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Special Session on

**“Energy Storage Systems for Resilience and Robustness
Improvement in Smart Grid and Electric Mobility”**

Organized by

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Call for Papers

The fast and massive deployment of distributed generation and e-mobility based on smart and microgrid concepts is contributing to change significantly the configuration of the energy system. However, the power quality and energy management issues, related to intermittency of generation and electricity demand due to the integration of renewable energy sources and the e-mobility, are increasing the request of flexibility, dynamic performance, robustness and resilience in the energy management of microgrid. Energy Storage Systems (ESS) plays a key role in this scenario both for the successful implementation of smart grids and for improving their robustness, reliability and resilience. The main objective of this special session is to share new developments in the design of ESS and of their management/integration in the power system to improve the resilience and the robustness of both electric mobility, microgrid and smart grid applications.

Topics of interest include, but are not limited to:

- State estimation diagnosis and prognostic algorithms of ESS
- Testing, modelling and ageing laws of ESS
- ESS Control algorithm oriented to increase robustness and resilience of Smart Grid and charging/discharging of electric vehicles;
- Sizing and optimization of distributed ESS for robustness and resilience improvement
- ESS Fault diagnosis, monitoring, and aging estimation
- Fail safe architectures and safety management
- Predictive resilience analysis
- Resilience driven system design