

# Special Issue

## Symmetry in Data Analysis and Optimization

### Message from the Guest Editors

**Aim:** This Special Issue titled "Symmetry in Data Analysis and Optimization" aims to explore the role of symmetry in various aspects of data analysis and optimization methods. It seeks to gather innovative research that demonstrates how symmetrical properties can improve analytical techniques and optimize processes. The goal is to foster a deeper understanding of symmetry's contributions to data science, aiding in the development of more efficient algorithms and effective methodologies. Contributions may include theoretical advancements, practical applications, and case studies that highlight the significance of symmetry in addressing real-world data challenges. **Scope:** The topics of this Special Issue include, but are not limited to, the following: Mathematical Symmetry; Symmetric Data Structures; Symmetry in Algorithms; Geometric Symmetry; Statistical Symmetry; Machine Learning; Optimization Techniques; Symmetry in Neural Networks; Dynamic Systems; Interdisciplinary Applications;

### Guest Editors

Dr. Mingcheng Zuo

Dr. Chunliang Zhao

Dr. Sabri My Abdelouahed

### Deadline for manuscript submissions

31 October 2025



# Symmetry

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

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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

Prof. Dr. Sergei Odintsov

1. ICREA, 08010 Barcelona, Spain

2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

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