



## Symmetry in Field Theory, Gravitation and Cosmology

Guest Editor:

**Prof. Dr. Alexander Shalyt-Margolin**

Institute for Nuclear Problems,  
Belarusian State University,  
220030 Minsk, Belarus

Deadline for manuscript  
submissions:

**closed (31 August 2023)**

### Message from the Guest Editor

Dear Colleagues,

Symmetry plays an important role in fundamental physics. This was already clear in the last century. All major scientific breakthroughs were made on the basis of this concept. Approaches within this paradigm have been changing over time (in particular, global symmetry in many cases gave way to local symmetry), but the fundamental principle (different symmetries and their breaking are the key to understanding processes in the Universe) remains unshakable.

It is no exaggeration to say that the 20th and 21st centuries demonstrate the triumph of this principle: the development and experimental confirmation at the LHC of the standard model in high-energy physics and the confirmation at space observatories of the standard model of cosmology are the most striking facets of this triumph.

The present Special Issue is devoted to the investigation of symmetry and its breaking in field theory, (including quantum field theory), gravitation, and cosmology (including their quantum aspects).





# symmetry



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Sergei D. Odintsov

ICREA, P. Lluis Companys 23,  
08010 Barcelona and Institute of  
Space Sciences (IEEC-CSIC), C.  
Can Magrans s/n, 08193  
Barcelona, Spain

## 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.

## Author Benefits

**Open Access:**— free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Multidisciplinary Sciences*) / CiteScore - Q1 (*General Mathematics*); Q1 (*Physics and Astronomy*); Q1 (*Computer Science*)

## Contact Us

---

*Symmetry*  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/symmetry  
symmetry@mdpi.com  
@Symmetry\_MDPI