

# Special Issue

## Mathematical Structures and Their Applications

### Message from the Guest Editor

In this issue, we will be looking for the categorical version of a mathematical structure. By that, we mean a diagram in a category, consisting of objects, morphisms, 2-cells, etc., which are required to satisfy some limiting or colimiting conditions as well as identities or pseudo-identities. Examples include directed graphs, spans, cospans, reflexive graphs, internal categories, groupoids, crossed-modules, bicategories, triangulations, chain-complexes, graded algebras, n-dimensional categories, homotopy types, etc. Each such structure can be interpreted in any category (perhaps with some additional features) and may give rise to different applications both in mathematics and other areas of study. Such areas may include physics, biology, chemistry, computer science, and several others on the verge of technology and engineering. Papers that introduce new structures and study their properties, as well as papers that consider new applications or interpretations of known ones are welcome to this topic.

---

### Guest Editor

Prof. Dr. Nelson Martins Ferreira  
Department of Mathematics, Polytechnic Institute of Leiria, Leiria,  
Portugal

---

### Deadline for manuscript submissions

closed (10 April 2025)



## Mathematics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 4.6



[mdpi.com/si/78460](https://mdpi.com/si/78460)

*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 17.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).