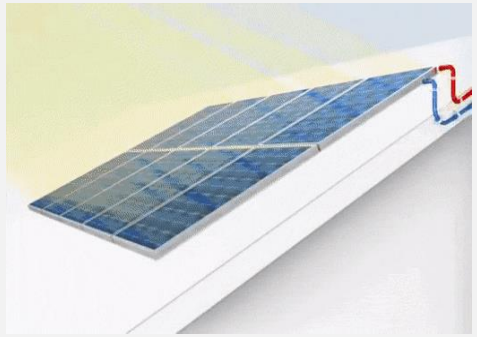
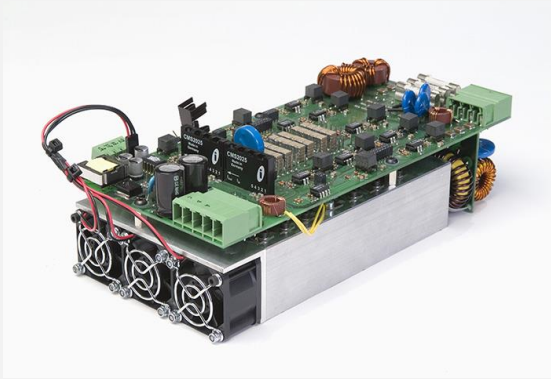
SHORT-TERM TRAINING PROGRAM
(ONLINE MODE)
ON

POWER ELECTRONICS APPLICATIONS FOR INDUSTRIAL SYSTEMS
(Sponsored by TEQIP-III)
(7th -11th September 2020)





Organised by

Electrical Engineering Department, National Institute of Technology Silchar, Silchar, Assam, 788010

Coordinators: Dr. Jiwanjot Singh, Dr. Asha Rani M. A., Dr. Amritesh Kumar, Dr. Avadh Pati

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Online Registration Link (No Fee): https://forms.gle/irwQHFNhWCFS2ZDT8

Last Date (Online Registration): 01-09-2020

About the Institute

National Institute of Technology, Silchar is one of the 31 National Institutes of Technology of India and was established in 1967 as a Regional Engineering College in Assam. In 2002, it was upgraded to the status of National Institute of Technology and was declared as Institute of National Importance under the National Institutes of Technology Act, 2007. NIT Silchar is a fully residential campus situated on the banks of river Barak and on a sprawling campus spread over 625 acres of land surrounded by scenic tea gardens on the outskirts of Silchar. NIT Silchar is a teaching and research institute which reflects in the top NIRF rankings.

About the Department

The Department offers B.Tech. in Electrical Engineering and M.Tech. in two specializations (i) Power and Energy Systems Engineering & (ii) Control and Automation. The department also offers Ph.D in Electrical Engineering. The department is equipped with state of art laboratories to train the UG, PG and PhD scholars to cater research in the frontier research areas of Electrical Engineering. The faculty members are specialized in diverse fields and there is commendable research ambience in the department. Department of Electrical Engineering takes up sponsored R & D projects by various funding agencies.

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EED, NIT Silchar

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About the Course

Concern over the limited stock of conventional energy sources such as coal and other petroleum products has fuelled efforts towards the development of renewable sources of energy that have a lesser footprint on the environment. The advent of power electronics plays a significant role here in efficient extraction and feeding of clean energy from solar or wind to the grid taking care of grid stability. However, there exist concerns in the integration and control of renewable sources like PV and wind either with the conventional grid or Microgrid. Also, a prominent drift is observed in the recent years towards distributed energy systems and integration of renewable sources to the autonomous micro or nano grids which require specific power electronics capabilities for the reliable and secure operation of the power grid. Furthermore, the emergence and integration of electric vehicles with the AC/DC grid will be quiet common in the near future which also needs sophisticated control techniques. Here plays a noteworthy role by the resonant converters, Voltage Source Inverters (VSIs) and DC-DC converters. In this context, this course is designed to address the various design, operational and control aspects of advanced power electronic interfaces associated with Microgrids.

Topics to be Covered

- Multilevel Inverters for Renewable Power Applications
- Modelling of PV cells
- MPPT techniques and Impact of partial shading on PV systems
- DC-DC Converter Controller Design for Solar PV Applications
- Control of Grid-Connected PV Inverters
- Grid Synchronization of Distributed Generation systems
- Electric Vehicle Charging Infrastructure
- Power Control Topologies for Wind Generators
- Challenges involved in Grid Integration of Wind Generators
- Measurement challenges and Testing of Wide Band Gap Devices
- Embedded Controller for Power Electronics Applications
- Solid State Transformers for Renewable Power Applications

Resource Persons


Dr. Rabiul Islam, University of Wollongong, Australia


Dr. P. Sanjeevikumar, Aalborg university Denmark


Dr. Gurunath Gurrala, IISC Bangalore


Prof. Sathans NIT Kurukshetra


Prof. Venkatesa Perumal, NIT Surathkal


Prof. Jagdish Kumar, PEC Chandigarh


A. Ajeesh, C-DAC, Trivandrum


Dr. G. Saravana Ilango, NIT Tiruchrappalli


Nitin Nigam, Tektronix India Pvt. Ltd.


Prof. N.B. Dev Choudhury, NIT Silchar


Dr. L. C. Saikia NIT Silchar


Dr. Prasanta Roy, NIT Silchar


Dr. Avadh Pati, NIT Silchar


Dr. Amritesh Kumar, NIT Silchar


Dr. Jiwanjot Singh, NIT Silchar


Dr. Asha Rani M.A., NIT Silchar


Stephen Samuel, Entuple Technologies Pvt. Ltd.


Sanjeev Malik, Sapro Electronics and Electrical Ltd

Important Dates

Last date (Online Registration): 01-09-2020
Confirmation by E-mail: 03-09-2020 to 5-09-2020,
Duration: 07-09-2020 to 11-09-2020

Eligibility

This program is open to faculty members, research scholars, PG & UG Students and industrial personnel

Registration

Registration Fee: Nil
Number of participants is limited to 200 approx.
Online Registration Link: https://forms.gle/irwQHFNhWCFS2ZDT8

Certification

E-certificates will be provided to those participants who have attended the program without any absenteeism.