

Special Issue

Applications Based on Symmetry in Image Processing and Optimization

Message from the Guest Editors

This Special Issue on "Applications Based on Symmetry in Image Processing and Optimization" explores the crucial role of symmetry in enhancing image analysis and optimization tasks. Symmetry in deep learning and machine learning is a powerful tool in image processing, particularly in areas such as remote sensing imaging, where it aids in improving the accuracy and efficiency of tasks like image segmentation, reconstruction, and denoising. Researchers can design algorithms that more effectively handle complex image data, such as in remote sensing, MRI, X-ray, PET, and ultrasound imaging. Symmetry-based approaches help maintain structural integrity in images while reducing noise and improving resolution, which is especially important in diagnostic imaging. This issue highlights advancements in symmetry-based methodologies that contribute to the development of innovative techniques for image enhancement and analysis. Furthermore, the application of symmetry in optimization algorithms allows for more efficient computational processes, which is vital for processing large-scale imaging datasets.

Guest Editors

Dr. Longfei Ren

Dr. Minghua Wang

Dr. Jing Yao

Deadline for manuscript submissions

31 January 2026



Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.3



mdpi.com/si/224971

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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

1. ICREA, 08010 Barcelona, Spain

2. 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)