

Special Issue

Advanced Studies in Mathematical Optimization and Machine Learning

Message from the Guest Editor

This Special Issue explores the growing synergy between mathematical optimization and machine learning, aiming to highlight innovative research that addresses both theoretical and practical challenges. As machine learning models become more complex, there is a critical need for optimization techniques that are mathematically rigorous and computationally efficient. We invite high-quality submissions on topics such as convex and non-convex optimization, stochastic and adaptive methods (e.g., SGD, Adam), variational techniques in Bayesian learning, and bilevel or multi-objective optimization for meta-learning and neural architecture search. Contributions that integrate optimization with symbolic reasoning, graph-based learning, reinforcement learning, or control theory are also welcome. Emphasis is placed on works providing theoretical guarantees related to optimality, stability, and convergence. Applications in medical data analysis, generative AI, GAN-based models, signal processing, finance, and control systems are particularly encouraged. The goal is to foster cross-disciplinary innovation by bridging foundational optimization theory with real-world machine learning practice.

Guest Editor

Dr. Rabian Wangkeeree

Department of Mathematics, Faculty of Science, Naresuan University,
Phitsanulok, Thailand

Deadline for manuscript submissions

31 October 2026



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



mdpi.com/si/238113

Mathematics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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).