

**EPE-PEMC 2012: ECCE Europe
15th International Power Electronics and Motion
Control Conference
Novi Sad, Republic of Serbia**

**INVITED SPECIAL SESSION: “Power Electronics
Impact on Power Systems Behavior”**

organised by

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Call for Papers

The basic architecture of today's electric grid is little changed from the way it was designed over 100 years ago. Its nature, however, has been evolving, with the most apparent of changes being introduced in the last decades by the pervasive integration of distributed and dispersed resources (micro turbines, variable speed wind turbines, PV generation) mostly through power electronics couplings. This is affecting more noticeably the distribution networks that are integrating more and more power sources that need power electronics to make them compatible with grid characteristics. Electronic power processors are proliferating also in the compensation sector, in an attempt to increase the network overall transmission capacity. Transmission networks are not more immune to these pervasive electronics that must be accommodated within the aging grid to provide extended controllability through HVDC links, FACTS devices and wind farms.

Power electronics is undoubtedly becoming a compelling solution to a vast range of power system issues. While this leads to a better utilization of the network, it at the same time brings dramatic changes in the behavior of the system and its control; an aspect that deserves more careful attention.

Accommodating the widespread use of power electronics in a way that allows benefiting from the component flexibility without jeopardizing the stability at the system level is an impending challenge in the horizon of future power system operation.

This special session welcomes contributions addressing issues related to the widespread adoption of power electronics solutions into the power system in the aspects related to the component modeling for system level studies, control challenges in combination with the grid restrictions for operability and overall system integration.

Topics of interest include, but are not limited to:

1. General aspects related to the integration of distributed energy sources, wind farms, HVDCs and FACTS devices into the power system
2. Modeling of power electronics for investigating their impact on system behavior and stability, and the potential for correcting or improving the behavior
3. Stability analysis methods and tools capable to integrate the relevant properties of the new devices into the system level analysis

Submission procedure: The same as for regular papers.

Submission deadline: 19th December 2011

All the instructions for paper submission are included on the conference website:

<http://epe-pemc2012.com/>