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Research and Application on Fluid Flows: Modelling, Numerical Simulations, and Computational Dynamics

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Message from the Guest Editor

Dear Colleagues,

The aim of this Special Issue is to present the applications of useful CFD simulations, such as porous flows, turbulence models, reactors, two-phase flows, etc. We look forward to receiving and publishing novel and insightful studies.

Theoretical and modelling methods in fluid dynamics require suitable approximations; for example, the terms in the Navier–Stokes equation are often neglected, as determined by the nondimensional analysis of relevant forces, or expanded as in the case of porous flows. In addition, fluid stresses are averaged out in turbulent flows, and the compressibility of water is often neglected. Particularly interesting are the phenomena that occur at boundaries, such as chemical reactions. The main challenge thus continues to be the accurate translation of real-world problems into the simulation domain. Successful modelling is thus akin to art.

[...]

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Special Issue



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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

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