

Special Issue

Statistical Machine Learning and Bayesian Methods with Applications

Message from the Guest Editors

We are pleased to introduce a Special Issue on “Statistical Machine Learning and Bayesian Methods with Applications”. The fields of statistical machine learning and Bayesian analysis are rapidly evolving, fuelled by theoretical and computational advances and an increasing demand for interpretable, trustworthy, and adaptable models in high-stakes applications. While machine learning has often been developed and tested on benchmark datasets, it has already shown its value in significant real-world applications and continues to hold great untapped potential across domains such as spatial statistics, survival analysis, healthcare, and environmental science. This Special Issue seeks to highlight the synergy between modern Bayesian methods, including hierarchical, nonparametric, and deep probabilistic approaches, and statistical machine learning, with a particular focus on enhancing the transparency, robustness, and interpretability of predictive models. Contributions are encouraged that demonstrate both theoretical innovation and application-driven insights, providing proof-of-concept studies or real-world implementations with clear originality and significance.

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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