

## Special Issue

# Symmetries and Symmetry-Breaking in Data Security, 2nd Edition

### Message from the Guest Editors

Data security is fundamental to protecting the integrity and reliability of information in our increasingly digital world, ensuring trust and safety for individuals, businesses, and governments alike. Symmetries and symmetry-breaking play significant roles in data security, and their study provides valuable insights and tools for developing more secure and resilient data protection methods. Recently, many researchers have concentrated on watermarking techniques for data protection, encryption methods to ensure data integrity and confidentiality, secure data transactions, and privacy-preserving computation strategies to enhance data security. Additionally, there is a focus on the dynamic interplay between attacks and defensive measures in data security, emphasizing innovative approaches to mitigate threats. Understanding the concepts of symmetries and symmetry-breaking allows security professionals to anticipate potential vulnerabilities and design methods that are robust against a wide range of threats.

This Special Issue seeks to address both theoretical and practical aspects of how symmetry principles can enhance or compromise security mechanisms across various domains.

---

### Guest Editors

Prof. Dr. Na Ren

School of Geographical Sciences, Nanjing Normal University, Nanjing 210023, China

Dr. Weitong Chen

School of Information Engineering, Yangzhou University, Yangzhou 225127, China

---

### Deadline for manuscript submissions

18 August 2026



## Symmetry

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 5.3



[mdpi.com/si/257860](https://mdpi.com/si/257860)

*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)