Special Issue

Advances in Modeling, Control and Optimization of Renewable Energy Systems and Microgrids

Message from the Guest Editor

Renewable energy is becoming a key player in electric power generation. It includes different sources such as wind, solar, hydro, tidal/wave, geothermal, and biomass. As some of these sources are intermittent, the current power systems and microgrids include more than a single source with storage capabilities to enhance their efficiency and operation. Modeling, control, and optimization techniques are important for understanding and efficiently operating these complex energy systems. Innovative solutions and state-of-the-art studies for renewable energy integration and microgrids will be collected in this Special Issue. Topics of interest for publication include but are not limited to the following:

- Renewable energy sources
- Nano- and micro-grids
- Energy storage (battery, fuel cell, etc.)
- Hybrid power systems
- Control, optimization, and energy management strategies for microgrids
- Forecasting for renewable energy
- Internet of Things (IoT) and artificial intelligence (AI) applications

Guest Editor

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About the Journal

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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