NATIONAL CENTRE FOR PHOTOVOLTAIC RESEARCH AND EDUCATION

Continuing Education Program 3-Day Short-Term Course on

“State-of-the-art Power Electronics Technologies and Future Trend in Solar PV Integration”

Introduction: Power electronics-based converters play a vital role in efficient evacuation of power generated from solar Photo-voltaic (PVs). The major roles includes: to interconnect PV panels in series-parallel configurations and operate at MPP; and to act as an interface between the DC output of PV panel and the AC grid or the loads. The next-generation PV systems connected to a decentralized micro-grid environment are expected to exhibit more controllability to attain high efficiency and reliability. The auxiliary and intelligent services such as voltage and frequency support, low-voltage ride-through (LVRT), islanding detection, flexible active and reactive power control, and optimal thermal management would be of prime importance in future smart PV inverters.

Course Outline: In this course, we will be dealing with various topologies for DC-DC and DC-AC converters which can perform the power conversion with high efficiency and reliability. In addition to this, the control aspects of these converters for MPPT operation, off-grid and on-grid operation, grid synchronization will also be explained. The high penetration of PV systems demands additional smart features like reactive power support, islanding detection, LVRT operation; whose implementation on converter control will also be discussed.

Who May Benefit: The course would benefit anybody who wants to work with converter topologies for PV systems, specially research and development engineers and students who are currently working on power electronics-based systems. The workshop would also be an excellent opportunity to learn several aspects of current solar PV technology and the operation and control for future PV inverters.

Course Coordinator: Prof. B. G. Fernandes, Department of Electrical Engineering and Principal Investigator, NCPRE, IIT Bombay

Date: October 8-10, 2018

Registration Last Date: 22/09/2018


Registration Details: There are limited numbers of seats for the course. Please fill the online registration form available on our website. Once your profile has been approved by the course coordinators, (you will receive a mail regarding the same), you need to send the hard copy of completed Registration Form, along with the fees to the address given below. The fees can be paid online (details given below) or by demand draft in favor of “Registrar IIT Bombay - CEP Account.”
The course fee per participant will be as follows:

<table>
<thead>
<tr>
<th>PARTICIPANTS</th>
<th>FEES</th>
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<tbody>
<tr>
<td>Industry</td>
<td>18000</td>
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<tr>
<td>Govt. Organization</td>
<td>12000</td>
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<tr>
<td>Academia</td>
<td>12000</td>
</tr>
<tr>
<td>Student (Full time)</td>
<td>6000</td>
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</tbody>
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* Fees inclusive of 18% GST
The fee includes course material, lunch and refreshments. Limited accommodation may be available for academic participants, but is not included in the above fee.

**Contact for more info:**
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For information on other Solar Photovoltaic (PV) courses, please visit

[http://www.ncpre.iitb.ac.in/events.html](http://www.ncpre.iitb.ac.in/events.html)