Special Issue

Advances in Fluid Dynamics and Wave Interaction Phenomena

Message from the Guest Editors

This special issue aims to bridge the gap between theory and practical application by showcasing new methodologies and numerical tools designed for marine, ocean, offshore, and coastal engineering challenges. A collection of cutting-edge research will contribute to exploring the fundamental and applied aspects of fluid dynamics in marine and coastal environments, including the dynamic behaviour of waves under nonlinear conditions, the interaction of waves with fixed and floating structures, and the integration of novel numerical techniques, including emerging AI/ML applications, to enhance the prediction and analysis of fluid dynamic phenomena. The collected works can also highlight innovative approaches to improving design, safety, and efficiency in engineering applications, underscoring the importance of multi-disciplinary research in advancing the field. We welcome expertise in marine, ocean, offshore, and coastal engineering, offering valuable insights into the latest developments in fluid dynamics and wave interactions, thereby setting the stage for future innovations in engineering design and environmental management.

Guest Editors

Dr. Haoyu Ding

Dr. Siming Zheng

Dr. Guixun Zhu

Prof. Dr. Jun Zang

Deadline for manuscript submissions

10 November 2025

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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