Special Issue

Trends and Challenges in Cyber-Physical Energy Systems

Message from the Guest Editor

The integration of cyber-physical systems (CPSs) into energy infrastructure is transforming the energy sector. Cyber-physical energy systems (CPESs) represent an advanced infrastructure where computational algorithms and physical components interact seamlessly to enhance efficiency, reliability, and sustainability. As the energy landscape evolves, integrating renewable energy sources, smart grids, and advanced control systems, new challenges emerge in relation to security, real-time communication, and data management. The integration of CPSs into energy systems brings numerous benefits, such as improved grid resilience, enhanced demand-response capabilities, and better resource management. However, it also introduces complex challenges including cybersecurity threats, interoperability issues, and the need for robust regulatory frameworks. By exploring these topics, this Special Issue aims to explore current trends, innovative approaches, and the multifaceted challenges associated with cyber-physical energy systems (CPESs). We look forward to receiving your submission!

Guest Editor

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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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