Online Short Term Course (e-STC)

On

Next Generation RF to THz Devices for Wireless Communication and Other Applications

2nd - 6th May 2024

An Initiative of
National Institute of Technology Hamirpur
(An Institute of national Importance)

Hamirpur − 177005, Himachal Pradesh, India

Organized by

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Engineering

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Hamirpur − 177005, Himachal Pradesh, India.

About the Institution

National Institute of Technology Hamirpur is one of the thirty-one NITs of the country, established in 1986 as Regional Engineering College, as a joint and cooperative enterprise of the Govt. of India and Govt.of Himachal Pradesh. The goals of the institute as embodied in the logo are truly remarkable in their scope of vision. The Institute provides Undergraduate, Postgraduate and Doctorate Education in Engineering, Sciences & Humanities; fostering the spirit of National Integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied.

About the Department

Established in the year 1988, the Electronics & Communication Engineering (E&CE) Department NIT Hamirpur, HP, has built an International reputation for excellence in teaching, research and service. Electronics engineers are changing the world to a comfortable global home. The information and technology revolution has been built on the advances of Electronics. The E&CE Department takes pride in its high National rankings and the International recognitionits faculty has received from their peers.

Department of ECE is making exhilarating progress in areas ranging from microelectronics, signal processing, machine learning, mobile communications to VLSI Design Automation. In labs and classrooms, students draw on the expertise and knowledge of our able faculty, integrating practical, hands-on research experience with challenging and interesting course-work. The department runs M. Tech. in VLSI Design Automation & Techniques (VDAT) since 2006, M.Tech in Communication Systems and Networks and Also has over 30 PhD Scholars involved in various research in the department.

Objective of e-STC

The primary objective of the short-term course on Next Generation RF to THz Devices is to equip participants with the knowledge and skills needed to comprehend, design, and apply cutting-edge technologies in the development of devices for wireless communications and various other applications operating in the Radio Frequency (RF) to Terahertz (THz) frequency range.

Resource Persons/Speakers

1. Prof. Animesh Biswas, IIT Kanpur
2. Prof. Dinesh Kumar V, IIITDM Jabalpur
3. Prof. Bratin Ghosh, IIT Kharagpur
4. Prof. Bhaskar Gupta, Jadavpur University
5. Dr. Prabal Pratap, Director, Unique Identification Authority of India
6. Dr. Soumak Bhattacharya, Associate Prof., IIT BHU
7. Dr. Soumava Mukherjee, Associate Prof., IIT Jodhpur
8. Dr. Surender Soni, Associate Prof., NIT Hamirpur
9. Dr. Ashok Kumar, Associate Prof., NIT Hamirpur
10. Dr. Mahesh Angira, Associate Prof., NIT Hamirpur
11. Dr. Saurabh Kumar, Assistant Prof., NIT Hamirpur
12. Dr. Chandra Shekhar Prasad, Assistant Prof., NIT Hamirpur
13. Dr. Amit Bage, Assistant Prof., NIT Hamirpur

Number of Participants
Number of participants is limited for this e-STC. Application will be accepted **on first-cum-first serve basis**.

Targeted Participants

Faculty members from educational institutes, research scholars, UG/PG/PhD students, and employees from the industries.

Topics to be Covered

Introduction to RF and THz Technologies: Overview of RF and THz Spectrum, Basic Electromagnetic Wave Principles, Circuit Concepts for RF and THz Devices; Fundamentals of Terahertz Technologies: Terahertz Communication Systems, Characteristics and challenges of THz communication, Modulation techniques for high-speed data transfer, Terahertz Imaging and Spectroscopy, Applications in medical imaging, security, and material characterization; Advanced Devices in RF to THz Range: Metamaterials and Plasmonics for RF and THz Devices, Design principles and applications in antennas and filters, Control of THz waves using metamaterial structures, Graphene and 2D Materials in Terahertz Devices, Properties of graphene for THz applications and Integrated Circuits for THz Systems; 6G Networks and Beyond: Future of THz Communications, Overview of 6G technologies, Emerging trends and potential applications.

Registration Fee Details

Participants	Amount(in Rs.)
Faculty members or Participants from Academia/R&D Labs	500/-
Students (UG, PG, PhD)	200/-
Participants from Industries	1000/-

Participants should have minimum 80% attendance.

Certificate

e-Certificate will be issued to the participants after successful submitting the feedback form on completion of the online workshop.

Last Date of Registration: 30th April 2024

How to Apply

The interested participants should register by paying the registration fee at SBI-I collect and filling the Google form through the below link:

(https://forms.gle/VwVTqd88481L5yX89)

The SBI-I collect has following steps:

a. Visit SBI collect at https://www.onlinesbi.sbi/sbicollect/

b. Click on Proceed after accepting terms and conditions.

c. Select State of Corporate/ Institution:

   Himachal Pradesh and Type of Corporate/Institution as Educational Institution and click Go.

d. Select Educational Institutions Name: NIT Hamirpur

e. Select Payment Category: WORKSHOP STC FDP CONFERENCE (Last option)

f. Fill up all the details.
   ➢ Write TITLE of e-Workshop
   ➢ Organizing Department

g. Address: Filling Postal code is must

h. Submit the form and generate the receipt.