Short Term Course On Substrate Integrated Waveguide Technology (SIW)

A Continuing Education Program of Indian Institute of Technology Kharagpur

September 13 – 15, 2016

COURSE COORDINATOR

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Organized by

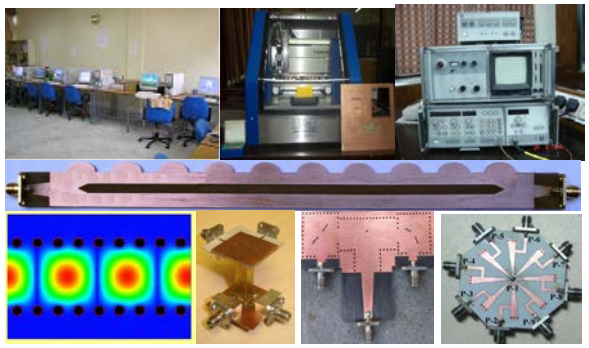
Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology Kharagpur – 721 302

OBJECTIVES AND SCOPE

A substrate integrated waveguide (SIW) also known as post-wall waveguide is a synthetic rectangular waveguide formed in a dielectric substrate. It is a planar form of the traditional rectangular waveguide where the broad walls are realized by the upper and lower metal plates of the substrate and the side walls by densely arraying metallized posts or plated though holes (PTH) which connect the upper and lower metal plates. The waveguide can be easily fabricated using conventional printed circuit board technology. The SIW is known to have similar guided wave and mode characteristics to the conventional rectangular waveguide. It has become one of the most popular planar wave guiding structures because of its lower loss and higher power handling capability compared to other well-known planar guides such as microstrip line and CPW.

This course attempts to provide the fundamentals as well as recent development of SIW technology. Detail design steps of the microwave passive devices, antennas, active modules such as mixers, amplifiers etc. in SIW technology and their implementation techniques using printed circuit board technology will be discussed. The course will include lectures and practical sessions. Broad topics are

- Introduction to SIW technology.
- Loss and power handling capabilities.
- Realization of passive components, antennas and active modules in SIW technology.
- Use of electromagnetic simulators in SIW component design.
- Fabrication of SIW components.



COURSE FACULTY

Faculty members/ experts from IIT Kharagpur and some other institutes.

WHO SHOULD ATTEND

Faculty members of University and engineering colleges, research scholars, M. Tech final year students, 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. or equivalent degree in Electronics/ Telecommunication / Electrical Engineering.

LOCATION

Kharagpur Railway Station is about 116 Km (2 hours) west of Kolkata. There are frequent train services from Howrah Railway Station and it is well connected to almost all parts of the country. The Institute is about 5 Km away from Kharagpur Railway Station. Taxis, Auto-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 by **31st August, 2016**.

Registration for TEQIP Sponsored

Teachers / students from TEQIP approved Colleges /Institutions / Universities. Participants should bring a letter of nomination from their head of institution stating that they are being deputed for the course.

There is no registration fee. However, a Demand Draft of Rs. 5,000/- (drawn in Favor of "**CEP–STC, IIT Kharagpur**") should be enclosed with the application form which will be refunded to the participants attending the course.

Registration for others (non TEQIP)

(a) Scientists / Technologists / Engineers from industry or government institutions:

Course fee: Rs. 16,000/-.

(b) Faculties from University & Engineering Colleges:

Course fee: Rs. 12,000/-

(c) Registered students:

Course fee: Rs. 8,000/-

Candidates will be provided course materials, working lunch, tea & snacks during the course hours. Boarding & lodging expenses will be waived for TEQIP sponsored candidates. It should be borne by the other participants.

The registration fees in Bank Draft should be in favor of ***'CEP - STC, IIT, Kharagpur'*** payable at Kharagpur along with completed registration form to be sent to Dr. M. K. Mandal, Kalpana Chawla Space Technology Cell, I.I.T Kharagpur – 721 302, West Bengal, INDIA.

Certificate:

A certificate of participation would be issued to all the participants from the Office of Dean, Continuing Education, I.I.T Kharagpur.

Enquires should be addressed to:

Dr. M. K. Mandal,
Department of Electronics and Electrical Communication Engineering, IIT Kharagpur
Kharagpur – 721 302

E-mail : office@adm.iitkgp.ernet.in
mkmandal@ece.iitkgp.ernet.in

Phone : 91-3222-282298
Telefax: 91-3222-282299
Fax : 91-3222-255303

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September 13- 15, 2016

REGISTRATION FORM

Please complete the details below and mail it to the address overleaf along with the demand draft.

1. Name:……

2. Designation:……

3. Address (Office):…….....

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4. Phone (Mob.) :……...

Phone (Res.) :…….

E-mail (compulsory) :……

5. Male/ Female:……..…

6. Highest academic qualification:……...

7. Accommodation Required (Y/N):……

8. Bank Draft No…….. ……..Date……..

Amounting Rs……drawn on…….Bank

Date : Signature of the Applicant

Place :

For M. Tech./B. Tech. students:

Signature of Head of the department with seal