



Rheological Studies, Mathematical Analysis, and Numerical Methods for Multiphase and Non-Newtonian Fluid Flows

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Deadline for manuscript submissions:

15 December 2024

Message from the Guest Editors

"Rheological Studies, Mathematical Analysis, and Numerical Methods for Multiphase and Non-Newtonian Fluid Flows" brings together a curated selection of cutting-edge research articles, review papers, and technical notes that advance our understanding and capabilities in the dynamic field of complex fluid flow analysis.

The study of non-Newtonian fluids has remained a domain of considerable academic and industrial interest.

This issue highlights innovative rheological investigations that reveal the nuanced stress-strain relationships in complex fluids, pushing the boundaries of what we know about their flow and deformation characteristics.

Moreover, we delve into the numerical realm, showcasing the latest developments in computational methods tailored for the simulation of multiphase and non-Newtonian flows.

As we present this special issue, we invite our readers to engage with the research findings and critical discussions contained within, which we hope will serve as catalysts for further discovery and innovation in the fascinating world of multiphase and non-Newtonian fluid flow research.





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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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