



**5 Days Short Term Course on  
Latest Advances and Challenges in Power System  
(LACPS-2023)**

**June 10-14, 2023**

**Hybrid Mode (Virtual and Physical Presentation)**



**Organized by  
Department of Electrical Engineering**

**National Institute of Technology Rourkela**

**Rourkela 769008, Odisha, India**

**Ph.:+91 661 2462400**

**Website: <https://website.nitrkl.ac.in/EE/>**

## Overview of Course

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The power system has been expanding at a rapid rate due to the proliferation of loads. In order to cater to the ever increasing load demand, the existing infrastructure needs to be updated from time to time. In the process of updation several challenges inevitably crops up both at the transmission and the distribution level. The seamless transition from the existing system to the updated system would require a continuous refinement in the power system equipment, power electronic devices etc. The handling of the power quality issues, power system stability and security issues, power system planning, FACTS based reactive power compensation etc. play a major role in this refinement process. Also due to the environmental concerns, there has been a conscious shift from the traditional power generation to the non-conventional power generation such as renewable, distributed etc. The proposed control schemes associated with the non-conventional power generation are always a challenge for the power system community. The Hybrid Electric technology is also an outcome of the environmental concerns and energy management of these vehicles is an important issue which needs to be addressed.

Since the power system equipment plays a major role in the technological updation, the condition assessment of these equipment is also significant. This assessment starts with continuous monitoring with the help of IOT devices and sensors.

## About NIT Rourkela

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NIT Rourkela is one of the premier national level institutions for technical education in the country and is funded by the Government of India. Government of India has elevated the Regional Engineering College, Rourkela to a deemed university under the name of National Institute of Technology, Rourkela. The main objective of the Institute is to produce quality Engineers and Scientists in Graduate and Post-Graduate levels in various branches of Engineering and Science. The Institute is managed by the Board of Governors of National Institute of Technology (Rourkela) Society and vested with significant degree of administrative and financial autonomy. Government of India have recognized the Institute as a premier institution of repute and have developed it as a center of excellence under plan funding. The campus of the Institute consisting of the Institute buildings, halls of residence and staff colony is situated at the eastern end of Rourkela steel city, beyond Sector-1 over an area of 262 hectares of land provided by the Government of Orissa. It is a residential campus offering accommodation to faculty, staff and students. The campus has all the amenities for developing personal, social and academic skills of the student community.

## Course Highlights

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- To educate participants about recent challenges and mitigation of power quality issues.
- Make participants aware of the current challenges in renewable energy generation and possible solutions.
- A conclave for industrial and academic experts.
- Importance of micro grid and smart grid in power system network.
- Evolutionary Computing applications in power system.
- Expert lecture by eminent academicians from IITs, NITs as well as other universities and Industry experts.
- Excellent opportunity for collaboration.

## Session Covered

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**Session I:** 9:00 AM – 1:00 PM; Tea Break: 11:00 AM – 11:15 AM; Lunch: 1:00 PM – 2:00 PM  
and

**Session II:** 2:30 PM – 5:30 PM; Tea: 5:00 PM – 5:30 PM

- Basics of power delivery
- Advanced control strategies for the mitigation of power quality issues
- Smart Grid and infrastructure
- Microgrid and it's related issues
- Energy management for Hybrid Electric Vehicles
- Control schemes for renewable energy applications
- IOT applications in power system
- FACTS and it's various applications to power system network
- Fault identification of power system network
- Interconnection of HV power system components
- Condition monitoring for power system equipment
- Insulating materials utilized in power system equipment
- Testing of power system equipment

## Fees Structure

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Registration fees ((Including GST))

- UG/PG Students: Rs. 750/-
- Research Scholars : Rs. 1000/-
- Professionals from Academia: Rs. 2000/-
- Professionals from Industry : Rs. 3000/-

\*Registration fee includes Course Kit only. **Food and Accommodation is not included** in the registration fees. Professionals from the Academia/Industries will be provided with Guest House facility, if available, on payment basis. There are also many budget friendly hotels are available in Rourkela.

## Fee Payment Details

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The registration fees can be paid directly by account transfer through NEFT/RTGS/IMPS using following Bank details given below.

Branch name: SBI, NIT Campus, Rourkela

IFSC code: SBIN0002109

Account Name: CONTINUING EDUCATION NIT ROURKELA

Account Number: 10138951784

MICR No: 76 9002 007

SWIFT Code: SBININBB137

## Important Dates

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Registration Opens: Tuesday, April 30, 2023

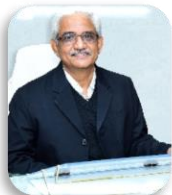
Last date for registration: Tuesday, June 10, 2023

Event date: June 10-14, 2023.



## Advisory Committee

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**Prof. K. Umamaheshwar Rao**

Director  
National Institute of Technology Rourkela



**Prof. K. B. Mohanty**

HOD, Department of Electrical Engineering,  
National Institute of Technology Rourkela

## Local Organizing Committee

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### Course Coordinators



**Dr. Sanjeeb Mohanty**

Associate Professor  
Department of Electrical Engineering  
National Institute of Technology Rourkela



**Dr. Subrata Karmakar**

Associate Professor  
Department of Electrical Engineering  
National Institute of Technology Rourkela

## Who can apply

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Interested participants can apply through Google form link:

Participants:

- I. UG/PG Students
- II. Research Scholars
- III. Academia
- IV. Industry Personnel

The successful participants who will attend the whole course will be given participation e-certificate.

## How to Reach NIT Rourkela

### By Air

There is no commercial air strip in Rourkela; however Steel Authority of India Limited has an airport that is routinely used for charter flights and private aircrafts. Major airports in the proximity of Rourkela are Ranchi, Bhubaneswar, Kolkata and Raipur as per details given below:

Airport	Rail Distance from Rourkela / Journey time	Road distance from Rourkela / Journey time
Bharsuguda	135 Km, 1 hrs 30 mins	135 Km, 2hrs 30 mins
Kolkata	413 Km, 6 hrs	525 Km, 9hrs
Bhubaneswar	462 Km, 7 hrs	320 Km, 5hrs
Ranchi	166 Km, 3 hrs 30 minutes	222 Km, 4hrs
Raipur	417 Km, 6 hrs 30 mins	448 Km, 6hrs 30 mins

### By Train

Rourkela railway station is 7 km away from the NIT campus. The Howrah-Mumbai line and Ranchi-Bhubaneswar line passes through this city.

### By Road

Rourkela is well connected by State Highway no. 10 and National Highway no. 23. It connects to the cities like Ranchi, Raipur, Sambalpur, Bhubaneswar etc.

### How to Reach NIT

Rourkela railway station is situated 7 km away from the NIT campus. Autos/taxis are available round the clock there. Local transport facility is also available from nearby state and private bus terminus.

## Sponsorship

Category	Sponsorship Amount (INR)	Free Delegates
Platinum	4,00,000.00	05
Diamond	300000	03
Gold	200000	02
Silver	100000	01
Bronze	50000	01
GST @18% shall be applicable as per Govt. of India Rules.		

## Registration Form

### Short Term Course on **Latest Advances and Challenges in Power System (LACPS-2023)**

**Hybrid Mode (Virtual and Physical Presentation)**  
**Department of Electrical Engineering**  
**National Institute of Technology, Rourkela-769008, Odisha.**

Name\* (Prof./Dr./Mr./Mrs./Ms.): \_\_\_\_\_

Date of Birth (DD/MM/YYYY): \_\_\_\_\_

Sex: Male/ Female: \_\_\_\_\_

Designation\*: \_\_\_\_\_

Organization\*: \_\_\_\_\_

Department\*: \_\_\_\_\_

E-mail\*: \_\_\_\_\_

Postal Address for correspondence\*: \_\_\_\_\_

\_\_\_\_\_

Mobile number (only 10 digits)\*: \_\_\_\_\_

WhatsApp number: \_\_\_\_\_

#### **Particulars of Registration Fee:**

DD/UTR No: \_\_\_\_\_ Date: \_\_\_\_\_

Name of the Bank and branch:

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

\*: mandatory field

No need to fill this in hard copy, please submit the abovementioned information through a google form having the link: <https://forms.gle/eeM5C8w78xxrH1hB7>



Scan QR code to register.



## Contact us

### **Dr. Subrata Karmakar**

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