

A QUARTERLY IN-HOUSE NEWSLETTER

BY

THE DEPARTMENT OF ECE
OF



B.P. Poddar Institute of Management and Technology

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Editor In Chief: Ms. Rashmita Mishra



Vision of the Department:

Emerge as one of the premier departments for Electronics and Communication Engineering studies in West Bengal

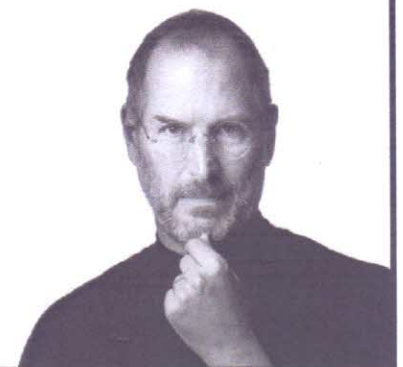
Mission of the Department:

1. Imparting innovative educational program through laboratory and project-based teaching-learning process for meeting the growing challenges of industry and research.
2. Providing an inspiring and conducive learning environment to prepare skilled and competent engineers and entrepreneurs for sustainable development of the society.
3. Creating a knowledge centre of advance technologies committed to societal growth using environment-friendly technologies.

"Don't let the noise of others' opinions drown out your own inner voice."

— Steve Jobs

(24th February 1955 - 5th October 2011)



TECH TRENDS

AUGMENTED REALITY

Augmented reality is an enhanced version of the real physical world through the use of visual elements, sound or other sensory stimuli. It is a growing trend among companies involved in mobile computing and business applications in particular. Amid the rise of data collection and analysis, one of augmented reality's primary goals is to highlight specific features of the physical world, increase understanding of those features and derive smart and accessible insight that can be applied to real-world applications. Such big data can help inform companies' decision-making and gain insight into consumer spending habits, among others.

Augmented Reality vs Virtual Reality

Augmented reality uses the existing real-world environment and puts virtual information on top of it to enhance the experience. Conversely, virtual reality involves users inhabiting an entirely different environment altogether, notably a virtual one. Users may be immersed in an animated scene or an actual location that has been photographed and embedded in a virtual reality app. Through a virtual reality viewer, users can look up, down or any which way, as if they were physically there.

Augmented reality in healthcare

There are some incredibly exciting applications for augmented reality in healthcare from allowing medical students to train in AR environments to telemedicine options that enable medical professionals to interact with patients. In critical situations, augmented reality applications can deliver real-time information to the treatment area to support diagnosis, surgery and treatment plans. AccuVein is a handheld device that can scan the vein network of a patient that leads to a 45% reduction in escalations. Surgeons can plan procedures before making the first cut, models can be made of tumors, and AR diagnostic tools can model disease conditions. Deloitte Research asserts that AR will disrupt the business model and operations of healthcare.



RECENT EVENTS

SEMINAR ON VLSI DESIGN & MICROELECTRONICS TECHNOLOGY

On the 8th of September, 2018 the Department of Electronics and Communication Engineering in association with SPIE Student Chapter, BPPIMT organized a Seminar on VLSI Design & Microelectronics Technology. This Seminar on VLSI Design & Microelectronics Technology provided an open forum to faculty members, graduate and undergraduate students with an emphasis on Design of VLSI Systems and Microelectronics Technology.

112 members participated – faculties and students, in this Seminar. We welcomed students from outside colleges as well making this seminars enlightening boundary even wider.

Eminent speakers from all over Kolkata came to enlighten young minds and provide valuable knowledge and information on the budding topic of VLSI Design and Microelectronics Technology.

It was our pleasure to welcome to the campus- Prof. Susmita Sur Kolay (ISI, Kolkata), Prof. Susanta Sen (Institute of Radio Physics and Electronics, University of Calcutta), Prof. Chandan Kumar Sarkar (Jadavpur University) and Prof. Tarun Kanti Bhattacharyya (IIT, Kharagpur) to share their knowledge and experiences in this field and make this seminar a huge success.



INDUSRTRIAL VISIT

The Department of Electronics & Communication Engineering in association with SPIE Student Chapter, BPPIMT, organized an industrial visit to Kolaghat Thermal Power Station on the 10th of September, 2018. 30, third year students were taken to the Kolaghat Thermal Power Station for this visit. These students were provided an insight about various field activities and on-sight activities of the power plant. The students were provided with valuable technical knowledge and first hand industrial exposure. Thus, giving students an essence of working in an industry.



UPCOMING EVENTS

INFORMATION, PHOTONICS AND COMMUNICATION 2019

IPC (Information, Photonics and Communication) is a National Conference organized by the Department of Electronics and Communication Engineering and SPIE Student Chapter of B.P. Poddar Institute of Management and Technology. This conference offers a platform to the interested personnel to showcase their skills and innovative ideas.

The aim of this conference is to introduce the concept of photonic information, signal processing & intelligent system, device & VLSI, communication system & Network to the students, researchers, engineers and scientists. Many eminent Speakers both from academia & industry will enlighten the audience from various perspectives and thereby provide an overview of the state of the art in the field. The proceedings of the conference will consist of invited talks by eminent Speakers from industry & academia, paper presentation sessions, and tutorials. The dominant goal of the conference is the exchange of ideas, results, work-in-progress and experience on photonics, Microelectronics and VLSI communication and network, Signal processing.

ACHIEVEMENTS & AWARDS

Faculty Publications:-

- 1) **Title-** Modeling of tunneling current density of GeC based double barrier multiple quantum well resonant tunneling diode

Authors- Dr. Vedatrayee Chakraborty

Journal/Conference- Journal of Semiconductors, IOP Science

Date- Published on August 2018(Accepted on 22nd March 2018)

- 2) **Title-** Linear Antenna Array Adaptive Beamforming For Space-Time Signal Processing Using Hybrid Genetic Algorithms Applied To Fading Channels

Authors- Mr. Joyanto Roychoudhary

Journal/Conference- Conference Info/Academic Science, OUCIP, Hyderabad (Telangana State), International Journal of Computer Engineering and Sciences Research

Date- August and October 2018

Faculty Editorial Board: Ms. Rashmita Mishra, Dr. Vedatrayee Chakraborty, Ms. Susmita Biswas

Student Editorial Board: Shirsho Dutt (ECE-B, 3rd Year), Anisha Palit (ECE-A, 3rd Year)