2017 11th International Conference on Compatibility, Power Electronics and Power Engineering
CPE-POWERENG 2017

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Proposal for CPE-POWERENG 2017 Special Session

Special Session on: **ADVANCES IN POWER CONVERTERS AND CONTROL FOR DC MICROGRIDS**

Technical Outline of the Session (100-200 words) and Topics:

DC Microgrids (MG) are gaining an important attention due the capability of energy management between renewable energy sources (RES), energy storage systems (ESS) and loads, offering controllability and more efficiency interaction with the distribution grid.

Power electronics and control advancements plays an important role as enabling technology for an efficient management of the power quality distributing the power into the DC bus and especially to the distribution grid. The aim of this special session is to concentrate all related contributions on converter topologies and control to provide a common environment for presentation and discussion of emerging technology, while promoting academic and industrial interaction and cooperation. Topics of interest include, but are not limited to:

- Control, stability and management of DC microgrids
- Impact of power electronics on DC microgrid stability
- Advanced and coordinate control of FACTS, HVDC or STATCOM systems for smart distribution network
- Bidirectional capability and control of power converter stages for ESS management
- Topological study of DC-DC interfacing power stages for sub-buses interaction
- Technical issues of DC microgrids (architectures, protection, power quality, demand side response, Energy dispatching)

Special Session Organizers (names and contact emails):

- Organizer 1: Dr. Marcelo A. Perez, Universidad Técnica Federico Santa María, Chile (marcelo.perez@usm.cl)
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