

Objectives of the FDP

This Faculty Development Program (FDP) aims to provide educators, researchers, and industry professionals with a comprehensive understanding of synergy of artificial intelligence (AI) and electric vehicle (EV) technologies for the evaluation of next-generation smart energy systems. The program focuses on the role of AI and EV technology with grid connected and isolated smart energy system. Participants will learn about the latest advancements EV technology and AI applications for exploring their integration in smart energy grids. The FDP blends theory with practical applications, fostering a collaborative environment for research and innovation in AI driven smart energy systems with EV technologies.

The FDP aims to disseminate knowledge in the following areas and explore potential research opportunities within these fields.

- Applications of AI and ML methods in control and optimization of smart energy systems.
- Fundamentals of Deep Learning and Recent Trends.
- EV charging infrastructure and standards.
- Smart power converter system for EV synergy.
- IoT driven V2G/G2V and V2X Technologies.
- AI driven battery management systems.
- Information communication technology (ICT) and Protocols for Smart Energy Systems
- AI driven anomaly detection, classification and mitigation methods for smart energy grids
- HIL and PHIL implementation of smart energy systems in real-time simulation environment.
- Lab Session/Hands on co-simulation platforms such as OpenDSS- Python- MATLAB etc.
- Pedagogy/writing tools

CHIEF PATRON

Prof. S. K. Patra, Director, NIT Agartala
Prof. P. K. Jain, Director, NIT Patna

PATRON

Prof. Arvind K. Jain, HoD, EED, NIT Agartala
Dr. R. K. Mandal, Head, EED, NIT Patna

Resource Persons

Prof. Subhash Lakshminarayana, University of Warwick, U.K.
Ex. Prof. S. P. Singh, IIT(BHU), Varanasi
Prof. Trapti Jain, IIT Indore
Prof. Ankush Sharma, IIT Kanpur
Prof. S. R. Mohanty, IIT(BHU), Varanasi
Prof. Naran M. Pindoriya, IIT Gandhinagar
Prof. Arvind Kumar Jain, NIT Agartala
Dr. Vijay Babu P., SIT, Singapore
Dr. Veerapandian Veerasamy, NTU Singapore
Prof. Saurabh Chanana, NIT Kurukshetra
Prof. Priyanath Das, NIT Agartala
Dr. Gururaj Mirle Vishwanath, IIT Kanpur
Dr. Avneet Kumar, IIT Patna
Dr. Parikshit Pareek, IIT Roorkee
Dr. ESN Raju P, IIT Guwahati
Dr. Munendra Singh, NIT Jamshedpur
Dr. Abanishwar Chakrabarti, NIT Agartala
Dr. Bikram Das, NIT Agartala
Dr. Omkar Yadav, NIT Durgapur
Dr. Amit Kumar Thakur, GE Vernova Noida
Dr. Devesh Shukla, NIT Calicut
Dr. Saran Satsangi, NIT Patna
Dr. Pawan Kumar, NIT Patna
Dr. Aasim, NIT Patna
Dr. Sadhan Gope, NIT Agartala
Dr. Shailendra Singh, NIT Agartala
Dr. P. Padmagirisan, NIT Agartala



इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
ELECTRONICS AND
INFORMATION TECHNOLOGY



**Two Week Online Faculty Development
Program on**

AI and EV Synergy: Driving the Evolution of Next-Gen Smart Energy Systems

7th July – 18th July 2025

**Under the aegis of
Electronics and ICT academy, Phase-II
at National Institute of Technology Patna,**

**Jointly organized by
National Institute of Technology Agartala.
and
National Institute of Technology Patna.**

Supported by

**Ministry of Electronics and Information
Technology (MeitY), Govt. of India**

Conveners

**Prof. Arvind Kumar Jain, NIT Agartala
Dr. Padmagirisan P., NIT Agartala**

Coordinators

Dr. SHAILENDRA SINGH
Assistant Prof., EE Deptt., NIT Agartala
and
Dr. SARAN SATSANGI
Assistant Prof., EE Deptt., NIT Patna

About Electronics & ICT Academy

The Ministry of Electronics and Information Technology, Government of India has instituted seven Electronics and Information & Communications Technology (ICT) Academies of which, the academy of NIT Patna is one. The Academy at NIT Patna aims to design and organize basic as well as specialized training programs and research promotion workshops in niche areas of electronics and ICT for the development of the required knowledge base, skills, and tools to equip the teaching community with better knowledge and understanding.

About NIT Patna

The National Institute of Technology (NIT) Patna is one of India's most historic technical institutions, tracing its roots back to 1886, when it began as a pleaders' survey training school. Over time, it evolved into the Bihar College of Engineering Patna in 1924, making it the 6th oldest engineering institute in the country. On 28th January 2004, the college was rechristened as NIT Patna, becoming the 18th National Institute of Technology under the Ministry of Education, Government of India. NIT Patna has been a pioneer in technical education for well over a century, offering undergraduate (UG), postgraduate (PG), and PhD programs in engineering, technology, science, and humanities. The institute expanded its graduate-level offerings to include doctoral programs in 1978, further strengthening its academic portfolio. Located on the south bank of the holy river Ganges, near the iconic Gandhi Ghat in Patna, the institute stands as a symbol of both academic excellence and cultural significance. With a mission to set high standards in education and research, NIT Patna is actively involved in research and development (R&D), pushing the boundaries of innovation across various fields. It holds a distinguished reputation for its long record of academic excellence.

About NIT Agartala

Established in 1965 as Tripura Engineering College. Later, the Government of India converted the Tripura Engineering College to National Institute of Technology Agartala on 1st April 2006. NIT Agartala is an Institute of National Importance was instituted by under the Ministry of Education, Government of India with the mission to herald excellence in technical education and research in the North-East region. NIT Agartala offers undergraduate, postgraduate, and doctoral programs in various fields of engineering, science, humanities, and management. The institute is renowned for its academic excellence, research initiatives, and industry collaborations. NIT Agartala boasts state-of-the-art infrastructure, well-equipped laboratories, and a conducive learning environment.

The **Department of Electrical Engineering** is established in 1965 under the aegis of Tripura Engineering College. The department offers four years B.Tech program in "Electrical Engineering" and 2 years M.Tech programs in four specializations namely Power Systems, Power Electronics & Drives, Instrumentation Engineering, and Integrated Energy Systems.

Details of FDP

- The two-week (10 working days) training will be conducted by a team of experts from both India & abroad, possessing extensive experience in the theme of FDP.
- **Mode of Conduction: ONLINE.**
- **Session Timings:**
Monday to Friday: 9.30 a.m. - 11.30 a.m. & 3.30 p.m. - 5.30 p.m.
Saturday: 9.30 a.m. - 11.30 a.m., Sunday: No session
- The online training will include 24 hours of Theory session, 16 hours of Lab session and 02 Hours on pedagogy/writing tools.
- E-certificates will be given to participants who have attended more than 70% of the FDP sessions and complete the given online assessments during FDP.

Who Can Participate

Faculty members, research scholars of recognized universities from India and abroad, and industry personnel. Selection will be made on the first-come-first-serve basis to a maximum number of 200.

Registration Fee

India and SAARC Countries: Rs. 500 (Inclusive of GST)
Other than SAARC countries: 60 USD (Inclusive of GST)

Registration Process

The registration fee should be paid through bank transfer or UPI. The account detail for this purpose is as follows:

Account Name: E and ICT Academy NIT Patna

Account no: 50380476798

IFSC Code: IDIB000B810

Bank Name: Indian Bank

or

**Scan QR code for payment
using UPI**



- After the successful payment, take snapshot of payment proof with the transaction reference number, which is to be uploaded in online registration form.
- Click the link below to proceed the registration
<https://forms.gle/LkbsqTfUkZ4d2Toa7>
- The online meeting link for FDP will be sent to the selected candidates one day before the FDP.

Registration deadline: 30th June 2025 11:59 PM (IST)

For any queries, please contact:

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