A FIVE DAY FACULTY DEVELOPMENT PROGRAMME

on

Emerging Power Conversion Techniques and Challenges for Renewable Energy and Electric Vehicle Applications

Date: 24th – 28th June 2019

Organized by

Department of Electrical and Electronics Engineering

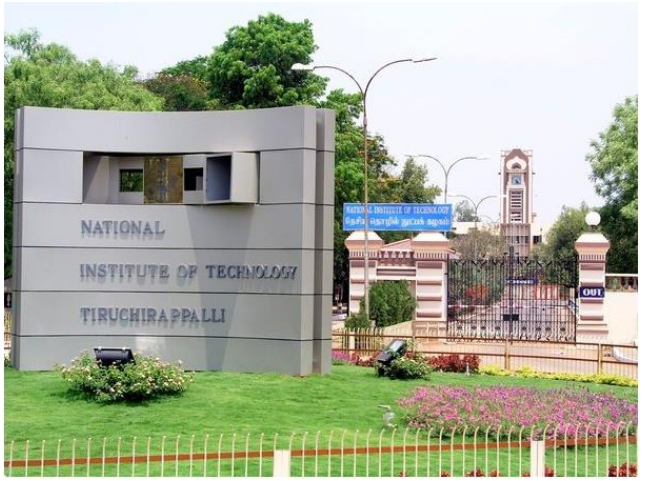
National Institute of Technology, Tiruchirappalli, Tamil Nadu

In Association With

AICTE MARGADHARSHAN SCHEME

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.

CO-ORDINATORS:

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

Notable Resource Personalities

Prof. Sukumar Mishra
IIT Delhi

Dr. Sandeep Anand,
IIT Kanpur

Dr. Sivakumar K,
IIT Hyderabad

Dr. Ramkrishan Maheswari,
IIT Delhi

Scope of the training Program:

To meet the growing electric energy demand and to reduces 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 and renewable based power generation. Thus the prime objective of this FDP programme is to familiarize and train the academicians and research scholars in these emerging technology.

The participant of this FDP are expected to gain the knowledge on various inverter topologies and its control for grid connected renewable energy systems, design of wide band gap semiconductor device based power converters and their challenges, design of multi-port converters for renewable energy integration, single stage buck-boost DC/AC converters, Design of efficient DC/DC power converters. In addition, participants will also learn, design and development of pole phase modulated induction motor drives with enhanced torque and speed variation for EV applications. Participants also get exposure on modern hardware in loop real time simulator and rapid prototyping of power electronic systems.

The five-day workshop shall have sessions on:

- Advancements in solar PV inverters
- Pole phase modulated induction motor drive for EV applications
- SiC based power electronics converters and its design
- Single stage buck-boost inverters for renewable and EV applications
- Grid connected inverters for PV systems and its challenges
- High efficient DC/DC converters for renewable energy sources
- Hardware in Loop (HIL) real time simulations of power electronics converters and rapid prototyping
- Multiport converters

The course will enlighten the participants with new paradigms and findings, practical challenges encountered and the possible solutions for the challenges faced in renewable energy and 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 community.

Resource persons:

Faculties from IIT Kanpur, IIT Delhi, IIT Hyderabad and from NIT Trichy with rich experience in teaching, research and laboratory development will be handling the sessions.

- Prof. Sukumar Mishra, IIT Delhi
- Dr. Sandeep Anand, IIT Kanpur
- Dr. Sivakumar K, IIT Hyderabad
- Dr. Ramakrishan Maheswari, IIT Delhi
- Faculties from NIT Trichy

Registration:

Registration Fee:

Category	Individual
Mentee Institute Participants	**Free of cost**
Non-Mentee Institute Participants	**Rs. 3000/- [inclusive of GST]**

***The registration fee includes workshop kit, lunch and refreshment for all days*.**

Registration fee is to be paid in the form of DD, drawn in favour of "**The Director, National Institute of Technology**", payable at SBI, NIT Tiruchirappalli and submit the same on 24th June 2019.

Registration Procedure:

All the participants from Mentee/non-mentee institute should register through online using the following link:

https://docs.google.com/forms/d/e/1FAIpQLSdBQHQcuCi8I5wju3QqLwpNITNKHB5ZbWXvliVV7ld5NODH9Q/viewform?usp=sf_link

Accommodation:

For Mentee Institute Participants: Free of cost.
For Non-Mentee Institute participants: Accommodation will be arranged on a twin shared basis depending on the availability at a nominal fee in the institute guest house (Rs.600/day/participant) or at hostel (Rs. 120/day/participant).

Important Dates:

Last date for online submission of the duly filled-in Registration forms – 15th June 2019.

Confirmation of Participants will be intimated through email by 16th June 2019.

For any clarifications, please contact:

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