

Special Issue

Optimization of Building Energy Systems and Energy Grids

Message from the Guest Editor

Control and coordination in the modern energy ecosystem are often brought about through the use of optimization techniques. Buildings play a vital role in this ecosystem, as they have been estimated to be responsible for almost a third of the global energy consumption. With the advancement of information and communication technologies, control and optimization techniques become increasingly relevant for building energy systems, with a view towards achieving increased energy efficiency, improved fault detection and diagnostics, and resilient building operations. Similarly, from an overall energy grid operations standpoint, optimization techniques are frequently applied in different contexts, including capacity expansion planning and energy policy framing as well as more temporally granular objectives such as resource scheduling, market clearing and ancillary services, to ensure economical and environmentally sustainable power system operations. In this Special Issue, we focus on novel algorithms, unique application areas, recent theoretical advancements and technical challenges related to optimization for building energy systems and energy grids.

Guest Editor

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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