

One Week Workshop on “Millimeter Wave & THz Technology with their Contemporary Applications”

July 14th to 18th 2025



Organized by

Centre of Excellence on UAV and
Electronic Border Security

Department of Electronics &
Communication Engineering

Jaypee Institute of Information
Technology, Noida (Declared Deemed to
be University under Section 3 of UGC
Act 1956)

About the Institute

JIIT, a leading Engineering Institute was established in the year 2001 with the vision of becoming a center of excellence in the field of IT & related emerging areas of education, training and research comparable to the best in the world for producing professionals who shall be leaders in innovation, entrepreneurship, creativity and management. The Institute offers Undergraduate, Post-graduate and Doctoral programs in the disciplines of Computer Science Engineering, Information Technology, Electronics & Communication Engineering, Biotechnology and Management. The Institute aims to develop technocrats with skill and capability to design and implement computer based systems, tool and equipment.

About the Department of Electronics and Communication Engineering

The Electronics and Communication Engineering Department was formed in the year 2002. Besides running a 4-year B.Tech. degree and a 5-year Integrated B.Tech - M.Tech. degree program, the Department also runs three M.Tech. degree programs with specializations in Wireless Communication, Machine Learning and Signal Processing, Microelectronic Systems And IOT. The Department has strong research programmes leading to Ph.D. degree in cutting edge research areas of Electronics and Communication Engineering.

The salient features of the degree programs are:

- Inculcate analytical approach,
- Adequate number of courses on humanities and personality development,
- Judicious mix of hardware and software based experiments,
- Emphasis on learning through design and simulation,
- Open ended laboratory problems,
- Minor specialization in other disciplines,
- IEEE student chapter,
- Creativity and Innovation Cell,
- Higher emphasis on project and project based learning, and
- State-of-the-Art courses in Mobile Communications, Optical Communications, Telecommunication Networks, Signal Processing, Microelectronics, Digital System Design, Machine Learning, Embedded Systems and MEMS.

JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, NOIDA



About the Workshop

Workshop on “Millimeter Wave & THz Technology and Their Contemporary Applications”

This workshop offers a comprehensive opportunity to understand the complete design cycle of microwave devices — from simulation and fabrication to testing. It is specifically tailored to meet the needs of faculty members, researchers, and industry professionals working in the domains of RF and microwave engineering.

The program is thoughtfully designed, keeping in view the evolving requirements of the RF and microwave field. Participants will benefit from:

- Technical talks by eminent speakers with expertise in millimeter wave and THz technology.
- Hands-on technical sessions conducted using HFSS (High-Frequency Structure Simulator).
- Live demonstrations of the Metasurface antenna, SIW cavity backed antenna, Filters and MIMO Antenna.
- Testing and measurement sessions using advanced equipment such as the Vector Network Analyzer and newly established Anechoic Chamber facilities.

This workshop will be highly beneficial for both beginners and experienced professionals looking to deepen their understanding and practical skills in RF and microwave component design and testing.

WORKSHOP HIGHLIGHTS

- Expert Lecture by eminent speakers
- Design and Simulation of an antenna, filters, MIMO antenna, Metasurface and SIW on HFSS

MODE OF CONDUCTING

- ONLINE

REGISTRATION FEE

- INR 300 / per registration
- Payment can be made either through QR Code
- Payment Details:



REGISTRATION LINK

- <https://forms.gle/mNLJHBwjfuRR2pMI7>



PLEASE NOTE

- Registration will be on the selection process.
- Total number of seat is 100.
- The registration fees includes access to online session and certificate for attendees having percentage greater than 70%
- All the session is online and will be conducted in two slots

WORKSHOP AGENDA

Day 1 (14th July): (1st Half)

- Inaugural Session
- Chief Guest Invitation
- Technical Talk by expert-1 (Dr. Darshak Bhatt, Associate Professor, Indian Institute of Technology Roorkee)

Day 1 (14th July): (2nd Half)

- Technical Talk by expert-2 (Prof Shweta Srivastava, Dean and HOD ECE Department, IIIT Noida)

Day 2 (15th July): (1st Half)

- Technical Talk by expert-3 (Dr. Sukomal Dey, Associate Professor, Electrical Engineering, Indian Institute of Technology Palakkad)

Day 2 (15th July): (2nd Half)

- HANDSON session 1 (Dr. Raghvendra Kumar Singh, IIIT Noida)
- Topic: Design and Characterization of a Highly Sensitive Perfect THz Metasensor for Refractive Index Sensing + Introduction to Antenna testing

Day 3 (16th July): (1st Half)

- Technical Talk by expert-4 (Dr Akash Bansal, Royal Academy of Engineering UK Intelligence Community Research Fellow and Lecturer in Applied Electromagnetics at Loughborough University, UK.)

Day 3 (16th Sep): (2nd Half)

- HANDSON session 2 (Dr. Abhay Kumar, IIIT Noida)
- Topic: SIW design and SIW Cavity Back Antenna using HFSS

Day 4 (17th July): (1st Half)

- Technical Talk by expert-5 (Dr. Nasimuddin, CN Department, Institute for Infocomm Research, Singapore)

Day 4 (17th July): (2nd Half)

- HANDSON session 3 (Dr. Nitin Muchhal, IIIT Noida)
- Topic: Design of Stubbed Microstrip Bandpass filter using HFSS

Day 5 (18th July): (1st Half)

- Technical Talk by expert-5 (Dr. Kirti Dhawaj, Centre for Applied Research in Electronics (CARE), IIT Delhi, India)

Day 5 (18th July): (2nd Half)

- HANDSON session 4 (Dr. Nidhi Tewari, IIIT Noida)
- Topic: MIMO microstrip antenna and analysis using HFSS software for sub-6ghz applications
- Valedictory Session with Feedback

WORKSHOP COORDINATORS

Dr. Nitin Muchhal
Dr. Nidhi Tewari
Dr. Abhay Kumar

Department of Electronics and Communication Engineering, Jaypee Institute of Information Technology, Noida

CHIEF PATRON

Sh. Jaiprakash Gaur Ji
Sh. Manoj Gaur Ji

PATRON

Prof. S. C. Saxena, Pro-Chancellor
Prof. B.R. Mehta, Vice Chancellor
Prof. Shweta Srivastava, Dean A&R (II) & HoD ECE

CONTACT DETAILS

- nitin.muchhal@mail.jiit.ac.in, 0120-2594306
- nidhi.tewari@mail.jiit.ac.in, 0120-2594301
- abhay.kumar@jiit.ac.in, 0120-2594287

**Let's Meet
and
Design
&
Simulate**

**(Antenna, Filters, MIMO
Antenna, Metasurface, SIW and
many more)**



Address

Jaypee Institute of Information
Technology, Sector 62, Main Campus

A 10, A Block, Block A, Industrial Area, Sector 62, Noida,
Uttar Pradesh 201309

Jaypee Institute of Information Technology,
Sector 128, WishTown Campus

Jaypee Greens Internal Rd, Goberdhanpur, Sector 128,
Noida, Uttar Pradesh 201304

Schedule

DATE	SPEAKER DETAIL AND TITLE OF TALK (10 AM-12 PM)	SPEAKER/HANDSON SESSION DETAIL (2PM – 4PM)
14th July 2025	9:30AM-10:00 AM: Inauguration Ceremony	Prof. Shweta Srivastava Dean A&R(II) and HoD ECE Deptt, IIIT Noida Topic: TO BE UPDATED
	Dr. Darshak Bhatt Associate Professor, Department of Electronics and Communication, Indian Institute of Technology Roorkee Topic: Reconfigurable RFICs for Next-Gen RF Transceivers: Innovations and Applications	
15th July 2025	Dr. Sukomal Dey Associate Professor, Electrical Engineering, Indian Institute of Technology Palakkad Topic: Multi-band and Broadband MIMO Antennas for Smartphone Applications	Hands-on session #1 Dr. Raghvendra Kumar Singh IIIT Noida Topic: Design and Characterization of a Highly Sensitive Perfect THz Metasensor for Refractive Index Sensing + Introduction to Antenna testing
16th July 2025	Dr. Akash Bansal Royal Academy of Engineering UK Intelligence Community Research Fellow and Lecturer in Applied Electromagnetics at Loughborough University, UK. Topic: Advancements in 3D Printing RF Systems and Beam-Steering Antennas	Hands-on session #2 Dr. Abhay Kumar IIIT Noida Topic: SIW design and SIW Cavity Back Antenna using HFSS
17th July 2025	Dr. Nasimuddin CN Department, Institute for Infocomm Research, Singapore Topic: Smart Antennas for Smart Systems: Advances in Reconfigurable Technologies for Comm/Connectivity	Hands-On Session #3 Dr. Nitin Muchhal IIIT Noida Topic: Design of Stubbed Microstrip Bandpass filter using HFSS
18th July 2025	Dr. Kirti Dhawaj Centre for Applied Research in Electronics (CARE), IIT Delhi, India Topic: Evanescent mode filtering antennas	Hands-On Session #4 Dr. Nidhi Tewari IIIT Noida Topic: MIMO microstrip antenna and analysis using HFSS software for sub-6ghz applications + VELEDICTORY