Special Issue

Control and Protection Technologies for Converter-Based Power Systems Under Symmetric and Asymmetric Conditions

Message from the Guest Editors

With the large-scale integration of renewable energy sources, the power system is gradually becoming dominated by power electronic converters. However, as the proportion of power electronic sources increases, the operating characteristics of the power system undergo fundamental changes. Firstly, the voltage and frequency support capability of the grid-following control technology is weak, leading to the deterioration of power system stability. Grid-forming control technology is regarded as the most promising solution to this issue. In addition, the fault characteristics of converters are different from traditional synchronous generators, resulting in a decrease in the adaptability or even failure of traditional relay protection technology. Thus, there is an urgent requirement to investigate the novel control and protection technologies of converter-based power systems to guarantee the safe and stable operation of power systems.

This Special Issue invites academics, researchers, and professionals to contribute original research papers and reviews that explore key control and protection technologies for converter-based power systems under symmetric and asymmetric conditions.

Guest Editors

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Deadline for manuscript submissions

closed (31 January 2026)

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.2

mdpi.com/si/229783

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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.

Editor-in-Chief

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