

NIT Rourkela

invites participation in a short-term course on

Recent Trends in Power Electronic Drives, Power Quality and Renewable Energy Systems

May 30th - June 03rd , 2023



Organized by

Department of Electrical Engineering, **NIT Rourkela**

Coordinator

Prof. K. B. Mohanty

Professor and Head

Department of Electrical Engineering, NIT Rourkela

Course Objective

This short term course provides an opportunity to the participants to understand the state-of-the-art techniques in the area of power electronic drives, power quality, wind, solar and hybrid energy conversion systems. An in-depth explanation will be provided on the concepts related to operation and control of induction machines and different concepts related to MPPT techniques used in renewable energy systems. There are several power quality issues due to unsymmetrical and non-linear loads.

Who can apply?

This course is designed for faculties, practicing engineers and students in Electrical Engineering who are especially interested in the application of Power Electronics in Electric Drives, Power Quality and Renewable Energy Systems. This course also offers training in the dynamic simulations of electrical machines and renewable energy systems, using MATLAB. Teachers, students and industry personnel who are sincerely motivated in exploring these issues are invited.

Registration Fee to be paid by Cheque or Demand Draft

Registration fee amount: Rs. 5000/-

Payable to: DIRECTOR, NIT ROURKELA

Payable at: SBI, NIT Campus, Rourkela

IFSC code: SBIN0002109

Registration Form

Completed form with registration fee (cheque or draft) is to be sent to Coordinator's address.

Name:

Qualification:

Present Position/ Department:

Present Organization Address:

Mobile:

Email:

Payment Details:

Demand Draft/ Cheque Number

Amount:

Date:

Type of Accommodation Required:

Date:

Signature of Applicant

NIT Rourkela

NIT Rourkela is situated in one of the top 20 cleanest cities of India. It is one of the premier institutes of India for higher technical education, basic and applied research. The campus is around 250 hectares of land surrounded by 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 & Drives, Control Systems, Power Systems and Electronics Systems & Communication. 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 robotic systems & networked control systems, high voltage & insulation research, signal and image processing.

Course content

- ✓ State feedback control using pole placement design and observer design for induction motor drive
- ✓ Vector control of induction motor drive
- ✓ Direct torque control and SVM based DTC of induction motor

- ✓ Dynamic modelling of induction motor and simulation in MATLAB
- ✓ Wind energy conversion system
- ✓ Power electronic control of induction generators in wind energy systems
- ✓ Self excited induction generator (SEIG)
- ✓ Power electronics-enabled Photovoltaic Generation system
- ✓ Direct Power Control of Front End Rectifiers – Basics and Developments
- ✓ Power Quality Improvement- Non Linear Load Condition

Accommodation

Registration fee does not include accommodation and food charges. If participants opt for accommodation, it can be arranged and participants will pay the charges at the time of taking accommodation. The charges per person is as follows.

AC room at South Block Guest House

In twin sharing basis: Rs. 700/- per person

In single occupancy: Rs. 1064/-

AC room at North Block Guest House

In twin sharing basis: Rs. 448/- per person

In single occupancy: Rs. 672/-

Rooms also can be arranged in students' hostels.

Patron

Prof. K. Umamaheswar Rao,
Director, NIT Rourkela

Selection of Participants

Selection of participants is based on First-Apply, First-Get basis.

Important Dates

Completely filled-in application with cheque or demand draft is to be sent to the Coordinator in the address given below.

Last date of receipt of application:

25th May 2023

Selection intimation will be sent immediately after receipt of application and payment but not later than

29th May 2023.

Correspondence

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