

Special Issue

Bayesian Learning and Its Advanced Applications

Message from the Guest Editors

This Special Issue focuses on the cutting-edge advancements and applications of Bayesian learning across various domains. This Special Issue aims to showcase innovative research that pushes the boundaries of Bayesian learning, exploring its intersection with deep learning, physics-informed models, and large-scale data analysis. This Special Issue welcomes contributions that address theoretical developments, novel algorithms, and practical applications of Bayesian learning. Topics of interest include, but are not limited to, the following:

- Bayesian optimization;
- Multi-fidelity fusion;
- Physics-enhanced machine learning;
- Spatial-temporal field modeling for digital twins;
- Probabilistic graphical models;
- Bayesian deep learning;
- Approximate inference techniques;
- Sparse learning methods.

We particularly encourage submissions that demonstrate the power of Bayesian approaches in solving complex real-world problems in engineering, electronic design automation, and other data-intensive fields.

Guest Editors

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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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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).