Special Issue

Symmetry in CFD: Convection, Diffusion and Dynamics

Message from the Guest Editors

This Special Issue will include high-quality peer-reviewed articles on convection, thermal diffusion, and nonlinear dynamics, with an emphasis on numerical and analytical studies of Newtonian and rheological fluid flows, as well as purely theoretical studies in theoretical fluid dynamics with emphasis on symmetry concepts arising from group studies. In this Special Issue, we welcome the submission of scientific articles on exact and approximate solutions of the Navier–Stokes equations, Euler equations, vortex hydrodynamics, computational fluid dynamics, convection, diffusion, thermal diffusion, MHD phenomena, physicochemical hydrodynamics, and plasma physics. Authors are given the opportunity to publish research on fluid–body interactions and rigid body dynamics in fluids, as well as works solving engineering problems in fluid mechanics, regarding glacier dynamics and the nonlinear hydrodynamics of Newtonian or non-Newtonian fluids, including polymers and other fluids with non-classical properties such as nanofluids and microfluidic phenomena.

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Deadline for manuscript submissions

closed (30 September 2023)

Symmetry

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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.

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