Special Issue

Advances in Multi-phase Flow: Symmetry, Asymmetry, and Applications

Message from the Guest Editors

In recent years, significant progress has been made in the study of multi-phase flows, focusing on symmetric and asymmetric behaviour and their applications in various industrial fields through the integration of advanced simulations and measurements. Theoretical analyses, numerical simulations, and experimental measurements are increasingly being employed to capture the complex dynamics of multi-phase flows. By leveraging insights gained from symmetric and asymmetric flow research, scientists and engineers can optimize the design process, improve efficiency, and reduce the operational risk of the equipment. Interdisciplinary collaborations among theoretical fluid dynamics experts, computational scientists, and experimentalists continue to drive innovation and push the boundaries of multi-phase flow research and its practical applications. This Special Issue focuses on the ongoing advancements in theoretical innovation, simulation techniques, and experimental measurements of the multi-phase flow, underscoring their pivotal roles in advancing the understanding of multi-phase flow dynamics and fostering innovation across various scientific and engineering disciplines.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

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