

**Five Days Online Faculty
Development Programme on**

Advanced Energy Storage Systems for Electric Vehicles

11th to 15th November, 2024

National Institute of Technology, Hamirpur

Coordinators

**Dr. Upasana Sarma
Dr. Supriya Jaiswal**

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 7th August 1986 as Regional Engineering College, a joint and cooperative enterprise of the Govt. of India and Govt. of Himachal Pradesh. On 26th 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

The 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 to keep students abreast with the latest emerging technologies. Various departmental laboratories have been strengthened and modernized by procuring state-of-the-art equipment. The department is also equipped with the 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

In transportation, battery-operated electric vehicles (EV) have proven to be a viable solution to the crisis of fossil fuels. Nonetheless, various technical challenges like limited driving range, longer charging time, limited charging infrastructure, thermal runaway protection, and the environmental issues of battery disposal might affect the adoption of electric vehicles in the coming years. Thus, the automotive industry is undergoing a rapid transformation to deliver powerful, reliable, and scalable EV battery and ePowertrain designs.

The objective of the program is to impart an industrial workflow on how the electric vehicle is conceptualized, designed, and manufactured; understand the concept of energy storage systems in EV and learn about the recent advancement in the field of energy storage technologies based ePowertrain.

Topics to be covered

- ❖ Introduction to Electric Vehicles: A clean mobility solution
- ❖ EV charging infrastructure
- ❖ Battery pack design, BSM and BTMS in electric vehicles
- ❖ Battery Durability and Longevity-Based Power Management for Plug-in Hybrid Electric Vehicle
- ❖ Integration of hydrogen technology in EV: Pros and Cons
- ❖ PEM fuel cell and its applications to future transportation systems
- ❖ EV system architecture

Eminent Speakers

- ❖ Dr. Praveen Kumar, Oak Ridge National Laboratory, USA
- ❖ Dr. Akshay Kumar Rathore, Singapore Institute of Technology
- ❖ Dr. Sanjib Ganguly, IIT Guwahati
- ❖ Dr. Arun Kumar Verma, IIT Jammu
- ❖ Dr. Saket Verma, IIT Guwahati
- ❖ Dr. Jiwanjot Singh, NIT Hamirpur
- ❖ Dr. Upasana Sarma, NIT Hamirpur

Important Dates

Last date (Online Registration): 09-11-2024
(Limited seats are available)
Confirmation by E-mail: 10-11-2024
Duration: 11-11-2024 to 15-11-2024

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 Academia/R&D Labs**
- (b) **Rs. 250 for Students**
- (c) **Rs. 1000 for participants from Industry**

1. Go to www.onlinesbi.com and select option **State Bank Collect**
2. Accept terms & conditions and proceed further
3. Select State of Corporate/Institute: **Himachal Pradesh** and Type of Corporate/Institute: **Educational Institute**
Select Educational Institute Name: **NIT Hamirpur** and click on **Submit**
4. Select Payment category **Workshop STC FDP Conference** and fill the details to proceed further

Link for e-registration through Google form:

<https://forms.gle/CqtdWKZQ5vpRxfN76>

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

Contact Details

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