

# Special Issue

## Development and Optimization of Mathematical Models for Operations Research

### Message from the Guest Editors

Programming theory of the optimization model, queuing theory of the queuing model, and game theory of the game model are the first three important branches of operations research. The development of mathematical models and their optimization are fundamental for the effective resolution of many problems in operational research. In recent years, increased insights into real-world problems have led to the development of new mathematical models, new optimization algorithms, or both, contributing to the development of a research area with increasing practical relevance. This Special Issue is dedicated to works at the interface between mathematical modeling, optimization and operations research with a special focus on real-world applications. In addition to research papers, high-quality review articles on mathematical models/algorithms developed for a challenging real-world application are welcome.

---

### Guest Editors

**Dr. Humberto Rocha**

Centre for Business and Economics Research, University of Coimbra,  
Av. Dias da Silva, 3004-512 Coimbra, Portugal

**Dr. Ana Maria Rocha**

Department of Production and Systems, School of Engineering,  
University of Minho, 4704-553 Braga, Portugal

---

### Deadline for manuscript submissions

closed (31 July 2022)



# Mathematics

---

an Open Access Journal  
by MDPI

---

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



[mdpi.com/si/85030](https://mdpi.com/si/85030)

*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).