ABOUT THE DEPARTMENT
The Department of Electronics and Communication Engineering has experienced considerable growth since its inception in 1976. The vision of the department is to focus on the incubation of innovations in the areas of electronic design/ fabrication, and communication technologies, which are needed to address the growing challenges of tomorrow. The overall aim is to harbor a sustainable, and continuously evolving scientific, technological and educational environment which is both internationally-adapted and industry relevant.

OBJECTIVE OF THE STTP
The aim of this STTP is to provide a deep insight about basic concepts, technology and advancement of Emerging Nanoscale Devices and Circuits. In addition, it explores various applications of nanoscale semiconductor devices for future computing and information processing devices and systems. It also focuses on the fundamentals of nanoscale device design, methodology and testing. It will further give impetus to the participants towards bringing out newer and efficient techniques. Moreover, this short-term training program explore this area, the future scope of the technology, the issues, the challenges, and research opportunities.
**TOPICS TO BE COVERED**

- Organic Thin Film Solar Cell Technology
- Devices and Circuit for Neuromorphic/In-memory Computing
- High Performance Organic Transistor and Memory for Flexible Electronics Applications
- 2D Materials Based Gas Sensors
- Device-circuit interaction in NCFETs
- Reliability and security issues in VLSI circuits and systems
- Device Random Fluctuations in Nanoscale MOSFETs
- Techniques for Broadband circuit design
- GaN Based Power Amplifier Design
- Neuromorphic Computing: Mapping Neural Networks to Hardware
- Engineering Ga2O3 based nanostructures and thin-film for high-performance deep UV Photodetectors
- Emerging trends in Doping and Junction free transistors

**RESOURCE PERSONS**

- Prof. Satyabrata Jit, Dept. of Electronics Engineering, IIT (BHU)
- Dr. Jawar Singh, Dept. of Electrical Engineering, IIT Patna
- Dr. Mahesh Kumar, Dept. of Electrical Engineering, IIT Jodhpur
- Dr. Mahendra Sakare, Dept. of Electrical Engineering, IIT Roorkee
- Dr. Shree Prakash Tiwari, Dept. of Electrical Engineering, IIT Jodhpur
- Prof. Anand Bulusu, Dept. of ECE, IIT Roorkee
- Dr. Ambika Prasad Shah, Dept. of Electrical Engineering, IIT Jammu
- Dr. Shubhankar Majumdar, Dept. of ECE, NIT Meghalaya
- Dr. Shubham Sahay, Dept. of Electrical Engineering, IIT Kanpur
- Dr. Ankush Bag, Dept. of Computing and Electrical Engineering, IIT Mandi
- Dr. Chitrakant Sahu, Dept. of Electronics & Comm. Engineering, MNIT Jaipur
- Dr. Kaushik Nayak, Dept. of Electrical Engineering IIT Hyderabad

**REGISTRATION**

This STTP is open to the faculty members of AICTE/UGC approved Engineering Institutes/Universities / R&D Labs /Industry person/ PhD scholars/ post graduate and undergraduate students interested to know about the current status, scope and challenges about Emerging Nanoscale devices, Circuits and their applications.

The interested person should fill the Google form by clicking on the link below: [https://forms.gle/dDHWUo1DGL3NJj2RA](https://forms.gle/dDHWUo1DGL3NJj2RA)

No Registration fees is required for attending this STTP.

**Important Dates**

- Last date of registration: May 7, 2021
- Confirmation to the participants: May 9, 2021

**Address for Correspondence**

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**Note:** E-Certificate will be provided to those participants whose attendance will be minimum 75% after successful completion of STTP.