Special session on

"Power Converter Applications in Renewable Energy: New Topologies, Control Systems, Condition Monitoring and Energy Efficiency"

Organized and co-chaired by:

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Call for Papers

Technical Outline of the Session and Topics:

Worldwide, renewable energy resources (RERs) (solar PV, fuel cell, wind energy, and energy storage systems) are playing a significant role in the present era, particularly with the incremental awareness on the climate change and the rapid decline of conventional energy sources like fossil fuels. Advanced power converter topologies like DC–DC converter, DC-AC Inverters, Multi-Level Power Converters are crucial components for proper, efficient harvesting and applications of RERs. This track session primary aims to host critical discussions on recent contribution of the most recent development in topologies for power converters, control systems, condition monitoring and fault detection, adjustment on technical standards and compliances related to energy efficiency. It is expected that, several topologies of power converter for RERs applications are presented in terms of the range of power levels they can oversee, the complexity of the hardware implementation, the cost of implementation, the tracking efficiency, reliability, condition monitoring and fault detection, and the overall efficiency of the converter.

Topics of the Session include, but are not limited to:

- New Power Converter Topologies for Off-grid and Grid Integration of Renewable Energy Applications with New System Configurations.
- Technical Challenges in Grid Following and Grid Forming Converters for Grid Integrated Renewable Energy Resources.
- Condition Monitoring and Fault Detection in Renewable Power Generation Components.
- Technical Standards and Compliances for Design, Installation and Operation of RERs Components.
- Recent Developments on Control System Applications for Power Converters applied in RERs with Energy Efficiency Requirements.
- Recent Developments on Control and Design of Battery Management Systems.

Author's schedule:

Deadline for submission of special session papers	30th September 2024
Notification of acceptance	31st October 2024
Deadline for submission of final manuscript	30th November 2024

Mode of Presentation: Hybrid Mode

All the instructions for paper submission are included in the conference website:
http://icpc2t.nitrr.ac.in