

## REGISTRATION FORM

(To be filled in block letters)

Name: .....

Designation: .....

Institution: .....

IET Membership ID: .....

Address: .....

City/State: .....

Mobile: .....

Email ID: .....

Signature of Participant

### Registration Details:

- Last Date for Registration : 10-09-2021
- Intimation of Acceptance : 12-09-2021
- No registration fee.
- IET student members attach proof for membership.

### Registration Link

<https://forms.gle/nVFSs598H8igbiPs5>



(or) Scan the QR code to Register

### Topics to be covered

#### 1. Electric Vehicle Architecture and Battery Management System

Date: 16.09.2021 | Time: 09.45 a.m. - 10.45 a.m.

#### 2. Power Electronics and its role in Electric vehicle

Date: 16.09.2021 | Time: 11.00 a.m. - 12.00 p.m.

#### 3. Power Electronics Applications in Electric Vehicle

Date: 16.09.2021 | Time: 03.00 p.m. - 04.00 p.m.

#### 4. Importance of BMS in Electric Vehicle

Date: 17.09.2021 | Time: 10.00 a.m. - 11.00 a.m.

#### 5. Equivalent Circuit Model for Electric Vehicle Batteries

Date: 17.09.2021 | Time: 11.00 a.m. - 12.00 p.m.

#### 6. Battery Thermal Management and Safety Regulations

Date: 17.09.2021 | Time: 02.45 p.m. - 03.45 p.m.

### Organizing Team

**Convenor:** Dr. V. Jayasankar,  
Professor & Dean - SoEC

**Coordinator:** Dr. P. Chandrasekar,  
Professor & Head - EEE

### Co - Coordinators:

Dr. K. Karunanithi, Professor,  
Dr. K. Karthikumar, Associate Professor,  
Department of EEE,  
School of Electrical and Communication,  
Vel Tech Rangarajan Dr.Sagunthala R&D Institute  
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# Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Two Days Workshop  
on

# Electric Vehicle Battery Management System

16<sup>th</sup> & 17<sup>th</sup> September 2021

Organized by

Department of  
Electrical and Electronics Engineering,  
School of Electrical and Communication

Mode: Virtual

[In association with](#)

**IET** The Institution of  
Engineering and Technology



## | About Vel Tech

Vel Tech is well-known for its renowned educational practices, which has been recognized and endowed with several awards. The founders of the Institution, Col. Prof. Vel. Dr. R. Rangarajan Chancellor & Founder President and Dr. Sagunthala Rangarajan Foundress President believes in Education for all despite their financial means which will promote and uplift the society. In accord to their vision, Vel Tech Mahatma Gandhi Scholarship scheme was started and has supported students since the inception. Vel Tech has bestowed 9500 scholarships worth approximately Rs. 35 Crores until 2019.

## | About the School

The School of Electrical and Communication comprises of Department of Electrical and Electronics Engineering and Department of Electronics and Communication Engineering. This school motivates the students to actively participate in nationally reputed clubs such as robotics club and small device programming club, to enthuse and bring out their design skill from them. Many of our faculty members in the school received Doctoral degrees from reputed Institutions from India and abroad. The students are also involved in nationally significant projects namely small satellite projects in collaboration with international industries in France, Germany etc. The Programmes are well designed and developed in close interaction with industry partners like C-DAC, FCRI, ARAI and NASSCOM etc.

## | About the Department

The department of Electrical and Electronics Engineering started in the year 1997. The department offers B.Tech - Electrical and Electronics Engineering, M.Tech. - Power Electronics and Ph.D. programmes. New courses are introduced subsequently and the existing ones are restructured to reflect the recent trends. The

department has been strengthened by its passionate and research focused faculty members from reputed universities in India and abroad. The department has well equipped laboratories and state of the art facilities for research and development. The key areas of academic research are Smart Power Grid, Industrial Drives, Industrial Automation and Renewable Energy, Electric Vehicle and Battery Management System. The faculty and students have won awards like Creative Technology KASA, Korea, L&T Techgium Best Innovator Award recently. The department is actively associated with organizations such as Fluid Control Research Institute (FCRI) and Kwalify photonics Ltd.

## | Preamble

Batteries for Electric Vehicles are the comprehensive study for building an in-depth understanding of Batteries in EV Scenarios. The workshop comprises Batteries and their types, applications, architecture, Cell Chemistries, Battery Charging its Modes & Standards, Battery Management Systems, Cell Balancing, Wire Harness, Battery Connectors & EV Connectors. Batteries are an essential part of any electric vehicle sometimes taking up to 40% of the entire vehicle cost. Novel techniques in battery production would increase the range of the Electric Vehicle. This workshop would comprise all the necessary components required to understand the underlying technology with battery design.

## | Objectives

- To understand about Power Electronics and its role in Electric vehicle.
- To learn about Equivalent Circuit Model for Electric Vehicle Batteries
- To study on Electric Vehicle Architecture and Battery Management System
- To Analysis Battery Thermal Management and Safety Regulations

## | Outcomes

After attending this workshop, Participants will be able to:

- Represent Electric Power Electronics and its role in Electric vehicle.
- Discuss the Equivalent Circuit Model for Electric Vehicle Batteries
- Point out the Electric Vehicle Architecture and Battery Management System
- Analyze EV Battery Thermal Management

## | Resource Persons

### **Dr. S. Albert Alexander**

*Associate Professor, Department of Electrical and Electronics Engineering, Kongu Engineering College, Perundurai*

### **Dr. Sanjeevikumar Padmanaban**

*CTiF Global Capsule, Department of Business Development and Technology, Aarhus University, Herning, Denmark*

### **Dr. R. Gandhiraj**

*Assistant Professor, Department of EEE, Anna University (BIT Campus), Tiruchirappalli*

### **Dr. Gurappa Battapothula**

*Assistant Professor, Department of EEE, B V Raju Institute of Technology, Narsapur, Medak, Telangana*

### **Dr. K. Selvajothi**

*Assistant Professor, Department of EEE, IIITDM Kancheepuram, Chennai*

### **Dr. N. Kamala**

*Associate Professor, Jain (Deemed-to-be University), Faculty of Engineering and Technology, Ramanagara District, Bengaluru*

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