

### Resource Persons

- **Dr. S. Senthil Kumar**, *Asso. Prof., NIT Trichy*
- **Dr. R. Ramesh**, *Professor, Anna University, Chennai*
- **Dr. K. Srinivas Reddy**, *Professor, IIT Chennai*
- **Dr. Gopinath Selvaraj**, *Senior Technical Manager, Tata Elxsi, Bangalore*
- **Dr. Dinesh Babu**, *Application Manager, Megger, Chennai*
- **Dr. B. Subba Reddy**, *Professor, IISc., Bangalore*
- **Er. K. Yekambaram**, *Senior Engineer, SRLDC, POSOCO, Bangalore*
- **Dr. B. Chitti Babu**, *Professor, IITDM, Kancheepuram*

### Topics to be covered

- Autonomous & Connected Electric Vehicles
- Real Time monitoring & Control of Indian Grid using SCADA
- Importance and challenges in EHV Transmission systems
- Control & Grid Synchronization of Solar PV System
- Grid Connection Requirements of Solar PV System
- Automation in Substation
- Role of PMU in Power System Control
- Control & Grid Synchronization of Solar PV System
- Grid Connection Requirements of Solar PV System
- Wind Energy Conversion System

### Registration Process

- Prospective participants are requested to register for the FDP through the following web link.  
<https://events.vit.ac.in/>
- e-Certificate will be issued to all registered participants.

### Registration Fees (Including GST)

- External Faculty/ Industry Experts Rs. 1500
- Internal Faculty Rs. 1250
- Students / Research Scholars Rs. 1000
- Online-NonVITians Rs. 590

### Important Dates

Last date for registration 09<sup>th</sup> July 2022

### Organizing Committee

#### Chief Patron

**Dr. G. Viswanathan**, *Chancellor*

#### Patrons

**Shri. Sankar Viswanathan**, *Vice President*  
**Dr. Sekar Viswanathan**, *Vice President*  
**Shri. G. V. Selvam**, *Vice President*  
**Dr. Rambabu Kodali**, *Vice Chancellor*  
**Dr. T. Jayabarathi**, *Registrar*

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**Dr. Mathew Mithra Noel**, *Professor & Dean*  
*School of Electrical Engineering*

#### Organizing Co-Chairs

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**Dr. I. Jacob Raglend**, *Professor & HOD (EEE), School of Electrical Engineering*  
**Dr. N. Arun**, *Assoc. Professor & HOD (EPE), School of Electrical Engineering*  
**Dr. M. Monica Subashini**, *Assoc. Prof. & HOD (EIE), School of Electrical Engineering*  
**Dr. N. Ruban**, *Assoc. Professor & HOD (CA), School of Electrical Engineering*

#### Conveners

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**VIT**<sup>®</sup>  
Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

## 5-day Faculty Development Program

on

## Advancement in Electric Power & Energy Systems

# AEPES-2022

11-15, July 2022



Organized by

Department of Electrical Engineering  
School of Electrical Engineering  
VIT, Vellore –632 014

## About the Institution

VIT was established with the aim of providing quality higher education on par with international standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. The campus has a cosmopolitan atmosphere with students from all corners of the globe. Experienced and learned teachers are strongly encouraged to nurture the students. The global standards set at VIT in the field of teaching and research spur us on in our relentless pursuit of excellence. In fact, it has become a way of life for us. The highly motivated youngsters on the campus are a constant source of pride.

Our Memoranda of Understanding with various international universities are our major strength. They provide for an exchange of students and faculty and encourage joint research projects for the mutual benefit of these universities. Many of our students, who pursue their research projects in foreign universities, bring high quality to their work and esteem to India and have done us proud. With steady steps, we continue our march forward. We look forward to meeting you here at VIT.

## About School of Electrical Engineering

The School of Electrical Engineering (SELECT) has over 93 faculty members who pursued their UG, PG and Doctoral degrees from top-notch universities. The faculty members are consistently performing well in teaching and research. Faculty members and students frequently receive awards, laurels and prizes for outstanding research contributions in their respective fields.

The school offers B.Tech. (Electrical and Electronics Engineering), B.Tech. (Electronics and Instrumentation Engineering), M.Tech. (Power Electronics and Drives), M. Tech. (Control and Automation), Ph.D and Integrated Ph.D in Engineering. Both B.Tech. and M.Tech. programmes attract the Intelligent students from the country and abroad. The B.Tech. Electrical and Electronics Engineering and B.Tech. Electronics and Instrumentation Engineering Programmes are accredited by the Engineering Accreditation Commission of ABET. All UG & PG

programmes of the school are accredited by the Institution of Engineering and Technology (IET), U.K.

The placement record of the school has always been impressive. Almost 100% of the students secure job from the campus placement and many of them are recruited in core companies. We encourage our students to carry out industry based projects during their B.Tech and M.Tech degrees. The School has state-of-the art laboratories in almost all the areas of Electrical, Electronics and Instrumentation Engineering. The School has the latest simulation tools to cater various specializations and is equipped with facilities for measurement, characterization and synthesis of experimental as well as theoretical results. SELECT has industry sponsored advanced laboratories for performing world class research and consultancy. Danfoss Advance Drives Lab, Schneider Electric Smart Energy Monitoring Lab, Fluke Testing and Calibration Lab, Q-Max Automated Test Engineering Lab (Alumni Sponsored Lab) and NxP Semiconductors, India, have established Centre of Excellence for students R&D activities under the guidance of faculty members and industry experts.

The students are encouraged to take advantage of the growing opportunities by incorporating an international internship experience in their final year undergraduate and postgraduate education. Students are also motivated to opt twin degree program with various reputed universities across the globe. Every year, students get scholarships to do their final year projects abroad under the Semester Abroad Program (SAP).

## About AEPES-2022

The advances in electric power and energy systems emphasize all aspects of electrical energy, innovation in energy generation and distribution, grid intelligence, renewable resources, electric transportation, and efficient devices and buildings. Research projects address machines and systems for the conversion, delivery, and use of energy in electrical form. The activity ranges from controls and reliability for large utility systems and microgrids to energy-harvesting devices for microsensors.

Electrical energy continues to be the foundation of the modern economy. The growth of solar energy, wind energy, and other resources, combined with trends such as electric and hybrid vehicles and aeroplanes, will have a profound impact on global society. In a time of ever-increasing energy demands, mounting concerns over the environmental impacts of power generation, and the emergence of new, smart-grid technologies, electricity price forecasting has assumed a prominent role within both the academic and industrial arenas. Short-run forecasting of electricity prices has become necessary for power generation unit schedules since it is the basis of every maximization strategy. Therefore, electrical power system knowledge is required in handling these modern grid network

This program on advancement in electric power & energy systems offers hands-on training and knowledge of advanced electric power and energy systems that covers, Wind Energy Conversion System, Thermal Analysis of Renewable Energy Systems, Autonomous & Connected Electric Vehicles, Automation in Substation, Real Time monitoring and Control of Indian Grid using SCADA – PART – I & II, Role of PMU in Power System Control – PART – I & II, Control & Grid Synchronisation of Solar PV System, and Grid Connection Requirements of Solar PV System that help in solving critical issues in the grid network and also helps in forecasting power system loads and their collective unit pricing.

