

**Five Days Online Faculty  
Development Programme**  
**on**  
**AI and Data Analytics Applications  
in Power Systems**  
**03<sup>rd</sup> to 07<sup>th</sup> June, 2024**  
**National Institute of Technology, Hamirpur**



**Coordinators**

Dr. Katam Nishanth  
Dr. Sreeram T.S.

**Organized by**



**Department of Electrical Engineering  
National Institute of Technology  
Hamirpur, Himachal Pradesh**

**About the Institute**

National Institute of Technology Hamirpur is one of the thirty-one NITs of the country, which came into existence on 7<sup>th</sup> August 1986 as Regional Engineering College, a joint and cooperative enterprise of the Govt. of India and Govt. of Himachal Pradesh. On 26<sup>th</sup> June 2002, REC Hamirpur was awarded the status of Deemed University and upgraded to National Institute of Technology. The Institute offers Bachelor, Master and Doctoral programmes in Engineering, Sciences, Architecture, Management and Humanities. Various programmes serve the purpose of building a comprehensive foundation of knowledge and of enhancing confidence, creativity and innovation in its students.

**About the Department**

Electrical Engineering Department, established in the year 1986, is one of the oldest departments of National Institute of Technology Hamirpur. The Department has been imparting quality education at undergraduate and post-graduate level. The faculty members have been active in teaching and research activities. The course curriculum is being revised from time to time so as to keep students abreast with latest emerging technologies. Various departmental laboratories have been strengthened and modernized by procuring state of art equipment's. Department is also equipped with latest experimental and computational facilities for taking up R&D and consultancy activities in different areas of Electrical Engineering.

**Committee**

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## About the e-FDP

Advancements in artificial intelligence (AI) and data analytics are steering modern power systems towards unprecedented efficiency and reliability. Researchers are leveraging artificial intelligence (AI) algorithms and sophisticated data analytics tools to optimize power generation, distribution, and consumption. Machine learning models are being employed to predict equipment failures, enhance grid resilience, and optimize energy usage in real-time. Data-driven decision-making processes are transforming traditional power systems into intelligent, adaptive networks. Innovative applications, such as predictive maintenance, demand forecasting, and anomaly detection, are being explored to address the complex challenges faced by the power sector. The integration of AI is paving the way for sustainable and resilient power infrastructures, as the research frontier expands the future of power systems.

The objective of the program is to explore and understand AI algorithms, machine learning techniques, and data-driven decision-making processes specific to power systems, so that faculty, researchers and students can integrate AI and data analytics principles into their research.

## Topics to be covered

- ❖ Challenges with Big Data Analytics Applications in Power System
- ❖ AI and IoT applications in Power System Domain

- ❖ Fuzzy, ANN and Regression based techniques for process optimization
- ❖ Optimization techniques in Power System Applications using AI
- ❖ Intelligent IoT and Predictive Maintenance
- ❖ Optimization of sustainable grid integrated hybrid energy system in India
- ❖ AI In RE and microgrid environment
- ❖ Application of differential evolution techniques in power system
- ❖ AI driven microgrid control and protection

## Eminent Speakers

- ❖ Prof. Bhaveshkumar Bhalja, IIT Roorkee
- ❖ Dr. Deep Kiran, IIT Roorkee
- ❖ Dr. M. H. Kolekar, IIT Patna
- ❖ Dr. Sanjoy Kumar Parida, IIT Patna
- ❖ Prof. Parimal Acharjee, NIT Durgapur
- ❖ Dr. Srikanth Allamsetty, NIT Silchar
- ❖ Prof. D. P. Acharya, NIT Rourkela
- ❖ Dr. Sunanda Sinha, MNIT Jaipur
- ❖ Dr. Santosha Kumar A., CUK, Gulbarga

## Important Dates

**Last date (Online Registration): 01-06-2024**

**(Limited seats are available)**

Confirmation by E-mail: 02-06-2024

Duration: 03-06-2024 to 07-06-2024

## Eligibility

This program is open to faculty members, research scholars, PG & UG Students, and industrial personnel.

## e-Registration and Payment Guidelines

**Registration Fee (Non-Refundable) (Through SBI Collect):**

- (a) **Rs. 500 for Faculty/Academia/R&D Labs**
- (b) **Rs. 200 for Students**
- (c) **Rs. 1000 for Industry Personnel**

1. Go to **www.onlinesbi.sbi** and select option **State Bank Collect**  
[State Bank Collect \(onlinesbi.sbi\)](https://onlinesbi.sbi)
2. Select the Category by clicking on **Educational Institutions**. You will be directed to Select Payee window.
3. Select state as **Himachal Pradesh**; Search **NIT HAMIRPUR**, and click on the search result.
4. You will be redirected to enter Payment details. Select Payment category as **Workshop STC FDP Conference**. Fill the required details to proceed further and complete the payment.

**Link for e-registration through google form:**

**<https://forms.gle/hQqFkA2jrpuwfnYD8>**

## e-Certification

E-certificates will be provided to the participants, with at least 75% attendance.

## Contact Details

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