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Special Issue on Energy in Smart Infrastructures: Storage and Utilizations

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ASME Journal of Dynamic Systems, Measurement, and Control

Special Issue on Energy in Smart Infrastructures: Storage and Utilizations

The modern world is experiencing a union of once-in-a-generation challenges, including depleting energy resources, exponential population growth, and extreme, intermittent weather conditions. To maintain the habitability of Planet Earth, energy sustainability becomes indispensable. In the past few years, various efforts have been made to include sustainability aspects in conceptualizing and designing smart infrastructures. They possess intelligence in the form of Internet-of-Things (IoT), feedback-based decision-making, connectivity, and autonomy. Examples include smart power grids, smart energy storage, intelligent transportation, smart manufacturing, smart buildings, etc. Specifically, how energy is stored and utilized becomes critical to maintaining sustainable operations of smart infrastructures.

In this Special Issue, Guest Editors will assemble original research papers that explore various aspects of energy storage and utilization in smart infrastructures, ranging from energy storage (e.g. batteries) to energy utilization in various applications (e.g. smart electric vehicles and buildings). Ultimately, papers will combine modeling, analysis, monitoring, and control techniques necessary to improve the efficiency, reliability, and safety of the overall spectrum of energy systems.

Topic Areas
The intended scope includes, but is not limited to:
- Modeling, estimation, control, prognostics, and diagnostics of batteries and supercapacitors
- Learning-based control and management of hybrid energy storage systems
- Modeling, analysis, and control of electrified powertrains
- White-, black-, and grey-box modeling for regulation of building temperature and power demand
- Physics-based and/or data-driven building system modeling and simulation
- Machine learning/reinforcement learning, optimization, and control in building environments
- Human in-the-loop sensing and control for building energy systems
- Theories and practical methods of smart grid technologies and systems, with applications in demand response and demand side management, distributed energy resources (DER) interaction and integration with power grids, and EV integration

Publication Target Dates
Paper submission deadline	**March 31, 2023**
Initial review completed	**June 30, 2023**
Special Issue publication date	**September 2023**

Submission Instructions
Papers should be submitted electronically to the journal at **journaltool.asme.org**. If you already have an account, log in as author to your ASME account. If you do not have an account, sign up for an account. In either case, at the **Paper Submittal** page, select the **ASME *Journal of Dynamic Systems, Measurement, and Control*** and then select the Special Issue **Energy in Smart Infrastructures: Storage and Utilizations.**

Papers received after the deadline or papers not selected for inclusion in the Special Issue may be accepted for publication in a regular issue.

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