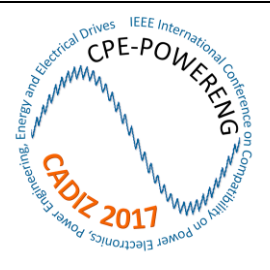




**2017 11th International Conference on
Compatibility, Power Electronics and Power
Engineering
CPE-POWERENG 2017
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**4-6 April, 2017
Cadiz, Spain**

CPE-POWERENG 2017 Special Session

Special Session on: **Stability and control aspects of grid-connected converters in weak grids**

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

The evolution of electricity networks led to the creation of increasingly distributed grid structures and topologies. While in some network areas lines are strongly meshed, in some others long lines and remotely connected generators and loads can be found. Such situation contributed to the emergence of certain network areas frequently referred to as weak grids.

Weak grids with their increased impedances and multiple resonant frequencies as well as a projected massive incorporation of power electronics based energy interfaces may jeopardize the proper operation and stability of power networks and all subsystems connected to them (generators, loads, etc.).

These are the principal reasons why the research interest for control of grid-connected power converter applications has in recent years shifted towards the following topics:

- Small signal modelling of converters and control strategies for stability analysis of weak grids
- Stability assessment and control improvements of power converter applications in weak grids
- New control algorithms for power converter applications in weak grids

Special Session Organizers (names and contact emails):

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