Applications of power electronics is dominant in the various fields of aerospace, utility systems, telecommunications, industries, domestic, transportation, etc... Latest development in semiconductor devices makes it way in the various applications of power converters which lead to the effective use of renewable energy systems. Trends towards renewable energy and various control techniques increase the importance of power electronic technologies. Power converters being the industrial revolution, creating more way in the developments in the renewable energy systems and its applications. Renewable energy systems completely depend on the power converters for grid interfacing solutions.

Objectives of the FDP:
- To enable the participants to learn the principles of power converters and their applications in renewable energy systems.
- To analyze the problems and identify solutions related to renewable energy systems.
- To evolve control techniques for the renewable energy systems.
- To empower the participants to transfer their learning experiences into their classroom-teaching practices.

Learning Outcomes:
- Formulate research problems related to power converters and control techniques in renewable energy systems.
- Design improved power converters and control techniques for better performance.
- Transfer the learning experience into classroom-teaching practices.

Topics to be covered:
- Fundamentals of PV
- Impact of renewable energy systems on electric grid
- MPPT techniques for solar based systems
- High gain converters
- Power converters for feeding solar power to grid
- DC/DC converters
- Bidirectional AC/DC converters
- Control techniques for renewable energy systems.

Resource Persons:
Eminent Faculty from IITs, NITs, Central Universities, Teaching Learning Centres and Senior Faculty from NIT Warangal.

Mode of Delivery:
Resource Persons will deliver the online lectures and hands-on sessions through, Google-Meet platform. The essence of the FDP is to improve the teaching ability of the teachers and enabling the learners to learn. The theme of the FDP is a way in building capacity of making better teachers. Lectures can be presentation mode, Discussions and hands-on sessions. Ultimate goal of the FDP is to develop the faculty members in the new pedagogy and emerging areas of science and technology.

Registration is open to:
The program is open to all NBA and AICTE approved Engineering college teachers and research scholars. The number of participants is approximately 100 and selection will be based on priority basis. The Brochure and details of the Registration Form can be downloaded from the institute website http://www.nitw.ac.in
How to Register:
Eligible candidates may apply by filling the following Google form by uploading payment proof on or before 01/03/2021 via google form. 
Google form link: https://forms.gle/f1gUumsQzDEq3okLA

Note: Keep the payment receipt ready as a PDF file (size < 1 MB)

Registration Fee:

<table>
<thead>
<tr>
<th>Category of Participants</th>
<th>6-Day Reg. Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Members</td>
<td>750/-</td>
</tr>
<tr>
<td>Research Scholars</td>
<td>400/-</td>
</tr>
</tbody>
</table>

Note: Registration Fee for Faculty and Students of SC/ST category is half of the amounts mentioned above as applicable.

Bank Details:
Registration Fee may be remitted through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the Google Form.

<table>
<thead>
<tr>
<th>Account Name</th>
<th>Director, Research Account, NITW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Number</td>
<td>62266262236</td>
</tr>
<tr>
<td>Bank</td>
<td>State Bank of India (SBI)</td>
</tr>
<tr>
<td>Branch</td>
<td>NIT Waragul Campus</td>
</tr>
<tr>
<td>IFSC code</td>
<td>SBIN0020149</td>
</tr>
</tbody>
</table>

Confirmation of Participation:
On receipt of the Google Form and Fee Remittance Receipt, participants will be sent confirmation of their participation through email by 02-03-2021. As the programme is conducted online with the number of participants in the workshop is limited to 100. Candidates are advised to register early to avoid disappointment.

Brief profile of the Department of Electrical Engineering:
The Department of Electrical Engineering was established as one of the major departments of NITW (RECW), in the year 1959. The Department is actively engaged in teaching and research in diverse fields of Electrical Engineering. It offers B.Tech. in Electrical & Electronics Engineering, M.Tech. program in Power Electronics & Drives, Power Systems and Smart Electric Grid (From AY 2010-21) and Ph.D program. Broad areas of expertise of the department include Design and development of Smart Grid/ Microgrid systems, Control and integration of Renewable Energy Sources, State Estimation and Real Time Control of Power Systems, AI Applications in Power Systems, Power System Deregulation, Power System Transients, Power Quality, Application of Power Electronics to Power Quality Improvement and Industrial Drives, DSP controlled Drives, Simulation of Power Electronic Converters and Drives Systems and Control of Special Machines. The department has strong Industry interaction and is involved in various Research & Consultancy projects in coordination with industry, Governments of India, Telangana & Andhra Pradesh. The department has an MOU with Central Power Research Institute (CPRI) and PGCIL to carry out collaborative projects.

Teaching Learning Centre of NIT Warangal:
The Teaching Learning Centre (TLC) has been established at NIT Warangal with grants from the MHRD, through its scheme "Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)". Under this Scheme, a separate building has been built exclusively for the TLC activities, with the state-of-art training facilities that include a studio for production and uploading of video and e-lectures on various subjects of higher education, training halls to train the faculty in various theme areas of Science and Technology, humanities and social sciences, linguistics and communication skills, pedagogy and cognition evaluation, etc. among others. Many senior and young faculty are associated with this Centre as Core-Team. One of the important objectives of the Centre is to conduct training programmes for the aspiring, newly inducted and in-service faculty in science, engineering, social sciences disciplines in higher education. Other activities of the TLC include preparation of print and e-learning materials, offering on-line courses, curriculum design, carrying out research in educational technology and pedagogy and integrating with ICT into teaching-learning process. The TLC has special programmes of training for the marginalized and women-faculty.

About NIT Warangal:
National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 31 post-graduate programs besides doctoral programmes. About 5000 students across the country and about 500 international students study on the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art library, seminar halls, guest houses and research laboratories.

For any queries regarding the FDP, please contact the Programme Coordinators:
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For further details about Teaching Learning Centre, please contact:
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Professor-in-Charge and Coordinator,
Teaching Learning Centre (TLC), NIT Warangal
E-mail: archem@nitw.ac.in; mtc.nitw@nitw.ac.in
Office: 0870-2462686.