

# Special Issue

## Modeling and Optimization in Urban Transport and Ecology

### Message from the Guest Editor

This Special Issue publishes articles on the results of mathematical modeling to solve transport and environmental urban problems. The modeling and optimization of transport system parameters is a tool for efficient transport planning, dynamic management, and finding optimal solutions to overcome the challenges dictated by the dynamic development of transport systems. Potential topics include, but are not limited to:

- Mathematical modeling for transport and environmental applications using neural network solutions;
- Development of new theoretical models using methods to integrate Big Data and Data Science technologies for transition to sustainable high-tech development of transport systems;
- Modeling and optimization of models for assessing and forecasting the distribution of vehicle-related emissions;
- Modeling and improvement of mathematical description of traffic flow parameters and population mobility indicators;
- IoT-based AI architecture design for collecting and interpreting Big Data;
- Analytical and numerical methods for solving transport and environmental problems;
- .....

---

### Guest Editor

Dr. Vladimir Shepelev

Department of Automobile Transport, South Ural State University,  
454080 Chelyabinsk, Russia

---

### Deadline for manuscript submissions

closed (15 January 2024)



## Mathematics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 4.6



[mdpi.com/si/171578](https://mdpi.com/si/171578)

*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).