

# Special Issue

## Fusion of Evolutionary Computation and Multidisciplinary Innovations for Emerging Optimization Challenges

### Message from the Guest Editors

Over decades of development, evolutionary computation (EC) has established itself as a robust population-based optimization paradigm that operates independently of specific problem characteristics. It has demonstrated exceptional performance in tackling challenging problems, such as those in high-dimensional, non-linear, or multi-modal spaces, often outperforming classical mathematical optimization algorithms in terms of generality and practicality. Yet, optimization is an inherently dynamic field where advancements in problem complexity drive corresponding innovations in algorithmic design. This Special Issue seeks to explore how techniques from other disciplines can be leveraged to overcome the current challenges in EC while extending its optimization principles to new areas. We welcome contributions that focus on integrating EC with other fields, whether they involve foundational research or practical applications. By fostering such interdisciplinary collaborations, we aim to push the boundaries of both EC and related disciplines, inspiring innovation and vitality across these domains.

### Guest Editors

Dr. Rui Zhong

Information Initiative Center, Hokkaido University, Sapporo, Japan

Dr. Jun Yu

Institute of Science and Technology, Niigata University, Niigata, Japan

### Deadline for manuscript submissions

20 October 2025



# Mathematics

an Open Access Journal  
by MDPI

Impact Factor 2.2  
CiteScore 4.6



[mdpi.com/si/228603](https://mdpi.com/si/228603)

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

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





# Mathematics

---

an Open Access Journal  
by MDPI

---

**Impact Factor 2.2**  
**CiteScore 4.6**



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



## About the Journal

### Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

---

### Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and Informatics, De Montfort University,  
The Gateway, Leicester LE1 9BH, UK

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

#### Journal Rank:

JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).