TEQIP –II Sponsored

Short Term Course on

POWER ELECTRONICS DESIGN AND MPPT ALGORITHM FOR PV BASED SYSTEM

OCTOBER 5-6, 2016

REGISTRATION FORM

(Completed form should be scanned and send to Coordinators email addresses)

Name

_____

Position_____ Department_____

Industry _____Qualification_____

Industry Address _____

_____

_____Pin: _____

Mobile: _____Email:_____

Accommodation required (Y/N):

Date: Signature

Sponsorship Certificate

On the event of selection, Mr/Ms. _____ will be relieved for participation of the above programme.

Forwarded through Manager/Head of the Department

Course Objectives

- To discuss about the design, modelling and control of DC/DC Converters
- To present different MPPT techniques used in PV systems
- To discuss about the grid integration of PV systems
- To present different modulation techniques for inverter control
- Experimental demonstration of MPPT based PV System
- Experimental demonstration of different modulation techniques for Inverter

Coordinators

Dr. Susovon Samanta and Dr. S. Gopalakrishna

Electrical Engineering Department,

NIT Rourkela

Email: samantas@nitrkl.ac.in, gopal@nitrkl.ac.in

Who can apply?

This course is designed for industry personnel who are especially interested in the areas of Power Electronics, PV systems and Grid integration. The proposed short term course will provide opportunity to industry personnel to know the latest development, related problems and measures to overcome them for PV based standalone as well as grid connected system. The programme will also focus on the challenges to be taken by the researchers for developing the converter, Inverter and control algorithms when applied to the system connected to the PV source.

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Coordinators

Prof. S. Gopalkrishna

&

Prof. Susovon Samanta

Organized by

DEPARTMENT OF ELECTRICAL ENGINEERING, NIT ROURKELA

REGISTRATION FEE

Registration is FREE for all participants

(Registration kit and soft copy of the course material will be given in pen drive, Fooding and refreshments will be provided free of cost)

Accommodation & Travel: Participants shall pay for own travel. Accommodation for participants shall be arranged free of cost in the Institutes Guest House as per availability.

Important Dates

Scanned copy of filled-in application is to be sent to both the Coordinators by email. The original hard copy is to be submitted during the short-term course.

Last date of receipt of application: 30/09/2016
Selection intimation: 01/10/2016

Correspondence

1. Prof. Susovon Samanta, Assistant Professor, Electrical Engineering Department, NIT Rourkela
   Land: 0661-2462420, Mobile: 9439104535
2. Prof. S. Gopalakrishna, Assistant Professor, Electrical Engineering Department, NIT Rourkela
   Land: 06612462409, Mobile: 9438491853

Introduction

The increased energy demand and shortage of fossil reserves motivated researchers to focus on renewable energy sources. Photovoltaic (PV) power generation is evolving as one of the most remarkable renewable energy sources because of its benefits like eco-friendly nature, less maintenance, and no noise. This short term course will be focussed on various issues of DC/DC converters used in PV. Then it will cover the different MPPT algorithms used in industry made PV systems and also latest development of these algorithms will be discussed in detail. Implementation of all the algorithms in low cost microcontroller will be examined. Inverter is one of the important power electronics circuit used for DC/AC conversion so different PWM generation for inverter along with its design will be covered. Lastly grid synchronization with distributed generation systems will be discussed.

Course content

Broad coverage of the workshop includes:

- DC/DC Converter Modelling and Design
- Control Techniques for DC/DC Converter
- Different MPPT algorithms used in PV based systems
- Issues related to MPPT algorithms
- Different modulation techniques for inverter
- LC filter design
- Grid synchronisation of distributed generation system

Selection of Participants

The numbers of seats are limited to 5. Therefore, selection is based on First-Come First-Serve basis.

NIT Rourkela

NIT Rourkela is situated in one of the top 20 cleanest cities of India. It is one the premier institute of India for higher technical education, basic and applied research. The campus is around 250 hectares of land surrounded greenery and hills. The Institute is recognised as the Institute of National Importance by MHRD in April, 2015.

Department of Electrical Engineering

Apart from B.tech in Electrical Engineering, the Department runs specialised courses in the M.Tech in Power Electronics, Control Systems, Industrial electronics and Communication & signal processing. The academic and research activities in the department focus on the frontier areas of electrical engineering such as power quality studies, distributed generation, soft switching of converters, inverter design, control strategies for complex systems including robotics systems & networked control systems, high voltage & insulation research, signal and image processing.