ADULT, CONTINUING EDUCATION & EXTENSION

Phone : + 91-33-2414-6236
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Int. : 2290/2530
H.O.D. : Prof. Tandra Mitra
E-mail : hod@acee.jdvu.ac.in

1. (A) Courses Offered: Details of the Courses offered during the period from December 2008 to December 2009 may be found in the Annexure ‘A’ attached herewith.

(B) Number of Faculty Members: Four (4)

2. (A) Area of Research Activities: Adult Education & Continuing Education.

(B) Major Research Project:

Dr. P. S. Chakraborty
‘Capture and Analyze: The behavioural abnormalities of children with special need through skill development programme’. Minor Research Grant, Jadavpur University.

3. (A) Invited Lectures Delivered / Session Chaired:

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Type of Participation</th>
<th>Name of the Seminar</th>
<th>Place / Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 25.12.2008</td>
<td>Media and Terrorism</td>
<td>Panihati Mela</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 25.1.2009</td>
<td>Media and Reality Show</td>
<td>Uttor Kolkata</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 8.3.2009</td>
<td>Workshop on training for self help groups</td>
<td>Prasar Samiti</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 13.4.2009</td>
<td>Journalism Education Theory &amp; Practice</td>
<td>Department of Communication &amp; Mass Communication of Naihati Rishi Bankim College</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 18.4.2009</td>
<td>Workshop on Self help group &amp; sustainability</td>
<td>Bangiya Saksharata Prasar Samiti</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 22.8.2009</td>
<td>Development Communication</td>
<td>Kolkata Information Centre, Govt. of West Bengal</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 15.9.2009</td>
<td>Studies in Communication</td>
<td>Kolkata Information Centre, Govt. of West Bengal</td>
</tr>
<tr>
<td>Sri Santwan Chattopadhyay</td>
<td>Lecture delivered on 24.10.2009</td>
<td>Developmental stories in media</td>
<td>Kolkata Information Centre, Govt. of West Bengal</td>
</tr>
</tbody>
</table>
3 (B) Seminar/Workshop/Conference/Symposium Attended:

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Name of the Seminar</th>
<th>Place</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Santwan</td>
<td>International Workshop on Conflict Reporting</td>
<td>American Center</td>
<td>23.2.2009 &amp; 24.2.2009</td>
</tr>
<tr>
<td>Dr. Partha Sarathi</td>
<td>National Seminar on Engineering Education under changing Global Scenario</td>
<td>Jadavpur University</td>
<td>24.3.2009</td>
</tr>
<tr>
<td>Dr. Partha Sarathi</td>
<td>Workshop on Pedagogical tools for Knowledge Management in Hyatt Regency</td>
<td>28.3.2009</td>
<td></td>
</tr>
</tbody>
</table>

3 (C) Seminar/Workshop/Conference/Symposium Organised:

(i) International Workshop on 'Change focus in Continuing Education in Canadian Universities under changing Global Scenario' was organized on 3rd February, 2009. Prof. Howard S. Davidson and other foreign delegates from University of Manitoba, Canada participated in the workshop.

(ii) International Workshop on 'Community Colleges and Mass Education' was organised on 6th February, 2009. Prof. Valerie Palamountain, Dean of Workforce Service, Piedmont Virginia Community College, USA and other foreign delegates from Virginia Community College System, USA, participated in the workshop.

(iii) Workshops entitled (i) 'Financial Management in Educational Institutions' and (ii) 'Knowledge Commission on Education' were organized on 28th February, 2009. Eminent speakers of the relevant field participated in the workshop.

(iv) Workshops entitled (i) Human Relationship - Interpersonal relations and dialogue' and (ii) Role of Information Technology in Higher Education' were organized on 7th March, 2009. Eminent speakers of the relevant field participated in the workshop.

(v) Workshops entitled (i) ‘Financial Management in Educational Institutions’ and (ii) ‘Emerging Challenges in Education and new directions in the role of teachers’ were organized on 14th March, 2009. Eminent speakers of the relevant field participated in the workshop.

3 (D) Orientation Courses/Refresher Courses Attended:

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Title of the Course</th>
<th>Duration</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Partha Sarathi</td>
<td>Reliability, Availability and Maintainability (RAM) Engineering in Industries</td>
<td>3 Weeks (From 22.06.2009 to 11.07.2009)</td>
<td>Department of Production Engineering, Jadavpur University</td>
</tr>
</tbody>
</table>
3 (E) Orientation Courses/Refresher Course/Project Organized:

4 (A) Books/Monographs etc. Published:

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Name of the Article</th>
<th>Name of the Journal</th>
<th>Volume / Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Dr. Tandra</td>
<td>Lifelong learning</td>
<td>Lifelong Learning</td>
<td>V 1, N 1, 2008</td>
</tr>
<tr>
<td></td>
<td>A changed Paradigm in Educational Order</td>
<td>&amp; Development Journal</td>
<td></td>
</tr>
<tr>
<td>Prof. Dr. Tandra</td>
<td>Continuing Education for Technocrats - Indian Perspective</td>
<td>Edited Volume on Facets of Continuing Education, Department of Adult, Continuing Education, Andhra University</td>
<td>May, 2009</td>
</tr>
<tr>
<td>Dr. P. S.</td>
<td>Analytic Network Process</td>
<td>Journal of Cost</td>
<td>2009</td>
</tr>
<tr>
<td>Chakraborty, Dr. G.</td>
<td>Approach for the Supplier Selection Process (Accepted)</td>
<td>Management</td>
<td></td>
</tr>
<tr>
<td>Majumder and Prof. B. Sarkar</td>
<td>of a Manufacturing Organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sri Santwan</td>
<td>Sanskritite Upanibesh (in Bengali)</td>
<td>Ganamadhyam Barta, V 1, Issue 1, Govt. of West Bengal</td>
<td>June, 2009</td>
</tr>
<tr>
<td>Chattopadhyay</td>
<td></td>
<td></td>
<td>pp – 13 – 15</td>
</tr>
</tbody>
</table>

5 Collaborative Programmes: Virginia Community College Systems, USA. University of Manitoba, Canada. Courses organised in collaboration with different organisations have been shown in Annexure ‘A’.

6 Major Achievements: Around 450 participants received Certificates after completion of different courses offered by the department. Around 470 rural and urban underprivileged women and street children were trained in vocational trades at 7 extension centres.
GRADUATE LEVEL COURSES :

Title of the Course :
- B.Ed. in Special Education (Locomotor Impairment and Neuro-Muscular Disorder) (Conducted in collaboration with Indian Institute of Cerebral Palsy)
- B.Ed. in Special Education (Mental Retardation) (Conducted in collaboration with Manovikash Kendra)

Duration : 1 Year • 1 Year
No. of Students : 28 • 28
Target Group : Students, NGO Workers • Students, NGO Workers

POST - GRADUATE DIPLOMA LEVEL COURSES :

Title of the Course :
- Post Graduate Diploma in Mass Communication
- Post Graduate Diploma in Software Engineering and Business Management (Conducted in collaboration with Globysyn Technologies)
- Post Graduate Diploma in Psychological Counselling (Conducted in collaboration with Samikhani)

Duration : 1 Year • 1 Year • 2 Years
No. of Students : 141 • 14 • 22
Target Group : • Students, Freelance Media Persons, Young Professionals
- Engineering Graduates, Young IT Professionals & Managers
- Students, NGO Workers, Medical Practitioners/ Professionals

DIPLOMA LEVEL COURSE :

Title of the Course : Diploma in Food Processing & Customised Management
Duration : 1 Year
No. of Students : 35
Target Group : Students, NGO Workers

CERTIFICATE LEVEL COURSES :

Title of the Course :
- Technician Training Course in Air-Conditioning and Refrigeration (conducted in collaboration with St. Thomas Technical Training Centre)
- Computer Hardware (conducted in collaboration with St. Thomas Technical Training Centre)
- Basic Networking (conducted in collaboration with St. Thomas Technical Training Centre)
- Risk Assessment and Safety in Chemical Process
- Capacity Building in Reproductive Child Management (conducted in collaboration with CINI)
- Waste Water Treatment in chemical Industry
- Basic Management of Cerebral Palsy Course for Medical Professionals (conducted in collaboration with Indian Institute of Cerebral Palsy)
- Community Management (in association with Indian Association)
- Offset Printing & Binding
- Acupuncture
- Educational Administration (in collaboration with Nopany Charitable Trust)
- Air Pollution Measurement & Abatement
- Human Rights : Theory & Practice

**Duration**
- 1 year
- 6 Months
- 4 Months
- 3 Weeks
- 12 Weeks
- 3 Weeks
- 4 Weeks
- 12 Weeks
- 20 Weeks
- 16 Weeks
- 12 Weeks
- 3 Weeks
- 4 Weeks

**No. of Students**
- 14
- 11
- 12
- 09
- 12
- 16
- 11
- 12
- 07
- 17
- 18
- 14

**Target Group**
- School Dropouts
- School Dropouts & Unemployed Youth
- School Dropouts & Unemployed Youth
- Engineering Graduates, Science Graduates, NGO Workers
- Students, NGO Workers
- Engineering Graduates, Science Graduates, NGO Workers
- Medical / Rehabilitation Professionals
- Unemployed Youths, NGO Workers
- Unemployed Youths
- Medical Practitioners (MBBS/BHMS/DMS/BAMS/BDS)
- Unemployed Youths and Persons engaged in Educational Institutions
- Engineering Graduates, Science Graduates, NGO Workers
- Unemployed Youths, NGO Workers

**COURSES FOR THE PERSONS WITH SPECIAL NEEDS :**

**Title of the Course**
- Computer Operation Course for recovering mentally ill and chemical dependency patients (conducted in collaboration with Antara Psychiatric Centre)
- Computer Operation Course for the Deaf and Physically Challenged Persons (conducted in collaboration with Silence Training Institute)
- Art & Craft Course for the Deaf and Physically Challenged Persons (conducted in collaboration with Silence Training Institute)
• Desk Top Publishing (conducted in collaboration with Indian Institute of Cerebral Palsy)
• Web Designing & Publishing (conducted in collaboration with Indian Institute of Cerebral Palsy)
• Office Management (conducted in collaboration with Indian Institute of Cerebral Palsy)
• Database Management (conducted in collaboration with Indian Institute of Cerebral Palsy)

Duration: 12 Weeks • 1 Year • 1 Year • 24 Weeks • 24 Weeks • 16 Weeks • 8 Weeks

No. of Students: 05 • 15 • 04 • 04 • 04 • 04 • 05

Target Group: Recovering Mentally ill • Persons with disabilities • Persons with disabilities • Youth with Multiple Disabilities • Youth with Multiple Disabilities • Youth with Multiple Disabilities • Youth with Multiple Disabilities

VOCATIONAL COURSES FOR THE MARGINALISED:

Title of the Course:
• Computer Literacy Programme (conducted in collaboration with Bhola Basu Smriti Bhavan)
• Sewing and Tailoring (Kalikapur I No. Gram Panchyat)
• Sewing and Tailoring (Kalikapur II No. Gram Panchyat)
• Sewing and Tailoring (Pratapnagar Gram Panchyat)
• Sewing – Basic (Emmanuel Ministries at Ripon Street)
• Sewing – Advanced (Emmanuel Ministries at Ripon Street)
• Automobile Mechanic – Basic (Emmanuel Ministries at Ripon Street)
• Automobile Mechanic – Advanced (Emmanuel Ministries at Ripon Street)
• Sewing – Basic (Emmanuel Ministries at Lake Gardens)
• Sewing – Advanced (Emmanuel Ministries at Lake Gardens)
• Sewing (Kolkata Socio-Cultural Research Institute)
• Sewing and Tailoring (16 No. Ward) (BSPS)

Duration: 6 Weeks • 6 Months • 6 Months • 6 Months • 6 Months • 6 Months • 6 Months • 6 Months • 6 Months • 6 Months • 6 Months

No. of Students: 27 60 60 60 40 30 20 40 30 50 50 50

Target Group: Unemployed Youths, NGO Workers • Rural Women • Rural Women • Street Children • Street Children • Street Children • Street Children • Street Children • Street Children • Street Children • Urban Underprivileged/ Minority Women • Urban Underprivileged/ Minority Women.
ARCHITECTURE

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It. :2209/2708
H.O.D. : Prof. Shubhrajit Das
E-mail : hod@arch.jdvu.ac.in

1 A. Courses Offered

<table>
<thead>
<tr>
<th>Name of the course</th>
<th>Duration of course</th>
<th>No. of Students enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Architecture</td>
<td>5 Years</td>
<td>31</td>
</tr>
<tr>
<td>Master of Architecture</td>
<td>2 Years</td>
<td>6</td>
</tr>
</tbody>
</table>

B. Number of Faculty Members : 9

2 A. Area of Research Activities

Prof. Shubhrajit Das:

- Exploring the ‘In Between’ in the Spatial Intervals of Tadao Ando.
- The study aims to inquire into the role of Light and Geometry that contributes to the ‘In Between’ character of spaces in the works of Tadao Ando
- Architectural and Urban Conservation
- Sustainable Development
- Urban design
- Urban hydrology and drainage
- Eco-City Planning
- Energy Efficient Architecture
- Town and Regional Planning
- Transportation Planning

B. Major Research Project

Departmental/Individual | Name of the Project                                      | Funding Agency |
-------------------------|-----------------------------------------------------------|----------------|
Tapas Kumar Bhattacharyya| "Strategic shelters for the Indian Defence in the hilly terrains of India" (Principal Investigator) | DRDO funded |
Jayita Guha Niyogi      | Principal Investigator for Research project under PURSE, Jadavpur University titled Study to develop a land use cum stochastic transportation model for a better Kolkata | DST |
Dr. Shivashish Bose (Individual) | Doctoral Thesis titled "Conservation as an Element of Urban Design and a Tool for Sustainable Development in Asian Cities: Case Study Kolkata". Awarded Ph.D. (Engineering) Degree on 12th November 2008, None |
Dr. Shivashish Bose (Individual)
Post-Doctoral Research at the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) founded by UNESCO, working as Visiting Fellow during May-June 2009; Title of Research- “Conservation as an Element of Urban Design and a Tool for Sustainable Development”
ICCROM, Italy

Dr. Madhumita Roy
ON-LINE system for sanctioning building plans for West Bengal Housing Infrastructure Development Corporation (WBHIDCO)

Dr. Madhumita Roy
ON-LINE system for sanctioning building plans for Howrah Zilla Parishad (HZP), West Bengal

Dr. Madhumita Roy
ON-LINE system for sanctioning building plans for Kolkata Municipal Corporation (KMC)

Dr. Madhumita Roy
Formulation of building rules & regulations for Kolkata Municipal Corporation (KMC)

Dr. Madhumita Roy
R & D Project on The Feasibility Of Bamboo Structure For Possible Inclusion Into NBC & CPWD Schedule for NMBA, DST

Dr. Suchandra Bardhan
“Master Conservation Planning (Historic Landscape) of City Palace Complex, Udaipur- Ph II” Getty Foundation (through DRONAH)

Dr. Suchandra Bardhan
Environmental Impacts Of Contemporary Urban Multi-Storied Residential Buildings

Dr. Suchandra Bardhan
Resource consumption pattern in construction of High-rise Buildings

Sri Debashish Das
PhD on “Urban Development Model for developing countries from climate change perspective-An approach to Tomorrow’s Low Carbon Cities”

Sri Debashish Das

Sri Debashish Das
Sustainable Community Development Plan with special emphasis on cultural and economical sustainability, case study Kumartuli, Kolkata for Swedish International Development Cooperation Agency.
Sri Debashish Das

“Strategic shelters for the Indian Defence in the hilly terrains of India" (Co - Coordinator)  DRDO funded

Sri Debashish Das

Principal Investigator for Research project under FURSE, Jadavpur University titled “Developing framework for an integrated approach to Ecocity planning for Megacities- Case Study of Kolkata”, DST

3 A. Invited Lectures Delivered (Session Chaired)

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Type of Participants</th>
<th>Name of the Seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Shubhrajit Das</td>
<td>Architects/ Engineers/ Construction Consultants</td>
<td>IIA West Bengal Chapter Convention Kolkata 1 hour</td>
</tr>
<tr>
<td>Prof. Tapas Kumar Bhattacharyya</td>
<td></td>
<td>Lecture delivered Influence of ancient art on Contemporary Architecture Spain September 2009</td>
</tr>
<tr>
<td>Dr. Shivashish Bose</td>
<td>Chaired one Session and also Presented two Papers</td>
<td>Conservationists, Archaeologists, Architects, Planners, Historians, Restorers, Administrators &amp; Bureaucrats 6th International Conference on Science &amp; Technology in Archaeology and Conservation Rome, Italy December 10-11, 2008</td>
</tr>
<tr>
<td>Dr. Shivashish Bose</td>
<td>Delivered Guest Lecture</td>
<td>Faculty Members and PG-Students of Urban Design and Planning, and Researchers of Doctoral Degree of the University of Florence, Italy Guest Lecture Meeting Hall of Prof. R. Paloscia, HOD-Urban Planning, University of Florence, Italy December 12, 2008</td>
</tr>
<tr>
<td>Dr. Shivashish Bose</td>
<td>Chaired the Session</td>
<td>Faculty Members and Students of Architecture from Eastern India ZONASA (Zonal Competition of National Association of Students of Architecture) 2008; Chaired One Session on “Interior Design” Indian Institute of Chemical Engineers Auditorium, Jadavpur University Duration two hours October 2008</td>
</tr>
<tr>
<td>Dr. Shivashish Bose</td>
<td>Delivered Guest Lecture</td>
<td>International Participants of International Training Programme by Swedish Institute Second Phase of International Training Programme on ‘Integrated Urban Planning’ imparted by the Hifab International on behalf of SIDA –Sweden Kenilworth Hotel in Kolkata October 21, 2008</td>
</tr>
</tbody>
</table>

B. Seminar/Workshop/Conference/Symposium Attended

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Name of the Paper Presented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Suchandra Bardhan</td>
<td>&quot;Role of Photovoltaic in Environmentally Sustainable Tourism: A Conceptual</td>
</tr>
</tbody>
</table>
**Study** 18th International Photovoltaic Science & Engineering Conference (PVSEC 18) Science City, Kolkata 19th-23rd January, 2009

Dr. Suchandra Bardhan

“Sustainable Green Buildings” at the Special Session of Environment Sub-congress 7th All India Peoples’ Technology Congress organized by Forum of Scientists, Engineers & Technologists (FOSET) Science City, Kolkata. 6th-7th February 2009

Dr. Suchandra Bardhan

“Kolkata- An Expanding Metropolis” Annual Conference of Indian Society of Landscape Architects (ISOLA) - ISOLA 2009 Delhi India Habitat Centre, New Delhi 20th-21st February 2009.

Dr. Suchandra Bardhan


Dr. Suchandra Bardhan


Sri Debashish Das


Sri Debashish Das


Sri Debashish Das

Sustainable Community Development Plan with special emphasis on cultural and economical sustainability, case study Kumartuli, Kolkata International Training Programme on “Integrated Urban Planning” Phase-II Maputo, Mozambique 2nd Nov, 2009 to 11th Nov, 2009

**C Seminar/Workshop/Conference/Symposium Organized**

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Name of the Paper Presented</th>
<th>Name of the Seminar/ Conference</th>
<th>Place</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Shivashish Bose</td>
<td>1) Durga Puja Festival in Kolkata: Traditional Cultural Heritage in Temporary Urban Art Form; &amp; 2) Ganges &amp; Varanasi- Relationship &amp; Threat from Global Warming 6th International Conference on Science &amp; Technology in Archaeology and Conservation Rome, Italy December 10-11, 2008</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
D. Orientation Courses/Refresher Courses Attended

<table>
<thead>
<tr>
<th>Name of the Teacher</th>
<th>Title of the Course</th>
<th>Duration</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Debashish Das</td>
<td>International Training Programme on “Integrated Urban</td>
<td>10th Mar, 2009 to</td>
<td>Karlskrona and Stockholm in Sweden</td>
</tr>
<tr>
<td></td>
<td>Planning” Phase- I</td>
<td>8th April, 2009.</td>
<td></td>
</tr>
<tr>
<td>Sri Debashish Das</td>
<td>International Training Programme on “Integrated Urban</td>
<td>2nd Nov, 2009 to</td>
<td>Maputo, Mozambique</td>
</tr>
<tr>
<td></td>
<td>Planning” Phase- II</td>
<td>11th Nov, 2009</td>
<td></td>
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</table>

E. Orientation Courses/Refresher Courses Organized

| Name of the Teacher | Title of the Course                                      | Duration          | Place |

4. A. Books/Monographs etc. Published

| Name of the Teacher | Name of the Book               | Name of the Publisher |

B. Articles Published in Journals

| Name of the teacher | Name of the Articles | Name of the Journal | Date of Publication | Volume |

Prof. Shubhrajit Das

Architecture Education. Theory vs. Practice Indian Inst. of Architects West Bengal Chapter Convention May 2009

Sri Debashish Das


Sri Debashish Das

Urban Sustainability : Guidelines and approaches for Preservation, Rejuvenation and Renewal of an Old Historic Settlement of Kumartuli, Kolkata, Journal of Indian Institute of Town Planners, Jan-Mar, 2009 Vol-6, Number-1

5. Collaborative Programmes

a. Prof. Tapas Kumar Bhattacharyya organized Students exchange Programmes as Head of the Department with University at Milan, Italy under Erasmus Mundus scheme and with School of Art, Ourense, Spain.

b. E-TV-Network carried out shooting of Landscape Architecture classes including interviews of students and teachers (Dr. S.Bardhan and Sri D. Das) in the Dept. for its Career and Education Show ‘Yuva Bharat’.

6. Major Achievements:

a. Prof. Shubhrajit Das organized a presentation by the Internationally famous Architect/Academician, Prof. B.V. Doshi, in the Department

b. Prof. Shubhrajit Das organized a presentation on Design by eminent Designer/Architect/Academician, Prof. Ravi Hazra, earlier Professor and Head, Industrial Design, IIT Bombay and Professor CEPT University. He is currently the Director, Goa College of Architecture.
c. Prof. Tapas Kumar Bhattacharyya acted as an expert in the Building Committee of the Bose Institute, Kolkata.
d. Prof. Tapas Kumar Bhattacharyya acted as a member in the Jury Board for selection of Design entries for a resort in Havelock, A & N under the Andaman Public Works Department, The A & N.
e. Prof. Tapas Kumar Bhattacharyya participated as a member in the process of selection of Design entries for the Students’ Design competition: “Transparency” organized by Saint Gobain (a glass manufacturing co.) in Chennai.
f. Prof. Tapas Kumar Bhattacharyya participated as a member in the process of selection of Design entries for the Students’ Design competition conducted by INSAG (a Govt. of India undertaking on research on Steel).
g. Prof. Tapas Kumar Bhattacharyya acted as an examiner for the Sikkim Public Service Commission, Sikkim.
h. Prof. Tapas Kumar Bhattacharyya rendered consultancy service for construction of a Laboratory in Salt Lake under SAMEER (a Govt. unit under the Ministry of Defence, Govt. of India).
i. Dr. Suchandra Bardhan has been nominated member of the ENVIRONMENT & LANDSCAPE ARCHITECTURE Committee of Indian Institute of Architects for the term 2008-2010.
j. Dr. Suchandra Bardhan along with Prof. B. Ghosh (First Author) has been awarded the Best Poster Award (Visual Presentation) for their paper at the 24th European Photovoltaic Solar Energy Conference and Exhibition (24EUPVSEC), 2009 held in Hamburg, Germany in September 2009.
k. Sri Debashis Das is the member of the team working for designing the demonstrative green building at Jadavpur University campus.
l. Sri Debashis Das is the member for reviewing the applications of the candidates for Paul Foundation Scholarship, Kolkata and the member of Board of Examinations for Indian Institute of Architects, Kolkata Chapter.
m. Sri Debashis Das is the external thesis guide to students of Indian Institute of Architects.
n. Sri Debashis Das is the guide to the students of ETH Zurich while the students visited Kolkata to study various planning aspects in Kolkata.
o. Sri Debashis Das delivered lecture to the students of NIS, Singapore while their academic study visit to Kolkata.
p. Sri Debashis Das is the joint Secretary of Centre for Built Environment, Kolkata, a non-profit NGO working towards development of studies and research works on architecture, urban design and urban planning.
q. Sri Debashis Das is the member of the Souvenir Committee for Indian Institute of Architects, West Bengal Chapter for IIA Convention 2009.
r. Sri Debashis Das is the member of the Committee for the survey of trees, gardens and water bodies of Jadavpur University, which was formed for making
suggestions for planting of new trees, clearing of jungles and beautification of water bodies.

**Major Achievements of the Students:**

The students of Department of Architecture received an overall third place in the Zonal NASA convention, 2009 held in BIT, Mesra, behind IIT (KGP (1st) and CET Bhubaneswar (2nd). In the cultural events, the students got a close 3rd again.

Five students from the final year (session ‘08-’09) ranked within 1st to 10th position at the GATE Entrance Examination. Akash Karak of that batch has got the 1st rank in GATE.

Students of 5th year secured 1st position (Regional) and Jury commendation in Transparency 2009 Design Competition organized by Saint-Gobain Glass.

Students of 5th year secured 1st position (regional) in Archumen, Quiz competition organized by Ethos India.

Students of 5th year got Jury commendation in IGBC design competition.


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**Chemical Engineering**

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H.O.D.: Prof. Ranjana Choudhury  
E-mail: hod@chemical.jdvu.ac.in

1. **Courses Offered:** (Name of the course, duration of course, No. of students enrolled)

<table>
<thead>
<tr>
<th>Total Number</th>
<th>Gender</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>UG 268</td>
<td>33</td>
<td>235</td>
</tr>
<tr>
<td>PG 38</td>
<td>8</td>
<td>30</td>
</tr>
</tbody>
</table>

2. **Number of Faculty Members:** 18 (sanctioned: 29)
2 A. Area of Research Activities: (Broad Areas)

- Advanced chemical Engineering Kinetics
- Bioprocess Engineering
- Bioenergy
- Process intensification
- Nanotechnology
- CFD (Computational Fluid Dynamics)
- Environmental Engineering
- Non-conventional Energy

B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)

List of Ongoing Projects

- “Effect of surface characteristics on heat transfer in a rectangular cavity”, Funded by CSIR (Duration 2007-2009) Prof. Tapas K. Datta
- “Bioremediation of soil using micro-organisms”, Funded by West Bengal Pollution Control Board, (Duration 2007-2009), Prof. Siddhartha Datta
- “Studies on the Anaerobic Filter (AF) using Immobilized Cells for the Treatment of High Fat Effluent of Food Industries”, Funded by UGC, (Duration 2005-2008), Prof. Ranjana Chowdhury
- “Biodetoxification of Mercury Laden Effluent Sludge of Chloralkali Industries”, Funded by UGC, (Duration 2009-2012), Prof. Ranjana Chowdhury
- “Milk nutraceuticals: A biotechnology opportunity for Australian and Indian Dairy Producers”, Funded by DST, under Indo-Australian Biotechnology Fund (IABF), (Duration 2007-2010), Prof. Chiranjib Bhattacharjee
- “Higee Distillation”, Funded by DRDO, (Duration: 2007-2009), Prof. Avijit Bhowal
- “Process Intensification in Wastewater treatment”, Funded by AICIE, (Duration 2007-2009), Prof. Avijit Bhowal
- “Hollow Fiber Contained Liquid Membrane system with Strip Dispersion for Recovery of Metal values”, DST, Govt of India, A. Bhowal and S. Datta (2009-2011)
- “Heavy metal bioremediation of soil using micro-organism”, West Bengal Pollution Control Board, S. Datta and A. Bhowal (2007-2010)
- “Synthesis and Characterization of Nano-particle of Bismuth Telluride and its one dimensional composite with Conducting Polymer” funded by DST, Prof. K. Kar Gupta (2008 onwards)
• “Development of Phosphoric acid gel electrolyte Matrix and Study of its effect on Performance of Fuel Cell” funded by DST, Prof. K. Kar Gupta (2008 onwards)
• “Hollow Fibre contained Liquid Membrane system with Strip dispersion for Recovery of Metal Ions” funded by DST, Prof. K. Kar Gupta (2008 onwards)
• “Cost-effective techniques for mitigation of methane from paddy fields”-sponsored by the World Bank (Technical Education Quality Improvement Programme) (Duration: 2006-2008). Dr. Ujjaini Sarkar

Ozone and its Precursors in the Surface Layer: Predictions using Eulerian Photochemistry Model Funded by ISRO (2009 onwards) Dr. Ujjaini Sarkar

• “Process Intensification, Optimization and Techno-economical Studies on Freeze-drying” funded by UGC. Dr. R. Chakraborty

3 A. Invited Lectures Delivered/Session Chaired:

Prof. P. Bhattacharya
• Chaired a technical session in 60th Chemical Engineering Congress (Chemcon 2007) of IIChE held in December, 2007 at Heritage Institute of Technology, Kolkata.

Prof. R. Chowdhury
• Chaired a technical session in 60th Chemical Engineering Congress (Chemcon 2007) of IIChE held in December, 2007 at Heritage Institute of Technology, Kolkata.
• Delivered invited lecture on “Green Fuel” in the conference on Environment organized by TTTI, Kolkata and VIVEKANANDA Institute of Environment on 4th June, 2009

Editing of Journal
• Edited International Journal of Environmental Engineering, Vol.2, No.s 1/2/3 (Inderscience) along with Prof. S. De, Prof. S. Das Gupta and Prof. Yung Tse Hung.

Prof. C. Bhattacharjee
• Chaired a technical session (TS-9 on 14.12.2007) on “Environmental Science, Engineering and Management” in the National Conference on Frontiers in Chemical Engineering (NCFCE-2007) held at IIT, Guwahati during December 12 - 14, 2007. This session was chaired jointly with Dr. F. I. Khan, Memorial University, Canada.
• Chaired a technical session (TS-15 on 21.12.2007) on “Catalytic Membrane Contactor/Reactors” in the 8th International Conference on Catalytic Membrane Reactor (IIMR8) held at Central Glass and Ceramic Research Institute (CGCRI),
Kolkata, India during December 18 – 21, 2007. The keynote address was delivered by Dr. J.A. Dalmon of France and eminent speakers were Dr. V. V. Volkov of Russia and Dr. B. Chakroborty of Genesis Membrane, India.

- Chaired a technical session on “Chemical Reaction Engineering” (session code: R2E) on December 30, 2007 in the 60th Chemical Engineering Congress (Chemcon 2007) organized by Indian Institute of Chemical Engineers (IIChE) and held at Heritage Institute of Technology, Kolkata.

Dr. U. Sarkar
- Chaired two sessions at CHEMCON-2007.

B. Seminar/Workshop/Conference/Symposium Attended:
(Name of the Teacher, Name of the Paper Presented (if any), Name of the Seminar, Place, Duration)

Prof. P. Bhattacharya
- Chaired a technical session in 60th Chemical Engineering Congress (Chemcon 2007) of IIChE held in December, 2007 at Heritage Institute of Technology, Kolkata.

Prof. R. Chowdhury
- Chaired a technical session in 60th Chemical Engineering Congress (Chemcon 2007) of IIChE held in December, 2007 at Heritage Institute of Technology, Kolkata.

Prof. C. Bhattacharjee
- Chaired a technical session (TS-9 on 14.12.2007) on “Environmental Science, Engineering and Management” in the National Conference on Frontiers in Chemical Engineering (NCFCE-2007) held at IIT, Guwahati during December 12 – 14, 2007. This session was chaired jointly with Dr. F. I. Khan, Memorial University, Canada.
- Chaired a technical session (TS-15 on 21.12.2007) on “Catalytic Membrane Contactor/Reactors” in the 8th International Conference on Catalytic Membrane Reactor (IIMR8) held at Central Glass and Ceramic Research Institute (CGCRI), Kolkata, India during December 18 – 21, 2007. The keynote address was delivered by Dr. J.A. Dalmon of France and eminent speakers were Dr. V. V. Volkov of Russia and Dr. B. Chakroborty of Genesis Membrane, India.
- Chaired a technical session on “Chemical Reaction Engineering” (session code: R2E) on December 30, 2007 in the 60th Chemical Engineering Congress (Chemcon 2007) organized by Indian Institute of Chemical Engineers (IIChE) and held at Heritage Institute of Technology, Kolkata.

Dr. U. Sarkar
- Chaired two sessions at CHEMCON 2007.

C. Seminar/Workshop/Conference/Symposium Organized:
(Name of the Teacher, Name of the Paper Presented (if any), Name of the Seminar, Place, Duration)
Prof. P. Bhattacharya

1. Acted as a member of the organizing committee of Chemical Engineering Congress, 2007, held at Kolkata - Chemcon 2007.

2. Acted as a member of the organizing committee of International Seminar, organized by Indian Institute of Technology, Guwahati on December, 2007.

   - Organized the following courses as a Joint Course Coordinator in collaboration with Department of Adult Continuing Educational and Extension, Jadavpur University.
     1. Risk assessment and safety in chemical process industry
     2. Wastewater Treatment in chemical industry
     3. Air pollution measurement and abatement

Prof. C. Bhattacharjee

- Organized a National Conference on "Zero Effluent Discharge - Latest Development in Recycling" as Organizing Secretary during December 22-23, 2007. The conference was organized on the behalf of "The Institution of Engineers (India), West Bengal State Center, Chemical Engineering Division. The collaborators of this conference were CSIR and DBT, New Delhi. The sponsor was Haldia Petrochemical Limited, Haldia, West Bengal, India.

D. Orientation Courses/Refresher Courses Attended :
   (Name of the Teacher, Title of the Course, Place, Duration)

Dr. Rajat Chakraborty

   - Attended a Workshop on "Application of HYSIS for Simulation of Process Plants-Level-I" during October 20-24, 2008 at University of Calcutta.

E. Orientation Courses/Refresher Course Organized :
   (Name of the Teacher, Title of the Course (if any), Place, Duration)

4. A. Books/Monographs etc. Published :
   (Name of the Teacher, Name of the Book, Name of the Publisher)

Prof. C. Guha


B. Articles Published in Journals :
   (Name of the teacher, Name of the Article, Name of the Journal, Date of Publication, Volume)
(i) *International Journal:*

Prof. (Dr.) T.K. Datta


Prof. P. Bhattacharya


Prof. S. Datta

Prof. A. Mukherjee

Prof. (Dr.) R. Chowdhury
3. C. Chakraborty, R. Chowdhury and P. Bhattacharya Brucic acid based Effluent
Bio-Detoxification of Arsenic Laden Ground Water Through a Packed Bed Column of a Continuous Flow Reactor Using Immobilized Cells, Soil and Sediment Contamination (Taylor & Francis Publication), Accepted for publication (2009).

Prof. (Dr.) C Bhattacharjee


Prof. (Dr.) A. Bhowal


Prof. Dr. K. Kargupta


3. Manigandan, S., Jain, A., Majumdar, S., Ganguly, Kargupta, K. Formation of


6 Manigandan, S., Majumder, S. Asaithambi, S. Ganguly, S. Kargupta, K. and Banerjee, D. Electric field Induced Dewetting and Pattern Formation in Thin Conducting Polymer Film, Sensor and Actuators: B. Chemical, Accepted for Publication.


9 Asai, S., Majumder, S., Gupta, A., Kargupta, K., Ganguly, S. Dynamics and pattern formation in thermally induced phase separation of polymer-solvent system, Computational Material Science, Article in press.


Dr. U. Sarkar


2 Control of the Methane Flux from Water-logged Paddy-Fields: Case studies in the Southern part of West-Bengal, India. Journal of Greenhouse Gas Control (Elsevier), In Press. A. Bana, R. Mukherjee and U. Sarkar.


Dr. D. Roy


Dr. R. Chakraborty


B. National Journal:

Prof. P. Bhattacharya


3. K. Samanta, R Chowdhury, P. Bhattacharya Response of Cell Growth Due to
Change in Chromium Concentration During Bioconversion of Hexavalent Chromium Using Mixed Culture System, Indian Chemical Engineer, 51, No.2 April - June, pp.101 – 110, (2009)

Prof. (Dr.) S.Datta


5. “Assessment of Water Quality of Tolly’s Nullah by Water Quality Index (WQI)”, The Institute of Engineers (India), Volume 88, September, 1-7, 2007.


Prof. (Dr.) R. Chowdhury


Prof. C Bhattacharjee


Prof. A Bhowal


Prof. C Guha


5. Collaborative Programmes :
   - Collaborative work is going on with Australian university
   - Collaborative project is as follows,
     - "Milk nutraceuticals: A biotechnology opportunity for Australian and Indian Dairy Producers", Funded by DBT, under Indo-Australian Biotechnology Fund (IABF), (Duration 2007 – 2010), Prof. Chiranjib Bhattacharjee
• Collaborative project with Hadley Centre (United Kingdom), Title: Validation of NAME-II for trans-boundary pollution. Funding Agency: British Council, Kolkata. Dr. Ujjaini Sarkar.

• Research collaboration with Karlsruhe University regarding Pyrolysis of lignocellulosic Waste and spent engine oil is going on. A German student will work in the department from December, 2009 to March, 2010.

6. Major Achievements:
• Department has developed herbal "Drink, Abir and Candle" at Community Research Laboratory as a part of Outreach program.
• Department is being benchmarked by I. Chem E, UK.

CIVIL ENGINEERING

Phone : +91-33-2414-6210
Int. : 2204/2418
H.O.D. : Prof. Shankar Chakrabarty
E-mail : hod@civil.jdvu.ac.in

1. Area of Research Activities:
• Treatment of Industrial Wastewater
• Plant removal of Organics & Inorganics from Wastewater.
• Surface water Quality Modelling.
• Environmental Consequence of Waste utilization in Agriculture
• Pricing of Industrial Water.
• Air pollution, Noise pollution.
• Geotecnics of Earthquake Engineering.
• Geotecnics of Highway Engineering.
• Geo-Environmental Engineering.
• Soil Structure Interaction.
• Shell Structure.
• Concrete Technology
• Advanced Numerical Analysis.
• Laminated Composite Plates & Shells.

Major Research Project:
• Name of project: Efficacy of Liner System for attenuation of toxic pollutants in an industrial waste landfill system.
Sponsor: DST, Govt. of West Bengal.

Faculty Member’s Involved: S.N.Mukherji (PI), S.Ghosh (CO-PI).

• Name of project: “Assessment of Environmental Consequences for sustainability of waste recycling in present urban agricultural practices”.
  Sponsor: Department of Environment, Govt. of West Bengal.
  Faculty Members Involved: A. Debsarkar (PI), A. Gangopadhyay (CO-PI), S.N.Mukherji (CO-PI), S.K.Mukherjee (CO-PI)

• Name of project: Feasibility Studies for removal of heavy metals from water & waste water using a few low cost technologies.
  Sponsor: DST, Govt. of West Bengal.
  Faculty Member Involved: S. Chakrobarti (PI)

• Name of project: Study the strength and durability of fly ash based geopolymer concrete (Bacterial Concrete)
  Sponsor: AICTE
  Faculty Member’s Involved: Saroj Mandal (PI)

• Name of project: Evaluation of Mechanical, Durability and Micro Structural properties of high volume fly ash concrete (Geopolymer Concrete (Concrete without cement))
  Sponsor: PURSE SCHEME, DST, WB GOVT.
  Faculty Member’s Involved: Saroj Mandal (PI), Kalyan Kr Mandal (CI)

• Name of project: Numerical and experimental study on active control of coupled structural acoustic problems involving laminated composite structures (Coupled Structural Acoustics, Composites, Econometric).
  Sponsor: TEQIP, Jadavpur University.
  Faculty Members Involved: Arup Guha Niyogi, Partha Bhattacharya, Gupinath Bhandary, Subhashish Roy Chowdhuri, Sreyashi Das, Sibnath Chakraborti, Anupam DebSarkar, Madhumita Roy, Jayita Guha Niyogi

• Name of project: Numerical and experimental study on active control of coupled structural acoustic problems involving laminated composite structures (Finite element method to analyse folded plate problem).
  Sponsor: PURSE PROGRAMME, JADAVPUR UNIVERSITY
  Faculty Members Involved: Arup Guha Niyogi, Partha Bhattacharya, Subhashish Roy Chowdhuri

Seminar/Workshop/Conference/Symposium/Attended:

• S.N.Mukherji & S. Ghosh attended Indian Geotechnical Conference, 2008 at Bangalore in December, 2008
Papers Published in Journals/Conferences:

- S.Chakroborti (2009) "Preloading in combination with vertical drain" Proc. of TEQIP Programme held at BESU, 2009
- S.N.Chakroborty (2009) "Acid Rain- a step Forward to Nature General Awareness" Proc. of Seventh All India People’s Technology Congress, Organized By FOSET, 2009
• D. Chakravorty “Natural frequencies and mode shapes of composite cylindrical delaminated shells by finite element”. Journal of Reinforced Plastic and Composites. Accepted in press.
• D.Chakravorty (2009) "Bending characteristics of damaged composite conoidal shells under uniform loading", 3rd International Congress on Computational Mechanical and Simulation. IIT, Mumbai 2009, December


Additional Informations:

• S.Chakroborti, Head, Civil Engineering Department chaired the technical session on “Integrated water and Waste Water Management” held at Jadavpur University, Kolkata by School of Water Resource Engineering, Jadavpur University (2008-09).

• S.Chakroborti, Head, Civil Engineering Department chaired in National Seminar on “Material Management & Infrastructure Development” held in Jadavpur University & organized by Civil Engineering Department (JU) & Society of Civil Engineers (2008-09).

• R.B.Sahu, Professor, CE Dept co-chaired in a technical session (National Seminar) on “Emerging Trends in Ground Improvement”, in Kolkata, May 22-23, 2009.

**Computer Science & Engineering**

Phone : + 91-33-2413-1766  
Ext. : 2574  
H.O.D. : Prof. Chandan Majumdar  
E-mail : hod@cse.jdvu.ac.in/@vsnl.com

1. A. Courses Offered

<table>
<thead>
<tr>
<th>Name of the Course</th>
<th>Duration</th>
<th>No of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Computer Science &amp; Engineering</td>
<td>4 Years</td>
<td>60</td>
</tr>
<tr>
<td>Master of Computer Science &amp; Engineering</td>
<td>2 Years</td>
<td>31</td>
</tr>
</tbody>
</table>
Master of Computer Applications 3 Years 44
M. Tech in Computer Technology 3 Years 33

B. Number of Faculty Members:

Professor 16
Reader 9
Senior Lecturer 1
Lecturer 6

2 A. Area of Research Activities (Broad Areas):

3 A. Invited Lectures Delivered by Faculty Members

Prof. Nandini Mukherjee


Dr. Debotosh Bhattacharjee:

• Special talk on “Machine Learning and its applications in Computer Vision”, at TEQIP Sponsored Staff Program Organized by Netaji Subhash Engineering College, Kolkata on March 2009.
• Special talk on “Computer Vision”, at AICTE Sponsored Staff Development Program (SDP) Organized by RCC Institute of Information Technology, Kolkata on 6th March 2009.

Dr. Subhadip Basu

• “Optical Character Recognition: Current state-of-the-art and future research directions”, at the School of Cultural Texts and Records, Jadavpur University, 2nd September, 2009.
• “Some Techniques on different Pattern Recognition Applications”, at the Interdisciplinary Centre for Computational and Mathematical Modelling (ICM), University of Warsaw, Poland, 25th August, 2009.
• “Some Techniques on Computer Vision Applications”, at the one-day workshop on Recent Advances in Computer Vision and Applications, Calcutta Club, Kolkata, 12th April, 2009.
• “Retrieval of handwritten textual annotations using Tesseract open source OCR engine”, at a special lecture organized by the GOLD affinity group, IEEE Calcutta section, 26th December, 2008.
Dr. Susmita Ghosh


- "Information Processing and Information Technology“ in a Seminar on Recent Trends in IT, Its Challenges & Opportunities, March 9, 2008, BUIE, Bankura, India.


B. Seminar/Workshop/Conference/Symposium Attended:


5. Mrinal Kanti Bhowmik, Debotosh Bhattacharjee, Mita Nasipuri, Dipak Kumar Basu, and Mahantapas Kundu, “Classification of Fused Images using Radial Basis Function Neural Network for Human Face Recognition”, accepted for NbIC, Dec 9-11, Coimbatore, India


50. A. Mukhopadhyay, U. Maulik and S. Bandyopadhyay, “Multi-objective Genetic Clustering with Ensemble Among Pareto Front Solutions: Application to MRI
Brain Image Segmentation", Proc. 7th Int. Conf. on Advances in Pattern Recognition (ICARR), pp.236-239, Kolkata, India, 2009.


- Dr. Debotosh Bhattacharjee presented a paper entitled “Face Recognition from Facial Montage”, at the Humboldt Kolleg, Dec. 11-13 2008, PURI, India.
- Dr. Goutam Paul attended the Indo-Japan Workshop on Cryptography, Dec 12, 2009, New Delhi, India.
- Dr. Goutam Paul attended the 10th International Conference on Cryptology in India (INDOCRYPT), December 13-16, 2009, New Delhi, India.

C. Seminar/Workshop/Conference/Symposium Organized:

- A one day Workshop entitled "Recent Advances on Computer Vision and Applications" in collaboration with IEEE GOLD Affinity Group and IEEE Computer Chapter of IEEE Calcutta section at Calcutta Club on April 16,2009. About 114 persons including speakers, students, research workers and industry personnel participated in the said workshop.

D. Orientation Courses/Refresher Courses Attended:

- Dr. Debotosh Bhattacharjee, “Summer School on Multimedia Semantics” from 23.08.2009 to 28.08.2009 at Universitat Koblenz-Landau, Germany.

E. Orientation Courses/Refresher Courses Organized:

Prof Shovonlal Kundu and Prof Mita Nasipuri organized UGC Refresher course “Theoretical Aspects of Computer Science” during 21st January 2009 to 12th February 2009.

4. A. Books/Monographs etc Published:


B. Articles Published in Journals:


accepted in International Journal on Recent Trends in Computer Engineering, Academy Publisher, Finland.


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5 Collaborative Programmes:

• Title of the Project: Collaborative Program: India-Trento Program for Advanced Research (ITPAR) Project entitled “Advanced Techniques for Remote Sensing Image Processing & Recognition”.
  Institute of Technology (Bombay), Indian Statistical Institute (Kolkata), Jadavpur University (Kolkata) and University of Trento (Italy) are the collaborators of this joint research project.

• Collaborator as Technical Expert for the project entitled, “Development of Techniques for Human face Based online Authentication System”- Phase I, (Total funding Rs. 42.81 lakh, No. 12(14)/08-ESD) funded by Department of Information Technology, Ministry of Communications and Information Technology, Gov. of India at Dept. of Computer Sc. & Engg, Tripura University.

6 Major Achievements:

A. Patents Filed:


B. Committee Member of International Conferences:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Teacher</th>
<th>Name of the Seminar/Conference</th>
<th>Type of Participation</th>
<th>Place</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prof. Nandini Mukherjee</td>
<td>Program Committee Member International Workshop on Scheduling and Resource Management for Parallel and Distributed Systems 2009</td>
<td>Member</td>
<td>Vienna, Austria</td>
<td>2009</td>
</tr>
</tbody>
</table>
Dr. Goutam Paul is serving as an Invited Expert Member of the Project entitled “Security Evaluation and Design of Components and Cryptographic Primitives for RFID and Sensor Networks” under the DST (Govt. of India)-JST (Japan Science & Technology) Strategic Indian-Japan Cooperative Program, 2009-2011.

**Construction Engineering (Salt Lake)**

Phone : +91-33-2335-5211  
Int. : 116/121  
H.O.D. : Dr. Debasish Bandyopadhyay  
E-mail : hod@const.jusl.ac.in

1. **A. Course Offered:**
   - Name of the course: Bachelor of Construction Engineering
   - Duration of course: 4 years
   - No of students enrolled: 35

2. **B. Number of Faculty Members:**
   - Head of the Department: Dr. Debasish Bandyopadhyay
   - Total Faculty Members: 09

3. **A. Area of Research Activities (Broad Areas):**
   - Structural Health Monitoring
   - Concrete Technology
   - Highway Engineering
   - Geo-Environmental Engineering

4. **B. Major Research Project:**
   - Department: Construction Engineering
   - Coordinator: Prof. P. P. Biswas & S. Saraswati
   - Name of the Project: High Performance Concrete with Blended Cement
   - Funding Agency: AERB

5. **A. Invited Lectures Delivered**
   - Name of the Teacher: Dr. Debasish Bandyopadhyay
   - Type of Participants: Structural Engineering Convention – An International Meet.
   - Name of the Seminar/Conference: Structural Engg. Research Centre (SERC), Chennai
   - Place: Chennai
   - Duration: Three days
Prof. P. P. Biswas  
Invited Lecture  Technology Adaptation in India.  Academic Staff  
College, JU, Salt Lake  One Day  

Prof. T. Roy  
Invited Lecture  Sustainable Development of Infrastructural System of Kolkata Metropolis.  EZCC, Salt Lake  One day  

Dr. Debasish Bandyopadhyay  
Invited Lecture  Corrosion & Protection of Industrial & Civil Assets  
HIT, Haldia  One day  

B. Seminar/Workshop/Conference/Symposium Attended:  

C. Seminar/Workshop/Conference/Symposium Organized  

Name of the Teacher as Organiser Name of the Seminar/ Workshop Place Duration  
Dr. Debasish Bandyopadhyay  
Coordinator  Workshop on “Earthquake Engineering & Risk Management (EERM 2009)”.  Jadavpur University, Saltlake One Day  

Dr. Debasish Bandyopadhyay  
Coordinator  Workshop on “Sustainable Development of Infrastructural System of Kolkata Metropolis (SDISKM 09)”  EZCC, Salt Lake One Day  

D. Orientation Courses/Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)  

E. Orientation Courses/Refresher Courses Organized (Name of the Teachers, title of the Course, if any, Duration, Place)  

4. A. Books/Monographs etc. Published  
Construction Engineering by S. Saraswati & S. Sarkar, Oxford University Press  

B. Articles Published in Journals in the Year 2009  
4  Debasish Bandyopadhyay & S. K. Bhattacharyya : “Structural Vulnerability Assessment of Old Metropolitan Cities in Earthquake Disaster Mitigation”, 14th World Congress of Earthquake Engineering, at Beijing, China.


**Collaborative Programmes:**

Collaborated with Association of Corrosion Engineers for Research and Training of Industrial People.

**Major Achievements:**

**Debasish Bandyopadhyay** was awarded National Programme on Earthquake Engineering Education (NPREEE) Fellowship by MHRD, Govt. of India during his doctorate program 2005-2009 for advanced research at the University of Arizona, USA and also awarded the PhD degree in Civil Engineering with Specialization in Structural Engineering from Indian Institute of Technology, Kharagpur, 2009.

**Partha Pratim Biswas** was awarded Erasmus Mundus European Union Visiting Fellowship to University of Sophia Antipolis, Nice, France.

**Gokul Chandra Mondal** also visited the University of Sophia Antipolis, Nice, France

**Subhajit Saraswati** has authored a book on Construction Engineering published by Oxford University Press. He was also awarded the PhD (Engg) by Jadavpur University.
ELECTRICAL ENGINEERING

Phone : + 91-33-2414-6163
Fax : + 91-33-2414-6168
It. : 2539/2908
H.O.D. : Prof. Abhijit Mukherjee
E-mail : hod@ee.jdvu.ac.in

1. A. Courses Offered:

<table>
<thead>
<tr>
<th>Name of the Course</th>
<th>Duration of the Course</th>
<th>No. of Students Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.E.E. Four years</td>
<td>Four years</td>
<td>102</td>
</tr>
<tr>
<td>B.E.E. (PT)</td>
<td>Four years</td>
<td>44</td>
</tr>
<tr>
<td>M.E.E.</td>
<td>Two years</td>
<td>25</td>
</tr>
<tr>
<td>M.C.S.E.</td>
<td>Two years</td>
<td>5</td>
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<tr>
<td>M.E. Illumination Engineering</td>
<td>Two years</td>
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</tr>
</tbody>
</table>

CONTROL SYSTEM SECTION

1. B. Number of Faculty Members: 7

2. A. Area of Research Activities:

- Estimation and filtering techniques, Robust Control, Design review and audit of aero engine control system, Aircraft stabilization, Fault detection and Identification.
- Mechatronics and Robotics
- Mobile Computing
- Real-time and Embedded Systems

B. Major Research Projects

- S.Sadhu (PI), T.K.Ghoshal, K.Datta, A. Acharya, Fault Detection and Identification for Nonlinear Hybrid Plants, funded by Advanced Systems Laboratory, DRDO, Hyderabad.
- S.Sadhu (PI), T.K.Ghoshal, S.Goswami, K.Datta, S.Bhattacharyya, K Majumdar, Design Review and Audit of Control Law of Kaveri Engine (Phase-II), funded by GTRE, Bangalore.
- T.K.Ghoshal, K.Datta, S.Bhattacharyya, S.Sadhu, Software Audit Project for HBL SSI, funded by HBL, Hyderabad

3. A. Invited Lectures Delivered (Session Chaired): Nil

B. Seminar/Workshop Conference/Symposium Attended: Nil
C Seminar/Workshop Conference/Symposium Organized:
Dr. Smita Sadhu was a member of the Technical Program Committee for the 12th IEEE International Conference on Information Fusion, FUSION ’09, at Seattle, Washington USA, held during 6-9 July 2009.

D. Orientation Courses/Refresher Courses Attended:
• Prof. Tapan Kumar Ghoshal delivered a lecture on “Actuators” in UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009.
• Prof. Samar Bhattacharyya delivered a series of lectures on “Control Philosophy in Mechatronics” and “Real-time System” in UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009.
• Dr. Madhubanti Maitra delivered a series of lectures on “Real-time Systems” and “Software Design for Mechatronic Application” in UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009.
• Dr. Smita Sadhu delivered a lecture on “Estimation and Filtering” in UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009.
• Dr. Ranjit Kumar Barai delivered a series of lectures on “Application of Mechatronics in Robotics” in UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009.

E. Orientation Courses/Refresher Courses Organized:
• Dr. Ranjit Kumar Barai organized UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009 as Joint Coordinator.

4 A. Books/Monographs etc. Published: Nil

B. Articles Published
International Journals

5 M. Maitra, A. Mukherjee, D. Saha, “Integrated Inter-Switch Cable and Handoff Cost Minimizing Heuristics for Call-to-Switch Assignment in Wireless Cellular Networks,” Accepted for publication in IEEE Trans. on Vehicular Technology.

International Conferences


5 Collaborative Programmes : Nil

6 Major Achievements :

- Dr. Smita Sadhu received a Certificate of Merit awarded by the Institution of Engineers (India) on 27.01.2009 for the paper entitled “Response acceleration of an aircraft” published in the Journal of the Institution of Engineers (India) in 2007-2008.
- Ph.D. thesis guidance by Prof. T.K. Ghoshal and Dr. Smita Sadhu led to the award of PhD. Degree to Shovan Bhaumik in July 2009 for thesis entitled “Improved Filtering and Estimation Methods for Aerospace Problems”.
- Ph.D. thesis guidance by Prof. T.K. Ghoshal and Dr. Smita Sadhu led to the award of PhD. Degree to M. Srinivasan for thesis entitled “Application of Post Kalman Filtering Techniques to Tracking Problems”. The degree was awarded at the Annual Convocation of Jadavpur University held in December 2008.
- Dr. Smita Sadhu is a reviewer for IEEE Transactions on Aerospace and Electronic Systems.
- Dr. Ranjit Kumar Barai organized UGC Sponsored Refresher Course “Art and Science of Mechatronics and its Application in Robotics” during 1st June to 20th June 2009 as Joint Coordinator.
- Dr. Ranjit Kumar Barai acted as reviewer for Asian Journal of Control and also for the International Conference on Recent Advancements in Electrical Sciences (ICRAES’10)

ELECTRICAL MACHINE AND DRIVE SECTION

1 B. Number of Faculty Members : 9

2 A. Area of Research Activities :

- Electrical Machine Design,
- Modelling and Simulation of Electrical Machines and Drives System,
- Power Electronics and Drives.
B. Major Research Project: Nil

3 A. Invited Lectures Delivered/ Session Chaired:

- **Dr. S K Biswas** delivered a lecture in the refresher course entitled "Art and Science of Mechatronics and its Application in Robotics" organised by Department of Electrical Engineering, Jadavpur University, Kolkata, in June 2009.

- **Prof. N.K Deb** delivered a lecture in the refresher course entitled "Art and Science of Mechatronics and its Application in Robotics" organised by Department of Electrical Engineering, Jadavpur University, Kolkata, in June 2009.

- **Dr. S Kar Chowdhury** delivered a lecture on "Thermal Characteristics of Induction Motor" on 16th June 2009 in the refresher course entitled "Frontiers in Power Engineering and Energy Sustainability" organised by Department of Power Engineering, Jadavpur University, Kolkata.

- **Dr. S Kar Chowdhury** delivered a lecture on "Thermal Characteristics of Induction Motor" in the refresher course entitled "Art and Science of Mechatronics and its Application in Robotics" organised by Department of Electrical Engineering, Jadavpur University, Kolkata, in June 2009.

- **M Roy** delivered a lecture in the refresher course entitled "Art and Science of Mechatronics and its Application in Robotics" organised by Department of Electrical Engineering, Jadavpur University, Kolkata, in June 2009.

- **Prof. A. K.Ganguli** delivered an Invited lecture on "Recent advances in Electric Drives" at NSEC, Kolkata in July 2009, under TEQIP scheme.

- **Dr. Debashis Chatterjee** delivered an Invited lecture on "Modern techniques in Induction machine control" at NSEC, Kolkata in July 2009, under TEQIP scheme.

B. Seminar/Workshop/Conference/Symposium Attended:


- **Dr. Arabinda Das** attended The 1st International Conference on Computer, Communication, Control and Information Technology, 2009 (C3IT-2009), organised by Academy of Technology, Hoogly, West Bengal, India, 6-7 February 2009.

- **Dr. S. Kar Chowdhury** attended Workshop on “Pedagogical Tools for Knowledge Management”, 28th March 2009, Hyatt Regency, Kolkata, arranged by Jadavpur University, Kolkata.

C Seminar/Workshop/Conference/Symposium Organised:

D. Orientation Courses/ Refresher Courses Attended:

E Orientation Courses/ Refresher Courses Organised:
A. Books/Monographs etc. Published: Nil

B. Articles Published in Journals:


5 Collaborative Programmes:

6 Major Achievements:

- D. Chatterjee, A. K. Ganguli received Best Paper award, in International Conference IICE SPEEE '09 held in Chennai during April 15-17, 2009, for their paper entitled “A Permanent magnet Linear Oscillating Motor Suitable for Short Strokes”

MEASUREMENT AND INSTRUMENTATION SECTION

1 B. Number of Faculty Members: 8

2 A. Area of Research Activities:

- Sensors and transducers
- Process Instrumentation
- Intelligent Instrumentation and Control
- Signal Processing
- Image Processing
- Robotics and Artificial Intelligence
- Embedded Systems
- Condition Monitoring

B. Major Research Project:

<table>
<thead>
<tr>
<th>Name of the Project</th>
<th>Sponsor</th>
<th>Faculty Members Involved</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modeling and simulation:</td>
<td>Jadavpur</td>
<td>Sri. G. Sarkar (PI)</td>
<td>On-going</td>
</tr>
<tr>
<td>Electrical Capacitance Tomography</td>
<td>University, Kolkata</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3 A. Invited Lectures Delivered/Session Chaired


- Prof. Anjan Rakshit acted as a resource person for UGC-Academic Staff College sponsored Refresher Course On “Art and Science of Mechatronics and its Application in Robotics” organized by Electrical Engineering Department, Jadavpur University from 1st June to 20th June, 2009.

- Prof. Sugata Munshi acted as a resource person for UGC-Academic Staff College sponsored Refresher Course On “Art and Science of Mechatronics and its Application in Robotics” organized by Electrical Engineering Department, Jadavpur University from 1st June to 20th June, 2009.

- Sri. Palash Kumar Kundu acted as a resource person for UGC-Academic Staff College sponsored Refresher Course On “Art and Science of Mechatronics and its Application in Robotics” organized by Electrical Engineering Department, Jadavpur University from 1st June to 20th June, 2009.

B. Seminar/Workshop/Conference/Symposium Attended:
- M. Dutta has attended and presented a paper entitled “Design, Fabrication and Mico-mechanical Characteristics of MEMS based Micro-mirror” at IMEKO WORLD CONGRESS held at Lisbon, Portugal on 6-11 September, 2009.

C. Seminar/Workshop/Conference/Symposium Organized:

D. Orientation Courses/Refresher Courses Attended:
- Sri Biswajit Bhattacharyya attended a three week UGC – ASC sponsored refresher course on “Art and Science of Mechatronics and its Application in Robotics”, held from 1st June to 20th June, 2009 in Electrical Engineering Department, Jadavpur University.

E. Orientation Courses/Refresher Courses Organized:
- Sri Gautam Sarkar acted as a Joint Coordinator for a three week UGC – ASC sponsored refresher course on “Art and Science of Mechatronics and its Application in Robotics”, held from 1st June to 26th June, 2009 in Electrical Engineering Department, Jadavpur University.

4 A. Books/Monographs etc. Published:
B. Articles Published/Accepted in Journals (since December, 2008):

**International Journals:**
- **Debangshu Dey, Biswendu Chatterjee, Sivaji Chakravorti, and Sugata Munshi**, “Cross-Wavelet Transform as a New Paradigm for Feature Extraction from Noisy Partial Discharge Pulses,” IEEE Transactions on Dielectrics and Electrical Insulation, Accepted for publication, 2009.


Conference Papers:


5 Collaborative Programmes:

• Prof. A. Rakshit is serving as a member of the advisory committee for R&D Unit of Megatherm Electronics Pvt. Limited from April, 2005.

ELECTRICAL POWER SYSTEM SECTION

1 B. Number of Faculty Members : 5

2 A. Area of Research Activities:

• Power System Deregulation,
• Power System Dynamics and Control,
• Flexible Ac Transmission System,
• Voltage Stability, Application of soft computing techniques in power system,
• Distributed generation, Restructuring of power system.
B. Major Research Project:

• Exploring the Potential of FACTS Controllers for the Enhancement of Power System Dynamic Performance. (An AICTE sponsored project)

3 A. Invited Lectures Delivered/Session Chaired:

• Prof S. K. Goswami delivered an invited lecture on ‘Power system optimizations’ at NIT, Durgapur.

• Prof S. K. Goswami delivered an invited lecture on ‘Application of GA in power system’ at Netaji Subhas Engineering College.

• Prof S. K. Goswami delivered an invited lecture during a refresher course organized by Power Engineering Dept JU.

B. Seminar/Workshop/Conference/Symposium Attended:

C. Seminar/Workshop/Conference/Symposium Organized:

D. Orientation Courses/Refresher Courses Attended:

Dr. Sunita Halder nee Dey attended the refresher course ‘Art and Science of Mechatronics and its Application in Robotics’, 1st June to 20th June, 2009, Arranged by the Academic Staff College Programme of UGC, Department of Electrical Engineering, Jadavpur University

E Orientation Courses/Refresher Courses Organized:

4 A. Books/Monographs etc. Published:

B. Articles Published in Journals:


International Conference:


5 Collaborative Programmes : NIL

6 Major Achievements : NIL

HIGH VOLTAGE ENGINEERING SECTION

1 B. Number of Faculty Members : 6

2 A. Area of Research Activities :

- Numerical field computation.
- Surge propagation in electrical machine.
- Computer aided design and optimisation of insulation system.
- Application of artificial intelligence in high voltage systems.
- Application of artificial intelligence in power system.
- Condition monitoring of large electrical equipment and electromagnetic compatibility.
- High voltage pulse generation.
- Partial discharge signal analysis.
- Real-time data analysis in high voltage systems.
- Material development.
- Non-Linear Dynamics.

**B. Major Research Project:**

Prof. (Dr.) Sivaji Chakravorti.

<table>
<thead>
<tr>
<th>Name of the Project</th>
<th>Sponsor</th>
<th>Worked as</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of an Embedded System for Multi-Sensor Data Acquisition and Analysis of Partial Discharge Signals</td>
<td>AICTE</td>
<td>Principal Investigator</td>
<td>On-going</td>
</tr>
<tr>
<td>Development of an Intelligent, Low-Cost Partial Discharge (PD) Detection System DST, GOI</td>
<td>Principal Investigator</td>
<td>On-going</td>
<td></td>
</tr>
</tbody>
</table>

Sri. P. Rajamani

<table>
<thead>
<tr>
<th>Name of the Project</th>
<th>Sponsor</th>
<th>Worked as</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated Condition monitoring system for power Transformers</td>
<td>Jadavpur University</td>
<td>Principal Investigator</td>
<td>On-going</td>
</tr>
</tbody>
</table>

3 A. Invited Lectures Delivered/Session Chaired:

Prof. Sivaji Chakravorti.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Condition Monitoring of Oil-Paper Composite Insulation System of Transformers</td>
<td>14.08.2009</td>
<td>CV Raman College of Engineering, Bhubaneswar</td>
</tr>
<tr>
<td>2</td>
<td>Fundamentals of Wavelet Transform and Its Application in Power Engineering</td>
<td>14.08.2009</td>
<td>CV Raman College of Engineering, Bhubaneswar</td>
</tr>
<tr>
<td>3</td>
<td>Electrical Safety Issues</td>
<td>28.05.2009</td>
<td>CESC Ltd, Kolkata</td>
</tr>
<tr>
<td>4</td>
<td>Partial Discharge Phenomenon</td>
<td>31.03.2009</td>
<td>Electrical Engineering Department, NIT Durgapur</td>
</tr>
<tr>
<td>5</td>
<td>Gas Insulated Substation and Transmission Line</td>
<td>25.03.2009</td>
<td>Electrical Engineering Department, IIT Kanpur</td>
</tr>
<tr>
<td>6</td>
<td>Condition Monitoring of Oil-Paper Composite Insulation System of Transformers</td>
<td>25.03.2009</td>
<td>The Institution of Engineers (India), Kanpur Local Center</td>
</tr>
<tr>
<td>7</td>
<td>Condition Monitoring of Oil-Paper Composite Insulation System of Transformers</td>
<td>15.03.2009</td>
<td>NIT Hamirpur, Himachal Pradesh</td>
</tr>
<tr>
<td>8</td>
<td>Fundamentals of Artificial Neural Network</td>
<td>03.03.2009</td>
<td>Netaji Subhash Engg College, Kolkata</td>
</tr>
<tr>
<td>9</td>
<td>Condition Monitoring of Oil-Paper Composite Insulation System of Transformers</td>
<td>22.01.2009</td>
<td>Seminar Room, EE Dept, NIT Durgapur</td>
</tr>
</tbody>
</table>
10 Gas Insulated Substation and Transmission Line 22.01.2009 Seminar Room, EE Dept, NIT Durgapur

B. Seminar/Workshop/Conference/Symposium Attended:

- S. Dalai has attended the one day seminar on “Smart Grid & Alternative Energy Technologies for Promotion of Lighting System” at Jadavpur University on 30th April, 2009 organized by IEEE Calcutta Section Power Engineering Society.

- B. Chatterjee has attended the one day seminar on “Smart Grid & Alternative Energy Technologies for Promotion of Lighting System” at Jadavpur University on 30th April, 2009 organized by IEEE Calcutta Section Power Engineering Society.

- P. Rajamani has attended the one day seminar on “Smart Grid & Alternative Energy Technologies for Promotion of Lighting System” at Jadavpur University on 30th April, 2009 organized by IEEE Calcutta Section Power Engineering Society.

C. Seminar/Workshop/Conference/Symposium Organized:

D. Orientation Courses/Refresher Courses Attended:

- S. Dalai has attended one refresher course on “Art and Science of Mechatronics and its Application in Robotics”, at Jadavpur University on 1st June-20th June, 2009 organized by Electrical Engineering department, Jadavpur University.

- B. Chatterjee has attended one refresher course on “Art and Science of Mechatronics and its Application in Robotics”, at Jadavpur University on 1st June-20th June, 2009 organized by Electrical Engineering department, Jadavpur University.

4 A. Books/Monographs etc. Published:

B. Articles Published in Journals/Conference:

International:


National


5 Major Achievements:

Patent Filled:

ILLUMINATION ENGINEERING SECTION

1 B. Number of Faculty Members: 3

2. A. Area of Research of Research Activities:
- Ballast- Lamp characteristics
- Lamp-life estimation
- Performances of different lighting system,
- Development of energy efficient low-cost lighting control system,
- Optimized lighting system design,
- Human powered Battery charger for LED based Lighting System
- Daylight integrated artificial lighting
- Design of Energy Efficient Road Lighting System

B. Major Research Projects - N.A.

3. A. Invited Lectures Delivered/Session Chaired
- Technical Talk by Mr.Aniruddha Mukherjee about “Energy Efficient Lighting” at Seminar room of E.E. Dept., Jadavpur University on 15/01/2009.
- Delivered Lectures on two days Lighting course on 13th & 14th February 2009 at K.P.Basu memorial hall organized by SISED-JU & ISLE jointly by
  - Prof. K.Goswami on LIGHTING FUNDAMENTALS
  - Prof.(Dr.) S. Mazumdar on LIGHTING CONTROL GEAR
• Mr. S. Chakraborty on INDOOR LIGHTING
• Mr. A. Mukherjee on LIGHT SOURCES & LUMINAIRES
• Mr. K. Naveen on APPLICATION OF ENERGY EFFICIENT LIGHTING
• Mr. S. Ganguly on LIGHTING SYSTEM MANAGEMENT
• Dr. B. Roy on OUTDOOR LIGHTING & PHOTOMETRY
• Mrs. K. Ghosh on ENERGY & LIGHTING ECONOMICS
• Mr. O. Mitra on LIGHTING PROJECT ENGINEERING

Delivered presentation on the “Operational aspects of DIALux Software in case of outdoor lighting design” at Bengal Science & Engineering College on 27/03/2009.

Delivered lecture on “A Report on a Beacon to the future: India’s path towards low carbon lighting - USAID International Conference held on 1 -3rd April, 2009 at Delhi” in the technical seminar organized by ISLE on 11.04.09 at Chennai.

Airport Lighting of Vision 2010, the International Conference organized by ISLE, Karnataka was co-chaired by Prof. Saswati Mazumdar on 21/11/2008.


B. Seminars /Workshops / Conference /Symposium Attended

Prof. Saswati Mazumdar, Director, School of Illumination Science, Engineering & Design attended:

• A seminar on “Green Building and GRIHA National Rating System” on 20.08.09, organized by CPWD, at Kolkata.

• A technical presentation on Energy conservation in Building Lighting Systems was organized jointly with ISLE on 05/07/2008 at Kolkata.

• A technical presentation on “Indoor and Outdoor Lighting Concepts for Govt. Offices” on 25/09/2008 at Kolkata, organized by ISLE.

• The Exhibition, -Lii – 2009 & International Conference on Lighting, organized jointly with IIID & ISLE on 20/02/2009 at Mumbai.

• A technical lecture by Mr. P. Chandra Sekhar, on “To Create the Architectural Appeal and Reflect the Human Emotion” on 15/11/2008 at Chennai, organized by ISLE.

• Prof. (Dr.) S. Mazumdar, Dr. B. Roy, Ms. Kamalika Ghosh, Mr. S. Chakroborty attended the following Workshop on “Solar Building & Motion” on 14.09.09, organized by Goethe Institut, Humboldt Club in collaboration with IEEE Power & Energy chapter.

• Mr. S. Chakroborty attended the Seminar on “Art of Entrepreneurship “ on 18/08/09 organized by IEEE Power & Energy chapter.
• Mr. S. Chakroborty attended the Seminar on "The Triumph of AC over DC" on 05/03/09 organized by IEEE Power & Energy chapter.
• Mr. S. Chakroborty attended the Seminar on "Roadmap of Power Sector in India" on 14/11/08 organized by IEEE Power & Energy chapter.
• Mr. S. Chakroborty attended the Seminar on "Advance in Electro technology" organized by IEEE Power & Energy chapter.
• Mr. S. Chakroborty attended the Workshop on "Train the trainer "19.01.2009 to 23.01.2009 organized by Coa-NIASA in association with USAID and APP at Pune.

C Seminar/Workshop/Conference/Symposium Organized :NIL

D. Orientation Courses / Refresher Courses Attended:
• Mr. S. Chakraborty attended one refresher course on "Art and Science of Mechatronics and its Application in Robotics", at Jadavpur University on 1st June-20th June, 2009 organized by Electrical Engineering department, Jadavpur University.

3 E Orientation Courses / Refresher Courses Organized : N.A.

4 A. Books Of Monographs Etc. Published: N.A.

4 B. Articles Published In Journals:

5 Major Achievements
• Prof.(Dr.) S. Mazumdar, Ms. Kamalika Ghosh, Mr. S. Chakroborty selected as Technical Jury members for "Finolex Alok Surkasha Samman" for the selection of best durga puja pandel for creativity in lighting & electrical safety in 2009.

Consultancy:
• Survey and redesigning of Security lighting system at Budge Budge Generating Station, CBSC Ltd. (ongoing) April, 2009, Rs. 50,000/-.
ELECTRONICS & TELECOMMUNICATION ENGINEERING

Phone : +91-33-2414-6002
Fax : +91-33-2414-6217
H.O.D. : Prof. Bhaskar Gupta
E-mail : hod@etce.jdvu.ac.in

Courses Offered:

• B.E. Tel.E. : 4 years (60X4)
• M.E. Tel.E. : 2 years (25X2)
• Part Time M.Tech.:
  1. VLSI and Microelectronics, 3 years (18 X 3) Evening
  2. Intelligent Automation and Robotics, 3 years (18 X 3)

Number of Faculty Members : 23

Area(s) of Research Activities:
1. Adaptive antennas
2. Ad hoc wireless networks
3. Analog and Digital Signal Processing
4. Antennas and Microwaves
5. Artificial Intelligence & Soft Computing
6. Bio-informatics and Computational Biology
7. Biomedical Image Processing
8. Broadband Wireless Communications
9. Call admission control in cellular and WiMAX Networks
10. CMOS MEMS integration and signal conditioning of gas sensor
11. Coding
12. Computer Networking
13. Computer Vision
14. Cybernetics Sciences
15. Digital Communication
16. Development of embedded systems for medical diagnostic applications
17. Embedded Systems
18. EMI/EMC
19. Fiber Optic Communication
20. Mobility management for 3G/WLAN Integrated Architecture
21. Mobile Wireless Communication
22. Multi-agent Robotics
23. Optimization techniques
24. Optical Sensor Network
25. Packet Scheduling in WiMAX
26. Pattern Recognition
27. Photonics
28. Porous Silicon formation by Alumina template
29. RFID
30. Robotics & Computer Vision.
31. Semiconductor device
32. Signal and Image Processing,
33. Simulations of nanodevice models
34. Single electron & spintronics devices and their applications in VLSI circuits
35. Soft Computing
36. Swarm and Evolutionary Algorithms
37. WiMAX handoff and Call Admission
38. VLSI Circuit Design
39. VoIP over WiFi and WiMAX
40. MEMS based metal oxide gas sensors
41. Design and Simulation of RF MEMS based capacitive switch
42. CMOS MEMS integration and signal conditioning of gas sensor
43. Development of embedded systems for medical diagnostic applications
44. MEMS based Pressure Sensors
45. Power Optimisation of VLSI Circuits
46. Study of Nanocrystalline Silicon, Zinc Oxide and its application on Solar Cells and Gas Sensors
47. Porous Silicon Low Pressure Sensors
48. Porous silicon formation by Alumina template

Major Research Project(s) as PI or Co-PI Completed or Ongoing During 2009:

<table>
<thead>
<tr>
<th>Name of the Faculty</th>
<th>Title of the Project</th>
<th>Funding Agency</th>
<th>Amount (Rs.)</th>
<th>Duration</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Amit Konar</td>
<td>Emotion Research Perceptron Engineering Project</td>
<td>DIT</td>
<td>1.25 Crores</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>Prof. B. Gupta</td>
<td>Design, Development and Supply of K, RCI / DRDO</td>
<td>10.0 lakhs</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Band Ultra Low Side Lobe Level Microstrip Antenna
Development of Multiband Cylindrical Wrap Around Antenna

Feasibility Study for Compact Foldable Type Trans / Receive Antenna Design in 2-3 GHz Band in 2009

Development of RF MEMS Capacitive Shunt Switch in Application as Phase Shifters for Satellite Communication Systems

Infrastructural Communication Technologies Supporting Fully Ubiquitous Information Society Study and Optimization of Microstrip Antenna System to Receive Satellite Link from Moving Trains

Prof. Iti Saha Misra
Associated with DST FIST at ETCE Dept.

Prof. H. Saha
Design, Fabrication and Testing of Porous Silicon based integrated smart temperature and pressure sensor (STF/DITF)

Development of smart MEMS gas sensor for improvement of the safety of mines.

Design of MEMS based sensor for continuous monitoring of gases underground coal mines

Development of Nanocrystalline Silicon MEMS Pressure Sensor for Vacuum and Low Pressure Applications
Mobile Communication Centre for Mobile Computing
in Mining Environment and Communication,
Jadavpur University

Special Manpower Ministry of Communications
Development Programme and Information Technology,
for VLSI Design and Govt. of India.
Related Software (SMDP-II).

Prof. H. Saha and Prof. B. Gupta
Performance and Process Defence Research &
Design, Modelling and Development
Simulation of a MEMS Organization (DRDO).
Capacitive Switch and Govt. of India.
Phase Shifter at Ku- Band.

Mr. P. Venkateswaran
FPGA Based Interface Model UGC - MRP 5.73 lakhs 3 years Ongoing
for Scale-free Computer Network.

Prof. R. Nandi
Efficient Routing Algorithm UGC - MRP 9.00 lakhs. 3 years Ongoing
with Improved QoS Model for MANETS.

Prof. Salil Kumar Sanyal
FIST - 2007 (Departmental) DST, 90.00 lakhs 5 years Ongoing
with Improved QoS Model Govt. of India
for MANETS.

Prof. Subir Kumar Sarkar
Modeling of low power DRDO , 10.00 lakhs 3 years Completed
consuming ultradence VLSI Govt of India
chip using Narrow and single 31.03.2009
electron devices for space
vehicles and defence application

Prof. Subir Kumar Sarkar
Development of highly secured DRDO , 14.98 lakhs 3 years Ongoing
and authenticated algorithm Govt of India
and it’s low power
ASIC-VLSI implementation
suitable for defence
application
Development of an ASIC-VLSI multi chip zigbee RFID network processor for the realization of power efficient smart industries/homes

Low Power Consuming And High Frequency Nanodevice Based Vlsi Circuits For Medical And Space Applications

Invited Lectures Delivered/ Tutorial/Session Chaired in the Year 2009:

1. Prof. Amit Konar delivered a invited lecture for 3 hours on Cooperation in Distributed Motion Planning of Multiple Mobile Robots in RCC College of Engineering on the occasion of a 15-days’ Workshop on Soft Computing, March 2009.


3. Prof. Amit Konar gave a invited presentation on Emotion Recognition from Facial Expression and Its Control Using Fuzzy Logic on the occasion of 1st Indo-Japan Conf. on Science and Technology on Facial Expression Analysis, Organized by CDAC, Calcutta, March 12, 2009.

4. Prof. Amit Konar gave a one hour invited talk on Species Identification from DNA Sequence Analysis by Soft Computing Algorithms in a One-week Workshop on Data Mining, organized by BESU, March 27, 2009.

5. Prof. Amit Konar gave two-hours’ invited presentation on Knowledge Extraction from Gene Regulatory Network in a One-week Workshop on Data Mining, organized by BESU, March 27, 2009.


7. Prof. Amit Konar presented a invited lecture on Target Tracking by Mobile Robots in a Workshop on Engineering Applications of Computational Intelligence, Organized by St. Thomas’ College of Engg. and Tech., Kolkata on April 4, 2009.


13. Prof. Amit Konar gave a lecture on DNA-data clustering in a Workshop on Data Mining organized by RCC College of Engineering, Aug. 2009.


15. Dr. A.S. Chowdhury presented a talk on Computer Vision for Biomedical Applications, at Bengal Institute of Technology, Calcutta, India, September 2009.

16. Prof. Bhaskar Gupta delivered an invited talk at the International Conference on Computer, Communication, Control and Information Technology [C3 IT – 2009], Academy of Technology, West Bengal.

17. Prof. Bhaskar Gupta presented a lecture at the seminar on “Trends In Wireless Network Technology And Applications” in NIT Agartala.

18. Prof. Bhaskar Gupta presented a lecture at the seminar on “Advances In Information & Communication Technology And Mobile Applications” at NIT Silchar.

19. Prof. Bhaskar Gupta presented a lecture on “Antenna Fundamentals” at WB State University.

20. Prof. Bhaskar Gupta presented a lecture on “Vector Genetic Algorithms” at Silicon Institute of Technology, Bhubaneswar.


23. Prof. Bhaskar Gupta Chaired a Session in an International Conference on Computer, Communication, Control and Information Technology [C3 IT – 2009], Academy of Technology, West Bengal.


31. Prof. Salil Kumar Sanyal Chaired a Session in the National Conference on Communication & Computing System (CoCoSys’09) organized by the University Institute of Technology, Burdwan University, January 2009.


33. Prof. Salil Kumar Sanyal delivered an invited lecture on "Review of DFT & FFT" in the National Workshop on DSP: Concept and Application organized by the Department of Electronics & Telecommunication Engineering, Purushottam Institute of Engineering & Technology, Rourkela, October, 2009.

34. Prof. Subir Kumar Sarkar delivered an Invited Talk on RFID "An Electronic Identity to Objects" at Department of Electronics & Communication Engineering National Institute of Technology, Durgapur, West Bengal– 700013 on 19/01/2009.


36. Prof. Subir Kumar Sarkar delivered an Invited talk on Spintronics at One day Workshop on Nano Technology (Nano-forum’09) organized by Dr. M.G.R. Educational and Research Institute University, Chennai on 15th April 2009.

37. Prof. Subir Kumar Sarkar delivered a talk on RFID and its Applications, UGC Sponsored Refresher Course On Broadband Wireless Communication on 17 June 2009 at Department of Electronics and Telecommunication Engineering, Jadavpur University, Kolkata 700 032.

38. Prof. Subir Kumar Sarkar delivered an Invited talk on Microelectronics VLSI Design for Engineers & Scientists at NIST, Palur Hills, Berhampur, Orissa on 27 July to 08 August 2009.
39. **Prof. Subir Kumar Sarkar** chaired a session for Information & Communication Technology session I in the 7th All India People's Technology Congress at Science City & Energy Education Park, Kolkata on 7th February - 2009.

40. **Dr. Swagatam Das** delivered an Invited Lecture on “Differential Evolution: Algorithm, Analysis, and Applications to Pattern Clustering Problems”, in School of Electrical and Electronics Engineering, Nanyang Technological University (NTU), Singapore. Organized by EEE, NTU and IEEE Computational Intelligence Chapter, Singapore.

41. **Dr. Swagatam Das** delivered an Invited Lecture on “Computational Swarm Intelligence: A Conceptual Journey from Insects to Robots”, in Graduate School of Computer Science, Chung Ang University, Seoul, Republic of Korea.

42. **Dr. Swagatam Das** delivered an Invited Lecture in National Conference in Computational Intelligence Applications in Power, Control and Telecom, Silicon Institute of Technology, Bhubaneswar, during March 20 - 22nd, 2009.

43. **Dr. Swagatam Das** delivered an Invited Talk in Machine Intelligence Research Day (MIR Day), International Workshop, January 24 - 26, 2009, Nagpur, India.

44. **Dr. Swagatam Das** will be co-chairing a Program of International Symposium on Biologically Inspired Computing and Applications (BICA-2009) Bhubaneswar, India December 21-22, 2009.

**Seminar/ Workshop/ Conference Attended in the Year 2009:**

1. **Prof. Bhaskar Gupta** attended a Conference on Computer, Communication, Control and Information Technology [C3 IT – 2009], Academy of Technology, West Bengal.

2. **Prof. Bhaskar Gupta** attended a Seminar on “Trends In Wireless Network Technology And Applications” in NIT Agartala

3. **Prof. Bhaskar Gupta** attended a Seminar on “Advances In Information & Communication Technology And Mobile Applications” at NIT Silchar

4. **Prof. Bhaskar Gupta** attended the 4th International Conference on Near Field Characterization and Imaging ICONIC 2009, Taipei, Taiwan

5. **Prof. H. Saha** attended a Refresher Course on “Analog and Digital IC Flow using Cadence” at NIT Tiruchirapalli on June 16-21, 2009.

6. **Prof. H. Saha** attended a Refresher Course on “Indian Nanoelectronics Users Programme” at IIT Bombay on May 30-31, 2009

7. **Prof. Iti Saha Misra** attended as organizing member of One-Day Seminar for 30 years celebration IEEE Calcutta Section CALCON 08 on 24 Nov 2008.


9. **Mr. P. Venkateswaran** has participated in the AICTE - QIP Short Term Course on “Embedded System Design” during Feb. 02-06, 2009, Organized by the E&EECE Dept. at IIT Kharagpur.
45. **Prof. Subir Kumar Sarkar** attended a One day Workshop as CHIEF GUEST on Nano Technology (Nano-forum’09) organized by Dr. M.G.R. Educational and Research Institute University, Chennai on 15th April 2009.

46. **Prof. Subir Kumar Sarkar** attended Information & Communication Technology session I in the 7th All India People’s Technology Congress at Science City & Energy Education Park, Kolkata on 7th February - 2009.

1. **Mrs. Sudipta Chattopadhyay** attended a refresher course on “Broadband Wireless Communication” from 15-6-2009 to 4-7-2009 at Dept. of ETCE, Jadavpur University.

Seminar / Workshop / Symposium Organized in the Year 2009:

1. **Prof. R. Nandi & Mr. P. Venkateswaran** successfully organized

   (i) Name of the Program: **IEEE CASCOM’09 Educational Program**
   Theme: *Advances on Nano Electronics & Communication Systems*
   Duration & Date: 2 Days, March 20 & 21, 2009
   Venue: Day 1: Dr. K. P. Basu Memorial Hall, Jadavpur University Campus
          Day 2: TCS, Sector V, Salt Lake, Kolkata
   Jointly Organized by: Calcutta Chapters of IEEE Circuits And Systems (CAS) Society & Communications Society (ComSoc)

   (ii) Name of the Program: **IEEE Students Professional Awareness Conference (SPAC)**
   Theme: *Academic Career Opportunities for Higher Education - In India & Abroad*
   Duration & Date: Half-Day, May 25, 2009
   Venue: Hall No.: T-3-7, Dept. of ETCE, JU
   Jointly Organized by: Dept. of ETCE, JU & IEEE CAS Calcutta Chapter

   (iii) Name of the Program: **IEEE SPAC**, Theme: *Corporate Opportunities In India*
   Duration & Date: Half-Day, May 25, 2009
   Venue: Hall No.: T-3-7, Dept. of ETCE, JU
   Jointly Organized by: Dept. of ETCE, JU & IEEE ComSoc Calcutta Chapter

   (iv) Name of the Program: **Tutorial on VLSI Techniques**
   Conducted by: Mr. R. Senrayaperumal, Vi Microsystems Pvt. Ltd., Chennai - 600 096.
   Duration & Date: Half-day, October 31, 2009
   Venue: NetLab, Room #: T-3-16A, ETCE Dept., JU.
   Organized by: IEEE CAS Calcutta Chatper.

2. **Prof. H. Saha** successfully organized a summer training course programme on “Microelectronics Technology and VLSI Design” during the period June 21 to August 07, 2009 for B.Tech Final/Pre-Final year students. The course was attended by 66 participants from different colleges in West Bengal.
3 Prof. Iti Saha Misra successfully organized a 3 weeks UGC sponsored refresher course on “Broadband Wireless Communications” at ETEC Department, Jadavpur University. There were 49 participants from various parts of India.

Books/ Monographs Published in the Year 2009:

Peer Reviewed/ Book Chapters:
5 Prof. Subir Kumar Sarkar contributed a book chapter entitled, “Biomedical Watermarking” in the book, Intelligent Medical Technologies and Biomedical Engineering: Tools and Applications published by IGI Global, USA.
Articles Published in Journal in the Year 2009:

Publication List of Prof. A K Bandyopadhyay


Publication List of Prof. A K Bandyopadhyay and Prof. Bhaskar Gupta


Publication List of Prof. Amit Konar


Publication List of Prof. Amit Konar and Dr. Swagatam Das


Publication List of Dr. A. S. Chowdhury


Publication List of Prof. Bhaskar Gupta


Publication List of Dr. (Mrs.) Chayanika Bose


Publication List of Prof. D R Poddar


Publication List of Prof. H. Saha


Publication List of Prof. Iti Saha Misra


Publication List of Prof. R. Nandi and Mr. P. Venkateswaran


Publication List of Prof. Salil Kumar Sanyal,


Publication List of Prof. Salil Kumar Sanyal and Prof. R. Nandi


Publication List of Prof. Salil Kumar Sanyal, Prof. R. Nandi and Mr. P. Venkateswaran


Publication List of Prof. Salil Kumar Sanyal and Mrs. Sudipta Chattopadhyay


Publication List of Prof. Samir Kumar Sarkar


Publication List of Prof. Subir Kumar Sarkar


Publication List of Prof. Samir Kumar Sarkar and Prof. Subir Kumar Sarkar

1 S. Basu, J. Gope, A Karmakar, K.S.Kumar, Samir Kumar Sarkar, Subir Kumar Sarkar."Influence of Mixed oxide Interfacial Layer on the response Characteristics


Publication List of Dr. Swagatam Das


8 Prithwish Chakraborty, Gourab Ghosh Roy, Swagatam Das, Dhaval Jain, and Ajith Abraham, An improved harmony search algorithm with differential mutation operator, Fundamenta Informaticae, IOS Press (Accepted, 2009).


11 B. K. Panigrahi, V. Ravikumar Pandi, Swagatam Das, and Zhihua Cui, “Dynamic


Articles Published in Conferences in the Year 2009:

Publication List of Prof. Amit Konar


Publication List of Prof. Amit Konar and Dr. Swagatam Das


Publication List of Prof. Amit Konar and Dr. S. Sinha Choudhuri


Publication List of Prof. Amit Konar, Dr. S. Sinha Choudhuri and Dr. Swagatam Das


Publication List of Dr. A.S. Chowdhury


5. M.G. Linguraru, A.S. Chowdhury, J.A. Pura and R.M. Summers: 4D Graph Cuts For Automated Multi-Organ Segmentation From Contrast-Enhanced CT, Seventh IEEE Int. Symp. on Biomedical Imaging (ISBI); Rotterdam, The Netherlands (2010). (submitted)

Publication List of Prof. Bhaskar Gupta and Prof. A K Bandyopadhyay


Publication List of Prof. Bhaskar Gupta


Publication List of Prof. Bhaskar Gupta and Prof. H. Saha


Publication List of Dr. (Mrs.) Chayanika Bose


Publication List of Prof. D.R. Poddar


Publication List of Prof. H. Saha


Publication List of Prof. Iti Saha Misra


Publication List of Prof. Salil Kumar Sanyal and Mrs. Sudipta Chattopadhyay

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8. Gowrishankar S., Basavaraju T.G., Subir Kumar Sarkar, An Effort to Understand the Traffic Effect on the Performance of Wireless Sensor Networks, accepted for SENNET-09


Networks, Institute of Science and Technology Klawad, India 2009 (accepted)  


Publication List of Prof. Subir Kumar Sarkar and Prof. Samir Kumar Sarkar


Publication List of Dr. Sheli Sinha Chaudhuri


Publication List of Dr. Swagatam Das


Major Achievements in the Year 2009:

**Ph.D Awarded or Submitted:**

Name of the Research Scholar : Samik Chakraborty  
Name of the Guide : Prof. Bhaskar Gupta & Prof. D.R. Poddar  
Title of the Ph.D Thesis : Investigation on Dielectric Antennas  
Present Status : Awarded

Name of the Research Scholar : Sunandan Bhunia  
Name of the Guide : Prof. Bhaskar Gupta & Dr. P.P. Sarkar  
Title of the Ph.D Thesis : Some Studies on Compact Microstrip Patch Antennas  
Present Status : Awarded

Name of the Research Scholar : Indrajit Bhattacharyya  
Name of the Guide : Prof. Bhaskar Gupta & Prof. A.K. Bandyopadhyay  
Title of the Ph.D Thesis : Use of Genetic algorithm to Find Irregularities on the Surface of a Parabolic Reflector from Its Radiation Patterns  
Present Status : Submitted

Name of the Research Scholar : Madan Gopal Tiary  
Name of the Guide : Prof. Bhaskar Gupta & Prof. A.K. Aditya  
Title of the Ph.D Thesis : Some Investigations on Interconnects in VLSI  
Present Status : Submitted
Name of the Research Scholar : Shubhajit Roy Chowdhury  
Name of the Guide : Prof. H. Saha  
Title of the Ph.D Thesis : A high performance FPGA based Medical Diagnostic decision making Embedded System  
Present Status : Submitted

Name of the Research Scholar : Palash Kumar Basu  
Name of the Guide : Prof. H. Saha  
Title of the Ph.D Thesis : Anodically grown nanocrystalline nanoporous Zinc Oxide Thin Films and Devices for Gas Sensors  
Present Status : Submitted

Name of the Research Scholar : Niteen P. Futane  
Name of the Guide : Prof. H. Saha  
Title of the Ph.D Thesis : CMOS Analog Signal Processing for MEMS based pressure and gas sensors  
Present Status : Submitted

Name of the Research Scholar : Jayita Kanungo  
Name of the Guide : Prof. H. Saha  
Title of the Ph.D Thesis : Studies on Stability and Electrical Contacts on Porous Silicon for Sensor devices  
Present Status : Submitted

Name of the Research Scholar : Sibaram Khara  
Name of the Guide : Prof. Iti Saha Misra  
Title of the Ph.D Thesis : Some Studies on 3G/WLAN Integration Architecture for Next Generation Wireless Networks  
Present Status : Awarded in Dec 2009

Name of the Research Scholar : Surendra Kumar Shri Krishna Rao Dalu  
Name of the Guide : Prof. C. K. Sarkar and Dr. M. K. Naskar  
Present Status : Submitted

Name of the Research Scholar : Gopal Chandra Manna  
Name of the Guide : Prof. Samir Kumar Sarkar  
Present Status : To be submitted in December 2009

Name of the Research Scholar : Satya Sopan Mahato  
Name of the Guide : Prof. Subir Kumar Sarkar  
Title of the Ph.D Thesis : Modeling of Silicon heterostructure Field-Effect Transistors for RF Applications  
Present Status : Awarded April 2009
Name of the Research Scholar : Tirtha Sankar Das
Name of the Guide : Prof. Subir Kumar Sarkar
Title of the Ph.D Thesis : Study on Data Hiding & Data Communication including Multimedia Communication
Present Status : Awarded July 2009

Foreign Assignment(s)
1. Prof. Bhaskar Gupta Visited Kyushu University, Fukuoka, Japan for collaborative research and antenna measurements.

Achievement of the Faculty
1. Prof. Amit Konar has been appointed as the Editor-in-Chief of IJAISC, 2009.
2. Prof. Amit Konar has been appointed as an Editor of Neurocomputing, Elsevier, Journal of Intelligent Decision Technologies, IOS Press, The Netherlands.
3. Prof. Bhaskar Gupta’s name has been included in Marquis 2009 Edition of Who’s Who in the World.
5. Prof. Bhaskar Gupta obtained the Best Paper award in oral section for the paper “Performance improvement of RF MEMS switch with two movable plates” at International Conference ICMEEMS 2009 at IIT Madras, Chennai which was received by co-author Sri A. Kundu.
7. S. Roy Chowdhury, S. Pahari and Prof. H. Saha sent three project proposals on Maximum powerpoint tracking of solar photovoltaic arrays, Foetal ECG extraction using Independent Component Analysis, Signal Conditioning of MEMS based low pressure sensors to M/S Texas Instruments and Jadavpur University was selected amongst the top ten institutions in India based on the proposals.
9. Prof. Iti Saha Misra has been elected as a TPC Member: AICT -2009, Greece.
11. Prof. Iti Saha Misra implemented VoIP Laboratory over wireless LAN, Developed OINET and Qualnet Laboratory for DST project at the Dep. of ETE, JU.
12. Prof. Salil Kumar Sanyal has been elected as Co-ordinator, Central Selection Committee (Engineering & Technology).
13. Prof. Salil Kumar Sanyal has been elected as Member of the Technical Committee for the installation of DSA System at Bangur Institute of Neurosciences, Govt. of West Bengal.
14. **Prof. Salil Kumar Sanyal** has been elected as Member of the International Program Committee of 12th International Conference on Computer and Information Technology (ICCIT 2009) organized by Independent University, Bangladesh and Military Institute of Science & Technology, Bangladesh, December, 2009.

15. **Prof. Subir Kumar Sarkar** has been nominated as Editor-In-Chief of the Journal International Journal of Nano Electronics, Circuits and Systems

16. **Prof. Subir Kumar Sarkar** has been nominated as Editorial Board Member of the Journal of Engineering, computing & Architecture

17. **Dr. Swagatam Das** has been selected as the Guest Editor, Special Issue of IEEE Transactions on Evolutionary Computation on Differential Evolution, 2009.

18. **Dr. Swagatam Das** has been selected as the Guest Editor, Special Issue of ACM Transactions on Autonomous and Adaptive Systems (TAAS) on Foraging Theory based Optimization Techniques, 2009.

19. **Dr. Swagatam Das** has been selected as the Guest Editor, Special Issue of International Journal of Swarm Intelligence Research (IJSIR), IGI Global on Application of Foraging Theory Based Optimization Algorithms to Power Systems Engineering, 2009.

20. **Dr. Swagatam Das** has been selected as the Technical Committee Member for Task Force on Memetic Computing, IEEE Computational Intelligence Society.

21. **Dr. Swagatam Das** has been selected as the International Program Committee member of IEEE Congress on Evolutionary Computation (CEC), Trondheim, Norway during May 18-21 (Monday - Thursday), 2009.

22. **Dr. Swagatam Das** has been selected as the International Program Committee member of 2009 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology, Milano, Italy, September 15-18, 2009.

23. **Dr. Swagatam Das** has been selected as the International Program Committee member of 8th International Conference on Computer Information Systems and Industrial Management Applications (CISIM 2009) during December 09-11, 2009 in Coimbatore, India.

24. **Dr. Swagatam Das** has been selected as the International Program Committee member of International Conference on Soft Computing and Pattern Recognition (SoCPaR 2009) during December 04-07, 2009 in Malacca, Malaysia.

25. **Dr. Swagatam Das** has been selected as the International Program Committee member of IEEE World Congress on Nature & Biologically Inspired Computing (NaBIC 2009), December 9-11, 2009, Coimbatore, INDIA.

26. **Dr. Swagatam Das** has been selected as the International Program Committee member of International Workshop on Advances in Peer to Peer Technology (IWAP2PT'09), December 9-11, 2009, Bangalore, India.

27. **Dr. Swagatam Das** has been selected as the International Program Committee member of ANTS 2010, Seventh International Conference on Swarm Intelligence, Brussels, Belgium, 2010.
Products Developed

1. **Prof. H. Saha** completed schematic and layout of Chopper Stabilized low noise instrumentation amplifier, 7:3 Compressor using 8T full adder and schematic of Analog ASIC design of inverse delayed function model of neuron. The LNA is designed in collaboration with IIT Kharagpur and the Compressor and neuron circuits are designed in collaboration with IISc Bangalore. The layout of the IC chips will be shortly sent to Europractice, Belgium for subsequent tapeout.

Collaborative Programmes

1. **Prof. Amit Konar** started a Research Collaboration with Prof. Lakhmi Jain of Univ. of South Australia, Adelaide for Joint research on Type 2 Fuzzy Sets.
2. **Prof. Amit Konar** started a Research Collaboration with Prof. Anil K. Nagra of Hope University, Liverpool on Multi-agent and Swarm Robotics.
3. **Dr. A.S. Chowdhury** started collaboration with Dr. A. El-Baz, Department of Bioengineering, University of Louisville, Louisville, KY, USA.
4. **Dr. A.S. Chowdhury** started collaboration with Dr. S. M. Bhandarkar, Department of Computer Science, University of Georgia, Athens, GA, USA.
5. **Dr. A.S. Chowdhury** started collaboration with Dr. N. Ray, Department of Computer Science, University of Alberta, Canada.
6. **Dr. A.S. Chowdhury** started collaboration with Dr. R.M. Summers, Department of Radiology and Imaging Sciences, National Institutes of Health, Bethesda, MD, USA.
7. **Dr. A.S. Chowdhury** started collaboration with Dr. J.C. Yu, Department of Plastic Surgery, Medical College of Georgia, Augusta, GA, USA.
8. **Prof. Bhaskar Gupta** Visited Kyushu University, Fukuoka, Japan for collaborative research and antenna measurements.
9. **Prof. Bhaskar Gupta** initiated collaboration with Virginia Tech University, USA for research on Cognitive Radio.
10. **Prof Subir Kumar Sarkar** initiated collaboration with Prof. Supriyo Bandopadhyay of Virginia Tech University, USA for research in Spintronics
1. **Courses Offered**
   - **B. Tech - F.T.B.E**
     Duration - 3 years, Intake: 20
   - **M. Tech - F.T.B.E**
     Duration - 2 years, Intake: 08

2. **Number of Faculty Members** : 10

B. **Area of Research Activities** :

B. **Major Research Projects** :

- Prof. U. Roy Chaudhuri
  - Survey for Sweetmeat of West Bengal, Sponsored by Dept. of Food Processing Industries & Horticulture, Govt. of W.B

- Prof. P. Chattopadhyay and Dr (Mrs) Lalitagauri Ray
  - Neutaceuticals production by food grade microorganisms; Sponsored by UGC, G.O.I.

- Prof. (Mrs) Lalitagauri Ray
  - Studies on fermentative production, purification and immobilization of a thermostable lipase - Sponsored by CSIR.
  - Survey on potentially toxic elements in fruits and vegetables. Sponsored by Min. of F.P.I & H, Govt. of W.B.
  - Production, Purification and Immobilization of beta-galactosidase enzyme from isolated strain - Sponsored by F.P.I & H, Govt. of W.B.
  - Studies on biosorption of heavy metal and textile dye from their aqueous solution by microbial biomass - Sponsored by UGC. ‘Rajiv Gandhi National fellowship for SC - Candidates (individual)’.
  - Studies on biosorption of Cadmium by microbial biomass, CAS, UGC
(Departmental) Project.

- Studies on the biosorption of heavy metals by waste materials. CAS, UGC (Departmental) Project.

Prof. Pratap Chakraborty

- Development of Quality Control Laboratory for Food Processing Industries, funded by MFPI & H, Govt. of West Bengal in the Dept. of Food Technology & Biochemical Engg., JU.
- Development of R & D on Food Irradiation assisting (i) Industries (ii) R & D in New Areas & (iii) Training Centre; sponsored by MFPI, Govt. of India.
- Studies on Radiation Processing of Food (Potato & Marine Products) for extension of shelf life sponsored by UGC, New Delhi.
- Studies on Radiation Processing of Food (Different Varieties of Mango, Potato and Marine Fishes), Role of dosimetry Involved & Chemical & Biological Effects of Different Radiation Doses of Foods Studied. sponsored by CSIR.

Prof. Amit Kumar Ghosh

- R & D Project on “Ultra high temperature processing of liquid beverages and semisolid food products by microwave & electrical energy heating” sponsored by FPI, GOI; & FPI & H, Govt. of WB

Dr. Uma Ghosh

- Studies on microbial production of Pectin methyl esterase. UGC, State Fellowship.
- Studies on production & application of industrially important food enzyme, CAS, UGC (Departmental).
- Studies on fermentative production of phytase and its application in food and feed, CAS, UGC (Departmental).

3 A. Invited Lectures Delivered/ Session Chaired:

Prof. U. Roy Chaudhuri

- Invited to act as a member of the judge panel in Mango Mahotsava and also delivered a lecture on Mango processing during the event which was held on June, 12-14, 2009 organized by Indian Chamber of Commerce.
- Invited to deliver a lecture on Food safety on August 20, 2009 by Indian Institute of Packaging, Kolkata.
- Delivered lecture on Health Foods in MPS Food Industries on 12th October, 2009
- Invited as Guest of honour to deliver lecture on 26th August, 2009 in the Merchant’s Chamber of Commerce, Kolkata on Growth Potential of Food Processing Industries
- Delivered a lecture as guest speaker on Food Processing & Biotechnology
in the seminar of Shilpa Banijya Mela, Baruipur in January, 2009

Prof. Hirannya Gangopadhyay

- Delivered special lecture on “appropriate rural food technology” in the state level awareness programme organized by KVIC & JU on 19.03.09 at IICHE, Kolkata
- Delivered invited lecture on “post harvest technology” on 10.02.09 at Bagnan II, Howrah organized by Agri-Marketing Dept. Govt. of WB
- Delivered Lecture on Sensitisation programme on Food Processing & Entrepreneurship development, organized by Resurrection, a public charitable trust in Kulberia, 24 Pgs (S) on 25.04.09
- Delivered special lecture on “process Technology on sweetmeat Industry” on 26.03.09 organized by PBMBS at Subhas Mukherjee memorial Research Centre, Behala, Kolkata
- Delivered series lectures as guest Faculty on Food preservation for M.Sc Students of Food Sc. & Nutrition, BESU Shibpur during the academic session of 08-09
- Delivered series of Lectures to one year diploma course in Food processing & Entrepreneurship Management organized by AfST (I) (Kol Chap) & FTBE Dept., JU
- Delivered Lecture as resources person in EDP organized by baranagar Baghajatin Social Welfare Organization on 14th October, 2009 in Kolkata

Dipankar Halder:

- Delivered series of lecture in the B.Tech (Biotechnology)-sixth semester classes of BIT, Bantala

B. Seminar / Workshop / Conference / Symposium Attended:

Prof Pratap Chakraborty

- International conference on Irradiation, July 30-31, Delhi

Prof. P. Chattopadhyay & Prof. Lalitagauri Ray

- Neutraceutical potential of fermented foods, National conference on Future of Food Technology in India, held at NIT, Durgapur. January 8-9, 2009.

Dr. Lalitagauri Ray

- National conference on Future of Food Technology in India, held at NIT, Durgapur, January 8-9, 2009.
- Studies on the effectiveness of Cu (II) desorption with acid, alkaline and chelating agents from the immobilized biomass of Bacillus cereus Mf.
- Removal of Pb(II) by Aspergillus sp. Awarded with first prize in the poster session

Dr. Paromita Bhattacharya

Fermentative production and downstream processing of 1,3 propanediol: International conference on Emerging Trends in Biotechnology. Dec 4-6, 2009 at BHU, India.

Prof. Hiranmay Gangopadhyay & Dr. Uma Ghosh

Partial purification of fungal alpha amylase and amyloglucosidase produced by solid state fermentation utilizing agricultural wastes - National conference on ‘Future of Food Biotechnology in India’ held at NIT, Durgapur, Jan 8-9, 2009.

Dr. Uma Ghosh

Waste management by solid substrate fermentation for the production of commercially important enzymes National conference on ‘Future of Food Biotechnology in India’ held at NIT, Durgapur, Jan 8-9, 2009.

Production of pectinase from agroindustrial waste using Aspergillus niger National conference on ‘Future of Food Biotechnology in India’ held at NIT, Durgapur, Jan 8-9, 2009.

Mr. Dipankar Haldar

‘Synthesis and Characterization of Silver-Gelatin Composite - Prospective Applicant for Food Packaging and Medical Products’- National conference on ‘Future of Food Biotechnology in India’, held at NIT, Durgapur, Jan 8-9, 2009.

‘Train-The-Trainer programme’ held in New Delhi during July 27-29, 2009 jointly organized by ASA-IM & USB, USA

C Seminar/Workshop/Conference/Symposium Organized

Prof. Amit Kr Ghosh & Dipankar Halder

“National Conference on Rural Food Processing and Entrepreneurship in the Coming Age of Consumerism” held in the IICHE Auditorium, JU on 17th & 18th January, 2009

Prof. Amit Kumar Ghosh

Vice Chairman of the organizing committee of the International Conference on Solid Waste Management held in Kolkata during November 4-6, 2009

Prof. U. Roy Chaudhuri

Acted as the Chief advisor of the organizing committee of the National Conference on Future of Food Biotechnology in India, NIT, Durgapur, January 2009

One year Diploma in Food Processing & Customized management of Adult Continuing Education Dept., JU, in July, 2009
- Six month’s Certificate Course for Cryogenic & Rural Development, JU under State Council of Govt. of W.B, 2009
- One day workshop organized with Khadi & Village Industries Commission on Rural Food Processing, March 2009

D. Orientation Courses / Refresher Courses Attended:

Dr. Paramita Bhattacharya

E. Orientation Courses / Refresher Courses Organized

4 A. Books / Monographs etc. Published

Prof. H. Gangopadhyay

Prof. Lalitagauri Ray

Dr. Paromita Bhattacharya

B. Articles Published in Journals

Prof. P. Chattopadhyay & Dr. (Mrs) Lalitagauri Ray

Prof. Lalitagauri Ray
- Production and characterization of an alkaline thermostable crude lipase from an isolated strain of Bacillus cereus C7. Applied Biochemistry and Biotech, 159 (1) 2009.
- Biosorption of copper (II) ions by Bacillus cereus M116 from aqueous solution. Ind Chemical Engg. Accepted.
- Statistical optimization of fermentation process parameters for the production of a alkaline thermostable lipase from an isolated strain of Bacillus cereus C7. Ind. Chemical Engg, 2009. Accepted.

Prof. U. Roy Chaudhuri & Prof. R. Chakraborty
• Influence of preservative, thermal treatment and storage time on the carotenoid content of Mangoes. J. Fresh Products, 3(1), 55, Global Science books.

• The effect of turmeric, lime and lemon on the colour and rheological characteristics of tomato puree. Int. J. Culinary Sc. & Tech. Accepted. Publisher Francis & Taylor.

Prof. U. Roy Chaudhuri

• Comparison of the protective effects of steamed and cooked Broccoli on ischemia reperfusion induced cardiac injury; NS British Journal of Nutrition, 2009

• Food Entrepreneurship in the University Education; The Journal of Technical Education & Practical Training, (4), 2009, AICTE.

Prof. Pratap Chakraborty


Prof. Hiranmay Gangopadhyay

• Effect of addition of fruit pulp / juice and soyachhana on fatty acid composition in Ghee, J. Food Sc. & Technology, 2009 (Communicated)

• Rheology of ghee as affected by fruit pulp, J. Food Sc. & Techn, 2009 (communicated)

• Comparison of the protective effects of steamed and cooked broccoli in ischemic reperfusion induced cardiac injury: British J of Nutrition, 2009 (in press)

• Broccoli protects heart through the activation of genes of thyrodoxin superfamily, national Conference proceeding, NIT Durgapur, Jan 6-7, 2009

• Production of Bio-alcohol utilizing jack fruit wastes, J. Mycopathol. Res. (communicated), 2009

Prof. Hiranmay Gangopadhyay & Dr. Uma Ghosh

• Production of Extra cellular alpha amylase from Aspergillus oryzae by solid state fermentation utilizing Agricultural wastes- J. of Mycopathological Res, 47 (1), 2009

• Effect of Metal salts on production of Fungal alpha Amylase from Aspergillus oryzae by solid state fermentation - J. of Mycopathological Res., 47 (2), 2009

• Effect of different carbohydrates and amino acids on production of fungal amylglucosidase by solid state fermentation utilizing agricultural wastes. J. Mycopathol. Res. (communicated), 2009

• Effect of different carbohydrates and amino acids on production of fungal amylase by solid state fementation utilizing agricultural wastes. Abstract
accepted for National symposium to be organized by IMS, Kolkata. Dec3-5, 2009

5 Collaborative Programme

6 Major Achievements

Prof. U.Roychaudhury & Prof. Runu Chakraborty

(a) The Dept. has been awarded a Grant of Rs. 94 lakhs by the UGC under CAS-I (during 2007-2012) to carry out research in the field of Nutraceuticals & Herbal Food processing, Food Biosensors and Bioremediation.
   Coordinators : Prof Utpal Ray Chaudhuri & Prof (Mrs) Runu Chakraborty

(b) The Dept. has been identified by the Dept. of Food Processing Industries & Horticulture, Govt. of West Bengal as the technical resource centre of the state to conduct training and short courses for Entrepreneurship Development & Food Quality Management in Food Processing & Preservation.
   Coordinators Prof. Utpal Raychaudhuri and Prof. (Mrs) Runu Chakraborty.

Prof Pratap Chakraborty

• Creation of Food Irradiation Laboratory (NIL Campus) in JU.
• Process of installation of Food Irradiation Unit at Chinsurah, Hooghly

Prof. D K Chattoraj (INSA HON. Scientist)

• Awarded with “B C Guha Memorial Lecture” in 96th Indian Science Congress held in Meghalaya, during January, 2009
• Invited to inaugurate and deliver plenary lecture in the National Conference on Frontiers of colloidal, surfaces and nanostructured systems during 18-20 February, 2009
• Invited for keynote address in NATCOSEB held in Srinagar during 28-30th July, 2009
INFORMATION TECHNOLOGY
(SALT LAKE)

Phone : +91-33-2335-8321
Pt. : 129
H.O.D. : Prof. Samiran Chattopadhyay
E-mail : hodit.jusl.ac.in

Courses Offered

<table>
<thead>
<tr>
<th>Name of the Course</th>
<th>Duration of the Course</th>
<th>Annual Intake</th>
<th>Year of Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.E (Information Technology)</td>
<td>4 years degree course</td>
<td>60</td>
<td>2000</td>
</tr>
<tr>
<td>M.E (Software Engineering)</td>
<td>2 year degree course</td>
<td>40</td>
<td>2002</td>
</tr>
</tbody>
</table>

Number of Faculty Members:
- Professor : 01
- Lecturer : 04
- Lecturers on Contractual Basis : 04 (Sanctioned 05)
- Reader on Contractual Basis : 01

Area of Research Activities: (Broad Area):

All teachers are actively engaged in research activities. The thrust areas of the department may be classified as follows.
- Image processing, Video Compression, Pattern Recognition
- Distributed Object Computing, Middleware
- Middleware in Mobile Computing, Mobile Ad hoc Networks
- Artificial Intelligence, Machine Learning
- Network Architecture, Routing Protocols
- Parallel Processing, Cryptography

Major Research Project/Consultancy

<table>
<thead>
<tr>
<th>Name of the Project</th>
<th>Principal Investigator</th>
<th>Funded by</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Based Video Indexing and Retrieval using Rectilinear Motion</td>
<td>Bibhas Dhara</td>
<td>ISI</td>
<td>2007 - 2011</td>
</tr>
</tbody>
</table>

• Professor Samiran Chattopadhyay has served as a Part Time Technical Consultant to Interra Systems India Pvt. Ltd., Kolkata.
• Professor Samiran Chattopadhyay has served as a member of the Technical Committee for West Bengal State Data Centre formed by Department of Information, Government of West Bengal.

• Professor Samiran Chattopadhyay has served as a member for several committees in connection with State e-Governance Mission under National e-Governance Plan.

• Professor Samiran Chattopadhyay has served as a member of several committees in connection with e-Governance of the Directorate of Forests, Government of West Bengal.

• Professor Samiran Chattopadhyay has served as a member of the expert committee to review the functioning of the ABV Indian Institute of Information Technology and Management, Gwalior.

Invited Lectures Delivered/Session Chaired

• Professor Samiran Chattopadhyay has served as one Organizing Chair of the ICISS 2009.

• Professor Samiran Chattopadhyay has served as a member of the Organizing Committee of the International Conference on Communications and Distributed Processing (ICDCN), 2010.

• Professor Samiran Chattopadhyay has served as a member of the Technical Program Committee of IEEE Conference on IP Multimedia Subsystem Architecture and Applications -2009 (IMSSAA-2009)

Seminar/Workshop/Conference/Symposium Attended

• Prof. Samiran Chattopadhyay presented his paper at the IEEE VTC Spring 2008 held at Singapore during May 11 - 14, 2008 to present his paper entitled “Energy-Efficient Broadcasting in Wireless Ad Hoc Networks Using Directional Antennas”.

• Mr. Debarshi Kumar Sanyal, a Ph.D student, presented his paper at IEEE Tencon held at Hyderabad, during November 18 – 21, 2008 to present his paper “Improved Performance with Novel Utility Functions in a Game-Theoretic Model of Medium Access Control in Wireless Networks”.

• Dr. Bibhas Chandra Dhara presented his paper at the International Conference on Advances in Pattern Recognition held at Kolkata, India during February, 2009.

• Mr. Bhaskar Sardar, Dr. Uttam Kumar Roy, Ms. Parama Bhaumik, Ms. Asmita Nag and Ms. Mumun Das will be attending the International Conference on Communications and Distributed Processing (ICDCN), January 3 – 7, 2010.

• Mr. Utpal Kumar Ray, Ms. Deblina saha, Ms. Tulika Bhattacharya attended ICISS held at Kolkata during December 14 – 18, 2009.

• Dr. Uttam Kumar Roy and Ms Parama Bhaumik attended a workshop on
“Pedagogical tools for knowledge” organized by TEQUIP, JU, on March 26, 2009.

- Ms. Parama Bhaumik attended a Workshop “Mission 10x: Excellence in Engineering Education” through innovation organized by Wipro held at Kolkata during August 10 – 14, 2009.

- Prof. Samiran Chattopadhyay attended a seminar on “Confidence-Based Learning Solutions For Engineering Curriculum” held at Kolkata on October 8, 2009.

Orientation Courses/Refresher Courses Organized

- A 60 hour Certificate Course on “J2EE and Introductory J2ME” has been conducted by the department in collaboration with Project IMPACT during January, 2009 – April, 2009.

Articles Published in Journals/Conferences


13. Parama Bhaumik, Moumita Bandyopadhyay, Zone Based Ant Colony Routing for Mobile Ad Hoc Networks, accepted for publication in COMSNET 2010.

Collaborative Programmes:

- Professor Samiran Chattopadhyay works with Indian Institute of Technology, Kharagpur and Indian Statistical Institute and with Bengal Science and Engineering University for joint research work leading to a Ph.D. r.

- Dr. Bibhous Chandra Dhara is an investigator of a research project jointly supervised and funded by Indian Statistical Institute, Calcutta.

- Mrs. Parama Bhaumik and Dr. Uttam Kumar Roy works with faculty of Indian Institute of Management, Calcutta on joint research projects.

Major Achievements

- Dr. Bibhous Chandra Dhara has proceeded to pursue his post doctoral studies at Alcorn State University, Missisipi, USA as a visiting Research Scholar/Scientist for a period of one year.

- A new floor has been constructed as an additional facility for the department at the second floor of the Building of the Centre of Mobile Computing and Communications.

- Amrita Saha, Rajiv Berlia and Sandipan Bhattacharyya reached the final of Intel Scholars Program, 2008 for their project entitled "An Intelligent Network using Automated Power Control System to ensure cautious driving" under the guidance of Mrs. Parama Bhaumik.

- Victor Chakraborty worked as a summer intern at Microsoft India Development Center, Hyderbad, during 19th May 2008 - 15th Aug 2008 in a project entitled "Office Mobile 14  (To be shipped with Windows Mobile Seven OS)"
• Sankalan Sarkar, Agniva De Sarkar, Subhadip Halder and Ayush Khemka, secured the First rank in “FRAMED 9211” even in “KSHITIJ '09” organized by Indian Institute of Technology, Kharagpur.

INSTRUMENTATION & ELECTRONICS ENGINEERING  
(SALT LAKE)  
Phone : + 91-33-2335-2587  
Int. : 136/154  
H.O.D. : Dr. Ratna Ghosh  
E-mail : dept@iee.jusl.ac.in

1) A) Courses Offered:  

<table>
<thead>
<tr>
<th>Name of the Course</th>
<th>Duration</th>
<th>Year from Which Started</th>
<th>Total Intake</th>
<th>No. of Students Enrolled</th>
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<tbody>
<tr>
<td>Bachelor of Instrumentation &amp; Electronics Engineering</td>
<td>4 Years</td>
<td>1989</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Bachelor of Technology in Instrumentation and Electronics Engineering</td>
<td>3 Years</td>
<td>1966</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Master of Technology in Instrumentation and Electronics Engineering</td>
<td>2 Years</td>
<td>2001</td>
<td>8</td>
<td>8</td>
</tr>
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</table>

B) Number of Faculty Members:  

<table>
<thead>
<tr>
<th>Professor(s)</th>
<th>Reader(s)</th>
<th>Lecturer(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalyankumar Ray</td>
<td>Kalyan Majumdar</td>
<td>Ruru Banerjee</td>
</tr>
<tr>
<td>Subhankar Bandyopadhyay</td>
<td>Rajanikanta Mudi</td>
<td>Proloy Sharma</td>
</tr>
<tr>
<td>Ardhendu Ghosal</td>
<td>Kumardeb Banerjee</td>
<td></td>
</tr>
<tr>
<td>Rajib Bandyopadhyay</td>
<td>Bhaswati Goswami</td>
<td></td>
</tr>
<tr>
<td>Bivas Dam</td>
<td>Ratna Ghosh</td>
<td></td>
</tr>
<tr>
<td>Bipan Tudu</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2 A) Area of Research Activities:
   i) Signal Processing
   ii) Digital System Design
   iii) Intelligent Control
   iv) Electronic Olfaction
   v) Embedded Systems
   vi) Sensor Design

B) Major Research Projects:

<table>
<thead>
<tr>
<th>Name of the Project</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIST-2008</td>
<td>DST, Govt. of India</td>
</tr>
<tr>
<td>Digital Controller for Electro-mechanical actuator</td>
<td>RCI, DRDO, Govt. of India</td>
</tr>
<tr>
<td>Development of Electronic Nose for Agro Products</td>
<td>DST, Govt. of India</td>
</tr>
<tr>
<td>Development of an Explosive Detection System using NQR technique</td>
<td>DRDO, Govt. of India</td>
</tr>
<tr>
<td>Non Classical Estimation Techniques for Homing Interceptor Guidance</td>
<td>DRDO, Govt. of India</td>
</tr>
<tr>
<td>Development of Constant Phase Element (CPE) based sensor for detecting adulterated milk</td>
<td>DST, W.B.</td>
</tr>
<tr>
<td>Development of Electronic Tongue for quality Assessment of Black tea</td>
<td>SERC, DST Govt. of India</td>
</tr>
</tbody>
</table>

3 A) Invited Lectures Delivered/ Sessions Chaired:
1. Prof. R. Bandyopadhyay was invited to deliver a talk on “Feature extraction with sensor arrays for non-destructive quality evaluation methods” at the annual workshop on Nondestructive methods for quality evaluation of food materials organized by CIHEM, Ludhiana on the 7th February, 2009.
2. Prof. R. Bandyopadhyay was invited to deliver a talk on “Classification Method with Sensor Arrays- Applicability in Electronic Nose and Tongue” at the International Workshop on Tailor-Made Nanomaterials and Applications for Chemical and Bio-Sensors held on 2-3 March 2009 at CGCRI, Kolkata.
3. Prof. R. Bandyopadhyay organized International Workshop and Industry Visit on “Electronic Nose and Tongue” jointly with CDAC, Kolkata on 30th October, 2009 at Manikanchan, Salt Lake, Kolkata.

B) Seminar/ Workshop/ Conference/Symposium Attended:
5. R. Bandyopadhyay, N. Bhattacharyya, M. Bhuyan, A. Ghosh

C) Seminar/ Workshop/ Conference/Symposium Organized:
None

D) Orientation Course/ Refreshers Course Attended:
None

E) Orientation Course/ Refreshers Course Organized:
None

4 A) Books/Monographs Published:

4 B) Articles Published in Journals:


11 Dibyendu Bhattacharyya, Anil Kumar Bag, Bipan Tudu, Nabarun Bhattacharyya, Rajib Bandhopadhyaya, “Fuzzy ARTMAP technique for quality evaluation of tea using electronic nose,” International Conference on Modeling and Simulation (MS’07), Department of Applied Physics, University of Calcutta, December 3-5, 2007 Kolkata, India (Accepted for Oral Presentation).


Process using Time-Delay Neural Network on Electronic Nose Data,”
Proceedings of the International Conference on Computing: Theory and
Application-ICCTA-2007, Indian Statistical Institute, Kolkata, India, March

17. Mousumi Palit, Bipan Tudu, Nabarun Bhattacharyya and Rajib
bandhopadhyay, “Taste sensors and Electronic Tongue,” Proceedings of the
International Conference on “Emerging Trends in Electrical Engineering”,
Jadavpur University, Kolkata, India, January 12-14, 2007.

18. Nabarun Bhattacharya, Devdulal Ghosh, Arun Jana, Bipan Tudu, Rajib
Bandhopadhyaya, “Fish Smell Classification Using Electronic Nose,”
Proceedings of the International Conference on Computer and Devices for
Communication -CODEC-06, Hyatt Regency, Kolkata, India, December 18-
20, 2006.

19. Nabarun Bhattacharya, Bipan Tudu, Rajib Bandhopadhyaya, Sohan Seth,
Arun Jana, “Fish Freshness Determination Using Electronic Nose,” Proceeding
of the National Workshop Cum training on Bioinformatics on aquaculture
Research, Central Institute of Freshwater Aquaculture, Bhubaneswar, India,


a) List of Referred Research Publication

1. Mousumi Palit, Bipan Tudu, Pallab Kumar Dutta, Ankur Dutta, Arun Jana,
Jayanta Kumar Roy, Nabarun Bhattacharya, Rajib Bandhopadhyay, Anutosh
Chatterjee, “Classification of Black TeaTaste and Correlation With Tea
Taster’s Mark Using Voltammetric Electronic Tongue,” Accepted for
publication in IEEE Transaction on Instrumentation and Measurement, 2009

2. Bipan Tudu, Arun Jana, Animesh Metla, Devdulal Ghosh, Nabarun
Bhattacharya, Rajib Bandhopadhyay, “Electronic nose for black tea quality

3. Bipan Tudu, Animesh Metla, Barun Das, Nabarun Bhattacharya, Arun Jana,
Devdulal Ghosh, Rajib Bandhopadhyay, “Towards Versatile Electronic Nose


b) Book Chapter

Title of the Book: Applied Bioinformatics Statistics and Economics in Fisheries Research


c) List of Paper Published/Accepted in Seminars/Conference proceedings:


3. Santi Sankar Chowdhury, Bipan Tudu, Nabarun Bhattacharya, Rajib Bandyopadhyay, "Portable Electronic Nose System for Aroma Classification


5 Collaborative Programmes:
None

6 Major Achievements:

Bipan Tudu received the SERC Fast Track Proposal for Young Scientists-Engineering Sciences scheme.
1. **(B) Number of Faculty Members:**

(Sanctioned Strength : 79)

- Professors: 22
- Readers: 28
- Lecturers: 17

2. **(A) Departmental Research Activities (Broad Areas):**

- Hydraulic and Combustion control
- Experimental and Computational fluid dynamics and heat transfer including problems on multi-phase flow.
- Fluid Power and control.
- Heat transfer analysis of various production processes.
- Combustion modeling and simulation.
- Pollution and its control
- Alternative fuels
- IC engine
- Vibration analysis.
- Vibration control in machine foundations.
- Laser machining process.
- Fracture Mechanics.
- Dynamic instability of machine structures
- Synthesis and analysis of machine components.
- Experimental stress and deformation analysis.
- Composite structure.
- Computer Aided Design & Manufacturing (CAD/CAM)
- Tribology
- Welding Technology
- Surface Engineering
- Machining processes including non-traditional
- Waste Management
- Total Quality Management
2. Major Research Projects:

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Description</th>
<th>Amount</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARC, 2009-12</td>
<td>Master curve generation for fracture toughness of the material 20 Mn Mo Ni 55 from lower shelf to upper shelf</td>
<td>20 00 000</td>
<td>PI: Prof. S. Acharyya</td>
</tr>
<tr>
<td>BARC, 2009-12</td>
<td>Code development for numerical simulation of premixing phase of fuel-coolant interaction in Indian pressurized heavy-water reactors</td>
<td>13 57 000</td>
<td>PI: N. K. Manna</td>
</tr>
<tr>
<td>BARC, 2009-12</td>
<td>Large-scale molten fuel-coolant interaction</td>
<td>95 00 000</td>
<td>PI: S. Sen</td>
</tr>
<tr>
<td>BARC, 2009-12</td>
<td>Clad behaviour under accident condition</td>
<td>35 90 000</td>
<td>PI: K. Ghosh</td>
</tr>
<tr>
<td>BARC, 2009-12</td>
<td>Thermal-hydraulic study for PHWR channel blowdown</td>
<td>1 80 000 00</td>
<td>PI: S. Das</td>
</tr>
<tr>
<td>CSIR, 2009-12</td>
<td>Fuel effects on performance and emission characteristics of thermal pulsed combustor</td>
<td>6 42 000</td>
<td>PI: A. Mukhopadhyay</td>
</tr>
<tr>
<td>ERIPR, 2009-12</td>
<td>Dynamic characterization of model gas-turbine combustors for early detection of thermo-acoustic instability and lean blowout</td>
<td>14 95 000</td>
<td>PI: A. Mukhopadhyay</td>
</tr>
<tr>
<td>BARC, 2009-12</td>
<td>Thermal hydraulic study for PHWR channel blowdown</td>
<td>1,86,05,555</td>
<td>PI: Prof. S. Das, D. Mishra, S. Simlandi</td>
</tr>
<tr>
<td>BRNS, 2009-12</td>
<td>Experimental investigation on critical flow behaviour for a pipe crack under bending moment</td>
<td>24,36,680</td>
<td>PI: S. Das, D. Mishra</td>
</tr>
<tr>
<td>UGC, 2007-10</td>
<td>Prediction of Forgeability of Aluminium Silicon Carbide Metal Matrix Composites by response surface method</td>
<td>10,00,000</td>
<td>PI: G. Sutradhar</td>
</tr>
<tr>
<td>Indian National Science Academy History of Technical Education in India:1900-2005</td>
<td>$3,00,000</td>
<td>PI: S. Saha</td>
<td></td>
</tr>
<tr>
<td>The Jute Corporation of India Development of High Speed Jute Ribboner</td>
<td>31,00,000</td>
<td>PI: S.K. Ghosh</td>
<td></td>
</tr>
<tr>
<td>West Bengal Pollution Control Board Inventorisation of Plastics Recycling and processing units in West Bengal</td>
<td>5,84,000</td>
<td>PI: S.K. Ghosh</td>
<td></td>
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<tr>
<td>Dept of Environment, Govt. of W.B. Waste to wealth -ER2 Surendra</td>
<td>12,37,000</td>
<td>PI: S.K. Ghosh</td>
<td></td>
</tr>
</tbody>
</table>

3. Invited Lecturers Delivered/Session Chaired:

Faculties of this Department have delivered lectures as indicated below:

Prof. Gautam Sutradhar

2. "Casting Defects and Remedies" on 8.9.2009 at CBD Premises, Dasnagar, Howrah. Program was organized by Directorate of Micro & Small Scale Enterprise, Howrah.
3. "Production of Clean Steel Casting through Simulation Technique" on 9th Sept,
2009 at National Workshop on CDM and Cleaner Production at Bhubaneswar, Orissa.

Prof. Samir K. Saha
2. “Introduction to Clean Development Mechanism”. Lecture delivered on 24th June, 2009 in the UGC-Academic Staff College Refresher Course of Department of Power Engineering, Jadavpur University, Kolkata.
5. Panel Member, at discussion at the national seminar on “Energy Security & Nuclear Power –An Indian Perspective”, organised by NCE & Jadavpur University Alumni Association in collaboration with Jadavpur University, 20th June, 2009, Jadavpur University, Kolkata.

Prof. Swarnendu Sen

Prof. Achintya Mukhopadhyay

Prof. D. Nag

<table>
<thead>
<tr>
<th>Name of the Organisation</th>
<th>Place</th>
<th>Subject</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Consultants Private Limited</td>
<td>Kolkata</td>
<td>An Introduction to Mechanics of Piping Stress Analysis</td>
<td>01st June-05th June, 2009</td>
</tr>
<tr>
<td>Indian Oil Corporation Limited</td>
<td>Haldia</td>
<td>Basics of Mechanics</td>
<td>14th July, 2009, 09th August, 2009</td>
</tr>
<tr>
<td>National Institute of Technical Teachers’ Training and Research</td>
<td>Kolkata</td>
<td>Particle Kinematics Particle Kinetics</td>
<td>02nd Sept., 2009, 03rd Sept., 2009</td>
</tr>
</tbody>
</table>

Dr. Himadri Chattopadhyay
“Application of CFD in Power Plants”, UGC ASC Course in Dept of Power Engg., July 2009, Jadavpur University
Prof. Sudipta De
2. “Combining power and process plants for improved performance”, Refresher Course organized by the Department of Power Engineering, Jadavpur University, Kolkata, 10th June 2009.

Prof. Ashis Bandyopadhyay
1. Delivered one invited talk on ADVANCES IN WELDING at NIT Agartala.
2. Delivered one talk on Welding Technology for the teachers’ training programme at NITTTR, Kolkata.

Prof. Sadhan K. Ghosh
1. 18.07.2009 Jute Corp of India Purchase Planning delivered invited lecture to JCI officers.
2. 22.06.2009 Indian Maritime University, IIPM, Kolkata Life Cycle of Equipment and Economics delivered invited lecture to senior officers of ports.
3. 16.06.2009 Max Muller Bhawan, Kolkata Problems in Vehicular Pollution in cities delivered invited lecture
4. 28.04.2009 Rotary Club of Calcutta Plastics Waste Management delivered invited lecture
5. 17.04.2009 National Seminar on Hazardous Waste Management by Indian Institute of Chemical Engineers, Jadavpur PWM in India and Other Countries-Problems and Prospects delivered invited lecture
6. 17.03.2009 CIPET, at IPF Seminar Room Rapid Prototyping and Reverse Engineering delivered invited lecture
7. 16.03.2009 IIPM, Kolkata TPM in port management delivered invited lecture to senior officers of ports.
8. 27.02.2009 CESC Ltd., CESC House, Kolkata Safety Audit in Power distribution, transmission and installation delivered invited lecture to senior officers CESC Ltd., CESC House, Kolkata
9. 20.02.2009 Environment Partnership Summit by India Chamber of Commerce
at Hyat Regency, Kolkata Feb 19-21, 2009  Air Pollution Control Techniques Vis-à-vis Climate Change delivered invited lecture

10. 03.02.2009  WBSETCL, at Zeerat 400 KV O&M S/S. TQM on Power Transmission delivered invited lecture to senior officers

11. 18.01.2009  National Conf on Rural Food Processing & Entrepreneurship in coming age of consumerisation, FITE, JU & ARST (I). Entrepreneurship and Rural Business opportunity delivered invited lecture

12. 23th & 24th Dec, 2008  Gobardanga Municipality Inauguration of Exhibition on Environment Inaugurated & delivered lecture

13. 29.12.2008  WBSETCL, Vidyut Bhawan, Saltlake TQM on Electricity Transmission Project delivered invited lecture to senior officers

Session Chaired

Dr. Tarun Naskar

Prof. Sudipta De

Prof. Pradip K. Pal
Chaired a technical session in the International Conference: AMPT – 2009, to be held at Kula-Lumpur, Malaysia during 26-29 Oct., 2009

Prof. Ashis Bandyopadhyay
Chaired a technical session at AMPT Conference, 2009

Prof. Sadhan K. Ghosh
Chairman, Panel Discussion on Plastics Waste Management, IPF Golden Jubilee Celebration Seminar at Grand Hotel, Kolkata on 15.05.2009.

3  (B) Seminar/Workshop/Conference/Symposium/Training Attended:

Prof. Prasanta Sahoo

Dr. Tarun Naskar

2  14th National Conference on Machines and Mechanisms (NaCoMM-09), NIT, Durgapur, India 17-18 December 2009

Prof. Gautam Sutrada
1  Aluminium metal foam a Potential material in Automotive & Aerospace


Prof. Ashis Bandyopadhyay

Prof. Pradip K. Pal
3. Attended AMPT2009 Conference at Kuala Lumpur and presented a paper there.

Prof. Samir K. Saha
Attended 5th Indo-German Theme Meeting on ‘Structural Integrity of Pressure Retaining Components’ jointly organised by Jadavpur University & BARC, 18th February, 2009, Jadavpur University, Kolkata.

Prof. Achintya Mukhopadhyay
7th Asia-Pacific Conference on Combustion, May 24 – 27, 2009, Taipei, Taiwan

Prof. Sadhan K. Ghosh
2. Seminar on Solid Waste Management at Hotel Oberoi Grand, Invited by British High Commission, Kolkata, 05.03.2009.
4. ISO TC 61 Briefing meeting at BIS, New Delhi as a team member of Indian Delegation to Rome, Italy in September 2009.

Dr. Nilkanta Barman
International Conference Attended and Presented a Poster Paper:

Workshop Attended:
• Two day workshop on “Mechanical Engineering Education at Crossroads” on 10-11 July, 2009 held in the Department of Mechanical Engineering, Jadavpur University, Kolkata.
- One day workshop on “Casting Simulation and Optimization: Benefits, Bottlenecks and Best Practices” on 28th August, 2009 held in the Department of Mechanical Engineering, Jadavpur University, Kolkata

3 (D) Orientation/Refresher Course Attended:

Dr. Nilkanta Barman

Refresher Course Attended:

- “Art and Science of Mechatronics and Its Application in Robotics” on 1-20 June, 2009 held in the Department of Electrical Engineering, Jadavpur University, Kolkata.

3 (E) Orientation Course/Refresher Course Organized:

<table>
<thead>
<tr>
<th>Name of the Programme</th>
<th>Convenor and Joint Convenor</th>
<th>Venue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th Indo-German Theme Meeting on Structural Integrity of Pressure Retaining Components</td>
<td>Dr. S.K. Acharya</td>
<td>Jadavpur University</td>
<td>February 18, 2009</td>
</tr>
<tr>
<td>Two-Day Workshop on Mechanical Engineering Education at Cross-Roads</td>
<td>Dr. Abhijit Chanda Dr. Debabrata Nag Dept of Mechanical Engg, Jadavpur University</td>
<td>10-11 July, 2009</td>
<td></td>
</tr>
<tr>
<td>Casting Simulation and Optimisation: Benefits, Bottlenecks, and Best Practices</td>
<td>Prof. Gautam Sutradhar</td>
<td>Jadavpur University</td>
<td>28th August, 2009</td>
</tr>
</tbody>
</table>

4 (A) Books/Monographs etc. Published:


3. Prof. Prasanta Sahoo has been invited to author Chapter 1 (on Surface Topography) of the book “Tribology for Engineers” to be published by Woodhead Publishing, Oxford.


5. Prof.s D. Nag and A. Chanda has the following book in press, “Fundamentals of Strength of Materials”, Wiley India, New Delhi


7. Prof. Sadhan K. Ghosh, Report on Inventorisation of Plastics Recycling and processing units in West Bengal, by CQMS, JU & WBPCB.

4 (B) Articles Published in Journals:


37. Naskar, T.K. and Acharyya, S., Measuring cam-follower performance, Mechanism and Machine Theory (Accepted)


54. R. K. Mallik, S. K. Mahapatra and A. Sarkar, "Neural finite difference method (NFDM) in development of improved differential approximation (IDA) and its


56. Datta, A. Biswas, G. Majumdar, "Identification of significant process parameters influencing overall quality indicator of submerged arc weld using Principal Component Analysis (PCA) and Analysis of Variance (ANOVA)", International Journal of Manufacturing Science and Production, Freund Publishing House, Israel. (Accepted)


64. N. Barman and P. Dutta, "Effect of process parameters on transport phenomena during solidification in the presence of electromagnetic stirring", Transactions of the ....
Conference Proceedings


5. Routara, B. C., Sahoo, P. and Bandyopadhyay, A., Multi-objective optimization of cutting parameters for surface roughness in cylindrical grinding using response surface method, International Conference in Mechanical Engineering (ICME) Dhaka 2009 (accepted).


7. Chatterjee, B., Adhikary, D. and Sahoo, P., Effect of strain hardening on elastic-plastic contact behaviour of a sphere against a rigid flat - a finite element study, International Conference in Mechanical Engineering (ICME) Dhaka 2009 (accepted).


23. Pradip Kumar Pal, Asih Bandyopadhyay and Ramesh Rudrapati, “Effects of process parameters on surface finish in cylindrical grinding”, accepted for presentation and publication in the Int. Conf. on Advances in material and Processing Technologies - AMPT 2009, to be held during 26 - 29 Oct., 2009

24. Pradip Kumar Pal, Asih Bandyopadhyay and Ramesh Rudrapati, “Vibration in traverse cut cylindrical grinding – experiments and analysis “, accepted for


42. S. D. Mohanty, S. Datta, S. S. Mahapatra and G. Majumdar, “Application of an Integrated Multi-Objective Optimization Methodology in Flux Core Arc Welding (FCAW)”, For Weld India 2009-10, National Welding Seminar NWS 2009-10, Organized by Indian Institute of Welding, Kolkata to be held on 10th -13th December 2009. (Accepted)

43. Majumdar, G., Bhattacharya, A. and Oraon, B., Prediction of weld bead geometry for submerged arc welding process using rule-based inference system, Proceedings of National Conference on "Recent Advances in Mechanical Engineering"
AR 2009 / 306

(RAIME-08), March 20-21, 2008, National Engineering College, Kovilpatti, Tamil Nadu, India.

44. Sutrachar, G., Thomas, S. and Oraon, B., Development of an fuzzy-logic intelligent system for the selection of most viable and economic casting method, Proceedings of 68th World Foundry Congress (WFC), February 7 - 10, 2008, Chennai, India.


47. Saha, Manas Kumar , Santanu Das, Asish Bandyopadhyay “Characterization of CO2 shielded GMAW process for welding low carbon steel specimens”, Srikanta Bandyopadhyay, National Seminar on Welding, organized by IIW, during 10-12 December, 2009. (Accepted)


5 Major Achievements of the Department:

Prof. Samir Saha

- Nominated as an Expert member in the UGC Advisory Committee for Mechanical Engineering Group DRS support project in BITS, Pilani.
- NBA Accrictor for AICTE
- Advisor to the UPSC to interview candidates on 7 & 8.10.2009.
- Advisor to PSC, Government of West Bengal & Government of Tripura.
- Member of the Executive committee of Birla Industrial & Technological Museum, Kolkata.
• Member of the Governing Body of MCKV Institute of Engineering, Howrah.
• Member, Syllabus Committee, WBUT.

Prof. Sadhan K Ghosh
• Appointed by ISO TC 61 Secretariat as the convener of Working Group, ISO TC 61 WG2 since August 2009 and offered to Chair the ISO TC 61 WG 2 meeting at Rome, Italy.
• Selected as the member of Indian Delegation team to ISO TC 61 WG 2 meeting at Rome, Italy.
• Selected as the member of PCD 12 of BIS.
• Received the appointment as the Director of CBWE, Ministry of Labour & Employment, Govt of India.
• Invited to act as the Non Executive Director and Chief of Advisory Board, KRL Recyclers Ltd, a new private initiative on automatic recycling of e-waste by imported technology in the state of West Bengal.
• Dept of Sports, Govt of West Bengal has invited to act as the member of jury board for science models in the science exhibition in 150th Anniversary of Sir Jagadish Ch Bose on 30.12.2008.
• Invited to act as the member of Cluster Development Coordination Committee (CDCC) and District Level Committee for the Silver Filigree Cluster Development Programme at Mograhat II, under micro and small enterprise cluster development programme, Govt of West Bengal, Directorate of Micro and Small Scale enterprise.
• Acted as the International Project Team Leader in ISO TC 61 for developing a guideline standard on chemical management in Plastics products and processes.

Prof. Prasanta Sahoo
Prof. Prasanta Sahoo has been appointed Guest Editor for a special issue on Computational Mechanics in International Journal of Engineering, Science and Technology (Multicraft)
Prof. Sahoo is Editorial Board Member of Materials and Design (Elsevier), International Journal of Engineering, Science and Technology (Multicraft), Journal of Tribology Research (Serials), Journal of Tribology & Surface Engineering (Nova Science).

Dr. Himadri Chattopadhyay
Awarded Guest Researchership for two months during 17.11.2009-14.01.2009 at the Dusseldorf University by DAAD, Germany
Dr. Balaram Kundu
Offered Research-Associateship for 2010-11 at the Dept. of Mechanical Engineering, HANYANG University, Korea

Dr. Kaushik Ghosh
Received Post Doctoral Fellowship for one year to carry out collaborative research in ‘INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE’ to carry research work on ‘Heat and Mass Transfer under film boiling configuration’

Peer Review
Faculties of this department have been involved in the following peer review activities:

Prof. Simil Banerjee
Int. J. Advanced manufacturing Technology (Springer)

Prof. Prasanta Sahoo:
- Journal of Physics D: Applied Physics (IOP),
- Materials & Design (Elsevier),
- Tribology International (Elsevier),
- Journal of Machining and Forming Technologies (Nova),
- Journal of Tribology and Surface Engineering (Nova),
- International Journal of Engg Science & Technology (MultiCraft),
- Tribology Transactions (SILE),
- Materials Characterization (Elsevier),
- International Journal of Surface Science and Engineering (Inderscience),
- Arabian Journal for Science and Engineering B: Engineering (Kfupm),
- International Journal of Solids and Structures (Elsevier)

Prof. Achintya Mukhopadhyay
- Experimental Heat Transfer,
- Applied Thermal Engineering,
- Atomization and Sprays, International Journal of Multiphase Flow,
- Transactions of ASME Journal of Heat Transfer,
- International Journal of Spray and Combustion Dynamics

Prof. Sudipta De
- Energy - the Int. Journal,
- International Journal of Energy Research

Dr. Himadri Chattopadhyay
- International Journal of Heat mass Transfer
Courses Offered:

1. 4-Year Bachelor in Metallurgical Engg.
2. 2-Year Master of Metallurgical Engg in Industrial Metallurgy
3. 2-Year Master of Material Engineering

Number of Faculty Members: 12

Area of Research Activity

- Fatigue & fracture of materials,
- Corrosion behavior of metal & material and there protection methodology,
- Welding Technology,
- Melting & Solidification,
- Composite Materials
- Nano Materials,
- Archaeo Materials
Main Achievement

Department is happy to receive the order for “Creation of Ministry Steel Chair Professor in Department of Metallurgical Engineering and five scholarships to undergraduates students pursuing study in Ferrous Metallurgy.” Vide order no.: F.No.11(23)/2005-TW dt. 31st October, 2008.

Department is also happy to receive the order for “Approval cum Sanction letter for the award of Research Fellowship in Sciences to Meritorious students under the UGC scheme of Research Fellowship in Science for Meritorious students to promote quality research in Universities/Departments” Vide order no.: F.4-3/2006 (BSR)/5-49/2007 (BSR) dt. 22 October, 2008.

Department has been identified by Department of Science & Technology, GOI New Delhi, in its FIST Programme.

METALLIX 2008

Metallix 2008 was the second major project undertaken by the IIM, Kolkata chapter. Three - day long technical feat involving students from various parts of the country as well as industrial houses was organized.

Research Projects

<table>
<thead>
<tr>
<th>Title of the Project</th>
<th>Supervising Agency</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zn-Al cast metal corrosion study</td>
<td>Electro-steel casting</td>
<td>2009 2010</td>
</tr>
<tr>
<td>Tribal &amp; Rural Arts Centre</td>
<td>TEQIP-SC &amp;E</td>
<td>2006 2008</td>
</tr>
<tr>
<td>Investigation of Coal based</td>
<td>CSIR</td>
<td>2005 2009</td>
</tr>
<tr>
<td>Methane as a clean energy source and utilizations there on</td>
<td>UGC-DSA</td>
<td>2004 2009</td>
</tr>
<tr>
<td>Corrosion and wear of hard materials, welds and composites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study on Corrosion Fatigue behaviour of high strength steel weldments in 3.5% NaCl solution with and without cathodic potential</td>
<td>Naval Research Board</td>
<td>2007 2010</td>
</tr>
<tr>
<td>Fatigue behaviour analysis of spot welded, laser welded and adhesive bonded high strength steel sheet joints</td>
<td>Ministry of Steel and Tata Steel</td>
<td>2007 2010</td>
</tr>
<tr>
<td>A recirculation loop test facility and study the crack initiation</td>
<td>BARC</td>
<td>2008 2012</td>
</tr>
</tbody>
</table>
and its precursor phenomenon leading to stress corrosion cracking in austenitic stainless steels in simulated nuclear reactor environment.

**Development procedure for friction stir spot Welding of Formable Steel qualify, High Strength Steel Joints**

Ministry of 2008 2011

**Processing of Vanadium Magnetite Ores of Eastern India**

Ministry of 2009 2012

**Investigation of deformation and Damage mechanism in Bare and Coated Automotive Steels through In-situ Scanning electron Microscopy**

Ministry of 2009 2012

**Low Cycle Fatigue, Ratcheting and their interaction in two different automotive grade sheet steels**

TATA Steel, Rs.3.60 Crore

Rs.14.95 lakh

**Seminar/Workshop/Conference/Symposium Attended**


2. Invited lecture delivered on “Effect of Welding parameters on microstructure and properties of high strength weld metal” at the National Symposium on Advances in Steel Metallurgy (ASM 2009) at Toshali Sands, Puri, Orissa, on 21st and 22nd March 2009.


**Seminar/Workshop/Conference/Symposium Organized**


**PUBLICATION LIST**


15. Fabrication and Characterization of Bioelectrochemical fuel cell with pyrolysed


28. The microstructure and mechanical properties of SiC reinforced Mg based


32. “Comparative Corrosion studies on a few coated biocompatible materials” by Shampa Dhar, S Paul & P K Mitra, Accepted for publication in Steel Tech.


42. J. Maity, T. K. Pal and R. Maity "Microstructural Characterization of TLP bonded 6062-SiCp Composite", Accepted for publication in journal of Material Engineering and Performance, USA.


44. Synthesis and optical characterization of polymer-capped nanocrystalline ZnS thin films by chemical process, Maity, R., Maiti, U.N., Mitra, M.K., Chattopadhyay, K.K., Physica E: Low-Dimensional Systems and Nanostructures 33 (1), 104-109


56. “Function of magnesium aluminate hydrate (MAH) and magnesium nitrate (MN) as MgO addition in crystal structure and grain size control of α-Al$_2$O$_3$ during sintering”, S. Pal, A. Bandyopadhyay, P.G. Pal, S. Mukherjee, B.N. Samaddar “Accepted in Bull, Materi. Sci., 2009.


1. **Courses Offered:**

<table>
<thead>
<tr>
<th>Name of the Course</th>
<th>Duration of the Course (in year)</th>
<th>No. of Students Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.Pharm.</td>
<td>4</td>
<td>70</td>
</tr>
<tr>
<td>M.Pharm.</td>
<td>2</td>
<td>25+QIP</td>
</tr>
<tr>
<td>Ph.D.</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>M.Pharm. in Clinical Pharmacy &amp; Pharmacy Practice</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

2. **No. of Faculty Members:**

- Professor: 13
- Readers: 8
- Sr. lecturer/Lecturer: 4

3. **Departmental Research Activities:** (Broad Areas)

**Research Areas**

1. Separation techniques, Particle Engineering
2. Antisense technology, chemoprevention by gene manipulation and gene delivery
3. Drug-lipid interaction
4. Adsorptive bubble separation method
5. PhytoChemistry and Synthetic Chemistry
6. QSAR and Molecular Modeling; Cheminformatics; Drug Design; Ecotoxicological Modeling
7. Novel and Controlled Drug Delivery systems
8. Cell Biology
10. Antibiotic production by immobilization. Antibiotic biosynthesis and biosynthetic enzymes. Enzymes isolation and purification. Semisynthesis of penicillins
11. Anticancer Drug Design
12. Synthesis of Coordination Compounds as anticancer agents.
13. Bio equivalence study toxicity study and clinical trial
B. Major Research Project:

Name of the Teacher/Name of the Project/Funding Agency/Sanctioned/Date

Dr. Biswajit Mukherjee Production of antisense h-ras oligomer by antisense technology and study the impact of it as a new drug against liver cancer. UGC 2009

Dr. Biswajit Mukherjee jointly with Dr. (Mrs.) B. Hazra Studies on indigenous plant product...parasites. DRDO 2009

Dr. Biswajit Mukherjee Targeting of breast cancer cells with immunoliposomes containing anticancer drug. ICMR 2009

Dr. Kunal Roy Predictive...Cheminformatics Tools ICMR October 2009

Tuhiandi Sen Bioactivity guided... Mollusk DRDO 2008

3. Invited Lectures Delivered/Session Chaired:

Name of the Teacher/Type of Participation/Name of the Seminar/Conference etc. Place/Duration

Dr. Subhash C. Mandal Invited lecture on “Role of stress and its impact on the formation of lead molecules in the medicinal plants invivo and invitro condition” International seminar on current status and future perspectives - Pharmaceutical Sciences Bangalore, India 19-21 Nov, 2009

Dr Subhash C Mandal Invited lecture Drug Discovery from Indian Traditional System of Medicines Centre of Biomedical, Molecular and Chemical Sciences, University of Canberra, Australia 24th June 2009.

Dr Subhash C Mandal Invited lecture Role of Stress for the Production of Lead molecules in Medicinal plants. Forensic Laboratory, University of Canberra, Australia June 2009.

Dr Subhash C Mandal Session chair scientific session on “Pharmacognosy, Phytochemistry, Indigenous drugs and Herbal formulations” during 61st Indian Pharmaceutical Ahmedabad 11th to 13th December 2009

Dr. Biswajit Mukherjee Invited lectures in Quality Improvement Programme 1. Antisense technology and therapeutics 2. Logistics of temperature sensitive drugs Manipal College of Pharmaceutical Sciences, Manipal University, Karnataka 6th-8th February 2009

Dr. Biswajit Mukherjee Invited lectures Seminar on Drug Delivery Technologies IMT Pharmacy College, Puri, Orissa 21st, 23rd and 24th March 2009

Dr. Biswajit Mukherjee Guest Speaker National Seminar on: Advance Approaches in Drug Designing and Drug Targeting G R Y Institute of Pharmacy, Borawan, Indore, MP 30-31st March 2009

Dr. Biswajit Mukherjee Invited lectures in Quality Improvement Programme 1. Transdermal drug delivery systems based on Pressure Sensitive Adhesive Polymers 2. Drug Targeting by direct approach Birla Institute of Technology, Mesra, Ranchi 10th June 2009
Dr. Biswajit Mukherjee  Invited lectures Pharmacokinetic approaches  
Indira Gandhi College of Pharmaceutical Sciences, Bhubaneswar, Orissa  
10th-11th July, 2009

Dr. Biswajit Mukherjee  Invited lectures Biopharmaceutics and Pharmacokinetics  
National Institute of Pharmaceutical Education and Research (NIPER), Hazipur, Patna 27th-29th August, 2009

Dr. Biswajit Mukherjee  Invited lecture Antisense therapeutics: an approach to target gene specifically in cancer  
Department of Pharmaceutical Sciences, Dibrugarh, Assam 21st October 2009

Kunal Roy  Indo-German Symposium on Modeling Chemical and Biological (Re)activity Wildbad Krueht, Germany 4-7 October 2009

Tuhinadri Sen  Guest Lecture Katholieke University, Leuven, Belgium, 2009 01

Guest Lecture  JBNSTS Programme for School Children (Kolkata), 2009 01


Do IPS (PHARMACON) Ranchi, 2008

B. Seminar/Workshop/Conference/Symposium Attended:

Name of the Teacher  Name of the Paper Presented  Name of the Seminar  Place  Duration

Dr. Subhash C. Mandal  Dereplication and pharmacognostic studies of two important fig species most commonly used in west bengal for better commercialization 2009 AAIPS annual meeting and exposition Los Angeles, USA 8-12 Nov, 2009

Dr. Subhash C. Mandal  Workshop on complementary medicine NICM National Symposium 2009 - Supporting health priorities and industry growth Brisbane, Australia 19 June, 2009

Dr. Biswajit Mukherjee  Advance Approaches in Drug Designing and Drug Targeting Drug Targeting Borawan, Indore 30-31st March 2009

Tuhinadri Sen  Zebra Fish Core Facility Katholieke University, Leuven May, 2009 (One day Symposium)

A study on the hemolytic activity of Telescopium telescopium - a marine mollusk from the Mangrove regions 1st Euro Mediterranean Conference on Natural Product from Marine Source - EMCMNP, Egypt 2008

C. Seminar/Workshop/Conference/Symposium Organized:

Nil  Nil  Nil  Nil

Nil  Nil  Nil  Nil

D. Orientation Courses/Refresher Courses Attended:

Name of the teacher  Title of the course  Duration  Place

Dr. Subhash C. Mandal  NICM National Symposium Networking 2009 - Supporting health priorities and industry growth.NICM is an
Australian Government initiative, supported by the New South Wales Government and hosted by the University of Western Sydney 18th June, 2009 Brisbane, Australia

Dr. Subhash C. Mandal Endeavour awards professional development workshops and networking function 2009 1st June, 2009 Melbourne Cricket Ground (MCG), Australia

Dr. Subhash C. Mandal Endeavour awards networking function 15th June, 2009 Canberra, Australia

E. Orientation Courses/Refresher Courses Organized:

Name of the Teacher/Title of the Course/Duration/Place

Dr. Biswajit Mukherjee AICTE sponsored QIP refresher course on “Progress in Pharmaceutical Biotechnology for Pharmaceutical Industry in India” 2 weeks, 9th -22nd January, 2009 Department of Pharmaceutical Technology, Jadavpur University, Kolkata

Dr. Biswajit Mukherjee AICTE sponsored QIP refresher course on “New Pharmacy Era: quality initiatives and new technologies” One month, July 9th 2009-August 7th 2009 Department of Pharmaceutical Technology, Jadavpur University, Kolkata

4 A. Books/Monographs etc. Published:

Name of the Teacher/Name of the Book Published/Date of the Publication/Name of the Publisher

Dr. Biswajit Mukherjee Book chapter titled: Ethnomedicines and Pharmacogenomics in Ethnomedicine: a source of complementary therapeutics 2009-10 Research Signpost

B. Articles Published in Journals:

Name of the Teacher Name of the Article Name of the Journal Date of Publication Volume

Dr. Subhash C Mandal Swietenin: a potential oral hypoglycemic from Swietenia macrophylla seed. Fitoterapia. Fitoterapia 2009 80(4)

Dr. Subhash C Mandal Anti-inflammatory activity of a polyphenolic enriched extract of Schima wallichii bark. Natural Natural Product Research 2009 Inpress

Dr. Subhash C Mandal Study of anti-inflammatory and antinociceptive activity of hydroalcoholic extract of Schima wallichii bark. Pharmaceutical Biology 2009 47

Dr. Subhash C Mandal Evaluation of Antidiabetic Activity of Methanol Extract of the Seeds of Swietenia macrophylla (Meliaceae) in Diabetic Rats. Pharmaceutical Biology 2009 47(2)

Dr. Subhash C Mandal Antidiabetic and Antioxidant Activity of the Methanol Extract of Diospyros peregrina (Ebenaceae) Fruit on Type I Diabetic rats. Pharmaceutical Biology. Pharmaceutical Biology 2009 Inpress
Dr. Subhash C Mandal Nilanjan Ghosh, Subhash C Mandal, *In vitro antioxidant study of livosyp: a polyherbal formulation* Pharmacologyonline 2009 01

Dr. Subhash C Mandal Nilanjan Ghosh, Subhash C Mandal, *COX-2 as a target for cancer chemotherapy* Pharmacological reports. 2009 Inpress

Dr. Subhash C Mandal *Mechanisms and Efficacy of Immunobiologic therapies for Inflammatory Bowel Diseases, International Reviews of Immunology* 2009 Inpress

Dr. Subhash C Mandal *CNS depressant activity of Annona reticulata bark* Pharmacologyonline 2009 01

Dr. Subhash C Mandal *Antibacterial activity of Delonix regia wood* Pharmacologyonline 2009 02

Dr. Subhash C Mandal *Pharmacognostic Study of Aerial Parts of Celosia argentea Linn. Research J. Pharmacognosy and Phytochemistry* 2009 01

Dr. Subhash C Mandal *Antinociceptive activity of Sesbania sesban Wood* Natural Product Research Research 2009 Inpress

Dr. Subhash C Mandal *In vitro studies of antistress and antiallergic effects of Semecarpus anacardium fruit in asthma* Latin American Journal of Pharmacy 2009 Inpress

Dr. Subhash C Mandal *Pharmacognostic study of bark of Tectona grandis linn.* Herbal Heritage 2009 Inpress

Dr. Subhash C Mandal *Antihistaminic effect of various extracts of Punica granatum Linn. flower buds* Journal of Young Pharmacists 2009 Inpress

Dr. Subhash C Mandal *Bioactive Components from Gynandropsis gynandra Leaves for Antinociceptive Activity* Latin American Journal of Pharmacy 2009 Accepted

Dr. Subhash C Mandal *Anthelmintic Potential of Dendrophthoe falcata Etting. Leaf* International Journal of Pharmaceutical Research and Development (IJPRD) 2009 Inpress

Dr. Subhash C Mandal *Microwave-assisted extraction of total bioactive saponin fraction from Gymnema sylvestre with reference to gymnemagenin: a potential biomarker* Phytochemical analysis 2009 Inpress

Dr. Subhash C Mandal *Role of modifier in microwave assisted extraction of oleanolic acid from Gymnema sylvestre: application of green extraction technology for botanicals. Natural product communications* 2009 Inpress


Subas C Dinda, Biswajit Mukherjee, N Damodharan, Bhakti B. Barik


Pintu Kumar Dey, N. Damodharan, Subrata Mullick, Biswajit Mukherjee Permeation and Plasma Level of Diclofenac Diethylamine in Human Volunteers from Transdermal Matrix Type Patches based on Polyvinylpyrrolidone (PVP) and Ethylcellulose (EC) Polymers PDA Journal of Pharmaceutical Science and Technology (USA), 2009, (accepted and in press) 2009


Tuhinadri Sen  Isolation of an unusual metabolite, 2-allyloxyphenol from a marine actinobacterium, its biological activities and applications  Applied Microbiology and Biotechnology 2009  In press

Tuhinadri Sen  Involvement of glucocorticoids receptor and peroxisome proliferator activated receptor-g in pioglitazone mediated chronic gastric ulcer healing in rats  Eur J Pharmacol., 2009 609(1-3):118-125


5  Collaborative Programme:
Tuhinadri Sen :
  Awarded the Erasmus Mundus Visiting Fellowship (Katholieke University, Leuven, Belgium), 2009

6  Major Achievements:
  • Endeavour Research Fellowship 2009 from Government of Australia for carrying out postdoctoral research work in the University of Canberra, Australia February to August 2009.
• Distinguished Educator and Researcher Award USA, 2009 by American Association of Indian Pharmaceutical Scientist (AAiPS) for outstanding contribution to Pharmacy profession.

a) Dr. Biswajit Mukherjee is the recipient of **UGC Research Award 2009** (awarded by University Grants Commission, Government of India)

Prof. (Dr.) Tapan Kr. Maity,
Dept. of Pharmaceutical Technology, Jadavpur University.

(Academic Report from 24th December 2008 to 24th December 2009)

**Publication**
4. “Synthesis, Anticancer Activity of 1, 3, 4-Oxadiazole derivatives” communicated in European Journal of Medicinal Chemistry. (communicated) 2009.
5. Anticancer activity... 1, 3, 4-Oxadiazole derivatives in Asian Journal of Chemistry (In press).

**Delivered Guest Lecture**
1. Delivered Lecture as Resource person in AICTE sponsored QIP short term course held at Dept of Pharmaceutical technology, Jadavpur University, Twice.
2. Delivered Lecture as Resource person in UGC sponsored refresher’s course for teacher held at school of Natural Product Studies, Dept of Pharmaceutical technology, Jadavpur University 2 times.
3. Delivered Guest Lecture at Kanak Manjari Institute of Pharmaceutical Sciences, Rourkela, Twice.
4. Delivered Prof. P. C. Dutta memorial Lecture as **Key speaker** held at University College of Science & Technology, University of Calcutta, Organized by Botanical Society of Bengal.
5. Delivered Guest Lecture at Institute of Pharmacy & Technology, Salipur, Cuttack under Biju Pattnaik University of Technology, Orissa
Conference Proceeding/Presentation

1. A research paper entitle "Free radical Scavenging activity of ...... has been accepted for presentation in "2nd International Conference on Drug Discovery & Therapy" to be held at Dubai, Feb 2010.

2. A research paper entitle "Synthesis, anticancer......1, 3, 4-Oxadiazole derivatives" has been accepted for presentation in "2nd International Conference on Drug Discovery & Therapy"Dubai in Feb 2010.

Ongoing Projects:

1. UGC-( Major Research project)-01
2. AICTE- RPS-01

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**Power Engineering**
(Salt Lake)

Phone : +91-33-2335-5813  
Fax :91-33-2335-7254  
H.O.D. : Prof. Niladri Chakraborty  
E-mail : hod@power.jusl.ac.in

1. **Courses Offered :**  
   (Name of the course, Duration of course, No. of students enrolled)  
   Bachelor of Power Engineering: 4years, 40 students in each batch  
   Master of Power Engineering: 4 semesters, 18 students in each batch  
   PhD(Engg.): Presently 16 registered research scholars

2. **Area of Research Activities :** (Broad Areas)
   Combustion modeling and diagnostics, energy, atomization, computational and experimental fluid dynamics and heat transfer, microfluidics, biological fluid flow, energy studies, heat transfer using nanofluid, experimental aerodynamics, hydro power, wind power, applied superconductivity, power system optimization, power economics, application of nanofluids in power engineering, economic power generation, pollution engineering, real-time & embedded systems, alternative energy from biomass, optimization of nonconventional energy sources.

B. **Major Research Project :** (Departmental/Individual, Name of the Project/Agency-ongoing)
- DST-FIST program for development of a Power Plant Simulator (DST.)
- Development of a Tool for De-coupling Control of Multi-variable Processes using Message Passing Across Embedded Controllers (BRNS, DAE) Principal Investigator- Prof. Amitava Gupta
- Numerical and experimental investigation of field-induced aggregation of magnetic microspheres for MEMS applications (DAE-Young Scientist Research Award), Dr. Ranjan Ganguly.
- Design and characterization of thermomagnetic pump for microfluidic applications, BRNS (DAE) - Dr. Ranjan Ganguly, Prof. Amitava Datta.
- Experimental and numerical investigation of various types of delta wings at different flow and maneuvering conditions (ERIPR, DRDO) Principal Investigator – Prof. Bireswar Majumdar
- Development of PI$^2$D$^1$ Controllers for Process Control Applications, BRNS (DAE) - Prof. Amitava Gupta(PI).
- Application of WCAN Technology for Control of Tennessee Eastman Reactor, DST (Indo-Tunisian Bi-lateral Exchange)- Prof. Amitava Gupta (PT).
- Development of Discrete PID Controller for Networked Control Applications with Packet Dropout and Data Loss-BRNS (DAE)-Prof. Amitava Gupta(PI).

### 3. A. Invited Lectures Delivered/Session Chaired

**Amitava Datta**


**Bireswar Majumdar**


**Bireswar Majumdar**

Hydro Power Invited class lecture (B.Tech level) NPTI, Durgapur November 18, 2009

**Amitava Gupta**

Courses on Distributed Real-time Systems,Cluster Computing Visiting Professor (DAAD) Technical University, Munich-Germany November 01,2009 to January 31, 2010

**Niladri Chakraborty**

Estimation and On-line Measurement of Emission from Thermal Power
Plants Invited Lecture, Group Consultative Meeting Second National Communication to UNFCC, New Delhi 8th March 2008

Niladri Chakraborty

Scheduling and Sizing of Distributed Generation Invited Lecture, Electrical Engineering Department Kolaghat Engineering College 17th February 2009

Niladri Chakraborty

Constrained Economic Generation using Particle Swarm Optimization (PSO) and Differential Evolution (DE) Techniques Invited Lecture, Electrical Engineering Department Assam Government Engineering College, Guwahati 24th February 2009

Niladri Chakraborty


Niladri Chakraborty

On-line Measurement of Emission from Thermal Power Plants in India: A NATCOM Experience Invited Lecture, Hoogly Institute of Technology Hoogly West Bengal 7th March 2009

Niladri Chakraborty


Niladri Chakraborty

Emission Constrained Economic Dispatch National Institute of Technology Durgapur, West Bengal 26th March 2009

B. Seminar/Workshop/Conference/Symposium Organized:

Name of the Teacher/Name of the Seminar/Workshop/Conference/Symposium/Place/Duration

Prof. Niladri Chakraborty.

Engineering Education under Changing Global Scenario: National Seminar Jadavpur University One day

C. Seminar/Workshop/Conference/Symposium Attended

Name of the Teacher/Name of the Paper Presented/Name of the Seminar/Place/Duration

K. K. Mandal

Differential Evolution based Environmentally Constrained Economic Dispatch (K.K. Mandal, N. Chakraborty) IEEE Conference & Exhibition on Control, Communication and Automation, Indian Institute
R. Ganguly
In-situ immunochemical binding on magnetic beads in a flow-through microfluidic separator (R. Ganguly, T. Hahn, S. Hardt) 2009 Gordon Research Conference on the Physics and Chemistry of Microfluidics Il Ciocco, Italy June 28-July 3, 2009

G. Konar

B. Tudu, G. Konar and D. Palit

B. Tudu and G. Konar
Workshop on “Pedagogical tools for knowledge management” organized under TEQIP-JU. Hyatt Regency, Kolkata. March 28, 2009

B. Tudu
Two day educational program on March 20 & 21, 2009 on “Advances on Nano Electronics & Communication systems” organized under IEEE CASCOM ’09, IEEE Calcutta Section. Jadavpur University & TCS Seminar on “Engineering Education under changing global scenario” organized under TEQIP-JU. Jadavpur University Campus

NATCOM workshop on “Review of the Implementation of Work Programme for India’s Second National Communication To the UNFCCC” & "National Workshop On Climate Change”. India Habitat Centre & Ashok Hotel, New Delhi. 13th & 14th Oct, 2009 organized by MoEF, India

Prof. Niladri Chakraborty
NATCOM workshop on “Review of the Implementation of Work Programme for India’s Second National Communication To the UNFCCC” & "National Workshop On Climate Change”. India Habitat Centre & Ashok Hotel, New Delhi. 13th & 14th Oct, 2009 organized by MoEF, India

D. Short Term Courses Attended

G. Konar
Attended ASC Refresher course entitled Frontiers in Power Engineering and Energy Sustainability, Department of Power Engineering, from 8th June to 27th June, 2009.
E. Orientation Courses/Refresher Course Organized

A. Datta, A.K. Santra
Refresher course entitled “Frontiers in Power Engineering and Energy Sustainability” organized under the aegis of UGC Academic Staff College in the Department of Power Engineering 8th June to 27th June, 2009.

4 A. Books/Monographs etc. Published:

B. Articles Published in Journals:


20. Mukherjee, I., Chakraborty, N., Mandal, T. K., "Measurement of Ozone (O) and Nitrogen-Di-Oxide (NO) in the Winter Period of 2007 at Kaikhali (22.022’N, 88.614’E) inside a special mangrove ecosystem - the Sundarbans", Accepted for publication in the Indian Journal for Air Pollution Control (IJAPC), 2009, New Delhi Chapter.


5 Collaborative Programmes:

- Collaborated with Chemistry Division of UGC-DAE Consortium for Scientific Research, Kolkata Centre for research carried out on Carbon Nanoparticles in Flames - Prof. Amitava Datta.

- Collaborative program with AHEC (IIT Roorkee) on testing of small hydro plants - Prof. Niladri Chakraborty, Prof. Bireswar Majumdar.

- Collaboration with CMFRI, Dhanbad on Power from Biomass blended Coal - Prof. Niladri Chakraborty.

- Collaborative research with Professor I.K. Puri (Virginia Polytechnic Institute and State University) in the area of Microfluidics - Dr. Ranjan Ganguly.

- Collaborative research with the Radio and Atmospheric Science Division, National Physical Laboratory, New Delhi, on atmospheric measurement - Prof. Niladri Chakraborty.

- Collaborative research with the Mechanical Engineering Department, IIT Kharagpur, on AC loss modeling of high-temperature superconducting tapes - Prof. Niladri Chakraborty, Smt. Gargi Konar.

- Collaborative research with the Electrical and Electronics Department, Imperial College, London on scheduling of nonconventional sources - Prof. Niladri Chakraborty.

6 Consultancy and Testing

(i) Calibration of industrial venturimeter (Client: M/s ALSTOM Power) - Prof. Bireswar Majumdar, 2009

(ii) Calibration of thermal anemometer (Client: M/s ALSTOM Power) - Prof. Bireswar Majumdar, 2009

(iii) Flow model test for ESP for JP Himachal (Client: M/s ALSTOM Power) - Prof. Bireswar Majumdar, 2009

(iv) Flow model test for ESP for Sail Bokaro (Client: M/s ALSTOM Power) - Prof. Bireswar Majumdar, 2009

(v) Testing of 2x250 +1x500 kW Serlui A SHP at Aizwal, Mizoram, collaboratively with AHEC, IIT, Roorkee, 4-6 August 2009 - Prof. B Majumdar and Prof. Niladri Chakraborty

(vi) Electrical Design Vetting of State Data Centre, Ministry of Information Technology, Govt. of West Bengal - Prof. Niladri Chakraborty

(vii) System Vetting of State Data Center, Ministry of Information Technology, Govt. of West Bengal - Prof. Niladri Chakraborty
7 **Major Achievements:**

1. Member in the Executive Committee of the Combustion Institute, Indian Section – **Prof. A. Datta**.

2. Editorial Advisory Board Member of the journal Recent Patents on Mechanical Engineering, published by Bentham Science Publishers – **Prof. Amitava Datta**.

3. Member, DRPC, Dept. of Mechanical Engg., NIT Durgapur – **Prof. B. Majumdar**

4. Member, Governing Body and Syllabus Committee, NPTI, Durgapur – **Prof. B. Majumdar**.

5. International Examiner for PhD Thesis Evaluation at Tribhuban University, Nepal – **Prof. B. Majumdar**.


7. External Member, Faculty Council of Engineering and Technology, Bengal Engineering and Science University – **Prof. Niladri Chakraborty**.

8. Member, West Bengal State Council of Technical Education, Govt. of West Bengal – **Prof. Niladri Chakraborty**.

9. Member, Energy Panel, Confederation of Indian Industry, Eastern Region – **Prof. Niladri Chakraborty**.

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**PRINTING ENGINEERING (SALT LAKE)**

Phone : + 91-33-2335-0408

H.O.D. : Prof. Arun Kiran Pal

E-mail : hodprint.jusl.ac.in

1 **A. Courses Offered:**

BE (Printing), 4 years, intake 25

M E in Printing Engineering & Graphic Communication (to be started shortly)

Ph. D. (Engineering), presently 4 students registered

**Other Courses** Certificate course on “Screen Printing” under Adult Continuing Education, co-ordinated by Dr. K.C. Paul and Sri S. Basak.
B. No. of Faculty Members 7 full time, 5 visiting

2 A. Area of Research Activities
Surface Coating, Material Science, Digital Imaging, Colour Science, Security Printing, Digital image processing, Digital Halftoning, non-impact printing, Packaging, Ink Technology etc.

B. Major Research Project:
1) Two UGC sponsored research projects co-ordinated by Sri Arpitam Chatterjee and Sm. Shilpi Naskar.
2) Research/Consultancy project co-ordinated by Prof. A.K. Pal & Dr. K.C. Paul sponsored by Department of Commerce & Industries, Govt. of West Bengal.

3 A. Invited Lectures Delivered/ Session Chaired

B. Seminar/Workshop/Conference/Symposium Attended:
Name of the Conference: 16th West Bengal State Science and Technology Congress
Paper presented: “Grayscale image dithering with random distribution” (Oral presentation)
Date and place: 28th February – 1st March, 2009, The University of Burdwan, Burdwan, India. (by Arpitam Chatterjee)
Name of the conference: 2nd International Conference on Digital Image Processing
Paper accepted and to be presented: An approach for ordered dither using artificial neural network (Oral presentation)
Date and place: 26th February – 28th February, 2010, The Nanyang Executive Centre, Nanyang Technological University, Singapore. (by Arpitam Chatterjee)

C. Seminar/Workshop/Conference/Symposium Organized
Name of the seminar: Printvizon’ 09 ‘A national level seminar on “Recent Advancements in Printing”.
Date and place: 10th and 11th January, 2009. Department of Printing Engineering, Jadavpur University, Salt Lake Campus, Kolkata, India

D. Orientation courses/Refresher Courses Attended
Two refresher courses attended by Sri Arpitam Chatterjee and Sm. Shilpi Naskar.

4 Publications (during 2008-09) in International Journals and Conferences:
1) International Journals
b) International Conferences


5 Collaborative Programmes
i) Collaborative Programme of KMC for Modernisation of printing presses under the co-ordinatorship of Dr. K.C.Paul

ii) Collaborative Programme of Modernisation of WB Govt. presses under the co-ordinatorship of Dr. K.C.Paul & Dr. A.K.Pal

6 Major Achievements
• Two final year students have been offered Golden Jubilee Award and Scholarships by All India Master Printers’ Association.
• Research activities by the faculties of the department in the field of Coating technology, Paper technology, Ink technology, Material Sciences, Electronic Publishing, Colour Sciences, Rheology, Non-impact printing etc published several research papers in the field.
• Research papers published by UG students at National Level Conference organized by Anna University and Jadavpur University.
• Organized a programme for competition of Students Paper presentation at the department sponsored by IFRA.
• Prof. Dr. Arun Kiran Pal is acting as Technical Expert in Standing Working Committee of Ministry of Finance, Department of Economic Affairs, Govt. of India.
• Prof. Dr. Arun Kiran Pal is acting as expert member of Curriculum & Syllabus Committee for “Diploma in Packaging Technology” by Govt. of West Bengal. Also acting as member of different committees of Govt. of West Bengal.
• Dr. K.C.Paul is acting as a expert member of Technical Expert Committee of KMC, Govt. of West Bengal
1. **Courses Offered**: Bachelor of Production Engineering, Master of Production Engineering

2. **Number of Faculty Members**: 15

3. **Area of Research Activities**:
   - Advanced Manufacturing Technology, Production Management, Micro Machining, Non Traditional Machining, Quality & Reliability Engg. Robotics, FMS,ERP.

4. **Major Research Project**:
   1. AICTE sponsored RPS project “Development of Intelligent Electrochemical Deburring (ECD) System for Enhanced Finishing Characteristics of Advanced Engineering Materials” (New Project)
   2. UGC Special Assistance Programme (SAP Ph III 4th year), Theme of Research : Micro Machining and Nano Technology
   3. CSIR sponsored project "Micro-machining Of Advanced Ceramics by Pulsed Nd:YAG Laser" (Second year)

5. **Invited Lectures Delivered/Session Chaired**:

   **Session Chaired**:
   1. Dr. S. Mitra chaired the first Technical session on "Material removal Processes" at the international conference on 'Advances in Material Processing Technologies (AMPT 2009), organized by International Islamic University Malaysia, IIUM, during 16 - 29th October, 2009 at Kuala Lumpur, Malaysia.

   **Invited Lectures Delivered**
   1. Dr. S. Mitra delivered an invited lecture on “Emerging Trends & Future Scope In Non Conventional Machining” on 27th March at Haldia Institute of Technology, Haldia, under its TEQIP programme.
   2. Dr. S. Mitra delivered an invited lecture on “EDM Technology & Its Applications” on 30th April 2009 at Central Tool Room & Training Centre, Bonhooogly, Kolkata.
   4. Prof. Bijan Sarkar delivered a talk on “Sri Ramakrishna’s Message for the Modern World” on 8th March, 2009 at Ramakrishna Mission Sikshan
Mandir, Belur Math. This national level seminar was sponsored by the University Grants Commission.

5. Prof. Bijan Sarkar delivered two lectures on “Leadership Management” and “Student Motivation” at Asansol Engineering College, Asansol on April 2009.

6. Prof. Bijan Sarkar has been invited by National Institute of Technology, Agartala to deliver expert lectures during AICTE sponsored “Induction Training Programme” on 6th and 7th May, 2009.


8. Prof. B. Bhattacharyya delivered a Keynote address in the National Conference on “Recent Trends in Manufacturing Technology (RTMT ‘09)” at Anna University, Chennai, organized by the Department of Manufacturing Engineering during 6th & 7th March 2009.

9. Prof. B. Bhattacharyya delivered an invited lecture in the seminar on “Nano-technology—a multi-disciplinary tool for future” organized by the Mahatma Gandhi Mission (MGM), Aurangabad, Maharashtra held at Aurangabad on 28th and 29th January 2009.

10. Prof. Balendra Nath Lahiri delivered an invited Speech in Int Conf HWWE 09, Dec 12-14, 2009 CU, organized by ISE and IEA.


12. Dr. B. Doloi delivered an invited lecture on “Reliability Economics and Management” at UGC Refresher Course on Reliability, Availability and Maintainability (RAM) Engineering in Industries, organized by Production Engineering Department, Jadavpur University from 22.06.2009 to 11.07.2009.

B. Seminar/Workshop/Conference/Symposium Attended

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Faculty Member/Title/Type of Seminar (International/National)</th>
<th>Year/Place/Attended/Organized with Role</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr. S. Mitra, Dr. A. S. Kuar, Dr. D. Banerjee, &amp; Mr. B. R. Sarkar</td>
<td>2nd International and 23rd All India Manufacturing Technology, Design and Research (AIMTDR) Conference, International Dec. 2008, Indian Institute of Technology Madras, Chennai</td>
</tr>
<tr>
<td>2</td>
<td>Dr. S. Mitra</td>
<td>International Conference ‘Advances in Material Processing Technologies (AMPT 2009), International Oct. 2009, International Islamic University Malaysia, IIUM, Kuala Lumpur</td>
</tr>
</tbody>
</table>
3 Dr. S. Mitra, Dr. B. Doloi, Dr. A. S. Kuar

International Conference on

Precision Engineering, COPEN-2009 International Dec.11-12, 2009 PSG Tech, Coimbatore

Invited for paper presentation

DR. B. Doloi

One day INDO-US Seminar on Micro-fluidics and Fabrionics

National Jan.08,2009 Mechanical Engg. Dept., BESU, Howrah

Attended

DR. B. Doloi


Invited for paper presentation

C. Seminar/Workshop/Conference/Symposium Organized :

The Department is going to organize a National conference on “Recent Advances in Manufacturing Technology and Management (RAMTM 2010) during 19 – 20th February 2010.

D. Orientation Courses/Refresher Courses Attended :

1. Dr. A. S. Kuar attended the UGC-ASC JU sponsored 3 weeks refresher course on “Reliability, Availability & Maintainability Engineering in Industries” from June 22 to July 11, 2009.

2. Mr. B. R. Sarkar attended the UGC-ASC JU sponsored 3 weeks refresher course on “Reliability, Availability & Maintainability Engineering in Industries” from June 22 to July 11, 2009.

3. Dr. B. Doloi attended AICTE sponsored one week short term training program on ‘Supply Chain Management: Issues and Challenges’ organized by Department of Industrial & Production Engineering at Dr. B R Ambedkar National Institute from 13-7-09 to 17-7-09.

E. Orientation Courses/Refresher Courses Organized :

1. Prof. Bijan Sarkar organized a UGC-ASC JU sponsored 3 weeks refresher course on “Reliability, Availability & Maintainability Engineering in Industries” from June 22 to July 11, 2009. 35 participants attended the programme. Faculties from IIT- Khargpur, IIM-Calcutta, ISI, NITTTR & JU enlightened the course. Prof. Goutam Biswas, Director, CMERI, Durgapur delivered a keynote address in the valedictory session of the programme.

4. A. Books/Monographs etc. Published : Nil

B. Articles Published in International Referred Journals :


3. S. Mitra, S. Sarkar, G. Bose, “Analysis of cutting forces on


14. Rajan Bhattacharya , Susmita Bandopadhyay ; “An improved strategy to solve Shop deadlock problem based on the study


5. Collaborative Programs : Nil

6. Major Achievements :

- Dr.S.Mitra has been elected a member of the Governing Council of the Central Tool Room & Training Centre, Kolkata, of Ministry of Micro, Small & Medium Enterprises, Government of India.

- Dr.S.Mitra was awarded a research project titled “Development of Intelligent Electrochemical Deburring (ECD) System for Enhanced Finishing Characteristics of Advanced Engineering Materials” by AICTE, New Delhi under the research Promotion Scheme(RPS), of Rs. 16.5 lakhs.
Prof. Bijan Sarkar has been invited by NSS, JU to deliver a lecture on *Swami Vivekananda’s philosophy* on 12th January, 2009 at Vivekananda Hall, JU.

Prof. Bijan Sarkar has been invited by Haldia Institute of Technology, Haldia to deliver lecture under TEQIP during January 21-22, 2009.

Prof. Bijan Sarkar has been invited by BMS College of Engineering, Bangalore-560019 to chair a session on “*Supply Chain Management*” and to deliver a keynote address on “*Constraint Management*” during February 27-28, 2009 respectively.

Prof. Bijan Sarkar has been invited by Birla Industrial & Technological Museum, Kolkata to act as chairman of a selection committee on 25th March, 2009.

Prof. Bijan Sarkar has been invited by Dumkal Institute of Engineering & Technology, Murshidabad to deliver lectures in 2 days seminar during March, 28-29, 2009.

Prof. Bijan Sarkar acted as an *External Examiner* for evaluation of project dissertation at PG level in IBM Dept. IIT, Kharagpur on May 12, 2009.

Prof. Bijan Sarkar has acted as *visiting faculty* at Netaji Subhas Engineering College during January 15 to May 15, 2009.

Prof. Bijan Sarkar has also acted as *guest faculty* at IBM, NCE Bengal for the session 2009-2010.

Prof. Bijan Sarkar has been invited by the Principal, Calcutta Institute of Engineering & Management, Tollygunge to deliver an expert lecture in the DST-sponsored Entrepreneurship awareness camp at their institute on 3rd September, 2009.

Prof. Bijan Sarkar has been invited by NIT, Agartala to deliver expert lectures in the Staff Development Programme sponsored by AICTE during December 10-11, 2009.

Prof. Bijan Sarkar has been invited by the Principal, Jalpaiguri Government Engineering College to act as a visiting professor for their PG course on “*Production Technology & Management*” opening on 2009-2010.

Like the previous year, Prof. Bijan Sarkar has acted as reviewer for IE(I) and IJPR, IJPE etc.

Dr. S. Mitra acted as reviewer of various international journals like IJAMT, IJMMT etc and journals of IE(I).