

# Special Issue

## Symmetry and Asymmetry in Data Compression

### Message from the Guest Editors

In this Special Issue, authors are invited to submit high-quality research or review articles that address the impact of the topics below:

- From a data perspective, symmetry denotes the repetition (semantic feature) of data patterns in their original or transformed form. Research topics include, but are not limited to, symmetry detection, representation, classification and organisation with the goal of enhancing data compression.
- From an algorithm perspective, the distinction between symmetric and asymmetric data compression algorithms implies differences in the design and use of the two categories.
- Time-varying data are sometimes characterised by a somewhat symmetric behaviour over time, which can improve their compression.
- The relationship between lossless and lossy compression on the one hand and exact and approximate symmetries on the other is also of research interest. A lossless algorithm achieves a clearly better compression when exact symmetries are identified in the data. Symmetrisation can thus be an important preprocessing step in data compression.

### Guest Editors

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### Deadline for manuscript submissions

31 January 2026



## Symmetry

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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

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