About the Institute

NIT Rourkela has a diversified academic program with 17 academic departments offering specialized courses at undergraduate, postgraduate and doctoral levels of studies. The Institute currently offers 21 undergraduate programs in the major disciplines of engineering, architecture, science, humanities and management, and post graduate programs in diversified fields of research areas. The Institute offers distinct programs such as B.Tech in Food Process Engineering, Biotechnology and Medical Engineering, Ceramic Engineering as well as Bachelor of Architecture to meet the demands of contemporary times. While the academic programs offered by NIT Rourkela are in tune with the National Education Policy, the quality of education is continuously upgraded by periodical revision of syllabi based on the needs of industry and academia. With different inclusive initiatives and the introduction of a standardized education policy, over the years, the Institute's graduates have been great performers at professional fronts in India and abroad. With the focus on teaching and learning across departmental boundaries, the mix-technology and management skills, NITians have been valuable assets to our country.

Please visit https://www.nitrkl.ac.in/

About the Department

The department of Electrical Engineering is established with the vision to design technologies and nurture technologists for diverse and sustainable growth in electrical engineering, leading to wealth and welfare of humanity. The department offers various UG and PG programmes with the mission to develop a platform for forging students as technocrats in line with cutting-edge academic, research and modern industrial practices, and enhancing their aptness in any technical sectors across the globe.

Please visit https://website.nitrkl.ac.in/EE/

Call for Participation

Five-Day Workshop on

Sustainable Development: Intersection of Green Energy and eMobility (IGEEM-2024) (Hybrid Mode)

16th -20th October 2024

Coordinators

Prof. Venkata Ramana Naik N, Associate Professor
Prof. Indrajit Sarkar, Assistant Professor
Prof. Anup Kumar Panda, Professor HAG

Department of Electrical Engineering
National Institute of Technology
Rourkela, Odisha - 769008

Science and Engineering Research Board (SERB)
Statutory Body Established through an Act of Parliament: SERB Act 2008
Government of India

About the Workshop

This workshop is meticulously designed to address the latest trends in Renewable Energy and Electric Vehicles, encompassing critical areas such as microgrids, energy management, and power converters for renewable energy integration and energy storage systems within utility grids and EV charging infrastructure. It addresses the significant challenges posed by renewable energy integration, including power quality issues arising from the inherent intermittency of renewable sources and the complexities of supply-demand management amidst generation and load uncertainties. The course offers a comprehensive exploration of fundamental concepts, advanced control strategies, and power management techniques in green energy integration, along with the latest advancements in EV charging solutions and intelligent speed control strategies for EV applications. Participants will gain in-depth knowledge of multi-level converters, maximum power point tracking (MPPT) for solar and wind applications, battery management systems, energy management strategies, and power quality issues specifically in the context of renewable energy systems and EV charging infrastructures. Additionally, the course provides a platform for delving into ongoing research and development initiatives within these domains. This program is particularly well-suited for students and researchers specializing in power electronics, power systems, and control systems. It is equally valuable for engineering professionals from academia, research and development organizations, and industry who are engaged in this rapidly evolving sector.

Topics to be covered:

The workshop shall discuss

- Introduction to Electric vehicle and Renewable energy.
- DC/DC Converter for solar EV charging systems.
- Integration of green energy and eMobility for sustainable development.
- Bidirectional power conversion systems for energy storage in EVs.
- Advanced EV charging techniques and control systems.
- Doubly Fed Induction Generator implementation in wind energy systems.
- Power electronics' role in modernizing next-generation grids.
- Innovations in e-Drive systems and its control for electric mobility.
- Smart grid technology pillars enabling green energy integration.
- Medium voltage, high power converters with reduced device count for EVs.
- Latest trends in embedded controllers for EVs and power electronics.
- Efficient power supply and motor drive design innovations with live demonstrations.
- Implementation of FPGA in optimizing EV applications.

Registration and General Information

The Workshop will be organized in Hybrid mode. Applications for the participation in the 'Workshop' should fill in the Google Form.

Link for Registration:

https://forms.gle/PfBo4CETHAt8AkLr9

Online Account Details

Bank Account Name	:	Continuing Education, NIT Rourkela
Account No.	:	10138951784
Bank Name	:	State Bank Of India (SBI)
IFSC Code	:	SBIN0002109
Branch	:	NIT Rourkela Campus

Workshop Fee (including GST@18%)

Category	Online Registration Fee in INR	Offline Registration Fee in INR
Students-UG/PG /Ph.D.	500/-	5000/- (Accommodation, Food & Extra)
Academicians/Scientists /Faculties	750/-	
Delegates from Industries	1000/-	
Students and staffs of NIT Rourkela are required to register by uploading their College ID card as Transaction Receipt in the Google Form		

Important Dates:

Registration Deadlines: 10th October 2024

Workshop Date: 16th -20th October 2024

The participants should attend all the sessions.

Student Coordinators:

- Satyabrata Behera – 7978419843
- Prerana Mohapatra - 7978915634
- Sameer Kumar Behera – 9439341534
- Sudhir Kumar Sahoo – 9348977308
- Gantasetty Vishwateja - 7978850970

Address for Communications, if any

Prof. Venkata Ramana Naik N, Associate Professor
(Mob:- 8763983981, Land-line: 0661-246-2406)

Prof. Indrajit Sarkar, Assistant Professor
(Mob:- 9167482002, Land-line: 0661-246-4416)

Prof. Anup Kumar Panda, Professor HAG
(Mob:- 7978075806, Land-line: 0661-246-2407)

Our Key Expert Speakers

Prof. Venkata Ramana Naik N.
Associate Professor,
NIT Rourkela

Prof. Indrajit Sarkar,
Assistant Professor,
NIT Rourkela

Prof. S.P. Singh,
Professor, IIT ROORKEE

Prof. B L Narasimharaju,
Professor, NIT Warangal

Prof. Rahul Harishchandra Meshram,
Assistant Professor,
IIT Madras

Prof. N. K. Swami Naidu,
Assistant Professor,
IIT BHU, Varanasi

Prof. Satish Naik Banavath,
Assistant Professor,
IIT Dharwad, Karnataka

Prof. Sukanta Halder,
Assistant Professor,
IIT (ISM) Dhanbad

Dr. Balakrishna Pamulaparthy,
Senior Engineer,
GE Grid Solutions

Prof. Naveen Yalla,
Assistant Professor,
IIT BHU, Varanasi

Dr. R.Vijayarajeswaran,
Managing Director,
VI Microsystems Pvt.Ltd.

Prof. A. V. Ravi Teja,
Assistant Professor,
IIT Ropar

Mr. Yuvaraja.S,
Chief technology Officer,
JSK LAB Instruments

Mr. Chandra Kumar Manavalan,
Technical Manager,Altair

Other Instructions

- The details of the workshop will be shared to the registered participants through email.
- The certificates will be issued based on their attendance in the technical sessions.

Five-Day Workshop on "Sustainable Development: Intersection of Green Energy and eMobility (IGEEM-2024)"

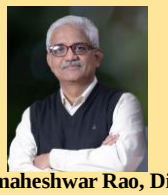
16th -20th October 2024 (Hybrid Mode)

Coordinators: Prof. Venkata Ramana Naik.N, Prof. Indrajit Sarkar, Prof. Anup Kumar Panda

Department of Electrical Engineering

National Institute of Technology, Rourkela

SCHEDULE OF THE WORKSHOP

Day	9.00 AM - 11.00 AM	11.00 AM - 1.00 PM	3.00 PM - 5.00 PM
Day 1 16/10/2024	***Our Chief Guest***  **Prof. K. Umamaheshwar Rao, Director, NIT RKL**	*Transformative role of Power Electronics in Next Generation Grids*  **Prof. Satish Naik Banavath, IIT Dharwad**	*Latest Trend in Embedded Controller for EV, Power Electronic, Drives. And Products for EV Lab*  **Dr. R.Vijayarajeswaran,VI Microsystems**
	9.00 AM - 11.00 AM	**11.00 AM - 1.00 PM**	**3.00 PM - 5.00 PM**
Day 2 17/10/2024	*Speed control of Electric Drives for EV applications*  **Prof. Venkata Ramana Naik N.,NIT Rourlela**	*Efficiency and innovation power supply design and motor drive development for EV applications*  **Mr. Chandra Kumar Manavalan, Altair**	*Reduced Device Count Medium Voltage High Power Converters for Battery Powered Vehicle*  **Prof. Naveen Yalla ,IIT BHU, Varanasi**
	9.00 AM - 11.00 AM	**11.00 AM - 1.00 PM**	**3.00 PM - 5.00 PM**
Day 3 18/10/2024	*Smart Grid Technology Pillars enabling green energy Integration*  **Dr. Balakrishna Pamulaparthy, GE Solutions**	*Research Scope in Hybrid Renewable Power Generations*  **Prof. A. V. Ravi Teja, IIT Ropar**	*Evolving e-Drive System for e-Mobility*  **Prof. Sukanta Halder,IIT (ISM) Dhanbad**
	9.00 AM - 11.00 AM	**11.00 AM - 1.00 PM**	**3.00 PM - 5.00 PM**
Day 4 19/10/2024	*Sustainable Development: Integrating Green Energy and eMobility*  **Prof. S.P. Singh, IIT Roorkee**	*Wide-Range Bidirectional Power Conversion System for Energy Storage Interface in E-Mobilty*  **Prof. B L Narasimharaju, NIT Warangal**	*Reinforcement learning for restless bandits*  **Prof. Rahul Harishchandra Meshram, IITM**
	9.00 AM - 11.00 AM	**11.00 AM - 1.00 PM**	**3.00 PM - 5.00 PM**
Day 5 20/10/2024	*A Triple Active Bridge DC/DC Converter based Solar EV Charging System*  **Prof. Indrajit Sarkar, NIT Rourkela**	*AImplementation of FPGA in optimizing EV applications*  **Mr. Yuvaraja.S, JSK LAB Instruments**	*Experimental Implementation of Doubly Fed Induction Generator for Wind Energy Conversion Systems*  **Prof. N. K. Swami Naidu, IIT BHU**

The valedictory session of the workshop is scheduled for October 20th, 2024, starting at 5:00 PM onwards

Note: *This is a tentative schedule and may have minor changes as per the convenience of experts