

Research and Development Activities at

B. P. Poddar Institute of Management and Technology during 2011-2012

Research and Development (R&D) is an integral part of the Academic activity of BPPIMT, Kolkata. Significant R & D work has been done by the various departments which is evident from the following sections.

- (A) **Department of Electronics and Communication Engineering** is engaged in R & D activities in the areas of optical communication, birefringent networks, birefringent and optical devices, optical signal processing, VLSI technology, image processing and signal processing.
- (B) **Department of Computer Science and Engineering** has been actively engaged in R & D in the areas of cloud computing, image processing, search optimization, scheduling, soft computing, VLSI design and testing, wireless and sensor networks and software engineering.
- (C) **Department of Electrical Engineering** is involved in R & D activities in the areas of control systems (flight dynamics), image processing, sky illumination and genetic algorithm.
- (D) **Department of Information Technology** is doing R & D activities in the areas of formal modeling, software architecture, analysis-design & verification requirement engineering and quantum cellular automata.
- (E) **Department of Computer Applications** is involved with research work in the areas of network and genetic algorithm, optical communication and security, wireless sensory network and quantum cellular automata.
- (F) **Department of Physics** is doing research work on the conducting properties of nanostructured composites, model of voltage gated potassium ion channel, nonlinear dynamics and stability analysis, spatio-temporal chaos, magnetic, rare earth manganites, proton dripline and nano-porous silicon.
- (G) **Department of Chemistry and Environmental Science** is doing research work in the areas of waste water management and beneficiation and water conservation.
- (H) **Department of Mathematics** is involved in research works in the fields of operations research, mathematical modeling, optimization, cosmology and mathematical biology.
- (I) **Department of Humanities and Management** is involved with research in literature.
- (J) **Department of Mechanical Engineering** is doing research in flux-cored arc welding (FCAW) technology.
- (K) **Computer Centre** has research activity in computer aided diagnostics of biomedical images.

Faculty Members Submitted Ph.D Thesis

1. Arijit Saha, Associate Professor, ECE Department submitted his Ph.D Thesis under Calcutta University in December 2011 on “Novel applications of chromatic behaviour of birefringent networks”.
2. Surajit Mandal, Assistant Professor, ECE Department submitted his Ph.D Thesis under Calcutta University in December 2011 on “Birefringent Lens”
3. Kakali Karmakar Sur, Assistant Professor, Department of Mathematics submitted her Ph.D Thesis under BESU, Shibpur in April 2012 on “Entropy optimization and its applications in social sciences”.

Faculty Members Registered for Ph.D Degree

1. Ms. Ivy Majumdar (ECE) at Jadavpur University.
2. Ms. Sagarika Das (ECE) at Jadavpur University.
3. Ms. Sudipta Chakraborty (EE) at BESU Shibpur.
4. Ms. Nandita Sanyal (EE) at Jadavpur University.
5. Ms. Sutapa Mukherjee (EE) at Jadavpur University.
6. Ms. Tista Banerjee (EE) at Calcutta University.
7. Mr. Bikramaditya Mandal (CSE) at Calcutta University.
8. Ms. Jayeeta Chandra (CSE) at Jadavpur University.
9. Ms. Mousumi Malakar (CSE) at Jadavpur University.
10. Mr. Binay Krishna Biswas (ME) at Jadavpur University.
11. Mr. Kunal Das (IT) at Kalyani University.
12. Mr. Soumya Pal (CA) at Kalyani University.
13. Ms. Inadyuti Dutt (CA) at Kalyani University.
14. Mr. Subhasis Pradhan (Ph) at Jadavpur University.
15. Mr. Indrakanta Moitra (Computer Centre) at Calcutta University.
16. Ms. Rikhiya Dhar (Mathematics) at Calcutta University.

Faculty Members Supervising Research Scholars for Ph.D Degree

1. Prof. B.N.Chatterji is supervising Mr. Ambar Dutta, Asst. Prof. BIT Mesra, Ms. Ivy Majumdar, Assoc. Prof. BPPIMT, Mr. Tapas Banerjee of ERTL Kolkata, Mr. Manas Saha, Assoc Prof. Siliguri Institute of Technology, Ms. Banhi Roy Chowdhury, Asst. Prof. BPPIMT and Ms. Sujata Sadhukhan, Asst. Prof. BPPIMT.
2. Prof. Shila Ghosh is supervising Ms. Somali Sikdar, Asst. Prof. BPPIMT.
3. Prof. Sabnam Sengupta is supervising Ms. Jayeeta Chanda, Asst. Prof. BPPIMT, Mr. Anirban Bhar, Asst. Prof. Narula Institute of Technology and Ms. Gitosree Khan, Asst. Prof. BPPIMT.
4. Prof. Lipika Adhya is supervising Mr. Tarunendu Mapder, Project Assistant of Dept. of Physics, BPPIMT.

List of Publications

Journal (International):

1. **Nandita Sanyal**, A.Chatterjee and S.Munshi published their paper titled, “An adaptive bacterial foraging algorithm for fuzzy entropy based image segmentation” in the Journal Expert System Application, Vol. 38 No.12, pp. 15489-15498 (July 2011).
2. **Uddipan Mukherjee** published a paper titled, “India and Iran: Can SCO serve as the common platform?” in the FPRC Journal, No.6, pp 104-117 (August 2011).
3. Dipankar Majumdar, **Sabnam Sengupta**, **Ananya Kanjilal** and Swapan Bhattacharya published their paper titled, “Automated requirements modeling With Adv-Ears” in International Journal Of Information Technology Convergence And Services (IJITCS), ISSN:2231-153X (Online) 2231-1939 (Print), Vol. 1, No. 4, pp. 57-67, (August 2011).
4. **Jayeeta Chanda**, **Sabnam Sengupta**, **Ananya Kanjilal** and Swapan Bhattacharya published their paper titled, “CA-ESB: Context Aware Enterprise Service Bus” in International Journal of Computer Applications, ISSN: 0975 - 8887, Vol. 30, No. 3, pp. 1-8 (September 2011).
5. **Jayeeta Chanda**, **Sabnam Sengupta**, **Ananya Kanjilal** and Swapan Bhattacharya published their paper titled, “SCAG: a graphical approach to measure the complexity of the SOA application” in ACM SIGSOFT Software Engineering Notes, ISSN: 0163-5943, Vol. 36, No. 5, pp. 1-6 (September 2011).
6. **Surajit Mandal** and Ajay Ghosh published their paper titled, “Polychromatic intensity point spread function of a birefringent lens”, in Optik (Elsevier), doi. 10.1016/j.ijleo.2011.08.045 (Available online 14 November 2011).
7. **Sutapa Mukherjee** and B. Ray, published their paper titled, “Correlating Indian measured Sky luminance distribution and Indian Design clear sky model with CIE standard” in Journal of Optics (Springer), DOI 10.1007/s12596-011-0047-8, (November 2011).
8. **Rikhiya Dhar**, Priyanka Dhar and Ranjit Dhar published their paper titled, “Problem on optimal distribution of induced microwave by heating probe at the tumor site in hyperthermia” in Advanced Modeling and Optimization, ISSN:1841-4311, Vol.13, No. 1, pp. 39-48, (November 2011).
9. **N. Sanyal**, A. Chatterjee and S. Munshi published their paper titled, “An adaptive bacterial foraging algorithm for fuzzy entropy based image segmentation” in Expert Systems with Applications, Vol. 38, No. 12, pp. 15489-15498, (November-December 2011).
10. **Surajit Mandal** and Ajay Ghosh published their paper titled, “The effect of broadband illumination on the imaging characteristics of birefringent lens suffering from primary spherical aberration”, in Journal of Optics (Springer), Vol. 40, No. 4, pp. 198-205 (December 2011).
11. **Indra Kanta Maitra**, Sanjay Nag and Samir K. Bandyopadhyay published their paper titled, “Anatomical Segmentation of Digital Mammogram to Differentiate Breast Regions” in International Journal of Research and Reviews in Computer Science (IJRRCS), ISSN: 2079-2557, Vol. 2, No. 6, pp. 1327-1330, (December 2011).

12. **R. Goswami, S.C. Chakravarty, J.B.M. Krishna, E. Bose, D. Das, P.Saha and U. Mukherjee**, published their paper titled, “AC conductivity and dielectric analysis of graphite - clay nanocomposite” in Canadian Journal of Physics, ISSN:1208-6045, Vol. 89, pp. 1255-1260, (December 2011).
13. **Inadyuti Dutt and Soumya Paul** published their paper titled, “A novel approach for wavelength assignment in single fibre WDM optical networks”, in the International Journal of Advances in Computer Engineering and Architecture, Vol. 1, No.2, pp. 261-269 July-December 2011.
14. **Soumya Paul and Inadyuti Dutt** published their paper titled, “A novel approach for failure detection in WDM optical networks”, in the International Journal of Data modeling and knowledge management, Vol. 1, No.2, pp. 135-140 July-December 2011.
15. **Arijit Saha, Kallol Bhattacharya and Ajoy Kumar Chakraborty** published their paper titled, “New achromatic quarter-wave combination of birefringent plates”, in the International Journal of Optical Engineering, Vol. 51(1), pp. 013001(1-5) (January 2012).
16. **Kalyan Mohanta** published a paper titled, “Reconfigurable co-processor for high performance Discrete Wavelet Transform”, in IJCSE Open Access Journal, Vol. 4, No. 1, pp.62-71, Jan 2012, ISSN: 0975-3397.
17. Tapas Bandopadhyay, B. Bandopadhyay and **B.N.Chatterji** published their paper titled, “Secure image encryption through key hashing and wavelet transform techniques”, in the International Journal of Emerging technology and advanced engineering, (ISSN 2250-2459) Vol. 2. No. 2, pp. 26-31 (February 2012).
18. **Ranjana Goswami** and Subimal Sen published a paper titled, “Fingerprint states in $^{115,117,119}\text{I}$ in the framework of Particle Rotor Model” in Physica Scripta Vol. 85 pp. 035201, February 2012.
19. **Kalyan Mohanta** Comprehensive Study on Computational Methods for K-Shortest Paths Problem”, in IJCA Open Access Journal, Vol. 40, No. 14, pp.22-26, Feb 2012, ISSN: 0975–8887.
20. **Madhumita Sarkar, Shovan Nandi and Aniruddha Ghosal** published their paper titled, “I-V and conductance characteristics of nano-scale 1D GaAs FETs”, in the Journal of electron devices, ISSN: 1682-3427, Vol. 13, pp. 957-959 (March, 2012).
21. **Kalyan Mohanta** published a Invited paper titled, “THICA: A Fault-Tolerant Cluster Model based on Execution Windowing”, in TIJCSA Open Access Journal, Vol. 1, No. 1, pp.52-62, March 2012.
22. **Soumya Paul and Inadyuti Dutt** published their paper titled, “A novel approach for light trail minimization using genetic algorithm in optical network” in the International Journal of Advanced Research in Computer Science and Electronics Engineering, ISSN No. 2277-9043 in Vol. 1, Issue 1, pp-1-10 (March 2012).
23. **Arijit Saha, Kallol Bhattacharya and Ajoy Kumar Chakraborty** published their paper titled, “Achromatic quarter-wave plate using crystalline quartz”, in the International Journal Applied Optics, ISSN: 2155-3165, Vol. 51, No. 12, pp. 1976-1980 (April 2012).
24. **Inadyuti Dutt, Soumya Paul** and Dipayan Bandyopadhyaya published their paper titled, “Security in All-Optical Network using Artificial Neural Network”, in the International Journal in Advanced Research in Computer Science, ISSN: 0976-5697, Vol. 3, No. 2, pp. 333-340 (March-April, 2012).

25. **Amlan Raychaudhuri** and Jayanta Dutta published their paper titled, "Image Binarization Using Multi-Layer Perceptron: A Semi-Supervised Approach", in the International Journal of Engineering Innovations and Research (IJEIR), ISSN: 2277-5668, Vol.1, No. 2, pp. 64 – 69 (March – April 2012).
26. **Anindita Ray** and Debashis De published their paper titled, "Data Aggregation Techniques in Wireless Sensor Network: A Survey" in the International Journal of Engineering Innovation & Research (IJEIR), ISSN: 2277 – 5668, Vol. 1, No.2, pp. 20 – 31 (March-April, 2012).
27. **Inadyuti Dutt, Soumya Paul** and Rahul Das published their paper titled, "Security in AON using Artificial Neural Network" published in the International Journal in Engineering Science and Advanced Technology, ISSN: 2250-3676, Vol. 2, Issue 3, pp. 396-400 (April 2012).
28. **Bikromaditya Mondal, Sarit Chakraborty** and Sharmistha Bhattacharjee published their paper titled, "Quasi-Dynamic Scheduling in Wireless Broadcast Networks", in the International Journal of Computer Applications, ISSN: 0975-8887, 43(9), pp. 13-17 (April 2012).
29. **Sarit Chakraborty** and **Bikromaditya Mondal** published their paper titled, "Spam Mail Filtering Technique using Different Decision Tree Classifiers through Data Mining Approach - A Comparative Performance Analysis" in the International Journal of Computer Applications, ISSN: 0975-8887, 47(16), pp.26-31 (June 2012).
30. **Anindita Ray** and Debashis De published their paper titled, "P-EECHS: Parametric Energy Efficient Cluster Head Selection protocol for Wireless Sensor Network" in the International Journal of Advanced Computer Engineering and Architecture (IJACEA), ISSN: 2248-9452, Vol. 2, No. 2, pp. 239-245 (June 2012).

Journal (National):

31. **Arijit Saha**, Kallol Bhattacharya and Ajoy Kumar Chakraborty published their paper titled, "A near infrared zero-order achromatic retarder", in Pramana Journal of Physics (Springer), Vol. 77, No 4. , pp. 627-631 (October 2011).

Conference Proceedings (International):

32. Swapan Bhattacharya, **Jayeeta Chanda**, **Sabnam Sengupta** and **Ananya Kanjilal** presented and published their paper titled, "Dynamic Service Choreography using Context Aware Enterprise Service Bus" in Intl. Conf. on s/w Engg. & Knowledge Engg. (SEKE), Miami, USA, pp. 319-324, 7th-9th July 2011.
33. Arnab Das, Saikat Das Adhikari, Rohini Basu, **Shila Ghosh** and Tista Banerjee presented their paper titled, "Remote controlling of Home appliance using Mobile phone and Personal computer With Interactive Voice Response Systems" in International conference on Nanoscience, engineering & advanced computing (ICNEAC-2011), 8th-10th July 2011.

34. Dipankar Majumdar, **Sabnam Sengupta**, **Ananya Kanjilal** and Swapan Bhattacharya presented and published their paper titled, "Adv-EARS: A Formal Requirements Syntax For Derivation of Use Case Models" in Proceedings of the first International Conference on Advances in Computing and Information Technology, Communications in Computer and Information Science, ACITY 2011, Vol. 198, Part 1, pp. 40-48, 15th-17th July 2011.
35. Tarunendu Mapder and **Lipika Adhya** presented and published their paper titled, "Alpha - Helices as Macro-Dipoles Affecting the Voltage Sensor Domain of Kvap" in Proceedings of International Interdisciplinary Science Conference 2011 On Bioinformatics: An Interface between Computer Science and Biology, pp. 61, 15-17 November 2011.
36. **Arijit Saha**, Kallol Bhattacharya and Ajoy Kumar Chakraborty presented and published their paper titled, "A zero-order achromatic quarter-wave plate for visible spectrum" in the 2nd International Conference on Trends in Optics & Photonics (ICONTOP-2011), 7-9 December 2011, Kolkata, India.
37. **Surajit Mandal** and Ajay Ghosh presented and published their paper titled, "Frequency response characteristics of a birefringent lens under broadband illumination" in the 2nd International Conference on Trends in Optics & Photonics (ICONTOP-2011), 7-9 December 2011, Kolkata, India.
38. **Kunal Das** and Debashis De presented and published their paper titled, "QCA Based Re-Programmable Logic Array for Logic Implementation" in International Conference ICANN'11, held on 08th Dec'11 to 10th Dec'11 at IIT Guwahati, Abstract Proc. pp. 443. Springer Conf. Proc.
39. **Sudip Kundu** and Sriyankar Acharyya presented and published their paper titled, "Stochastic local search approaches in solving the nurse scheduling problem" in the 10th International Conference on Computer Information Systems and Industrial Management Applications (CISIM 2011), 14-16 December 2011, Kolkata, India.
40. Nilanjana Pradhan, **Kunal Das** and Debashis De presented and published their paper titled, "Low Power Logic Design Using MQCA" published in XVI International Workshop on the Physics of Semiconductor Devices, held on 19th- 20th Dec 2011 at IIT Kanpur.
41. **Anindita Ray** and Debashis De presented and published their paper titled, "Energy efficient clustering hierarchy protocol for wireless sensor network" in IEEE International Conference on Communication and Industrial Application (ICCIA)-2011 having ISBN: 978-1-4577-1915-8, pp. 1-4, held on 26th to 28th December 2011 at Science City, Kolkata.
42. **Papri Saha** published the paper titled, "Complex Dynamical Systems and Applications" in International conference CISIM 2011 at Kolkata during 9th to 11th January 2012.
43. **Sutapa Mukherjee** published the paper titled, "Defining Standard Skies for Roorkee" in the Proceedings of International Conference on Advancement in engineering & management (RITSICAEM 2012), pp.71, February 2012 held in Hyderabad.
44. **Sutapa Mukherjee** published the paper titled, "PC based DC motor control using PIC 16F877A Microcontroller" in the Proceedings of International Conference on Advancement in engineering & management (RITSICAEM 2012), pp.72, February 2012 held in Hyderabad.

45. **Anindita Ray** and Debashis De published their paper titled, “Energy Efficient Cluster Head Selection in Wireless Sensor Network” in the Proceedings of IEEE International Conference on Recent Advances In Information Technology (RAIT)-2012, having ISBN: 978-93-80813-17-2, Vol. I, pp.344-349, 15-17th March 2012 (ISM Dhanbad, Jharkhand).
46. Nilanjana Pradhan, **Kunal Das** and Debashis De published their paper titled, “Diverse Clocking Strategy In MQCA” in the Proceedings of IEEE International conference on Recent Advances In Information Technology at ISM, Bhanbad, held on 15th -17th March 2012, pp. 354-358.

Conference Proceedings (National):

47. **R. Goswami, S.C.Chakravartty, E.Bose, U.Mukherjee, P.Saha** and P.Mondal published their paper titled, “Low Temperature DC conductivity of Graphite Kaolinite composite” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 65-69, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
48. **Arijit Saha**, Kallol Bhattacharya and Ajoy Kumar Chakraborty published their paper titled, “A zero-order achromatic quarter-wave retarder” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 70-76, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
49. **Ivy Majumdar**, Suvankar Das, Avirup, Avijit Kar and **B.N.Chatterji** published their paper titled, “Texture Matching of Gray Level Images Using Legendre Moment Technique” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 77-83, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
50. **Surajit Mandal** and Ajay Ghosh published their paper titled, “Imaging Characteristics of a Birefringent Lens in the Infrared Region” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 84-94, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
51. **Lipika Adhya** published a paper titled, “Lasing Without Population Inversion” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 109-115, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
52. A. Sarkar and **P. Saha** published their paper titled, “A New Modulation and Coding Scheme for Free Space Optical Communication Using Turbo Coded BICM – ID with 16 QAM” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 95-98, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
53. **Arijit Saha**, Kallol Bhattacharya and Ajoy Kumar Chakraborty published their paper titled, “A three-element variable retarder for infrared monochromatic light using crystalline quartz” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 116-122, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.

54. **Surajit Mandal** and Ajay Ghosh published their paper titled, "A Novel Technique for Computing the Polychromatic Optical Transfer Function of Optical Imaging Systems" in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 123-129, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
55. Kushan Chakrabarty, Isha Das and **Shila Ghosh** published their paper titled, "Development of Colorimeter using Low Cost Optical Bridge" in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 130-134, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
56. **Esa Bose**, Sudipta Pal and Sanjay Biswas presented and published their paper titled, "Study of low temperature magnetic properties of $\text{Pr}_{1-x}\text{Nd}_x\text{MnO}_3$, $x=0.3, 0.5, 0.7$ " in Conference on Condensed Matter Days 2011, Book of abstracts, pp. 134, August 2011.
57. **N.Sanyal**, A.Chatterjee and S.Munshi presented and published their paper titled, "Application of Adaptive Bacterial Foraging Optimization algorithm for image Segmentation" in CALCON IEEE National Conference, 4th-5th November 2011.
58. **Paramthesh Das** and **Tista Banerjee** published their paper titled, "Microprocessor based boiler drum level control" in the proceedings of COIN-2011 held at Techno India, Saltlake, pp. 167-172, November 2011.
59. **Nandita Sanyal**, A. Chatterjee and S. Munshi published their paper titled, "Application of adaptive bacterial foraging optimization algorithm for image segmentation" in the Proceedings of CALCON 2011 National conference in collaboration with IEEE held at Jadavpur University (5-6 November 2011).
60. **Somali Sikder** and **Shila Ghosh** published their paper titled, "Study of bipolar Walsh coding in optical code division multiple access (OCDMA) system" in the Proceedings of National Conference on Materials, Devices & Circuits in communication Technology (MDCCT 2012), Burdwan, held on 6th -7th February 2012.
61. **Kalyan Mohanta** published a paper titled, "Computing cluster: an affordable and scalable platform for e-learning", in Proceedings of the AICTE sponsored national conference on paradigm shift in educational technology & content management, IEEE Kolkata section, Kolkata, India, pp. 22-27, March 2012, ISBN:978-81-923034-7-5.
62. **Tista Banerjee**, Jinia Datta, Ayindrila Roy, Sumana Chowdhury and Jitendra Nath Bera published their paper titled, "Development of Remote Speed Control System for Induction Motor", in the Proceedings of CSTS-2012, pp. B24-B30, BPPIMT, Kolkata on April 28, 2012.
63. **H. S. Dalal** published the paper titled, "HVAC control system", in the Proceedings of CSTS-2012, pp. B31-B39, BPPIMT, Kolkata on April 28, 2012.
64. **Pramathes Das** and **Mithu Mukherjee** published their paper titled, "Development of pressure sensors with remotely mounted electronics for use in radioactive zones", in the Proceedings of CSTS-2012, pp. C1-C4, BPPIMT, Kolkata on April 28, 2012.

65. **Sagarika Das, Rashmita Mishra and Susmita Biswas** published their paper titled, “Study and measurement of different human body parameters affected by stress using stress meter”, in the Proceedings of CSTS-2012, pp. C5-C11, BPPIMT, Kolkata on April 28, 2012.
66. **Chandrani Das and Pramathes Das** published their paper titled, “Human fetal blood flow measurement by ultrasonic transducer”, in the Proceedings of CSTS-2012, pp. C12-C17, BPPIMT, Kolkata on April 28, 2012.
67. **Madhumita Kundu (Mondal), Sujata Saha and Pramathes Das** published their paper titled, “Machinery vibration analysis with the help of piezoelectric transducers”, in the Proceedings of CSTS-2012, pp. C25-C31, BPPIMT, Kolkata on April 28, 2012.
68. **Sutapa Mukherjee** published the paper titled, “A simple procedure to define luminance distribution for different sky conditions using cie general standard sky model”, in the Proceedings of CSTS-2012, pp. D1-D8, BPPIMT, Kolkata on April 28, 2012.
69. **Tista Banerjee** published the paper titled, “Development of remote speed control system for induction motor”, in the Proceedings of CSTS-2012, pp. B24-B30, BPPIMT, Kolkata on April 28, 2012.
70. **Subhadip Nandi, Harshit Kumar, Kabita Paul, Sarfaraz Sultan and Arijit Saha** published their paper titled, “A novel birefringent filter for wavelength division multiplexing”, in the Proceedings of CSTS-2012, pp. D19-D23, BPPIMT, Kolkata on April 28, 2012.
71. **Surajit Mandal** published the paper titled, “The frequency response characteristics of a birefringent lens in the infrared region”, in the Proceedings of CSTS-2012, pp. D29-D34, BPPIMT, Kolkata on April 28, 2012.

Student Publications:

72. **Mohammad Wasim Sayed and Nasibullah** students of ECE dept. published their paper titled, “Secured Data Communication Using PCM and Pseudo-Noise Generation” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 135-142, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
73. **Saatwik Katiha** student of CSE dept. published a paper titled, “Implementation of an audio equalizer with user specified cutoff frequencies in MATLAB GUIDE using a peak filter” in the Proceedings of National Conference on Emerging Areas of Photonics and Electronics (EAPE 2011), pp. 99-108, organized by SPIE Chapter BPPIMT, Kolkata, on September 15-16, 2011.
74. **Rahul Kumar, Shovon Das, Krishna Kant, Ankit Kumar and Ravi Kiran** published their paper titled, “On synchronization of Van der Pol oscillators” in the Proceedings of CSTS-2012, pp. B40-B46, BPPIMT, Kolkata on April 28, 2012.

Sponsored Projects

1. Title - Development of New Electrostatic Theory Based Model Voltage Gated Potassium Ion Channel
Department of Science and Technology, New Delhi.
Chief Investigator – **Prof. Lipika Adhya**
Amount – Rs. 150000/-
2. Title – Mathematical Modeling for Prevention of Crack Propagation in Composites
Department of Science and Technology, Govt. of W.B
Chief Investigator – **Prof. Sudipta Chakraborty**
Amount – Rs. 80000/-

Patents

1. **Arijit Saha**, Kallol Bhattacharya and Ajoy Kumar Chakraborty, “A three element programmable retarder for monochromatic light for generation of any arbitrary retardation effect in optical polarization applications” (Accepted technologically).
2. **Surajit Mandal** and Ajay Ghosh, “Novel applications of birefringent lenses in the infrared region” (Accepted technologically).

Honorary Consultants

1. **Prof. Pramathes Das** for Intech Corporation, Kolkata for Interlock and protection system of power and process plants.
2. **Prof. N. K. Datta** for Tarit Appliances and Equipments, Kolkata for Transformer CT, PT and switchgears.
3. **Prof. Nandita Sanyal** for Powercon Electric Company, Kolkata for Development of Thyristor control and inverter based machines.

Conference Organized

1. National conference on *Emerging Areas of Photonics and Electronics (EAPE 2011)* has been jointly organized by the SPIE student chapter and the Department of ECE, B. P. Poddar Institute of Management & Technology. The conference was held during 15th-16th September 2011.
2. National Conference was organized by the Department of Electrical Engineering, B. P. Poddar Institute of Management & Technology, Kolkata on “*Control, Sensor, Transducer and Signal Conditioning, CSTS 2012*”, on 28th April, 2012 in collaboration with IET.

Seminar Organized

3. Department of Information Technology, B. P. Poddar Institute of Management & Technology, organized a one-day seminar on *Advanced Computing and Communication ACC 2012* on March 24, 2012.

Conference/Seminar Attended

1. Mr. Subhasis Mallick of the Department of Computer Application attended and presented paper in the international conference on Parallel, Distributed and Grid Computing at Solan, during 28th to 30th Oct. 2011.
2. Ms. Nandita Sanyal of the Department of Electrical Engineering attended and presented paper in a conference titled CALCON 2011 at Jadavpur University, during 4th and 5th Nov. 2011.
3. Mr. Pramathes Das of the Department of Electrical Engineering attended and presented paper in a national conference titled Frontiers of communication and instrumentation at Techno India, salt Lake during 11th and 12th Nov. 2011.
4. Ms. Tista Banerjee of the Department of Electrical Engineering attended and presented paper in a national conference titled Frontiers of communication and instrumentation at Techno India, salt Lake during 11th and 12th Nov. 2011.
5. Mr. Arijit Saha of the Department of Electronics & Communication Engineering attended and presented paper in the International conference ICONTOP 2011 at Kolkata during 7th to 9th December 2011.
6. Mr. Surajit Mandal of the Department of Electronics & Communication Engineering attended and presented paper in the International conference ICONTOP 2011 at Kolkata during 7th to 9th Dec. 2011.
7. Mr. Kunal Das of the Department of Information Technology attended and presented paper in conference ICANN 2011 at Guwahati during 8th to 10th Dec. 2011.
8. Ms. Kakali Karmakar of the Department of Mathematics attended and presented paper in International conference ICRAMSA 2011 at Guwahati during 9th to 10th Dec. 2011.
9. Mr. Sudip Kundu of the Department of Computer Science & Engineering attended and presented paper in International conference CISIM 2011 at Kolkata during 14th to 16th Dec. 2011.
10. Ms. Madhumita Kundu of the Department of Electrical Engineering attended one day seminar on Matlab & Simulink for Engineering Education on 21st Dec. 2011.
11. Ms. Sujata Saha of the Department of Electrical Engineering attended one day seminar on Matlab & Simulink for Engineering Education on 21st Dec. 2011.
12. Ms. Susmita Dey of the Department of Electrical Engineering attended one day seminar on Matlab & Simulink for Engineering Education on 21st Dec. 2011.
13. Ms. Anushree Roy of the Department of Electrical Engineering attended one day seminar on Matlab & Simulink for Engineering Education on 21st Dec. 2011.
14. Mr. Soumitra Singh of the Department of Electronics & Communication Engineering attended one day seminar on Matlab & Simulink for Engineering Education on 21st Dec. 2011.
15. Dr. Papri Saha of the Department of Computer Science & Engineering attended and presented paper in International conference CISIM 2011 at Kolkata during 10th to 11th Jan. 2012.
16. Mr. Arijit Saha and Mr. Mousam Chatterjee of the Department of Electronics & Communication Engineering attended one day technical seminar “Engineering and Science Innovation Summit 2012” on 8th Jun. 2012.

Recognition

1. Arijit Saha, Associate Professor of ECE Dept. has been selected as Member of Editorial Board of International Journal of Physics and Mathematical Sciences, with ISSN 2277-2111 (Online).
2. Soumya Paul, Associate Professor & Head, Dept. of Computer Application has been appointed as a member of the Board of Studies of BCA, MCA, West Bengal University of Technology.

Faculty Seminar (*Prosaron*) Organized

1. Mrs. Jayeeta Chanda, Assistant Professor of the Dept. of Computer Science presented her talk on “*Dynamic service choreography using context aware enterprise service bus*” on 29th July 2011.
 2. Mr. Kunal Das, Assistant Professor of the Dept. of Information Technology presented his talk on “*Quantum dot cellular automata (QCA): The future alternative of CMOS technology in VLSI design*” on 22nd December 2011.
 3. Mr. Subhasish Mallick, Assistant Professor of the Dept. of Computer Applications presented his talk on “*A realistic model for runtime incremental task scheduling in distributed memory multiprocessor system*” on 13th January 2012.
 4. Mr. Pramathesh Das, Associate Professor & HOD of the Dept. of Electrical Engineering presented his talk on “*Microprocessor based boiler drum level control*” on 25th January 2012.
 5. Mr. Sudip Kundu, Assistant Professor of the Dept. of Computer Applications presented his talk on “*Stochastic local search approaches in solving the nurse scheduling problem*” on 10th February 2012.
- Ms. Somali Sikder, Assistant Professor of ECE Dept. has delivered a seminar talk on “*Study of bipolar Walsh coding in optical code division multiple access system*” on 16th May 2012.

Invited Lectures Delivered

1. Soumya Paul, Associate Professor and Head, Computer Application has delivered a talk on “Application of Mathematics in IT” on 18th May, 2012 at Assam University Silchar.

Invited Lectures Organized

1. **Dr. Arun Majumdar**, Senior Scientist, Ridgecrest USA delivered a series of lectures on “Free Space Optical Communications” in the Department of Electronics & Communication Engineering on 16th September 2011.
2. **Prof. V. P. N. Nampoori**, Professor International School of Photonics, Cochin University of Science and Technology, Cochin delivered two lectures on “Biophotonics and Nanobiotechnology” and “Hazards of Mobile Communication” in the Department of Electronics & Communication Engineering on 16th September 2011.

3. **Prof. Alok Kumar Das**, Ex-Professor, Department of Electronics & Communication Engineering, Jadavpur University delivered a lecture on “Optical Communication Network and Devices” in the Department of Electronics & Communication Engineering on 15th September 2011.
4. **Prof. Ajay Ghosh**, Professor, Department of Applied Optics & Photonics, Calcutta University, delivered a lecture on “Lasers and its applications” in the Department of Electronics & Communication Engineering on 15th September 2011.
5. **Mr. S. Maity**, General Manager, Eastern Telecom Project, BSNL delivered “Optical Networking” in the Department of Electronics & Communication Engineering on 16th September 2011.
6. **Mr. Jellar Rehman**, Chief Commissioning Engineer of delivered a lecture on “Erections and Commissioning of Turbo Generator in Super Thermal Power Plants” in the Department of Electrical Engineering on 4th August 2011.
7. **Mr. P. Bhoumik**, Faculty of IEM and research scholar of Jadavpur University delivered lectures on “Power system and protection” in the Department of Electrical Engineering on 13th and 14th October 2011.
8. **Prof. Swapan Bhattacharya**, Professor & HOD, Department of Computer Science & Engineering, Jadavpur university, delivered a lecture on “Integration of research and innovation in technical education” on 24th March 2012.
9. **Prof. Nabanita Das**, ISI Kolkata delivered a lecture on “Modeling Ad-Hoc networks” on 24th March 2012.
10. **Prof. Sankhayan Chowdhury**, Calcutta University, delivered a lecture on “Network modeling using High Level Net” on 24th March 2012.
11. **Prof. Dipti Prasad Mukherjee** of ISI Kolkata delivered a lecture on “Emerging trends in image processing” on 9th June 2012.
12. **Prof. Tapan Ghosal** of Jadavpur University delivered a lecture on “Missile technology” on 28th April 2012.
13. **Prof. Amit Konar** of Jadavpur University delivered a lecture on “Brain computer interfacing for rehabilitative applications” on 28th April 2012.
14. **Prof. Abhik Mukherjee** of BESU Kolkata delivered a lecture on “Strategies for navigation of autonomous vehicles” on 28th April 2012.
15. **Prof. Amitava Chatterjee** of Jadavpur University delivered a lecture on “Image processing and robotic vision” on 28th April 2012.
16. **Prof. Mainak Sengupta** of BESU Kolkata delivered a lecture on “Power electronics and drives” on 28th April 2012.

Professional Bodies

SPIE (Society of Photo-Optical Instrumentation Engineers) Student Chapter (ECE Department)

This Student Chapter of the International Body SPIE at BPPIMT, Kolkata has grown to be the **4th largest in Asia** and the **2nd largest in India** within a span of only 3 years.

In the last Academic year SPIE Student Chapter performed activities like:

1. Organized a National Conference EAPE 2011 at BPPIMT jointly with Dept of ECE during 15-16 September 2011.
2. Organized a technical quiz competition and a science model competition on 23 February 2012, where 55 teams participated.
3. Two students Mr. Nazimul Islam Gazi and Mr. Chandradip Saha were invited at San Diego, California USA to attend a conference of SPIE with financial assistance from SPIE during 11th-16th August, 2012.

IET Student Chapter (EE Department)

1. Organized invited lecture on “Erections and Commissioning of Turbo Generator in Super Thermal Power Plants “, delivered by Mr. Jellar Rehman, Chief Commissioning Engineer of BHEL (Bharat Heavy Electrical Ltd.) on 4th August 2011.
2. Organized invited lecture on “Power system and protection”, delivered by Mr. P. Bhoumik, Faculty of IEM and research scholar of Jadavpur University on 13th and 14th October 2011.
3. Organized a National Conference CSTS 2012 at BPPIMT on 28th April 2012 jointly with Dept of EE.

CSI Student Chapter (CA Department)

1. Inaugurated on 9th June 2012 with 77 student members.
2. Organized a technical seminar on “Emerging Areas of Computer Applications” on 9th June 2012.

Entrepreneurial Activities

The entrepreneurship cell of B. P. Poddar Institute of Management & Technology organized E-week from 14th to 17th February 2012, at BPPIMT campus in collaboration with National Entrepreneurship Network (NEN). There was all-round participation of students in activities like intra-departmental debate competition, T-shirt painting and auctioning, and business plan presentation. Mr. Bappaditya Roy Biswas, NEN consultant delivered the motivational speech on Entrepreneurial activities. The Institute committee consists of Mr. Soumya Paul (convenor), Mr. Pramathes Das (Jt. Convenor), Dr. Shila Ghosh, Mr. Somnath Roychoudhury, Dr. Sabnam Sengupta, Ms. Inadyuti Dutta, Ms. Rashmita Misra, Ms. Sutapa Mukherjee, Mr. Sarit Chakraborty, Ms. Gitosree Khan, Mr. Abhijit Gupta, Mr. Sandip Dutta and Mr. Pinaki Bhattacharya.

Some of the alumni of BPPIMT who became entrepreneur are Mr. Abhishek Agarwal, Mr. Somnath Pradhan, Mr. Priyankar Basu and Ms. Moumita Dey.

Students Achievements

1. Aniruddha Ghosh and Arindam Sen, students of 3rd year ECE dept. bagged the first position in West Bengal and received prize money of Rs. 25000 in the “Wizards of Math” contest held on 26th September 2011. The competition was organized by T.I.M.E. and 37 colleges all over West Bengal participated in the event.
2. Mr. Soumik Podder, ex-student of ECE department of our college has completed his M.Tech degree in *Nanoscience & Technology* from Jadavpur University, Kolkata in 2012. He stood 1st Class 1st and is awarded with gold medal.