



## CALL FOR PAPERS

### “Energy Storage Systems: Interface, Power Electronics, and Control”

**The Theme:** Efficiency of electric power systems and uninterrupted supply of power have become a major challenge for electrical and electronics engineers. Inefficient power systems cause unnecessary waste of energy that should be avoided; on the other hand black outs cause factory interruptions and system failures that could damage equipment and cause bodily harm. In both cases end users suffer a substantial financial loss. In this context the use of energy storage systems has been proposed to increase efficiency and reliability of the electric power system by providing energy savings and ancillary power supply. Energy storage systems can be used to enhance the performance of renewable energy sources (by mitigating their intermittent nature), electric transportation systems, energy efficient buildings and electric power generation to name a few. The aim of this Special Section is to present to the international industrial electronics community the most recent research and developments in the field of energy storage systems, showing advances and developments in design, modeling, component and system level simulations, power electronic interface, control, and practical implementation. Topics of interest of this Special Section include, but are not limited to:

- Energy storage systems (batteries, electrochemical capacitors, regenerative fuel cells, compressed air, flywheels, superconductors, etc.)
- New energy storage systems
- Hybrid energy storage systems
- Efficiency of energy storage systems
- Power electronics interface for energy storage resources: requirements, topology, control and design
- Energy-storage systems used for the grid integration of intermittent renewable energy sources
- Energy storage systems applied to hybrid vehicles and transport applications
- Use of plug-in hybrid electric vehicles as a distributed energy resource
- Energy storage systems for aircraft applications
- Use of energy storage systems for ancillary services to the grid
- Use of energy storage to improve grid stability, power quality and reliability
- Effect of energy storage systems on strong and weak grids
- System level modeling and simulation

#### Manuscript Preparation and Submission

Follow the guidelines in “Information for Authors” in the IEEE Transaction on Industrial Electronics <http://tie.ieee-ies.org/tie/>  
Please submit your manuscript in electronic form through Manuscript Central web site: <http://mc.manuscriptcentral.com/tie-ieee>. On the submitting page #1 in popup menu of manuscript type, select: Energy Storage Systems: Interface, Power Electronics, and Control.

#### Timetable

**Deadline for manuscript submissions**  
**Information about manuscript acceptance**  
**Estimated publication date**

**March 15, 2009**  
**July 2009**  
**December 2009**

#### Guest Editors

**Leopoldo G. Franquelo** (Corresponding Guest Editor), Electronic Engineering Department-University of Seville, Avda. Camino de los descubrimientos s/n, 41092 Seville, SPAIN, Tel: +34 95 448 7365, Fax: +34 95 448 7373, e-mail: [lgfranquelo@ieee.org](mailto:lgfranquelo@ieee.org)  
**Srdjan Lukic** (Corresponding Guest Editor), North Carolina State University, 1017 Main Campus Drive, Suite 2100, Raleigh, North Carolina 27606, USA Tel: +1-919-513-2842, Fax: +1-919-513-0405, e-mail: [smlukic@ncsu.edu](mailto:smlukic@ncsu.edu)  
**Stanley Atcitty**, Sandia National Laboratories, Power Electronics and Energy Storage, PO Box 5800, MS1033, Albuquerque, NM 87185-1033, USA Tel: +1-505-284-2701, e-mail: [satcitt@sandia.gov](mailto:satcitt@sandia.gov)  
**Sergio Vázquez**, Electronic Engineering Department-University of Seville, Avda. Camino de los descubrimientos s/n, 41092 Seville, SPAIN, Tel: +34 95 448 1301, Fax: +34 95 448 7373, [svazquez@gte.esi.us.es](mailto:svazquez@gte.esi.us.es)

**Editor-in-Chief:** **Bogdan M. Wilamowski,**  
[tieedit@auburn.edu](mailto:tieedit@auburn.edu) Tel: +1-334-844-1629

**Journal Administrator:** **Sandra McLain**  
[tieadm@auburn.edu](mailto:tieadm@auburn.edu) Tel: +1-334-844-1887

Alabama Nano/Micro Science and Technology Center, Auburn University, 200 Broun Hall, AL 36849-5201, USA, Fax: +1-334-844-1888