

Background

The present-day electricity sector is undergoing a major transformation through adopting smart grid concepts from generation to consumer end. It is witnessing an increased share of renewables, storage, EV charging stations, microgrids, power electronic interface, intelligent sensors and controllers, automation, and smart metering at different levels in the network. The large penetration of renewables, being intermittent, will pose system stability, and power quality concerns, which will require proper compensation and controls. The operation, control, and protection philosophy of the emerging smart grid will pose several R&D and operational challenges.

This training will include talks by leading experts from industries and academics on some of the key smart grid technologies and the associated challenges.

The smart city prototype in IIT Kanpur, one of the fourteen pilot projects sanctioned by the Ministry of Power (MOP) in 2014, is an important milestone in the smart distribution system journey of India. The main objective of the project was to develop and implement key solutions and identify the associated challenges in implementing smart distribution system technology in Indian cities. Key components of the IIT Kanpur pilot include supervisory control and data acquisition system (SCADA), advanced metering infrastructure (AMI), home automation (HA), and rooftop solar PV integration.

Additionally, the US India collaborative for Smart Distribution System with Storage (UI-ASSIST) project, jointly funded by IUSSTF/DST and the U.S. Department of Energy is implemented to showcase Smart Distribution System & microgrids with Storage. Participants will visit both the project's facilities during the training period.

Note: Send the soft copies of your nominations to puneetgr@iitk.ac.in.

For query, call 0512-679-5420

Objective

The main objective of this training is to familiarize the participants from utilities, industries, and R&D organizations with different concepts and developments in Smart Grid Technology. Experience gained through some of the pilot projects will also be shared.

Sessions/Topics

The tentative topics to be covered in the training include the following:

1. Introduction to Smart Grid Technology
2. Intelligent power transmission and Distribution system framework
3. Framework for the resilient operation of overhead power distribution network
4. Unified power flow analysis with grid integrated wind farms
5. Development of WADC for Eastern Regional Grid of Indian Power System
6. Renewable Integration and Interfacing Converters
7. Loss Reduction, Asset Monitoring and Optimization, and Outage Management System
8. Cyber Security in Intelligent Transmission & Distribution Systems
9. EV and Storage Integration
10. Intelligent Transmission & Distribution Systems Communication Systems
11. Consumer Engagement and Participation
12. IT Enablers for Intelligent Transmission & Distribution Systems
13. Field visit
14. Lab Visits

Nomination Form

Training on Intelligent Power Transmission and Distribution Systems

May 18 - 22, 2022, IIT Kanpur

Name: _____

Designation: _____

Organization: _____

Gender (for accommodation): M F

Accommodation required: Yes No

Correspondence Address: _____

_____ PIN: _____

Phone: _____ Fax: _____

E-mail: _____

Qualification: _____

Category

Utility Industry

R&D organization Academics

I will submit the final vaccination (both doses) certificate on my arrival at IIT Kanpur, failing which my candidature for the training will stand canceled

I will be willing to attend the training under paid category if not selected under the free category (For academics only).

(Signature of Participant)

Forwarded

(Head of the Organization/Unit)

Signature with seal

Coordinators

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Schedule and Venue

The training will be held from 18th to 22nd May 2022 at the PBCEC Classroom, Visitors' Hostel, IIT Kanpur.

P.S – Candidates, who will provide the final vaccination (both doses) report, only will be allowed to attend the training.

Nomination & Training Registration

Nominations are invited from the Power utilities, industries, R&D, and academic organizations for attending this five-day training program at IIT Kanpur. The filled-up nomination form duly signed by the Head of the Organization or Unit, giving details of the person attending the training, should reach us latest by 30th April 2022 through email or post. Notification about selection will be finalized by 4th May 2022. The nomination form can also be downloaded from the SG-CENTRE (<https://sgcentre.iitk.ac.in>) website.

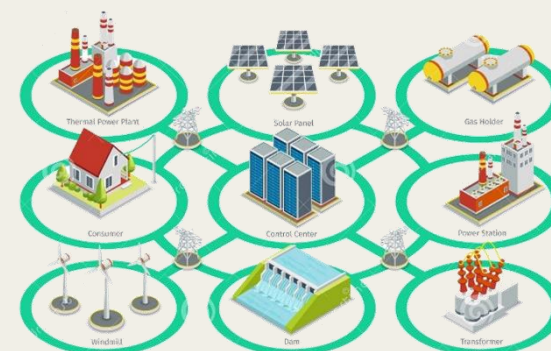
The first 30 participants from the Academic institutes (Faculty members only) will be provided training free of cost, including free boarding and lodging. However, they need to bear their travel cost. Since free seats in training are limited, nominations received on a first come first serve basis will be considered. All participants will bear their travel costs.

Training fee details*

- Trainees from the Academic institutes - INR 17,700 (including GST) which includes training fee, boarding & lodging /INR 5,900 (including GST) which includes training fee only
- Trainees from the other categories - INR 29,500 (including GST) which includes training fee, boarding & lodging/INR 11,800 (including GST) which includes training fee only
- * Note: Above training Fee will be applicable after the first 30 nominations from the Academic institutes (Faculty members only)

Training on Intelligent Power Transmission and Distribution Systems

May 18 - 22, 2022, IIT Kanpur



Organized by



Department of Electrical Engineering
Indian Institute of Technology Kanpur

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