

## About the Institute

The National Institute of Technology Sikkim (NIT Sikkim) is one of the esteemed institutions of higher learning in the country, established in 2010 as part of the 11th Five-Year Plan of the Government of India. Located in the serene Himalayan region, the institute offers undergraduate, postgraduate, and Ph.D. programs in various disciplines of engineering, technology, and applied sciences. NIT Sikkim is committed to providing quality education and fostering innovation and research. The institute has a growing reputation for academic excellence, with its students consistently securing placements in top national and international companies.

## About the Departments

The Departments of Electrical and Electronics Engineering (EEE) and Computer Science and Engineering (CSE) at NIT Sikkim are among the institute's leading academic divisions committed to fostering excellence in education and research. The EEE department offers a robust undergraduate and Ph.D. program, focusing on key areas such as power systems, power electronics, and renewable energy. It is supported by a team of highly qualified faculty who are actively engaged in research and industry consultancy. Similarly, the CSE department offers undergraduate, postgraduate, and doctoral programs, with a strong emphasis on cutting-edge research in fields like artificial intelligence, machine learning, data science, and cybersecurity. Both departments are dedicated to providing a solid academic foundation, driving innovation, and contributing to industry-relevant solutions through active faculty participation in research, consultancy, and collaboration with top organizations.

## About Sikkim

Sikkim, a picturesque state in northeastern India, is renowned for its breathtaking landscapes, rich cultural heritage, and peaceful environment. Nestled in the Himalayas, the state is known for its pristine natural beauty, with snow-capped peaks, lush greenery, and serene monasteries. Sikkim is a major hub for tourism, attracting visitors from around the world for activities like trekking, mountaineering, and eco-tourism.

## About ATAL FDP

The ATAL (AICTE Training and Learning) Faculty Development Program (FDP) is a flagship initiative of the All India Council for Technical Education (AICTE) aimed at enhancing the teaching, research, and professional skills of faculty members across various disciplines. The program focuses on equipping educators with the latest advancements in technology, pedagogy, and research methodologies. It provides a platform for knowledge exchange through workshops, lectures, and hands-on training sessions delivered by experts from academia and industry. The ATAL FDP covers a wide range of topics, including emerging technologies like artificial intelligence, machine learning, data science, cybersecurity, and renewable energy. The objective is to empower educators to incorporate these advancements into their teaching, foster innovation, and drive research in their respective fields. Participants gain invaluable insights and practical experience, enhancing their ability to contribute to their institutions' academic and professional growth.

## Topics to be covered:

The program shall discuss

- Fundamentals of Supercomputing and High-Performance Computing (HPC)
- Parallel Computing and Distributed Systems
- Applications of Artificial Intelligence in High-Performance Computing
- Deep Learning and Neural Networks
- Quantum Cryptography and Cybersecurity
- High-Performance Computing in Power Systems Optimization
- AI-Driven Control Systems for Smart Grids
- AI for Power Electronics: Control and Optimization
- Real-Time Robotic Path Planning
- Supercomputing in Robotic Manipulators
- AI for Collaborative Robots (Cobots) in Industrial Automation
- AI in Robotics for Precision



AICTE Training and Learning  
(ATAL) Academy



sponsored

**Online Faculty Development Programme**

on

**Next-Gen Computing: Exploring  
Supercomputing, AI, and Quantum  
Technologies**

**10<sup>th</sup> to 15<sup>th</sup> February 2025**

**Organized By**



**National Institute of Technology, Sikkim  
Ravangla, Barfung Block  
South Sikkim- 737139 (India).**

(An autonomous Institute under the aegis of the Ministry  
of Education, Govt. of India)  
website: <https://nitsikkim.ac.in/>

## Resource Persons

Experts from IITs, NITs, top foreign universities, and industries.

## Who Can Attend?

The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel

## Expected Outcomes of the FDP

- Participants will gain foundational and advanced knowledge in supercomputing, parallel computing, and distributed systems.
- The FDP will equip participants with the ability to apply AI techniques in high-performance computing systems, robotics, and control systems.
- Participants will develop an understanding of quantum cryptography, cybersecurity principles, and their relevance in modern computational systems.
- Participants will gain insights into AI-driven control and optimization for collaborative robots, robotic path planning, and industrial automation.
- The FDP will train participants in leveraging AI and supercomputing for optimizing power systems and control in smart grids.

## Contact Us

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## Patron

**Prof. Mahesh Chandra Govil,**  
Director, NIT Sikkim

## Chairperson

**Dr. Pratyay Kuila**

Associate Professor & Head, CSE  
NIT Sikkim

**Dr. Aurobinda Panda,**

Assistant Professor & Head, EEE  
NIT Sikkim

## Convener

**Dr. Vivek Kumar**

Assistant Professor, EEE,  
NIT Sikkim

## Coordinator

**Dr. Bam Bahadur Sinha**

Assistant Professor, CSE,  
NIT Sikkim

## Advisory Committee

**Dr. Anjan Kumar Ray,** NIT Sikkim

**Dr. Sangram Ray,** NIT Sikkim

**Dr. Sourav Mallick,** NIT Sikkim

**Dr. Molay Roy,** NIT Sikkim

**Dr. Pradeep Kumar,** NIT Sikkim

**Dr. Nimai Charan Patel,** NIT Sikkim

**Dr. Md. Sarfaraj Alam Ansari,**  
NIT Sikkim

**Dr. Pankaj Kumar Keserwani,**  
NIT Sikkim

**Dr. Abhishek Rajan,** NIT Sikkim

**Dr. Krishna Kumar,** NIT Sikkim



## Other Instructions

- This FDP will be conducted in online mode through Google Meet platform
- In case of any query, feel free to contact the course coordinators.
- Google meet link will be shared to participants prior to the session starts.
- The certificates shall be issued to those participants who are registered on ATAL portal [www.aicte-india.org/atal](http://www.aicte-india.org/atal) and attend the program with minimum 80% attendance and score minimum 70% marks in the test.

## Registration and General Information

The interested candidates are required to register for the FDP through the following link on or before the last date <https://www.aicte-india.org/atal>

**REGISTRATION FEE: NIL**

The number of participants is limited and will be selected based on a first-come, first-serve basis and prerequisite. **For any clarification, the FDP coordinator can be contacted.**

**Last date of registration: 31<sup>st</sup> January 2025**

The candidates would be informed of their selection through E-mail by