

**Special Session on**

**“Advanced Energy Storage Management in Electrified Transportations  
and Smart Grids”**  
**Organized by**

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**Call for Papers**

Energy storage is an enabling technology for many sophisticated mechatronic and power-electronic systems, such as electrified transportation, portable electronics, and smart grid. Advanced and intelligent management is desired to unlock its potential in performance and cost combining the knowledge of chemistry, material, control theory, and electrical engineering. The properties of advanced management technologies should include enhanced safety and efficiency, prolonged service life, and environment-friendly.

**Topics of the Session:**

This special issue aims to investigate applications of advanced management technologies for electrified transportations and smart grids, in terms of modeling, state estimation and prediction, operation, analysis, planning, as well as thermal management and health management.

- Model development for energy storage systems
- Management strategy analysis, optimization, and control for energy storage systems
- Fault prognosis and diagnosis for energy storage systems
- Health management for energy storage systems

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- Prediction/estimation of energy storage system states in terms of available charge, capacity, power, energy, temperature, and health.
- Control and optimization of energy storage systems with power electronics interface
- Grid ancillary services from energy storage systems
- Energy storage systems in transportation electrification
- Integrated ICT and ITS solutions for higher sustainability, safety and security.
- Internet of things (IoT)-based infrastructures for energy storages' operation and control.
- Cyber security and risk management for energy storage system.