

## About the IEEE

The Institute of Electrical and Electronics Engineers Inc. (IEEE), a nonprofit organization, is the world's leading professional association for the advancement of technology.

Through its global membership, the IEEE is a leading authority on areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics among others. The IEEE has more than 365,000 members, including 68,000 students, in over 150 countries. It publishes 128 transactions, journals and magazines and organizes more than 300 conferences worldwide each year.

To foster an interest in the engineering profession, the IEEE also serves student members in colleges and universities around the world.

IEEE Madras Section came into existence in 1978 and has crossed its silver jubilee year. It is organizing Technical Meets, Conferences and Seminars of highest standard for the benefit of its members. The section today has the highest number of student branches among the sections in the world. The section is concerned about the welfare of the students in this part of the country and wants to improve the teaching learning process in the Engineering Colleges and Universities. With this in mind, the section is organizing Faculty Development Programme (FDP) for the teaching faculty members of engineering Colleges and Universities in TamilNadu.

## Faculty Development Programme

Teaching-learning is an important process in academic institutions. Transfer of knowledge takes place from the teacher to the students only when the teaching is effective. The young teachers need orientation and training in effective teaching. As a service to the teaching

community in the engineering institutions, IEEE Madras Section is organizing Faculty Development Programme (FDP) on the topics listed overleaf. The instructors for this programme are from IITMadras.

## Schedule

The course - I on "Probability and Random Processes, and Digital Communication" is proposed to be held on November 17 and 18, 2007. The Course-II on "Semiconductor Devices and Analog Circuits" is proposed to be held on November 24 and 25, 2007. Each programme will be for two days with 4 sessions, each of 3 hours duration.

## Participants

The FDP is aimed at faculty members of Engineering colleges in Tamil Nadu. Specifically, Course-I is meant for faculty who have taught courses such as Communication, Digital Communication, Probability and Random Processes and Course-II for those who have taught courses on Semiconductor Devices and Analog Circuits for at least two years. The objective of the courses is to impart the ability to communicate better with students as well as solve the drill problems given at the end of chapters in standard textbooks.

## Course Fee

There is no course fee for IEEE members and for non-members the course fee is Rs.1000/- for each course. The number of seats is limited and the participants will be chosen on a first-come-first-served basis provided they satisfy the criterion of having taught a course in related area. The fee includes course material and lunch. Accommodation and transport will be the responsibility of the participants. Accommodation may be provided in Student hostel/ Institute guest house (on payment basis) subject to availability. Specific request has to be made in advance to the IEEE office.

## Details of the present course

### Course - I

**Title : Probability and Random Processes, Digital Communication**

#### Course Contents:

- ☆ Probability, Random variable
- ☆ Random Processes
- ☆ Applications to Communication and Signal Processing
- ☆ Principles of optimum receivers in AWGN and ISI channels, Pulse shaping, BER calculations

#### Course Instructors

Prof. Srikrishna Bhashyam  
Prof. Devendra Jalihal

### Course - II

**Title : Semiconductor Devices and Analog Circuits**

#### Course Contents:

- ☆ Operation and Modelling of BJT
- ☆ Operation and Modelling of MOSFET
- ☆ Negative feedback and opamps: Basic negative feedback; concept of the ideal opamp; Assigning signs to the opamp; Analysis of circuits containing opamps; Stability criteria for negative feedback circuits
- ☆ On chip biasing circuits: Principle of biasing transistors; Replication of bias current; Current mirrors; Cascode current mirrors; Replica biasing for accurate current mirroring

#### Course Instructors

Prof. Nandita DasGupta  
Prof. Amitava DasGupta  
Prof. Nagendra Krishnapura  
Prof. Y. Shanthi Pavan



## REGISTRATION FORM

Name :  
IEEE Membership No.  
(if applicable) :  
Name of the  
Institution :  
Address :  
Hostel Accommodation  
Required :  Yes  No  
Email :  
Tel. / Cell No. :  
Details of  
Demand Draft  
DD. No. :  
Drawee Bank :

Fees Paid for **Course-I / Course II / Both**

Note: The Bank DD shall be drawn in favour of IEEE Madras Section, payable in Chennai.

I certify that I have taught one or more courses on  
(1) Communication/Probability and Random Processes/Digital Communication.  
(2) Semiconductor Devices/Analog Circuits  
(Tick whichever applicable)

Signature of applicant

Signature of the Head of Institution

Complete Registration form along with demand draft should reach the address below on or before 2<sup>nd</sup> November 2007.

IEEE Madras Section  
Room No. 3, ISTE Profession Centre  
Gandhi Mandapam Road, Madras 600 025

**Contact Details for courses:**  
**Prof. Amitava DasGupta**  
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Indian Institute of Technology Madras  
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## IEEE MADRAS SECTION ORGANISES



Course - I

**PROBABILITY AND RANDOM  
PROCESSES, DIGITAL  
COMMUNICATION**

Date: 17<sup>th</sup> and 18<sup>th</sup> November 2007

Course - II

**SEMICONDUCTOR DEVICES &  
ANALOG CIRCUITS**

Date: 24<sup>th</sup> and 25<sup>th</sup> November 2007

Venue

**Department of Electrical Engineering  
Indian Institute of Technology Madras  
Chennai- 600 036**

Contact Address

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