AICTE Sponsored QIP Short Term Course

Recent Trends in Microwave/Millimeter Wave Technology and their Applications in Wireless Communication and Defense Perspective

October 14-19, 2019

Organized by
Department of Electronics Engineering, IIT (BHU), Varanasi - 221005

Course Coordinator
Dr. M. Thottappan
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IIT (BHU), Varanasi-221005

About the Course

Microwaves cover an important window (~300MHz to ~300GHz) of the spectrum of electromagnetic waves. Since its advent for wireless communication and defense sectors for many decades ago, it has grown rapidly in all aspects of the associated technology spanning sources, amplifiers, couplers, antennas, detectors, etc. These advances have led to compact active and passive microwave/millimeter wave devices being deployed in a wide range of environments – from space-borne communication systems to personal mobiles! Creating new designs, simulating the performance, fabricating the devices, and testing are challenges that need to be addressed. The objective of this course is to introduce the fundamentals of electromagnetic theory and recent advances in microwave/millimeter wave technologies for wireless communication and defense sectors. Further, the modeling issues of microwave/millimeter wave devices including antennas, meta-surfaces, frequency selective surfaces, photonic bandgap structures, etc., will be addressed to the young faculty members of various technical institutions.

Course Content

The tentative topics to be covered in this course are:

- Electromagnetic Theory
- Microwave Active & Passive Devices
- High Power Microwaves & its Applications
- Millimeter Waves & their Applications
- Antenna Systems
- Meta-surfaces
- Modeling in Ansys HFSS
- Modeling in Microwave CST Studio

Application Form for QIP Short Term Course

Recent Trends in Microwave/Millimeter Wave Technology and their Applications in Wireless Communication and Defense Perspective

October 14-19, 2019

1. Name (block letters):
2. Designation & pay scale:
3. Organization:
4. Address for communication with pin code:
   Mobile No.: e-mail:
5. Highest Academic Qualification:
6. Specialization:
7. Experience (in years):
   (a) Teaching:   (b) Industrial:
8. Amount of TA for to-and-fro III AC railway fare (only for the AICTE approved college teachers):
9. Whether Accommodation (to be provided strictly on sharing basis) is required:
   Please register me for the course on “Recent Trends in Microwave/Millimeter Wave Technology and their Applications in Wireless Communication and Defence Perspective” to be held at IIT (BHU) Varanasi during October 14-19, 2019.

Place:

Date: Signature of the applicant
Recent Trends in Microwave/Millimeter Wave Technology and their Applications in Wireless Communication and Defense Perspective at IIT (BHU) Varanasi during October 14-19, 2019 of the Short Term Course, if selected.

Date: ____________________________
Designation: ____________________________
Signature of Sponsoring Authority
(Official Seal)

Refundable Security Deposit Details:
*DD No.: ____________________________ Date: ____________________________
Bank: ____________________________ Amount: ₹ 2000/-

Signature of the Applicant

Certificate of participation will be issued to all the participants only after completion of the course.

Last date for receiving the Registration form: October 3, 2019 (Extended)
Confirmation of Participation: October 04, 2019

Note: The selected participants are required to carry with them two passport size photographs along with a proof of photo identity (Preferably Institute Identity Card).

The Department of Electronics Engineering of IIT (BHU) came into existence as an offshoot of Electrical Engineering Department in 1971 in the erstwhile Institute of Technology, Banaras Hindu University. The Department offers Bachelor, Master and Doctoral programs in Electronics Engineering with the major thrust areas of Microelectronics, Microwave Engineering, Digital Techniques & Instrumentations and Communication Systems. The intake every year of the Department is 113 in the B.Tech. level and 56 in the M.Tech. level. Besides teaching students of our own discipline (Electronics Engineering), the basic courses in Electronics Engineering are offered to almost all the Departments of the Institute and advanced-level courses are taught to the students of Electrical Engineering and Computer Engineering Departments. The Department has been actively engaged in research since its inception as evidenced by the research publications. The first major financial support from the Department of Electronics (DoE), Govt. of India in the tune of Rs.1.0 Crore was received by the Department in 1980 to carry out research for development of High Power Microwave Tubes. In addition to this, the Department has been actively pursuing manpower training and collaborative research programs in specialized areas to meet the national manpower requirements in R&D laboratories, academic institutions and industries. The Department has a close interaction with many reputed national R&D laboratories including DRDO, CSIR, Bharat Electronics, leading software industries, and foreign Universities.

The city of Varanasi is well connected by road, rail and air with all the important places of India. Regular flights are there from Varanasi to Delhi, Mumbai, Chennai, Kolkata, Bangalore, Hyderabad, and Lucknow. IIT (BHU) campus is only 5 km from Manandadighi Railway Station, 10 km from Varanasi Railway Station, 20 km from Pt. Deen Dayal Upadhyaya Railway Station (formally known as Mughalsarai) and 35 km from the Lal Bahadur Shastri International Airport, Babatpur, Varanasi. Pre-paid taxis and auto-rickshaws can be hired from the airport and rail way stations.