



Proposal for IECON 2012 Special Session Send your proposal to the SS chairs

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Special Session on: {**Advances in Energy Storage Devices and Systems**}

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

Recent developments in rechargeable battery and supercapacitor technology create new and attractive opportunities in the field of energy storage systems. Exploiting these opportunities require a deep understanding of these new battery and supercapacitor technologies and the development of novel architectures and algorithms for their effective management. Furthermore, the integration of the energy storage system in both already consolidate and innovative applications is of paramount importance.

Topics of interest include, but are not limited to:

Part I: Energy Storage Devices

- Battery and supercapacitor technology
- Battery and supercapacitor testing
- Battery and supercapacitor modeling
- Fly-wheel devices and other energy storage technologies

Part II: Energy Storage Systems and Applications

- Battery monitoring and management
- Fault-tolerant architectures and functional safety standard implementation
- Battery protection and battery pack reconfiguration
- Battery status estimation
- Cell balancing of series-connected elements
- Hybrid energy storage systems
- Applications of energy storage systems
- Conventional applications of supercapacitors
- New circuit topologies and applications exploiting supercapacitors