Special Issue

Symmetry/Asymmetry in Data Mining, Optimization Algorithms, and System Control for Intelligent Transportation Systems

Message from the Guest Editors

Symmetry/Asymmetry is prevalent in Intelligent Transportation Systems (ITSs). Utilizing advanced methodologies such as data mining, optimization algorithms, and system control to identify these characteristics and enhance the technological capabilities of ITSs is essential for effective traffic management. In the era of rapid AI advancement, these technologies have undergone swift innovation. The scope of this Special Issue is to present research focused on symmetry/asymmetry in ITSs utilizing big data, as well as the application of advanced methodologies to address some of the inherent challenges faced by ITSs. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Symmetrical/asymmetrical design of ITSs;
- Analysis of symmetry/asymmetry in ITSs;
- Application of data mining, optimization algorithms, and system control in ITSs;
- Data-driven-based traffic safety analysis;
- Data-driven-based traffic behavior analysis;
- Data-driven-based traffic signal control;
- Data-driven-based urban geographic analysis;
- Data-driven-based trajectory tracking control.

Guest Editors

Dr. Zhiyuan Sun

Dr. Jianyu Wang

Dr. Yongnan Zhang

Deadline for manuscript submissions

31 December 2025

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

mdpi.com/si/233641

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

mdpi.com/journal/symmetry

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

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)

MDPI