



SPECIAL SESSION IV

Power Electronics in Renewable Energy Microgrids

ORGANIZED BY

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The special session on the integration of renewable energy sources into microgrids serves as a crucial forum for collaboration among researchers, practitioners, and industry experts. The focus is on exploring the latest advancements, challenges, and opportunities in power electronics applications within renewable energy microgrid systems. The key objectives include discussing the role of power electronics in enhancing efficiency and reliability, exploring emerging technologies in power electronic converters, addressing challenges related to grid stability and power quality, and showcasing real-world case studies and successful implementations of power electronics in renewable energy microgrid projects. This collaborative effort aims to propel the evolution of the energy landscape towards sustainable and efficient solutions.

Topics of the Session:

- **Advanced Power Converters for Renewable Energy Systems**
- **Control Strategies for Power Electronics in Microgrid Applications**
- **Integration of Energy Storage Systems with Power Electronics**
- **Grid-Forming Inverters for Microgrid Stability**
- **Power Quality Improvement Techniques in Renewable Microgrids**
- **Power Electronics Based Microgrids**
- **Power Electronic Converter for Microgrids.**
- **Protection of Microgrids**