

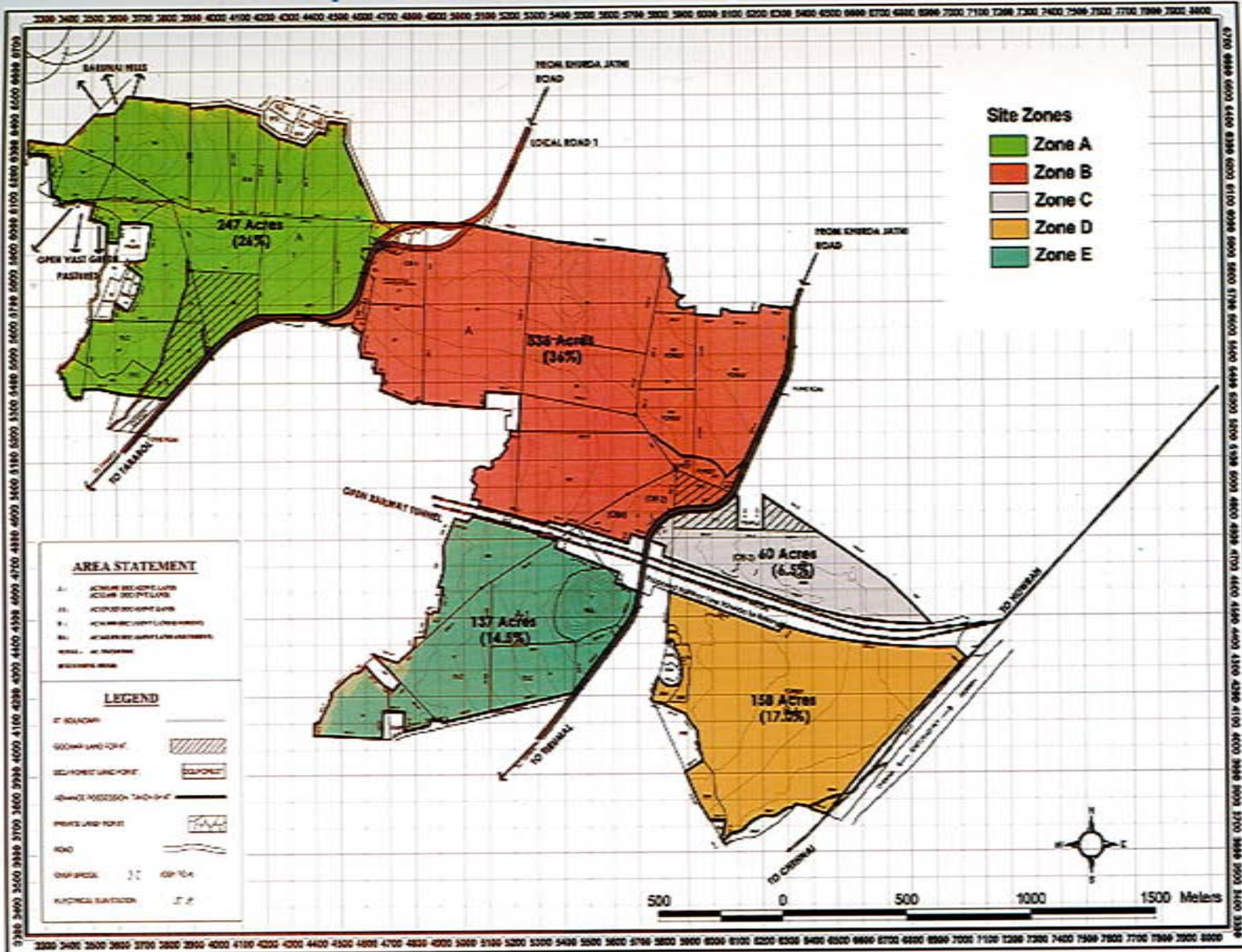


02 वार्षिक रिपोर्ट Annual Report 2009-10



भारतीय प्रौद्योगिकी संस्थान भुवनेश्वर
INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR

Site map of the Permanent Campus of the Institute



2009-10
वार्षिक रिपोर्ट
2009-10
Annual Report



भारतीय प्रौद्योगिकी संस्थान, भुवनेश्वर
सामंतपुरी, भुवनेश्वर-751013
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Phone No :- 0674-2301982, Fax : 0674-2301983
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Seminar for the students held on 21.07.2009
on the eve of commencement of Academic Session in
Bhubaneswar on 22.07.2009.

Director's Report

DIRECTOR'S REPORT

Preamble

The Indian Institute of Technology Bhubaneswar was established on 22nd July 2008 and started functioning from the main campus of the mentor institute IIT Kharagpur. The Institute, however, started its operation from the city of Bhubaneswar from 22nd July 2009. The Registrar of the institute joined on 31st December 2008 while the Director of the Institute joined on 19th May 2009. It was decided to start the operation of the new IIT from the city of Bhubaneswar from the academic session 2009-2010 and accordingly necessary actions were initiated on a war footing to set up the class rooms, laboratory facilities, office spaces for the administration and the faculty and for hiring accommodation for students and faculty. It was decided to move all the 94 students from the campus of IIT Kharagpur to Bhubaneswar and the Institute began its journey from the IIT Kharagpur extension Centre in Bhubaneswar from 23rd July 2009. The Institute celebrated its 1st Foundation Day on 22nd July 2009. The students were actively involved in various activities. They had actively participated in the Tree plantation programme at the permanent campus at Arugul. Brief outlines of the major activities of the Institute during the year 2008-2009 are highlighted below.

Academic Programmes

The academic programmes of the Institute include B. Tech. in Civil, Electrical and Mechanical Engineering with an intake capacity of 40 each. The Institute has also introduced the Ph. D. programme from the academic session 2009 - 10.

Since IIT Kharagpur is the mentor Institute of IIT Bhubaneswar and the academic programme started from the campus of the mentor Institute with 94 students in the year 2008, the course curricula, syllabi and rules and regulation of the mentor Institute were adopted both for the ongoing undergraduate and doctoral programmes. In a recent revision of undergraduate curricula, Bioscience and Environmental Science have been included as compulsory subjects considering their importance.

Academic Schools

In order to offer the undergraduate and Ph. D. programmes the Institute has established five schools rather than conventional departments and encourages academic staff to work together in an interdisciplinary environment. These are the Schools of Basic Sciences (encompassing Physics, Chemistry, Bioscience, Mathematics), Humanities, Social Sciences and Management, Mechanical Sciences (Mechanical, Manufacturing & Industrial Engineering, Aerospace Engineering, Naval Architecture), Infrastructure (Civil Engineering, Architecture, Urban Design, Town Planning, Traffic & Transportation Engineering), Electrical Sciences (Electrical Engineering, Electronics and Communication Engineering, Computer Science and Engineering, Energy, Learning Sciences, Instrumentation). The Institute has already appointed national level Academic Advisory Committees for these 5 schools. In order to address the issues related to this region and the state of Orissa in particular the Institute has also appointed Academic Advisory Committee for creation of the two new Schools namely the School of Minerals, Metallurgical and Materials Engineering (relevant in terms of the rich resources of metals and minerals in the region) and the School of Ocean and Environmental Sciences (relevant to the region keeping in view the vast coast line, rich biodiversity, need for disaster management and mitigation arising out of flood, cyclone etc.) The recommendations of these committees are being considered actively action plans are being prepared.

Faculty

The Institute has appointed five Professors, one Associate Professor, twenty five Assistant Professor, and four Assistant Professors on Contract. In addition the Institute has appointed 5 Visiting Faculty. The School of Basic Sciences comprising of 2 Professors and 6 Assistant Professors of Chemistry, 4 Assistant Professors, 1 Research Associate and 1 Visiting Professor of Physics, 3 Assistant Professors and 1 Visiting Professor of Mathematics had worked together to set up the laboratories and other facilities for the 1st and 2nd year academic programmes so that the level of instructions/teaching remain as in the older IITs. The School of Electrical Sciences comprising of 2 Professors 3 Assistant Professors had established all the laboratory facilities for all the students. They had taken care of not only the professional courses in 2nd year but also the requirements of 1st year such as electrical technology and computer science and data processing. The School of Infrastructure comprising of 1 Professor and 5 Assistant Professor had also set up laboratories and took care of the drawing classes of the 1st year students. Similarly the School of Mechanical Sciences comprising of 1 Associate Professor and 6 Assistant Professors had taken care of the Workshop facilities for the entire 1st year and organized all professional courses including laboratories for the 2nd year of Mechanical Engineering. The School of Humanities, Social Sciences and Management comprising of 4 Assistant Professors and 2 Visiting Professors had taken care of requirements in humanities for the 1st year students. It may be mentioned here that the faculty members in the Schools as above were not available initially and joined the Institute at different points of time during 28 May 2009 – 31 March 2010.

Research and Development Areas

The research and development activities of the School of Basic Science include Organometallic Chemistry, Supramolecular Chemistry, Organic Solid State & Materials Chemistry, Coordination Chemistry, Theoretical Chemistry, Molecular modelling and Molecular Dynamics simulations, Biophysical Chemistry, Protein Chemistry & Spectroscopy, Optimization Theory, Functional Analysis, Variational Inequalities, Oxide nanorods and soft condense matter physics and Stochastic Modelling and Simulation.

The School of Electrical Sciences are working the in thrust areas that include Digital Signal Processing, Soft and Evolutionary Computing, Sensor Network, Intelligent Instrumentation, Theoretical and Computational Electromagnetic and Wireless Communication Systems.

The thrust areas of the School of Infrastructure are Structural Dynamics and Earthquake Engineering, Disaster Mitigation, Nonlinear Structural Dynamics, Greenhouse Gases and Global Warming, Bioremediation of Solid Wastes, Geotechnical Risk and Reliability, Earthquake Geotechnics, Soil-Structure Interaction, Geoenvironmental Engineering, Self Compacting & High Performance Concrete and Bacterial Concrete.

The School of Mechanical Sciences have initiated R & D activities in Conjugate Heat Transfer, Radiation Modelling, Numerical Transport Phenomena, Metal Matrix Composites, Ultra Fast Radiation Heat Transfer, Technical Acoustics & Industrial Noise Control, Industrial Engineering & Quality control, Refrigeration & Air Conditioning, Probabilistic Mechanics, Smart Composites & Smart Composite Structures.

The thrust of the School of Humanities, Social Sciences and Management are Commonwealth Studies, Psychology of Personality, Environmental Economics and Natural Resources Management and Cross-cultural Communication, Business Communication

Infrastructure Development

In addition to setting up adequate infrastructural facilities under each school for carrying out teaching and research, the Institute has already set up the library, optical fibre based gigabit Ethernet campus LAN, adequate computational facilities and 1GB internet connection.

The Institute has started operating from six locations in the city of Bhubaneswar. These are Academic complex at IIT Kharagpur Extension Centre (Samantapuri), Workshop at Central Tool Room and Training Centre (Patia), Civil Engineering Laboratories at Institute of Minerals and Materials Technology (IMMT), Acharya Vihar, Accommodation for students, faculty and staff at SBI Colony (Kesura), Accommodation for faculty at Government Colony (Gajpati Nagar), Transit Guest House (Lumbini Vihar). The Government of Orissa has also provided two towers at Toshali Plaza, Satyanagar (130000 sq ft) that requires complete renovation.

A number of laboratory facilities have been set up in the temporary campus of the Institute. In addition to the first year laboratories, some other facilities created in the School of Basic Science are HPC laboratory with 12-nodes computer cluster, Spectrometer, Coupled and Pohl's Pendulum, Michelson Interferometer, Newton's Ring, Fresnel's Biprism, Diffraction Gratings. The facilities in the School of Electrical Sciences include programming and data structure laboratory, electrical technology laboratory, signals and networks laboratory, basic electronics laboratory, analog electronics circuit laboratory, communication system laboratory, VLSI laboratory. Some of the facilities in the School of Infrastructure are compression testing machine, bitumen penetration kit, CBR Apparatus, dynamic cone penetrometer, universal penetrometer, modified roughness indicating machine, Benkeleman beam apparatus, Los Angeles abrasion testing machine, aggregate impact tester, crushing value apparatus. The School of Mechanical Sciences has created the machine and mechanism laboratory, CAD/CAM laboratory. The School of Humanities, Social Sciences and Management has set up an excellent Language Laboratory with a capacity of 32 for teaching English for Communication.

Permanent Campus

The Institute has processed the appointment of design and project management consultant and the Board of Governors has approved appointment of M/s Consulting Engineering Services (India), New Delhi in its meeting on 4th March 2009 after finalization of the contract to be signed. Work has started on erecting 16 Km boundary wall and about 3.5 km has been completed. The Government of Orissa has initiated steps for connecting the campus with National Highway-5 with a 4-lane road, providing 3 MGD water and 132/33 KV power supply.

International Collaboration

The Institute has signed MoU with the University of Edinburgh, UK and the University of Western Ontario, Canada for faculty and students exchange programme. The Institute has also initiated steps for collaboration with the Warwick Manufacturing Group, The University of Warwick, UK and the University of Massachusetts at Dartmouth, USA.

Laurels and Distinctions

Prof. Sekhar Chandra Dutta, Professor, School of Infrastructure and Dean, Students' Affairs has been awarded the prestigious Fulbright-Nehru Senior Research Fellowship at University of California, Davis, CA beginning middle of December, 2010 for six months. Dr. Sumanta Halder,

Assistant Professor, School of Infrastructure received the prestigious Prof. Leonard's best Ph.D. thesis award from Indian Geotechnical Society (IGS). Dr. C.S. Bhende, Assistant Professor, School of Electrical Science received the prestigious best Ph.D. thesis award from INAE. Pyari Mohan Pradhan, Satyasai Jagannath Nanda and Vikas Baghel, Research Students of the School of Electrical Sciences were awarded by Department of Foreign Affairs and International Trade, Government of Canada, the "Commonwealth Graduate Student Exchange Programme" fellowship. Raghav. R, 3rd Year Student, School of Mechanical Sciences won the All India Essay Competition for college students conducted by the NGO named Nandini Voice for the Deprived.

Sponsored Research and Industrial Consultancy

While the Institute in its very first year of existence in Bhubaneswar had to be very busy in setting up various facilities for taking care of providing excellent academic environment to the undergraduate students, it did not hesitate to initiate the research activities. All the faculty members were provided with seed money so that they could initiate their research activities. The School of Basic Science earned one DST and one CSIR sponsored projects while the School of Electrical Science earned one DST sponsored project. The School of Mechanical Sciences earned two sponsored projects by DRDO and DST. The School of Infrastructure earned two consultancy projects.

Training and Placement

Periodical trainings and workshops are required for the skill enhancement of both the students and faculties. The Institute plans to set up a special cell to assess the needs and arrange the different trainings to be held at the institute. Although the placement record of students passing out of the different IIT's is very impressive, this cell will function as a career counselor catalyst in the placement process of the students. It will arrange for campus interviews and will help the students gain suitable employment

Students' Affairs

A Counseling Service Team has been formed to offer its assistance to the fresh batch of students to cope up with the academic, social, emotional and psychological stresses. The Students' Gymkhana has been set up with a view to facilitate a holistic development of students through extra-curricular activities and promoting activities that will enable students to develop various socio-cultural skills and values like leadership qualities, time management, personal relationship and team building, etc. The students organized a cultural event "Alma Fiesta" for the fun-loving college-goers across the country as its first ever socio-cultural festival. The Gymkhana has formed a number of societies/cells to encourage the students to actively participate in various activities. These are Fine Arts Society, the Literary Society (PANACEA), the Music Society, Dramatic Club, Cyber Gaming Club, Sports Club, Entrepreneurship Innovative Cell, Robotics Society (Robotix) etc. Students participate in a wide array of extra-curricular activities and have secured silver in March Past at Inter-IIT Sports Meet at IIT Kanpur in the year 2009. The students have also formed a chapter of SPIC MACAY in IIT Bhubaneswar.

Prof. Madusudan Chakraborty

BOARD OF GOVERNORS



Chairman
Professor P. Rama Rao
Governing Council, International Advanced Research Centre for
Powder Metallurgy and New Material (ARPI) & former Secretary to the
Govt. of India (Dept. of Science and Technology), Balapur, Hyderabad



Ex-Officio
Prof. Madhusudan Chakraborty
Director, IIT Bhubaneswar



Ex-Officio
Shri. Tarun Kanti Mishra
Chief Secretary & Chief Development Commissioner,
Government of Orissa, Bhubaneswar



Member
Smt. Vibha Puri Das
Secretary, Development of Higher Education,
Ministry of HRD, Govt. of India, Shastri Bhavan, New Delhi



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Shri. S. K. Roongta
Ex-Chairman, SAIL, New Delhi



Member
Prof. Samir K. Brahmachari
Director General, CSIR, New Delhi



Member
Shri. T. V. Mohan Das Pai
Director & Head, Human Resources,
Infosys Technologies Limited, Electronics City, Hosur Road,
Bangalore



Member
Prof. Sujit Roy
Dean (Administration & Planning), IIT Bhubaneswar



Member
Prof. Ganapati Panda
Dean (Academic Affairs), IIT Bhubaneswar



Special Invitee
Prof. Damodar Acharya
Director, IIT Kharagpur



Secretary
Shri. B.K. Ray
Registrar, IIT Bhubaneswar

Finance Committee

FINANCE COMMITTEE

Name	Designation
<p>Prof. P. Rama Rao Chairman, Governing Council International Advanced Research Centre for Powder Metallurgy and New Material (ARPI) & former Secretary to the Govt. of India (Deptt. of Science & Technology), Balapur, Hyderabad-500 005</p>	Chairman
<p>Prof Madhusudan Chakraborty Director, IIT Bhubaneswar, Bhubaneswar-751 013</p>	Member
<p>Shri Ashok Thakur Additional Secretary to Higher Education Ministry of Human Resource Development Government of India Shastri Bhawn New Delhi – 110 001.</p>	Member
<p>Shri Sanat Kumar Ray Additional Secretary & Financial Advisor Ministry of Human Resource Development Government of India Shastri Bhawn, New Delhi – 110 001.</p>	Member
<p>Shri T.V. Mohan Das Pai Director & Head, Human Resources Infosys Technologies Limited Electronics City, Hosur Road Bangalore-560 100</p>	Member
<p>Prof Sujit Roy Dean (A&P), IIT Bhubaneswar</p>	Member
<p>Shri B. K. Ray Registrar, IIT Bhubaneswar</p>	Secretary

The Senate

THE SENATE

Chairman

Prof. M. Chakraborty
Director, IIT Bhubaneswar

Members

Prof. Sujit Roy
Dean (A&P), IIT Bhubaneswar

Prof. G. Panda
Dean (AA), IIT Bhubaneswar

Prof. S. C. Dutta
Dean (SA), IIT Bhubaneswar

Prof. S.C. De Sarkar
Dean Faculty

Prof. V.R. Pedireddi
Dean (SRIC)

Prof. A.K. Mohanty
Visiting Prof. HSS (Economics)

Prof. S.K. Mund
Visiting Prof. HSS (English)

Prof. N. Barik
Visiting Prof. Basic Sc. (Physics)

Prof. V.R. Yerikalapudy
Visiting Prof. Basic Sc. (Mathematics)

Prof. S.N. Behera
Visiting Prof. Electrical Sc.

Dr. D. Pasla
HOS, School of Infrastructure

Dr. S. Chowdhuri
HOS, School of Basic Sc.

Dr. P.K. Sahu
HOS, School of Electrical Sc.

Dr. S.K. Mahapatra
HOS, School of Mechanical Sc.

Dr. S. Pani
Asst. Prof. Basic Sc. (Mathematics)

Dr. P. Rath
Asst. Prof. Mechanical Sc.

Dr. P. Bhunia
Asst. Prof. Infrastructure

Dr. D. Ghosh
Asst. Prof. Electrical Sc.

Dr. S. N. Panigrahi
Asst. Prof. Mechanical Sc.

External Members

Prof. B. K. Mishra

Director, IIMT, Bhubaneswar

Dr. M.P. Ravindra

Advisor, Education & Science

Education Research, Infosys

Technologies Ltd., Bangalore

Prof. Binayak Rath

Vice Chancellor, Utkal University

Special Invitee

Prof. D. Acharya

Director, IIT Kharagpur

Prof. S.K. Som

Dean (UGS), IIT Kharagpur

Prof. P.K.J. Mahapatra

Dean (PGS & R), IIT Kharagpur

Prof. Ajay Chakraborty

Dean (Continuing Education

Programme), IIT Kharagpur

Prof. G.C. Mitra

PIC (IIT Kharagpur Extension Centre),

Bhubaneswar

Student Invitee

Mr. Nitin V. George

Ph.D. Research Scholar (Electrical Sc.)

Mr. Pradosh K. Sahoo

3rd Year Student (School of

Infrastructure)

Secretary

Shri. B. K. Ray

Registrar, IIT Bhubaneswar

Administration

ADMINISTRATION

Director

Prof. Madhusudan Chakraborty

Deans

Dean, Administration & Planning

Prof. S. Roy

Dean, Faculty Affairs

Prof. S. C. De Sarkar

Dean, Academic Affairs

Prof. G. Panda

Dean, Student Affairs

Prof. S.C. Dutta

Dean, Sponsored Research & Industrial Consultancy

Prof. V. R. Pedireddi

Head of the Schools

School of Basic Sciences

Dr. S. Chowdhuri

School of Electrical Sciences

Dr. P. K. Sahu

School of Infrastructure

Dr. D. Pasla

School of Mechanical Sciences

Prof. S. K. Mahapatra

School of Humanities, Social Sciences & Management

Prof. S. Roy

Chair & Co-Chairpersons

Central Instrumentation Facility

Dr. S.N. Rath

Library

Dr. A. Biswas

JEE Cell

Dr. S. Pal

Women's Grievance Redressal Committee

Dr. D. Ghosh

Co-Chair, Central Instrumentation Facility

Dr. N. Mohapatra

President, Gymkhana

Dr. R. Jha

Professors-in-Charge

Examination

Dr. S.N. Panigrahi

Training & Placement

Dr. C.S. Bhende

Computer & Networking

Dr. D. Ghosh

Information Cell & Website

Dr. A. Barve

Newsletter

Dr. A. Satapathy

Annual Report

Dr. S. Haldar

Telephone

Dr. P.K. Sahu

Guest House

Dr. N.C. Sahu

Counselling & Rajbhasa Ekak

Dr. A. Shukla

EAA Coordinator

Dr. A. K. Singh

Time Table Coordinator

Dr. Mihir Kumar Das

Wardens & Assistant Wardens

Warden

Prof. S.C. Dutta

Assistant Warden

Dr. A.K. Ojha

Dr. S. Chowdhuri

Dr. P. Bhunia

Dr. S. Patra

Dr. P.P. Dey

Dr. A. Pradhan

Dr. S. Pal

Dr. A. Shukla

General

Registrar

Mr. B. K. Ray

Assistant Registrar, Finance and Accounts

Mr. O. P. Sribastava

Assist. Registrar, Academics & Establishment

Mr. P. Das

Special Officer, Stores & Purchase

Mr. T. K. Ghosal



Celebration of Independence Day on 15.08.2009

Academia

ACADEMIA

IIT Bhubaneswar has set up interdisciplinary schools to promote the borderless academic environment

Academic Programs

In order to foster borderless academic environment and interdisciplinary research, Indian Institute of Technology Bhubaneswar initiated a few schools. The Institute offers education and research programmes in disciplines of national and global interest. Presently, the institute has five academic schools, namely School of Basic Sciences, School of Infrastructure, School of Mechanical Sciences, School of Electrical Sciences and School of Humanities, Social Sciences and Management. Each school offers both specialized and interdisciplinary courses.

The Institute offers undergraduate programme in Civil Engineering, Mechanical Engineering and Electrical Engineering. Institute also offers Doctoral and Postdoctoral programmes in all the schools.

The current total strength of B.Tech program for an academic year is 120 students, with 40 each in Civil, Mechanical and Electrical Engineering, while about 20 Ph.D. students are pursuing research career. The institute follows a seven point grading system with letter grades and the corresponding grade points per credit.



Schools at IIT Bhubaneswar

SCHOOLS AT IIT BHUBANESWAR

School of Basic Sciences

School of Basic Sciences at IIT Bhubaneswar envisages to become a state-of-the-art school with high quality education and cutting edge interdisciplinary research in science. The school proposes to offer integrated M.Sc-Ph.D. program and Ph.D program in Physics, Chemistry and Mathematics in order to nurture young minds towards scientific challenges. The School also proposes to offer M.Tech program in Nanoscience and postdoctoral program in different areas of science to motivate researchers and scientists to build their career in academics and industries. At present, there are fifteen faculty members in the School. These include two full professors, twelve assistant professors, one visiting professor and one research associate.



Chemistry Laboratory for undergraduate students



Physics laboratory for undergraduate students

HEAD OF SCHOOL

Dr. Snehasis Chowdhuri

Faculty Members

Professors



Prof. Sujit Roy
Ph.D. (IIT Kanpur, 1987)

Phone: + 91-674-2306 232
Email : sroychem@iitbbs.ac.in

Research areas: Organometallic chemistry, homogeneous catalysis, mono & bimetallic catalysis, C-H functionalization, metallocenes



Prof. V. R. Pedireddi
Ph.D. (University of Hyderabad, 1993)

Phone: + 91-674-2306 235
Email: vr.pedireddi@iitbbs.ac.in

Research areas: Supramolecular chemistry, molecular recognition, organic solid state reactions, polymorphism

Assistant Professors



Dr. Snehasis Chowdhuri
Ph.D. (IIT Kanpur, 2005)

Phone: + 91 674 2306 234
Email: snehasis@iitbbs.ac.in

Research areas: Solvation structure, dynamics and hydrogen-bond properties of liquid



Dr. Srikanta Patra
Ph.D. (IIT Bombay, 2005)

Phone : + 91 674 2306 233
Email : srikanta@iitbbs.ac.in

Research areas: Coordination Chemistry, Materials Chemistry and Sensor



Dr. Akhilesh Kumar Singh
Ph.D. (IIT Kanpur, 2007)

Phone: + 91 674 2306 236
Email: aksingh@iitbbs.ac.in

Research areas: Coordination Chemistry: Bioinorganic perspective and Magentochemistry and magnetic materials



Dr. Santanu Pal
Ph.D. (IIT Bombay, 2006)

Phone: +91 674 2306 237
Email: spal@iitbbs.ac.in

Research areas: Development of novel methodology and total synthesis of biologically active natural products; Development of chemically modified small molecules as therapeutic agent and Synthesis of modified nucleic acid with a biological potential



Dr. Ashis Biswas
Ph.D. (Jadavpur University, 2005)

Phone: +91 674 2306 238
Email: abiswas@iitbbs.ac.in

Research areas: Biophysical Chemistry, Protein Chemistry and Spectroscopy



Dr. Shyamal Chatterjee
Ph.D. (University of Heidelberg, Germany, 2007)

Phone: +91 674 2306 244
Email: shyamal@iitbbs.ac.in

Research areas: Experimental investigation of the interaction of electrons and ions with atoms, molecules, clusters, solids and biomolecules.



Dr. Rajan Jha
Ph.D. (IIT Delhi, 2007)

Phone: +91 674 2306 230
Email: rjhaPhy@iitbbs.ac.in

Research areas: Optical sensors, Surface Plasmon Resonance (SPR), nanophotonics, Photonics Crystal Fiber based interferometer and biophysics.



Dr. Niharika Mohapatra
Ph.D. (IIT Bombay, 2006)

Phone: +91 674 2306 231
Email: niharika@iitbbs.ac.in

Research areas: Experimental condensed matter physics (Strongly Correlated electron system, including magnetically driven ferroelectrics, thermoelectric oxides, high temperature superconductors, low dimensional and frustrated magnetic systems and magnetocaloric intermetallics)



Dr. Satchidananda Rath
Ph.D. (Institute of Physics, Bhubaneswar, 2006)

Phone: +91 674 2306 227
Email: srath@iitbbs.ac.in

Research areas: Miniaturization of nanoscopic materials, Understanding of Structure and ultrafast phenomena through laser light interactions and Study of dynamic processes of soft nano-materials



Dr. Abhijit Dutta Banik
Ph.D. (IIT Kharagpur, 2007)

Phone: +91 674 2306 224
Email: adattabanik@iitbbs.ac.in

Research areas: Stochastic models in operations research and their application in communication systems, manufacturing, production and inventory systems, queueing theory, applied probability models



Dr. Sabyasachi Pani
Ph.D. (IIT Kharagpur, 2004)

Phone: +91 674 2306 221
Email: spani@iitbbs.ac.in

Research areas: Optical Fiber Sensors, Photonics Crystal Fiber Interferometer, Nanowires, Plasmonics, Terahertz Plasmonics



Dr. A.K. Ojha
Ph.D. (Utkal University, Bhubaneswar, 1997)

Phone: +91 674 2306 223
Email: akojha@iitbbs.ac.in

Research areas: Artificial Neural networks, Geometric programming, Optimization Theory, Soft computing, Decision Sciences

Visiting Professors



Prof. Vasudeva R Yerikalapuy
Ph.D. (Andhra University, Visakhapatnam)

Phone: +91 674 2306 225
Email: r.y.vasudeva@gmail.com

Research areas: for Ultrasonic NDT and Inversion of Geophysical data



Dr. Smita Ota
Ph.D. (Utkal University, Orissa, 1997)

Phone: +91 674 2306 226
Email: smitaota@iitbbs.ac.in

Research areas: Computational condensed matter physics (Monte Carlo simulation)



SPIC - MACAY Concert on 21.08.2009

Thrust Areas

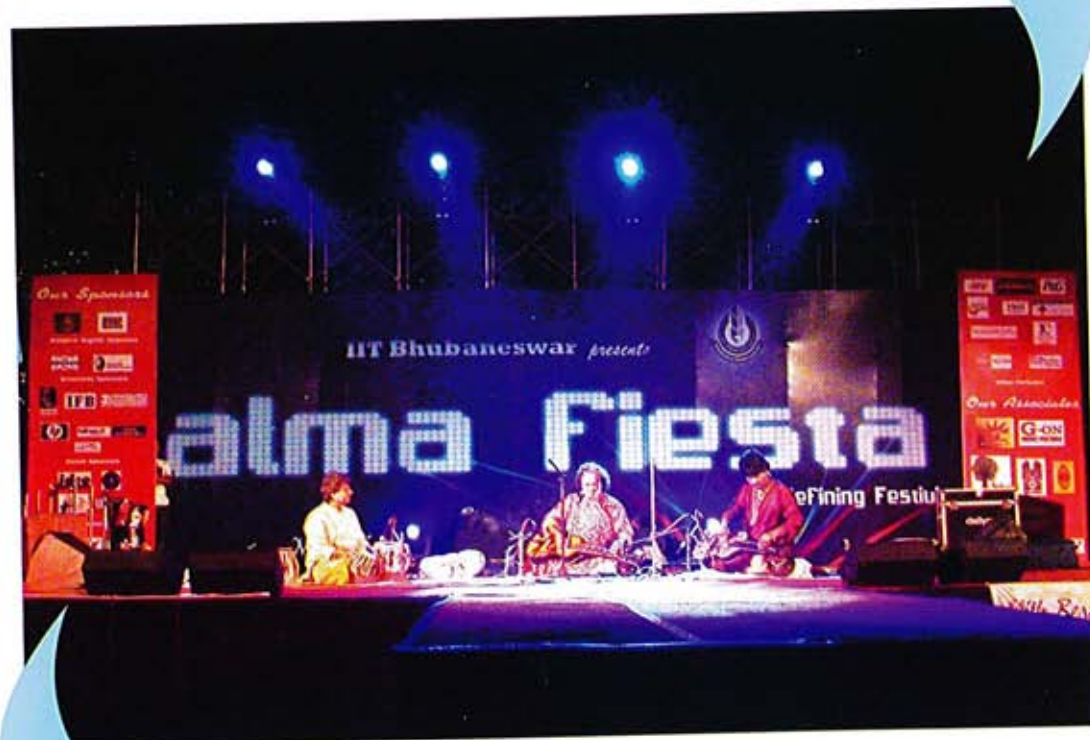
- Organometallic Chemistry, Supramolecular Chemistry
- Organic Solid State & Materials Chemistry, Coordination Chemistry
- Theoretical Chemistry, Molecular modelling and Molecular Dynamics simulations
- Biophysical Chemistry
- Protein Chemistry & Spectroscopy
- Optimization Theory, Functional Analysis, Variational Inequalities
- Oxide nanorods and soft condense matter physics
- Stochastic Modelling and Simulation

Major Facilities Created

HPC laboratory with 12-nodes computer cluster, Spectrometer, Coupled and Pohl's Pendulum, Michelson Interferometer, Fresnel's Biprism, Diffraction Gratings.

Sponsored Research Projects

Project	Principal investigator	Funding agency
Catalytic activity of endothelial nitric synthase-a probe into the molecular basis of its electron transfer limitation	Dr. Ashis Biswas	DST
Structure and Dynamics of Ionic and Molecular Solutes in Aqueous and Non Aqueous Solvents and in Their Binary Mixture at Different thermodynamic Conditions: A Molecular Dynamics Simulations Study	Dr. Snehasis Chowdhuri	CSIR

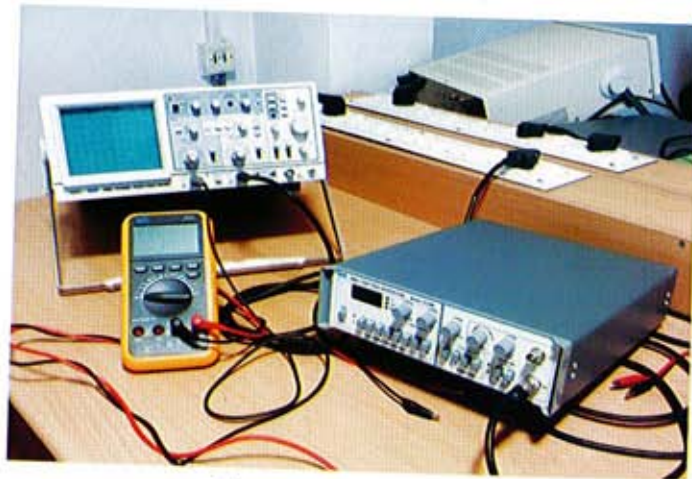


Alma Fiesta 2010

School of Electrical Sciences

School of Electrical Sciences

The mission of the School of Electrical Sciences is to shape graduates into hardcore professionals who would become effective leaders and noteworthy innovators in the technology areas of Electrical Engineering, Electronics and Communication Engineering, Instrumentation Engineering, Computer Science and Knowledge Engineering. While producing competent professionals and responsible citizens, it is also the endeavour of the School to ensure that the graduates adhere to ethical values in life and be sensitive to environmental and social issues. It is also part of the mission to motivate and encourage the students to engage in lifelong learning which would help them keep abreast with contemporary developments in their fields of operation and enable them to leverage on the power of knowledge to become outstanding performers in whatever careers they choose. Presently, the School has five faculty members.



Electronics laboratory



Electrical Technology laboratory

HEAD OF SCHOOL

Dr. Prasant Kumar Sahu

Faculty Members

Professors



Prof. Ganapati Panda
Ph.D. (IIT Kharagpur, 1981)
Phone: +91 674 2306 247
Email: gpanda@iitbbs.ac.in

Research areas: Digital signal processing, digital communication, soft computing, intelligent instrumentation, evolutionary computing, computational finance, sensor networks and distributed signal processing



Prof. S.C. De Sarkar
Ph.D. (University of Calcutta)
Phone: +91-674-2306 249
Email: scdesarkar@iitbbs.ac.in

Research areas: Artificial intelligence and knowledge based systems, algorithms and compiler design

Assistant Professors



Dr. Prasant Kumar Sahu
Ph.D. (IIT Kharagpur, 2009)
Phone: +91 674 2306 245
Email: pksahu@iitbbs.ac.in

Research areas: Fiber optics Device, Optical Communication, Optical Sensor, Communication System



Dr. Debalina Ghosh
Ph.D. (Syracuse University, USA, 2008)
Phone: +91 674 2306 246
Email: deghosh@iitbbs.ac.in

Research areas: Antenna design for personal and satellite communication systems, Theoretical and computational electromagnetic, Wireless communication systems, Non-destructive testing methods, Signal processing, Front-end amplifier design for RF systems.



Dr. Chandrashekhar N. Bhende
Ph.D. (IIT Delhi, 2008)
Phone: +91 674 2306 248
Email: cnb@iitbbs.ac.in

Research areas: Power Quality, Custom Power Devices, Renewable Energy Sources and Application of soft computing techniques to power systems

Thrust Areas

- Digital Signal Processing
- Soft and Evolutionary Computing
- Sensor Network
- Intelligent Instrumentation
- Theoretical and computational electromagnetic
- Wireless communication systems

Major Facilities Created

Programming and data structure laboratory, electrical technology laboratory, signal and network, basic electronics laboratory, analog electronics circuit laboratory, communication system laboratory, VLSI laboratory.

Sponsored Research Projects

Project	Principal investigator	Funding agency
Robust Nonlinear Channel Equalization and Identification Using Bio-inspired techniques	Prof. G. Panda	DST

Achievements

Dr. C.S. Bhende, Assistant Professor, School of Electrical Science, and has been honored with prestigious Innovative PhD Thesis Award in 2009 by Indian National Academy of Engineering (INAE).

Visits Abroad

Prof. Ganapati Panda | Visited London for IIT Directors' meet being organised by IIT Alumni, London Chapter in *collaboration with UK Trade and investment in London*, October 6, 2009.



IITBBS Contingent at Inter-IIT Sports Meet
in IIT KANPUR - Dec 11-18, 2009

School of Infrastructure

School of Infrastructure

In the backdrop of worldwide infrastructural escalation, School of Infrastructure at IIT Bhubaneswar has come up to dedicated excellence in engineering education, creation of knowledge, innovation in research and leadership in professional services. The mission of the School is to offer unbounded academic environment in undergraduate and postgraduate teaching, doctoral program, research, and public service. School of infrastructure aims to have an academic space for interaction between all disciplines of engineering related to Infrastructural development, namely, Civil Engineering, Architecture, Urban Design, Town Planning, and Traffic and Transportation Engineering. Presently, it is offering B. Tech. and Ph.D. programs in Civil Engineering. Programs in other disciplines will also be offered shortly. The School promotes students to engage in extra-curricular activities and research oriented assignments to nurture their organizational skills and innovation. Presently, the School has six faculty members.



Transportation Engineering Laboratory



Water Resource Engineering Laboratory

HEAD OF SCHOOL

Dr. Dinakar Pasla

Faculty Members

Professors



Prof. Sekhar Chandra Dutta
Ph.D. (IIT Kanpur, 1996)

Phone: +91-674-2306 296
Email: scdind@iitbbs.ac.in

Research areas: Earthquake engineering, soil-structure interaction, dynamic behaviour of earthen embankment and reinforced concrete structural elements.

Assistant Professors



Dr. Dinakar Pasla
Ph.D. (IIT Madras, 2005)

Phone: +91 674 2306 297
Email: pdinakar@iitbbs.ac.in

Research areas: Characterisation of cementitious materials, use of admixtures in concrete, fibre reinforced concrete, high performance and se compacting concrete, durability and non destructive evaluation lfof construction materials.



Dr. Puspendu Bhunia
Ph.D. (IIT Kharagpur, 2008)

Phone: +91 674 2306 298
Email: pbhunia@iitbbs.ac.in

Research areas: Biological treatment of wastewaters and bio-energy recovery from wastes



Dr. Sumanta Halder
Ph.D. (IISc Bangalore, 2008)

Phone: +91 674 2306 299
Email: sumanta@iitbbs.ac.in

Research areas: Geotechnical risk and reliability, geohazards mitigation, soil-structure interaction, geotechnical earthquake engineering, numerical modeling, ground improvement



Dr. Rajesh Roshan Dash
Ph.D. (IIT Roorkee, 2008)

Phone: +91 674 2306 301
Email: rrdash@iitbbs.ac.in

Research areas: Biological treatment of water and wastewaters, management of solid waste, biological and adsorptive removal of metal and toxic compounds from industrial waste streams.



Dr. Partha Pratim Dey
Ph.D. (IIT Roorkee, 2006)

Phone: +91 674 2306 320
Email: ppdeydce@iitbbs.ac.in

Research areas: Modeling of traffic flow.

Thrust Areas

- Structural Dynamics and Earthquake Engineering
- Disaster Mitigation
- Nonlinear Structural Dynamics
- Greenhouse gases and global warming
- Bioremediation of solid wastes
- Geotechnical Risk and Reliability
- Earthquake Geotechnics, Soil-Structure Interaction
- Geoenvironmental Engineering
- Self Compacting & high performance concrete
- Bacterial concrete

Major Facilities Created

Compression Testing Machine, Bitumen Penetration Kit, CBR Apparatus, Dynamic Cone Penetrometer, Universal Penetrometer, Modified Roughness Indicating Machine, Benkeleman Beam Apparatus, Los Angeles Abrasion Testing Machine, Aggregate Impact Tester, Crushing Value Apparatus, Sieves, Sieve Shaker, Ductility Testing Machine, Ring And Ball Apparatus, Thermometer, Marshall Apparatus, Compaction Apparatus Mould, Viscometer, Automatic Bituminous Compactor, Water Bath, Hot Air Oven, Liquid Limit Device, Shrinkage Limit Apparatus, GPS, Total Station, Dumpy Level, Theodolite, Auto Level, Basic Hydraulic Bench, Multipurpose Flume, Advanced Hydrology Study System

Consultancy Projects

Project	Principal investigator	Funding agency
Remodelling and Upgradation of Major Dhanchand Stadium, New Delhi for Commonwealth Games	Prof. S. C. Dutta	Philips Electronics India Ltd.
Structural Design Calculation for Flood Light Mast, Wankhade Stadium, Mumbai	Prof. S. C. Dutta	Bajaj Electrical Ltd.

Achievements

Prof. Sekhar Chandra Dutta, Professor, School of Infrastructure and Dean, Students' Affairs has been awarded the prestigious Fulbright-Nehru Senior Research Fellowship at University of California, Davis, CA beginning middle of December, 2010 for six months.

Dr. Sumanta Halder, Assistant Professor, School of Infrastructure received the prestigious Prof. Leonard's best Ph.D. thesis award from Indian Geotechnical Society (IGS). The award was presented on 18th February, 2010 at the Indian Geotechnical Conference in Guntur, Andhra Pradesh, India.

Visits Abroad

Prof. Sekhar Chandra Dutta

Attended the Joint Conferences of 7th International Conference on Urban Earthquake Engineering (7CUUE) and 5th International Conference on Earthquake Engineering (5ICEE) at Tokyo Institute of Technology, 3rd-5th March, 2010, Tokyo, Japan where he presented his paper on Improving Seismic Performance of Brick Masonry Junctions and Indian Bamboo as an Alternative: A Critical Review from Strength of Material Perspective.

Dr. Sumanta Halder

Attended the Joint Conferences of 7CUUE and 5ICEE at Tokyo Institute of Technology, 3rd-5th March, 2010, Tokyo, Japan where he presented his paper on Response characteristics and failure mechanisms of pile foundations in liquefiable soil.

School of Mechanical Sciences

School of Mechanical Sciences

The School of Mechanical Sciences at Indian Institute of Technology Bhubaneswar will be a premier learning centre for education and will be internationally recognized in a variety of areas of mechanical sciences research and scholarly work. The unique intellectual fusion within School of Mechanical Sciences creates new opportunities for students and will lead to a richer experience both in the classroom and the laboratory. The mission of the School of Mechanical Sciences is to provide an excellent educational experience for its students. This experience includes an emphasis on the technical, communication, teamwork and life-long learning skills in which graduate engineers need to excel at the workplace and in the society in general. The curriculum aims to emphasize a rigorous treatment of the mathematical and scientific approach to the solution of engineering problems. The program endorses the design across the curriculum and is capped with an integrated design experience in the form of a senior project. Presently, the school has seven faculty members



Machine and Mechanism Laboratory



CAD/CAM Laboratory

HEAD OF SCHOOL

Dr. S. K. Mahapatra

Faculty Members

Associate Professor



Dr. S. K. Mahapatra
Ph.D. (IIT Kharagpur)

Phone: + 91 674 2306 272
Email: swarup@iitbbs.ac.in

Research areas: Thermo-acoustics Refrigeration, Energy saving and Experimental Fluid Mechanics

Assistant Professors



Dr. Prasenjit Rath
Ph.D. (NTU, Singapore, 2007)

Phone: + 91 674 2306 273
Email: prath@iitbbs.ac.in

Research areas: Numerical Transport Phenomena, Ultra Fast Radiation Heat Transfer, CFD/HT



Dr. S. N. Panigrahi
Ph.D. (IISc Bangalore, 2007)

Phone: + 91 674 2306 271
Email: psatyan@iitbbs.ac.in

Research areas: Technical Acoustics, Industrial Noise Control, Automotive noise control, Musical Acoustics.



Dr. Mihir Kumar Pandit
Ph.D. (IIT Kharagpur, 2009)

Phone: + 91 674 2306 274
Email: mihir@iitbbs.ac.in

Research areas: Composite Materials, Sandwich Structures, Finite Element Analysis, Probabilistic Mechanics, Deterministic and Random Vibration, Smart Composites.



Dr. Arun Kumar Pradhan
Ph.D. (IIT Kharagpur, 2008)

Phone: + 91 674 2306 276
Email : akpradhan@iitbbs.ac.in

Research areas : Smart Composite Structures, Composite Materials, Solid Mechanics



Dr. Mihir Kumar Das
Ph.D. (IIT Roorkee, 2006)

Phone: +91 674 2306 275
Email: mihirdas@iitbbs.ac.in

Research areas: Heat Transfer, Refrigeration & Air Conditioning, Solar Energy And I.C. Engines



Dr. Akhilesh Barve
Ph.D. (IIT Delhi, 2006)

Phone: +91 674 2306 277
Email: akhilesh@iitbbs.ac.in

Research areas: Supply chain management, industrial Engineering, quality control, logistics

Thrust Areas

- Conjugate Heat Transfer
- Radiation Modelling
- Numerical Transport Phenomena
- Metal Matrix Composites
- Ultra Fast Radiation Heat Transfer
- Technical Acoustics & Industrial Noise Control
- Industrial Engineering & Quality control
- Refrigeration & Air Conditioning
- Probabilistic Mechanics
- Smart Composites & Smart Composite Structures

Major Facilities Created

Machine and mechanism laboratory, CAD/CAM laboratory.

Sponsored Research Projects

Project	Principal investigator	Funding agency
Modification of low modulus titanium alloys by addition of interstitial solutes and/ or ceramic materials for biomedical applications	Prof. M. Chakraborty	DRDO
Simulation of Conjugate heat Transfer Phenomena in Ultra-short Laser Tissue Interaction	Prof. S.K.Mohapatra	DST

Achievements

Raghav. R, 3rd year B.Tech. student, School of Mechanical Sciences, won the all India Essay Competition for college students conducted by the NGO: Nandini Voice for the Deprived. The topic of his prize winning essay was "Will Demand for Separate Smaller States Lead to Disintegration of India?"



Seminar on Renewable Energy

School of Humanities, Social Sciences and Management

Scientific temper can only thrive and proliferate in a holistic environment-an environment that boasts of an optimum mix of rationality and art. The School of Humanities and Social Sciences projects the humane face of technology that aims to infuse in the students a sense of conscientiousness through the study of Literature and Language. It is imperative that budding scientists and engineers should be sensitive and sensible in order to appreciate the finer things in life. The school envisions in making persons that are receptive and responsive in temperament, and secular and responsible in character. It also aims to produce technocrats, who can contribute productively to the world of economics and commerce.

Creative thinking besides technical expertise is essential for engineers and scientists in the making. It is the School's aim to nurture and augment the creative faculties of its students. Visualisation of an abstract idea or concept before giving it a form or a structure is an exercise that the school wishes to put to practice to develop cognitive abilities of young minds. The School of Humanities and Social Sciences aims at creating a learning environment that will help students and scholars to develop into well rounded personalities. It wishes to propagate knowledge that is utilitarian and aesthetic in its makeup. Presently, the School has six faculty members.



Language Laboratory

HEAD OF SCHOOL

Prof. Sujit Roy

Faculty Members

Assistant Professors



Dr. Amrita Satapathy
Ph.D. (Utkal University, 2009)

Phone: +91 674 2306 239
Email: asatapathy@iitbbs.ac.in

Research areas: Commonwealth Studies, Indian Diaspora Literature, Travel Writings/Autobiographies/Memoirs



Dr. Asmita Shukla
Ph.D. (IIT Kanpur, 2008)

Phone: +91 674 2306 242
Email: asmita@iitbbs.ac.in

Research areas: Consumer Behavior, Research methodology, Psychology of Personality, Ecommerce, Marketing, Clinical Psychology



Dr. Naresh Chandra Sahu
Ph.D. (IIT Kanpur, 2008)

Phone: +91 674 2306 243
Email: naresh@iitbbs.ac.in

Research areas: Environmental Economics and Natural Resources Management, Water and Energy, Finance and Rural Economics

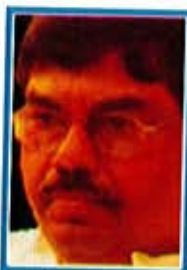


Dr. Punyashree Panda
Ph.D. (Berhampur University, Orissa, 2008)

Phone: +91 674 2306 319
Email: ppanda@iitbbs.ac.in

Research areas: Postcolonial Literature, American Literature, Canadian Literature, Indian Writing in English, ELT, Cross-cultural Communication, Business Communication

Visiting Professors



Prof. Subhendu K. Mund
Ph.D. (Utkal University, Orissa, 1996)

Phone: +91 674 2306 240
Email: subhendumund@gmail.com

Research areas: Indian English Literature, Oriya Literature and Culture Studies



Prof. Adwait Kumar Mohanty
Ph.D. (University of Wisconsin, USA, 1984)

Phone: +91 674 2306 241
Email: amohanty06@yahoo.co.in

Research areas: International Accounts, Banking and Rural development

Thrust Areas

- Commonwealth Studies
- Psychology of Personality, Environmental Economics and Natural Resources Management
- Cross-cultural Communication, Business Communication

Major Facilities Created

The School has a state of the art Language Lab that is outfitted with a server with CACM-ISIL software and is connected to 32 User's chair clients with consoles. It also has an LCD projector with screen, a digital Handycam and audio-visual aides to facilitate training and practice in Speaking and Presentation skills, GD, Mock Interview, Personality Development and other Soft skills enhancement.

Excellence in Research

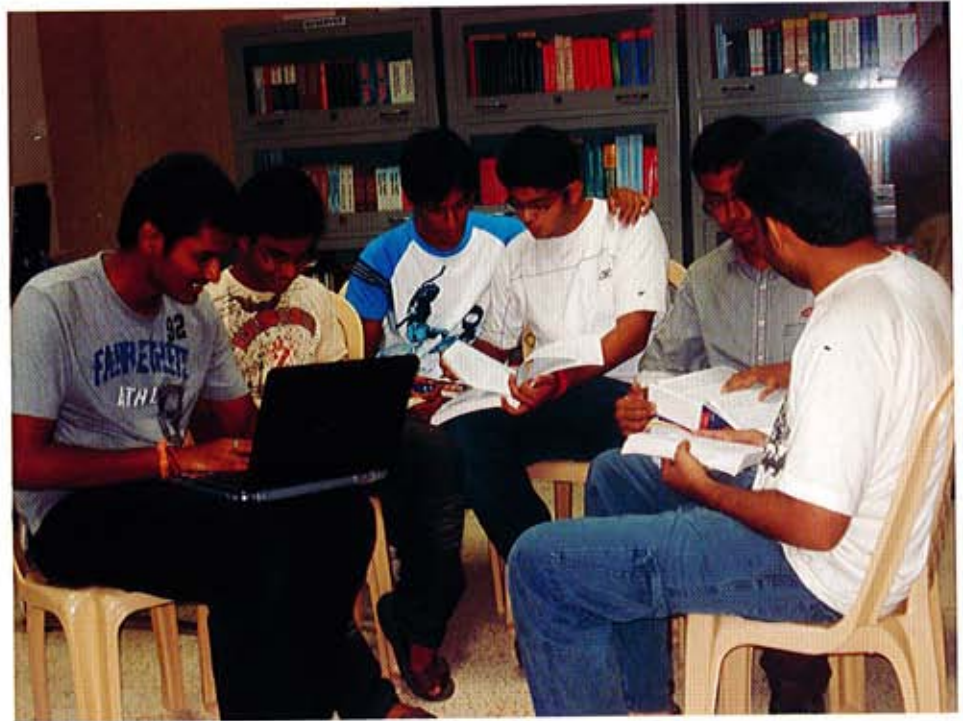
Excellences in teaching and academic activities largely depend on scholarships of discovery, analysis, integration and education, which need proper ambience and facilitation. Therefore, it is essential for the Institute to provide its faculty, researchers and students adequate opportunities, as well as quality infrastructure to excel and be at par, professionally with the best in the World.

IIT Bhubaneswar attempts to create an ambience that facilitates creation of knowledge through fundamental and applied research, innovations, and entrepreneurship. The Institute facilitates sponsored and collaborative research with reputed industries, R&D laboratories and universities or institutes globally. It also enhances the research capacity for sustained growth in research and consultancy and has plans to encourage development of technologies for commercialization through science and technology parks.

The Institute will strive to establish links and work closely with other IITs and technical institutions of repute in India and abroad, R&D units, industrial and NGOs to get proper feed-back, remove overlaps, change and modify research areas, if required, as well as develop joint academic and R&D activities on a collaborative basis.

Institute Facilities

IIT Bhubaneswar is building state-of-the infrastructure. A campus-wide optical fiber network ensures Internet connectivity in all class rooms, computer labs, library and faculty rooms. The academic blocks have class rooms and faculty chambers. It is equipped with state-of-the-art audio-visual equipments like LCD projectors and sound systems. Recently an additional academic building has been made to augment these facilities



Library

The library is not a shrine for the worship of books. It is not a temple where literary incense must be burned or where one's devotion to the bound book is expressed in ritual. A library, to modify the famous metaphor of Socrates, should be the delivery room for the birth of ideas - a place where history comes to life.

A Library is a repository of academic wealth and is emblematic of any educational institute's intellectual and scholarly excellence. The Central Library of IIT Bhubaneswar, though in its infancy, boasts of an excellent collection of books, journals and magazines from all spheres and an academic atmosphere that stimulates the young minds to think beyond the confinements of texts. A state of the art hybrid library, its academic resources include databases both CD-ROM based and online, which are made available through the Institute's network. Users can access the online database and also find out the real-time availability of library materials from their own computer terminals. The Library offers a range of information services set to the highest professional standards. Besides, the Central Library is a fully air conditioned, eco-compatible, tastefully decorated providing a breathing space and a break from monotony. A Hall Library at the Hostel is established to ensure that students are able to access books and materials.



Auditorium

Institute is having well-equipped, air-conditioned auditorium to facilitate workshops, seminars and conferences.

Computational Facilities

The computer lab has 60 desktops with high speed Internet connections and necessary software such as Ansys, Solid Works, MATLAB, Mathematica etc.



Academic Information

ACADEMIC INFORMATION

Programmes Offered

School of Basic Sciences

Ph.D.

School of Electrical Sciences

B.Tech. in Electrical Engineering and Ph.D.

School of Infrastructure

B.Tech. in Civil Engineering and Ph.D.

School of Mechanical Sciences

B.Tech. in Mechanical Engineering and Ph.D.

School of Humanities, Social Sciences and Management

Ph.D.

Distribution of Students in different Categories

First Year Undergraduate (Academic Year 2009-10)

Categories	Male	Female	Total
General	44	7	51
SC	22	3	25
ST	0	0	0
OBC	28	4	32
PD	1	0	1
Total	95	14	109

Second Year Undergraduate (Academic Year 2008-09)

Categories	Sc. of Infrastructure			Sc. of Elec. Sc.			Sc. of Mech. Sc.		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
General	14	2	16	19	1	6	14	1	15
SC	1	1	2	6	0	0	1	2	3
ST	0	0	0	0	0	11	0	0	0
OBC	10	0	10	10	1	0	10	1	11
PD	0	0	0	0	0	0	0	0	0
Total	25	3	28	35	2	37	25	4	29

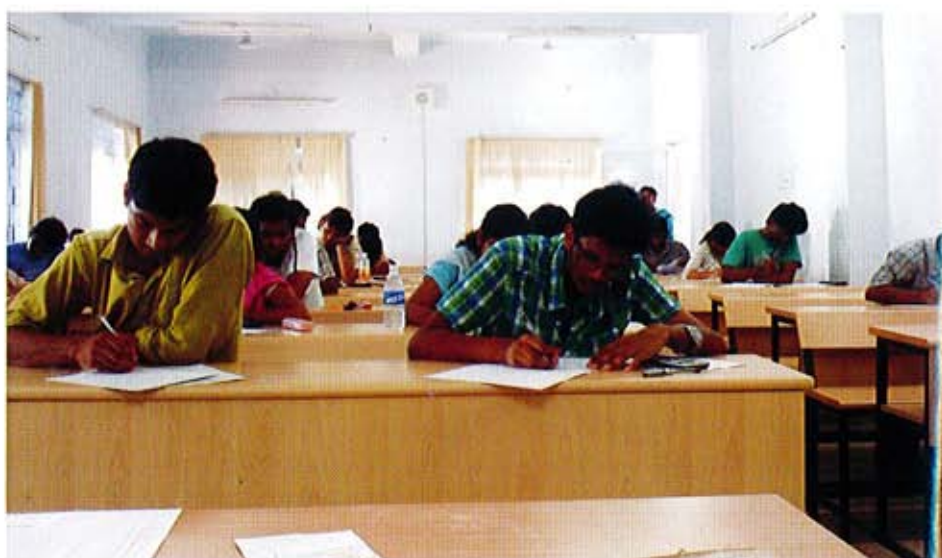
Second Year Undergraduate (Academic Year 2009-10)

Categories	School of Basic Sc.	Sc. of Infrastructure	Sc. of Elec. Sc.	Sc. of Mech. Sc.	Total
Male	0	2	5	1	8
Female	1	0	0	0	1
Total	1	2	5	1	9

Scholarships

During 2009-10, 39 students have been awarded Merit-cum-Means (MCM) scholarships, along with tuition fee waiver. A sum of Rs. 1000/- per month is given as scholarship while the amount of free studentship is Rs. 5000/- per month subject to a maximum of Rs. 25000/-. 20 other students have been awarded tuition fee waiver.

Name of Scholarship	2009- 10 (Batch)	2008- 09 (Batch)
MCM Scholarship 2009-10	26	13
MCM Scholarship 2009-10 (Free Studentship)	11	9
CSSS for Top Class Education (SC Students)	7	1
Financial and other assistance for ST students	6	0
NCERT	2	1
Post Matriculation	1	0
State Govt. Scholarship (Orissa)	0	1
State Govt. Scholarship (Bihar)	0	1
A.P. – Central Sector Scheme of Scholarships for college and University students for the year 2009-10	7	0
Merit Scholarship from Central Warehousing Corporation	0	1
Scholarship (MECON Ltd.)	1	0
Total	61	27



Campus

CAMPUS

IIT Bhubaneswar functions from its various campuses located in and around the city of Bhubaneswar. The temporary campus of IIT Bhubaneswar is located at the 51,000 sq. ft. IIT Kharagpur Extension Centre at Samantapuri, Bhubaneswar. IIT Bhubaneswar will begin its 2010-2011 academic session parallelly from its sister campus at Toshali Plaza. Toshali Plaza is situated at Satyanagar one of the main commercial centres of the city. It is a 130000 sq. ft. partially renovated twin building campus with class rooms, faculty rooms and laboratories. The new hostel is a 40,000 sq. ft. 7 storied building near Toshali Plaza which accommodates the current batch of first year students. The institute has hired 60 HIG, 3 bedroom flats in SBI Colony situated at Kesura near Jharpada as its student and faculty residential complex. The New Government Colony at Gajapati Nagar also houses some of the faculty of IIT BBS. The institute has hired 2000 sq. ft. of space at CTTC at Patia for conducting workshops for the students. The institute also holds the Civil Engineering laboratories at the 1000 sq. ft. lab space provided by IMMT in Acharya Vihar. The transit guest house of IIT BBS is located at Lumbini Vihar. A new shed of 20,000 sq. ft. is under construction at Samantapuri, which will provide space for Civil Engineering laboratory, Mechanical workshop, class rooms and faculty rooms.

IIT Bhubaneswar Celebrates its First Foundation Day

IIT Bhubaneswar celebrated its 1st foundation day on 22nd July, 2009. The day began with the plantation drive organized at the permanent campus site at Arugul. The faculty, staff and students participated enthusiastically in this drive, planting numerous plant samplings across the boundaries of the upcoming campus.



The inaugural function was held at Swosti Premium with the lighting of the lamp by the honourable Chief Minister Shri Naveen Patnaik, the Director, Prof. Madhusudan Chakraborty and the Registrar, Mr. B.K.Ray. The Chief Minister addressed the invited guests, media and students at the auditorium in the institute. He congratulated the faculty members and stressed on the idea of working together and striving towards the vision of making IIT BBS renowned in the field of research and innovation. The Director in his inaugural speech talked of setting milestones by being different from other established IITs. He emphasized on a borderless, interdisciplinary mode of classroom teaching and research. The audience was enthralled by a spectacular Odissi performance by Ms.Aruna Mohanty and her troupe. The students of IIT BBS also captivated the viewers with their song and dance performances. The evening ended with a vote of thanks by the Registrar Shri B.K. Ray.

Appointment of Design and Project Management Consultant

IIT BBS selects CES (I) Pvt. Ltd, New Delhi for the Design and Project Management Consultancy work of its permanent campus. The company is in the process of finalizing the Master Plan (Academic and Residential Township) for the campus to be built on a 936 acres site, with ultimate student strength of about 10,000 and a total campus population of about 20,000. Further, it envisions a world class, visionary, iconic, barrier-free, state-of-the-art, 21st century campus. The campus shall be a powerful symbol of the pre-eminent IIT brand while looking forward to the next 100 years. It shall incorporate the best of international as well as Indian practices with regard to high-tech educational planning, technology and design. Simultaneously, the master plan and design shall be sensitive and responsive to local, cultural, historic and climatic features in Bhubaneswar and the state of Orissa with built-in ecologically sustainable planning and design. Besides, the company will also supervise the construction of buildings and other infrastructure of the proposed campus. The first phase of the campus would be built for a student population of 2500 with an initial estimated expenditure of Rs. 400 crores. The process of Master Plan is expected to be completed by September 2010.



Womens' Day

Commemorating with the International Women's Day on 8th March, IIT Bhubaneswar celebrated it with the enthusiastic participation of students and teachers alike. A series of events including a poster making competition on "Marginalisation of Women" and an elocution competition were organized.

The day boasted of the presence of dignitaries, who have been stalwarts in their own fields and have so veritably brought home the fact that women can match their counterparts in every aspect, be it technical mettle or administrative skills or social handling. Dr. Amrita Patel, a professor in the Dept. of Women's Studies, Utkal University and a forefront Women's Rights activist in Orissa was the chief speaker of the day. Dr.



Patel highlighted on the recent laws and statistics of women development in the state. Architect Geeta Pattnaik, the first woman architect of the state, called for everyone to awaken to their responsibilities and help every distressed woman. Her words indeed carried the message that she has made it to success through trials and ordeals and stands as a successful woman. Mrs. Nargis Natarajan, a passionate writer appealed to every woman to express herself, as she does in her novels and books.

It was a spectacle indeed to watch the display of posters, where students put in their voices for women rights and strong detest against social evils meted out to women, all through figures, caricatures and creative sketches. The participating speakers of the elocution competition put forward their opinions on "Equal rights, equal opportunities: Progress for all" and on "Female Foeticide: A reality in contemporary India". Starting from citing relevant



instances, to analysis of the injustice, to citing solutions, the students proved that despite being in an institute of technical learning, they had retained their human values and obligations to the greater community. It was not just awards that motivated the students, but it was their instinct to express and make it heard, that they do care as the future of a developing nation, and as alert citizens.

Independence Day Celebration

Indian Institute of Technology, Bhubaneswar celebrates the day, when we were bestowed the rights to be respected as 'Indian's with sincere reverie for our great freedom fighters and innumerable martyrs. Besides the regular routine for Independence Day that begins with the salute to our flag and motherland, this red letter day is an occasion when every student of the institute basks in the responsibility of nourishing knowledge into a legacy. Every member of this IIT, which stands as a stalwart in the field of education, pledges to take forth the cause of independence from the clutches of ignorance.



Student Events

STUDENT EVENTS

Orientation Program

The second batch of students of IIT Bhubaneswar was registered on the 21st July, 2009. On reaching Bhubaneswar, the first year students received a warm welcome in the form of an orientation programme. Under this programme, the students got the opportunity of visiting Industries like NALCO, CTTC and IMMT on the very first day after their registration. Apart from the industry visit, they also got an exposure to rich culture of the state of Orissa in the form of a tour to well known heritage locations in and around the cities of Bhubaneswar and Puri.

Establishment of Counselling Service Team (CST)

A Counselling Service Team has been formed at IIT Bhubaneswar on 9th March 2010. The team consists of a Professor-in-Charge, a Counsellor, a Student Coordinator, Asst Coordinators and Student Guides. The team will offer their assistance to the fresh batch of students who joined IIT BBS to cope up with the academic, social, emotional and psychological problems. An altruistic fund will also be maintained by the team to help the needy students. The underlying motto of CST is- Cooperation of the students, by the students, for the students.

Student Gymkhana

The Students' Gymkhana of IIT Bhubaneswar came into being with the nomination of the President in the month of February 2010. The aim of the Gymkhana is to ensure a holistic development of students through extra-curricular activities and promoting activities that will enable students to develop various socio-cultural skills like leadership qualities, time management, personal relationship and team building, etc.



The Gymkhana will function through the Senate consisting of the President, Vice President, Advisors, General Secretaries like the Cultural Council, the Sports Council and the Science and Technology Council. One Secretary from each Council shall also be a part of the Senate. The General Secretaries of the Councils in consultation with the Vice-President will nominate one Secretary as the Senate member from among the Secretaries in their respective Councils.

Alma Fiesta

For all the fun-loving college-goers across the country, IIT Bhubaneswar provided the perfect platform for a fun-filled extravaganza with zest and verve and instilling a sense of awareness of one's social responsibilities, through its first ever socio-cultural fest "Alma Fiesta". The event that spanned from 26th to 28th of March 2010 saw brand IIT making its presence felt in Odisha through a volley of events, competitions and workshops that pervaded the various domains of music, dance, drama, quiz, literary and adventure. If Dr. Kumar Vishwas made the audience hold out their stomachs, laughing in "Mehfil-e-Hansi", the performances of Grammy award winner Pt. Vishwa Mohan Bhatt, along with Pt. Salil Bhatt and Akram Khan

amalgamated classical music to bring about the perfect finish to the day that had already been highlighted by the commemoration of "Earth Hour". Not to forget the enthralling performance of the Orissa Dance Academy and the Head Bang-ing performance by India's one and only heavy metal band, Kryptos. The IIT Bhubaneswar Rolling Trophy Quiz, the literary workshop on Decoding Shakespeare, the dance workshop and the Youth Marathon provided the seamless support to the regular inter-collegiate events embracing "face-off", "topsy-turvy" and "euphony"- that saw the very famous "Underground Authority" take the stage. However "Perspective- the social case study competition" that saw the students from the leading colleges across Bhubaneswar voice their concern and ideas to lead the nation ahead, turned out to be the stand-out event.

Fine Arts Society

In this world, we are circumscribed by art- be it natural or manmade. Fine Arts society (FAS) IIT Bhubaneswar aims to arouse interest in the areas of art, culture and tradition among students and to widen their horizon of thoughts so that they can understand the colorful world around them in a better manner. This society proposes to conduct workshops on different areas of fine arts such as clay modeling, computer designing, photography etc. This society also holds the responsibility for various cultural events- Rangoli and Illumination at the time of festivals to name a few.

The Literary Society (PANACEA)

Panacea aims to provide students with ample opportunities to voice their underlying opinions as well as nurturing and honing their creative skills- with a vision to eventually transform them into a wholesome individual ready to take on this world in a stride. The society has been instrumental in setting up of a reading club-cum-library, having a diverse inventory of academic and non academic books and journals to quench the thirst of avid readers. The "institute newsletter" is a yet another initiative of the society which serves as a wreath binding together all the students of the institute. Moreover, the society hopes to furnish the personality of the students by organizing interactive and fun events ranging from group discussion-personal interview sessions to body language analysis workshops. The society is all about connecting you and your inner self to the outer world. The society was instrumental in bringing the first edition of students' newsletter Wistaz., maintaining blogs and also opening up the hall library.

The Music Society

Music resides in every soul may it be in the form of classical music or hardcore death metal. This society is for all the music lovers. The basic aim of this society is to promote the spirit of music amongst the students of IIT Bhubaneswar. The music society aims at putting up performances and improving the musical skills of the students. It includes training of students by professional trainers in playing the instruments. The music society also aims at participating in the musical events conducted in other colleges. With the plans to call eminent musicians and bands from around the globe to perform in IIT, the music society has taken all the steps to keep the spirit of music alive in IIT Bhubaneswar. It also aims on conducting various musical events for the students.

Cyber Gaming Club

The addiction of adrenaline rushes while gaming led a group of insane gamers to form the CYBER GAMING CLUB. This society promises to satisfy your hunger of hardcore action and mind freaking adventures. This is for all the pros, noobs and first timers

who want to experience the excitement of cyber battle. This society promotes fair competition and exposes the gamers of IIT Bhubaneswar to college and national level gaming with the basic motive of imbibing a sense of tactical knowledge and skills in upcoming gamers. Various intra and inter college cyber gaming events are held under this society. Besides gaming, this society organizes guest lectures and workshops on gaming, animation and 3-D simulation by various eminent cyber gaming industry personalities on the present gaming scenario and upcoming developments in the electronic gaming world. Let there be no doubt that cyber gaming club has left no stone unturned to create a platform for the students of IIT Bhubaneswar to improve their skills in cyber gaming.

Sports Club

The sports club functions as a medium of communication between the students and the administration of IIT Bhubaneswar in the sports related activities. Unlike other societies, sports club is open for all the students and each student is a member of this club. This club focuses on the overall development of various sports activities at IIT Bhubaneswar including - providing ample opportunities for the students to learn or improve their skills in any sport. With the setting up of a gymnasium and facilities for indoor games in the hostel, the club is sure to provide extreme recreation for the students. Organizing intra and inter college, inter department sports extravaganzas feature amongst the future plans.

Other Activities

Students of IIT Bhubaneswar participate in a wide array of extra-curricular activities and have secured silver in march past at inter-IIT sports meet at IIT Kanpur in the year 2009. They have formed clubs like Entrepreneurship and Innovative Cell (E-cell), Dramatics Club and Robotix. Dramatics club became a trend-setter by celebrating cracker-free diwali and successfully hosting a show in residential area on Diwali; it also participated in international theatre festivals. Robotix organized a winter workshop and the students successfully created bots to undertake basic tasks. Novus, the first symposium of IITBBS was organized which included paper presentation, poster designing, database creation and web designing. IITBBS chapter of SPIC MACAY was initiated with an exclusive performance of Hindustani music by eminent 102 years old, Ustad Abdul Rashid Khan. A cricket match was organized between the Directors' XI and Registrars' XI, and ever sportive Director' XI emerged as the winner.

Invited Lectures on Campus

INVITED LECTURES ON CAMPUS

Name of Speaker	Topic	Date
Prof. Chitta Baral Professor, Arizona State University, USA	Vision for IIT Bhubaneswar	22.07.2009
Prof. Sunil K. Sarangi Director, NIT Rourkela, India	Addressing UG Students of IIT Bhubaneswar	23.07.2009
Mr. Bijon Nag Chairman and MD, IFB Kolkata	Entrepreneurship	13.07.2009
Dr. Akhilesh Singh Lyon, France	Versatile Transition Metal Complexes and their Various Applications	28.08.2009
Dr. Himanshu Mohapatra University of Nebraska-Lincoln, USA	The Use of Brillouin and Raman Spectroscopy to Study Intermolecular Interaction and Crystallization Process in Pharmaceutical Drug Polymorph	11.09.2009
Dr. Swarnali Bandopadhyay Department of Physics, Norwegian University of Science and Technology, Trondheim, Norway	Renormalisation of dephasing by zero-point-fluctuation	16.09.2009
Mr. Sameer V. Sheth U. S. Diplomat and Head (Global Issues Unit), U. S. Embassy, New Delhi	President Barack Obama's Policies and South Asia	18.09.2009
Dr. Chittaranjan Patra Assistant Professor Department of Biochemistry and Molecular Biology, Mayo Clinic College of Medicine, Mayo Foundation, Rochester, USA	Role of inorganic nanorods/nanoparticles in angiogenesis and cancer therapy	22.09.2009
Shiv Subramaniam ANSYS Inc., Bangalore	CFD and its Applications	09.10.2009

Eric Roston Senior Associate, Nicholas Institute, Duke University, Washington, DC	How Can Non-Scientists Understand Climate Change?	15.10.2009
Dr. Ritwick Das Postdoctoral Fellow, ICFO, Barcelona, Spain	High Power, Fiber-Laser Based, CW Optical Parametric Sources in the Near- and Mid-Infrared	10.11.2009
Prof. Debendra Kumar Das Professor and Past Chair of Mechanical Engineering, University of Alaska, USA	Application of Nanotechnology in the Area of Heat Transfer	18.11.2009
Dr. Sreekanta Das Associate Professor, Dept. Of Civil & Env. Engineering, University of Windsor, Canada	Strength of Concrete Masonry Parallel to Bed Joint	19.11.2009
Prof. Lalu Mansinha Professor Emeritus, Dept. Of Earth Sciences, Univ. Of Western Ontario, Canada	Geophysics	24.11.2009
Prof. Bernard Mulgrew Professor and Head, Dept. of Digital Communication, Univ. of Edinburg, UK	MIMO Radar	03.12.2009
Dr. Sukalyan Sengupta Associate Professor, Dept. of Civil & Env. Engg, Univ. of Massachusetts, Dartmouth	Selective Removal and Recovery of Phosphate from Wastewater using an Iron Oxide Impregnated Anion Exchanger	30.12.2009
Dr. Prabhakant Sinha Founder, P. K. Sinha Centre for Bioenergy, IIT Kharagpur	Solar and Bioenergy	01.01.2010
Prof. Anjan Bose Washington State University, USA	Address to Students and Faculty of IIT Bhubaneswar	04.01.2010
Dr. Bibhu Datta Sahu UCLA, USA	ADC Design in Nano electronics Era A Little bit of Analog, A Whole Lot of Digital	14.01.2010

Shri Shantanu Mahapatra Ex-Director, Mining & Geology, Govt. of Orissa	Significance of Music in our Life	05.02.2010
Dr. Debapratim Das Postdoctoral Fellow, Dept. of Chemical Biology, Max Planck Institute for Molecular Physiology, Dortmund, Germany	Exploring Ras Super-Family Proteins: A Chemical Biology Approach	19.02.2010
Dr. Priti Mohanty Postdoctoral Fellow, Adolphe Merkle Institute and Fribourg Center for Nanomaterials, University of Fribourg, Switzerland	Responsive Colloids as Building Blocks in Soft-Nanotechnology	05.03.2010
Dr. Abhijit Ganguli Postdoctoral Fellow, Centre for Subsurface Sensing and Imaging Systems (CENSSIS), Dept. of Civil and Environmental Engineering, Northeastern University, Boston, USA	Synthetic Aperture Imaging for Damage Detection in Concrete and Ultrasonic Focusing in Attenuative Media	12.03.2010
Dr. Tora Mitra Ganguli Postdoctoral Research Associate, McGovern Institute for Brain Research, Dept. of Brain and Cognitive Sciences, MIT, Cambridge, USA	Role of Voltage Gated Calcium Channels in Neuromodulation and Neuroplasticity	12.03.2010
Dr. Rakesh Barik Postdoctoral Research Fellow, School of Chemistry, University of Edinburgh, UK	Marine Environmental Factors Affecting the Corrosion Performance of Nickel-Aluminium Bronze	19.03.2010
Prof. Bhubaneswar Mishra Professor, Computer Science, Mathematics and Cell Biology, Courant Institute, New York University, USA	Computational Biology	19.03.2010
Mr. Prafulla K. Padhi Founder/CEO – Global Entrepreneurship	Opportunity Study Modeling: The Next Big Thing	25.03.2010

PUBLICATIONS

SCHOOL OF BASIC SCIENCES

Journals:

1. Roy, U. K.; Roy, S. Making and Breaking of Sn-C and In-C Bonds in Situ: The Cases of Allyltins and Allylindiums. *Chemical Reviews* 2010, 110, 2472.
2. Chatterjee, P. N.; Roy, S. Propargylic Activation Across a Heterobimetallic Ir-Sn Catalyst: Nucleophilic Substitution and Indene Formation with Propargylic Alcohols. *Journal of Organic Chemistry*, 2010, 75, 4413.
3. Bera, M.; Roy, S. Silver (I)-Diene Complexes as Versatile Catalysts for the C-Arylation of N-Tosylaziridines: Mechanistic Insight from In Situ Diagnostics. *Journal of Organic Chemistry* 2010, 75, 4402.
4. Pratihari, S.; Roy, S. Nucleophilicity and Site Selectivity of Commonly Used Arenes and Heteroarenes *Journal of Organic Chemistry* 2010, 75, 4957.
5. Na Lou, Rajan Jha, J. L. Dominguez, V. Finazi, J. Villatoro, G. Badenes, and V. Pruneri, "Embedded optical micro-nano-fiber for stable devices", *Optics Letters* 35(4) (2010), 571-573.
6. Anuj K. Sharma, Rajan Jha and Himanshu S. Pattanaik, "Chalcogenide glass based surface plasmon resonance sensor for determining different blood group in near infrared", *Journal of Applied Physics* 107 (2010), 034107.
7. Rajan Jha, and Anuj K. Sharma "SPR based infrared detection of aqueous and gaseous media with silicon substrate", *Europhysics Letters* 87 (2009), 10007.
8. Anuj K. Sharma and Rajan Jha, "SPR based gas sensor with chalcogenide glass and bimetallic alloy nanoparticles layer", *Journal of Applied Physics*, 106 (2009) 103101.
9. Ritwick Das and Rajan Jha, "On the modal characteristic of surface plasmon polaritons at a metal Bragg interface at optical frequencies", *Applied Optics*, 48 (2009) 4904-4908.
10. A.K.Ojha and A.K.Das(2010): Multi-objective Geometric Programming Problem being cost co-efficient as continuous function with weighted mean method, *Journal of Computing*, Vol.7 issue-2, pp.67-73, February 2010, ISSN 2151-9617.
11. A.K.Ojha and A.K.Das(2010): pp.20-24, A.K.Ojha and A.K.Das(2010):Geometric Programming Problem with Co-efficient and Exponents Associated with Binary Numbers, *International Journal of Computer Science Issues*, Vol.7, Issue 1, No.2, pp.49-55, January 2010 ISSN:1694-0784,.
12. A.K.Ojha and K.K.Biswal (2010): Posynomial Geometric Programming Problems with Multiple Parameters, *Journal of Computing*, Vol.2, Issue 1, pp.84-90, January 2010, ISSN 2151-9617.
13. A.K.Ojha, D.Mallick and C.Mallick(2010):Existence and Global Logarithmic Stability of Impulsive Neural Networks with Time Delay, *International Journal of Computer Science Issues*, Vol.7, Issue 1, No 2, pp.32-41, January 2010, ISSN:1694-0784.
14. A.K.Ojha and K.K.Biswal(2010): Multi-objective Geometric Programming Problem with weighted mean Method, *International Journal of Computer Science and Information Security*, Vol.7.No.2, pp.82-86, 2010.
15. A.K.Ojha, C.Mallick and D.Mallick (2009): Logarithmic Barrier Optimization Problem Using Neural Network, *Journal of Computing*, Vol.1, Issue 1, December 2009, ISSN:2151-9617.

16. A.K.Ojha and K.K.Biswal(2009):Lexicographic Multi-Objective Geometric Programming Problems, International Journal of Computer Science Issues , Vol.6,No.2, pp.20-24, 2009 ISSN:1694-0784
17. A.K.Ojha,C.Mallick and D.Mallick(2009):Cornerity in binary image using Neural Network, Journal of Computational Mathematics and Optimization, Vol.5(2009),No:2 ,pp.79-99,ISSN:0972-9372
18. A.K.Ojha,D.Mallick and C.Mallick(2009):Prediction of Consumption of Electrical Energy by using Neural Network Forcasters, Journal of Computer and Mathematical Sciences, Vol. 1(1),47-54,2009.

Seminars/Workshops/Conferences :

1. Rajan Jha, Joel Villatoro, Mark Kreuzer, Vittoria Finnazi, and V. Pruneri, "Highly versatile in reflection photonics crystal fiber interferometer", 20th International Conference on Optical Fibre Sensor, OFS-20, October 5-9, 2009, Edinburgh, UK.
2. Rajan Jha and A. K. Sharma, "Surface Plasmon resonance based high performance chalcogenide glass sensor", International conference on optics and photonics, ICOL, October 30, 2009. Chandigarh, India.
3. J. Villatoro, Rajan Jha, and Goncal Badenes "Photonic crystal fiber modal interferometer for accurate refractometry", Proc. of SPIE sensing Technologies and Applications, Fiber Optic Sensors and Applications, April 13-17, 2009, Orlando, USA.
4. J. Villatoro, Rajan Jha, V. P. Minkovich, M. P. Kreuzer, G. Badenes, and V. Pruneri "High sensitivity photonic crystal fiber interferometer for chemical vapors detection" Proc. of SPIE sensing Technologies and Applications, Fiber Optic Sensors and Applications, April 13-17, 2009, Orlando, USA.
5. S. Kasthurirangan, A. N. Agnihotri, A. H. Kelkar, S. Chatterjee et al. "Angular Distribution of K-LL Auger Electron Emission from C60 in collisions with fast Si ions",p-137, DAE-BRNS Symposium on Atomic, Molecular and Optical Physics, Inter-University Accelerator Centre, Delhi during 10-13 February 2009.
6. Smita Ota & SB Ota. Random Number, variance and digit statistics, to chair a session and present in WMSCI-2009 Florida USA.

SCHOOL OF INFRASTRUCTURE

Journals:

1. Dutta, S. C., Dutta, S., and Roy, R., (2009) "Seismic Failure Possibilities of R/C Elevated Shaft-supported Tanks", Engineering Structures, Elsevier, Vol.31, pp 2617-2629.
2. Dutta, S.C., Raychaudhury, A., Chakraborty, S., and Roy, R., (2009), "Pushover analysis: proposals for Modifications", Structural Engineering International, IABSE, Vol.19, No.3, August, pp 249-255.
3. Dutta, S.C., Chakraborty, S., Rauchaudhuri, A., (2009), "Efficacy of Push over Analysis Methodologies: A Critical Evaluation", Structural Engineering and Mechanics, Technopress, Vol. 31, No.3, 265-276.
4. Dutta, S.C., Bhattacharya, K., and Roy, R., (2009), "Effect of Flexibility of Foundations on its seismic stress distribution", Journal of Earthquake Engineering, UK, Vol.13, pp 22-49.

5. Haldar, S. and Sivakumar Babu, G. L. (2009). "Design of laterally loaded piles in clays based on cone penetration test data: A reliability based approach." *Geotechnique*, Thomas Telford, Vol. 59 (7), 593-607. DOI: 10.1680/geot.8.066.3685.
6. Haldar, S. and Sivakumar Babu, G. L. (2009). "Probabilistic seismic design of pile foundations in non-liquefiable soil by response spectrum approach." *Journal of Earthquake Engineering*, Taylor and Francis, Vol. 13, 737-757. DOI: 10.1080/13632460902792410.
7. Haldar, S. and Sivakumar Babu, G. L. (2009). "Ground improvement of machine foundation: A case study." *Ground Improvement*, Thomas Telford, Vol. 162, Issue G11, 1-6. DOI: 10.1680/grim.2009.162.1.1.
8. Rajesh R. Dash, C. Balomajumdar & A. Kumar, Treatment of Cyanide Bearing Water/Wastewater by Plain and Biological Activated carbon, *J. Industrial Engg. & Chemistry Research*, 2009, Vol. 48, No. 7, pp. 3619-3627.
9. Rajesh R. Dash, C. Balomajumdar & A. Kumar, Removal of metal cyanides from aqueous solutions by suspended and immobilized cells of *Rhizopus oryzae* (MTCC 2541), *Engineering in Life Sciences J.*, 2009, Vol. 9, No. 1, pp. 53-59.
10. Rajesh R. Dash, C. Balomajumdar & A. Kumar, Removal of cyanide from water and wastewater using granular activated carbon, *Chemical Engineering J.*, 2009, Vol. 146, No. 1, pp. 408-413.
11. Rajesh R. Dash, A. Gaur & C. Balomajumdar, Cyanide in Industrial Wastewaters and its removal: A Review on Biotreatment, *J. Hazardous Materials*, 2009, Vol. 163, No. 1, pp. 1-11.
12. Partha Pratim Dey and Satish Chandra. Desired time gap and time headway in steady state car-following on two-lane roads. *Journal of Transportation Engineering*, ASCE, 2009, 135(10), 687-693.

Seminars/Workshops/Conferences:

1. Dutta, S.C., Mukhopadhyay, P., and Goswami, K., (2010), "Improving Seismic Performance of Brick Masonry Junctions", *Proceeding of 7th International Conference on Urban Earthquake Engineering*, & 5th International Conference on earthquake Engineering, 3rd to 5th March, Tokyo.
2. Mukhopadhyay, P., and Dutta, S.C., (2010), "Indian Bamboo as an Alternative: A Critical Review from Strength of Material Perspective", *Proceeding of 7th International Conference on Urban Earthquake Engineering*, & 5th International Conference on earthquake Engineering, 3rd to 5th March, Tokyo.
3. Haldar, S. and Sivakumar Babu, G. L. (2010). "Response characteristics and failure mechanisms of pile foundations in liquefiable soil." In joint Proc. of the 7th International Conference on Urban Earthquake Engineering (7CUEE) & 5th International Conference on Earthquake Engineering (5ICEE), 3rd to 5th March Tokyo, Japan, 499-506 (CD ROM).
4. Dutta, S.C., Mukhopadhyay, P., and Bhattacharya, S., (2009), "Impact of Moderate Earthquake in Post Bhuj Era: Case Study of Sikkim 2006 and Durgapur 2008 Earthquakes, India," *Proceedings of 3rd Greece-Japan Workshop on Seismic Design, Observation, Retrofit and Foundations, Santorini*, 22-23 September, pp 154-170.
5. Mukhopadhyay, P, Dutta, S.C., and Bhattacharya, S. (2009), "Lessons Learnt from the Impact of Sikkim 2006 Earthquake on Heritage Structures," *Proceedings of 3rd Greece-Japan Workshop on Seismic Design, Observation, Retrofit and Foundations, Santorini*, 22-23 September, pp 615-628.

SCHOOL OF MECHANICAL SCIENCES

Journals:

1. B. N. Padhi, P. Rath and S. K. Mahapatra, "Short Pulse Collimated Radiation with Diffusely Reflecting Boundaries", Submitted to International Communications in Heat and Mass Transfer, 2009.
2. R.K. Mallik, S.K. Mahapatra, and A.Sarkar. Development of a Novel Improved Differential Approximation (NIDA) for analysis of combined conduction-radiation heat transfer (CCR) in a two-dimensional enclosure with participating medium : An experimental validation, Numerical Heat Transfer, Part B, 2009;56:231-258.
3. Anjan Sarkar, S.K.Mahapatra, & A.Sarkar. Opposing Mixed Convection and its Interaction with Radiation inside Eccentric Horizontal Cylindrical Annulus, Int. Jl. Num. Meth in Fluids, 2008, Volume 61, Issue 3, Date: 30 September 2009, Pages: 291-310
4. R.K.Mallik, S.K.Mahapatra, & A.Sarkar. Neural Finite difference method in development of Improved differential approximation and its application for coupled conduction and radiation heat transfer in a square enclosure: an experimental validation, Int Jl. Heat and Mass Transfer, Jan, 2009, Vol. 52, pp. 504-515
5. S.K.Mahapatra. Interaction of radiation with opposing mixed convection within differentially heated square enclosure, Jl. Of Mechanical Engineering Sciences, IMechE-PartC, UK, 2009, Vol. 223(C2), 451-462.
6. Anjan Sarkar, S.K.Mahapatra, S.Behera & A.Sarkar. Natural Convection inside a differentially heated partitioned enclosure, Jl. Of Inst. of Engineers (India), 2009.
7. Mihir K. Das, Nand Kishor, (2009), "Adaptive Fuzzy Model Identification to Predict the Heat Transfer Coefficient in Pool Boiling of Distilled Water", Expert Systems with Applications, 36 : 2, 1142 – 1154.
8. Pandit, M. K., Singh, B. N., and Sheikh, A. H. (2009), Buckling of Sandwich Plates with Random Material Properties using Improved Plate Model, AIAA Journal, Vol. 47, No. 2, pp. 418-428..
9. Pandit, M. K., Sheikh, A. H., and Singh, B. N. (2009), Analysis of Laminated Sandwich Plates Based on an Improved Higher Order Zigzag Theory, Journal of Sandwich Structures and Materials, (doi:10.1177/1099636209104517).
10. Pandit, M. K., Singh, B. N., and Sheikh, A. H. (2009), Stochastic Perturbation based Finite Element for Deflection Statistics of Soft Core Sandwich Plate with Random Material Properties, International Journal of Mechanical Sciences, Vol. 51, No. 5, pp. 363-371.
11. Singh, B.N., Bisht, A.K.S., Pandit, M. K., and Shukla, K.K. (2009), Nonlinear free vibration analysis of composite plates with material uncertainties: A Monte Carlo simulation approach, Journal of Sound and Vibration, Vol. 324, No. 1-2, pp. 126-138.
12. Pandit, M. K., Singh, B. N., and Sheikh, A. H. (2010), Stochastic Free Vibration Response of Soft Core Sandwich Plates using an Improved Higher Order Zigzag Theory, ASCE Journal of Aerospace Engineering, Vol. 23, No. 1, pp. 14-23.
13. M. C. Ray and A. K. Pradhan, "On the Use of Vertically and Obliquely Reinforced 1-3 Piezoelectric Composites for Damping of Laminated Composite Panels", Acta Mech. DOI: 10.1007/S00707-009-0149-4; Published online: 21 April 2009

14. Barve, A., Kanda, A. and Shankar, R. (2009), "Role of human factors in agile supply chains", *European Journal of Industrial Engineering*, Vol. 3, No. 1, pp. 2-20.
15. A. Mandal, B.S. Murty and M. Chakraborty. Wear behaviour of near eutectic Al-Si alloy reinforced with in-situ TiB₂ particles, *Materials Science and Engineering A* 506 (2009) 27-33
16. A. Mandal, B.S. Murty and M. Chakraborty. Sliding wear behaviour of T6 treated A356-TiB₂ in-situ composites. *Wear* 266 (2009) 865-872
17. A. Mandal and M.M. Makhlof. Development of a Novel Hypereutectic Aluminum-Silicon-Magnesium Alloy for Die Casting *Transaction of the Indian Institute of Metals* 42 (2009) 357-360

Seminars/Workshops/Conferences:

1. Shivedayal Pandey, V.K.Nema, M. K. Das, "Modeling and Exergy loss reduction in Plate heat Exchangers of typical Surface Configurations-A Review", *International Conference on Issues and Challenges in Energy Conversion and Management (ICEM-2009)*, Dec. 18 – 20, (2009)
2. Pandit, M. K., Sheikh, A. H., and Singh, B. N. (2009), An Improved Higher order Zigzag Plate Model for Bending and Buckling Response of Soft Core Sandwich Plates, *9th International Symposium on Fibre Reinforced Polymer Reinforcement for Concrete Structures (FRPRCS-9)*, Sydney, Australia, July 13-15.
3. Pandit, M. K., Singh, B. N., and Sheikh, A. H. (2009), Analysis of sandwich laminates with soft core using an improved higher order zigzag plate theory, *International Conference on Advances in Concrete, Structural and Geotechnical Engineering*, Birla Institute of Technology & Science, Pilani, India, October 25-27.
4. A. K. Pradhan and M. C. Ray, "Performance of Vertically Reinforced 1-3 Piezoelectric Composites for Active Constrained Layer Damping of Laminated Composite Structures," *53rd Cong. of ISTAM, N. S. I. T., New Delhi*, December 14-17, 2009.
5. A. Mandal and M.M. Makhlof. Development of a Novel Hypereutectic Aluminium-Silicon-Magnesium Alloy for Die Casting *International Conference on Solidification Science and Processing (ICSSP-IV)*, November 2009, Chennai, India

SCHOOL OF ELECTRICAL SCIENCES

Journals:

1. R. Majhi, G. Panda, Babita Majhi and G. Sahoo, "Efficient prediction of Stock Market Indices using Adaptive Bacterial Foraging Optimization (ABFO) and BFO based Techniques", *Expert Systems with Applications*, Elsevier, vol. 36, no. 6, pp. 10097-10104, August 2009.
2. Sudhansu Kumar Mishra, G. Panda, S. Meher "Chebyshev Functional Link Artificial Neural Networks for Denoising of Image Corrupted by Salt and Pepper Noise" *International Journal of Recent Trends in Engineering (Computer Science)*, Vol. 1, No. 1, pp 413-417, June 2009.
3. Babita Majhi and G. Panda, "Cascaded Functional Link Artificial Neural Network Model for Nonlinear Dynamic System Identification", *International Journal of Artificial Intelligence and Soft Computing*, vol. 1, Nos. 2/3/4, pp. 223 – 237, 2009.
4. Babita Majhi and G. Panda, "A Hybrid Functional Link Neural Network and Bacterial Foraging Approach for Efficient Identification of Dynamic Systems", *International Journal of Applied Artificial Intelligence in Engineering Systems*, vol. 1, no. 1, pp. 91-104, January-June 2009.

5. R. Majhi, G. Panda and G. Sahoo, "Development and Performance Evaluation of FLANN based Model for Forecasting of Stock Markets", *Expert Systems with Applications*, Elsevier, vol. 36, no. 3, part 2, pp. 6800-6808, April 2009.
6. Babita Majhi and G. Panda, 2009, "Identification of IIR systems using comprehensive learning particle swarm optimization", *International Journal of Power and Energy Conversion*, vol. 1, no. 1, pp. 105-125, 2009.
7. Babita Majhi and G. Panda, 2009, "Identification of IIR systems using comprehensive learning particle swarm optimization", *International Journal of Power and Energy Conversion*, vol. 1, no. 1, pp. 105-125, 2009.
8. D. Ghosh and T. K. Sarkar, "Three Antenna Array Design for Buried Object Detection", *Wiley Microwave and Optical Technology Letters*, Wiley Interscience, Vol 52, Issue 2, 8 Dec 2009, pp. 338-343.
9. D Ghosh, T. K. Sarkar and E. L. Mokole, "Design of a Wide-Angle Biconical Antenna for Wideband Communications", *Progress in Electromagnetic Research B*, Vol. 16, pp. 229-245, 2009.

Seminars/Workshops/Conferences:

1. Sudhansu Mishra, R. Majhi, G. panda and S. Meher, "Comparative Performance Evaluation of Multiobjective Optimization Algorithms for Portfolio Management", *IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09)*, Coimbatore, pp. 1338-1342, 9-11 December 2009.
2. R. Majhi, B. Majhi, M. K. Mishra and G. Panda, "Forecasting of Retail Sales Data using Differential Evolution", *IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09)*, Coimbatore, pp. 1343-1348, 9-11 December 2009.
3. R. Majhi, B. Majhi, S. Mishra, M. Rout and G. Panda, "Efficient sales forecasting using PSO based adaptive ARMA model", *IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09)*, Coimbatore, pp. 1333-1337, 9-11 December 2009.
4. A. Sailaja, A. K. Sahoo, G. Panda and V. Baghel, "A recurrent neural network approach to pulse radar detection", *IEEE INDICON 09*, Gandhinagar, pp. 1-4, 18-20 December 2009.
5. A. K. Sahoo, G. Panda and P. M. Pradhan, "Generation of pulse compression codes using NSGA-II", *IEEE INDICON 09*, Gandhinagar, pp. 1-4, 18-20 December 2009.
6. Satyasai Jagannath Nanda, Sasmita Kumari Behera and Ganapati Panda, "Development of a Nonlinear Model of Unijunction Transistor using Artificial Immune System", *IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09)*, Coimbatore, pp. 725-730, December 2009.
7. Sitanshu Sekhar Sahu, Ganapati Panda and Satyasai jagannath Nanda, "Improved Protein Structural Class Prediction Using Genetic Algorithm and Artificial Immune System", *IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09)*, Coimbatore, pp. 731-735, 9-11 December 2009.
8. Ajit Kumar Sahoo, Ganapati Panda and Pyari Mohan Pradhan, "Efficient Design of Pulse Compression Codes Using Multiobjective Genetic Algorithm", *IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09)*, Coimbatore, pp. 324-329, 9-11 December 2009.

9. Sudhansu kumar Mishra, Ganapati Panda and Sukadev Meher, "Multiobjective Particle Swarm Optimization Approach to Portfolio Optimization", IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09), Coimbatore, pp. 1612-1615, 9-11 December 2009.
10. R. Majhi, G. Panda and Babita Majhi, "Robust prediction of stock indices using PSO based adaptive linear combiner", IEEE World Congress on Nature and Biologically Inspired Computing (NaBIC09), Coimbatore, pp. 312-317, 9-11 December 2009.
11. Vikas Baghel, P.Srihari, G. Panda, K. Rajarajeswari "Performance Evaluation Of Phase Coded Radar Signals Using Functional Link Artificial Neural Network", International Radar Symposium India – 2009 (IRSI 2009), Bangalore, india, Dec 8-11, 2009.
12. T. Panigrahi, P. M. Pradhan, G. Panda, Babita Majhi and B. Mulgrew, "Robust distributed optimization in wireless sensor network", IEEE International Conference on Advances in Recent Technologies in Communication and Computing (ARTCom 2009), Kottayam, Kerela, pp. 249-253, 27-28 Oct 2009.
13. D Ranganadam, Pavankumar Gorpuni, G. Panda "A Novel Fast motion estimation method based on based on Clonal particle Swarm Optimization (CPSO)", 2009 International Conference on Mechanical and Electronics Engineering (ICMEE)
14. Babita Majhi, G. Panda and B. Mulgrew, "Robust identification and prediction using Wilcoxon norm and Particle Swarm Optimization", Proc. Of 17th European Signal Processing Conference(EUSIPSO 2009), Glasgow, Scotland, 24-28 August 2009.
15. Babita Majhi, G. Panda and B. Mulgrew, "Nonlinear identification over adaptive networks using distributed PSO algorithms", IEEE Congress on Evolutionary Computation (CEC 2009), Norway, pp.2076-2082, May 18-21, 2009.
16. S. J. Nanda, G. Panda and Babita Majhi, "Development of Immunized PSO Algorithm and Its Application to Hammerstein Model Identification", IEEE Congress on Evolutionary Computation (CEC 2009), Norway, pp.3080-3086, May 18-21, 2009.
17. Nithin V George, Sitanshu Sahu, L. Mansinha, K. F. Tiampo and Ganapati Panda "Time Localized Band Filtering Using Modified S-Transform" International Conference on Signal Processing Systems (ICSPS), Singapore, May 15-17, 2009
18. C. N. Bhende, "Stand-Alone Wind Energy Supply System", 3rd International Conference on Power Systems, IIT Kharagpur, Dec. 2009.

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Journals:

1. Mund. S.K 'Looking for the "Hero": Narayan's Valorisation of the Female Self and The Guide.' Indian Legendary Writers in English: Mulk Raj Anand, R. K. Narayan and Raja Rao. Ed. Dr Jaydeep Sarangi. Delhi: Authorspress, 2009. 75-90.
2. Mund. S.K 'Lost in 'a strange light': An Enquiry into Toru Dutt's Legacy'. Indian English Women Poets. New Delhi: Creative Books, 2009. Eds. Anisur Rahman and Ameena Kazi Ansari. 176-193.
3. Mund. S.K "Resistance and Reasoning: Shoshee Chunder Dutt's Narration of the 'Sepoy Mutiny.'" 1857 and After: Literary Representations. Eds. R. N. Rai, Anita Singh & Archana Kumar. New Delhi: Pencraft International, 2009. 157-166.
4. Panda, Punyashree. "Tayo's Archetypal Journey: The Traits of Fantasy in Leslie Marmon Silko's Ceremony." The Intersection of Fantasy and Native America: From H. P. Lovecraft to Leslie Marmon Silko. Ed. Amy H. Sturgis and David Oberhelman, Oklahoma: Mythopoeic Press, 2009.

5. Panda, Punyashree. Review of Susan Edmond's *Grotesque Relations*. *Journal of American Studies* 43 (2009): e47.
6. Panda, Punyashree and Minakshi Prasad Mishra. "The Plight of the Marginal in Pre-Independence India: A Study of Mulk Raj Anand's *Untouchable*." *Seva Bharati Journal of English Studies* Vol V. (2009): 71-78.
7. Panda, Punyashree. "Corporate Communication: An Essential Tool for Modern Management Practices." *Emerging Trends in Corporate Communication*. Ed. Madhavi S. Pandya and S.F. Chandra Sekhar. 2009. 1-8.
8. Sahu ,N.C. & G . Gupta(2010), "Intensity of Electricity in India: Application of Kuznet Curve" *International of Journal of Business Management, Economics and Information Technology*, Vol-2, No.1, Jan-June, pp. 127-132

Seminars/Workshops/Conferences:

1. Satapathy, A. Identity and Resistance: A Brown Man's Idea of England' at the annual conference of the Indian Association for Commonwealth Literature and Language Studies (IACLALS) on Word, Image and Music in the Age of New Media: Postcolonial Readings (Utkal University, Bhubaneswar from 4-6 January 2010).

FINANCIAL INFORMATION

Sl No.	RECEIPTS	Current Year (2009-10)	Previous year (2008-09)	PAYMENTS	Current Year (2009-10)	Previous year (2008-09)
I	Opening Balance			EXPENSES		
	a) Cash in Hand			a) Establishment Expenses	138,279.0	794,280.00
	b) Bank Balances			b) Administrative Expenses	13,245,317.00	4,166,564.00
	i) In Current accounts					
	ii) In deposit accounts			Payments made against funds for various projects		
	iii) In Savings accounts	48,698,172.00				
				Investments and Deposits made		
II	Grants Received					
	a) From Govt. of India		75,000,000.00	a) Out of Earmarked/Endowment Fund		
	From MHRD	375,000,000.00				
	From MSJE	1,061,920.00				
	b) From State Government			b) Out of Own Funds		278,000,000.00
	c) From Other Sources (Details)					
	(Grants from Capital and Revenue expenses to be Shown Separately)					
				Expenditure on Fixed Assets & Capital Work-in-progress		

Sl No.	RECEIPTS	Current Year (2009-10)	Previous year (2008-09)	PAYMENTS	Current Year (2009-10)	Previous year (2008-09)
III	<u>Income on Investments from</u> :			a) Purchase of Fixed Assets	7,137,430.00	1,531,729.00
	a) Earmarked/Endowment Fund			b) Expenditure on Capital Work-in-Progress		20,000,000.00
	c) Own Funds (other Investment)	-	1,110,800.00	<u>Refund of Surplus money/Loans</u>		
				a) To the Government of India		
IV	<u>Interest Received</u> :			b) To the State Government		
	a) On Bank Deposits	4,480,523.06	30,523.00	c) To other providers of funds		
	b) Loans, Advances etc					
				<u>Finance Charges (Interest)</u>		
V	<u>Other Income</u>	4,914,592.00		<u>Other Payments</u>		
	(Project, Fees, Fine, & Tender Fee etc.)					
VI	<u>Amount Borrowed</u>			<u>Loans (Liability)</u>		
				Advance From Ranjan Banerjee	7,750.00	
				Atul Prakash Trivedi	254.00	
				Ratul Bandhyopadhyaya	7,074.00	

SI No.	RECEIPTS	Current Year (2009-10)	Previous year (2008-09)	PAYMENTS	Current Year (2009-10)	Previous year (2008-09)
VII	Other Receipts			Current Liabilities		
				Sundry Creditors	86,630,354.20	
	Encashment of Investment		278,000,000.00	SALARY PAYABLE	12,169,752.90	
				Car Advance(M.Chakraborty)	29,500.00	
	Rectification Entries relating to Expenditures			EMD	100,000.00	
	Administrative Expenses			G I S Payable	1,320.00	
	Refund of Travelling and Conveyance	2,441.06		G P F Payable	466,211.00	
	Bank Charges	240.50		L I C	301.00	
	Misc Expenses	2,777,481.00		New Pension Scheme	631,382.00	
	Scholarship for Student	187,000.00		Performance Security	871,887.00	
				P.Tax	60,735.00	
	Current Liabilities			Rent Payable	4,250,513.00	
	Sundry Creditors	251,957.00		TDS	2,507,413.00	
	EMD	5,956,868.00		Tech Coop Credit Society	1,000.00	
	Performance Security	3,507,775.25		T F S	260.00	
	Rent Payable	192,125.00		Current Assets		
	TDS Payable	760,925.00		Loans & Advances (Asset)	98,574,300.50	
				Sundry Debtors	3,100.00	

Sl No.	RECEIPTS	Current Year (2009-10)	Previous year (2008-09)	PAYMENTS	Current Year (2009-10)	Previous year (2008-09)
	<u>Current Assets</u>			Prepaid Telephone Charges	47,450.00	
	Loans & Advances (Asset)	20,948,384.00		Rent Advance	3,000,000.00	
	Sundry Debtors	16,984,645.00		Security Deposit	29,000.00	
	D D Collected	356,000.00		Term Deposits	170,000,000.00	
	Grant-in Aid(Claims Receivable)	40,000,000.00		Contingent Advance		950,578.00
	Tuition Fees and Subscription Receivable	3,577,375.00				
				Closing Balances		
				a) Cash in Hand		
				b) Bank Balances		
				i) In Current accounts		
				ii) In deposit accounts		
				iii) In Savings accounts	129,747,840.27	48,698,172.00
	TOTAL	529,658,423.87	354,141,323.0	TOTAL	529,658,423.87	354,141,323.00

Permanent Campus Site

PERMANENT CAMPUS SITE

IIT Bhubaneswar envisages building a state-of-the-art campus having all infrastructure and facilities for achieving excellence as a global educational hub. The institute has initiated steps for building its new campus in the 936 acres of land provided by the Government of Orissa at Arugul, about 25kms from the city of Bhubaneswar. The campus will be built for a population of 10000 students, 1000 faculty and 1100 supporting staff with a total population of about 20000 in different phases. The first phase is expected to be completed by 2013 with a total population of 2500 students, 250 faculty and 275 supporting staff making a total population of 5000. The campus is expected to grow over the next 10-15 years. The campus as a whole will have an international ambience with necessary up to date facilities. The structure and composition of the building will be unique and distinct. The whole campus will be universally accessible and barrier free. IIT Bhubaneswar will be an environment friendly, green campus. A science park will be an integral part of the institute. The park will house a large number of industry sponsored R&D activities to facilitate practice relevant education. The students will get an opportunity for hands on experience to face the reality. The park will be critical for the mission of IIT Bhubaneswar for the present and the future.





Meeting of BOG in New Delhi on 4th March 2010



भारतीय प्रौद्योगिकी संस्थान भुवनेश्वर
INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR