

**Special Session on**

**“Microgrids Implementation, Planning, and Operation”**

**Organized by**

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**Call for Papers**

Microgrids can allow a better integration of distributed energy storage capacity and renewable energy sources into the power grid, therefore increasing its efficiency and resilience to natural and man-caused disruptive events. In addition, microgrids and nanogrids are potential solutions for providing a better electrical service for both insufficiently supplied and remote areas. Microgrids networking with an optimal energy management will lead to a sort of smart grid with numerous benefits such as reduced cost, and enhanced reliability and resiliency. In this context and after a successful session in IECON 2019, this special session will continue addressing and disseminating state of the art research and development results on the implementation, planning, and operation of microgrids/ nanogrids, where energy management is one of the core issues.

**Topics of the Session:**

Topics of interest include, but are not limited to:

- Implementation of control and optimization techniques in grid-connected and islanded modes;
- Peer-to-peer energy management systems in community microgrid.
- Peer-to-peer energy trading in microgrids.
- Power grid resilience enhancement through microgrid facilities.
- Self-healing strategies for resilience purpose.
- Power quality assessment and improvement.
- Microgrids transformation into virtual power plants.
- Mobility-aware vehicle-to-grid control in microgrids.
- Nanogrid (building) integrated energy management and monitoring system;



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- Maritime applications: shipboard microgrids, offshore platforms, and port electrification.
- Aerospace applications: satellite microgrids, spacecraft power systems, and moon/mars station microgrids.
- Applied IoT architecture and communication technologies for smart microgrids.
- Smart enabling technologies for the effective penetration of microgrids.