

## Special Issue

# Cyber-Physical Power System and Symmetry Analysis

### Message from the Guest Editors

The cyber–physical power system is a typical symmetrical system. To facilitate the power system, the cyber environment must be well designed according to the physical power system, which can further improve the optimal control efficiency. The cyber–physical power system is closely related to symmetry, which can be a critical issue. This Special Issue invites researchers to submit original research papers and review articles related to renewable energy and power systems in which theoretical or practical issues of symmetry are considered. Applied case studies are especially welcome. The topics of interest include, but are not limited to, the following:

Symmetry in cyber–physical power systems;

Symmetry in the topology of power grids;

Symmetrical and asymmetrical faults in cyber–physical power systems;

Symmetry studies of electrical signals using signal processing methods (FFT, DFT, STFT, WT, etc.);

Symmetry in optimal control strategy of cyber–physical power systems;

Symmetry in renewable energy systems (including smart grids and microgrids);

Symmetrical analysis of power plant layouts and location (including wind farms and photovoltaic plants).

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### Guest Editors

Dr. Huifeng Zhang

Dr. Yushuai Li

Dr. Fei Teng

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### Deadline for manuscript submissions

30 September 2025



## Symmetry

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## About the Journal

### Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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### Editor-in-Chief

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