

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

**INVITED SPECIAL SESSION:
“Cyber Physical Systems: Applications to Power
Electronics and Smart Grid”**

organized by

Ivan Celanovic, Massachusetts Institute of Technology, ivanc@mit.edu
Alejandro Dominguez-Garcia, University of Illinois at Urbana-Champaign, aledan@illinois.edu

Call for Papers

Cyber physical systems (CPS) represent close integration and coordination of computation and physical processes. One of the most promising applications of CPS is for smart grid and power electronics; where power electronics is one of the key physical layers of the smart grid. In order to realize the full potential of CPS fundamentally new approaches are needed for real-time computation, controls, and communications, both in terms of theory, analysis and design tools, and new applications.

We seek key contributions that span real-time modeling, simulation, control, estimation, fault-detection and isolation, summarized with following topics:

- Hybrid system modeling, simulation, and control applied to power electronics and smart grid
- Ultra-high fidelity Hardware-in-the-Loop (HIL) simulations
- Integrated tool chain development for CPS
- Fault detection and isolation techniques
- High-performance state estimation and sensorless control
- Modular and distributed converter control (temporally and spatially)
- Advanced controls for grid connected converters
- Embedded system design
- Telemetry and network design for smart grid applications

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/>