IMPORTANCE AND SCOPE

Current microwave systems for transmission and radiation of electromagnetic waves have to meet the competing requirements of enhanced functionality, low loss, reduced size and weight and low cost. It is important to appreciate that many of the design goals in modern efficient and miniaturized systems are self conflicting. For example, incorporation of multiband or broadband characteristics involves increase in physical size, which may have to be carefully optimized in handheld and wireless sytems where space it at a premium. Similarly, development of low-loss devices are crucial for successful operation at the Ka and Ku-bands and beyond. It might be mentioned that traditional technologies like the microstrip are prohibitively lossy at 20-30 GHz frequencies and beyond. The rectangular waveguide based designs, though satisfying the loss requirements, are comparatively bulky and difficult to effectively integrate with planar components.

Keeping the above in view, the design and analysis of efficient modern systems will be addressed with particular emphasis on low-loss guided structures and antennas. Reconfigurable antennas for mobile and wireless communication and current antenna miniaturization techniques for the realization of sub-wavelength radiating structures would be discussed.

In addition, metamaterials and their role in the design of systems with enhanced performance would be addressed. These include the design and realization of metamaterials, the design of electrically small antennas based on metamaterials and miniaturization of radiating structures based on the zeroeth order resonance.

KEY TOPICS TO BE ADDRESSED

- Basic electromagnetic theory
- Low loss antennas and guided structures
- Green's function analysis of antennas
- Metamaterials
- Antenna miniaturization
- Reconfigurable antennas
- Radar and communication
- EMI/EMC

TENTATIVE SPEAKERS

- Prof. Binay Kumar Sarkar, IIT Kharagpur
- Prof. Bratin Ghosh, IIT Kharagpur
- Prof. Amitabha Bhattacharya, IIT Kharagpur
- Prof. A. De, IIT Kharagpur
- Prof. Kalyan Bandyopadhyay, IIT Kharagpur
- Prof. Rajat Roy, IIT kharagpur

Important Dates

Last date for receiving aplication: May 31st , 2012
Intimation to the applicants: June 1st, 2012
Course duration: June 11 to June 16, 2012

Short term course on Current Trends in Microwave Design and Applications

June 11 -16, 2012

Registration Form

Name:_____

Designation: _____.

Sex (M/F): _____

ORGANISATION _____

Highest academic Qualification _____

Address:_____

_____

Phone / Fax: _____

Email (Compulsory):_____

Accommodation required yes/No_____

Details of bank draft: Amount Rs_____

Draft No. _____Dated:_____

Issuing Bank:_____
.

Date:

Signature

Place:

Recommendation and forwarding from the Organisation:

Signature with seal of the
Head of the Organisation

General Information

Situated at a distance of 116 Km form Kolkata, Kharagpur welcomes you with its green, calm and quiet campus, away from the din and bustle of city life. Historically, IIT Kharagpur started its journey in the "Hijli Detention camp". Presently it houses a science and technological Museum known as the Nehru Museum of Science and Technology. Also, the scenic township of Digha on the sea beach is only 120 km away from Kharagpur.

Connectivity:

Kharagpur is an important railway junction and is well connected to all parts of the country by rail service (SER).Numerous local & express trains are available from Howrah. The Institute is approximately 5 Kms from the Kharagpur railway station with the bus stand adjacent to the railway station. Rickshaws (Rs. 50), auto-rickshaws (Rs. 80) and taxis (Rs.100) are available form the railway station.

COURSE COORDINATOR

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Registration fees
Faculty/Scientists/Engineers
From Academic Institution /R & D Organisation: Rs. 10000/-
From Industries/Private sector: Rs. 20000/-
Course fee includes lecture notes and refreshments during the course.
The Course fee does not include boarding and lodging charges.

Accommodation

Limited shared accommodation is available in the guest house (VGH) on personal payment basis. The charges are as follows : Daily charges : Rs. 100/- per bed + taxes as applicable (non–AC shared room). On prior intimation we will try to arrange accommodation with the corresponding charges.

Eligibility for Participation:

Research personnels in R&D organisations/scientific officers and engineers working in cutting–edge technology from industries/faculties of educational institutes having exposure to microwave guided & radiating structures are eligible to participate.

How to apply:

Interested persons may apply in the form given herewith alongwith the registration fee in the form of demand draft drawn in favour of **'CEP-STC, IIT Kharagpur', payable at Kharagpur. The application should be sent to the following address latest by May 31st , 2012.** The total number of seats in this course is limited to 60. In view of the limited seats, selection will be made on first come first serve basis.

Certificate :

Certificate will be issued to each participant from the office of "Dean (Continuing Education), IIT-Kharagpur".

Mailing address:
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Short term course
On
Current Trends in Microwave Design and Applications

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Prof. Bratin Ghosh

Organized by

Electronics and Electrical Communication Engineering Department
Indian Institute of Technology
Kharagpur – 721 302, India