

Special Issue

Black Holes, Cosmology, Quantum Gravity, and Their Symmetries

Message from the Guest Editors

Dear colleagues, A fascinating lesson that follows from our current understanding of gravitational physics and quantum theory is that the large-scale structure of the universe cannot be fully understood without a clear description of its microscopic properties. This ultimately requires a consistent combination of gravity and the quantum, a challenging open question.

The exploration of the early universe, the observation of gravitational waves, the study of analog models in the lab, the thermodynamics of black holes, and many other research lines and innovative approaches to longstanding questions are contributing to a growing body of knowledge that will open new avenues to find a successful theory that describes the dynamics of gravity in the strongest regimes.

This Special Issue is aimed at bringing together novel results on classical and quantum aspects of black holes and compact objects, gravitational waves, early- and late-time cosmology, and different approaches to quantum gravity. Review articles, which play a very important role for the dissemination of well-established results in emerging and recently consolidated topics, and short communications are also encouraged.

Guest Editors

Dr. Gonzalo J. Olmo

Dr. Adrián Del Río Vega

Prof. Dr. Eduardo J. Sánchez Villaseñor

Deadline for manuscript submissions

closed (15 March 2023)



Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.3



mdpi.com/si/67968

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, CAPus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)