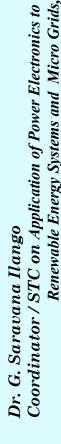


# Send your Registration forms



Technology, Tiruchirappalli, National Institute of

### **ABOUT THE DEPARTMENT:**

The Department of Electrical and Electronics Engineering of this institute was started in the year 1964. It offers undergraduate programme, postgraduate 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 research, teaching and service to the profession.

### **CO-ORDINATORS**

Dr. C. Nagamani Dr. M. Jaya Bharata Reddy Dr. G. Saravana Ilango

Department of **Electrical and Electronics Engineering**, National Institute of Technology, Tiruchirappalli,

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Mobile No.: 9489066260

: 9489066272

**8<sup>th</sup> - 10<sup>th</sup> February 2015** 

**Under NAMPET - Phase II** 

Short Term Course

**Application of Power Electronics** 

to Renewable Energy Systems and

Micro Grids





Organized by

**Department of Electrical and Electronics Engg.** National Institute of Technology, Tiruchirappalli,

Tamil Nadu - 620 015.



## **Scope of the Training Program:**

In 21st century, power electronics will play a vital role in industry and utility applications with increased emphasis on energy saving, efficient control of industrial processes and exploitation of renewable energy sources thereby helping to preserve the environment. Further, in addition to motion control, factory automation, transportation, energy storage, multi-megawatt industrial drives, electric power transmission/distribution and interfacing with distributed power generation plants, it is expected to evolve in several directions such as integrated systems for electronic power processing, intelligent control and energy management of distributed generation, electric traction, emerging applications in commercial/residential areas etc. Owing to the hike in the global energy demand along with environmental concerns, one of the emerging avenues for power electronics is in efficient feeding of clean energy from solar or wind to the grid taking care of stabilization of power grid. In this context inverters and DC-DC converters including resonant converters have a special scope. A notable drift is observed in the recent years towards distributed energy systems and integration of renewable sources to the autonomous micro or nanogrids which require specific power electronic interfaces.

This course is designed to address various design, operational and control aspects of advanced power electronic interfaces associated with microgrids and micro generators. The workshop methodology includes classroom lectures, case studies and lab visit.

The three day workshop is organized with sessions on

- Power electronic converter architecture for Distributed Energy Resources
- Line commutated inverters for wind driven induction generators and solar PV systems
- Design and analysis of filters and control schemes for power flow management in microgrids
- V2G technique and protection issues in microgrids

- Operation and control of stand-alone and grid connected Induction Generators
- Soft switching converters for battery charging
- Power control of DFIG under unbalanced grid conditions
- MPPT techniques and impact of partial shading in solar PV systems

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

### **RESOURCE PERSONS:**

Faculty members from IITs / NITs / Industries with rich experience in teaching, research and laboratory development will be handling the sessions, in addition to the faculty members from the Department of Electrical & Electronics Engg., NIT Tiruchirappalli.

# Registration

### **Registration Fee**

The registration fee includes workshop kit, food and refreshments .

Industry Delegates Rs. 2000

Academicians/ Faculty Rs. 1000

Scholars/ Students Rs. 500

Accommodation for the outstation participants may be arranged in the institute hostels on request, subject to availability.

### Important dates

Completed Registration forms accompanied by registration fee (in the form of DD) should reach the coordinator not later than 29<sup>th</sup> January 2015. The selected candidates will be intimated by 1<sup>st</sup> February 2015 by e-mail / phone.

### **REGISTRATION FORM**

Short Term Course on

Application of Power Electronics to Renewable Energy Systems and Micro Grids

8<sup>th</sup> - 10<sup>th</sup> February 2015

Name:
Designation:
Organization :
Official Address :
Mobile/Telephone No:
e-mail :
Payment details
DD No. :
Date : Rs. :
(DD should be drawn in favour of "The Director, NIT, Tiruchirappalli" payable at Tiruchirappalli)
Date:
Signature :