



ONLINE FACULTY DEVELOPMENT PROGRAMME

ON

Emerging Techniques in Smart Power System: Challenges and Solutions

(24th to 28th August 2020)

Call for participation and registration

Organized by

Department of Electrical Engineering
in Association with
Centre for Continuing Education
NIT Warangal



Coordinators:

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About the NIT Warangal:

National Institute of Technology, Warangal (An Institution of National Importance), formerly known as Regional Engineering College, was established in 1959, the first in the chain of 31 NITs in the country. The institute is well known for its dedicated faculty, staff and the state-of-the art infrastructure conducive to a healthy academic environment. The institute is constantly striving to achieve higher levels of technical excellence. The institute offers eight undergraduate programmes (B.Tech), and post graduate programmes in engineering, sciences and management and research programmes in engineering, sciences, humanities, physical education and management. The institute is well-known for its research and development, industrial consultancy, continuing education and training programmes for teachers and industrial personnel.

Centre for Continuing Education (CCE):

The CCE of NIT Warangal organizes continuing education programmes and workshops in the frontier areas of science, engineering, technology, management, humanities, social science and socially relevant themes on self-financing basis in different modes (in-campus/out of campus) in collaboration with other organizations.

Department of Electrical Engineering:

The Department of Electrical Engineering (EED) is one of the oldest departments of the NIT, Warangal. Since its inception in 1959, the EED has been actively engaged in teaching and research in diverse fields of electrical engineering. At present there are 33 faculty members and have expertise in various fields of electrical engineering. EED offers B. Tech in Electrical & Electronics Engineering, M. Tech in Power Electronics & Drives (PED) and Power Systems Engineering (PSE) and Smart Electric Grid (SEG) and also Ph. D in all the major fields of electrical engineering. The department has strong industry interaction and MOUs with various organizations such as Central Power Research Institute (CPRI), ABB Bangalore and PGCIL New Delhi etc. to carry out the collaborative research and consultancy projects. Many research projects sponsored by DST-SERB, CPRI, SPRAC are under execution. Department

has conducted several faculty Development Programs/ Short-term training programs/workshops etc. sponsored by AICTE, MHRD, SPARC, DST-SERB and also in association with CCE, NIT Warangal.

About the Course:

Globally, there is a ramping demand for modernization of power system in multiple aspects including Smart Electric Grid (SEG) technology, automatized load/generation control, high voltage transmission, integration of large Renewable Energy Sources (RES) and strategic grid resiliency enhancement. In the view of this, there is an increasing investment from Indian government and R&D industries towards the development of: smart distribution grids, smart cities, reliable power infrastructure adopting advanced real time control strategies and condition monitoring. However, this transition using conventional central power grid may pose several technical and economic challenges which has opened numerous research aspects in the power engineering.

SEG technology enables integration of multiple distributed energy resources such as PV, wind, fuel cells, micro-turbines, energy storage system, conventional diesel generators and advanced communication system. SEG can be operated either in grid connected or islanded mode based on grid availability. However, the control strategies for individual sources and prosumers in the grid connected mode differs from islanded mode. The designing of control schemes and optimal energy management play a vital role in the smooth, stable, reliable and economical operation of the modern power system.

Further, the development of smart sensors for online fault detection, fabrication of nanomaterials and application of AI techniques in power engineering is equally important for development of resilient smart electrical infrastructure.

In this program recent trends and technologies for the smooth operation, online monitoring and control of power distribution/transmission systems will be discussed. In addition, experts from different domain will detail ongoing research, existing loopholes and their solutions for the modernization of power system network.

Key Note Speakers:



Dr. Sukumar Mishra
Professor, EED, IIT Delhi
<http://web.iitd.ac.in/~sukumar/>
Micro grid, intelligent control, modelling and optimization of power systems, RES integration



Dr. R. Sarathi
Professor, EED, IIT Madras
<http://www.ee.iitm.ac.in/~sarathi/>
Condition monitoring of power apparatus, nanodielectrics, pulsed power technology



Dr. Ashu Verma
Assoc. Professor, CES, IIT Delhi
<http://web.iitd.ac.in/~averma/>
Power system planning, distribution system, operation & control aspects of integrated renewable energy systems



Dr. C. C. Reddy
Assoc. Professor, EED, IIT Ropar
<http://www.iitrpr.ac.in/electrical/reddy>
Space charges in dielectrics, advances in high voltage engineering, cable technology



Dr. Jeyabalan Velandy
R&D Head, GE T&D India Ltd. Hosur, Tamil Nadu, India
<https://www.linkedin.com/in/dr-jeyabalan-velandy-383b4615/?originalSubdomain=in>
Electrostatic and electromagnetic analysis of power apparatus, ester oil transformer technology



Mr. Mahesh M.
Manager, PGCIL Pondicherry
Smart grid technology, battery energy storage system, distribution automation

Key Topics of the Program:

1. Renewable energy resources integration in microgrid system
2. Smart grid infrastructure in India: Recent trends and technology
3. Modern distribution system: Challenges and solution
4. Emerging condition monitoring techniques in power engineering
5. Recent electric cable technologies and pulsed electro acoustic technique
6. Green transformers and liquid dielectric
7. AI techniques and its applications in modern power system

Who Should Attend:

The programme is open to faculty and research scholars of all Engineering, colleges and other allied disciplines in India.

How to Apply:

Interested candidates can apply online by clicking below link.

<https://forms.gle/WLgK6tnL8KPEr58WA>

Last date: 23rd August 2020, 11:59 PM

Registration Fee: Registration fee is Rs 500.

Fee submission

Interested candidate can submit his registration fee through online transaction at following institute account.

Account Name: Center for Continuing Education NITW

BANK NAME: State Bank of India (SBI)

ACCOUNT NO: 62403680215

ACCOUNT TYPE: Saving Account

IFSC CODE: SBIN0020149

BRANCH: REC WARANGAL

Application Form

1. Name:
 2. Designation:
 3. Institution:
 4. Phone no:
 5. Email:
 6. Address for Correspondence:
 7. Educational Qualification:
 8. Subjects taught so far:
 9. No. of FDP's/workshop attended:
 10. Experience (in years):
- Teaching:
- Research:

Payment Details:

Name of Bank:
Amount in Rs:
Transaction ref no:
Date:

Declaration:

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration.

Signature of the Applicant

Recommended and Forwarded
Signature of Head of
Institute (with seal)