



The 38th Annual Conference of the
IEEE Industrial Electronics Society

IECON' 2012



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Proposal for IECON 2012 Special Session

Send your proposal to the SS chairs

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Special Session on: **Industrial Electronics in Smart Grids**

Special Session Organizers (names and contact emails):

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Technical Outline of the Session (50 words) and Topics:

The power grid has been the fundamental energy supply for the vitality of economy and society, which is a massive interconnected network used to deliver electricity from suppliers to consumers. To minimize the impact of Climate Change while at the same time maintaining social prosperity, the so-called “Smart Grid” (SG) technology has attracted increasing attention in recent years, which refers to electricity networks that can intelligently integrate the behavior and actions of all users connected to it. Challenges facing SG include intermittency of renewable energy generation and large scale networks of small distributed generation mechanisms, for example photovoltaic (PV) panels, batteries, wind and solar, plug-in hybrid electric vehicles (PHEV). IEEE Industrial Electronics Society is well positioned to tackle large scale SG problems relevant to a cross-disciplinary nature. This Special Session is focused on Industrial Electronics aspects of Smart Grids, including topics such as

- Intelligent Control Systems
- Grid Security and Stability
- Fault Detection and Prediction
- Modelling and Optimization
- Smart Metering Systems
- Energy Hubs
- Information and Communication Systems
- Power Converters
- Smart loads

IES Technical Committee Sponsoring the Special Session (if any):

IES Technical Committee on Smart Grids