

ONE WEEK SHORT TERM COURSE

ON

Enabling Power Electronics Technologies for EVs Ecosystem

(05-09 FEBRUARY, 2024)

Organized By



Department of Electrical Engineering

National Institute of Technology,
Uttarakhand
Srinagar Garhwal- 246174
(Uttarakhand), Bharat





ABOUT NIT, UTTARAKHAND

National Institute of Technology, Uttarakhand is located in the hilly terrain of Srinagar Garhwal, Pauri Uttarakhand. NIT, Uttarakhand was established in 2009 under the Act of Parliament of India by the Ministry of Human Resource Development and designated with the status of “Institute of National Importance”.



ABOUT ELECTRICAL ENGINEERING DEPARTMENT

The Department of Electrical Engineering was founded in 2010 at the same time the Institute was founded, and it features a fine blend of young and energetic professors. Currently, the department offers a B.Tech. in Electrical & Electronics Engineering and an M. Tech. degree in Electrical Engineering with two specialties, namely Power System & Control and Power Electronics & Drives. The department is also offering Ph.D. program in the emerging areas of Electrical Engineering for both full time and part time researchers. The significant areas of expertise of faculty of department are Power Systems, Power Electronics, and Control Systems. They have been actively researching cutting-edge technologies and routinely publishing their findings in prestigious international publications and conferences. The department is also running the IEEE student branch chapter.



SRINAGAR GARHWAL

ABOUT

Nestled in the foothills of majestic Himalayas and on the banks of Alaknanda River sits the historic town of Srinagar. Srinagar is an important tourist attraction for its natural beauty and several temples. One of the important temples of Srinagar is Kamleshwar Mahadev, dedicated to Lord Shiva. Another important temple is Killeshwar Mahadev on the banks of the Alaknanda River. This temple was established by Adi Shankaracharya. The Dhari Devi temple is located 19 KM. from Srinagar on the Srinagar Badrinath Highway. Pauri (Pauri Garhwal) is one of the most famous towns in the Garhwal region, blessed by natural exquisiteness. Pauri is located 29 KM. from Srinagar Garhwal

AIMS OF THE STC

- To enhance technical and professional competency of the faculty members, Ph.D. and PG scholars.
- The recent STC has its potential applications to industrial and factory automation.

COURSE DESCRIPTION

This course initiates candidates into the emerging area of Power Electronics in the application of Electric Vehicles and helps learn the Basics of Battery driven EVs and its Dynamics, Motors, Power Electronics, Batteries, Charging etc. The program consists of instructor led live lecture sessions.

INTRODUCTION

Electric Vehicles (EVs) are the upcoming largest share of the automotive industry. Adhering to sustainability and budget-friendly the EV models are developing with every possible feature that would appeal to the world. It is to be expected that there will be a shift toward electromobility with regard to private passenger cars in the coming years. This will oblige the respective power grid providers to upgrade their networks in future years. So that grid operators can plan and operate their grids to meet future needs, they have to have as complete information as possible about the loads they will be required to handle. Depending on voltage level, geographic location, general grid load, and spread of e-mobility, the situation will vary. With the application of artificial intelligence, EV are able to monitor driving in real time and optimise energy consumption, allowing for greater range while reducing drivers' concerns about running out of power.



RESOURCE PERSONS



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The expert's list is as follows:

Prof. Shailendra Jain	MANIT Bhopal
Prof. Sanjib Kumar Panda	National University of Singapore
Prof. Ranjan Kumar Behera	IIT Patna
Prof. Mukesh Kumar Pathak	IIT Roorkee
Prof. Sanjeevikumar Padmanaban	University of South-Eastern Norway
Prof. Pradyumn Chaturvedi	VNIT Nagpur
Dr. Naveen Yalla	IIT-BHU
Dr. Satish Mohanty	Honeywell
Dr. Gaurav Purohit	CEERI Pilani
Dr. Saravana Kumar	NaMPET, Thiruvananthapuram

PATRON

PROF. LALIT KUMAR AWASTHI
DIRECTOR, NIT, UTTARAKHAND





CONVENER(S)



Dr. Sourav Bose
HoD & Assistant Professor
EE-Department, NIT, Uttarakhand

COORDINATOR(S)

Dr. Prakash Dwivedi
Associate Professor
EE-Department, NIT, Uttarakhand

Dr. Ravinder Kumar
Assistant Professor
EE-Department, NIT, Uttarakhand

Dr. Rohit Kumar
Assistant Professor
EE-Department, NIT, Uttarakhand

ADDRESS FOR CORRESPONDENCE

Interested persons should send the nomination on the google form by the applicant along with the course fee.

Dr. Ravinder Kumar
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HOW TO APPLY



A registration form (google form/ offline) should be sent to ravinder.kumar@nituk.ac.in on or before 04 Feb. 2024.

The google form link is :
<https://forms.gle/rFQyBsi1Xcei9DDa7>

The payment to be made online /by RTGS to the NIT Uttarakhand Bank Account. Details are as follows:

A/C Name	National Institute of Technology Uttarakhand
Bank Name	SBI, Srinagar-Garhwal
A/c No.	37530566069
IFSC Code	SBIN0003181

Note

The registration fee for the course is INR 500 for Industry professionals, Faculty, research scholars from recognized Engineering colleges. No fee for the participants of NIT Uttarakhand.





REGISTRATION PROCESS FOR PARTICIPANTS



- Single registration to attend all lectures.
- Prior registration is mandatory to attend STC.
- E-certificate will be issued to the participants on successful participation of the course.
- Webinar meeting link and other instructions will be shared via e-mail to all registered participants only.

