

## Special Issue

# Applications of Symmetric Functions Theory to Certain Fields

### Message from the Guest Editors

Symmetric polynomials and symmetric functions are ubiquitous in mathematics and mathematical physics. For example, they appear in elementary algebra representation theories of symmetric groups and general linear groups over the complex field or finite fields. The theory of symmetric functions has also many applications to enumerative combinatorics, as well as to such other branches of mathematics as group theory, Lie algebras, and algebraic geometry. Indeed, the Frobenius map and its extensions provide a bridge translating representation theory problems to symmetric function problems and ultimately to combinatorial problems. They have also played a central role in random matrix theory in the computation of quantities such as joint moments of traces and joint moments of characteristic polynomials of matrices. This Special Issue will reflect the diversity of the topics in the applications of symmetric functions, symmetric function spaces and symmetries.

---

### Guest Editors

Dr. Serkan Araci

Department of Basic Sciences, Faculty of Engineering, Hasan Kalyoncu University, TR-27010 Gaziantep, Türkiye

Prof. Dr. Ayhan Esi

Department of Basic Engineering Sciences, Engineering Faculty, Malatya Turgut Ozal University, 44040, Malatya, Turkey

---

### Deadline for manuscript submissions

closed (15 September 2022)



## Symmetry

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 5.4



[mdpi.com/si/85287](https://mdpi.com/si/85287)

*Symmetry*  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[symmetry@mdpi.com](mailto:symmetry@mdpi.com)

[mdpi.com/journal/  
symmetry](https://mdpi.com/journal/symmetry)





# Symmetry

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 5.4



[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, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

#### Journal Rank:

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