



**PMMNMTT
Scheme**



**MHRD
Govt. of India**

सत्यमेव जयते

*A FIVE Day Workshop
on*

Effective Teaching and Learning of SMART GRID & MICROGRID TECHNOLOGIES

4th-8th December 2017

Call for Registration and Participation

Coordinators

Dr. M. Sailaja Kumari

Dr. Chandrasekhar Yammani

Dr. P. Chandrasekhar

Dr. Narasimhasarma NVS (Member, Core Committee-TLC)

Organized by

Department of Electrical Engineering

in association with

Teaching-Learning Centre

National Institute of Technology

Warangal – 506 004

Telangana State, India



Background:

Development of Smart Grid involves numerous technologies, devices, and systems that will be deployed throughout the electric system to make the grid 'Smart'. Automation of the transmission and distribution (T&D) system is critical for full smart grid deployment. Global infrastructure comprising the T&D system is very vast. Progress in laying new transmission lines is at a slow pace. Further, this process is also very expensive. However, an alternative that holds promise for T&D automation and development of a Smart Grid is the Microgrid. Microgrids are essentially smaller versions of the larger electric grid and are designed to serve localized electric loads. These are developed around the distributed energy resources which provide power and make the Microgrid self-sufficient. Microgrids have the ability to isolate themselves from the grid when power problems occur and operate as self-contained entities in an 'Island' mode. Microgrids could potentially overtake smart grid development efforts since they are, in effect, smaller electric grids that can be made 'smart'.

Objectives of the programme:

- To enable the participants to learn and conceptualize smart grid and micro grid technologies
- To enhance the learning capabilities of the participants in communication, wide area measurement, protection and storage technologies.
- To empower the participants with usage of MATLAB/Scilab tools for smart grid and microgrid optimization applications.
- To provide hands on training to the participants with usage of OPAL-RT for smart grid applications
- To encourage the participants to offer a course in smart grid and micro grid technologies.
- To enable the participants to learn new methods and practices in teaching and learning.

Resource Persons:

Eminent faculty of the Electrical Engineering department and Faculty from IITs, other NITs & Industry who have the expertise in these areas will be delivering lectures as core faculty for the workshop.

Topics of the programme:

- ✓ Introduction to Smart Grid/Microgrids
- ✓ Smart Grid Initiatives- Indian perspectives
- ✓ Integration of Generation from Renewable Energy Sources with Grid.
- ✓ Distributed generation, optimal sizing & siting
- ✓ Power converters for renewable energy systems and their controls.
- ✓ Microgrid modeling and control issues
- ✓ Electric Vehicles and charging stations
- ✓ Energy storage systems
- ✓ Modern Teaching - learning methods
- ✓ Learning Smart Grid and Microgrid technologies through hands on experience
- ✓ Learning concepts of Smart Grid and Microgrid through group activities

Registration is open to:

- Faculty members working in Engineering institutions.
- Research Scholars at senior level aspiring for faculty positions

How to Apply:

Eligible candidates may apply by submitting the scanned copy of the filled-in registration form (attached with this mail / brochure) by e-mail to: **sailaja_matam@yahoo.com** on or before **10th November 2017**.

Selection and Intimation:

As the programme is conducted in a workshop mode with hands-on sessions, the number of participants in the workshop is limited to **50**. The selection will be on first-cum-first serve basis among eligible applicants. The selected applicants will be informed about his/her selection through *e-mail* on or before **20th November, 2017**.

Payment of Registration Fee:

After receiving the information about selection, the applicant has to send the required registration fees as per the details shown in Table, on or before **21st November, 2017**. The mode of payment of registration fee is given under the heading "Bank Details"

Confirmation of Participation:

On receipt of the proof of payment of registration fee in the form of scanned copy of the DD / Proof of remittance (with transaction number if online transaction), the applicants will be sent confirmation of their participation through *e-mail* immediately.

Accommodation:

Accommodation for outstation participants will be provided on request in the Institute Visitor's Block or International Students' Hostel.

Registration fee:

Category of Participants	Local participants (with working lunch)	Residential participants (with accommodation, breakfast, lunch & dinner)
Faculty	Rs. 600	Rs. 1200
Students and Research Scholars	Rs. 300	Rs. 600

Note: Registration fee for Faculty and Students of SC/ST category is half of the amounts mentioned above as applicable.

Bank Details:

Registration fee may be sent in the form of a DD or remitted through On-line / NEFT to the Bank Account given below. Local participants may also pay the registration fee in cash to the Coordinator in the Department of Electrical Engineering.

Account Name	DIRECTOR, NIT WARANGAL
Account Number	52109375198
Bank	State Bank of Hyderabad
Branch	REC Warangal (NIT Campus)
Branch Code	20149

Brief profile of the Department of Electrical Engineering:

The Department of Electrical Engineering was established as one of the major departments of NITW, in the year 1959. The Department is actively engaged in teaching and research in diverse fields of Electrical Engineering. It offers B.Tech in Electrical & Electronics Engineering, M.Tech program in Power Electronics & Drives and Power Systems and Ph.D program. Broad areas of expertise of the department include Design and development of Smart Grid/ Microgrid systems, Control and integration of Renewable Energy Sources, State Estimation and Real Time Control of Power Systems, AI Applications in Power Systems, Power System Deregulation, Power System Transients, Power Quality, Application of Power Electronics to Power Quality Improvement and Industrial Drives, DSP controlled Drives, Simulation of Power Electronic Converters and Drives Systems and Control of Special Machines. The Department has strong Industry interaction and is involved in various Research & Consultancy projects in coordination with industry, Governments of India, Telangana & Andhra Pradesh. The department has an MOU with Central Power Research Institute (CPRI) to carry out collaborative projects.

About NIT Warangal:

NIT Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 31 post-graduate programmes besides doctoral programmes. About 5000 students across the country and about 500 international students study on the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art library, seminar halls, guest houses and laboratories.

Teaching-Learning Centre of NIT Warangal:

The Teaching-Learning Centre (TLC) is established at NIT Warangal with grants from the MHRD, GOI under the scheme, 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNTT). Many senior and young faculty members across various departments of the Institute are associated with this center as members of the Core-Team.

One of the important objectives of the TLC center is to conduct training programs for Aspiring, Newly Inducted and In-Service faculty in Science and Engineering disciplines. Other activities of the TLC include preparation of e-learning materials, offering courses on-line, curriculum development, carrying out research in pedagogy and integrating ICT into teaching-learning process.

About Warangal:

Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is two km away and Warangal Station is 12 km away) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile Kakatiya dynasty. It is a seat of tourist attractions with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Laknavaram Lake located in a radius of 30 km.

For any queries regarding this workshop, please contact the Coordinators.

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REGISTRATION FORM

Name : _____

Date of Birth : _____

Place of Birth: Village/Town/City: _____ Tick as applicable (Rural / Urban)

District _____ State: _____

Gender (Put a \sqrt Mark) : Male Female

Category (Tick as applicable): **Open / OBC / SC / ST / PWD**

Qualification : _____

Designation : _____

Organization : _____

No. of Years of Teaching Experience: _____

Address for Correspondence : _____

Mobile(s): _____

Email(s) _____

Details of Remitting Registration Fee: (i) Amount in Rs. _____

(ii) Name of the Bank Through which Remitted/DD Taken: _____

(iii) On-line Transaction No./ DD No: _____ (iv) Date: _____

Accommodation (Put a \sqrt Mark) : Required Not Required

Declaration by the Applicant

If selected, I agree to abide by the rules and regulations of the workshop/ training programme and shall attend all the sessions.

Date:

Signature of the Applicant

Recommended and Forwarded

Office Seal

Signature of the Head of the Department/ Institution