Special Issue

Multiscale Modeling in Engineering and Mechanics: From Microscopic to Macroscopic Mechanical Modeling

Message from the Guest Editors

Multiscale modeling has become an important tool in the field of engineering, allowing for a more accurate understanding and prediction of the behavior of materials and structures at different scales. This Special Issue aims to bring together the latest research on multiscale modeling in engineering, with a focus on both microscopic and macroscopic mechanical modeling. The Special Issue will cover a range of topics including, but not limited to, computational methods and techniques for multiscale modeling, mechanical modeling of materials and structures at different scales, morphology analysis of heterogeneous materials, and applications of multiscale modeling in engineering problems. In particular, we encourage submissions that highlight the deep mathematical connections between the microscopic and macroscopic scales. We hope this Special Issue will provide a platform for researchers to exchange ideas and knowledge, and to promote interdisciplinary collaborations to address complex engineering problems, which may contribute to the advancement of multiscale modeling in engineering and mechanics and inspire further research in this exciting field.

Guest Editors

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Deadline for manuscript submissions

closed (31 May 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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