

# Special Issue

## Advanced Numerical and Computational Methods for Engineering and Applied Mathematical Problems

### Message from the Guest Editors

The objective of this Special Issue is to publish state-of-the-art fundamental development for advanced numerical methods, prospective research directions, and applications for engineering and applied mathematical problems. Topics include, but are not limited to: 1. Recent advances in meshfree methods and particle methods, smoothed particle hydrodynamics, peridynamics, material point methods and other advanced numerical methods.

2. Strong-form collocation meshfree methods, stabilized collocation methods and generalized finite difference methods.

3. Method of fundamental solutions, boundary element methods, integration-based meshfree methods, and localized radial basis functions method.

4. Characterization and stabilization of numerical instabilities.

5. Applications of meshfree methods and other numerical methods for the numerical simulation of advanced materials and structures, soft materials, inverse problems, fluid dynamics and fluid-structure interaction, geomechanics, large deformation and non-linear problems, multi-phase interactions, contact and impact, static and dynamic structural responses, manufacturing processes, nano mechanics, etc.

### Guest Editors

Prof. Dr. Lihua Wang

Prof. Dr. Benny Yiu-Chung Hon

Dr. Sheng-Wei Chi

### Deadline for manuscript submissions

closed (31 July 2024)



## Mathematics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 4.6



[mdpi.com/si/118533](https://mdpi.com/si/118533)

*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).