

Special Issue

Symmetry in Fluid Mechanics: New Challenges in Fluid– Structure Interaction

Message from the Guest Editors

This Special Issue aims to delve into the intricacies of fluid–structure interaction (FSI), encompassing an exploration of the bidirectional coupling between fluid flows and solid structures. It seeks to investigate phenomena like the symmetry observed in wake flows behind vibrating structures and the impact of aerodynamic forces. With a dedicated focus on addressing the complexities introduced by advancing technology, we invite contributions that tackle challenges such as navigating intricate geometries, integrating fluid and structural solvers, and confronting extreme conditions. Through the advancement of numerical methods and experimental techniques, as well as fostering interdisciplinary collaboration, this Special Issue endeavors to push the boundaries of FSI research and applications in alignment with the scope of *Symmetry*. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following: fluid–structure interactions, complex aerodynamic forces, numerical methods, experimental techniques, fluid dynamics, AI-based flows and control, and energy harvesting from flows.

Guest Editors

Dr. Guanbin Chen

Prof. Dr. Kyung Chun Kim

Dr. Aref Afsharfard

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Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

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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

Prof. Dr. Sergei Odintsov

1. ICREA, 08010 Barcelona, Spain

2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

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