

QIP Short Term Course On Microwave Fundamental & its applications in Radar and Avionics

A Continuing Education Programme of
Indian Institute of Technology
Kharagpur

May 21 – June 02, 2012



Coordinator

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Co-Coordinators

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Dept. of E & ECE

Organized by

**Kalpana Chawla Space Technology
Cell,
Indian Institute of Technology
Kharagpur – 721 302**

OBJECTIVES AND INTRODUCTION

Microwave is the backbone of the wireless communications system which is being extensively used in back haul links of Internet Service Providers, Cellular Mobile systems, satellite TV broadcasting system and Radar systems. More recent uses are in Aircraft Avionics for surveillance, navigation and communication.

Basic knowledge of microwave techniques, transmission lines, devices and measurement techniques are essential to microwave engineers. This course attempts to provide refreshing of the fundamentals of microwave engineering and recent techniques that are used in the design and measurements of microwave networks and antenna. It will also provide exposure to the specific applications areas like, Radar, navigation and communication.

SCOPE

The aim of this course is to focus on the fundamentals of microwave theory and techniques and its selected applications. This will include lectures, tutorials and practical sessions. Broad topics will be:

Basics of microwave engineering,
EMI/EMC,
Microwave Components and Devices,
Microwave Networks,
Antennas,
Measurement techniques and
Applications of microwave in Radars (Radar Basics, Synthetic Aperture, Phased array, MIMO radars etc.) and

Avionics (Navigation Basics, Inertial and Doppler navigations, Microwave Landing System, GPS, and Avionics related communication systems etc.)



COURSE FACULTY

The entire course will be covered by the faculty members of IIT Kharagpur and a few experts from industry.

WHO SHOULD ATTEND

Faculty members of University and AICTE approved engineering colleges who want a thorough guided tour on electromagnetic / Microwaves / Radar and Avionics.

Practicing RF and microwave Engineers, Professionals and functional managers, administrators in the mobile phone, satellite communication and radar industry.

ELIGIBILITY

B.E. / B.Tech/ M.E / M.Tech / MSC and or equivalent degree in Electronics/ Telecommunication / Electrical Engineering.

REGISTRATION

- (a) Teachers from AICTE Approved Engineering Collages/Institutions – No registration fee. (Application should reach at Kalpana Chawla Space Technology Cell, IIT Kharagpur **by 7th May, 2012**; total participants limited to 30: selection of participants is first come first serve basis).
- (b) Scientists / Technologists / Engineers : From R & D Lab. and Industry may also attend (limited no. of seats on first come first serve basis) : **should apply by 30th April, 2012 course fee Rs. 15,000/-**. Self sponsored candidates will be provided course materials, working lunch, tea & snacks during the course hours. Traveling, boarding & lodging expenses should be borne by participants. The registration fees in Bank Draft should be in favour of **‘CEP - STC, IIT, Kharagpur’** payable at Kharagpur along with completed registration form to be sent to Prof. B.K. Sarkar, Kalpana Chawla Space Technology Cell, I.I.T., Kharagpur – 721 302, West Bengal, INDIA

LOCATION

Kharagpur is an important Railway junction station about 116 Km. west of Kolkata. There are frequent train services from Howrah Rly. Stn. and it is well connected to almost all parts of the country. The Institute is about 5 Kms. away from Kharagpur Railway Station. Taxis, Auto-rickshaws, cycle rickshaws are available as transport.

ACCOMMODATION

Limited shared accommodation in the guest house is available. However, efforts will be made to book accommodation in the guest houses on receipt of request from the participants.

Enquires should be addressed to :

Prof. B.K. Sarkar,
Kalpana Chawla Space Technology Cell, IIT
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REGISTRATION FORM

Please complete the details below and mail it to the address overleaf along with the registration fee.

1. Name :
2. Designation :
3. Address :
4. Phone (Mob.) :
- Phone (Res.) :
- E-mail (compulsory) :
5. Male/Female:
6. Date of birth :
7. Highest academic qualification:
8. Accommodation Required (Y/N):

For QIP Sponsored Candidates [Category-(a)]
Recommended and forwarded

Date: _____
Signature and Seal of the
Head of the Organization

For others [Category-(b)]

1. Draft No. _____ dt. _____
amounting Rs. _____ drawn on
_____ Bank.
2. Recommendation and forwarding letter from
the organization where working.

Date : _____
Signature of the Applicant

Place :