



IEEE 14th International Conference on
Compatibility, Power Electronics and Power
Engineering
IEEE CPE-POWERENG 2020
1-3 April, 2020 Setúbal, Portugal



**Special Session on
“Recent Advances in Multilevel Inverters for Renewable Energy
Integration”**

Organized by

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Call for Papers

Renewable energy sources, such as photovoltaics, wind generators and fuel cells, could be used to feed an isolated load in stand-alone systems, or be connected directly to the power grid through various power converter topologies. Power electronics interfacing is required to ensure system stability, voltage regulation, power flow control, and low electromagnetic emission, along with high power density, low cost and high reliability. In some applications where high voltage or high currents are required, the switching frequency of the power semiconductors is limited and the use of multilevel converters becomes mandatory in order to get an acceptable power quality. The effort of the researchers and industry has led to a rapid development of different multilevel inverter topologies, modulation techniques and control strategies. In addition, other interesting research topics such as the fault tolerant operation, efficiency improvement, optimized control strategies and new applications are also important. We encourage all researchers working in this area to submit papers to this Special Session.

Topics of interest include, but are not limited, to the following:

- Multilevel inverters for photovoltaic systems
- Multilevel inverters for wind energy systems
- Multilevel inverters for fuel-cell systems
- Topology modifications applied to renewable energy systems
- Power quality control and management
- MPPT algorithms and modulation techniques
- Control methods of multilevel inverters including capacitor voltage balancing methods
- Modeling techniques applied to multilevel converters

IES Technical Committee Sponsoring the Special Session:

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