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Special Session on

"Grid-Connected Inverters for Renewable Energies Integration: Emerging Topologies, Control Techniques, and Applications"

Organized by

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Call for Papers

Renewable energy sources, such as photovoltaics, wind generators, and fuel cells, could be used in stand-alone mode to feed isolated loads or integrated into the power grid through power conditioning units. The grid-connected inverter is a key component for the integration of renewable energies while ensuring system stability, voltage regulation, power flow control, and low electromagnetic emission, along with high power density, low cost and high reliability. The effort of the researchers and industry has led to a rapid and continual development in this field, such as different inverter topologies, modulation techniques, and control strategies. In addition, other interesting research topics such as the fault tolerant operation, efficiency improvement, grid support, and optimized control strategies are also important. Therefore, we encourage all researchers working in this area to submit papers to this Special Session.

Topics of interest include, but are not limited to:

- Advanced topologies
- Modulation techniques
- Optimized Control strategies
- MPPT algorithms
- Power quality improvement
- Fault tolerant operation and grid support
- Islanding detection

IES Technical Committee Sponsoring the Special Session:

This Special Session is sponsored by Power Electronics Technical Committee and Impedance Source Converters subcommittee under the IES.

Accepted papers will be published in an IEEE proceedings volume and will be also submitted for the International Publication in *IEEExplore*