

Special Issue

Progress in Computational and Applied Mechanics

Message from the Guest Editors

Computational and applied mechanics play an important role in engineering problems, allowing us to address a variety of challenges in various fields of science and engineering. This Special Issue endeavors to consolidate the forefront of computational and applied mechanics, spotlighting innovative research and envisioning future advancements. We encourage researchers to provide relevant papers, including theoretical development and rational applications of mathematical models, variational formulations, and numerical methods related to finite element, finite volume, virtual element, isogeometric and meshless discretization methods. Topics of interest include, but are not limited to, the following:

- Computational methods: including finite element method, meshless method, virtual element method, and particle methods;
- Mechanics of materials: plasticity, damage, phase field fracture;
- Dynamics, vibrations, and waves in solids;
- Multiscale and multiphysics simulations;
- High-performance computing techniques;
- Uncertainty quantification and sensitivity analysis;
- Computational fluid dynamics: compressible flow, incompressible flow, numerical heat transfer.

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 18.3 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2024).