



## Applications of Mathematics to Fluid Dynamics

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### **Message from the Guest Editor**

Fluid dynamics is inseparably linked with mathematics. Theoretical fluid dynamics is permeated with mathematics. Its main research method is mathematical modeling. Analytical and numerical methods of mathematics are used to solve tasks. Fluid dynamics studies are widely represented in nature and in various fields of human activity such as energy, oil and gas industry, medicine and many others.

This Special Issue is mainly devoted to new studies related to the mathematical modeling of different processes such as wave, vibration, filtration, interaction of fluid with heterogeneity, two-phase flow, etc. Studying the main features of mathematical models that provide a consistent description of the considered processes is very relevant for this Special Issue. Studies may include research on new efficient numerical methods for the implementation of mathematical models of fluid dynamics.

The purpose of this Special Issue is to provide the scientific community with powerful tools for a wide range of applications. We hope to bring together reputable and young scientists actively working in the field of application of mathematics to fluid dynamics.





## Editor-in-Chief

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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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