



## Faculty Development Program



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

### Event Outcome

**Title :** Sustainable Smart Cities: The Role of Smart Grids, EVs, and Green Hydrogen

**Date :** 2025-05-05 - 2025-05-09

**Time :** 10:00 - 17:30

**Venue :** TT 311

- Enhanced knowledge of sustainable technologies
- Policy and Industry Awareness
- Research & Innovation Opportunities
- Ability to integrate smart grid and EV concepts into teaching and research
- Exposure to real-world applications through industry collaborations

**Resource Person 1 - Details**

**Name :** Dr M P Selvan

**Designation :** Professor, Department of Electrical and Electronics Engineering

**University/ Company :** National Institute of Technology Tiruchirappalli, Tiruchirappalli

**Address :** India, 620015.

**Resource Person 2 - Details**

**Name :** Dr P SRINIVASA RAO NAYAK

**Designation :** Associate Professor, Department of Electrical and Electronics Engineering

**University/ Company :** National Institute of Technology Tiruchirappalli, Tiruchirappalli

**Address :** India, 620015.

**Resource Person 3 - Details**

**Name :** Dr B Chitti Babu

**Designation :** Associate Professor, Electronics and Communication Engineering

**University/ Company :** Indian Institute of Information Technology Design and Manufacturing Kancheepuram, Chennai

**Address :** India, 482005.

**Resource Person 4 - Details**

**Name :** Dr Vanchiappan Aravindan

**Designation :** Dr Vanchiappan Aravindan, Department of Chemistry

**University/ Company :** Indian Institute of Science Education and Research Tirupati, Tirupati

**Address :** India, 517619.

**Resource Person 5 - Details**

**Name :** Dr D E V S Kiran Kumar

**Designation :** Assistant professor, Department of Architecture Planning and Design

**University/ Company :** IIT BHU Varanasi, Varanasi

**Address :** India, 221005.





**Resource Person 6 - Details**

**Name :** Dr A Karthikeyan

**Designation :** Associate Professor, Department of Electrical and Electronics Engineering

**University/ Company :** National Institute of Technology Karnataka, Surathkal

**Address :** India, 575025.

	<p><b>Resource Person 7 - Details</b>  <b>Name :</b> Dr B Venkatesaperumal  <b>Designation :</b> Professor, Department of Electrical and Electronics Engineering  <b>University/ Company :</b> National Institute of technology Karnataka, Surathkal  <b>Address :</b> India, 575025.</p>
	<p><b>Resource Person 8 - Details</b>  <b>Name :</b> Dr M M Rajan Singaravel  <b>Designation :</b> Assistant Professor, Department of Electrical and Electronics Engineering  <b>University/ Company :</b> NIT Puducherry, Karaikal  <b>Address :</b> India, 609609.</p>
	<p><b>Resource Person 9 - Details</b>  <b>Name :</b> Dr Subhasis Mandal  <b>Designation :</b> Assistant professor, Chemical Engineering Department  <b>University/ Company :</b> NIT Calicut, Calicut  <b>Address :</b> India, 673601.</p>
	<p><b>Resource Person 10 - Details</b>  <b>Name :</b> Dr Jaganathan VM  <b>Designation :</b> Assistant Professor, Department of Energy and Environment  <b>University/ Company :</b> NIT Tiruchirappalli, Tiruchirappalli  <b>Address :</b> India, 620015.</p>
	<p><b>Resource Person 11 - Details</b>  <b>Name :</b> Dr V Vignesh Kumar  <b>Designation :</b> Assistant Professor, Department of Electrical and Electronics Engineering  <b>University/ Company :</b> National Institute of Technology Tiruchirappalli, Trichy  <b>Address :</b> India, 620015.</p>

## **Resource Person's Profile :**

### **1. Profile of Dr M P Selvan**

He is a Professor in the Electrical and Electronics Engineering Department, National Institute of Technology Tiruchirappalli, where he is associated with the Hybrid Electrical Systems Laboratory. He is a Life Member of ISTE, Fellow of Institution of Engineers (India), Senior Member of IEEE. He holds a Ph.D. degree from Indian Institute of Technology (IIT) Madras. He has 24 years of teaching and research experience in the field of power systems. He has published more than 160 technical research

### **2. Profile of Dr P SRINIVASA RAO NAYAK**

He has published more than 55 research publications, 3 patents are obtained and filled 6 patents and 5 sponsored projects completed, and 2 sponsored projects are in progress. He has guided 5 PhD and 2 MS, and guiding 7 PhD, one MS. He has guided projects in the area of Power Electronics and EVs. Currently, His research interests include power electronic and drives, biologically inspired optimization techniques, power converters for EVs and Plug-in and wireless EV battery charging systems.

### **3. Profile of Dr B Chitti Babu**

Dr.B. Chitti Babu received Ph.D degree in Electrical Engineering from National Institute of Technology Rourkela His current research interests include power electronics applications in smart distribution grids containing renewable energy sources, Design of Low Power Photovoltaic (PV) system including MPPT Algorithm, control and grid integration of Renewable energy systems. He has published more than 70 paper and received many notable awards.

### **4. Profile of Dr Vanchiappan Aravindan**

His research interest includes the development of high-performance electrodes and electrolytes for Li-ion batteries and beyond, including recycling spent Li-ion batteries and discarded solar panels. He has authored and co-authored over 280 articles with an h-index of 75 and 9 patents to his credit. He is the recipient of the prestigious Swarnajayanti Fellowship (2020) by DST, Govt. of India.

### **5. Profile of Dr D E V S Kiran Kumar**

He completed PhD in Mechanical Engineering from NTU Singapore and a post-doctoral research fellowship from Energy Research Institute at NTU. He was also a visiting researcher to CNRS laboratory of engineering sciences for the environment at La Rochelle University France. Prior to NTU he was a research associate at The Energy and Resources Institute (TERI) India. He is a recipient of Ministers award from Ministry of National Development, Singapore and Roll of honour from TERI.

### **6. Profile of Dr A Karthikeyan**

A. Karthikeyan (Senior Member, IEEE) received the Ph.D degrees in electrical and electronics engineering from the National Institute of Technology, Tiruchirappalli. He published 50 research papers which includes 10 IEEE journals and 30 IEEE conferences. He handled six sponsored research projects. He has 3 Indian patents granted. His research interests include design of power converter for drives, renewable energy systems, and power conditioning

### **7. Profile of Dr B Venkatesaperumal**

He holds a PHD degree from Indian Institute of Technology Delhi(IITD). He has 5 patents 12 sponsored projects and published many papers in IEEE transactions. He has both industrial and teaching experiences. His research interests include smart chargers and smart grid.

### **8. Profile of Dr M M Rajan Singaravel**

He holds a Ph.D. degree from NIT, Trichy in hybrid renewable energy system. He has successfully completed two sponsored research projects funded by DST. He is an active reviewer of various journals of IEEE Transactions, IET, Elsevier, Springer, etc,. His area of interest includes Hybrid renewable energy systems, Net Zero Energy Buildings, Distributed Generators, Micro Grid, Smart Grid, etc.

### **9. Profile of Dr Subhasis Mandal**

Dr. Subhasis Mandal is an Assistant Professor in the Department of Chemical Engineering at NIT Calicut. He earned his PhD from IIT Kharagpur, MTech from NIT Durgapur, and BTech from Heritage Institute of Technology, Kolkata. His research interests are centered around hydrogen production and storage. Dr. Mandal has made significant contributions to the field with 11 international journal publications and 4 presentations at international conferences

### **10. Profile of Dr Jaganathan VM**

Dr Jaganathan VM received PhD degree in Mechanical Engineering from Indian Institute of Technology Madras. His current research interests include Thermo-chemical conversion of solid fuels Bio-Char applications Energy efficient technologies Renewable Hydrogen production and Energy storage methods. He has 5 ongoing R and D projects and completed 2 consultancy projects.

### **11. Profile of Dr V Vignesh Kumar**

Dr. V. Vignesh kumar is currently working as an Assistant Professor in the Department of Electrical and Electronics Engineering, National Institute of Technology, Tiruchirappalli, Tamil Nadu, India. Prior to joining in NIT Trichy, he had been working in NITK Surathkal for 5 years. He has received his B.E. degree in electrical and electronics engineering and M.E. degree in power systems from Thiagarajar College of Engineering, Madurai in 2009 and 2011, respectively. He obtained his Ph.D. from Na

In the era of rapid urbanization and climate change, sustainable development has become a global priority. The Faculty Development Program (FDP) on "Sustainable Smart Cities: The Role of Smart Grids, EVs, and Green Hydrogen" aims to provide in-depth knowledge to faculty members and researchers on cutting-edge sustainable technologies. This FDP will cover key aspects of smart cities, including digital infrastructure, IoT applications, and urban sustainability. The smart grid segment will focus on advanced grid management, renewable energy integration, and AI-driven optimization. The growing prominence of electric vehicles (EVs) will be explored through sessions on EV technology, charging infrastructure, and vehicle-to-grid (V2G) systems. Additionally, the FDP will introduce participants to the emerging field of green hydrogen, covering its production, storage, and applications in the energy and transportation sectors.

Not applicable

**Coordinator's: Prof. BRISILLA R M 15251 - Professor Grade 1 - SELECT**  
**Prof. SANKARDOSS V 11075 - Assistant Professor Sr. Grade 2 - SELECT**