottom Institute of Agriculture Technology & Science	Department of Computer Science & Engg., Sam Higginbottom Institute of Agriculture Technology & Science, Naini, Allahabad	10 -11, December, 2011
3.	Shambhu Sharan Kumar	Intellectual Property Rights;(IPR – 2011)	Controller General of Patents, Design & Trade Marks, Govt. of India	Birla Institute of Technology, Mesra	02, December, 2011
4.	Ashish Mohan Dubey	Change Management and Transformation	School of Management Studies, Motilal Nehru National Institute of Technology, Allahabad	Motilal Nehru National Institute of Technology, Allahabad	18, April, 2012
5.	Ajit Kumar Keshri	Summer Faculty Research Fellow Programme – 2011	Department of CSE, IIT Delhi	Indian Institute of Technology, Delhi	13 May - 07 July, 2011

6.	Ajit Kumar Keshri	Use & Deployment of Web & Video Courses	7 IITs & IISc., Bangalore	Indian Institute of Technology, Delhi	05 July - 06
7.	Aparna Shukla	First International Conference on Recent Advantage in Information Technology	Indian School of Mines, Dhanbad.	Dept. of Computer Science & Engg, ISM, Dhanbad	July, 2011 15 – 17, March, 2012
8.	Naveen Trivedi	Recent Advancements in Seciece, Technology & Management	IEEE conference VITS ,Indore	VITS, Indore	12 – 13 November, 2011
9.	P.C. Behari	Introduction to Research Methodologies	IIT Bombay Under MHRD (ISTE workshop)	Jaipur Engineering College, Kukas, Jaipur	25 June –04 July, 2012

## **PUBLICATIONS**

## Published in International Journals

- Suvendu Kanungo, Gadadhar Sahoo, Manoj Madhava Gore, BiCross: A Bi-clustering Technique for Gene Expression Data using One Layer Fixed Weighted Bipartite Graph Crossing Minimization, International Journal of Computer Applications (0975 – 8887), Vol. 29(4), 2011.
- Suvendu Kanungo, Gadadhar Sahoo, Manoj Madhava Gore, BiFree: An Efficient Bi-clustering Technique for Gene Expression Data Using Two Layer Free Weighted Bipartite Graph Crossing Minimization, International Journal of Computer Science and Information Technologies, Vol. 2 (6), 2517-2524, 2011.
- 3. S.C.Pandey, G.C.Nandi, "Blood Sugar Regularization based Evolutionary Algorithm for Data Classification", Applied Soft Computing, Elsevier, 12(2012), 2266-2273. Impact Factor = 2.6.
- Kamta Nath Mishra, P.C. Srivastava, A. Agrawal, P. Ojha, R. Garg, "Fingerprints, Iris and DNA Features Based Multimodal Systems: A Review", International Journal of Information Technology and Computer Science, 4(2012) 1-22.
- Kamta Nath Mishra, P.C. Srivastava, A. Agrawal, V. Tripathi, V. Gupta, "A Framework Towards using Eigen Iris, Minutiae Thumb and DNA Sequence Features for Personal Identification", International Journal of Information Acquisition, 8(2011) 197 – 225.
- Kamta Nath Mishra, A. Agrawal, P.C. Srivastava, V. Tripathi, V. Gupta, "An Efficient Eigen Values Based Technique for Online Iris Image Compression and Identification", International Journal of Information Acquisition, 8(2011) 133 – 152.
- 7. Aparna Shukla, Prabhat Ranjan, A Novel Approach for Complexity Measure Based on Control Structure, International Journal of Software Engineering Research, Volume 2, 2012.

## **Published in National Journals**

 Ashish Mohan Dubey, Ashish Gupta and G.P. Sahu (2011), E-Governance in India: Transformational Approach. Uttranchal Business Review, Vol 1, ISSN. 2277-1816, pp. 133-144.

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

- R.S. Pandey, B.D. Choudhary, An Estimation of Min-Max of QoS Attributes of a Choreography, Proceedings of Advances in Engineering, Science and Management (ICAESM12), Nagapattanam, Tamil Nadu, March 30 - March 31.
- Shambhu Sharan Kumar, Formulation, Characterization & Performance evaluation of Micron sized & Nano TiO2 particles modified Surface Coatings, National Conference on Recent Trends in Chemical Sciences – 2012, BIT Deoghar Campus, February 18- February 19.
- 3. Shambhu Sharan Kumar, Synthesis, Characterization & Application of Nano particles in Surface Coatings for Corrosion Protection & Green Future, National Conference on Recent Trendsin Chemical Sciences 2012, BIT Deoghar Campus, February 18- February 19.
- 4. Aparna Shukla, Prabhat Ranjan, A Generalized Approach For Control Structure Based Complexity Measure, ISM, Dhanbad, Jharkhand, India, March 15 March 17.

#### **Departmental Students' Activities**

SI. No	Name of the Activity	Students' Coordinator, if any	Date/Duration
1	Annual Inter-Semester Cricket Tournament	Shri A.K. Keshri	February, 2012
2	Placement of Students	Shri A.K. Keshri	16th Aug 2011- Jan 2012
3	Personality Development Program through Career XL	Shri A.K. Keshri	15th Aug 2012-15th Sep 2012

### Ph.D Students enrolled, submitted and awarded

No. of PhD Students enrolled as on 30/05/12	No. of PhD Thesis submitted during July' 11 to June' 12	No. of PhD awarded during July'11 to June'12	
01	03	Nil	

## Any other important information not covered under above heads

- 1. Shambhu Sharan Kumar gave a lecture on "Application of Chemistry for Sustainable Development" on "International year of Chemistry 2011-12" at Kendriya Vidyalaya, Naini, Allahabad on 21-01-2012.
- 2. A new air-conditioned Conference Hall with a seating capacity of 100 persons has been built.
- 3. ACs have been installed in all the classrooms.
- 4. Old library has been shifted to a newly developed library (area = 1500 ft.2 approx.) which is fully air conditioned and equipped with 14 computer systems for students.

## **DEOGHAR**

BIT, Deoghar Campus was set up in 2007 as a PPP model by Govt. of Jharkhand and BIT, Mesra in 25 acres of land allotted by State Govt., nearly a kilometer from Jasidih Railway Station between the ambient picturesque villages of Ratanpur and Ramchandrapur, very close to the internationally famous religious place Baidyanathdham.

The State Government also sanctioned a lum sum of Rs.40 crores only towards capital expenditure. The academic activities of the Institute commenced on and from October 2007 with admission to the BE programmes in Computer Science & Engineering (CSE), Electrical & Electronics Engineering (EEE)



BIT, Mesra Off Campus, Deoghar

and Electronics & Communication Engineering (ECE) with an intake capacity of 50 students in each stream. The intake capacity from the academic year 2008-09 had been increased to 270 in total with 60 each in CSE, ECE, EEE, Mechanical Engineering (ME) and 30 in Production Engineering.

The admission was made through AIEEE and Central Counseling Board till 2010. Admission from 2011 had been based on AIEEE ranking and online counseling by BIT, Mesra.

#### **Institute Campus**

The Institute is fully residential and spread over an area of 25 acres. The main building of the Institute covers an area of 1, 52,500 sq.ft which accommodates administrative office, library, class rooms and various research and training laboratories.

The Workshop Annexure covers an area of 14000 sq.ft. The campus has its own protected Water supply, Canteen, Back-up Electricity Plant, Games and Sports Complex, Dispensary and Stationary shop.

Residential Complex with staff quarters in different categories have been completed partially.

Hostel accommodation for 1000 students comprises of two Boys Hostel-94 rooms in each hostel accommodating 278 students each. One Girls Hostel- 153 rooms for accommodating 283 students.

The interiors of the hostels include spacious dining halls, common room with TV and reading room (subscribes various magazines, periodicals and newspapers). Each hostel has its own independent mess, lavatories and water coolers on each floors. Each student residing in the hostel is provided with a steel cot, table. chair and a built-in-almirah.

Open Air Theatre and seminar halls are being planned to cater to the growing needs of academic and student activities. Wi-Fi facilities keep the BIT community technically updated and developed.

The Dispensary provides the medical needs of the students and staff of the Institute. Three compounders and one nurse are on round-the-clock duty. One general physician and two lady doctor provides medical services/consultation everyday. The dispensary has its own ambulance to cater to emergency needs.

#### **Central Library**

The Learning Resource Center is the nerve center 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, magazines and over national journals on the subject areas and other research materials. Important local, regional dailies in English (4) and Hindi (2) are also an important part of Newspaper section of the library.

Numbers of volumes of books added during the academic year 2011-12 is 2905. Currently total number of books is 16823. The facility for E-library is being developed. A library software libsys is installed.

#### **Online Resources**

IEEE : Future plan
ASME : Future plan

e-BOOKS : In-process

#### Clubs/Societies of the Institute

There are nine clubs/societies which is instrumental in bringing out the latent potentials of the students apart from technical knowledge. Whenever appropriate and required, the clubs/societies organize proper conduct of events.

#### The clubs/societies are:

Leo Club, Literary Club, Sports and Adventure Club, Fine Arts Society, Music Club, Dance Club, News and Publication Society, Photographic Society & Dramatic Society.

#### **Publications**

Spring and Monsoon editions of newsletter BIT-IN-NUCE - half Yearly

Magazine PRISM - Annual

Souvenir - Annual

Compendium-Research Scholar Day - Annual

Compendium of Projects - Annual

#### Students' Activities - Extra curricular and Co-Curricular

- Representation and participation of students at IIT, Kharagpur, ISM, Dhanbad, IIT, Kanpur, BIT, Mesra, BIT,
   Patna and other institutions.
- Seminar/Symposium/Short term courses organized by different departments time to time.
- Robotics Workshops in collaboration with NextSapiens.
- Yearly celebration of Deepotsav on the occasion of holy Dipawali.
- Celebration of traditional festivals-SaraswatiPuja and Vishwakarma Puja.

- The Independence Day and Republic Day.
- Yearly celebration of the annual Tech-Fest UTTHAAN.
- Tree plantation drives blood donation camps are organized by the Leo Club and the NSS Club respectively.
- Exhibition of Creative Arts are organized on appropriate occasions.

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

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

## Research & Development work

S. No.	Title	Principle Investigator/ Department	Application	Area of application
1.	"Preparation of hollow sphere electro catalysts and their application in water electrolysis for hydrogen production"	Mrs. Jayeeta Chattopadhyay SERC-DST Govt. Project Under Fast Track Young Scientist Scheme	Hydrogen produced by this method is likely to be used as fuel-cells in hybrid new generation vehicles.	Alternate fuels
2.	"Solution of some flow problems of a viscous in compressible fluid"	Prof. Amit Kumar Department of Applied Mathematics	This is going to be utilized for transportation of fluid like crude oil, gas and other material movement in process industries where the transportation is carried through pipe for optimal resistance higher throughput and speedy transportation.	Fluid transportation
3.	"Mathematical modeling of Generalized thermo elasticity" for solid materials	Dr. Roushan Kumar Department of Applied Mathematics	This modeling would be effectively utilized for design and development of variety of components like torsion bar, beam, bridges etc.	Manufacturing Industries

				1
4.	"Novel approach to Avel Inversion"	Dr. R.K.Paul Department of Applied Physics	Presently to detect absorption/ emission profile, require large numbers of detectors. This research aimed at reducing the number of detectors required merely to two detectors, thereby reducing the cost of medical equipment and process involved.	Bio-medical Instrumenta- tion
5.	"Propagation of soliton in non-linear media and induction of Hall optical devuces"	Dr. R.K.Sarkar Department of Applied Physics	This is going to find application in components like Hall optical passive transistor, isolators, digital gates etc.	Electronics equipment manufacturing
6.	"Study of non-statistical fluctuation at Large Hydron Collidors SERN Energy Center of European Organization of Nuclear Research, Geneva, Switzerland"	Dr. Arshad Kamal Department of Applied Physics	This project envisages big-bang scenario simulation in laboratory as was done in Geneva for study, analysis, visualization and for prediction.	Experimental High Energy Physics
7.	"Investigation of growth mechanism of various carbon nano-structures, magnetic and dielectric nano-materials as a function of process functionalities of thermal plasma reactors"	Dr. S.Karmakar Department of Applied Physics	This nano-structures so developed is going to be used as sensors for measurement of blood-urea, glucose etc., further it would be used as gas sensors and electron emitter for flat panel display.	Bio-medical instrumenta- tions
8.	"Electro —chemical machining of newly emerging materials of various application"	Dr. P.K.Srivastava Department of Applied Chemistry	Machining of materials of high hardness of 400 bhm. Conventional machining is difficult and time consuming, this work is going to be effectively utilized for machining of difficult profiles which is going to be faster and would give better surface finish.	Manufacturing Industries
9.	"Development of pricing technique for Deregulated Indian Power Market"	Prof. Pankaj Mishra Department of Electrical & Electronics Engineering	This work would results in a pure market structure in Indian Power market along with improved reliability, quality and stability of power supplied to the end consumers.	Power System

10.	"Small solar power plant based on axial tracking of sun"		This would result in increased efficiency of solar panel as compared to traditional static solar panels.	conventional
11.	"Characterizing of machined surface using Wavelet Analysis"	Prof. B.M.Jha	It would give a better assessment of machined surface in manufacturing industries.	Manufacturing Industries
12.	transplantation"	Dr. Saumya Banerji Department of Computer Science (Department of IT, Govt. of India Project)	The project envisages intelligent combinational algorithms, which could select the best matching kidney pairs and considers the several health constraints & parameters.	Bio-medical Instrumenta- tion

#### **Doctoral Research**

In addition, BIT Deoghar campus also offers Doctor of Philosophy Programmes in:

- Applied Sciences
- Engineering & Technology
- Management

## **Computer Laboratory**

The heart of the Institute is the large Computer Centre with 200 P4/i3/i5 Computers with centralized high configuration servers' connectivity to LAN to support multi user software in all three labs. There is a provision for a fourth centralized Computer Lab with another 40 Computers, 2 additional servers and centralized UPS connectivity. At present, the students are using System Software's like C++, MSDN, ORACLE, & Application Software like Auto CAD 2009, Auto CAD Raster Design, Auto CAD Electrical, Auto CAD Inventor, MATLAB, Multisim, Comsim, Xiling, Active HDL etc.

## **Training & Placement Cell**

The placement office at Deoghar is well equipped and designed to smoothly handle and support the placement procedure by the T & P Cell staff and student placement coordinators. We are equipped with the following facilities to aid the process.

- Conduct pre placement talks
- Conduct written tests, including online test
- Conducts interviews and group discussions.

## Placement Report 2011-12

_	Branches					
Name of the Company	CSE	ECE	EEE	Mechanical	Production	Total
ARICENT	11	02				13
ATOS		01	01			02
BHARTI INFRATEL			01			01
COGNIZANT	21	27	05	07		60
CYBAGE		02				02
ERICSSON		01	05			06
EXIDE			01			01
GMR ENERGY				02		02
HEADSTRONG		01	01			02
IBM		01	01	01		03
INFOSYS	10	09	05	02	01	27
MISYS	03					03
NRB BEARING		01				01
ORACLE	01					01
PHILIPS ELECTRONICS		01				01
SAPIENT		01				01
TATA TECHNOLOGIES				02		02
VERIZON		02				02
WIPRO	04	05	07	01		17
3DPLM SOFTWARE				01		01

## **SPONSORED PROJECTS**

## Ongoing Projects Sanctioned before July 2011

Project Title	PI/Co-PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
A research project entitled "Enhancing Material Removal Rate Through Control of Valence (Transition) in Multivalent Metals While Electrochemical Machining of Metal Alloys"	Srivasatava	AR&DB	2008-09	Rs 9.674 lakhs	3 years

Development of Economically	Dr. Jayeeta	DST-	18/11/10	Rs. 19.86	3 years
Favourable Hollow Sphere Electro		SERC	.0, , 10	Lakh	o years
Catalysts for Hydrogen and Oxyger				Lakii	
Production from Water Electrolysis Using					
PEMWE System					
ter	1				

## Project Sanctioned during July 2011 - May 2012

Project Title	PI/Co-PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
Augmentation of Jamming Resistance Global Positioning System for Space Borne Application using Smart Antenna		Department of Science & Technology	2012	Rs. 9.60 lacks	3 years

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

Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, year
Dr. Jayeeta Chattopadhyay	8th All India Peoples Technology Congress	All India Peoples Technology	Science City, Kolkata	11-12,Feb, 2011
Dr. Ram Krishna Sarkar	ICONTOP-11, 2nd International Conference on Trends in Optics &, SINP Autditorium Photonics, 2011			7-9, Dec, 2011
Dr. Sandip Ghosh Hazra	International Conference on "Competition & Competitiveness of Global Corporate Sector"	Srusti Academy of Management, Bhubaneswar	Srusti Academy of Management, Bhubaneswar	18-19, Nov., 2011
	National Seminar on "Role of Management in Economic Development of Jharkhand"	AS College, Deoghar	AS College, Deoghar	16-17, Mar., 2012
	Workshop on "Structural Equation Modelling : Basics and Applications"	IBS, Hyderabad	IBS, Hyderabad	28-29, Jun., 2012
Dr. Soumen Karmakar	National Conference on Recent Trends in Chemical Sciences		BIT, Deoghar	18–19 Feb, 2012
Dr. Soumya Banerjee	ACM-MEDES, Digital Ecosystem as Invited Lecture	San Francisco, USA	San Francisco, USA	20-27, Feb., 2011
	The Seventh International Multi- Conference on Computing I the Global Information Technology ICCGI 2012 as invited lecture	Venice, Italy	Venice, Italy	24-29, Jun., 2012

	International Seminar, on Social Networking : Trends and Algorithms	9	Hindustan College of Science, coimbotre	6th Feb, 2012
OCCOMMUNICATION TO THE PROPERTY OF THE PROPERT	Social Networking Application: Wiki ad FaceBook as a Case	NSIT, new Delhi , Govt. of Delhi	Netaji Subhas Institute of Technology, New Delhi, India	21st -23rd Feb., 2012.
	Social Network and Graph Analysis using Soft Computing Learning from Nature: Evolutionary and Hybrid E – learning Methodologies in Engineering as a part of World Congress of Information and Communication Technology, 2011, Mumbai.	CZ section University of Mumbai, MIRLAB	Ostrava, Czech Republic University of Mumbai	5th-8th Sep,2011 Dec, 2011

#### **PUBLICATIONS**

#### **Published in International Journals**

- 1. Banerjee, S. (2012). Minimizing Ripple Effect of Web Centric Software Using Pheromone Extension. Information Science, 193, 218–232.
- 2. Banerjee, S., & Al-Qaheri, H. (2011). An Intelligent Hybrid Scheme for Optimizing Parking Space: A Tabu Metaphor and Rough Set Based Approach, Egyptian Informatics Journal, 12(1),.
- 3. Chakraborty, C., & Roy, R. (2012). Markov Decision Process based Optimal Gateway Selection Algorithm. International Journal of Systems, Algorithms & Applications, 48-52.
- 4. Chattopadhyay, J., Son, J.K., & Pak, D.(2011). Preparation and characterizations of Ni alumina, Ni ceria and Ni alumina / ceria catalysts and their performance in biomass pyrolysis. Korean Journal Chemical Engineering, 28(8), 1677 1683.
- 5. Kamal, A., Ahmad, N., Khan, M.M., Azmi, M.D., Khan, A.R., Zafar, M. & Irfan, M.A.(2011). Comparative study of the experimental and simulated values of multifractal specific heat in 14.5a gev/c heavy-ion collision. International Journal of Modern Physics E, 20, 2269-2292.
- Karmakar, S., Nawale, A.B., Lalla, N.P., Sathe, V.G., Kolekar, S.K., Mathe, V.L., Das, A.K., & Bhoraskar, S.V. (2012). Gas phase condensation of few-layer graphene with rotational stacking faults in an electricarc. CARBON, 55, 209-220.
- 7. Kulkarni, N.V., Karmakar, S., Asthana, S.N., Nawale, A.B., Shaikh, A., Patole, S., Woo, J.B., Mathe, V.L., Das, A.K., & Bhoraskar, S.V. (2011). Study on growth of hollow nanoparticles of alumina. Journal of Nanoparticle Research, 46, 2212-2220.
- 8. Prasad, S., Sarkar, R.K., Srivastava, A., & Medhekar, S. (2011). Coupled Propagation in Electromagnetically Induced Transparent Medium; Thirring Type Soliton Pairs and Breather Pairs. Journal of Electromagnetic Waves and Applications, 25, 923-933.

- 9. Shinde, M., Patil, R., Karmakar, S., Bhoraskar, S.V., Rane, S., Gade, W., & Amalnerkar, D. (2012). Antimicrobial Properties of Uncapped Silver Nanoparticles Synthesized by DC Arc Thermal Plasma Technique. Journal of Nanoscience & Nanotechnology, 12, 887-893.
- 10. Srivastava, A., Sarkar, R.K., Prasad, S., & Medhekar, S. (2011). Coupled Tapered / Uptapered Beams. Optik, 122, 2039-2043.
- 11. Yadav, N., Majhi,S.S., & Srivastava, P.K. (2012). Growth mechanism and crystal ordering of spherulitic patterns in a B-Z type reaction system. Bulletin Korean Chemical Society, 33(10), 3397-3406.
- 12. Yadav, N., & Srivastava, P.K. (2011). Growth and form of spherulitic crystal pattern in a B-Z type reaction system, Crystal Research & Technology, 46, 277-286.
- 13. Yadav, N., & Srivastava, P.K. (2011). Growth of spherulitic, crystal pattern in a B-Z type reaction system, New Journal of Chemistry, 35, 1080-1087.

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

Name of the Faculty	Title of the Award/ Honours	Organisation	Year/ Duration
Prof. Sandip Ghosh Hazra	Awarded Ph.D. in Management	IIT, Kharagpur	August, 2011
Dr. Soumya Banerjee	Honorary Technical Member	International Federation for Information Processing (IFIP)	2012
	Social networks and graph mining Direction Chair	Scientific Research in Egypt	2011
	Collaborator researcher at University of Maniatoba	Computational Intelligence lab, Cannada	2011
	Collaborata and Member IFIP Technology	International Federation for Information Processing (IFIP)	2011
	Awarded among best 50 social networking student project mentor	IBM University Relationship Program	2011

## No. of summer trainees trained in the Department during July 2011-June 2012.

Batch			Branches		
	CSE	ECE	EEE	Mech	Prod
Batch 2009	11	40	44	09	,
Batch 2010	33	02	04	32	05

## **JAIPUR**

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

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



BIT, Mesra Off Campus, Jaipur

### **Development Vision:**

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

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

#### **ACADEMIC PROGRAMMES:**

#### **Undergraduate:**

B.E. in following branches of Engineering:

- i) Computer Science (CS)
- ii) Electronics and Communication Engineering (ECE)
- iii) Electrical & Electronics Engineering (EEE) BBA, BCA & B.Sc. (Animation & Multimedia)

#### Postgraduate:

MBA, MCA, Masters in Animation Design, Integrated MBA, Integrated MCA,

Slow Pace MBA (for working professionals)

New Programmes introduced from session 2011-12

- i) Integrated MBA
- ii) Integrated MCA
- iii) Slow Pace MBA (for working professionals)

## SPONSORED PROJECTS

## Ongoing Projects Sanctioned before July 2011

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Duration of the Project
1	Feasibility study of setting- up of Food Processing Zone (FPZ) near by the irrigated Region of Sri Ganganagar District of Rajasthan and its Socio Economic Implications Discipline: Management Studies	Sharma	Ministry of Food Processing Industry, Govt. of India	27.01.11	Rs. 3.0 lacs	1 year (Project is extended till December 2012

## Projects Completed during July 2011- June 2012

SI. No.		PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Date of comple-tion of the Project
1.	Soft modeling of group dynamics: A cognitive psychology perspective Discipline: Engineering (Computer Science)		Department of Science & Technology, Ministry of Science & Technology, Government of India.	12-11-2008	11.2944 Lacs	July 2011
2.	Development of two short animation film for social awareness; i). Animated Spot Film on Patient Councilor ii). Animated Spot Film on Health care waste Management Discipline: Animation & Multimedia	1. Dr.Vibhuti Pandya 2. Vivek Sharma 3. Bidyut Jyoti Baruah	Rajasthan Health Systems Development Project, Govt. of Rajasthan Health Ministry of Rajasthan- Jaipur	July 8, 2010	Rs. 3,70,608/-	July 2011

3	Development of a microcontroller based technology of a pressure sensitive bed for immovable patients to reduce the risk of bed sore Discipline: Engineering (Electronics)	1. Mr. S.P. Sarkar 2. Mr. J.B. Sharma 3. Mr. P.S. Rathore 4. Mrs Aparajita Pandey 5. Mr Avinash Pankaj	Indian Council of Medical Research, Govt. of India	23-03-2009	8.30888 Lacs	May 2012
4	Oil Exploration in the District of Barmer of Rajasthan: Employment Generation And Sectoral Mobilization of Working Force - Some Projections Discipline: Management	Sharma 2. Dr. Ritu Arora	Ministry of Labour & Employment, Government of India.	6-11-2008	4.97145 Lacs	June 2012

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

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

SI. No.	Name of the short term training programme	Funded by	Duration	Sanctioned Amount (Rs.)	Total Entrepreneurs Trained in the Programme
1.	Technical Entrepreneurship Development Programme	Department of Science & Technology, Govt. of India	23-04-2012 to 02-06-2012	4.00 Lacs	50
2.	Entrepreneurship Development Programme	Department of Science & Technology, Govt. of India	23-04-2012 to 02-06-2012	1.30 Lacs	23
3.	Entrepreneurship Awareness Camp	Department of Science & Technology, Govt. of India	19-03-2012 to 28-03-2012	27,000	163

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

S. No.		Title of the Conference/ Seminar	Organized by	Venue	Date, Month Year
01	Puneet Sharma	Workshop on Basic Electronics	IIT, Bombay	JEC, Jaipur	22 June-2 July2011
02	Ritu Pareek	Grammar for Communication	ELT@I Rajasthan: Jaipur Chapter	ELT, Jaipur	29th July201
03	Dr. Gurminder Singh	UGC Sponsored- National Seminar on Recent trends in Fluid dynamics and Optimization Techniques	University of Rajasthan	University of Rajasthan Jaipur	6-7 August , 2011
04	Dr. Vibhuti Pandya, Vivek Sharma, Gautam Goswami, Bidyot Baruah, Neerja Sharma, Manish Kumar, Rishika Sharma	Experimental Animation	Jaipur International Animation Film Association	Film Bhawan, JLN Marg, Jaipur	11 October, 2011
05	Dr. Vibhuti Pandya, Vivek Sharma, Gautam Goswami, Bidyot Baruah, Neerja Sharma, Manish Kumar, Rishika Sharma	Cinematography & Production Design	Jaipur International Animation Film Association	Film Bhawan, JLN Marg, Jaipur	12 October, 2011
06	Ritu Pareek	Indian Writing in English: Text and Context	English Department, Kanya Gurukul Mahavidyalaya, Dehradun	Kanya Gu- rukul Ma- havidyalaya, Dehradun	13- 14 October, 2011
08	Ritu Pareek	Embracing Glocal English	ELT@I Rajasthan, in association with VIT Jaipur	VIT, Jaipur	4- 5 November, 2011
09	Jyoti Sharma, Snehanshu shekhar and J.Goswami	Short term course on VLSI Technology CAD	IIT, Kharagpur	IIT, Kharagpur	22-26 November, 2011

10	Dr. Ranjana Agrawal	National Seminar on Environmental Pollution, Restoration and Management	Raj. Education & Research Development Society, Jaipur & Govt. College of Engg. & Technology, Bikaner	Raj. Education & Research Development Society, Jaipur	25 November, 2011
11	Dr. Ranjana Agrawal and Dr. Anirudh Sahni	National conference on AIDS: Current Scenario and future challenges	Centre for Advanced Studies, Dept. of Zoology, University of Rajasthan	Dept. of Zoology, University of Rajasthan	1-3 December, 2011
12	Piyush Gupta	International Seminar on Accounting Education and Research	University of Rajasthan, Jaipur	University of Rajasthan, Jaipur	17-18 December, 2011
13	Vishwambhar Pathak , Seema Gaur, Anju Sharma and Santosh Agarwal	National Workshop on e-Governance-2011	Department of Computer Science & Engineering, Central University of Rajasthan	Kishangarh, Ajmer	20 December, 2011
14	Anand Kumar Srivastava	26th National Symposium on Plasma Science and Technology. (PLASMA-2011)	BIT, Patna and PSSI	BIT, Patna	20-23 December 2011
15	Dr. Dheeraj Bhardwaj	Short Term Course on "Wireless and Optical Communication Technologies	MNIT, Jaipur	MNIT, Jaipur	9 -13 January, 2012
16	Dr. Gurminder Singh	National Conference on "Numerical & Mathematical Modeling in Electrical Engineering & Applied Sciences"	Poornima College of Engineering	Jaipur	21 January , 2012
17	Dr. Ranjana Agrawal and Dr. Anirudh Sahni	International conference on Cancer prevention, Diagnosis and treatment by Indian Society for Radiation Biology at University of Rajasthan	University of Rajasthan, Dept. Of Zoology	University of Rajasthan, Dept. Of Zoology	21-22 January. 2012
18	Dr. Gurminder Singh	National Conference on Computational and Mathematical Sciences, COMPUTATIA-2012	VIT, University, Jaipur	VIT, University, Jaipur	28-29 January 2012

	9 Dr. Vibhuti Pandya and Vivek Sharma	Script Writing & Dialogue Writing	Jaipur International Filn Association		Gariaary
20	Pandya and Vivek Sharma	Film Direction	Jaipur International Film Association	Jaipur Chamber of Commerce, Jaipur	unitadi y
21	Pandya and Vivek Sharma	"Young Film makers, Freelance Film makers & Networking", "Indian & world classical cinema & "Coproduction between India & other countries"	Jaipur International Film Association	Chamber of	31 January 2012
22	Alok Pandey and Aparajita Pandey		W3C	LNMIIT, Jaipur	12 February 2012
23	Pandya	Comic Conference India-2012	Comic Con India	Delhi Haat, New Delhi	17 – 19 February,
24	Piyush Gupta	International Conference on Knowledge Management & Resource Sharing	Waljat Colleges of Aplied Science with BIT	Muscat (Oman)	2012 27-28 February,
25	Dr. Dheeraj Bhardwaj	International Conference on Computational Electronics and Nanotechnology	AMITY University, Jaipur	AMITY University, Jaipur	2012 1 - 2 March 2012
26	Madan Mohan Agarwal and Anju Sharma	Workshop on ns2 simulator	GLA university, Mathura	GLA university, Mathura	02 March, 2012
27	Dr. Dheeraj Bhardwaj	National conference on Advances in Wireless & Optical Communication Systems	Swami Keshvanand Institute of Technology, Management & Gramothan (SKITMG), Jagatpura, Jaipur	Swami Keshvanand Institute of Technology, Jaipur	17-18 March, 2012
28	Bhardwaj	National conference on Microwave Device and Components	Global Institute of Technology, Sitapura, Jaipur.	Global Institute of Technology, Sitapura,	22-23 March, 2012
		on"Antennas and RF Systems"	LNM Institute of Information Technology (LNMIIT) Jaipur (	Jaipur, LNM nstitute of nformation Fechnology LNMIIT)	24 – 25 March, 2012

30	Alok Pandey and Aparajita Pandey	Practical Approaches to Networking	Dept of Electrical Engg., IIT,Kanpur	IIT, Kanpur	12-15 April 2012
31	Piyush Gupta	International Conference on Contemporary Innovative Practices in Management	Pacific University, Udaipur	Pacific University, Udaipur	13-14 April, 2012
32	Dr. Madhavi Sinha	National Conference on Innovative & Sustainable Global Solutions to Business Management & IT Issues	International School of Informatics and Management, Jaipur	IIS University Campus, Jaipur	19-20 April, 2012
33	P.S. Ratore and Snehanshu shekhar	Workshop on Smart grid technologies for Renewable sources of Energy"	IIT Rajasthan	IIT Rajasthan, Jodhpur	23 April, 2012
34	P.S. Ratore , Alok Pandey and Aparajita Pandey	Short Term course on Smart Grid Technology	Dept of Electrical Engg., MNIT,Jaipur	MNIT,Jaipur	14-18 May 2012
35	Dr. Anuj Kumar Jhankal	Summer faculty research fellow programme- 2012	IIT, Delhi	IIT, Delhi	17 May 2012 to 5 July 2012
36	Dr. Gurminder Singh	Two week ISTE main workshop on Computational Fluid Dynamics	I.I.T, Bombay	J.E.C. Jaipur	12-22, June 2012
37	Alok Pandey	National Instructional Workshop on Cryptology	Cryptology Research Society of India	Manipal University, Jaipur	21-23 June 2012
38	Shripal Vijayvargiya and Vivek Gaur	Applying pervasive computing and social networks to accelerate the growth of rural and urban India.	I.I.T. Roorkee	I.I.T. Roorkee	25-29 June, 2012
39	B. Pathak and Santosh Agarwal	workshop on Introduction to Research Methodologies	Indian Institute of Technology, Bombay	Poornima Engineering College, Jaipur	25 June- 4 July 2012
40	Subhash Chand Gupta, Madan Mohan Agarwal, Vikas Sangwan, Dr. Archana Bhatnagar, Pramod Bubna, Santosh Kumar Sharma, Sumit Kulshrestha, Priyanshu Sharma	workshop on Introduction to Research Methodologies	Indian Institute of Technology, Bombay	VIT, Jaipur	25 June- 4 July 2012
41	J.B. Sharma	Short term course on Recent Trends in Electronics & Communication Engineering	MNIT, Jaipur	MNIT ,Jaipur	25 June to 29 June 12

### **PUBLICATIONS**

## Published in International Journals

- Shripal Vijayvargiya, Pratyoosh Shukla, A genetic algorithm with clustering for finding regulatory motifs in DNA sequences, International Journal of Computer Applications (IJCA) special issue on AI techniques –novel approaches and practical applications, 1 (2011): 6-10 doi: 10.5120/2826-207
- Pathak Vishwambhar, Dhyani Praveen, Mahanti Prabhat, , Data Clustering with Artificial Innate Immune System Adding Probabilistic Behaviour, International Journal Of Data Mining And Emerging Technologies, Volume-1, Issue-2 (2011) , 77-84. Print ISSN: 2249–3212, Online ISSN: 2249–3220
- 3. Piyush Gupta, Promoting Higher Education Sector through E-learning in Indian Perspective, Journal of Accounts and Information Technology Vol 11, No.2, (2011), 54-60, ISSN: 0972-9550
- Roopali Sharma, Indian Economic Stability in South Asia: A case of successful balancing of internal, regional & global challenges during global economic crisis, Proficient – An International Journal of Management, ISSN 0975-475X, Volume III Issue-VII, (2011), 70-79.
- 5. Ranjana Agrawal, Physico-chemical Analysis of selected Groundwater Samples of Behror Town in Alwar district, Rajasthan, Asian Journal of Biochemical and Pharmaceutical Research, 4(1) (2011), 113-115.
- 6. Rajni Agarwal, S. K. Sharma, U. Jha, Assessment of heavy metals in industrial effluents and in ground water of Sitapura industrial area, Jaipur (India) (During Pre-monsoon season, 2007), Pollution Research, 30(3) (2011), 345 347.
- 7. Sahni Anirudh, Assessment of Ground Water Quality at Municipal Solid Waste Dumpsite Sewapura Jaipur, Current World Environment, (December, 2011), ISSN 0973-4929.
- 8. Sahni Anirudh, Allocation of Major Air Pollutants in Rural Environment near Municipal Solid Waste Dumping Site Mathuradaspura Jaipur, Rajasthan, Asian Journal of Experimental Science, Volume 26, No.1 (January, 2012), 71-75, ISSN 0971-5444.
- Sahni Anirudh, Bacteriological Examination of Drinking Water in and around Municipal Solid Waste Dumping Site, Mathuradaspura Jaipur, with Reference to Coliform, Journal of Ecotoxicology and Environmental Monitoring, 22 (2) (January, 2012), 175-178 2012, ISSN 0971-0965.
- Aparajita Pandey, An Investigation of Challenges to Online Federated Identity Management Systems, International Journal of Engineering Innovation & Research, ISSN-2277 – 5668, Volume 1 Issue 2 (March 2012)
- 11. Aparajita Pandey, Analysis of Online Identity Management Techniques, Opt. Quantum Electron, International Journal of Research in Computer Application & Management, Vol. 2, Issue 3 (MARCH 2012), ISSN- 2231-1009
- Madhavi Sinha, Anuja Arora, Web Application Testing: A Review on Techniques, Tools and State of Art, International Journal of Scientific & Engineering Research, Volume 3, Issue 2 (2012) ISSN 2229-5518
   Madhavi Sinha, Doopshikka Pk. Leepingering Research, Volume 3, Issue 2 (2012) ISSN 2229-5518
- Madhavi Sinha, Deepshikha Bhargava, Design and Implementation of Agent based Inter Process Synchronization Manager, International Journal of Computer Applications Volume 46

  – No.21 (2012) 17-22, ISSN: 0975

  – 8887 doi: 10.5120/7065-9670
- Shripal Vijayvargiya, Pratyoosh Shukla, A niched Pareto genetic algorithm for finding variable length regulatory motifs in DNA sequences, 3Biotech (Springer), 2 (2012): 141 – 148. doi: 10.1007/s13205-011-0040-6

- 15. Archana Bhatnagar, Aditi Jain, Megha Gupta, Android-Platform For Mobile Devices And Its Ecofriendly Applications, International Journal of Environmental Engineering and Management, Volume 3 (2012), 61-64.
- 16. Roopali Sharma, Ritu Arora, Collective Public-Private Partnership & Related Socio-Economic Development in the Case of Oil Exploration in the Barmer District of Rajasthan, International Journal of Social Sciences & Interdisciplinary Research, Volume 1.No.1, (2012), 90-96, ISSN: 2277677X
- 17. Roopali Sharma, Ritu Arora, Socio-Economic Assessment of Oil Exploration In Barmer Region of Rajasthan, International Journal Asian Journal Of Management Sciences And Education, Volume 1. No.1 (2012), 28-38, ISSN: 2186-8441
- 18. Gurminder Singh, 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(2012), 1144-1154.
- 19. Gurminder Singh, P.R. Sharma, 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(2012), Article 20(1-12).
- I. K. Dadheech, P. R. Sharma, Effect of Joule heating on steady MHD flow of low Prandtl fluid on a porous stretching sheet, International Journal of Engineering Research and Technology, 1 (3) (2012)
- 21. I. K. Dadheech, Gurminder Singh, P. R. Sharma, Heat and mass transfer effects on unsteady MHD free convective flow along a vertical porous plate with internal heat generation and variable suction, International Journal of Mathematical Archive. 5 (3), (2012) 1-10.
- 22. I. K. Dadheech, Gurminder Singh, P. R. Sharma, Effects of variable thermal conductivity and internal heat generation on unsteady MHD flow through porous media bounded by a vertical porous plate with variable suction. Accepted for publication in International Journal of Mathematical Modeling Simulation and Application, 2012.
- Ranjana Agrawal, Nitrate contamination in ground water samples of Gangapurcity town (Sawai Madhopur District) Rajasthan, Journal of Chemical, Biological and physical sciences, 2(1) 2012, 511-513.
- 24. 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, 2(2) 2012, 1051-1053.
- 25. Alok Pandey, Counter Measures to Combat Misuses of MAC Address Spoofing Techniques , International Journal of Advanced Networking Applications ( IJANA)- Volume 03, Issue 05 (2012)1358-1361
- 26. Alok Pandey, A Simplified Defense Mechanism Against Man In The Middle Attacks, International Journal of Engineering Innovations & Research IJEIR, (Accepted for publication in 2012)
- Pramod Bubna, Monitoring and Tracing System for Soldiers with Radio Frequency Identification Technology: Zenith International Journal Of Multidisciplinary Research (ISSN: 2231-5780) (Accepted for publication in 2012).

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

 Ritu Arora, Roopali Sharma, Effective Branding Strategies of Multinational Corporations in International Markets: The Case of India, PRIMA: Practices and Research in Marketing Journal. (Accepted for publication in 2012)

# Papers/Abstracts in Conference Proceedings

- Gurminder Singh, Numerical solution for mixed convection flow along a moving vertical plate with Newtonian surface heating, at UGC Sponsored- National Seminar on Recent trends in Fluid dynamics and Optimization Techniques, University of Rajasthan, Jaipur, Aug 6 to 7, 2011.
- Piyush Gupta, Ensuring Quality Education through Distance Mode via Support Services: A Case of India, 25th AAOU International Conference, Penang, Malaysia September 28 to 30, 2011
- 3. B. Pathak, PramodBubna, Business Ethics for IT Professionals National Conference on Ethics in Business: September, 2011.

  September, 2011.
- Madan Mohan Agarwal, Survey: Conservation of Energy in Ad-Hoc Network through Topology Control,
   Vivek Gaur Prayers Dhyspi Olympia
- Vivek Gaur, Praveen Dhyani, Cloud Services for Consumer in Federated Environment: Simple View,egovernance – Techno- Behavioral Implications, Nirma University, Ahemdabad, October 17 to 18, 2011
- Sahni Anirudh, Ultraviolet Photolysis technique for the treatment of pollutants, National Conference on and Technology, Bikaner, 20 th November 2011.
   Madhavi Sinha, Suptivi Charaka.
- Madhavi Sinha, Swati V. Chande, Genetic optimization for the join ordering problem of database queries, India Conference (INDICON), Annual IEEE, BITS Hyderabad, India, December 16 to 18 2011, Print 8.
   Pivush Gunta Pramod Bitter 5.
- Piyush Gupta, Pramod Bubna, Priyanshu, Potential Benefits and E-Accounting System, International
   Anirudh Sahri Dr Borione Associated and Research, Jaipur, December 17 to 18, 2011
- Anirudh Sahni, Dr Ranjana Agrawal, Sumit Kulshrestha, Abhishek Gautam, Kavita Sahni, National Conference on AIDS: Public Awareness & Role of Media, AIDS: Current Scenario & Future Challenged (Poster Presentation), ISSRF & Department of Zoology, University of Rajasthan, Jaipur, December 1-3,
- Anand Kumar Srivastava, G. Prasad, Comparative Study of Parallel-Plate and Planar-Surface Glow Science and Technology (PLASMA-2011), BIT Patna, Patna, December 20-23, 2011.
   Subhash Chand Gunta Fire Indiana.
- Subhash Chand Gupta ,Fuzzy logic based automatic braking system for automobiles, National Conference on Computational and Mathematical Sciences: Computatia –2012, Vivekanand Institute of Technology, Jaipur, January 28 to 29, 2012.
- Anju Sharma, Madhavi Sinha, Heuristic Design for Route Finding in Distributed Graph, COMPUTATIA-2012, National Conference on Computational and Mathematical Sciences, VIT, Jaipur, Jan 28 to 29, 2012
- B. Pathak, Significance and Usage of Intelligent Agents in Distributed Data Mining, Proceedings of Sciences(Journal), V.I.T. Campus, Jaipur, January 28 to 29, 2012.
   Madan Mohan Agental, Edward Edward Sciences (Sciences)
- 14. Madan Mohan Agarwal, Energy efficient approach on Demand Multipath routing for Mobile Adhoc Networks, Proceedings of National Conference -- COMPUTATIA-2012 and Proceedings of Rajasthan Academy of Physical Sciences, V.I.T., Jaipur, January 28 to 29, 2012.

- Gurminder Singh, Mass transfer in laminar boundary layer flow over a vertical flat surface with convective boundary condition in presence of uniform free stream, at National Conference on Computational and Mathematical Science, VIT, Jaipur, Jan 28-29, 2012
- 16. Gurminder Singh, A similarity solution of laminar boundary layer flow over a vertical flat surface with convective boundary condition at National Conference on Numerical & Mathematical Modeling in Electrical Engineering & Applied Sciences - 2012 at Poornima College of Engineering, Jan. 21, 2012.
- Ranjana Agrawal, Sahni Anirudh, AIDS: Atharveda and Cancer management (Poster Presentation)
   International conference on Cancer prevention, Diagnosis and treatment by Indian Society for Radiation
   Biology. Dept. of Zoology, University of Rajasthan, Jaipur, Jan. 21 to Jan 22, 2012
- 18. Sahni Anirudh, "Assessment of Soil Quality Degradtion Due to Leachate at Municipal Solid Waste Dumping Site Mathuradaspura Jaipur". A abstract published in 99th Indian Science Congress, held at KIIT University Bhubneshwar on 3 7 January, 2012, Sec. Environmental Science pp-76.
- Sahni Anirudh, "Drinking Water Quality Appraisal of Jaipur Suburb RailwayStations With Special Mention to Chloride and Nitrate". A abstract published in99th Indian Science Congress, held at KIIT University Bhubneshwar on 3 – 7 January, 2012 Sec. Environmental Science pp-71.
- Piyush Gupta, Santosh Agarwal, The Role of Technology in Knowledge Management Systems and Resource Sharing in Enterprises, International Conference on Knowledge Management & Resource Sharing, Muscat, Oman, February 27 to 28, 2012.
- 21. J.B. Sharma, S.P. Sarkar, Development of microcontroller based technology of a pressure sensitive bed for immobile patients to reduce the risk of bedsore, Proceedings of national conference on Innovations in Microelectronics, Signal Processing and Communication Technologies, V-IMPACT 2012, VIT, Jaipur, February 18 -19, 2012.
- Pathak, Pramod Bubna, Significance of Multi-agent System in distributed data mining for handling large data set, International Conference on Current Trends and Challenges in Management, Engineering, Computer Applications and Technology (ICCTCMECAT-2012), March 23 to 25, 2012.
- 23. J.B. Sharma, Ashish Tejpal, Implementation of Fuzzy Logic Controller for Air conditioners, Proceedings of National Conference on Advances in Wireless & Optical Communication SKIT Jaipur, 17-18 March, 2012
- 24. J.B. Sharma, Ashish Tejpal, Implementation of Fuzzy Logic Controller for Washing Machine, Proceedings of National Conference on Microwave Devices and Component, GIT Jaipur, 22-23 March, 2012
- J.B. Sharma, Ashish Tejpal, Implementation of Fuzzy Logic Controller for Cruise Control System, Proceedings of National Conference on Advanced electronics & Wireless & Optical Communication, RIET Jaipur, 24-25 March, 2012.
- Snehanshu Shekhar, Utkarsh Ranveer, Preeti Gupta, Wireless Communication in Virtual Instrumentation for Biomedical Applications, Proceedings of National Conference on Advance Electronics & Wireless Communication Technologies – 2012, Rajasthan College of Engineering For Women, Sponsored by ISTE, Jaipur, March 24- 25, 2012
- 27. Dheeraj Bhardwaj, Saksham Soni, Vidisha Garg, Vipul Jain, Komal Sharma, Dual Band Elliptical Microstrip Patch Antenna with Triangular Slot For WLAN Application, In Proceedings of International Conference on Computational Electronics and Nanotechnology, held at AMITY University Rajasthan, Jaipur, March 1 to 2, 2012.

- Dheeraj Bhardwaj, Richa Dolia, Tanu Rawat, Komal Sharma, Compact Triangular Microstrip Antenna with Triangular Slot for Bluetooth Application, In Proceedings of International Conference on Computational Electronics and Nanotechnology, held at AMITY University Rajasthan, Jaipur, March 1 to 2, 2012.
   Dheerai Bhardwai, Sakabar Carin, March 1 to 2, 2012.
- Dheeraj Bhardwaj, Saksham Soni, Vidisha Garg, Vipul Jain, Komal Sharma, On Radiation from Dual Band Rectangular Microstrip Patch Antenna with Rectangular Slot, National conference on Advances in Wireless & Optical Communication Systems (AWOCS-2012), held at Swami Keshvanand Institute of Technology, Management & Gramothan (SKITMG), Jaipur, March 17 to 18, 2012.
   Dheeraj Bhardwaj, Kapil March 2012.
- 30. Dheeraj Bhardwaj, Kapil sharma, Shubham Kumar, Komal Sharma, Effect of Substrate Thickness on The Performance of Circular Microstrip Patch Antenna With Elliptical Slot For Wimax Application, National conference on Microwave Device and Components, held at Global Institute of Technology, Sitapura, Jaipur, March 22to 23, 2012.
- Dheeraj Bhardwaj, Saksham Soni, Vidisha Garg, Vipul Jain, Komal Sharma, Dual Frequency Rectangular Microstrip Patch Antenna with Diagonal Square Slots for Wireless Communication, National conference 22to 23, 2012.
   Pivush Gunta Cross Events
- 32. Piyush Gupta, Cross Functional Management Information System & Complex Strategic Decisions, International Conference on Contemporary Innovative Practices in Management, Udaipur, April 13 to 14, 2012
- Piyush Gupta, Santosh Kumar Agarwal, the contemporary innovative practices in knowledge management Practices in Management, Udaipur, April 13 to 14, 2012
   Pramod Bubba, Piyush Contemporary Innovative
   Pramod Bubba, Piyush Contemporary Innovative
- 34. Pramod Bubna, Piyush Gupta, Sumit Kulshrestha, Cross Functional Management System and Complex Organizational Strategic Decisions, International Conference on Contemporary Innovative Practices in Studies, Udaipur, April 13-14, 2012
- Madhavi Sinha, Deepshikha Bhargava, , Performance Analysis of Agent Based IPSM, Ninth International Joint Conference on Computer Science and Software Engineering, organized by University of the Thai Print ISBN: 978-1-4673-1920 doi: 10.1109/ JCSSE.2012.6261961
   Seema Gaur, DR. Sharman
- 36. Seema Gaur , P.R. Sharma ,Deepti Gaur, Mining Measures in Graph-Based Pattern mining , Global Institute of Technology, Jaipur ,May 11, 2012
- 37. Dheeraj Bhardwaj, Jyoti Sharma, Komal Sharma, Multi Frequency Rectangular Patch Microstrip Antenna with T-Shaped Slot for Ultra Wide Band Communication Systems, Proceedings of IEEE International to May 13, 2012
- 38. Roopali Sharma, Ritu Arora, Analyzing Special Economic Zones as an Island of Opportunities and its for Sustainable Business-2012, Department of India, National Conference on Emerging Challenges Roorkee, June 1-2, 2012
- 39. Pramod Bubna, Monitoring and tracing system for prisoners with radio frequency identification technology, International conference on technology enabled organizational transformation, Sri Shankaracharya Technical Campus, Bhilai, June 21-23, 2012

- Seema Gaur, Deepti Gaur, P.R. Sharma, Fuzzy Clustering model with positivistic C means, International conference of KIICE. (ICKIICE 2012), Istanbul, Turkey, June 28 to 29, 2012.
- 41. Roopali Sharma, Contemporary Concept of Performance in Higher Education, National Conference on Excellence in Higher Education, Indian Institute of Technology (IIT), Delhi, June 28-30, 2012

#### **Books**

#### **Edited books:**

 Dr. Madhavi Sinha edited the course BCA12 Data Structure and Algorithms, Vardhman Kota Open University, Kota March 2012 ISBN NO: 978-81-8496-311-3

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

- Seema Gaur, Anju Sharma, Data Base Management System-BCA-09, Vardhaman Mahaveer Open University, kota March 2012, ISBN No-13/978-81-8496-325-0
- I. K. Dadheech, Numerical Analysis (MA-MSc MT-08), Vardhman Mahaveer OpenUniversity, VMOU Kanchan Offcet Printers, (Kota), 2012, (ISBN- 13/978-81-8496-314-

## Departmental Students' Activities:

S.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1. 2.	: VIIII ALIUIIA.	Mr. Dhrupad Shirivastava (BE VIII) Abhishek Rungata ((BE VIII) Samreen Zehra (BE VIII) Gaurangee Gupta (BE VIII) Mukul Pareek (MCA IV) Arpit Mamodia ( MBA IV) Arunmoy Dey ( MAD IV) Hemant Gupta (BE VIII) Asmita Singhal (BE VIII)	January 11-13, 2012 (3 days) March 15-17, 2012
	An event that timulate minds to innovate and practically realize knowledge and deas. The rich technical legacy of BIT gets new expressions in TechVibes.	Akanksha Bhargava(BE VIII) Lata Mamnni (MCA IV) Amit Jha (MCA IV) Vijay Lalwani (MBA IV) Riya Agarwal (MBA IV) Yash Agarwal (B.Sc -A&M IV) Ekta Vijay ( MAD IV)	(3 days )
3.	Cavorts: (Sport Fest) An event to develop Physical, Mental, Competitive and Team Spirit strength. All these significantly contribute in professional career.	Akarsh Gupta (BE VIII) Navendu Upreti (BE VIII) Amit Jha (MCA IV) Nitin Anand (MBA IV)	March 12-14 , 2012 (3 days )

## No. of summer trainees trained at the centre during July 2011 to June 2012

**Summer Training Programme for External Students**: 15 external under graduate engineering students attended the programme conducted at institute during May-June 2012 in Electronics & Communication Engg. & Computer Science Engg. Disciplines.

## Innovative Summer Training Programme for Internal students

Jaipur centre conducted an innovative training program for internal students on "Software Quality & Testing Process". Mr. Santosh Kumar Sharma, Assistant Professor, CS department was coordinator of the programme. Two students have participated in this programme.

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

- 1. Dr. Madhavi Sinha is a member of BOS of Vardhman Kota Open University for BCA course (UG)
- 2. Dr. Vibhuti Pandya, Member on Board of Studies for B.Sc. Animation & Multimedia (UG) & Master in Animation Design Programme (PG) in BIT, Mesra
- 3. Mr. Vivek Sharma, Member on Board of Studies for B.Sc. Animation & Multimedia (UG), in BIT, Mesra

### Status of Ph.D Programme at the Centre:

No. of Ph.D students enrolled as on 30/06/12	No. of Ph.D Thesis Submitted during July'11 to June '12	No. of Ph.D awarded during July'11 to June '12	
5	04	01	

## **KOLKATA**



Computer Lab

BIT Kolkata Campus was established in 1995. This Centre offers academic programmes in Computer Science and Business Management, Bioinformatics and Electronics & 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, SIAM and Science Direct. 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.

The BIT Kolkata Centre was a co-sponsor of the 1st & 2nd International Conference On Information Systems Security (ICISS2005 & ICISS 2006) held in December 2005 & December 2006. The Centre was also one of the major technical sponsors, along with the IEEE and IEE, of an international conference organized by Computer Society of India, Kolkata Chapter in the year 2006 and 2011 respectively.

## Programmes currently offered:

UG:

- I. BBA
- II. BCA

PG:

- I. MCA
- II. M.SC (BIO INFORMATICS)
- III. MBA (2 / 3 Years)
- IV. M.TECH (COMPUTER SCIENCE) (2 / 3 Years)

## **Integrated Programmes:**

- I. Integrated MBA
- II. Integrated MCA
- III. Integrated MSC (Mathematics and Computing)

PhD Programmes in Computer Science, Management, BioInformatics

## **SPONSORED PROJECTS**

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1	FDP on Telecom Concepts & IT	TCS Kolkata	TCS Kolkata	14 <sup>th</sup> September 2011

## Conferences/ Seminars/ Workshops/ Staff Development Programmes attended

S. No.	Name of the Faculty	Title of the Conference/Seminar	Funding Agency	Organizers	Venue	Month Date, Year
1	R T Goswami	National Conference on MATSMIA	BIT Mesra	Dept. Applied Mathematics, BIT Mesra	BIT Mesra	November 2011
2	R T Goswami	International Conference on Informatics, Electronics & Vision, 2012 (ICIEV12)	Dhaka University, Bangladesh	IEEE unit, Department of Electronics, Dhaka University, Bangladesh	Dhaka University, Bangladesh	May 18 -19 2012

3	Srabani Mukhopadhyaya and etal	International Conference on Informatics, Electronics & Vision, 2012 (ICIEV12)	Dhaka University, Bangladesh	IEEE unit, Department of Electronics, Dhaka University, Bangladesh	Dhaka University, Bangladesh	May 18 -19 2012
4	Ambar Dutta,R T Goswami, Ranadeep Mukherjee and etal	6th National conference on Computing and nation building	Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM)	Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM)	Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi	February 2012
5	R.K. Chatterjee and etal	13th IASTED International Conference on Signal and Image Processing (SIP 11)	Dallas (USA)	Dallas (USA)	Dallas (USA)	December 14-16, 2011
6	R.K. Chatterjee and etal	9th European Conference on Synthetic Aperture Radar (EUSAR 12)	Nurnberg (Germany)	Nurnberg (Germany)	Nurnberg (Germany)	April 24-26, 2012
7	R.K. Chatterjee and etal	International conference Geomatrix'12	IIT Bombay	IIT Bombay	IIT Bombay	. 26 <sup>th</sup> to 29 <sup>th</sup> Feb 2012
8	Ranadeep Mukherjee and Ambar Dutta	First National Conference on Cyber Security	DIAT Pune	DIAT Pune	DIAT Pune	June 2012
9	Sraboni Dutta	The Annual Conference of Academy of Innovation and Entrepreneurship 2011	Tsinghua University, Beijing	Tsinghua University, Beijing	Tsinghua University, Beijing	July 2011
10	Sraboni Dutta	Seminar on "Nurturing Indian Entrepreneurs: Role of Informal Entrepreneurial Ecosystem	West Chester University	West Chester University	West Chester University	27 <sup>th</sup> February 2012

11	Sraboni Dutta And Ruchira Mukherjee	UGC approved 36th Orientation programme	UGC	Jadavpur University, Kolkata, West Bengal	Jadavpur University, Kolkata, West Bengal	11 <sup>th</sup> July – 6 <sup>th</sup> August 2011
12	Tanmoy Kumar Banerjee	UGC approved 86th Orientation Programme	UGC	Academic Staff College, Burdwan University	Academic Staff College, Burdwan University	7 <sup>th</sup> June 2012 to 4 <sup>th</sup> July 2012

#### **PUBLICATIONS**

#### Publication in International Journals:

- 1. Saumini Kar, Ajanta De Sarkar, and Nandini Mukherjee," An Integrated Framework in Geographic Information System Using Wireless Sensor Network" in International Journal of Computer Applications, pp: 13-18, March 2012.
- Sanchita Ghosh, Amit Konar and Lakhmi C. Jain, Automatic call management in a cellular mobile network by fuzzy threshold logic, International Journal of Knowledge-Based and Intelligent Engineering Systems 2012 Vol.16(1) pp.49-68 ISSN:1327-2314
- 3. Sanchita Ghosh, Amit Konar, An evolutionary approach to velocity and traffic sensitive call admission control Intelligent Decision Technologies 2011 Vol. 5(4) pp. 357-369 ISSN:1327-2314
- 4. Sanchita Ghosh, A.K.Ghosh, On Hydromagnetic Channel Flow of a Rotating Two-Phase Fluid Induced by Tooth Pulses IAENG Int. J. Appl. Math 2011 Vol 41,1, pp IAENG Int. J. Appl. Math ISSN:1992-9978 (print version) Impact factor:1
- 5. Ambar Dutta, Avijit Kar and B. N. Chatterji, "Fuzzy Set Theoretic Approach to Image Thresholding", International Journal of Computer Science, Engineering and Applications, Vol.1, No.6, pp 63 72, 2011
- 6. Ranadeep Mukherjee and Ambar Dutta, "Certified E-mail Protocols: A Brief Survey", International Journal of Computational Science and Engineering, Vol 2, No 2, pp 65 76, 2012

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

S. No.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
1	Radha Tamal Goswami	Treasurer	Computer Society of India Kolkata Chapter	2011-13

#### MoUs / Collaborations

S. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1	Nagaon Paper Mill, Kagajnagar, Jagi Road Assam	Industrial Visit of MBA Students	9th – 16th
			January 2012

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

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1	Students Social	2 <sup>nd</sup> year students	October 2011
2	Intra College Cricket Tournament	Final year MBA	January 2012
5	Saraswati Puja	MCA IV semester and Disha, a Social Awarness	28 January
		Group	2012

## No. of Summer Trainees trained in Department during July 2011 to June 2012: 100

Any other important information, not covered under above heads.

### **Ongoing Research Areas of Interest**

- Image processing
- Pattern Recognition
- Grid Computing
- VLSI Testing
- Algorithms, Distributed Algorithm
- Mobile Computing
- Biophysics / Structural Biology
- Small Business Management
- · Spatial Decision Support System
- Labour Welfare (HR)

## **LALPUR**

The Institute first started a Centre for Continuing Education at Lalpur in Ranchi, initially with part-time postgraduate M.E. courses in the disciplines of Mechanical, Civil, Electrical and Electronics engineering for the benefit of working professionals employed in various Ranchi based public and private sector undertakings who aspired to upgrade their qualification. Part-time evening courses were offered for first the M.E. then subsequently the MBA, MCA, and DCA courses, with laboratory classes being conducted on Sundays and holidays at the MESRA campus. This Centre is now named as BIT Lalpur Campus.



BIT, Mesra Off Campus, Lalpur

In 1997 the Institute started the full time courses B.Sc. Computer Science and B.Sc. Electronics course for girls and in 1998 the BCA course also for girls only. Because of its' success, in 1999 two extra shifts were added to run the BCA course for boys also. In 1999, M. Sc. Information Technology and M.Sc. Electronics and Telecommunication courses were introduced again for girls only. In 1979, the institute started the MBA as a Part time course for the working professionals. From the current session 2011-12 two new courses Integrated MBA and Integrated MCA courses have been introduced, the Lalpur Extension Centre has over 1800 students on its rolls of which almost 500 are post graduate students.

With a mission and commitment to be recognized as a leading centre for education, the quality of the courses imparted is of paramount importance to the centre. The centre is continually striving to impart best possible management and computer technology education to students. The core team of faculty members of the concerned departments, who posses excellent academic and corporate experience, share the responsibility with the adjunct faculty drawn from the different departments of BIT and also a number of distinguished visiting academicians and industry professionals.

The challenging and innovative course curriculum of computer science and management, aims to develop the knowledge, skills and competencies to enable the students to succeed in the corporate sector. The education provides the students with a traditional knowledge base in conjunction with the most recent progression of the field and extends cross functional awareness. A range of educational methods are used such as lectures, group discussions, case studies, presentations and projects along with intensive on the job industrial training, frequent industrial visits and foreign language learning. The students also actively engage themselves in various extracurricular activities through self-run societies, giving them opportunity for overall personality developments.

To support the needs of the students, research scholars and the faculty the institute has an access to an excellently established library with books, journals and periodicals. The library functions on an open access system for the faculty members and the research scholars and remains open from 8:30 AM to 8:30 PM, on all working days. The institute library has electronic access through the internet to a large numbers of online journals. The library has also developed an extensive CD-Database of back volumes and abstracts of leading books in computer science and management. The centre also has two large computer laboratories with 170 PCs all connected in LAN, and latest software.

The Placement activities are carried out by a dedicated placement cell, comprising a team of training and placement student coordinators under the guidance of T&P division BIT MESRA, which has initiated in

overwhelming response in the placements. All possible guidance and support is offered to the students resulting in a rewarding placement level. Accepted as a premier centre for technical and management education, the centre has been successfully placing the students consistently in the reputed organizations like: INFOSYS, HCL Technologies, TCS, COGNIZANT, ACCENTURE, WIPRO, GOLDMAN SACHS etc and the management students in HCL Infosystems, HCL Commnet, ICICI, UTI, Goodyear, Pantaloon, IDBI, Reliance, ISPAT Industries, Bluestar etc.

As for support service, the centre has a UCO Bank branch and a medical centre with qualified doctors and nurses with proper supporting facilities to meet any medical emergency needs. The institute also has a hygienic canteen facility to meet the food requirements of the staffs and the students which is also properly administered. With the educational and extra curricular activities duly supported by the requisite facilities the ultimate aim of the centre is to provide to the students, a full range of academic and professional competence necessary to succeed in a challenging career and adapt with the changing corporate needs.

### **Ongoing Projects Sanctioned before July 2011**

SI. 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 and Professional Women: Tribal and Non tribal Women of Jharkhand"	Ms. Anupma Sahai	Indian Council for Social Science Research (ICSSR) (Ministry of Human Resource Development), New Delhi	1 <sup>st</sup> February, 2010	Rs. 5,42,875	2 Years (one year extension)

## 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
		MANAGEN	MENT DEPARTMENT		
1.	Ms Anupma Sahai	"Workshop on Case Writing Teaching and Research	IIM Calcutta CRC (IIMCCRC)	IIM Calcutta	June 14 – 15 June, 2012
2.	Ms Mili Dutta	"Emerging challenges for sustainable Business	Department of management, IIT, Roorkee	IIT ,Roorkee	June 1-2, 2012
		Business Excellence through TQM	Institute of Science and Management	ISM,Pundag	20 <sup>th</sup> June to 2nd July 2011
		Marketing Research:Role of consumer Behaviour	Vinod Gupta School of management, IIT, Kharagpur	VGSOM	21 <sup>st</sup> -25 <sup>th</sup> May,2012

3.	Ms Swati priyadarshani	Refresher course in Financial Management  UGC-sponsored 68th Orientation Programme	UGC-sponsored; UGC-ACADEMIC STAFF COLLEGE, Ranchi UGC-sponsored; UGC-ACADEMIC	Ranchi university, Ranchi Jharkhand Ranchi university, Ranchi	To 30-6-2011 21-5-2012 To
			STAFF COLLEGE, Ranchi	Jharkhand	17-6-2012
		COMPUTER SC	IENCE & ENGINEERI	NG	
1.	Dr. (Mrs.) Vandana Bhattacherjee	Workshop on Data Mining	Chitkara University, Punjab	Chitkara University, Punjab	July 21, 2011
2.	K.Mukherjee & G.Sahoo	Security mechanism for c-Governance using Hadamard matrices	2nd IEEE International Conference on computer & Communication Technology,	Department of Computer science & Engg., Motilal Nehru National Institute of Technology, Allhabad, India.	15-17 September 2011,
3.	Mrs Onima Tigga	UGC-sponsored 68th Orientation Programme	UGC-sponsored; UGC-ACADEMIC STAFF COLLEGE, Ranchi	Ranchi university, Ranchi Jharkhand	21-5-2012 To 17-6-2012
4.	Jaya Pal	Application of fuzzy clustering on software quality using max – min method	ICCCS 2012(accepted), NIT, Rourkela,	NIT, Rourkela	October 6-8, 2012

### **PUBLICATIONS**

### **Published in International Journals**

## Computer Science & Engineering

- V. Bhattacherjee, E. Rashid and S. Patnaik (2012) "The Application of Case-Based Reasoning to Estimation of Software Development Effort", International Journal of Computer Science and Informatics (IJCSI) ISSN (PRINT): 2231 –5292, Vol 1 Issue 3 of IOAJ Journals.
- V. Bhattacherjee, E. Rashid and S. Patnaik (2012) "Strategies Towards Improving Software Code Quality in Computing", International Journal of Engineering Research and applications(IJERA) ISSN (Online): 2248-9622, Vol 2 Issue 3, ,pp 2253-2258.
- 3. V. Bhattacherjee, E. Rashid and S. Patnaik (2012) "A Survey in the Area of Machine Learning and Its Application for Software Quality Prediction" Accepted for publication in ACM SigSoft Software Engineering Notes.

- 4. J. Pal and V. Bhattacherjee (2010) "Applying Fuzzy Clustering To Predict Software Usability", International Journal of Applied Research on Information Technology and Computing (IJARITAC), Volume: 1, Issue:, Sept-Dec, 2010.
- Vinay singh, Vandana Bhattacherjee and Sandeep Kumar (2012)"An Analysis of Dependency of Coupling on Software Defects" ACM SIGSOFT Software Engineering Notes. January 2012, Volume 37 Number 1 DOI: 10.1145/2088883.2088899 http://doi.acm.org/10.1145/2088883.2088899
- 6. Vinay singh, Vandana Bhattacherjee (2011) "Detection of Indirect Coupling Using Chaining Method and Its Impact on Software Quality" International Journal of Research and Reviews in Information Sciences (IJRRIS) Vol. 1, No. 4, December 2011, ISSN: 2046-6439 © Science Academy Publisher, United Kingdom www.sciacademypublisher.com
- 7. Priyam, A., Anwar, S, 2011, Application of Bayesian Classification for EcoGene Data, International Journal Science Mathematical Science and Engg. Appls.(IJMSEA), 5, 69-76.
- 8. Mukherjee, K., Sahoo, G., "A Novel Methodology for secured c-Governance using Hadamard coding", International Journal of Cloud Computing, Vol. 1, Nos.2/3, 2012, pp 145-166, DOI: 10.1504/12.46718, Inderscience Publisher.
- 9. P S Bishnu, V Bhattacherjee, "Software Fault Prediction using Quad Tree based K-Means Clustering Algorithm", IEEE Transactions on Knowledge and Data Engineering, vol 24, No. 6, pp- 1146- 1150, 2012.
- 10. P S Bishnu, V Bhattacherjee, "Application of K-Medoids with Kd-Tree for Software Fault Prediction", ACM SIGSOFT Software Engineering Notes, vol. 36, no. 2, pp. 1-6, 2011.

#### **Management**

- 1. A.N. Jha "Health Care and Women's Empowerment: The role of Self Helf Groups" pp 116-128; in the online journal hcs.pitt.edu, ISSN 2161-6590, Vol. 1, Issue 2, 2012
- 2. A.N. Jha "Viability of Credit in Microfinance for developing countries" pp. 104-107, International Review of Social Sciences & Humanities, www.irssh.com, ISSN 2248-9010 (Online), ISSN 2250-0715 (Print) Vol 3, Issue 2
- Pranab Kumar "The Role of Emotional Intelligence in Securing High Service Quality in Indian Service Sector"; Management Dynamics. Vol.12, No.1, Year-2012
- 4. "Emotional Labour- An Empirical Analysis of the Correlations of Its Variables"; European Journal of Business and Management, Vol.4, No.7, Year-2012.
- 5. "Management: New Imperative for Organisational Effectiveness"; Growth, Vol.39, No.4, Year-2012
- 6. "Emotional Intelligence: The New Face of Leadership"; International Journal of Management & computing Sciences; Vol. 2, No.2, Year-2012.
- 7. "Quality of Work Life Satisfaction of Working Female Professionals in Private Banking Sector"; An International Journal of Business & Technology Resaearch; Vol. 4, No.1, Year-2011.
- 8. "Rudiments of an HR Auditor for a thriving Human Resource Audit"; An International Journal of Business & Technology Resaearch; Vol. 4, No.1, Year-2011.
- Mili Dutta, HUMAN RESOURCE ACCOUNTING THE NEW PERSPECTIVE, ASIA PACIFIC JOURNAL OF RESEARCH IN BUSINESS MANAGEMENT, Volume 2, Issue 9 (September, 2011) ISSN 2229-4104

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

 Mukherjee, K., Sahoo, G., "Secure Framework For c-Governance", pp 205-210, National Conference on Mathematical and Statistical Modeling in Innovative areas, Department of Applied Mathematics, BIT Mesra, October 19-20, 2011.

### Papers/Abstracts in Conference Proceedings

- 1. J. Pal and V. Bhattacherjee, "Application of fuzzy clustering on software quality using max min method, in proceedings of ICCCS 2012(accepted), NIT, Rourkela, October 6-8, 2012.
- 2. P.S. Bishnu and V. Bhattacherjee, "A Dimension Reduction Technique for K Means Clustering", 1stInternational conference on RAIT 2012 (IEEE), vol. 2, pp. 89-93, 2012.
- 3. Pranab Kumar "Glass ceiling: Gender Differences in Management Practice", 2nd International Conference of Management and Behavioural Sciences, organized by Society of Management and Behavioural Sciences) Haridwar Uttarakhand (India), 2011.
- Mili Dutta "Social Media Promotion: Role of IMC in Rising above the Clutter", National Conference on Emerging Challenges for Sustainable Business 2012, IIT, roorkee, pg 1437-1451, ISBN - 978-93-81583-46-3,

### Ph.D. students enrolled, submitted and awarded

No. of PhD students enrolled as on 30/05/12	No. of PhD Thesis Submitted during July'11 to June '12	No. of PhD awarded during July'11 to June '12
15	01	-

No. of summer trainees trained in the Department during July 2011 to June 2012

Computer Science & Engineering Department – 135

Management Department -- 255

## **NOIDA**



BIT, Mesra Off Campus, Noida

BIT Mesra in the year 1998, established one of its extension centre as it is in advantageous position compared to other extension centres of BIT in terms of its location- near capital region and gateways to many IT companies at Greater NOIDA, Gurgaon and Delhi for diversified and advanced educational research, consultancy and training of human resources in IT and Management technology in the Northern Zone,. The Department of management at Birla Institute of Technology was established in 1998 to carry forward the legacy of BIT Mesra to focus on management education with the intent to encourage intellectual curiosity,

management studies, academics and learning. 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.

Computer Science Department at BIT EC 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.

The Department of Animation and Multimedia was established in the Noida Campus of BIT, Mesra in the year 2004. (The 1st batch of students had joined the campus in Dec 2004). **An Advisory Board** is being constituted to advice new orientation to the department. Experts from Jamia Milia Islamia, New Delhi, Indian Institute of Mass Communication, (IIMC) New Delhi, National Centre of Design, New Delhi, IIT Bombay, Presidency University, Kolkata, Ministry of Science and Technology, Gol, Central University of Orissa have agreed in principle to participate in the deliberations and lend all support.

#### Infrastructure Added:

A latest version 75 Dell Desktop has introduced to PG computer laboratory for PG students. All class rooms are made equipped with AC and LCD Projectors for effective teaching in the last one year.

#### **Programmes Offered:**

- 1. Integrated Master of Business Administration (IMBA) 5 years (10 semesters)
- 2. Integrated Master of Computer Application (IMCA) 5 years (10 semesters)
- 3. Bachelor of Science Animation & Multimedia (BAM) 3 years (6 semesters)
- 4. Masters in Business Administration (MBA) 2 years (4 semesters)
- 5. Masters in Computer Application (MCA) 3 years (6 semesters)
- 6. Masters in Animation & Multimedia PG Level, Full Time

- M.Tech (Computer Science) PG Level, Part Time
- 8. Masters in Business Administration PG Level, Part Time/Slow Pace
- 9. Ph.D. (Management & Computer Science) Full Time & Part Time

## SPONSORED PROJECTS

## Projects Completed during the period July 2011-June 2012

SI. No.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of
1.	Routing Protocol for Mobile Ad-Hoc Network	Ms. Charu Wahi	UGC	Feb' 2011	Rs.90,000/-	the Project Feb'2012
2.	E-Learning Modules on Research Methodology & Advertising	Mr. Partho Achariya, Mr. Niket Mehta Mr. Lalit M Bhatt	IIIT, Allahabad	2009	5,00000	April, 2011

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	FDP on Research Methodology	Dr. S L Gupta Dr. Arun Mittal		29 <sup>th</sup> – 30 <sup>th</sup> June, 2012.
2.	National Workshop on Development Communication Website: : http://bitnoidaworkshop. blogspot.in/	Dr. Suparna Dutta, Coordinator Mr. Niket Mehta, Co Coordinator	Ministry of Science and Technology	9 <sup>th</sup> - 10 <sup>th</sup> April 2012
3.	Seminar on Future Trends of Research in Computer Science: FTRCST-2012	Ms. Priti Sharma & Mr. Pankaj Gupta	DST, New-Delhi & DRDO, New-Delhi	3 <sup>rd</sup> March 2012
4.	FDP on Entrepreneurship Development	Dr. Arun Mittal	Department of Science and Technology, Govt. of India	02 <sup>nd</sup> - 14 <sup>th</sup> Jan, 2012
	Round Table Discussion On The Relevance and Need of Communication in Policy application	Dr. Suparna Dutta		10 <sup>th</sup> Dec 2011
6.	FDP on Entrepreneurship Development		Department of Science and Technology, Govt. of India	28 <sup>th</sup> Nov-10 <sup>th</sup> Dec 2011

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

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, Year
1.	Pallab Sikdar, Ms. Garima Srivastava Ms. Neharika Shrivastava	Faculty Development Program on Research Methodology & SPSS	BIT Noida	BIT Noida	June 29 –30, 2012
2.	Amresh Kumar	Workshop on "Structural Equation Modeling(SEM): Basics And Application	IBS-Hyderabad (ICFAI foundation)	Hyderabad	June 28-29, 2012
3.	Ms. Neharika Shrivastava	Finance workshop on regulatory framework	Confederation of Indian Industries	New Delhi	June 12 <sup>th</sup> 2012
4.	Ms. Charu Wahi	International workshop on "Data Structures and Algorithms"	Thapar University	Patiala	4-15 June'2012
5.	Dr. Munish Makkad, Dr. S.L. Gupta Ms. Harpreet Charanjit , Dr. Arun Mittal,	MDP on Multivariate Data Analysis	IIT Kharagpur	Vinod Gupta School of Management, IIT Kharagpur	June 4 <sup>th</sup> - 9 <sup>th</sup> 2012
6.	Pallab Sikdar Amresh Kumar	Workshop on Advances in Research Methods & Data Analytical Tools	CME-AIMA	AlMA, New Delhi	May 24-26 2012
7.	Ms. Rachana Pratik, Dr. Vandna Sharma, Ms. Harpreet Charanjit, Mr. K.B. Singh, Dr. Abhishek Singh Dr. S.P. Singh	National Seminar on Faculty Development in Management Education: Oppurtinities and Challenges	By Fore School, Delhi	PHD House New Delhi	May 15 <sup>th</sup> 2012
8.	Ms. Neharika Shrivastava	Six Sigma Green Belt	FICCI	New Delhi	April 16 <sup>th</sup> -20 <sup>th</sup> 2012
9.	Ms. Siba Mitra, Mr. Anil Kumar, Ms. Charu Wahi, Mr. Aruna Malik, Ms. Muntha Ahamad, Ms. Shruti Kohali, Ms. Smitha Jha	FDP on "Functional Programming"	AKGEC	Ghaziabad	12-13 April'2012

10	Ms. Neharika Shrivastava, Ms. Garima Srivastava	Advanced Statistical Tools for Business Research	Gautam Buddha University	Greater Noida	April 12 <sup>th</sup> - 13 <sup>th</sup> 2012
11	. Dr. S.P. Singh	International Conference or emerging trends in CS & IT		Jhunjhunu Rajasthan	April 9 <sup>th</sup> -10 <sup>th</sup>
12		Workshop on Financial Markets	CME-AIMA	AlMA, New	2012 March, 29 – 30 2012
13	Dr. Munish Makkad	1st World Summit on Accreditation	National Board of Accreditation	Hotel Ashok, New Delhi	March 25-28, 2012
14.		International conference on "Marketing: Emerging issues, challenges and strategies"	Punjab Commerce And Management Association	Mohali, Punjab	March 24, 2012
15.	Ms. Neharika Shrivastava, Ms. Garima Srivastava	National Seminar on Future Of Corporate Finance in India	Delhi College Of Art and Commerce	New Delhi	March 22 <sup>rd</sup> - 23 <sup>rd</sup> 2012
16.	Ms. Niharika Srivastava	Financial Literacy	Ajay Kumar Garg Institute of Management	Ghaziabad	March 15 <sup>th</sup> 2012
17.	Pankaj Gupta, Ms. Sheetal Dhir, Ms. Lipika Jha, Ms. Pramila Joshi, Ms. Anil Kumar Dr. S.P. Singh	National Seminar on Future Trends of Research in Computer Science and Technology	Computer Science Dept BIT Noida	BIT Noida	March 3 <sup>rd</sup> , 2012
18.	Ms. Charu Wahi	National Workshop on "Network Simulators for Research Issues in Wireless Technology NSRIWT 2012"	ВІТ	Coimbatore	27 <sup>th</sup> Feb-4 <sup>th</sup> March'2012
19.	Dr. Munish Makkad	International Conference on Knowledge Management & Resource Sharing	of Applied	Muscat; Sultanate of Oman	Feb 26-28 2012
20.	Dr.S.L. Gupta	International Commerce & management Conference		Mumbai	Feb 23-24 2012
21.	Dr. Vandna Sharma	National Conference on Enhancing People Factor: HR Issues & Challenges	USMS, Guru Gobind Singh Indraprastha	Hotel Radisson Blu, Dwarka, New Delhi	Feb 24-25 2012

22.	Dr. Asha Prasad Dr. Meenakshi Sharma Dr. Monika Bisht Ms. Preety Bajaj	Workshop on Psychometric Metric Testing & Applications	FORE School of Management, New Delhi	FORE School of Management, New Delhi	Feb 16 <sup>th</sup> -17 <sup>th</sup> 2012
23.	Mr. Anil Kumar	Refresher Course On paradigms and Applications of Pattern Recognition in Image Processing and Computer Vision	Indian Academy of Sciences Bangalore. Indian National Sciences Academy, New Delhi. The National Academy of Sciences Allahabad.	Dr. GRD College of Science, Coimbatore, Tamilnadu	23 <sup>rd</sup> Jan-4 <sup>th</sup> Feb 2012
24.	Dr. Munish Makkad, Dr. S.L. Gupta	Workshop on Case Study	ICFAI Business School	Hyderabad	Jan 27-29, 2012
25.	Dr. Munish Makkad	26th Meeting of Investors Association	Securities Exchange Board of India	SEBI Corporate Office, Mumbai	Dec. 23, 2011
26.	Mr. K. B. Singh	3rd International Workshop on Quantitative Finance	Jointly by – IIT-Kanpur, IGIDR-Mumbai, IDRBT-Hyd. & RPI-USA	IDRBT- Hyderabad	Dec 14-17 2011
27.	Ms. Rachana Pratik	Conference on Marketing of Services	Gautum Buddha University	GBU,Greater Noida	Dec 17 <sup>th</sup> 2011
28.	Dr.S.L. Gupta	64th All India commerce Conference	School of Management, Pondicherry University	Pondicherry University	13-15 Dec 2011
29.	Ms. Pramila Joshi	FDP on Entrepreneurship Development	Computer Science Dept BIT Noida	BIT Noida	28 Nov 2011 -10 Dec 2011
30.	Dr. Asha Prashad	5th India Energy summit 2011, Climate change & the Energy challenges	Indian Chamber of Commerce	New Delhi	28-29 Nov 2011
31.	Ms. Rachana Pratik	Faculty Development Programme in Research Methodology	IIT, Delhi	IIT, Delhi	Nov, 19- 20th.'2011

32.	Dr. Vandna Sharma	International Conference on FOBES-2011	IMT Ghaziabad in Collaboration with Essex Business School, University of Essex, UK	Indian Habitat centre, New Delhi	Nov 4-7 2011
33.	Dr. Munish Makkad	Annual Conference of Association of Finance & Control on Indian Financial Sector - Agenda for Reforms	Dept. of Finance & Control, University of Delhi	Hotel Eros Shangri-La, N.D.	Sep 17 2011
34.	Mr. K. B. Singh	XXIV Annual Convention 2011 (Title-"Indian Financial Sector-Agenda for Reforms)	Dept. of Fin. Studies, University of Delhi	Shangri-La's Eros Hotel, New Delhi	Sep 17 2011
35.	Pankaj Gupta	Recent Trends in Software Testing	DTU, New-Delhi	Delhi	17 Sep, 2011
36.	Ms. Charu Wahi	Short-term training programme on "Network Security"	IIITM	Gwalior,	Sep 5 <sup>th</sup> – 7 <sup>th</sup> 2011
37.	Ms. Charu Wahi	International Conference on "Issues and Challenges in Networking, Intelligence and Computing technologies (ICNICT 2011)"	KIET	Ghaziabad	Sep 2 <sup>nd</sup> – 3 <sup>rd</sup> 2011
38.	Ms. Rachana Pratik	FDP on SPSS & Research Methods	Instt. Of Mgt. Studies,Noida	IMS,Noida	July, 27 <sup>th</sup> -28 <sup>th</sup> 2011
39.	Pallab Sikdar	Training Course on Project Management – Planning, Implementation, Monitoring & Evaluation	Crown Agents (India) Pvt. Ltd.	India Habitat Centre, New Delhi	July, 5–8 2011
40.	Pallab Sikdar	Training Course on Project Management – Planning, Implementation, Monitoring & Evaluation	Crown Agents (India) Pvt. Ltd.	India Habitat Centre, New Delhi	July, 5–8 2011
41.	Mr. K. B. Singh	QIP (Title-"Case Based Learning in Business & Management")	Dept. of Management IIT-Roorkee	IIT-Roorkee	July 05 - 09 2011
42.	Pallab Sikdar	Workshop on Advances in Research Methods & Data Analytical Tools	CME-AIMA	AIMA, New Delhi	May,24-26 2012
43.	Mr. Anil Kumar	Workshop on Optimization Techniques for Image Processing	Bharathiar University Coimbatore, Tamilnadu	Bharathiar University	March, 9-10 2012

#### **PUBLICATIONS**

#### **Published in International Journals**

- Dr. Vandna Sharma, A perceptual study on KM Orientation in Indian Private Engineering Institutions, International Journal of Educational Management, 26, No.3, (2012) 234–251, Emerald Group Publishing Limited, U.K. DOI: 10.1108/09513541211213327 www. emeraldinsight.com/0951-354X.htm
- 2. Charu Wahi, Sanjay Kumar Sonbhadra, Mobile Ad Hoc Network Routing Protocols: A Comparative Study, International Journal of Ad-Hoc, Sensor & Ubiquitous Computing (IJASUC), 3, No.2, April (2012).
- 3. Pankaj Gupta, Design and Implementation of Sensitive Information Security Model based on Term Clustering, International Journal of Computer Applications April, (2012) ISBN:937-93-80867-45-0
- 4. Basu Dev Shivahare, Charu Wahi, Shalini Shivhare, Comparison Of Proactive And Reactive Routing Protocols In Mobile Adhoc Network Using Routing Protocol Property, International Journal of Emerging Technology and Advanced Engineering, ISSN 2250-2459, 2, Issue 3, March (2012).
- 5. K.B. Singh, Post Merger Financial Appraisal of Selected Firms, International Journal of Business Economics and Management Research, 3, Issue-1, Jan (2012), 42. (ISSN 2229-4848)
- 6. K.B. Singh, S.K. Singh, Dr. Abhishek Singh, An Analysis of Balanced Mutual Fund Schemes", Asian Journal of Research in Banking and Finance, 2, Issue-1, Jan (2012), 59. (ISSN: 2249-7323)
- 7. Dr. Shruti Kohli, Dr. Ela Kumar, Improving Link Spam Detection using Spamizer, Lecture Notes in Engineering and Computer Science, IAENG, 2193, (2011) 1 88-93.

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

1. Arun Mittal, Building Management Models from Chanakya Niti and Vidur Niti, PhilManQuest, 2 N0. 1 (2012).

#### Papers/Abstracts in Conference Proceedings

- 1. K.B. Singh, Dr. Abhishek Singh, The Indian Corporate Bond Market: Potential and Challenges, Proceedings of National Conference on Emerging Challenges for Sustainable Business, IIT-Roorkee, June 1-2, (2012), conference proceedings ISBN 978-93-81583-46-3.
- K.B. Singh, Dr. Abhishek Singh, Impact of Micro Insurance in India, Proceedings of National Conference on Innovative management practices in Banking & Insurance Sector – A Global perspective, Faculty of Commerce, BHU, Varanasi, during April 14-15, (2012);
- 3. Dr. Vandna Sharma, Exit Interview-A Tool to retain employees: An Empirical Study in Indian Power Sector Organization, Enhancing The People Factor Human Resource Issues and challenges, Proceedings of the National Conference on Enhancing People Factor: HR Issues & Challenges, organized by USMS, Guru Gobind Singh Indraprastha University, New Delhi, at Hotel Radisson Blu, Dwarka, New Delhi, India, 24-25 February, (2012), Narosa Publishing House, First Edition, (2012), pp.121-136, ISBN: 978-81-8487211-8.
- 4. K.B. Singh, Post Merger Shareholders wealth: Study of selected banks, National conference on M&A Issues, Opportunities and Challenges, Shaheed Bhagat Singh College, University of Delhi, New Delhi during January 20-21, (2012),

- K.B. Singh, Dr. Abhishek Singh, "Regulation of M&A in India" at the National conference on M&A Issues, Opportunities and Challenges, Shaheed Bhagat Singh College, University of Delhi, New Delhi during January 20-21, (2012).
- 6. K.B. Singh, Mergers and operating performance in post-liberalization era, Proceedings of National seminar on Indian Business through Ages, organised by FMS, University of Delhi, New Delhi, December 12-13, (2011) Macmillan Publishers (2012), pp.164, ISBN 023033-2161.
- K.B. Singh, Dr. Abhishek Singh, Role of FII in the Indian Capital Market in the post-liberalization era, National Seminar on Indian Business through Ages, FMS, University of Delhi, New Delhi, December 12-13, (2011).
- 8. Dr Shruti Kohli, Dr Ela Kumar, Evolution of user dependent model to predict future usability of a search engine, World Congress on Information and Communication Technologies, 11-14 Dec. (2011)
- Dr. Vandna Sharma, An Empirical Study on Impact of Soft Skills Training on CRM in Indian Banks, Proceedings of the International Conference on FOBES-2011, jointly organized by IMT Ghaziabad in Collaboration with Essex Business School, University of Essex, UK, at Indian Habitat centre, New Delhi, India, 4-7 November, 2011, McMillan Advance Research Series, McMillan Publications, First Edition, (2012), pp.370-382, ISBN: 978-935-059-028-7.
- 10. K.B. Singh, Abhishek Singh, Analysis of Balanced Mutual Fund Schemes National seminar on Future of Financial Markets, CMS, Jamia University, New Delhi on September 5, (2011) ISBN: 978-81-922331-0-9
- 11. K.B. Singh, Post M&A Financial Appraisal of Selected Firms, National Seminar on Future of Financial Markets, CMS, Jamia University, New Delhi, September 5, (2011) ISBN: 978-81-922331-0-9
- 12. Satya Prakash, Anil Kumar, 'A New Approach for Representation of Multi-Dimensional Matrix Multiplication Operations', Journal of computing, ISSN No. 2151-9617, volume 3, issue 8, September (2011).
- 13. Dr Shruti Kohli, Dr Ela Kumar, Improving link Spam detection using Spamizer, World Congress of engineering & Computer Science, WCECS (2011) USA

#### **Departmental Students' Activities**

S. No.	Name of the Activity	Students' co coordinator, if any	Date/Duration
1.	Guest Lecture on Six Sigma	Kim Verma /Aditi Chawla	7 <sup>th</sup> – 10 <sup>th</sup> May 2012
2.	Discussion on Budget 2012		19 <sup>th</sup> March 2012 3 P.M.
3.	CRM – A Business and Technical Perspective	,	24 <sup>th</sup> Feb'2012
4.	Management Game 'Headstrong'		3r <sup>d</sup> - 4 <sup>th</sup> Feb 2012 9.30 am - 5 pm
5.	Guest Lecture on ERP/SAP	Kim Verma /Aditi Chawla	2 <sup>nd</sup> – 5 <sup>th</sup> July 2012
6.	Entrepreneurship Summit		April' 2012
7.	Cricket Tournament		March' 2012
8.	Cultural Fest		

9.	Personality Development Programme	10 <sup>th</sup> February, 2012 2:00 p.m. & 2nd Jan, 2012 10:30 a. m & 26 <sup>th</sup> August, 2011 12:30 p.m
10.	3 days Workshop on Digital Painting (for UG/PG Students) by Vijay Sharma, Digital Artist.	Jan, 2012
11.	Guest Lecture on Project Management	17 <sup>th</sup> Sep, 2011 11:30 am – 12:30 pm
12.	Guest Lecture on Marketing Strategies for Pharmaceutical Industry	9 <sup>th</sup> Sep, 2011 12.30-1.30 pm
13.	Management Game-"Ice-Breaker"	3 <sup>rd</sup> Sep, 2011
14.	Service Oriented Architecture	3 <sup>rd</sup> Sep, 2011
15.	Workshop on Group Discussion	23 <sup>rd</sup> Aug, 2011 12:30 p.m
16.	3 days workshop on Visual Effects & Editing Techniques (for PG Students) By Deepak Katter, Video Editor, NDTV.	Dec, 2011
17.	3 days workshop on MEL & MAX Scripting (for PG Students) By Aditya Kapoor (Gaming Professional).	Dec, 2011
18.	3 days workshop on Art & Craft (for UG Students) By Mr. Soumen Bhowmick, College of Arts	Aug, 2011

### Ph.D. students enrolled, submitted and awarded

No. of Ph.D. students enrolled as on 30/05/12	No. of Ph.D. Thesis Submitted during July'11 to June '12	No. of Ph.D. awarded during July'11 to June '12
40	11	06

No. of summer trainees trained in the Department during July 2011 to June 2012-: 45 MBA Students + 49 BBA B.E. + 65 BBA = 159 Management students

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

### MEMBERS OF THE BOARD OF STUDIES OF 5 Yrs. Integrated MBE

(1) Dr. S. K. Bose – HOD, Department of Management : Chairman

(2) Cdr. B. R. Sharma – Director, BITEC, Noida : Special Invitee

(3) Dr. S. L. Gupta – Professor, BITEC Noida : Member & Coordinator

(4) Dr. Munish Makkad – Professor, BITEC, Noida : Member

(5) Dr. Asha Prasad – Associate Professor, BITEC, Noida : Member

(6) Dr. Meenakshi Sharma - Asstt.Professor, BITEC, Noida : Member

(7) Dr. Suparna Dutta-Asstt.Professor, BITEC, Noida : Member

(8) Dr. Abhishek Singh – Asst.t Professor, BITEC, Noida : Member

(9) Dr. Ila Sahay – Associate Professor, BITEC, Noida : Member

(10) Mr. Pankaj Gupta – Assistant Professor, BITEC, Noida : Member

(11) Dr. D. D. Chaturvedi – University of Delhi : External Member

(12) Dr. Kavita Sharma – Delhi School of Economics : External Member

#### Other important information

 An animated film "We Stand Together" was nominated in FICCI Frames 2011 (Indo Canada Innovation Award), Third winner of 4th Global Film Festival 2011, Selected in the UFO 2010 International Digital Film Festival.

 A 3d animated film "What Goes Around Comes Back Around" by Anand Kusumakar, Akshit Dhiman, Bharat Lalwani won 1st prize at 4th Global Film Festival 2011 and Nominated in FICCI Frames 2011 (indo Canada innovation award), Screening at IIT Roorkee (16 Frames), CMS VATAVARAN 2011, Screening at Vigyan Bhawan Delhi, Inox Chennai, Hotel Renaissance Mumbai.

#### **Campus Recruitment Programme 2011-12**

- 1. The campus recruitment programme for the batch of students passing out in the year 2012 is over now in and at this point, we would like to share the data and the feedback with the respective stake holders
- 2. A total of 48 organizations have participated the campus placement in this year so far during placement session stating from July 2011. Organizations from diverse sectors Telecom, IT Products, IT Services, Banking and Finance, Consultancies, Hospitality sector and Animation have recruited from Noida campus. This year a total of 142 offers have been generated from the Campus recruitment process compared to last year's 96 offers. Several offers have been generated through the internship too.
- Computer Science students have been successfully placed in a wide spectrum of IT companies like Samsung, Headstrong, Aricent, Cognizant, Infosys, Newgen, Verizon, Mysis, Wipro, Amazon, Grapecity
- 4. Students of management department are well placed in diversified fields of management in companies like Capital IQ, Grail Research, 99 acres, Naukri, Tata Tech, NBC, Content Flow, Syscon Corp., G2O Technology, APAC, Jaro Education, U Flex, Earth Infra, ING Vasya Bank, IIFL, CITI Bank, Aspiring Mind, CRM Next, Add India Advertising.

# **PATNA**



BIT, Mesra Off Campus, Patna

The Birla Institute of Technology Mesra, a name synonymous with quality technical education, on the initiative of Govt. of Bihar, established its centre at Patna in year 2006. A Memorandum of Understanding was signed between the Institute and the Govt. of Bihar in December 2005. Subsequently, the Govt. of Bihar allotted 25 acres of land beside the Jai Prakash Narayan International Airport at Patna and released the requisite fund for establishing the centre. The Foundation Stone of the Centre was laid on 24 December 2005 and construction started in April 2006.

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 the B.E. programs in the following disciplines:

- 1. Computer Science & Engineering
- 2. Civil Engineering BIT, Mesra Extension Centre, Patna
- 3. Electronics & Communications Engineering
- 4. Information Technology
- 5. Electrical & Electronics Engineering
- 6. Mechanical Engineering
- 7. Production Engineering

#### **Doctoral Research:**

In addition, BIT Patna campus also offers Doctor of Philosophy Programs in:

- Applied Sciences
- 2. Engineering & Technology
- 3. Management.

# Proposed courses to be start in the following academic year:

2012-13	2013-14
Five years Integrated Bachelor of Architecture (B. Arch.)	IMBA
Integrated M.Sc. in Mathematics	MBA
Integrated M.Sc. in Physics	M.Tech. in Remote Sensing
	M.Tech. in Computer Science
	M.Tech. in Scientific Computing

#### Facilities:

State-of-the-art Auditorium, Seminar Hall, Dispensary, Ultramodern Laboratories, Central Library, Play Ground, Well equipped Workshops, Wi-Fi Campus, Cafeteria, Language Lab, Gymnasium, Guest-House, Staff Quarters, Transport facility for students & staffs

# 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, 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 & international journals, periodicals on the subject areas & other research materials. Important local, regional and national dailies in English and Hindi are also an important part of Newspaper section of the library.

Number of volumes of books added during the academic year 2011-12 is 1285. Currently total number of books is 25,000 (all bar-coded). The facility for video conferencing is established and E- library is being developed.

#### **Online Resources:**

IEEE : Including 145 Titles

ASCE : Including 33 Titles

ASME : Including 25 Titles.

# **Computer Laboratory:**

The heart of the institute is the large Computer Centre with 200 P4 Computers with a DELL Server connected to LAN to support multi user software. There is a provision for a second centralized Computer Lab with another 200 Computers. At present, the students are using System Software's like C++, MSDN, ORACLE, Rational Rose & Application Software like Auto CAD 2009, Auto CAD Raster Design, Auto CAD Electrical, Auto CAD Inventor, MATLAB, Multisim, Comsim, Xiling, Active HDL etc.

#### **Training & Placement Cell:**

The placement office at Patna is well equipped and designed to smoothly handle and support the 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. We are equipped with the following facilities to aid the process:

- Air-conditioned auditoriums to conduct pre placement talks.
- Classrooms for conducting the written tests.
- Well furnished air-conditioned rooms for Interviews and group discussions.
- Video conferencing facilities.

# Placement Report 2011-12:

			Branch	es				
Name of Company	CIVIL	CSE	ECE	EEE	IT	MECH	PROD	Total
Aricent Tech(H)		5	***************************************					5
Atos Origin			1					1
Bharti Infratel			one-ot-ot-ot-ot-ot-ot-ot-ot-ot-ot-ot-ot-ot-	1				1
Bseb	2		TANABANIST VALLE	2				4
Cognizant	3	20	27	11	9	2	4	76
Cummins Ltd.						1		1
Cybage					1			1
Ericsson		1	5	1	1			8
Exide Industries						2		2
Gammon India Ltd.	3	v-						3
Gmmco				1				1
Gmr Energy Ltd.		a de la companya de l				2		2
Gmr Group (Delhi Airport)				1				1
Headstrong		2	2					4
Hero Motocorp	:					2		2
lbm		1			2	1	1	5
Infosys Technologies		12	19	11	5	2	2	51
Metalsa				1		The state of the s		1
Misys		1						1
Musigma	•	5	2	2				9
Nagravision			2			"		2
Oracle		1						1
Reckit Benkiser	·			1				1
Samsung Lab		6			1			7
Sapient	***************************************	2				and the second s		2
Soma Enterprises	1							1
Tata Autocomp Ltd.				2			1	3
Tata Motors			1	2		2	1	6
Tata Technologies		1				1	1	3
Tata Consulting				1		1		2
Engineers								
Tayo Rolls Ltd.						1		1
Verizon Data Services		8	1		1			10
Vishwa Infrastructures	5							5
Wipro Technologies	2	22	17	22	7	1	1	72

# **SPONSORED PROJECTS:**

# Project Sanctioned during July 2011- May 2012:

Dept.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
BIT	E-Content Generation	Prof.	Dept. of	March	10.40 Lakh	Six Months
Patna	of selected subjects for	M.A.Hassan	Science &	2012		
}	Engineering Students of		Technology,			
	Bihar State		Govt. of Bihar			

# Ongoing Projects Sanctioned before July 2011:

Dept.	Project Title	PI / Co- PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
Civil	Preparation & Characterization of Lithium Titanate Pebbles for Low Activation Energy	Dr.S.K.Sinha	BRFST Govt. of India	Aug. 2010	30 Lakh	Aug. 2010 to Aug. 2013
Applied Maths	Simulation of Heat Transfer between a solid of Tapered Shape & Surrounding Fluid- A Study through Analytical & Numerical Method	Dr. Purnima Srivastava	UGC	2009 (Revised in 2010)	1.7 Lakh	Sept. 2012

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

Dept.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
EEE	Recent Advancement in	Prof. Nirmala	IEEE Student Chapter,	01 April 2012
	Technology	Soren	BIT Patna	
ECE	8TH GISFI Standardization	Prof. Shahiruddin	BIT Patna	26 March 2012
	Series Meeting			
Mech.	Computational Fluid	Dr.P.Choudhary,	SAE BIT Patna	08 January 2012
	Dynamics	Prof.S.K.Pradhan		
Applied	26th National Symposium	Dr.S.K.Sinha	Board of Research	19 – 22 Dec. 2011
Physics	of Plasma Science		in Fusion Science &	The state of the s
	and Technology		Technology (BRFST),	
	(PLASMA-2011)		The Institute of Plasma	
			Research	T
Training &	Aptitude Workshop	Mr. Byju	NOISIS, Education	3 Aug 2011
Placement		Ravindran	Times, Group	
Cell		\$		

Training & Placement	MATLAB Training	Mr. Rajesh Babu Mallela	BIT Patna Faculty	13-15 Oct 2011
Cell	Workshop on Network Management	Mr. Swapan Pulkait	NETTECH, Kolkata	2-18 Dec 2011
	Windows Phone 7 Development Workshop	Mr. Siddharth Monani Mr. Goutham Upadhyay	Microsoft India	3-4 Dec 2011
	Field Visit	Mr. Raj Kumar	Dena Iron & Steel Co. Ltd., Patna	14 Jan 2012
	Workshop on GD	Mr. Anoop Singhania	Career Launcher, Patna	21 Jan 2012
	Workshop on Soft Skills	Mr. B R Chatterjee	HR, Times of India	17-18 Mar 2012 24-25 Mar 2012

# Conferences/ Seminars/ Workshops/ Staff Development Programs/ Orientation program/ Refresher Course etc. attended:

Dept.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, Year
Applied Chem.	Dr. K.Sharma	National Seminar on Genomics	Mahabir Cancer Sansthan	Phulwarisarif Patna	Jan. 21-22, 2012
	Mrs. Anubha Singh	National Conference on Recent Trends in Chemical Science	B.I.T. Deoghar	B.I.T. Deoghar	Feb. 18-19, 2012
	Mr. Ranvijay Kumar	National Conference on Recent Trends in Chemical Science	B.I.T. Deoghar	B.I.T. Deoghar	Feb. 18-19, 2012
Applied Maths	Dr. T.Paul & Dr.Rajnish Kumar	26th National Symposium on "Plasma Science & Technology"	B.I.T. Patna & Plasma Science Society of India	B.I.T. Patna	Dec. 21-24, 2011
Applied Physics	Dr. K.P.Tiwary	National Seminar on Genomics	Mahabir Cancer Sansthan	Phulwarisarif Patna	Jan. 21-22. 2012
	Dr. Binay Bhushan	National Symposium on "Emerging Trends in Materials Science"	Patna University	Patna Women's College	Sept. 27, 2011
CSE/IT	Prof. K. Lal	14th IEEE International Conference on "Computational Science & Engineering" (Paper Presented and Session Chaired)	Technology &	Dalian, China	Aug 24-26, 2011

EEE	Prof. Nirmala Soren	International Conference on "Power System Operation and Energy Management"	Interscience Research Networks (IRNet)	Bangalore	July 23-24, 2011
ECE	Prof. Megha Dadel	International Conference on "Arrays of Patch Antenna using log Periodic Property, IEEE-RFM-11"	IEEE	Malaysia	Dec. 12-14, 2011
	Prof. Shahiruddin	National Conference on "Inoculation Monitoring Device, NEEC-11"	Delhi College of Engineering	New Delhi	Dec. 16-17, 2011
	Prof. R.K.Badhai, Prof. A.K.Pandey, Prof. Megha Dadel, Prof. Sweta Kumari	Short Term Course on "VLSI Technology CAD"	IIT Kharagpur	IIT Kharagpur	Dec. 22-26, 2011
	Prof. Prashant Kumar	International Conference on "Speech, Image and Video Processing"	IIT Patna	IIT Patna	Jan. 13-15, 2012
		International Conference on "Recent Advances in Information Technology" and also presented a paper on the topic "DCT Based OFMD for Underwater Acoustic Communication"	ISM Dhanbad	ISM Dhanbad	March 15- 17, 2012
	Prof. Sudhanshu Verma	Micarowave Fundamentals and Radar Avionics	IIT Kharagpur	IIT Kharagpur	June 21-25, 2012
Mech.	Dr. P.Choudhary	"Transportation of Oil & Gas through Pipeline"	NIT Patna	NIT Patna	June 15-18, 2011
	Prof. S.K.Pradhan	Deformation Behaviour of Material, NSTSI-11	C.V.Raman College of Engineering	Bhubaneswar	Dec. 08-10, 2011
	Prof. S.Mandal	Thermal Model for Material Deposition, Plasma-11	BIT Patna	BIT Patna	Dec. 20-23, 2011
		A Heat Transfer Mode For Material deposition	IIT Patna	IIT Patna	March 17, 2012

Mech.	Prof. M.A.Hassan	Presented a Paper in National Conference on "Inoculation Monitoring Device, NEEC-11" and "High efficiency Solar Power Generation System"	Delhi College of Engineering	New Delhi	Dec. 16-17, 2011
		Symposium on "Rheology of Complex Fluid"	IIT Guwahati	IIT Guwahati	Jan. 2012
		Presented a Paper on the topic "Natural Convention of Viscoplastic Fluids in a Square Enclosure with Localized Heating from Below and Symmetrical Cooling From Sides", IIT Guwahati	IIT Guwahati	IIT Guwahati	Jan. 2012
		Workshop on "Quality Enhancement for Teachers in Engg. Students"	IIT Kharagpur	IIT Kharagpur	Nov. 2011
a para de la constanta de la c		Presented a Paper in National Conference on "Emerging Trends in Open Source Applications & Cloud Computing"	Jamia Milia Islamia, New Delhi	Jamia Milia Islamia, New Delhi	March 2012

# **PUBLICATIONS:**

#### Published in International Journals:

- 1. C.K,Panigrahi, P.K. Mohanty, N.Soren, A.Sahu R.K.Pati, A.Nimjhe. "Issues and challenges in Captive Power Plants under Deregulated Environment" Global Journal Engineering and Applied Science (GJEAS), Rising Research Journal Publications, Vol. 1. No:3, 2011, Pp,20-26
- 2. C.K,Panigrahi, N.Soren, P.K. Mohanty, R.K.Pati "Economic Environmental Dispatch "(EED) by Modified Differential Evolution Technique" International Journal of Computer Applications (IJCA)
- 3. C.K,Panigrahi, P.K .Mohanty, A.Nimjhe, N.Soren, A.Sahu, R.K.Pati "Enhancing Power Quality and Reliability in Deregulated Environment" International Journal of Electrical Engineering and Technology (IJEET), International Association for Engineering and Management Education(IAEME), Vol. 2. Issue 2(May-July 2011), Pp1-11
- 4. C.K.Panigrahi, N.Soren, U.Praead, P.K.Chattopadyay, R.K,Pati "Issues and Challenges in Distributed Power Generation Systems" Global Journal Engineering and Applied Science (GJEAS), Rising Research Journal Publications, Vol. 1. No:4, 2011, Pp,23-25
- 5. R. Kumar, Patents Related to Catalysts Used for Curing Thermoset Resins, Recent Patents on Catalysis. 1 (2012) 35-42.
- 6. M. K. Yakubu, M. S. Gumel, M. B. Ibrahim, R. Kumar, Synthesis and Characterisation of Colorants Derived from 1, 4-Diamino Anthraquinone Polyamides, Advances in Chemical Engineering and Science. 2 (2012) 300-308.

- 7. Samant Saurabh, Ashok Sairam- "Linear and remainder packet marking for fast IP Trace Back, Communication system and networks"; In International Conference, IEEE Communications Society, Bangalore, India, COMSNETS January 2012.
- 8. Samant Saurabh, Ashok Sairam- "FIDA; A Finger printing, Filtering and IP Trace back mechanism to mitigate Dos/DDoS Attacks"; In International Journal of Information Processing.
- 9. Samant Saurabh, Ashok Sairam, Shashi Shekhar Singh- "A Two tier storage and distributed indexing for flash based sensor network"; In International Journal of Information Processing.
- Samant Saurabh, Ashok Sairam, Smita Pallavi, Rajesh Kumar- "A novel scheme for distributed star coloring of graphs and its application in IP Trace back- recent advancement in Information Technology"; In International Conference, IEEE Communications Society, Dhanbad, India, March 2012

# Papers/Abstracts in Conference Proceedings:

- Ram kumar Karsh, Dr. G.K.Choudhary, Chitranjan Kumar "Speed Conrol of Separately Excited dc Motor using Fuzzy Technique" Proc. of Int. Joint Colloquium on Emerging Technologies in Computer Electrical and Mechanical 2011.
- 2. C.K,Panigrahi, A.Nimjhe. N.Soren, P. Hota, A.K. Mohanty "Steady State Analysis of Interline Power Flow controller" International conference on power System Operation and Energy Management (ICPSOEM-2011) at Bangalore, 23-24th July 2011.
- 3. Dr. C.K.Panigrahi, N.Soren "Power Saving in Hybrid Renewable Energy National Conference on "Distributed Generation through Renewable Energy Sources for Rural India" (DGTRES-2011) KIIT University, Bhubaneswar, 2nd April 2011.
- Dr. C.K.Panigrahi, N.Soren "Energy Storage Options for Renewable Energy Systems" National Conference on "Distributed Generation through Renewable Energy Sources for Rural India" (DGTRES-2011) KIIT University, Bhubaneswar, 2nd April 2011.
- 5. Dr. C.K.Panigrahi, R.K.Pati N.Soren "Power Quality Issues, Problems and Related Standards"National Conference on "Distributed Generation through Renewable Energy Sources for Rural India" (DGTRES-2011) KIIT University, Bhubaneswar, 2nd April 2011
- N.Soren A.K.Roy "Restructuring and Renewable Energy Development National Conference on "Distributed Generation through Renewable Energy Sources for Rural India" (DGTRES-2011) KIIT University, Bhubaneswar, 2nd April 2011.
- 7. Kaushlendra Sharma, Ranvijay kumar, K P Tiwary, S K Choubey, Synthesis of Polymethacrylic Acid Grafted Psyllium for Sewage Water Treatment. National Seminar on Genomics Organized by Mahabir Cancer Sansthan, Phulwarisarif Patna on 21st to 22nd Jan 2012.
- 8. Kaushlendra Sharma, Shiv Kumar Choubey, Ranvijay Kumar, K.P.Tiwary, Synthesis of II-VI compound semiconductor nanocrystals for the application of Biosensor. National Seminar on Genomics Organized by Mahabir Cancer Sansthan, Phulwarisarif Patna on 21st to 22nd Jan 2012.
- 9. Ranvijay Kumar, Kaushlendra Sharma, Synthesis of Co-polymer and its application for sewage water treatment. National Conference on Recent Trends in Chemical Organised by B.I.T. Deoghar, 18th-19th February, 2012.
- 10. Samant Saurabh, Ashok Sairam- "A path tracing and filtering mechanism to defend against DDoS attacks"; In Proceedings of International Conference of Information Processing, Bangalore, August 2011 (Springer Verlag).

- 11. Samant Saurabh, Ashok Sairam- "Fragmentation compatible deterministic edge router marking"; In Proceedings of Asia Pacific Conference on Communications, 2011, IEEE Malaysia.
- 12. Samant Saurabh, Ashok Sairam, Shashi Shekhar Singh- "Global distributed Indexing for In-Network storage in sensor networks"; In Proceedings of International Conference of Information Processing, Bangalore, August 2011 (Springer Verlag).

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

Dept.	Name of the Faculty	Title of the Award/ Honours	Organisation	Year / Duration
EEE	Prof.Nirmala Soren	Awarded Ph.D. in Electrical Engineering	KIIT University, Bhubaneswar	December 2011
CSE/IT	Prof. K. Lal	Awarded Ph.D. In Computer Science	Birla Institute of Technology, Mesra,	June 2012

# Patents (Applied / Granted):

Dept.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year
Applied	Rakesh Kumar	Polyfurfuryl Alcohol Products	Applied International patent	2012
Chemistry	Rajesh Anandjiwala		PCT/IB2012/051201	

# **Departmental Students' Activities:**

SI. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1	Technika 2012	Organized by a team of BIT	2011-2012
	Annual Sports Meet 2012	students	
	REVA 2012		
2	IEEE, Student Branch Chapter	Dr. Nirmala Soren	Yearly
3	Won 2nd Prize at BRY Air Awards (ASIA) in Student	Prof. M.A. Hassan	Feb. 24, 2012
	Design Category, The prize include Citation,	Saurav Kumar Murarka	
	Momento, and Cash worth Rs. 50,000/-	Puja Mahanty	
4	1⁵t Prize in Astronomy Quiz at Anwesha, IIT Patna	Antariksh Dicholkar	Feb. 24-26, 2012
		Shubham Aggarwal	
5	Participated in 6th NASA Lunabotics Competition at	Prof. M.A. Hassan	May-2012
	Kennedy Space Centre, Florida, USA	Prof. B.B. Das	
		BIT Team "Gurutva"	
6	Represented India as the "Minister of Development"	Prof. (Dr.) S. P. Lal	June 03-09, 2012
	in G-8 & G-20 Youth Summits for Policy & Welfare	Ajay Pratap Singh	
	-2012, at Washington DC, USA		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
7	Formation of Nanotech Society	Himanshu Kumar Lal	8/7/2012
8	Winner of Microsoft Imagine Cup- 2012, India and	Mrs. Smita Pallavi	July 2012
	also chosen as "Ambassador of India for the final	Devesh Kumar	·
	Competition to be held in Sydney, Australia"	Abhishek Kumar	
		Amit Kumar Sharma	

# 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	Basic Electronics,	Bihar Edusat Program
	Digital Electronics	Taramandal, Patna

# Sports:

- 1. The team of BIT PATNA was CHAMPIAN in 20<sup>th</sup> "Chetan Devraj Memorial East Zone Inter Technical Tournament 2012" held at Mesra, Ranchi.
- 2. Chanakya National Low University Sports Fest FORZA 2012:

SI. No.	Sports	Name of the Student	Status
1.	Volley Ball (Boys)	Mr. Rajesh Kumar (Captain)	WINNER
2.	Badminton(Boys, Singles)	Sri Charan Das Goswami Abhishek Sinha	WINNER
3.	Badminton (Boys, Doubles)	Mr.Anil Jalley Mr Mathew George	WINNER
4.	Basket Ball (Boys)	Mr.Prince Soren	RUNNER UP
5.	Table Tennis (Boys)	Mr. Abhishek Sinha Manoj	RUNNER UP

# SPARDHA -2012, Organized by BHU Varanasi:

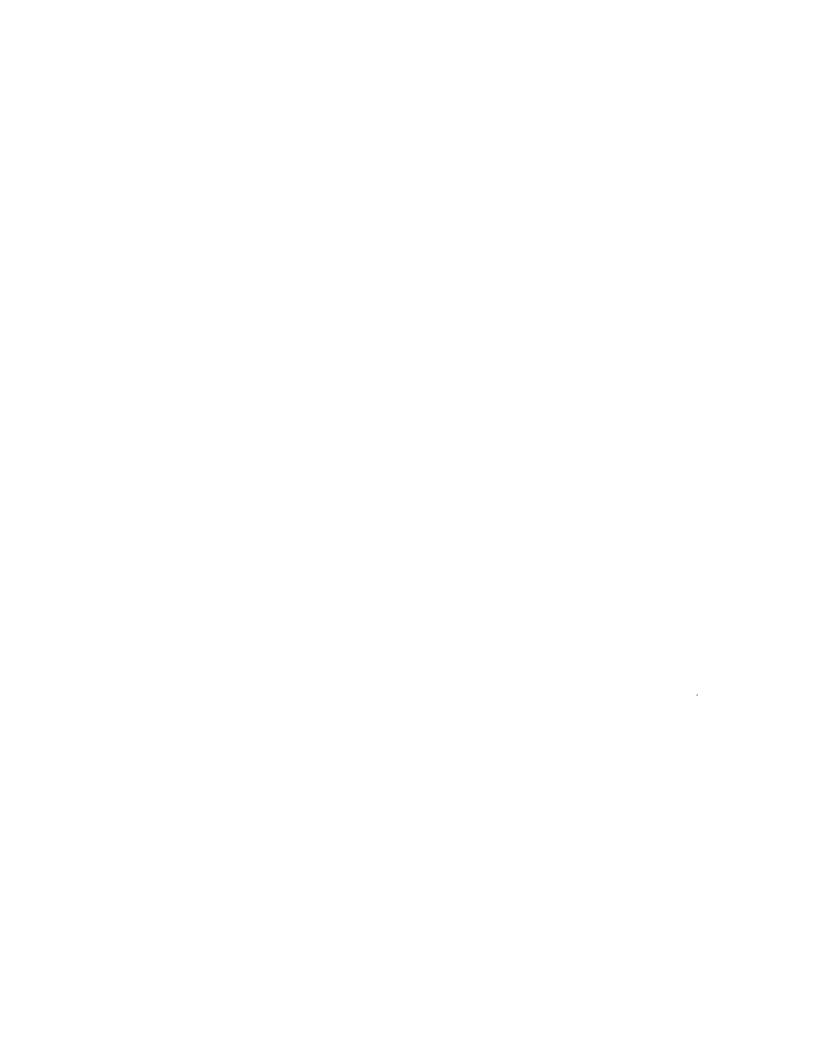
SI. No.	Sports	Status
01	Volleyball (Girls)	CHAMPION
02	Volleyball (Boys)	RUNNER UP

# **Individual Prize Winners in Athletics:**

Category	Event	Prize	Name
Men	110 m H	Silver	Ashok Kujur
Men	Triple Jump	Silver	Ashok Kujur
Men	400m hurdle	Silver	Ashok Kujur
Men	High Jump(M)	Bronge	Ashok Kujur
Women	Javelin Throw	Gold	Kalyani Kumri
Women	800M	Silver	Supriya Yadav
Women	Triple Jump	Silver	Supriya Yadav
Women	Discus Throw	Silver	Shamsunnissa Begum

Women	Disuse Throw	Bronze	Kalyani Kumari
Women	4x400 m Relay	Bronze	Supriya Yadav
Women	4x400 m Relay	Bronze	Kalyani Kumari
Women	4x400 m Relay	Bronze	Ajita Singh
Women	4x400 m Relay	Bronze	Sweta Kumari

# OFF-SHORE CAMPUSES OF BIRLA INSTITUTE OF TECHNOLOGY MESRA, RANCHI



# **MUSCAT**



The Waljat Colleges of Applied Sciences founded by H.E. Dr. Omar bin Abdul Muniem Al Zawawi in 2001 in academic partnership with Birla Institute of Technology as its International Centre, occupies a pride of place among the technical colleges in the Sultanate of Oman. Located in the "Knowledge Oasis" at Rusayl, Muscat, it attracts students from all over Oman and neighbouring countries.

The College has a total built-up area of about 17,300 sq.meters consisting of Academic buildings, Workshops, Smart Class Rooms, Laboratories and Computational Facilities, Library etc., The College has a dedicated Quality Assurance Department for implementing recommendations and suggestions of Oman Accreditation Council. In the year under report, a new workshop building with necessary machines and training tools, a new fully furnished cafeteria, a separate block for Department of Biotechnology including laboratories and a third administrative cum academic building have been made fully operational. A new conference room and a video conferencing facility have also been created in the new block. Play fields and student facilities have also been developed for indoor and outdoor games and sports.

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 (Honors)
- 3. Bachelor Business Administration (Honors.)
- 4. Bachelor of Computer Applications
- Bachelor of Business Administration\*
- Masters in Business Administration
- Executive MBA\*

<sup>\*</sup> Also offered as a part-time programme for working candidates.

# **Department of Biotechnology**

The Department of Biotechnology has a unique distinction of offering industrial biotechnology course at undergraduate level in Oman. The BE (Biotechnology) program offered by the department educates and trains students for bright careers in all biotechnology related fields involving bio-processes and products. The department provides integrated approach towards education as well as applied research in various bioprocesses. The research activities of the department include areas such as renewable energy, nano-biotechnology, enzyme technology and microbial technology.

The Department aims to provide an inspiring environment where scientific work and class room teaching goes hand in hand with practical research work at laboratories. Department of Biotechnology has highly qualified faculty and staff who are keenly involved in important research projects aimed on replacing materials based on fossil carbon with renewable feed stocks. Research areas encompass both basic research and applied research. During the past year, the research has also been focused in the fields of Environmental Biotechnology, Medical Biotechnology, and Industrial Biotechnology.

# **Department of Computer Science and Engineering**

The Department of Computer Science and Engineering offers quality graduate programs in Computer Science & Engineering. Consistent with our objectives, high priority is accorded by the Department for quality research and effective teaching. The Department gives due importance for advanced research & learning of new Computer Science related technologies. The Department gives due emphasis to project based learning and innovation.

As the requirements of computer industry are rapidly and continuously changing, various new courses are being offered at this Centre from time to time. The Department has initiated the process to start B.Sc. (CS) and M.Sc(IT) courses from the next academic year.

# **Department of Electronics and Communication Engineering**

The Department of Electronics and Communication Engineering is offering Bachelor of Engineering program and carrying our research activities. In the year of report, 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 etc.

The students of the Department of Electronics and Communication Engineering regularly participate in various national level project presentations, paper presentations and other competitions in the Sultanate of Oman. In this year, several groups of students received first prizes in the category of paper presentation and innovative engineering projects at different events organized at the national level.

The department has qualified and experienced faculty members and well equipped laboratories. The faculty members are actively engaged in research and development activities and some of them are presently working for their Ph.D. degree. The research interests of members of the Department encompass the areas of wireless communication, signal processing, VLSI design, microelectronics, embedded systems, plasma physics and non-linear dynamics.

# **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 objective of the Department is to provide broad exposure to the students in the important areas of Mechanical Engineering making them technically competitive. Mechanical Engineering Department achieves this by providing practical exposure to students in the discipline through design projects and giving opportunities to work in research projects with faculty members. The laboratories as well as workshops associated with the Department are well equipped with the most modern range of lab equipment. The excellent laboratory facilities, modern computer clusters, systematically designed curriculum, and dedicated faculty members make the Department a dynamic place to study.

The major laboratories in the Department include:

**Engineering Mechanics laboratory** 

**Engineering Graphics Laboratory** 

**Engineering Workshop** 

**Auto-CAD Laboratory** 

#### **Department of Mathematics**

The Department of Mathematics offers comprehensive courses in different fields of Applied Mathematics for various disciplines, in main course as well as for foundation program. It offers support to other departments to conduct various quantitative and mathematical courses. The main aim of department is to make a sound mathematical background and develop analytical abilities in students of various disciplines for better understanding of respective discipline.

#### 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.

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

SI. No.	Title of Seminar / Conferences / Short – term Courses	Name of Coordinator	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses
1.	Fall National Leadership Development Seminar	Association Internationale des Étudiants en Sciences Économiques et Commerciales (AIESEC; pronounced "aie-sek") is a global youth organization	Waljat College of Applied Sciences	15&16 Sept.2011
2.	Workshop on Introduction to SPSS 19.0	Mr. Mithun Shrivastava, Faculty, Management	Waljat College of Applied Science	30.11.2011
3.	Short Term Course on Research Methods and Statistical Analysis for post graduate students of WCAS	Mr. Mithun Shrivastava & Mr. Niraj Mishra, Ms. Nupur Sen Faculties of Management	Waljat College of Applied Science	21.12.2011
4.	International Conference on Knowledge Management & Resources sharing	Waljat College of Applied Science	Waljat College of Applied Sciences	27 & 28 Feb.2012

# **Guest Lectures/ Programmes Conducted at the College**

S. No.	Topic Speaker		Date
1	Digital Fountain	Prof. Atal Chaudhari Jadavpur University, Kolkata	26.09.2011
2	Research Activities in the field of RF & Microwave Engineering	Prof. Nisha Gupta, BIT	26.09.2011
3	Assessment and Evaluation / Project Based Learning	Prof. Utpal Baul , BIT	27.09.2011
4	Encompression	Prof. Atal Chaudhari	27.09.2011
5	Marketing of Services in Industrial Markets	Prof. Utpat Baul, BIT	28.09.2011
6	Nawras IPO and our learning  Mr. Ross Cormack, CEO of Nawras  Oman		02.10.2011
7	Career Awareness Programme [CAP-2011]	Shell Oil , Oman	12.10.2011
8	Oman College Fest 2011	Media Service Houses, Oman	15.10.2011
9	Image Steganography	Mr. Sunny Sheth and Ms. Frasha Khan  – Students of BE – CS	28.12.2011
10	Islamic Economics and Banking	Dr. A. Prakash and Ms. Soofi Deptt. of Management .	18.01.2012
11	Organizational Development: In the light of bringing radical change in Organization	Mr. Arvind Hans, Deptt. of Management	08.02.2012

12	Globalization and Corporate Social Responsibility	Ms. Andrea Aeby, Deputy Chief of Staff, Federal Dept of Foreign Affairs, Bern, Switzerland	14.03.2012
13	Promoting Entrepreneurship- The Role of Educators	Prof. Mathew J Manimala, Prof.and Head of OBHR at IIM Bangalore	18.03.2012
14	Role of Parents & Teachers in shaping the destiny of a Child	Mrs. Nejma Mohd, English Deptt.	21.03.2012
15	Cultural Diversity and Staff Counseling	Dr. G.P. Mishra, Associate Prof., Deptt. of Management	21.02.2012
16	Tissue Culture & its application in Agriculture	Dr. Akhtar Jamal Khan, Professor & Scientist	02.04.2012
17	Placement and Career Avenues	Mr. B.B. Pant, BIT	03.04.2012
18	Software Piracy and Open Source Software	Ms. Mallika Sadhu, Deptt. of ECE .	11.04.2012
19	Memory techniques & Practices for healthy lifestyles	Mrs. Jayalakshmi, Deptt. of Maths	07.03.2012
20	Getting familiar with browser add-ons	Dr. Santosh Ray, Deptt. of Computer Science	25.04.2012
21	Goal setting and Career Planning	Mr. Syed Aulia, Deptt. of Management	02.05.2012
22	How to Enhance your Left or Right to a full brained potential	Mr. Thompson David, Deptt. of English	09.05.2012
23	Awareness of Bronchial Asthama	Ministry of Health, Muscat	22.05.2012
24	How Japan has developed as a technology oriented nation after the country opened itself to the outside world in modern times	Mr. Shinichi Yamanaka, Counselor, Embassy of Japan, Muscat	22.05.2012
25	Recent Developments in Mimo Channel Estimation Techniques	Mr. Vikash Sharma, Deptt. of ECE	30.05.2012

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

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Organized by	Venue	Date, Month, Year
1	Mr. Jyoti Chandel	Management Development Programme on Multivariate Data Analysis(MIDA)	IIT	Kharagpur	4-9/7/11
2	Mr. Sounak Paul	World Congress of Engineering 2011	International Association of Engineers	Imperial College of London	6-8/7/11
3	Mr. Syed Aulia	Train the Trainers	Dale Carnegie Inc	Delhi	8 to 10/9/11
4	Mr. Mithun Shrivastava	The International Information Systems Conference 2011	College of Commerce & Economics, Sultan Qaboos University	Muscat	11-12.10.11

5	Dr. Mohan Varma	Importance of creating linkage between academic institution and international markets through innovation value chains	The Research Council Oman	Muscat	14.11.11
6	Mr. Vikash Sharma	Key performance Indicators	Ministry of Higher Education	Muscat	11.12.11
7	Dr. Padmini P.	The Second Quality Network in Higher Education	Oman Quality Network	Muscat	20-21.2.12
8	Mr. Mithun Shrivastava & Mr. Niraj Mishra	Oman Symposium on Management (OSOM 2012)	Department of Business Studies, Ibra College of Technology, Ibra,Oman	Ibra	04.03.2012
9	Ms. Atiya Tabassum & Ms. Koel Mukherjee	Consanguinity towards discovery of Genes predisposing to and protecting from disease	Sultan Qaboos University	Muscat	17-19.3.12
10	Dr. G.P. Mishra	Role of National Institution in Promoting and Protecting Human Rights	NHRC	Muscat	11-12.3.12
11	Dr. Mohan Varma	Moving Mountains – Entrepreneurship through Higher Education	The Research Council, Oman and Central University of Finance and Economics, China	Muscat	17-19.03.12
12	Ms. Vijaya, Dr. Santosh, Mr. Sanjay	E-Learning workshop	Ajyal HR Solutions & Services in partnership with Docebo	Muscat	19.03.12
13	Dr. Mohan Varma, Dr. Avneesh Pareek	Graduates in the Oil and Gas Industry: Reality & Expectations	Ministry of Higher Education & Ministry of Oil & Gas, Oman	Muscat	26.03.2012
14	Ms. Vijaya, Mr. Sanjay, Mr. A. Choudhary, Dr. Santosh Ray	Contact Centre Seminar	Public Establishment for Industrial Estate, Oman	Muscat	13.05.12
15	Dr. Sadaf, Ms. Atiya	Ion Torrent Sequencing from Genes to Exome to Genomes to Transcriptiomes	Business International Group and Life Technologies, Oman	Muscat	22.05.12

# **PUBLICATIONS**

#### **Published in International Journals**

- Koel Mukherjee, Ashutosh Kumar, Dev M Pandey and Ambarish S Vidyarthi, Study of Rice Telomere Binding Protein1 (RTBP1): An InSilico Approach., International Journal of Pharmaceutical Sciences Review and Research, Volume10(1), Sept-Oct 2011.
- 2. Medhavi Mallick, Koel Mukherjee and Neetha A. Udayakumar, Homology Modelling of Polyphenol Oxidase from Solanum Melongen: Sequence Analysis and Structural Validation Studies In Silico., International Journal of Pharma. and Bio Sciences, Volume 2(3), July-Sept 2011.
- 3. P.Shrivastava, M. Balasubramanian, and M. Shrivastava, User Perceptions of Web-Site Quality for Banks in Oman, International Journal of Computer Science and Technology, Vol. 3 (2), 2012.
- 4. Kusum Mishra, Study of different criteria of Organizational effectiveness, JM International Journal of HRR, ISSN: 2230-9233, Vol. 1 (5) October 2011.
- 5. J.K. Chandel, S.K. Sharma. and S.P.Bansal, Linking the 'Big Five' Personality Domains To Organizational Commitment, International Journal of Research in Commerce, IT & Management, Vol. 1(3), 19-24, 2011.
- R. Yadav, S. Gattoufi, S.K. Sharma, and J.K. Chandel, An Investigation into the Acceptance of Mobile Banking in India, Proceedings of International Information Systems Conference, Sultan Qaboos University, Sultanate of Oman, October 11-12, 2011. pp. 159-166. ISBN: 978-9948-16-253-7.
- 7. B. Christina and V. Ramanujam, Omani Women Entrepreneurship and SMEs, International Journal on Management Guru, Vol. 1, pp. 28-42 ISSN 2231 0622, 2011.
- 8. G.P. Mishra, Study of Different Criteria of Organizational Effectiveness, International Journal of HRR, ISSN: 2230 -9233, Vol -1 (5), 2011.
- Sounak Paul and Naveen Kumar Sao, An Energy Efficient Hybrid Node Scheduling Scheme in Cluster Based Wireless Sensor Networks, Proceedings of World Congress on Engineering, Vol. II, London, UK, July 2011.
- Kumar Rajnish and Vandana Bhattacherjee, An Analytical Evaluation on Li's Inheritance Metric Suites against Weyuker's Properties, International Journal of Engineering and Technology, Vol. 1 (1), pp 80-88, 2011, http://www.dcc.ufla.br/infocomp.
- S. Kumar, S.K. Ray, and P. Tewari, A Combined Approach using Fuzzy Clustering and Local Image Fitting Level Set Method for Global Image Segmentation, Canadian Journal on Image Processing and Computer Vision, 2012, ISSN: 1923-1717.
- 12. S. Khan, Relationship of Job Burnout and Type A Behaviour on Psychological Health among Secretaries, International Journal of Business and Mangement, Vol.6 (6), 31-38, 2011.
- 13. Srilekha Goveas, Effect of Work Life Balance and Ethics on Quality of Service' International Journal of Business and Social Science, Vol. 2, pp. 282-285, 2011.
- 14. Srilekha Goveas and Neelufer Aslam, A Role and Contributions of Women in the Sultanate of Oman, International Journal of Business & Management, Vol. 6 (3), 2011.

15. Mohammad Mohatram, "Applications of Artificial Neural Networks in Electric Power Industry: A Review", International Journal of Electrical Engineering, ISSN 0974-2158, Vol. 4, (2) pp.161-171, 2011.

# Papers/Abstracts in Conference Proceedings/Seminars

- 1. J.K. Chandel, R. Yadav, S. Gattoufi and S.Sharma, An investigation in to the Acceptance of Mobile Banking in India, Proceedings of International Information Systems Conference, Sultan Qaboos University, Oman, October 11-12, 2011.
- 2. S. Kumar, N. Mishra and M. Shrivastava, Salalah Khareef Season: A Trend Analysis of Visitors. Proc.of Oman Symposium on Management 2012, pp.328-336.
- 3. N. Mishra, N. Sen and I. Ahmad, Building Customer Relationships through New Media Formats: Emerging Trends in Marketing, 3rd NCT Symposium, Oman 2012, pp.22-23.
- 4. S. Varshney and S. Aulia, Service Guarantee: A Strategy for Customer Loyalty "Industry In the proceeding of Academia Collaboration for Technological Innovation", 3rd NCT Symposium, Nizwa Oman, May 2012.
- Mithun Shrivastava and S. Manasa, Theories used in IS Research Application in Word of Mouth Research, Proc. International Information Systems Conference, October 11-12, 2011 Sultan Qaboos University, Oman, pp. 110-124
- 6. Mithun Shrivastava, T. Paperwala and K. Dave, Trends in Web Technologies: Web 1.0 to Web 3.0 & Beyond, Proc. International Information Systems Conference, October 11-12, 2011 Sultan Qaboos University, Oman, pp. 73-79.
- 7. Mohd. Mohatram, A Non-iterative Algorithm to Optimize the Generation Schedule of Thermal Power Plants, ICKMARS, Waljat College of Applied Sciences, Feb. 27 28, 2012.
- 8. Mohd. Mohatram, Economic Load Flow Using Lagrange Neural Network, IEEE Saudi International Conference, Riyadh, Kingdom of Saudi Arabia, 2011.
- 9. Vikash Sharma, Recent Developments in MIMO Channel Estimation Techniques, DICTAP, An International Conference sponsored by IEEE, Bangkok, 2012.
- 10. Akhilesh Kumar Roy, FPGA Based Digital System Design, Center for Community Services and Continuing Education, Sultan Qaboos University, Muscat, June-23-27, 2012

#### **Books**

- 1. Jyoti Chandel contributed as a Member of Oman Observer Brand Council in 2011 for the publication of a book on "Oman's 180 Greatest Brands".
- 2. Vikash Sharma, "Multi-Resolution Signal Decomposition Techniques", Published by I.AP Lambert Academic Publishing Gmbh & Co. Germany, August 2011.

# MoUs / Collaborations with Academia

Two students of BE (ECE) program are proceeding to University of Leeds, UK to join in third year of study under the MoU.

# **Departmental Students' Activities**

S. No.	Name of the Activity	Students' co ordinator, if any	Date/Duration
1.	Students Election held	Mohd. Mohatram	19.10.2011
2.	Blood Donation Camp	Dr. Ismaeel Baki Mohammed	11.10.2011
3.	Oman's National Day Celebration	Ms. Alya Said Al Rawahi	20.11.2011
4.	Environment Observation Day	Dr. Sadaf Zehara	23.11.2011
5.	Intra College Cricket Competition	Rajiv Ranjan	November 2011
6.	Trip to Sawadi Beach	J.K. Chandel	21.12.2011
7.	Poetry Competition- English club	Ms. I. Basu	28.12.2011
8.	Trucking cum Clean-up programme	J.K. Chandel	22.12.2011
9.	Scientific visit to Book Exhibition	Dr. Ismaeel Baki Mohammed	05.03.2012
10.	Talent Hunt 2012 for Singing, Dancing, Band performance and other stage activities	Ms. N. Basu Ms. S. Groveas	14.3.2012
11.	Participated in the Muscat Film Festival for Documentary Film competition	Ms. Seema Varshney	Held in March 2012
12.	Plantation Event	Dr. Sadaf Zehara	03.04.2012
13.	Mother's Day	Dr. Sheeba Khan	03.04.2012
14.	Career Fair-2012	I. Ahmad	16.04.2012
15.	Rock Climbing Course	J.K. Chandel	23rd & 29th May 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	All UG/PG Programs	Classrooms during teaching
Pedagogy	Faculty Training Program	Once a semester
Student - centric Learning	E-learning Program	Library and laboratories
Virtual Lab	Computer Science & ECE	For instructions during semester
Technology-enhanced Learning	Wi-Fi, Internet, Moodle and VCR Utilization Program	During the semester
Others	Subject Handouts Review	Before each semester
Video Conference Room	VCR for expert lectures	During the semester

# Ph.D. students enrolled, submitted and awarded

No. of Ph.D. students enrolled as on 30/05/12	No. of Ph.D. Thesis Submitted during July'11 to June '12	No. of Ph.D. awarded during July'11 to June '12
25 (13 registered with BIT)	3	1

# No. of summer trainees trained by the Centre during July 2011 to June 2012: 250

# Members on Board of Studies (UG/PG)

#### a. UG:

- 1. Dr. Mohan Varma
- 2. Dr. P. Padmini
- 3. Ms. P. Vijaya
- 4. Mr. A.K. Roy
- Mr. J.K. Chandel

#### b. PG:

- 1. Dr. Mohan Varma
- 2. Dr. P. Padmini
- 3. Dr. S.K. Ray
- 4. Dr. G.P. Mishra
- 5. Dr. Rajeev Kumar

# Other important information

- Final year Bachelor of Engineering students of the Department of Electronics and Communication Engineering participated in various national level competitions in the Sultanate of Oman and were honoured with prizes. The team of Azhar Mumtaz, Jiya Verghese, and Payal Tejani presented their paper on "Autonomous Parallel Parking Remote Control Car" in "MECHFIRE-2012" (Student Symposium on Mechanical Engineering and Mechatronics) held at the Caledonian College of Engineering, Muscat on 17th April 2012. The paper was highly appreciated by the judges and awarded first prize. In the same event the project "Zigbee & RF based Remote Surveillance Robot using Renesas R8C Tiny Microcontroller" by Nygil Alex and Harish won the second prize under Project Display Category.
- The team of Yahya Zakir, Mohd. Ahsan Kabir Rizvi, Neeraja Mohanan and Ashvin Savio Dsilva, won the prestigious first prize at First Student Creativity Forum Symposium organized by the Ministry of Higher Education, Sultanate of Oman at Oman International Trade & Exhibition Centre on 21st May 2012. The project combined the applications of GPS and GSM techniques in a very cost effective manner to help the daily commuters depending on public transport and save them from discomfort of waiting.
- The success by the students of BE 8<sup>th</sup> Semester Electronics and Communication Engineering continued at the University of Nizwa where the team of Hridaya Ashokan, Abhinaya Pillai, Ruchika Varma and Divya Vijayanarayanan won the first prize under paper presentation category. Their paper on Smart NextGen

Home was highly appreciated by the judges and visitors and was awarded the first prize. In this project the students demonstrated how the popular GSM mobile phone can be utilized to remotely control home and office appliances to save a large amount of energy.

# 7th Muscat International Film Festival

- Our students participated in the 7<sup>th</sup> Muscat International Film Festival (24-31<sup>st</sup> March, 2012) as part of Indian Short Films under Omani Film Meet. Out of the 100 entries to the film fest, the movie "700 Degree Celsius"; to create awareness about PASSIVE SMOKING; shot by our students selected under the top 8. Crew for the movie from college included; Director, Editor, and Cinematographer: Midhun Mukund (BBA VI Semester), Boss in Office Scene: Drizzle Cherian (BE EC-VI semester), Key Grip: Kevin Varghese.
- Another short film; "12th November" done by Laji John Mathew and Sharuk Zalam has also made to the top 8, which was rescreened in Radisson Blue on 28th March 2012. Participants from the college were; Director: Laji John Mathew (BE EC-VIII semester), Editor: Sharuk Zalam (BE EC-VI semester).
- The 7th Degree Award Ceremony of the college was held on 28th Jan. 2012 under the patronage of H.E. Engr. Ahmed Bin Hassan Al Dheeb, Undersecretary of Ministry of Commerce & Industry, Sultanate of Oman. A total of 322 students received Degree Certificates and 62 students received Diploma certificates.
- International Conference on Knowledge Management & Resource Sharing was organized on February 27-28, 2012. More than 200 delegates from different countries participated in the event.
- The 3rd Career Fair was inaugurated by H.E. Mohsin Bin Khamis Al Balushi, Advisor to Ministry of Commerce & Industry and Chairman of Public Authority of Manpower's Register on April 16, 2012.
- First WCAS Alumni Meet with the objective of 'Get Connected Strengthen Bond' was organized on May
   23, 2012 at the campus and more than 100 alumni participating in the meet.

# RAS AL KHAIMAH, UAE



Main Building

BIT International Center at Ras Al Khaimah started its operation from September 2005, where we are imparting BIT's 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.

As per law of the country the center is not allowed to own any property on permanent basis. Thus, the center had started operating based on the agreement & License of "Royal College of Applied Science and Technology" in RAK. However, due to some acts of commission/omissions on part of the Royal College, BIT had to start looking for the alternatives. In the process, with the support of "RAK Free Trade Zone" authority, BIT could associate with a new strategic partner i.e. "CORE international Institute of Higher Education FZE". Thus since February 2012, the International Center of BIT has been offering the same academic program, in the same premises but with a new name "BIT Offshore Campus, RAK" based on the agreement and License of the new strategic partner.

# 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	Soofi Anwar	FDP on Research Methods for Business Management & Social Sciences		AIMIT, Mangalore	Mangalore	July 11-16, 2011
2	Reshma Gopi.R	International conference ICCPEIC'2012		Adhiparasakthi Engineering College	Melmaruvathur, India	18-04-2012

# **PUBLICATIONS**

#### Published in International/ National Journal: 6

# Reference to a Journal publication:

- P.K.Upadhyay, "Detection of Sleep Patterns of Electroencephalogram using Self-Organizing Feature Map and Learning Vector Quantization", Caledonian Journal of Engineering, Vol – 7, No-2, July 2011, pp. 1 – 10, ISSN: 1999-9496.
- Ranjeet Ranjan, P.K.Upadhyay, "Theoretical and Experimental Modeling of Air Muscle", International Journal of Emerging Technology and Advanced Engineering, Vol-2, Issue-4, April 2012, pp. 112-119, ISSN - 2250–2459.
- 3. Reshma Gopi.R, "Analysis of Maximum Power Point Converter Topologies of Photovoltaic System Using Incremental Conductance Control' has been published in CiiT International Journal of Programmable Device Circuits and Systems (ISSN 0974 973X), June 2012.
- 4. Soofi Anwar, "Young Consumer Attitude towards Television Advertisements in the Internet Age", Zenith International Journal of Multidisciplinary Research, Volume II Issue 4, April 2012.
- 5. Soofi Anwar, "Factors Influencing Knowledge Sharing Behavior-Developing a Theoretical Framework", International Journal of Management Prudence, Volume II, Nov 2011.
- 6. Ayaz Ahmed Shariff, K. Durga Prasad, "Factors Affecting the Growth of E-Business in India", The Alternative, Deptt. Of Management, BIT Mesra, Journal, Vol XI, No.1, (October '11 to March' 12).

# Departmental Students' Activities (Please arrange chronologically)

S. No.	Name of the Activity	Department	Students' Co-ordinator	Date/Duration
1	Workshop on Resume Writing & Interview Skills	BBA/MBA		03 rd May 2012
3	Workshop on Financial Derivatives & Portfolio Management	BBA/MBA/EMBA		25th & 26th May 2012
4	Workshop on Designing Effective Marketing Strategies	BBA/MBA/EMBA		25th & 26th May 2012

# Guest Lectures were arranged, inviting the practicing Architects in UAE.

S. No.	Name of the Speaker	Topic of Presentation	Organization	Date of Presentation
1.	Ms. Kavita V. Solanki, B Arch (Mumbai), MUD (Melbourne)	Urban Design Projects in Australia and UAE	HOPKINS ARCHITECTS, DUBAI, UAE	9th. January, 2012
2.	Mr. Jophy Thomas, B Arch	Architecture projects in GCC	DSA Architects International, Dubai, UAE	12th May, 2012
3.	Mr. Samjad Kandilat, B Arch	Experience of handling different projects in India and UAE	Design Consultant – Architecture & Interiors, AL BARSHA, DUBAI, UAE	19th June, 2012

# Development of Learning Materials (e- contents, pedagogy, Student - centric Learning, Virtual Lab, Technology- enhanced Learning, etc.)

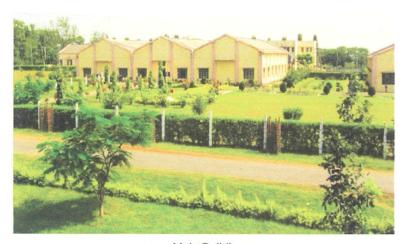
Learning materials	Name of Subject/Course /Programme	Where and When used
Pedagogy	Lecture Hand -outs/ PPT/ Case Analysis/ Seminars/Assignments	Combination of these used in teaching different subjects for Engineering and Management Students
Student - centric Learning	Role Plays (Sales & Distribution Mgt) 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
Others	Industrial Visits	Le Meridien Fujairah- April 2012, RAK Ceramics- May 2012, Julphar- June 2012.

# Any other important information not covered under above heads:

# **Campus Recruitment Programme 2011-12**

Almost all the B.Arch students graduated in 2012, have been placed in the same organization where they took their internship training in IX semester as a recognition of their performance during that period.

# UNIVERSITY POLYTECHNIC



Main Building

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 67.33 & 62.67 percent respectively for PT & SC category students.

Admission process for both Diploma in Engineering & Medical Lab Technology courses for 2012 batch was completed as per schedule and their regular classes started off successfully in August, 2012. 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.

# **Training & Placement:**

# **INDUSTRIAL VISITS**

- Scheck Process & Controls Ltd., Ranchi
- 2. Jharkhand Government Tool Room & Training Center, Ranchi
- Sikidiri Thermal Power Plant, Sikidiri

#### TRAINING

- A two months training was arranged for Automobile & Manufacturing Engineering students, 2010 batch students at TATA MOTORS Ltd., Jamshedpur.
- 2. Usha Martin Industries Ltd., Ranchi
- 3. Patratu Thermal Power Station, Patratu, Hazaribagh
- 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 and 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
Tata Motors, Jamshedpur	05
Schenck Process & Controls Ltd.	06
Usha Martin Industries Ltd., Jamsedpur	01
SNL, Ratu	08
DR Jain Video on Wheel	25
Total	45

# **Sponsored Projects:**

SI. No.	Project Title	PI	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Setting-up of CAM Lab.	Mr Rakesh	AICTE	15 April, 2011	Rs 10,00,000	One Year

# Seminar/ Conference/Short-Term Courses Conducted by the Department Short Term Course:

1. Three Months program on "Electrical Repair, Maintenance & Troubleshooting" for unemployed youths of Jharkhnad

# Conferences/ Seminar/ Workshop/ Staff development Programmes/ Orientation Programmes/ Refresher Course etc. attended

- 1. Mr. T. K. Parashar and Mrs Neeru singh attended AICTE Sponsored Quality Improvement Program 2012, organized at B.I.T., Mesra from 01 Oct, to 13 Oct, 2012.
- 2. Mr. Manish Oraon presented a paper in national conference on competitive manufacturing: strategies & decision support system, held on Nov. 05-06, 2011, dept. of mechanical engineering, GLA University, Mathura.
- 3. Mr. Manish Oraon presented a paper in national Seminar on advancement in manufacturing Vision-2020, held on May 25-26, 2012, institution of engineers an dept. of Production engineering, BIT Mesra, Ranchi.

# **Publications**

- 1. T. K. Parashar and R. K. Lal "Theoretical modelling of InP based photodetector for hydrogen fluoride gas detection in short wavelength region", Optoelectronics and Advanced Materials Rapid Communications Vol. 5, No. 7, July 2011, pp. 732 737.
- 2. T. K. Parashar and R. K. Lal "Modeling and Simulation of HgCdTe Based Photodetector for N2O Gas Detection", Journal of Electron Devices, Vol. 11, 2011, pp. 527-537.
- 3. Chandralekha Bhagat, Sandeep kumar singh, Priya ranjan Prasad verma, Neeru singh, Samridhi, Mohd. Neyaz. Crystalline and amorphous Carvidilol loaded nanoemulsion: formulation optimization using response surface methodology—May 2012 DOI: 10-1080/17458080.2011.630037 Journal of experimental nanoscience.

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

Dr. Satish Kumar appointed as a reviewer of International Journal "Desalination" published under Elsevier

# **Department Students' Activities**

#### **Cultural Events**

Annual cultural programme & Art and Craft exhibition was organized on the occasion of "Saraswati Puja on 28th of January, 2012

#### **Annual Athletic Meet 2012**

University Polytechnic organized its 5th Annual Athletic Meet 2011 -2012 on 24<sup>th</sup> and 25<sup>th</sup> February, 2012. Dr. Ajay Kumar Chakrabarty, then Vice-chancellor was the Chef Guest at the inaugural programme and renowned industrialist of Jharkhand, Shree R.P Sahi was Chief Guest of the closing ceremony.

# Members on Board of studies (UG):

# List of members of the board of studies for Diploma Programme

#### Chairman:

Dean, Academic Co-ordination, BIT

#### Members:

- 1. Dean(UG Studies), BIT
- 2. Director, University Polytechnic
- Head, Deptt. of Mechanical Engg., BIT
- 4. Head, Deptt. of Production Engg., BIT
- 5. Head, Deptt. of Computer Sc., BIT
- 6. Head, Deptt. of EEE, BIT
- 7. Head, Deptt. of Pharmaceutical Sciences
- 8. Senior Faculty, Deptt. of Management
- 9. Dr. S.Jha, Inchage, BMLT Programme
- 10. Mr Ramkesh, University Polytechnic
- 11. Mr Rakesh, University Polytechnic
- 12. Mr N.K.Mukherjee, University Polytechnic
- 13. Mrs Sumana, University Polytechnic
- 14. Mr Ramnish Sinha, University Polytechnic
- 15. Mrs Neeru Singh, University Polytechnic

#### **External Members:**

- 1. Dr. Tulsi Mahto, Director, RIMS
- 2. Dr. B.C. Adhikari, RIMS
- 3. Mr B.Singh, Head, Project Management.

Central Project Engineering Division, Tata Steel

- 4. Mr C.Khan, Asstt. General Manager(Trg.), Tata Motors, Jamshedpur
- 5. Dr. R.K.Singh, Pansa Kothi, House No. C-29, Ranchi
- 6. Principal of any Polytechnic

# M.Tech/ME Awarded:

Mr. Abhay Kumar completed M.Tech(CSE) from BIT, Mesra, Ranchi Md. Maqubool Hosain completed M.E(Microwave Engineering) from ECE Dept., BIT, Mesra.

# Ph.D. Awarded

Dr. Sumana Kumari completed Ph.D. in Technology from ECE Dept. BIT, Mesra. Title of her thesis was "Design and development of Printed Microstrip Antenna for Wireless Communication"

# Registered students at University Polytechnic

With 108 diploma in engineering & 35 Medical Lab. Technology students of 2009-2012 batch, 173 diploma in engineering & 32 MLT students of 2010-2013 batch, and admission of 2012 batch for Diploma in Engineering and Medical Lab Technology the number of Registered students at University Polytechnic as on 31.03.2012 was as under:

Students Registered in MO-11			Students Registered in SP-12				
MLT				MLT			
1st Semester		<u>~</u>	41	2 <sup>nd</sup> Semeste		-	38
3 <sup>rd</sup> Semester		_	32	4 <sup>th</sup> Semester		-	32
5 <sup>th</sup> Semester		-	35	6 <sup>th</sup> Semester		-	35
Diploma in En	gineering			Diploma in Er	ngineering		
1 <sup>st</sup> Semester (	(All Branches)	-	173	2 <sup>nd</sup> Semester	All Branches)	-	170
3 <sup>rd</sup> Semester (	(Automobile)	-	29	4th Semester	(Automobile)	<b>~</b>	28
(10 batch) (Co	(10 batch) (Computer)		28	(10 batch) (Computer)		**	28
	(Electronics)	-	29		(Electronics)	***	29
	(EEE)	-	30		(EEE)	Ree	29
	(Manufacturing)	-	28		(Manufacturing)		27
	(Mechanical)	-	30		(Mechanical)	P-0	30
5 <sup>th</sup> Semester	(Automobile)	-	28	6th Semester	(Automobile)	-	28
(09 batch)	(Computer)	-	25	(09 batch)	(Computer)	-	25
	(Electronics)	-	30		(Electronics)	-	30
	(Manufacturing)	-	25		(Manufacturing)		25

# **CENTRAL LIBRARY**



Circulation Desk

(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. 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,

42.593

broadening knowledge, and enhanced services.

# **Print Books**

**Total Volumes** 1, 34,760 **Total Titles** 

Print Journals/Magazine 61

Indian 56

Foreign 00

Magazine 05



Books are the best friend

Electronic Journals

10,315

CD/ DVD

3,200

**Bound Volumes** 

18,512

Library home page

http://bitmesra.ac.in/library/default.asp

Library Services

Bibliographic services

**Document Lending Services** 

Reference

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 Frida

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 2012

SI. No.	Course	#Titles Available	#Volumes Available
1	Applied Chemistry	1961	8032
2	Applied Mathematics	1985	8729
3	Applied Mechanics	2875	5619
4	Applied Physics	2516	6703
5	Architecture	1584	2229
6	Biotechnology	1790	3065
7	Civil Engineering	2478	7079
8	ECE	2759	12094
9	CSE	5761	21454
10	IT & MIS	3247	8157
11	EEE	2405	9189
12	Environmental Science & Engineering	759	1257
13	НМСТ	558	2886
14	Management	2268	11863
15	Mechanical Engineering	2329	10297
16	Pharmacy	2683	6000

	Total	42,593	1,34,760
21	Others	550	1652
20	Space Engineering & Rocketry	630	1055
19	Remote Sensing	586	1068
18	Production & Engineering	2387	3087
17	Polymer Engineering	482	3245

# **Details of Print Journals/ Magazines**

SI. No.	Title of Journals	IND / INT	Jr./Mag
1	Fortune (Magazine)	IND	Mag
2	Express Hospitality (Magazine)	IND	Mag
3	Business Today (Magazine)	IND	Mag
4	Outlook traveller (Magazine)	IND	Mag
5	Time (Magazine)	IND	Mag
6	Annals of Lib & Information Studies	IND	Jr.
7	Bhartiya Vaigyanik Avam Audhyogik Anushandhan Patrika	IND	Jr.
8	Indian journal of Biochemistry & Biophysics	IND	Jr.
9	Indian journal of Biotechnology	IND	Jr.
10	Indian journal of Chemical Technology	IND	Jr.
11	Indian Journal of Chemistry (Section-A)	IND	Jr.
12	Indian Journal of Chemistry (Section-B)	IND	Jr.
13	Indian Journals of Engineering & Materials Science	IND	Jr.
14	Indian Journal of Experimental Biology	IND	Jr.
15	Indian journal of Fabric & Textile research	IND	Jr.
16	Indian Journal of Pure & Applied Physics	IND	Jr.
17	Indian journals of Radio & Space Physics	IND	Jr.
18	Indian journals of Traditional knowledge	IND	Jr.
19	Indian Science Abstracts	IND	Jr.
20	Journals of IPR	IND	Jr.
21	Journals of Scientific & Industrials Research	IND	Jr.

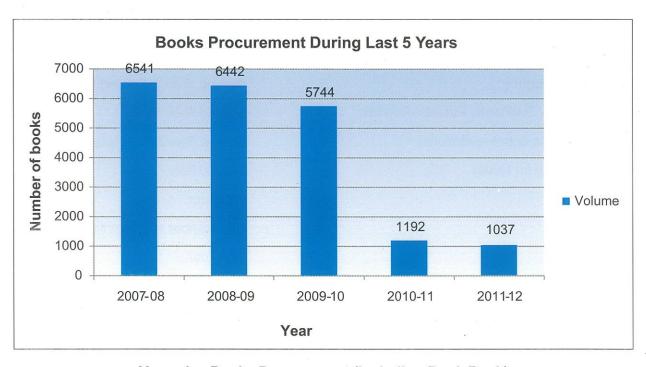
22	Medical & Aromatic Plants Abstracts	IND	Jr.
23	CSIR News	IND	Jr.
24	Indian journals of Naturals products and research	IND	Jr.
25	PRAMANA journals of Physics	IND	Jr.
26	Journals of Astrophysics and Astronomy	IND	Jr.
27	Proceedings mathematical Science	IND	Jr.
28	Journal of Earth System Science	IND	Jr.
29	Journals of Chemical Science	IND	Jr.
30	Bulletin of Material Science	IND	Jr.
31	Sadhana (Engg. Science)	IND	Jr.
32	Journals of Bio- Sciences	IND	Jr.
33	Chemical Weekly	IND	Jr.
34	Research journals of Chemistry & Environment	IND	Jr.
35	Everything about Water	IND	Jr.
36	Everything about Environment	IND	Jr.
37	Green Source	IND	Jr.
38	Asian Geographic	IND	Jr.
39	Indian Green File	IND	Jr.
40	Indian Management	IND	Jr.
41	Journal of Entrepreneurship	IND	Jr.
42	The Economist	IND	Jr.
43	ET Polymers	IND	Jr.
44	Modern Plastics & Polymers	IND	Jr.
45	Everything about Green Buildings	IND	Jr.
46	Architectural Review	IND	Jr.
47	Harvard Business Review	INT	Jr.
48	Indian journals of Pharmaceutical Science	IND	Jr.
49	Indian journal of Pharmacology	IND	Jr.
50	Indian journal of Steep Medicine	IND	Jr.
51	Telecommunication Journal	IND	Jr.

52	Industrial researches	IND	Jr.
53	Inside Outside	IND	Jr.
54	International journal of Computational Intelligence Research	IND	Jr.
55	Journal of Indian Society of Remote Sensing	IND	Jr.
56	Journals of Marketing and Communications	IND	Jr.
57	Journals of Indian Institute of Science	IND	Jr.
58	The Pharma review	IND	Jr.
59	Current Science	IND	Jr.
60	Resonance - Journal of science Education	IND	Jr.
61	Journals of Genetics	IND	Jr.

## Abstract/ Full Text Online Journals/Books/Thesis & Dissertations

SI. No.	Publishers	Web Link
1	American Chemical Society	http://pubs.acs.org
2	American Institute of Physics	http://www.aip.org
3	American Physical Society	http://www.aps.org
4	Cambridge University Press	http://journals.cambridge.org
5	Economic & Political Weekly	http://www.epw.in
6	IndianJournals.com	http://indianjournals.com/ijor.aspx
7	Institute of Physics	http://iopscience.iop.org/journals
8	ISID (Bibliographic Database)	http://isid.org.in
9	JCCC (Bibliographic Database)	http://www.jccc-ugcinfonet.in
10	Oxford University Press	http://www.oxfordjournals.org
11	Project Muse	http://muse.jhu.edu/browse
12	Royal Society of Chemistry	http://www.rsc.org
13	SciFinder Scholar (Bibliographic Database)	http://cas.org/products/scifindr/index.html
14	SIAM	http://epubs.siam.org
15	Springer Link	http://www.springerlink.com
16	Taylor & Francis	http://www.tandfonline.com
17	Web of Science (Bibliographic Database)	http://apps.webofknowledge.com

18	Wiley-Blackwell	http://onlinelibrary.wiley.com
19	ASCE Journals	http://scitation.aip.org/browse/by_publisher#ASCE
20	ASME (including AMR)	http://scitation.aip.org/browse/by_publisher#ASME
21	IEL Online (5 Users)	http://ieeexplore.ieee.org/Xplore
22	McGraw Hills Access Engineering	www.digitalengineeringlibrary.com
23	EBSCO Databases	http://search.epnet.com
24	Elsevier's Science Direct	http://www.sciencedirect.com
25	GALE Gale Cengage Learning	http://lr.cengage.co.in
26	ProQuest Dissertation & Theses	http://search.proquest.com
27	Ebrary(online Books)	http://site.ebrary.com/lib/bitmesra



#### Year wise Books Procurement (including Book Bank)

Location Index	Landley
Name of the resource, service, section	Location
Bindery Section	Second floor
Book Acquisition Section	Ground floor
Book Bank	Second floor
Book display	Ground floor
Book stacks (All disciplines)	First floor and Second floor

#### Annual Report 2011-12

CD ROM workstations Ground floor Issue of Library Card Ground floor Circulation counter /section Ground floor Claimed Books and Books processed urgently Ground floor Faculty publications display Ground floor Fine Details Ground floor Indexing and Abstracting Journals (Back Volumes) Ground floor Issue counter (for Journals / Reference Books / Pamphlets) Ground floor Journals (Bound volumes) Ground floor Journals Section / current journals display Ground floor Librarian's Office Ground floor Digital Library Ground floor Newspapers and Light Reading Material Ground floor

OPAC (Online catalogue) Ground, First & Second floor

Pamphlets Section (Standards, Patents, Reports, Ground floor

Photocopies, Theses and dissertations)

Ground floor & First floor

Photocopying facility for faculty Ground floor

Reference Section First floor

Reading Hall Ground floor and First floor

Text Book First floor

Technical Processing Section Ground floor

#### **Library Rules**

- The Library Card will be issued to a Staff/Student at the beginning of his/her career in the Institute, subject to the rules and regulations of the Library.
- 2. The Bar-coded Card should be preserved carefully. Loss of the Card should be reported immediately in writing to the Librarian. Issue of a duplicate card may be considered in case of loss on payment of Rs.25/for students and Rs. 40/- for Staff members but can not be claimed as a right. The Staff/ Student will be responsible for books found outstanding in the original card even after a duplicate has been issued.
- 3. All students may borrow five books from General Stock at a time for Fifteen days and one Text book for over night. All Teaching Staff may borrow eight books from General Stock at a time for one month and one Text book for over night. All Non Teaching Staff may borrow four books from General Stock at a time for one month and one Text book for over night. In addition to books, the teaching Staff may borrow two back volumes of any journal other than Indexing and Abstracting for a period of one week only.

- 4. The borrower will inspect the books and bring it to the notice of the Counter Assistance if they are damaged before getting them issued; otherwise he/she will be held responsible for the damage at the time of return.
- Students may also borrow from SC/ST Book Bank on submission of eligibility certificate.
- 6. Overdue charges will be collected as per rules prevailing in case of delay in return. The current charges are General Stock Books: 1/- per day for the first week and Rs.10/- per day thereafter; Text-book: Rs. 10/- per day.
- 7. Loss of books/documents should be reported in written to the Librarian immediately. The decision of the Librarian will be final regarding recovery of cost.
- 8. The Librarian has the discretion to recall any book even before the due date.
- 9. The books/documents borrowed on the card are not transferable.
- 10. Only writing materials will be allowed inside the Library. Personal belongings such as loose garments, shawls, umbrellas, brief cases, bags, file covers, etc. are to be left behind at the appropriate place near the entrance to the library.
- 11. The Staff/ Student will consult the Catalogue/ OPAC to locate the books on the shelves arranged according to the Call Numbers in the Catalogue. In case of any difficulty the Librarian may be consulted.
- 12. The Staff/Student will present the Bar coded library card with books at the issue/return counter for charging/discharging.
- 13. Misuse of library privilege will be regarded as breach of discipline.
- 14. This card must be used only by the member to whom it is issued.
- 15. Library card/ Library books lost/found must be reported in writing to the Librarian immediately.
- 16. No dues Certificate will be issued only when all documents borrowed are returned to the Library. The above regulations may be amended at the discretion of the library.

Library Team Name	Designation	Ext. No.
Dr. Vijayakumar M	Librarian – Acting	4452
Ms Rita Sinha	Assistant Librarian	
Mr. Debojyoti Nath	Information Scientist	4507
Ms. Shamida Lakra	Assistant Librarian	
Mr. Mohan Mahto	Senior Library & Information Assistant	
Mr. Amitab Kumar Mangalam	Library & Information Assistant	4505
Mr. Brajesh Kumar	Library & Information Assistant	4506
Dr. Samir Kumar Jalal	Assistant Librarian – (Extra Ordinary Leave)	
Ms. Tanushree Bhatnagar	Assistant Librarian (Maternity Leave)	

#### **Library Statistics of 2011-12**

Total Books Added : Title - 295 & Volumes - 1037

Total Journals Procured : Print - 61 & Online - 10,315

Total Number of Membership enrolled : 1,450

Total Number of Books Issued : 79584

Total Number of Books Returned : 79107

New Implementation : 20 New Computers procured for Digital Library.

#### **Library Achievements:**

 Central Library, BIT Mesra organized one day workshop on "DELNET: Resources, Services & Facilities" in collaboration With DELNET, New Delhi on 21st April, 2011.

- Central Library, BIT Mesra and NRDC, New Delhi jointly organised One day Seminar on "Intellectual Property and Innovation Management in Knowledge Era" on 21st February, 2012.
- Central Library, BIT Mesra organized ICSSR, New Delhi Sponsored 3 days National training Workshop on "Expansion in Developing and organizing Digital Information Resources" on 24th to 26th September, 2012

#### Staff Achievements

#### Dr. Vijayakumar M

#### **Invited Lectures**

- Why do we need DELNET: Experiences of Central library, BIT Mesra. One day workshop on "DELNET: Resources, Services & Facilities" on 21<sup>st</sup> April 2011, Central Library, Birla Institute of Technology, Deemed university, Mesra, Ranchi.
- Management of Intellectual Property Rights in India. Seminar on "Intellectual Property and Innovation Management in Knowledge Era" 21st February 2012, Birla Institute of Technology, Mesra, Ranchi, Jharkhand"
- Empowerment of library users through IT Tools. Three days National training workshop on "Strategic Planning and Management of Information Resources and Technology" March 1-3, 2012 at MP Institute of Social Science Research, Ujjain, Madyapradesh, India
- Design and development of WebPages. Three days National training workshop on "Strategic Planning and Management of Information Resources and Technology" March 1-3, 2012 at MP Institute of Social Science Research, Ujjain, Madyapradesh, India
- 5. MARC: A Tool to share the Catalogue Resource for Jharkhand Libraries. National Seminar on "Library & Information Services at Every Door Steps of Jharkhand" on 26<sup>th</sup> August, 2012 (Sunday) at Ramanujam Institute of Technology auditorium conducted by Jharkhand Information & Library Association
- 6. 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.
- 7. Koha: Open Source Software for Library Automation. Training Course on Creating of Electronic Library for Collection of Information. On 28th August 2012. Conducted by Indian Audit and Accounts Department,

- Regional Training Institute, Government of India, Ranchi, Jharkhand.
- 8. 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.

#### **Publications**

- 1. 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)]
- 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]
- 3. Vijayakumar M and Dharenra Prabhu. A Study on user perceptions of HIV/AIDS based Web Resources in Karntaka. ISST Journal of Advances in Librarianship. Vol. 2. No.1 January June 2011 [ISSN:0976-9021]
- 4. Webometric Analysis of Web Presence and Links of SAARC Countries. Paper contributed in International Conference on Knowledge Management & Resource Sharing conducted by Waljat College of Applied Science on February 27-28, 2012 Muscat, Oman
- 5. Human Resource Development in IT Enabled Libraries. Paper presented in the national conference on collection management in changing context: Problems and prospects at Shimoga, during 19-20 August 2011.

#### Conferences/ Workshop Participated

- 1. National conference on "Trends in Developing and Managing E-Resources in Libraries" on 25-26 May 2012, conducted by Visvesvaraya Technological University, Belgaum, Karnataka
- 2. Workshop on "Intellectual Property Rights (IPR-2011)" on 2nd December 2011, conducted by BIT, Mesra, Ranchi, Jharkhand.
- 3. NACLIN 2011, ON 15-17 November 2011, Organised by DELNET, New Delhi & Central Library, Visva-Bharati, Santiniketan, West Bengal.
- 4. National Seminar on Relevance of Dr. Ranganathan in Present Scenario, RIMS, Ranchi on 4th September 2011, conducted by JILA, Jharkhand.
- National Conference on Collection Management in Changing Context: Problems and Prospects, B R Ambedkar Bhavan Shimoga, during 19-20 August 2011, conducted by Kuvempu University College Librarians Association.
- 6. National Conference on "Technical Terminology in Indian Languages" Vigyan Bhavan, New Delhi during 27-29 2011, conducted by Commission for Scientific Technical Terminology, New Delhi.

#### Mr. Debojyoti Nath

- Registered for PhD degree at BIT-Mesra.
- Participated in the workshop on KOHA software at Mizoram University,1st -7th June,2011
- Paper contributed in the National Seminar NCCM 2011 at Kuvempu University,2011
- Paper contributed in the National Seminar NSRC 2012 at BBA University, Lucknow, 2012.

#### Contract

Dr. Vijayakumar. M, Librarian-Acting, BIT-Mesra, Ranchi, Jharkhand, INDIA, PIN:835215 (:0651-2276675 Direct or Extension 4452, Fax: 0651-2275401, Email: library@bitmesra.ac.in

### TRAINING & PLACEMENT DIVISION

The Campus Recruitment Programme 2011-12 achieved new landmarks both in terms of the number of offers generated as well the growth in average compensation.

The year saw as many as 107 recruiters visiting our campuses. Visits were organised at Mesra, Jaipur, Noida and Patna Campuses to cater to the geographically spread population of BIT students. Students from off-shore campuses at Ras al Khaimah & Muscat also participated at the Mesra Campus activity.

The number of Non-IT Sector organisations increased to 67 while there were as many as 32 IT organisations ranging from large scale IT Services Companies to high end product organisations who addressed the needs of the large number of students from the streams of CS and IT coupled with the MCA students spread across campuses, the focus, as earlier remained on IT Services organisations. A total of 1937 offers, the highest number ever, were generated through this process. Several students received multiple offers.

Recruiters were a good blend from all major sectors - Consulting, FMCG, Power and Infrastructure, Telecom, Auto, IT Product, IT Services and others.

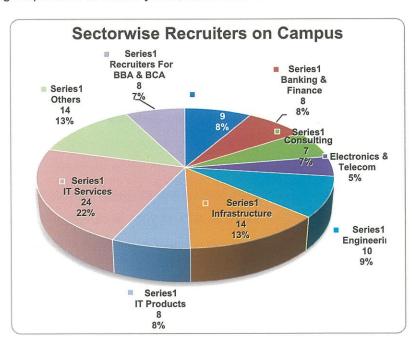
Average salary for the BE students was 5.1 lacs this year, a rise of 8%. The highest salary, in India was 14 lacs while the highest International Offer was US\$1.19 lacs.

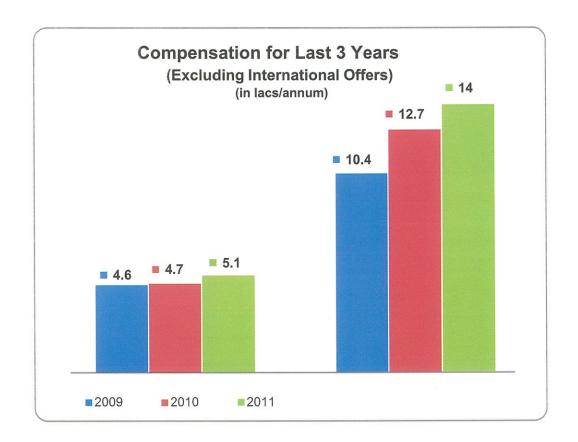
The Training and Placement Division made renewed efforts to get new recruiters on campus, which resulted in an addition of 26 'First Time' recruiters including Amazon, DVC, Exide, GMMCO, SAP Labs etc.

The Campus Recruitment programme at BIT, Mesra has over the years been most successful not just in terms of generating offers exceeding the number of students on campus but also in terms of development of wide ranging relationship covering almost all sectors of the industry.

While the fears of recession impacting the campus recruitment were well spread, it was observed that the recruiters continued hiring from premier Institutions like BIT while reducing the overall number of Institutes that they visited.

In order to ensure a high success rate, the Training &Placement Division put in extra efforts towards the CDP (Competency Development Programme) sessions as well as Industry interactions towards more effective dissemination of knowledge inputs. As in earlier years, assessment tests were run across all BIT Campuses.





List of Recruiters and Number of Offers (sector-wise)

Sector	Company	Offers Made
	Caterpillar	4
	Hero Moto Corp Ltd.	4
	Mahindra & Mahindra	1
	Maruti Suzuki	14
Automobile	Metalsa	1
	Suzuki Powertrain Ltd.*	4
	Tata Auto Comp	13
	Tata Motors	15
	Telcon	-
Automobile Total		56
	Allahabad Bank*	5
Banking & Finance	Capital IQ	1
	HDFC	16

	ICICI Bank	11
1	ICICI Securities	6
Banking & Finance	India Bulls	4
	ING Vaisya	1
	Shivpra Financial Solutions (P) Ltd.*	11
E	Banking & Finance Total	55
	Deloitte	22
	Direct I	5
	EXL Services	8
Consulting	Goldman Sachs	3
	MuSigma	23
	Nomura	6
	ZS Associates	10
	Consulting Total	77
	Bharti Infratel	3
Electronics	Freescale Semiconductors	1
Telecom	Hella Electronics*	2
Semiconductor	Idea Cellular	6
	Wipro VLSI Division	7
Electronics	19	
	Bluestar	4
	Cummins	1
	Exide*	8
	IFB	10
Pasis a suis -	NEI	5
Engineering	NRB Bearing*	3
	Tata Consulting Engg. Ltd.	5
	Tayo Rolls Ltd.*	3
	TRF	2
	Vedanta	5
	46	

	Adhunik Steel*	4
	CESC*	1
	Damodar Valley Corporation*	10
	Gammon India	9
	Gmmco	9
	GMR Airport*	3
In franchis at an	GMR Energy*	6
Infrastructure	Jusco	2
	L&T ECC	4
	NTPC	4
	Soma Enreprises	1
	Tata Power	6
	Tata Steel	8
	Vishwa Infrastructures*	9
	nfrastructure Total	76
	Amazon*	1
	Microsoft	2
	Nagra Vison*	5
IT Products	Oracle	5
TI Products	Samsung SEL	34
	SAP Lab*	5
	Tejas Network Ltd.	3
	yahoo!	2
IT Products Total		57
	3DPLM Software Solutions Ltd*	2
	Amdocs	11
	Aricent	117
IT Services	Atos Origin	15
	CA Technologies	7
1	Cognizant	539
	Cybage	5
	Ericsson*	35

	Goo20 Technologies*	3	
	HCL	2	
	Headstrong	56	
	ІВМ	52	
	Infosys	270	
	Mango Technologies	1	
	Misys	7	
 	Philips	4	
IT Services	Samsung SISO	11	
	Sapient	17	
	Sony India	4	
	Tata Steel (MT Systems)	4	
	Tata Technologies	11	
	Unisys*	25	
	Verizon	28	
	Wipro Technologies	123	
	IT Services Total		
וז	Services Total	1349	
17	Services Total 99 Acres*	1349 1	
17			
17	99 Acres*	1	
17	99 Acres* Birla Insurance*	1	
17	99 Acres* Birla Insurance* Britannia	1 1 4	
17	99 Acres* Birla Insurance* Britannia Cipla	1 1 4 19	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow*	1 1 4 19 1	
Others	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene	1 1 4 19 1 2	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene IOCL	1 1 4 19 1 2 5	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene IOCL. Jharcraft*	1 1 4 19 1 2 5 7	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene IOCL Jharcraft* JIT Borawan	1 1 4 19 1 2 5 7	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene IOCL Jharcraft* JIT Borawan Mylan Lab*	1 1 4 19 1 2 5 7 3	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene IOCL Jharcraft* JIT Borawan Mylan Lab* Nestle	1 1 4 19 1 2 5 7 3 14 1	
	99 Acres* Birla Insurance* Britannia Cipla Content Flow* Indegene IOCL Jharcraft* JIT Borawan Mylan Lab* Nestle Nokri.com	1 1 4 19 1 2 5 7 3 14 1	

	Aricent	6
Recruiters for BBA & BCA	EXL	5
	Extra Marks	15
	Infosys	20
	SAP	5
	Wipro BPO	22
	Wipro WASE	67
	Wipro Wista	1
Recruiters For BBA & BCA Total		141
Grand Total		1937

<sup>\*</sup> These companies were the "First time" participants in the Campus Recruitment Programme of BIT.

#### Other Activities:

- 1. Several activities were organised during this period through the sustaining tie-ups with the various leading recruiters:
  - The Ericsson 'Empower' Programme for competency building a Certification for ECE students was organised for the second year.
  - b) Mahindra 'Igniters Day' was organised at Mesra Campus with events from Auto Quiz, Design Competition and Paper Presentation etc.
  - c) T&P Division, with Cognizant Technology Solutions organised the 'Cognizant Certified Student' Programme across 3 centres (including Mesra). All pre-final year students who have cleared this test shall be exempted from the written exam during the selection process.
  - d) The Regional Rounds of 'Mahindra Auto Quotient Quiz' was organised at the Mesra Campus.
  - e) Student Workshops in Technical & Non Technical areas were organised in collaboration with TCS.
- 2. Under the academic interface programme TCS gave away the Best Student and Best Project Awards consisting of Gold Medals and cash prizes.
- 3. The NGO 'Tech for India' was invited on campus to interact with the final year students.
- 4. T&P Division had an active participation in the University Academia Meets organised by ZS Associates, Cognizant & TCS.
- Assessment Programme for all Pre-final year students was centrally planned and executed across centres
  of BIT in which 1660 students participated. The students were required to give aptitude test (consisting
  of 3 sections) and a subject test.
- 6. Based on the assessment test scores, the training arm of the T & P Division conducted a Competency Development Programme for 105 students (including students from weaker sections) at BIT Mesra in different aptitude subject areas as well as personality development. Sessions were conducted on weekdays in the evening and occasionally on weekends.
- Other Centres were encouraged to conduct such programmes with the same working model for weaker students.

## STUDENTS' ACTIVITIES



Clubs and societies of the students of the Institute organized various functions during the session July 2011 to June 2012. The brief of them are as follows:

August -2011

BASIC ROBOTICS WORKSHOP FOR 1ST YEAR STUDENTS: Workshop dealing with basic principles and aspects of 2011 Robotics to welcome 2011 batch to the culture of Robotics in Mesra.

FREE CAT WORKSHOP BY SERIAL CAT TOPPER BYJU: Workshop dealing with Number Systems, Data Interpretation, Algebra, Verbal Ability, etc by IEEE.

INTRODUCTORY WORKSHOP FOR 2K11 BY ROBOLUTION: A workshop was conducted for 2k11 batch about the exciting field of robotics. This workshop got an enthralling response with about 200 students attending the workshop.

CODE QUOTIENT MATCHES BY ACM: These are online programming contests held every Saturday night from 10:00 p.m. to 1:00 a.m. (Sunday). Contests are held over the Local Area Network of BIT. Workshop on C/C++ by ACM: For First years to get them acquainted with the basic concepts of coding and to inculcate their interest in the field of computer science.

WORKSHOP ON ADVANCED ALGORITHM BY ACM: Conducted for second and third year students to give them a head start in competitive programming.

LINUX WORKSHOP - A linux workshop in association with LUG group was held for the students of 1st year student.

December-2011	RANCHI SCIENCE AND ENVIRONMENT FESTIVAL 2011: EPAC in association with Rotaract organized Ranchi Science and Environment Festival on 4th of December, 2011 in BIT Mesra premises in which more than 800 students of 20 different schools of Ranchi participated.  I-ROBOT WORKSHOP WITH MATLAB AND IMAGE PROCESSING: Robolution, BIT Mesra organized a workshop on DIGITAL IMAGE PROCESSING using MATLAB and its applications in real time image processing. The workshop aimed at building an image processing based Robot capable of following a ball and any given track.
	Mood Indigo 2011: The Dance Club participated in an inter-college dance event Xtacy, in IIT-Bombay's annual cultural fest Mood Indigo 2011, from 18th-21st December.
	Get Started As An Automobile Engineer: A workshop was conducted to introduce 1st year students to the basics of Automobile Engg. viz Steering, Suspension, Braking, Chasis, Transmission design were explained to them.
January- 2102	The Music Club represented BIT - Mesra in various events organized at Spring Fest – 2012 (IIT Kharagpur) in Jaunary 2012. Achievements included – 4th position at Sargam (Eastern group singing competition), being one of the finalists for Wildfire (Western rock band competition) and first and second prizes in the Eastern Karaoke Competition and Three Minutes To Fame.
	Fine Arts Society represented BIT, Mesra at Springfest at IIT Kharagpur in various on spot events like face painting. Rangoli, Sketching etc
March 2012	BITOTSAV, the annual Techno-Cultural festival at BIT Mesra was organized from 29th February to 4th March. It consisted of Heritage Nite , Scribe Night & Battle of the Bands, Cultural Nite and Pro Nite.
April 2012	ALecture programme commemorating 150 years birth anniversary of Swami Vivekananda was organized at BIT Mesra on 26th April 2012. Lecture was given by Swami Samarpunanandaji Maharaj from Belurmath Ram Krishna Mission, Howrah.
	Workshop on BAJA: A workshop was conducted for 1st year students to familiarize them with the National ATV making competition.

#### **ALUMNI EVENTS DURING THE YEAR 2011-12**

The Alumni Relations Group of BIT, Mesra endeavours to constantly engage with alumni spread across the globe and also to organise value added events on campus.

During the year several alumni reunions and other prominent events were organised at Mesra campus and elsewhere. The Alumni Relations Group supported the organisation of the events at Mesra while the Noida Centre supported the organisation of events of the BITOSA Delhi Chapter. Both the Golden Jubilee and Silver Jubilee Batches



Group Photo of the Golden Jubilee Reunion Batch of 1957-61

celebrated reunions attended by a large number of alumni from all over the globe.

#### September-2011

WORKSHOP ON JAVA J2SE (CORE JAVA): IEEE conducted a three day workshop on Java concepts including Basics i/o, flow control, GUI (Swing package), Applets, NetBeans & ODBC.

WORKSHOP ON WEBDESIGN: IEEE conducted a two day workshop dealing with HTML, CSS, JavaScript, Apache, PHP, Wordpress, etc.

GATEWAY TO ROBOTICS: The workshop was conducted in two separate sessions and spanned over a period of two days for duration of 8hrs. It got a humongous response with a participation of about 250 students.

BLOOD DONATION CAMP: LEO Club organized a Blood Donation Camp for the students and staff of Birla Institute of Technology and took forward this noble cause in collaboration with the NSS and the NCC in the month of September at the BIT Dispensary. More than 200 people donated blood and each donor was given out food packets and a t-shirt as a gesture thanking them for their contribution to this great humane cause.

DANDIYA NITE 2011: LEO Club in collaboration with the Dance Club organized a Dandiya night celebrating the beginning of the festival of Navratri, in the month of September.

#### October-2011

PANTHEON'11: The Dance Club organized two informal events in Pantheon'11, Retrozap and Copycat. Retrozap was a solo dance competition while Copycat was also a duet competition in which two participants, chosen randomly, were to copy each other's dance steps in turns.

FUGIYA 2011 - A food fest was conducted by rotaract club on the 22nd of October during pantheon 2011, in which stalls were put up by the students showing there entrepreneurship skills, this night include band and dance performance by students.

WORKSHOP ON ETHICAL HACKING: IEEE had a workshop on Ethical hacking In association with AIESEC IIT Kharagpur.

MICROCONTROLLER AND MICROPROCESSOR CODING: Organized by Robolution, there were separate questions for microcontroller and microprocessor coding and the questions were arranged in increasing levels of difficulty. The questions were compiled and the codes were checked by the 2k8 seniors.

WILD SOCCER: Organized by Robolution the participants had to build a manually controlled Robot capable of hitting the ball into the goal post. The points were awarded on the basis of number of goals scored.

GRID MASTER: The participants had to build an autonomous Robot capable of traversing a 7X7 grid along the diagonal.

ROBOCODE: Robocode is a programming game where the goal is to code a robot to compete against other robots in a battle arena. The player is the programmer of the robot, who will have no direct influence on the game. Instead, the player must write the Al of the robot telling it how to behave and react on events occurring in the battle arena.

DEEPOTSAV 2011: LEO Club's flagship event, Deepotsav, was organized on the occasion of Diwali. The event is for those students and staff of the college who stay back for the Diwali Holidays.

Auto Techniqa: An automobile quiz competition was conducted. The students had to design their Dream Car keeping a balance between the car performance and cost.

Gtalk: Gtalk abbreviated as Green Talk, was a written Quiz cum group discussion event based on environmental issues.

#### Prominent alumni events during the year were:

- The 1957-61 Batch of Alumni celebrated their "Golden Jubilee Reunion" at the BIT Mesra Campus from the 4th-6th of December 2011. Around 30 senior alumni, many of them with their spouses came for the 'reunion'.
- The Batch of 1973 organised a 'Reunion' at Mesra on 24th December 2011. More than 100 alumni converged at the Mesra Campus for day-long activities.
- The 1982-86 Batch celebrated their "Silver Jubilee Reunion" at Ranchi with a day's activity at the Mesra Campus from the 26th-29th December 2011. More than 100 alumni from the Batch reunited for this event.
- A 'Leadership Summit' was successfully organised at Bangalore on the 10th of December 2011 by BITOSA Bangalore Chapter. The first such summit was organised in the year 2010.
- BITOSA Delhi organised a Panel Discussion on "Entrepreneurship-Challenges and Opportunity" on the 7th of April 2012 . The venue was BIT Noida Centre.

# ANNEXURES

# ANNEXURE - I MEMBERS OF GENERAL COUNCIL

Shri C. K. Birla - Chairman

Shri S. L. Bhatter - Founder Member

Dr. A. K. Chatterjee - Founder Member

Shri Sarosh Ghandy - Founder Member

H. E. Dr. A. R . Kidwai - Founder Member

Shri G. D. Kothari - Founder Member

Shri Russi Modi - Founder Member

Shri D. N. Patodia - Founder Member

Dr. Karan Singh - Founder Member

Dr. H. C. Pande - Life Member

Shri Mohammed Yeuif Jalal - Life Member

H. E. Dr. Omar bin Abdul Muniem

Al- Zawawi, OSQ, WOi - Life Member

Shri R. D. Sahay - Representative of the Ministry of

Human Resource Development, Government of Jharkhand

Shri Kota Hari Narayan - Representative of the University Grants Commision

Shri H. K. Mittal - Representative of the Department of Science & Technology

Government of India

Prof. Raj Pal Singh - Representative of the All India Council for Technical Education

Shri Jajoria, I. A.S. - Representative of the Department of Science & Technology

Government of Jharkhand

Shri S. S. Jajodia - Representative of the Birla Institute of Scientific Research

Dr. Ajay Chakrabarty - Vice Chancellor, B. I. T., Mesra

Shri H. P. Singhi - Representative of Corporate Member-

M/s National Engineering Industries Ltd.

Dr. P. Ghosh - Representative of Corporate Member

M/s India Press Exchange Ltd.

Shri P. C. Agarwal - Representative of Corporate Member

M/s General Marketing & Manufacturing Co. Ltd.

Dr. H. S. Sagar - Alumini Member

Shri R. D. Sahay - Alumini Member

# ANNEXURE - II MEMBERS OF THE BOARD OF GOVERNORS

Sri C. K. Birla

Chairman

Shri L. Khiangte, I.A.S.

Member

**Principal Secretary** 

Dept. of Science & Technology,

Govt. of Jharkhand

Shri Surender Singh, I.A.S

Member

Commissioner,

South Chhotanagpur Govt. of Jharkhand

Dr. Ajay Chakrabarty

Member

Vice-Chancellor

Dr. A. K. Chatterjee

: Member

Institute Faculty

Dr. Vijay Agrawal

Member

Institute Faculty

Shri D. N. Patodia

Member

Nominee of General Council

Shri G. P. Lal

Member

Nominee of General Council

Dr. P. Ghosh

Member

Nominee of General Council

Shri A. K. Pandey, I.A.S.

Member

Nominee of the Chancellor

Shri S. S. Jajodia

Honorary

Treasurer

Also attended the Meeting

Dr. (Mrs.) Renu Batra

Member

Nominee of UGC

Shri R. D. Sahay

Member

Nominee of Ministry of

Human Resource Dev., Dept. of India

Dr. Pradipto Banerjee

Member

Nominee of AICTE

Shri B. K. Tripathy, I.A.S. : Member

Principal Secretary,

Dept. of HRD

Govt. of Jharkhand

Shri M. L. Pachisia : Member

Nominee of HCT

Shri Rohit Saboo : Member

Nominee of HCT

#### **ANNEXURE - III**

## MEMBERS OF THE FINANCE COMMITTEE

Sri C. K. Birla Birla Tower (9th Floor) 25, Barakhamba Road New Delhi-110001

Dr. Ajay Chakrabarty Vice-Chancellor, BIT, Mesra Ranchi-835215

Prof. Jose Varghese Professor of Eminence Christ University (Deemed University) Hosur Road Bangalore-560029

Dr. A. K. Pandey, IAS
Principal Secretary to the Governor
Governor Secretariat
Raj Bhawan
Ranchi

Col. R. K. Verma (Retd.) Registrar BIT, Mesra Ranchi-835215

Sri Rohit Saboo M/s National Engineering Industries Ltd. Jaipur-302017

Shri S. S. Jajodia Honorary Treasurer, BIT, Mesra 78, Syed Amir Ali Avenue Kolkata-700 019

# ANNEXURE - IV WORKS COMMITTEE

A Works Committee has been constituted for Campus Development as under:

Chairman : Dr. Gopal Pathak

Professor & In-Charge

Environmental Science & Engg. Group

Members : Dr. (Mrs.) Manjari Chakraborty,

In-Charge,

Dept. of Architecture

Dr. S. P. Bhattacharya, Dept. of Architecture

Dr. S. Sengupta, Dept. of Civil Engg.

Dr. R. R. Sahay, Dept. of Civil Engg.

Dr. N. R. Mandal, Dept. of Architecture

Mr. G. K. Sinha, Senior Engineer

Wg Cdr A. K. Rohit,

Retd, Campus Administrator

Ms. Nisha Jha,

Dept. of Architecture

Chairman may co-opt additional member

# ANNEXURE - V TECHNICAL COUNCIL

#### Sl. No. Members of the Technical Council

1.	Dr. Aiav	Chakrabarty	(Vice-	Chancellor'
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- 2. Dr. P. K. Barhai (Dean, Faculty & Sponsored Research)
- 3. Dr. Ashok Misra, Professor Emeritus
- 4. Dr. A. K. Chatterjee, Dean (UG Studies)
- 5. Dr. J. K. Prasad, Professor, Dept. of Space Engg. & Rocketry
- 6. Dr. N. C. Mahanti, Dept. of Appl. Mathematics
- 7. Dr. D. Jairath, Head, Dept. of Applied Physics
- 8. Prof. R. K. Narayan, Professor, Dept. of EEE
- 9. Dr. G. Sahoo, Head, Dept. of Information Technology
- 10. Dr. P.C. Joshi, Dean (PG & Doctoral Research)
- 11. Dr. (Mrs.) Mandira Mukherjee, Head, Dept. of Chemical & Polymer Engg.
- 12. Dr. D. Sasmal, Dean (Admission & Academic Coordination)
- 13. Dr. Gopal Pathak, Incharge, Environmental Sc. & Engg. Group
- 14. Dr. R. Sukesh Kumar, Head, Dept. of Computer Sc. & Engg.
- 15. Prof. A. K. Ray, Head, Dept. of Appl. Mechanics
- 16. Dr. (Mrs.) Usha Jha, Head, Dept. of Applied Chemistry
- 17. Dr. (Mrs.) M. Chakraborty, Incharge, Dept. of Architecture
- 18. Dr. P.R.P. Verma, Professor, Dept. of Phar. Sciences
- 19. Dr. S. K. Bose, Incharge, Dept. of Management
- 20. Dr. (Mrs.) Nisha Gupta, Head, Dept. of ECE
- 21. Dr. A. S. Vidyarthi, Incharge, Dept. of Biotechnology
- 22. Dr. S. K. Ghorai, Professor, Dept. of ECE
- 23. Dr. Swapan Konar, Professor, Dept. of Applied Physics
- 24. Dr. Nilanchal Patel, Prof. & Incharge, Dept. of Remote Sensing
- 25. Dr. Balram Singh, Professor & Incharge, Dept. of Civil Engg.
- 26. Dr. S. K. Chakraborty, Professor & Incharge, Dept. of Appl. Maths
- 27. Dr. B. N. Sinha, Incharge, Dept. of Pharm. Science

- 28. Prof. Anand Kumar Sinha, Dean (Students)
- 29. Prof. Sitesh P. Srivastava, Head, Dept. of HMCT
- 30. Dr. Arbind Kumar-I, Incharge, Dept. of Mechanical Engg.
- 31. Dr. Kunal Mukhopadhyay, Professor, Dept. of Biotechnology
- 32. Dr. Utpal Baul, Professor, Dept. of Management
- 33. Dr. Amar Nath Jha, Incharge, Lalpur Extension Centre
- 34. Dr. Subir Samanta, Professor, Dept. of Pharm. Science
- 35. Dr. S. Jha, Professor, Dept. of Pharm. Science
- 36. Dr. S. Medhekar, Professor, Dept. of Applied Physics
- 37. Dr. D. K. Mohanta, Pforessor, Dept. of EEE
- 38. Dr. Manju Bhagat, Professor, Dept. of Management
- 39. Dr. Shardha Shivani, Professor, Dept. of Management
- 40. Dr. R. C. Jha, Professor, Dept. of EEE
- 41. Dr. T. Ghosh, Dept. of EEE
- 42. Dr. Bijay Kr. Singh, Incharge, Dept. of Production Engg.
- 43. Dr. S. K. Jain, Controller of Examinations
- 44. Dr. B. B. Das, Research Professor
- 45. Dr. A. P. Krishna, Professor, Dept. of Remote Sensing
- 46. Dr. Rakesh Kumar Sinha (Reader), Incharge, BMI
- 47. Sri. M. P. Chopra, Incharge, Food Processing & Technology
- 48. Dr. Jaganathan Chockalingam, RS
- 49. Dr. Rajeev Ranjan Sahay, Civil Engg.
- 50. Dr. N. R. Mandal, Architecture
- 51. Dr. Vinay Sharma, Production Engineering
- 52. Sri D. K. Jain, Director, University Polytechnic
- 53. Sri B. B. Pant, Dean (CPD)
- 54. Dr. D. Sasmal, Registrar & Secretary

## **ANNEXURE - VI**

## **HEAD OF THE DEPARTMENT**

SI. No.	Name	Department
1.	Dr. (Mrs.) Manjari Chakraborty	Architecture Incharge
2.	Dr. (Mrs.) Usha Jha	Applied Chemistry
3.	Dr. N. C. Mahanti	Applied Mathematics
4.	Prof. A. K. Ray	Applied Mechanics
5.	Dr. D. Jairath	Applied Physics
6.	Dr. A. S. Vidyarthi	Biotechnology Incharge
7.	Dr. Balram Singh	Civil Engineering Incharge
8.	Dr. (Mrs.) Mandira Mukherjee	Chemical & Polymer Engg.
9.	Dr. R. Sukesh Kumar	Computer Sc. & Engg.
10.	Dr. Nisha Gupta	Electronics & Comm. Engg.
11.	Dr. T. Ghosh	Electrical & Electronics Engg. Incharge
12.	Prof. Sitesh P. Srivastava	HMCT
13.	Dr. G. Sahoo	IT
14.	Dr. S. K. Bose	Management Incharge
15.	Dr. Arbind Kumar	Mechanical Engg. Incharge
16.	Dr. B. N. Sinha	Pharmaceutical Sciences
17.	Dr. Bijay Kr. Singh	Production Engg. Incharge
18.	Dr. M. S. Nathawat	Remote Sensing
19.	Dr. A. K. Chatterjee	Space Engg. & Rocketary
20.	Dr. Gopal Pathak	Env. Science & Engg. Group Incharge
21.	Dr. Rakesh Kr. Sinha	Biomedical Instrumentation Incharge

# ANNEXURE - VII ADDRESS OF THE CAMPUSES

SI. No.		SI. No.	
1	BIT off Campus, Allahabad B-7, Industrial Area P.O. TSL, Naini Allahabad – 211 010 (U.P) Phone: 0532-2686668/2687363 Fax: 2687554	6	BIT off Campus, NOIDA A-7, Sector-1 Noida-201301 Phone: 0120-2543484/2553661/ 3662 Fax: 2554146
2	BIT off Campus, Deoghar Jasidih Deoghar- 814132 Fax: 06432- 292565	7	BIT off Campus, Patna Near Patna Airport, P.O. Bihar University College Patna -800014 Phone: 0612- 2223545 /3200853 Fax: 2223545
3	BIT off Campus, Jaipur B.S.I.R. Campus 27, Malviya Industrial Area Jaipur – 302017 Phone: 0141-4019798/4019812 Fax: 2751614	8	BIT off-shore Campus, Muscat 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.	BIT off Campus, Kolkata Southend Conclave (4th Floor) 1582 Rajdanga Main Road (on Gariahat-EM bypass connector) Opp. Siemens Building Kolkata-700107 Phone: 033-24414542/24414456 Fax:24414299	9	BIT off-shore Campus, UAE C/O Royal College of Applied Science & Technology Knowledge Centre RAK Free Zone Ras Al Khaimah, U.A.E. Phone: +971504862900 (M) +97172272203
5	BIT off Campus, Lalpur Lalpur Chowk Ranchi-834001 (Jharkhand) Phone: 065- 2531817/2531676 Fax: 2531658 /2531676	The state of the s	

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# **XXII CONVOCATION**

June 3, 2012



