

**A ONE-WEEK FACULTY
DEVELOPMENT PROGRAMME
(Virtual Mode)**

On

***Research Opportunities, Challenges
in Power Electronics for EV and Its
Impact on Smart Grid***

Date: 14th – 20th DEC 2020

Organized by

**Department of Electrical and
Electronics Engineering**

***National Institute of Technology,
Tiruchirappalli, Tamil Nadu***



ABOUT NITT:

The National Institute of Technology, Tiruchirappalli (NIT-T), formerly known as Regional Engineering College, Tiruchirappalli (RECT) is one of the technical institutes started by the Government of India. RECT was imparting quality education since its inception - 1964-65. In 2003, the institution has been granted 'Deemed to be University' status with the approval of UGC/AICTE. With a cream of engineering and management talent, encompassing exuberant students and inspiring faculty, integrated with State-of-the-art infrastructure facilities, NIT-T today has emerged as one of the premier institutions in the country.

ABOUT THE DEPARTMENT:

The Department of Electrical and Electronics Engineering offers an undergraduate program, post-graduate programmes (Power Systems & Power Electronics) and research degrees (M.S. & Ph.D.) in various fields of Electrical and Electronics Engineering. The Department is recognized for excellence in teaching, research and service to the profession.

Notable Resource Personalities

***Prof. Sukumar Mishra
IIT Delhi***



***Dr. Praveen Kumar
IIT Guwahati***



***Prof. H. M. Suryawanshi,
IEEE Fellow, VNIT Nagpur***



***Dr. Rakesh Ramachandran
University of Southern
Denmark***



***Dr. Umesh B S
Khalifa University,
UAE***



***Dr. B Pratap Reddy
Qatar University,
Doha***



CO-ORDINATORS:

***Dr. Shelas Sathyan, EEE, NITT
Dr. Manoranjan Sahoo, EEE, NITT
Dr. G. Saravana Illango, EEE, NITT
Dr. S. Senthil Kumar, EEE, NITT***

Scope of the Training Program:

To meet the growing electric energy demand and to reduce the pollution, renewable based power generation and Electric vehicles (EV) technologies are the main thrust area of research in all over the world. Efficient power electronic converters and its control plays an important role in power conversion for EV technology. In addition to this, impacts of EV on grid need to address. The prime objective of this FDP is to familiarize and train the academicians and research scholars in these emerging areas.

The participant of this FDP are expected to gain the knowledge on Onboard battery charger for EV, Application of wide band gap based power converters for EV, Power electronics converters and design for EV, Electric Motor drives and EV Powertrain systems, EV scheduling in smart grid, Impact of EV in smart grid, Application of Renewable Energy sources in EVs.

The workshop will have multiple sessions on:

- Utilization of Wideband gap devices for a high power density On-board Battery Charger
- Power Electronics Converters for EVs
- Battery Charging Technology for EVs
- EV Powertrain
- Electric Drives for EVs
- Risk Adjusted EV Scheduling in Micro Grid.
- Impact of EV on Smart Grid

The course will enlighten the participants with new paradigms and findings, practical challenges encountered and the possible solutions for the challenges faced in EV systems. The workshop is anticipated to enhance the technical interaction between groups paving the way for an overall fortification of technical capabilities of the power electronics and power systems community.

Resource Persons:

Faculties from IIT Delhi, IIT Guwahati, University of Southern Denmark, VNIT Nagpur, NIT Trichy and researchers from Khalifa and Qatar universities with rich experience in teaching, research and laboratory development will be handling the sessions.

- Prof. Sukumar Mishra, Professor, IIT Delhi
- Dr. Praveen Kumar, Associate Professor, IIT Guwahati
- Prof. H. M. Suryawanshi, Professor, IEEE Fellow, VNIT Nagpur
- Dr. Rakesh Ramachandran, Associate Professor, University of Southern Denmark
- Dr. Umesh B S, Research Fellow, Khalifa University, UAE
- Dr. B Pratap Reddy, Research Fellow, Qatar University, Qatar
- Faculties from NIT Trichy

Registration:

Registration Fee:

Category	Individual (inclusive of GST)
Faculty/ Academicians	Rs. 590/-
Students (PhD/ M. Tech)	Rs. 354/-
From Industry	Rs.1180/-

***Registration fee is to be paid by using SBI-Collect**

Registration Procedure:

1. Go to the SBI-Collect using the link <https://www.onlinesbi.com/sbicollect/icollect/home.htm>
2. Select the state as “**TamilNadu**”, and category as “**Educational Institutions**”.
3. Select “**conference and workshop NIT Trichy**”
4. Select payment category as “**ROCPEVS2020**”
5. Make payment through UPI/ Net Banking/ credit card/ NEFT
6. Once paid the fees, fill up your details and upload the fee receipt in-

<https://docs.google.com/forms/d/e/1FAIpQLSdUbChUaNUVWiDRsHDw2ixR54Ei2iGdXWY3-i948fOEyBZRAQ/viewform>

Last date for online submission of the duly filled-in Registration forms – 10th December 2020.

The platform of the FDP will be intimated to the registered participant

On Successful attending the FDP digital Certificate will be sent to the participants

For any clarifications, please contact:

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