THE BPPIMT - NEWSLETTER

A Quarterly In-House Magazine
of
B.P. Poddar Institute of Management and Technology
Email: newsletter.bppimt@gmail.com

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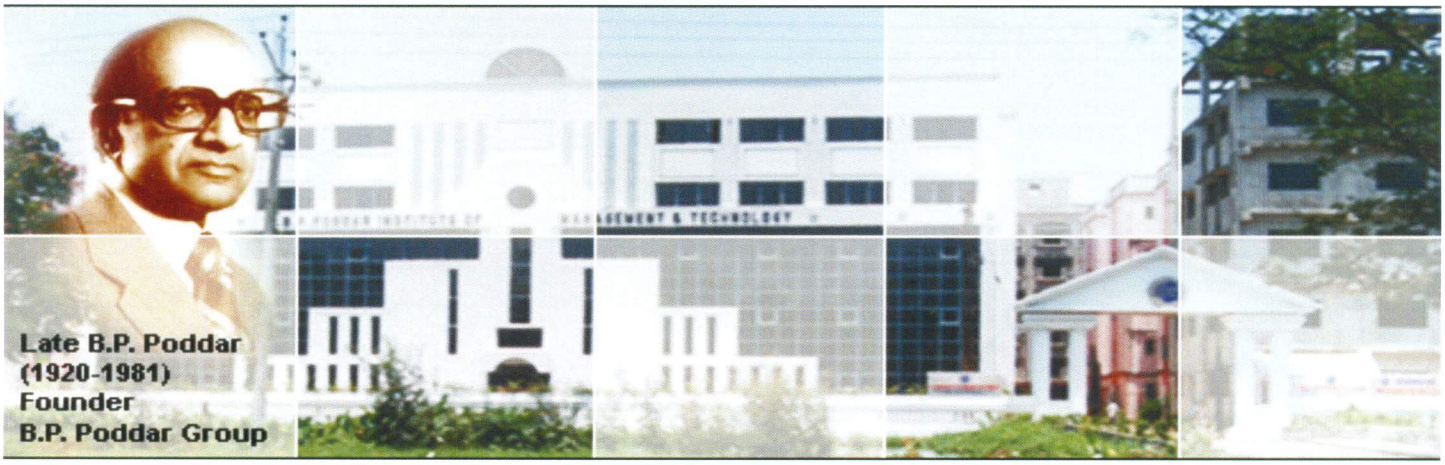


Our Director: Dr. Subir Choudhury

New Year's Message from the Director:

I am pleased to see that our BPPIMT – Newsletter, since its inception, has gained in color and spirits in every respect. Today on the 1st day of the New Year 2009, I wish our BPPIMT Newsletter that it continues its journey with equal vigor and with intelligent and informative news including those of the Global Economic Scenario related to the interest and image of the Institute.

Dr. Subir Choudhury
Director, BPPIMT

From the Editorial Desk:

"Time Lost is Lost forever, So use it judiciously"
"Never Say – I CAN'T DO IT, Say confidently – I CAN do it"
"Man often become what they themselves believe to be"

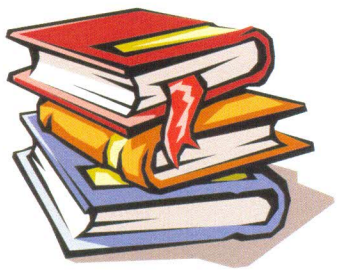
So we start the year 2009 with high hopes and determination and promise that: "We shall succeed and overcome all hurdles on our way"
Hence our New Year resolution will be:-
We shall work with speed, with speed in thinking, speed in Action at the right time and at the right place

Academic News:
Degrees Achieved:

Ms Sabnam Sengupta of the Department of Information Technology received her PhD degree from Jadavpur University in November 2008.

Ms. Paromita Nandi of the Department of Computer Science and Engineering completed her AMIE Degree.

Publications:



Dr Sabnam Sengupta of the Department of Information Technology, got her paper titled "A Framework for Component Design using MVC Design Pattern", published in the INFOCOMP Journal of Computer Science in 2008

Dr Sabnam Sengupta of the Department of Information Technology, got her paper titled "Formalization of UML Diagrams and Their Consistency Verification- A Z Notation Based Approach", published at the 1st India Software Engineering Conference (ISEC 2008), pp 151-152, held at Hyderabad, India in 2008

Dr. Ananya Kanjilal of the Department of Computer Science & Engineering and Dr. Sabnam Sengupta of the Department of Information Technology got their paper titled "CAG: A Component Architecture Graph", published in the proceedings of IEEE TENCON, held at Hyderabad, India in November 2008

Prof. S.C. Chakravartty, Prof. Ranjana Goswami and Prof. Uddipan Mukherjee of the Department of Engineering Physics got their paper titled "Electromagnetic Response of Graphite – clay Nanocomposite" published at DAE Symposium on Solid State Physics.

Prof. Uddipan Mukherjee of the Department of Engineering Physics got their paper titled "Orbital Phase Spectroscopy of Four High Mass X-Ray Binary Pulsars to study the Stellar Wind of the Companion" submitted to the Advances in Space Research

Prof. B. N. Chatterji of the Department of Computer Science and Engineering got his paper titled "Texture Image Retrieval using Rotated Complex Wavelet Filters" published in Pattern Recognition Letters, Vol – 28, pp 1040 - 1249

Prof. Papri Saha of the Department of Engineering Physics got her paper titled "Bifurcation Continuation, Chaos and Chaos Control in Non-Linear Bloch System" published in the Communications in Non-Linear Science and Numerical Simulation, 13:8. 1461 - 1471

Prof. Papri Saha of the Department of Engineering Physics got her paper titled "On the Various Kinds of Synchronization in Delay Duffing – Van der Pol System" published in the Communications in Non-Linear Science and Numerical Simulation, 13:4. 790 – 803

Prof. Papri Saha of the Department of Engineering Physics got her paper titled "On the Study of Delay Feedback Control and Adaptive Synchronization near sub-critical Hop Bifurcation" published in the International Journal of Modern Physics C, 19:1. 169 – 185

Participations:

Prof. Ivy Majumdar, Prof. Arijit Saha and Ms. Anamika Basu of the Department of Electronics and Communication Engineering attended the seminar titled "Agilent Measurement Seminar" at Taj Bengal, Kolkata in September 2008.

Prof. Sutapa Mukherjee of the Department of Electrical Engineering attended the seminar titled "Approach to Energy Efficient Lighting System" at the Jadavpur University, Kolkata in September 2008.

Dr. Papri Saha of the Department of Engineering Physics attended the Conference on Complexity at the Indian Statistical Institute, Kolkata in 2008.

Prof. Soumya Paul of the Department of Computer Applications participated in the MHRD/AICTE sponsored short term course titled "ERP and Integration of Business Processes" in 2008

Ms. I Dutt and Sri A Dey of the Department of Comp. Appl., Ms. P. Guha and Ms. M. Malakar of the Dept of Comp. Sc & Engg attended the "Winter School" sponsored by MHRD/AICTE at the IIT-Kharagpur, Salt Lake Center in December 2008

Prof. Soumya Paul of the Department of Computer Applications attended the workshop at Globsyn organized by National Entrepreneurship Network in 2008

Ms. I.Dutt, Ms. A Roychaudhuri and Sri A Bhattacharya of the Department of Computer Applications attended the Faculty Development Program at Cognizant Technology Solutions, Kolkata in 2008

Sri Panthadeb Saha of the Department of Electronics and Communication Engineering attended the Workshop on challenges in VLSI Design: Cutting Edge Perspective in 2008

Ms Gitosree Khan of the Department of Information Technology, Ms. Mousumi Malakar of the Department of Computer Science and Engineering and Ms Debarati Dey of the Department of Electronics and Communication Engineering attended the Summer School on Nanoelectronics: Science, Nanotechnology Engineering and Applications.

Prof D.Datta and Dr S. Sengupta of the Department of Information Technology attended the Workshop on E-Assessment at WBUT, Kolkata in 2008

Prof. Ivy Majumdar and Ms Madhuchanda Majumdar of the Department of Electronics and Communications attended the "Summer School" at the Indian Institute of Technology, Kharagpur in 2008 on "Image and Video Processing: Theory and Applications"

Sri Pratap Chandra Mondal of the Department of Computer Applications attended the "Summer School" at the Indian Institute of Technology, Kharagpur in 2008 on "Image and Video Processing: Theory and Applications"

Ms Jayeeta Chanda of the Department of Computer Science and Engineering attended the course on Unified Modeling Language and Service Oriented Architecture at CTS, Kolkata in 2008

Faculty Seminar Program:

Sri Amlan Roychaudhuri of the Department of Computer Science and Engineering delivered a seminar titled "Image Binarization Using Multilayer Perceptron" on 25th October, 2008.

The seminar was organized and coordinated successfully by the Institutional-Seminar-Management Authorities principally by Prof (Dr) Sabnam Sengupta and Prof. Jayeeta Chanda thereby promoting the research oriented learning and distribution of knowledge amongst of the faculty members.

This seminar being a brainchild of our Principal Prof. S.C. Chakravartty is a giant leap towards enhancing the research oriented activities in the institute.

Institutional News:

Sri Amlan Roychaudhury is appointed as Assistant Professor in the Department of Computer Science and Engineering.

The institutional exam committee has been re-constituted with Prof Jayeeta Chanda replacing Prof Kalyan Mahanto. With every new modification the committee is expected to function in a more judicious and effective manner.

Institutional Infrastructure:
Our Electronics and Communication Department is functioning in the institute since inception. The Department consists of highly qualified and eminent and pioneer educationalists, who impart the best of their knowledge to the students.

Digital Communication Lab: In this lab, the students are familiarized with preliminary as well as advanced level technologies in Communication Engineering. Here students perform experiments on various kinds of modulation, de-modulation, encoding and decoding techniques. Students also work with advanced instruments like DSO, Spectrum Analyzer etc.

Antenna and Microwave Lab: This is a high-end lab with state of art facilities. The lab is well equipped with powerful and costly instruments, like power meter, microwave-bench, antenna trainer system, transmission line analyzer etc. Studies of characteristics of different antennas and transmission lines, with different microwave sources, directional couplers etc. are a few mention-worthy experiments performed by the students.

Students Affairs:
Sri Mrigesh Mandevia, Sri Rajan Roy, Sri Rajnish Kumar Pandey, Sri Kaushik Mukherjee, Sri Subhrajit Dutt, Sri Rohan Sharma and Sri Mainak Majumdar of the Department of Electronics and Communication Engineering cleared the CAT Exam in 2008 conducted by the Indian Institute of Managements all over the country and secured the All-India basis prestigious rank.

Sri Prasun Chongdar and Sri Banhimitra Kundu of the Department of Electronics and Communication Engineering cleared the GATE exam conducted by the Indian Institutes of Technologies all over the country and secured the All-India basis prestigious rank.

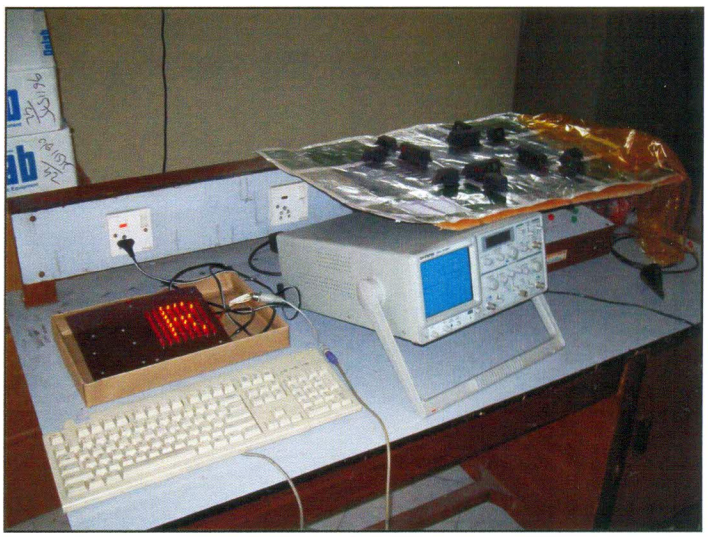
Sri Ishan Aditya of the Department of Electronics and Communication Engineering cleared the GRE exam and obtained a prestigious rank.

Sri Dibyendu Dam of the Department of Electronics and Communication Engineering got selected in BHEL.

Sri Anirban Chowdhury of the Department of Electronics and Communication Engineering got selected in BSNL.

In-house Developments:

Electronic Blackboard:
A Blackboard is a very common teaching aid. With rapid advances in electronics and electronic-instrumentation the traditional blackboards are also being replaced. An *Electronic Black-Board* was designed by the students of the Electronic and Communication Engineering Department as a final year project under the guidance of Ms Debarati Dey with vital technical suggestions from Prof. Bhaskar Som.



Connection Setup of the Electronic Black Board

- The Display portion should have sufficient area both for sketching and writing. A size of 24X24 (denoting the number of LEDs) may be considered sufficient for this.
- The writing mechanism should be very simple to enable the user to draw sketches very quickly.
- There should be a ESC key to erase the entire display.

Based on these specifications, the entire system has been developed. The display area is composed of 24X24 LEDs. Several I/O ports have been used for these LED displays. For the writing mechanism, a buffer in between flash memory and display has been used. The software program has been written in C Language.

One more crucial microcomputer chip that has been used is AT80C51. This project can be modified for special characters and symbolic representations. Introducing large number of LEDs in the display matrix, these special characters and symbols can be accommodated for display.

~EDITORIAL WORDS~

Global Recession: Will it ever Stop?

After the collapse of the Lehmann Brothers we faced a total global financial recession. Following the chain reaction from this recession India is facing the effect particularly in the IT based Industry which flourished by leaps and bounds from the business it got from USA and Europe. This affected the student community badly as the IT based job demand suddenly lost. So are the future of thousand bright young engineers passing out in 2008 and 2009.

Hence the question is will this recession ever stop? Before we answer this question let us see how severe the US recession as today's economy in the world is interlinked with those of the US mainly. In fact in the last 60 years this is the worst financial crisis US has seen since the Great Depression.

In fact US is almost a year into a recession and the fall in the output in going to continue at least through the end on 2009 and may be till the first half of 2010. In fact job losses are expected to continue even though economic growth starts to become positive by the end of 2010.

So the students this entering Information Technology and Computer Science based courses have nothing to worry, as from 2011 the world recession is expected to phase out and the job market is expected to become much much better.

Nothing can last forever – remember this, so avoid depression due to transitory recession.

GOOD-BYE 2008
WELCOME

It is an eternal truth that we cannot hold the past; neither can we hold the Time. So Present becomes Past, Future becomes Present and we accept this inevitable.

Hence in the beginning of 2009, we say "Goodbye – 2008" and "Welcome 2009"

The year 2008, due to Global Recession in IT, was not a happy year for most of the Engineering Students. But this may turn out to be a blessing in disguise for the nation, as these fresh Graduate-Engineers are now realizing that the world is quite large with larger opportunities. All one has to do is to explore those opportunities with Value Added Knowledge (VAK) and hard work and self-confidence so that the year 2009 becomes really a happy year.

So we start 2009 with high hopes and determination that we shall succeed and overcome all hurdles on our way. And hence our new resolution :-

We shall work with speed, with speed in thinking, speed in action at the right time and at the right place.

Unveiling the unknown facts of the Universe: The Large Hadron Collider Experiment
Dr. Rupa Pal

The Large Hadron Collider is the world's largest and highest energy particle accelerator used by several thousands of physists and engineers from over 100 countries of the world to study the smallest known particles – the fundamental building blocks of all things. It will revolutionize our understanding from the mini-scale world deep within the atoms to the vastness of the Universe. It is funded and built by the European Organization for Nuclear Research (CERN), intended to collide opposing particle beams of either protons at an energy of 7 TeV per particle or lead nuclei at an energy of 574 Tev per nucleus. It lies in a tunnel 27 Km in circumference as much as 175 meters deep inside the ground. The experimental setup is situated in the border between France and Switzerland near Geneva.

Two beams of subatomic particles called 'hadrons' will travel in opposite directions inside the circular accelerator, gaining energy with every lap. On 10th Sep, the proton beam was circulated in the main ring of the LHC for the first time. On 19th Sep, the operation was halted due to some serious fault. Thereafter it is re-scheduled to be operational after repairing jobs in Mid-Nov 2009.

The researchers there are attempting to re-create the condition that could have occurred just after the Big-Bang. This experiment is expected to give answers to many questions like – existence of 'Higgs Bosons', possibility of the Grand Unification Theory being the super-symmetry realized in Nature, formalization of Anti-Matter, Dark-Matter, Dark-Energy etc.

Call for Contributions:

Contribution for the Newsletter is always welcome from all the members of the BPPIMT family. The prospective contributors are requested to send their writings electronically to the following mail address:

newsletter.bppimt@gmail.com

Contributions should be within 100 words on interesting and intelligent news on science, technology and general topics related to our institute and the world at large. Contributions within 100 words may also be submitted as hard copy to Dipankar Majumdar of the Department of Information Technology for publication in the newsletter.

LAUGH-A-LOUD: TECH-JOKES

- Prof. Pramathes Das

Two students of an Engineering College were traveling in a bus, which had some variations over the bus fare. "What a bad conductor!" one of the students uttered in a complaining temper. The bus conductor overheard and angrily asked the students, "What did you say?" The other student tactfully handled the situation at once and smilingly said, "See, you are a very good insulator". The conductor said "Thank you for your complement, but what an insulator is?"

One customer asked for a zero-watt lamp in an electrical shop. Shopkeeper then asked his assistant to handover a fused bulb. The customer was astonished to hear that and frowned, "What?" The shopkeeper replied, "Sir, this is a true zero-watt bulb"

In a class, teacher asked a student "Can you calculate the copper-loss in the overhead electric line of your hostel?" Students replied, "100% Sir". The teacher asked, "Why?" Students replied, "Sir, the entire overhead line was stolen by thieves last night"

A teacher in Science class asked a student: "Why a capacitor blocks a D.C. and allows A.C to pass?" Student replied: "For a D.C. it being flowing in a straight-line, is blocked by a capacitor. While A.C. having a wavy nature, jumps off the capacitor and crosses past it"