

## Online Short Term Course (e-STC)

On

### Recent Advancement in Microwave Filters and Antennas: Design, Techniques and Applications

23<sup>rd</sup> - 27<sup>th</sup> July 2021

An Initiative of

**National Institute of Technology Hamirpur**

*(An Institute of national Importance)*

Hamirpur – 177005, Himachal Pradesh, India



**Organized by**

**Department of Electronics & Communication  
Engineering**

**National Institute of Technology Hamirpur**

Hamirpur – 177005, Himachal Pradesh, India

Phone: +91-1972-254011

Web: [www.nith.ac.in](http://www.nith.ac.in)

### Patron

Prof. Lalit Kumar Awasthi, Director

### Chairman

Dr. Ashok Kumar,  
Head, Department of Electronics &  
Communication Engineering

### Convener

Dr. Amit Bage

### Coordinator (s)

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Dr. Chandra Shekhar Prasad

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Dr. Saurabh Kumar

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Dharmendra Singh Yadav, Dr. Sankalita  
Biswas, Dr. Sandeep Singh, Dr. Pushpendra  
Singh.

### Contact Persons

Dr. Amit Bage,  
Assistant Professor, E&CED  
Email: [abage@nith.ac.in](mailto:abage@nith.ac.in),  
Mob: 9470143162

Dr. Saurabh Kumar  
Assistant Professor, E&CED  
Email: [saurabh@nith.ac.in](mailto:saurabh@nith.ac.in),  
Mob: 9407286763

Dr. Chandra Shekhar Prasad  
Assistant Professor, E&CED  
Email: [csprasad@nith.ac.in](mailto:csprasad@nith.ac.in),  
Mob: 7275629085

**National Institute of Technology Hamirpur  
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 recognition its 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 coursework. 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 researches in the department.

## Objective of e-STC

- To provide the basics of transmission line theory.
- To discuss the concept of antenna/filter design.
- Performance characteristics evaluation of antenna and filter design.
- To discuss the recent advancement in the field antenna design.
- To discuss the filter transformation technique.
- To discuss the recent advancement in the field Filter design.
- To explore the filters and antennas for high frequency applications.

## Resource Persons/Speakers

Faculties/ Experts from IITs, NITs, IIITs, Industries and other premier Institutions/Organizations will deliver the lectures.

## 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

Basics of transmission lines, Basics of Antenna and its performance characteristics; Recent advancement in antenna design and analysis, planar antennas like: single and multi band, linear and circularly polarized, narrowband and broadband, bandwidth enhancement, gain and efficiency enhancement, metamaterial based antenna, miniaturization of planar antennas, SIW antennas for millimeter wave antenna, Antennas for 5G and beyond, Wearable and flexible antennas.

Basics of filter with its transformation technique, microstrip lowpass/ bandpass/ bandstop filters, dielectric substrate insert waveguide filters, single/ dual and multi band rectangular waveguide filters, SIW based filters, reconfigurable filters, filters and antennas for high frequency 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:** 20<sup>th</sup> July 2021

## 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://docs.google.com/forms/d/e/1FAIpQLSc7SznOCQqsbWmi3xNbJv-od6WcYFCUUUwB9iWuMfhX66D1AA/viewform?vc=0&c=0&w=1&flr=0>

## The SBI-I collect has following steps:

- Visit SBI collect at <https://www.onlinesbi.com/sbicollect/collecthome.htm>
- Click on Proceed after accepting terms and conditions.
- Select State of Corporate/ Institution: Himachal Pradesh and Type of Corporate/Institution as Educational Institution and click Go.
- Select Educational Institutions Name: NIT Hamirpur
- Select Payment Category: WORKSHOP STC FDP CONFERENCE (Last option)
- Fill up all the details.
  - Write TITLE of e-Workshop
  - Organizing Department
- Address: Filling Postal code is must
- Submit the form and generate the receipt.

## **Invited Speakers**

- ❖ **Prof. Animesh Biswas, Professor, IIT Kanpur (Director NIT Rourkela)**
- ❖ **Prof. M. Jaleel Akhtar, Professor, IIT Kanpur**
- ❖ **Prof. Jayanta Mukherjee, Professor, IIT Bombay**
- ❖ **Dr. Akhilesh Mohan, Associate Professor, IIT Roorkee**
- ❖ **Prof. Santanu Kumar Behera, Professor, NIT Rourkela**
- ❖ **Dr. Sushrut Das, Associate Professor, IIT (ISM) Dhanbad**
- ❖ **Dr. Dinesh Kumar V, Associate Professor, PDPM-IIITDM Jabalpur**
- ❖ **Dr. Mrinal Kanti Mandal, Associate Professor, IIT Kharagpur**
- ❖ **Dr. Raghvendra Kumar Chaudhary, Associate Professor, IIT (ISM) Dhanbad**
- ❖ **Dr. Ravi Kumar Gangwar, Associate Professor, IIT (ISM) Dhanbad**
- ❖ **Dr. Balwinder Singh Dhaliwal, Associate Professor, NITTTR Chandigarh**
- ❖ **Prof. Rowdra Ghatak, Professor, NIT Durgapur**
- ❖ **Prof. Gautam Kumar Mahanti, Professor, NIT Durgapur**
- ❖ **Prof. Manoj Kumar Meshram, Professor, IIT (BHU) Varanasi**
- ❖ **Dr. Amit Kumar Singh, Associate Professor, IIT (BHU) Varanasi**