

Special Issue

Operation Optimization and Security Analysis of Energy Cyber Physical Systems

Message from the Guest Editors

Due to their rapid integration with advanced sensing, monitoring, communication and control technologies, energy systems have now emerged as typical cyber physical systems (CPSs). This Special Issue is devoted to reflecting on the latest progress and key technologies concerning ECPSSs, focusing on their modelling, analysis, optimization, control and demonstration. Topics of interest for publication in this Special Issue include, but are not limited to:

- Interaction mechanisms and models of ECPSSs;
- Operation optimization of ECPSSs;
- Coordination control of ECPSSs;
- Situational awareness for ECPSSs;
- Reliability, risk, vulnerability and resilience assessments for ECPSSs;
- Cyber security analysis of ECPSSs;
- Attack detection and defence of ECPSSs;
- Early warning, fault diagnosis and service restoration of ECPSSs;
- Market transaction and supervision of ECPSSs;
- Application of artificial intelligence and big data in ECPSSs;
- Application of cloud computing and secure multiparty computation in ECPSSs;
- Verification and demonstration of ECPSSs.

Guest Editors

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Deadline for manuscript submissions

closed (15 July 2025)



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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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