

# Special Issue

## Power Converters and Symmetry/Asymmetry

### Message from the Guest Editors

Power converters play an essential role in power grids nowadays, with distribution grids and microgrids also playing critical roles in shaping the future of electric power grids. This Special Issue will delve into the significant advancements in electric power grids in recent years, driven by the integration of renewable energy sources and the growing need for reliable, efficient, and sustainable low-inertia power systems, highlighting the roles of power converters in enhancing the control and operation of these modern electric systems in symmetric and asymmetric conditions, which profoundly impact system performance, reliability, and stability. This Special Issue will also explore various aspects of symmetry/asymmetry involving power converters including research areas such as the impacts of asymmetric grid conditions on converter operation; novel control strategies for mitigating the asymmetry, design and analysis of asymmetric converter topologies; and symmetry breaking in multilevel converters...

### Guest Editors

Dr. Edgar Lenymirko Moreno-Goytia  
Dr. Vicente Venegas-Rebollar  
Dr. Juan Ramón Rodríguez-Rodríguez

### Deadline for manuscript submissions

closed (31 May 2025)



## Symmetry

an Open Access Journal  
by MDPI

Impact Factor 2.2  
CiteScore 5.3



[mdpi.com/si/222113](https://mdpi.com/si/222113)

*Symmetry*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[symmetry@mdpi.com](mailto:symmetry@mdpi.com)

[mdpi.com/journal/  
symmetry](https://mdpi.com/journal/symmetry)





# Symmetry

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 5.3



[mdpi.com/journal/  
symmetry](https://mdpi.com/journal/symmetry)



## 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.

---

### Editor-in-Chief

Prof. Dr. Sergei Odintsov  
ICREA, 08010 Barcelona and Institute of Space Sciences (IEEC-CSIC),  
C. Can Magrans s/n, 08193 Barcelona, Spain

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

#### Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1  
(General Mathematics)