

## Special Issue

# Advances in Optimal Control and Smart Operation of Renewable Energy Systems

### Message from the Guest Editors

It is difficult to ignore the impact of the large-scale grid-connected operation of renewable energy on grid security and stability. On one hand, as they are often affected by natural resources and extreme weather, wind, solar and other renewable energies are intermittent and stochastic, leading to grid scheduling difficulties. On the other hand, hydropower is a power renewable energy source with flexible regulation capability; thus, it will play an increasingly important role in the new power system. To build future-oriented smart and strong power grids, this Special Issue will publish research on the safe and stable operation of renewable energy systems, focusing on areas such as reporting the latest advances in the modelling, stability, control, diagnostics, assessment, and prediction of hydropower, wind power, and photovoltaic power, as well as their hybrid systems. This Special Issue will provide a broad communication platform for scholars in the field, as well as provide energy policy makers and power plant operators with advice and recommendations for the efficient operation of renewable energy systems.

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### Guest Editors

Prof. Dr. Zhihui Xiao

Dr. Dong Liu

Dr. Yang Zheng

Prof. Dr. Yan Ren

Dr. Jingjing Zhang

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### Deadline for manuscript submissions

20 November 2025



## Energies

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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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### Editor-in-Chief

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