Special Issue

Symmetry and Cosmology

Message from the Guest Editors

This Special Issue, titled “Symmetry and Cosmology”, aims to provide an overview of the latest developments concerning aspects of symmetry in the field of cosmology. Symmetry plays an important role in most approaches to cosmology, ranging from the early- to late-time Universe. They are essential ingredients in the analysis of the large-scale structure of the current universe, in the scalar field description of cosmological components, in gauge symmetries, in the effective field theory for cosmological perturbations, in quantum gravity proposals, in gravitational wave predictions from the interface between cosmology and astrophysics, cosmological phase transitions, among many other topics. Altogether, this Special Issue aims to provide an overview of the current developments in such areas, discussing new concepts which could guide and stimulate efforts in understanding important aspects of symmetries in cosmology. Keywords:

- symmetry
- cosmology
- early universe
- large-scale structure
- quantum gravity
- effective field theory
- cosmological phase transitions
- cosmic microwave background
- cosmological perturbations

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Deadline for manuscript submissions

31 December 2025

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

mdpi.com/si/202217

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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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