



## Mathematical Modeling, Optimization and Machine Learning, 2nd Edition

Guest Editors:

**Prof. Dr. Andrey Gorshenin**

Federal Research Center  
“Computer Science and Control”,  
Russian Academy of Science,  
119333 Moscow, Russia

**Prof. Dr. Mikhail Posypkin**

Federal Research Center  
“Computer Science and Control”  
of the Russian Academy of  
Sciences, 119333 Moscow, Russia

**Prof. Dr. Vladimir Titarev**

Federal Research Center  
“Computer Science and Control”  
of the Russian Academy of  
Sciences, 119333 Moscow, Russia

Deadline for manuscript  
submissions:

**closed (30 June 2024)**

### Message from the Guest Editors

This Special Issue of *Mathematics* is a follow-up to the successful first edition titled “Mathematical Modeling, Optimization and Machine Learning”. This Special Issue series is devoted to topics in mathematical modeling, optimization methods, and various machine learning approaches. Potential topics include, but are not limited to, the following:

- Mathematical foundations of machine learning;
- New machine learning algorithms, approaches, and architectures of neural networks;
- Mathematical models and machine learning;
- Data analysis based on mathematical models, optimization, and machine learning algorithms;
- Mathematical models, optimization techniques, and machine learning algorithms in applied sciences;
- Statistical models and stochastic processes;
- Continuous and discrete optimization, linear and nonlinear optimization, derivative-free optimization;
- Deterministic and stochastic optimization algorithms;
- Numerical simulation in physical, social, and life sciences;
- High-performance computing for mathematical modeling;
- Application of machine learning, mathematical modeling, and optimization in science and technology.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Francisco Chiclana**  
School of Computer Science and  
Informatics, De Montfort  
University, The Gateway,  
Leicester LE1 9BH, UK

## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

**Journal Rank:** JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

## Contact Us

---

*Mathematics* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/mathematics](http://mdpi.com/journal/mathematics)  
[mathematics@mdpi.com](mailto:mathematics@mdpi.com)  
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)