Special Issue

Mathematical Finance: Statistical Inference, Stochastic Modeling, and Advanced Algorithms

Message from the Guest Editor

We are pleased to extend an invitation to scholars specializing in Mathematical Finance, Financial Econometrics, and Statistics to contribute to our forthcoming Special Issue. This Special Issue aims to encompass a broad spectrum of topics, including, but not limited to:

- Modeling of financial time series;
- Derivatives pricing;
- Term structure of interest rates;
- Stochastic volatility and risk modeling;
- Price duration analysis;
- High-frequency data analysis.

We are particularly interested in approaches utilizing both frequentist and Bayesian inference methodologies. This encompasses techniques such as:

- Sequential Monte Carlo and Particle Filtering;
- Markov Chain Monte Carlo;
- Laplace Approximations;
- Machine Learning methods;
- Other approximating techniques, including Random Forests, Deep Learning, Reinforcement Learning, and Non-parametric estimators.

Guest Editor

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Deadline for manuscript submissions

31 December 2025

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Mathematics

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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.

Editor-in-Chief

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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).