

Special Section on: Smart Energy Storage Technologies: System, Management, and Implementation

The widespread electrification and adoption of renewable energy is a major driving force to reshape the future of power generation, supply, and consumption. Energy storage plays an important role in supporting a variety of power-hungry devices and achieving stable power supply by optimally balancing supply and demand, especially with the ever-increasing requirement for computing power and intermittent nature of renewable resources. Besides the limitations in performance of today's energy storage devices, such as limited energy density, power density, and cycle life, a major challenge is the complex and dynamic environments of the applications of energy storage. High-performance components, proper system configuration, effective modeling and control are key to achieving seamlessly integrated and functional energy storage systems. Fortunately, with the rapid development of artificial intelligence (AI), Internet of Things (IoT), and cloud computing technologies, it has become/is possible, with higher accuracy, to monitor and predict key internal states, and to extract, model, and forecast power supply and demand. With these new technologies in industrial informatics, a new generation of energy storage systems could be smarter, with a higher level of integration, and be better equipped to address quality, stability, sustainability of power supply such as in mobile devices, electric vehicles, and renewable dominated micro and smart grids.

We encourage all researchers working in this area to submit papers to this Special Section. Topics of interest include, but are not limited to:

- ✓ **Topologies/configurations and designs of energy storage systems**
- ✓ **Devices, interfaces, and technologies for power distribution/transfer, e.g., wired and wireless**
- ✓ **Interaction and communication of energy storage systems with devices, loads, and the grid**
- ✓ **State measurement, estimation, monitoring and prediction of energy storage systems**
- ✓ **Component- and system-level modeling, data analysis, and behavior prediction for energy storage systems**
- ✓ **Distributed autonomous energy storage systems**
- ✓ **Security, reliability and scalability of energy storage systems**
- ✓ **Design and management of charging facilities, e.g., for electric vehicles and smart homes**
- ✓ **Design and control of large energy storage systems, e.g., for grid storage**
- ✓ **Innovative application areas.**
- ✓ **System-level intelligent energy management and coordination**

Manuscript Preparation and Submission

Check carefully the style of the journal described in the guidelines “Information for Authors” in the IEEE- IES website: <http://www.ieee-ies.org/pubs/jestie>. Please submit your manuscript in electronic form through: <https://mc.manuscriptcentral.com/jestie-ieee/>.

On the submitting page, in pop-up menu of manuscript type, select: “**SS on Smart Energy Storage Technologies: System, Management, and Implementation**”, then upload all your manuscript files following the instructions.

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Timetable

Deadline for manuscript submissions: May 31, Aug. 31, 2020	Information about manuscript acceptance: October, 2020	Publication Date: January, 2021
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