

Organizers

Dr. Lalit Kumar Bansal

+91-9945167343

Dr. Shankar Raman Dhanushkodi

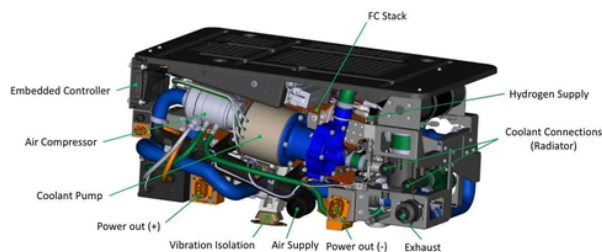
+91-9626845903

Dr. C. Ramesh Kumar

+91-9894189431

Dr. Deepak Kumar Biswal

+91-9861298766



Registration Process

The workshop registration fee: ₹600

(including coffee breaks and lunch on both days)

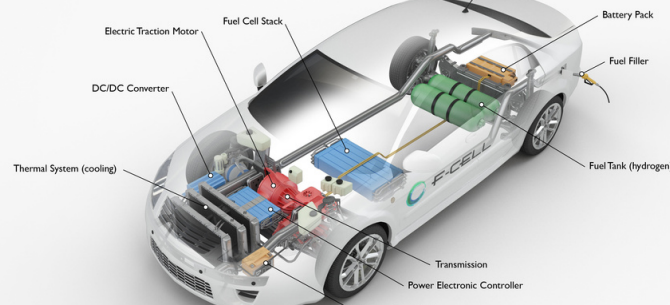
Registration Link:

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

Contact: +91-9945167343;

lalit.bansal@vit.ac.in.

Accommodation can be provided for the participants in the hostels (on payment basis) inside the campus



Organising Committee

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Dr. G Viswanathan

Chancellor

Patrons

Mr. Sankar Viswanathan

Vice President

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Vice President

Dr. GV Selvam

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Dr. Porpatham E,

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Dr. Nirmala Grace,

Director - CNR, VIT Vellore



A
TWO-DAY
NATIONAL WORKSHOP ON

**Fuel Cell: Proton Exchange
Membrane (PEM) Components to Cell
Stack for Automotive Industries**

18-19 October 2023

Jointly Organized by
School of Mechanical Engineering (SMEC)
School of Chemical Engineering (SCHEME)
Automotive Research Center (ARC)

Funded by
SERB India



Introduction

Energy usage in India has increased by two folds in the last two decades. We import 40% of its primary energy worth over \$90 billion every year. Transport and production industries are completely dependent on fossil fuels. Furthermore, we require a major shift in identifying the technologies that could be added to energy mix and reduce the use of fossil fuels in next two decades. As the nation aim to become an energy independent by 2047, recognising the critical role of Fuel cells and Green.

Hydrogen becomes vital in transforming the energy sector. Creating and establishing a Green Hydrogen ecosystem (GHE) has both the opportunities and challenges. Fuel cells, integral part of the GHE, produces water as a product, has the highest potential to play an important role in decarbonizing the energy sector. Fuel cell electric vehicles (FCEV) uses hydrogen produced from the renewable energy resources as a fuel. It is ready to replace fossil fuel driven internal combustion engine. Adopting the GHE model and promoting fuel cells could be an effective strategy to implement the broader climate and clean energy related goals.

Technical Program

This workshop supports the government of India's national green hydrogen mission and accelerate the commercialization of fuel cell India. It will bring together leading PEM fuel cell experts from universities, CSIR laboratories, and industry to share on research opportunities. It is organized by Vellore Institute of Technology, Vellore and sponsored by SERB DST in relation to Fuel Cell Production Action Plan in India. The workshop covers wide range of topics including

- Electro-catalysts
- Solid electrolyte membranes
- Porous transport layers
- Stack commercialisation
- Modeling and decision-making processes in FCEV
- The workshop offers an ideal opportunity to exchange technological ideas on current fuel cell research topics.

Day 1 18 October 2023

09:30	Inaugural Function
10:30	Prof. Vijayamohan Pillai, IISER Tirupati, India “PEMFC for auto industry: Strategies required for early market adoption in India”
11:30	Prof. Sebastian C. Peter, JNCASR, Bangalore, India “Design and tuning of the structure of the fuel cell components”
12:30	L u n c h
14:00	Prof. Saptarshi Basu, Indian Institute of Science, Bangalore, India “Cell diagnosis: Physical measurement techniques for PEMFC”
15:00	Mr. Mahesh Kadam, Ansys “Recent advances in PEM electrolyser and Fuel cell ”
16:00	Tea Break
16:15	Dr. S. Ravichandran, CSIR CECRI, India “Electrolyzers: The devices to make green hydrogen”
17:15	Dr. Karthikeyan, PSG Tech, Coimbatore, India “Fuel cell modelling and durability analysis”

Day 2 19 October 2023

09:30	Dr. C K Subramaniam, WiTT Waterfalls institute of Technology, India “Challenges in Fuel cell technology”
10:30	Dr. Vinod Kumar Sharma, NIT Calicut, India “Hydrogen storage on metal hydrides”
11:30	Tea Break
11:45	Dr. Pradeep Kumar Sow, BITS Pilani, Goa Campus, India “Water management in PEMFC: Role of Gas diffusion layers”
12:45	L u n c h
14:00	Dr. Sushil S. Ramdasi, ARAI Pune, India “Hydrogen fuel stations and delivery systems”
15:00	Dr. Rustam Singh Shekhar, COMSOL “FEM modelling: Anion exchange membrane fuel cell”
16:00	Tea Break
16:15	Dr. Manoj Neergat, IIT Bombay, India “Components of fuel cell: Electrodes – Recent trends in HER and OER catalysts”
17:15	Dr. C. Ramesh Kumar, VIT Vellore, India “Drive cycles and Hybrid Fuel Cell Vehicle for Automotive Applications”

Valedictory 18:15