

# A One Day Online Workshop

On

## Intelligent Net-Zero Energy Solutions: Optimal PV-Wind-EV Infrastructure Design and ANN-Enabled Solar PV Technologies

Date: 18<sup>th</sup> June 2026



**Organized by**

School of Computer Science and Engineering  
Vellore Institute of Technology,  
Vellore-632014.



### ABOUT VIT

Vellore Institute of Technology (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. Our Memoranda of Understanding with various international universities are our major strength.

### ABOUT THE SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

The School of Computer Science and Engineering (SCOPE) has one of the best infrastructures, including domain-specific laboratories associated with the technical departments mentioned below. Many of these laboratories are sponsored by industry leaders. The School has a strong track record of organizing seminars, workshops, symposia, and conferences in emerging technological areas, with the objective of developing core competence in subject matter specializations and fostering special interest groups for learning newer technologies. The School has formed the following technical departments:

- Department of Analytics
- Department of Computational Intelligence

- Department of Database Systems
- Department of Software Systems
- Department of Information Security
- Department of Internet of Things (IoT)
- Department of Quantum AI

### ABOUT THE WORKSHOP

The workshop on “Optimal Sizing of PV-Wind Generators with a Smart EV Charging Framework to Build a Grid-Friendly Net-Zero Energy Campus” aims to provide participants with a comprehensive understanding of the design, optimization, and operation of sustainable energy systems for future smart campuses. The program focuses on the integration of solar photovoltaic (PV) systems, wind energy generators, and electric vehicle (EV) charging infrastructure to achieve net-zero energy goals while maintaining grid stability and reliability.

Participants will gain insights into renewable energy resource assessment, optimal sizing techniques for hybrid PV-wind systems, smart energy management strategies, and advanced EV charging frameworks. The workshop will also cover techno-economic analysis, grid interaction challenges, demand response mechanisms, and emerging technologies for sustainable campus development.

### TECHNICAL SESSIONS

- Fundamentals of Net-Zero Energy Campuses and Renewable Energy Systems

- Optimal Sizing and Design of PV-Wind Hybrid Systems
- Smart EV Charging Infrastructure and Energy Management

### RESOURCE PERSON

Dr. A Venkadesan, Professor, Electrical and Electronics Engineering, NIT Puducherry

Dr. M. M. Rajan Singaravel, Associate Professor, Electrical and Electronics Engineering, NIT Puducherry

### REGISTRATION

Registration fee:

No registration fee for VIT Faculty and Students  
Rs.250/- (For external participant)

\* Registration fee excludes 18% GST.

Prospective external participants are requested to register for the workshop through the following web link

<https://events.vit.ac.in/>

### IMPORTANT DATES

Last date for registration: 18-06-2026

Dates of workshop: **18<sup>th</sup> June 2026**

### Coordinators

Dr. R. M. Brisilla  
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Mobile: 7008705264

### ORGANIZING COMMITTEE

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**VIT**  
Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

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#### **Session Plan**

**Date:18/06/2026**

<b>Date</b>	<b>Time</b>	<b>Venue</b>	<b>Topic</b>	<b>Speaker</b>
18-06-26 (Thursday)	10.00 am to 12.00 pm	Online	Application of Artificial Neural Networks in Solar PV Systems	Dr. A Venkadesan, Professor, Electrical and Electronics Engineering, NIT Puducherry
18-06-26 (Thursday)	2.00 pm to 4.00 pm	Online	<ul style="list-style-type: none"><li>• Optimal Sizing of PV-Wind Generators with a Smart EV charging Framework to Build Grid Friendly Net Zero Energy Campus</li><li>• Optimal Integration of Renewable Energy Sources</li><li>• Smart EV Charging and Energy Management</li></ul>	Dr. M. M. Rajan Singaravel Associate Professor, Electrical and Electronics Engineering, NIT Puducherry