

Special Issue

Uncertainty Quantification: Latest Advances and Applications

Message from the Guest Editors

The aim of this Special Issue is to bring together original research articles and review articles highlighting recent advances in theoretical modeling, numerical simulation, and experiments in uncertainty quantification. We also encourage submissions that investigate interesting applications involving uncertainty quantification. Research integrating machine learning or data-driven techniques is particularly welcome. Potential topics include but are not limited to the following:

- Data-driven and machine learning techniques in uncertainty quantification.
- Novel theory of modeling uncertainty problems.
- Numerical algorithms for alleviating computational burden and/or enhancing accuracy in uncertainty quantification.
- Sensitivity analysis and optimization based on uncertainty quantification.
- Novel experimental techniques related to uncertainty quantification.
- Case studies or advanced applications of uncertainty quantification in engineering and social science.

Guest Editors

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Deadline for manuscript submissions

closed (30 September 2025)



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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).