

Special Issue

Applied Mathematics, Computing, and Machine Learning

Message from the Guest Editor

The fields of artificial intelligence (AI) and machine learning (ML) are rapidly advancing, transforming industries, research, education, and daily life. Yet, current AI still lacks many human brain capabilities. This Special Issue, *Applied Mathematics, Computing, and Machine Learning*, invites contributions on:

- Optimization algorithms for ML (e.g., novel gradient descent, constrained optimization)
- Numerical linear algebra in AI (e.g., tensor decomposition, sparse methods)
- Probability, statistics, stochastic processes, and control theory in ML (e.g., time series, reinforcement learning)
- High-performance computing for AI (e.g., parallel/distributed ML, GPU acceleration)
- Quantum computing for ML (e.g., quantum algorithms, architectures)
- Uncertainty quantification in AI (e.g., probabilistic AI, error analysis)
- Ethical and explainable AI (e.g., fairness, transparency, accountability)
- Applied ML in science/engineering (e.g., healthcare, finance, environment)
- AI for scientific discovery (e.g., math, physics, chemistry, biology)
- Computational neuroscience and AI.

Guest Editor

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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.

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Author Benefits

High Visibility:

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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).