

Special Issue

Advances in Numerical Modeling of Coupled CFD Problems

Message from the Guest Editors

The development of numerical methods for coupled problems in fluid mechanics remains an area of active research due to numerous complexities faced therein. These include moving and deforming boundaries as well as the coexistence of physical phenomena of different scales. Additionally, practitioners require technologies capable of providing reliable results in a feasible amount of time. The present Special Issue is devoted to highlighting the latest advances in the numerical modeling of complex coupled CFD problems, particularly fluid-structure interactions and two-phase flows. Such multiphysics systems exist in many applications of relevance for marine and ocean engineering, ranging from large-scale ones, such as sea waves interacting with off-shore structures, to small-scale phenomena, such as cavitations affecting marine engines. The Special Issue welcomes both works reporting advances in numerical methods relevant to the above-mentioned area as well as simulations of real-life problems, revealing important physical insights. Innovative solution algorithms, including data-driven approaches and HPC-oriented implementations, are particularly welcome.

Guest Editors

Dr. Pavel B. Ryzhakov
Dr. Mohammad Reza Hashemi
Dr. Julio Marti

Deadline for manuscript submissions

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Journal of Marine Science and Engineering
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jmse@mdpi.com

mdpi.com/journal/jmse





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About the Journal

Message from the Editor-in-Chief

Journal of Marine Science and Engineering (JMSE, ISSN: 2077-1312) focuses on research in the fields of Ocean Engineering, Coastal Engineering, Physical Oceanography, Geological Oceanography, Marine Biology, and Marine Environmental Science. It publishes reviews, regular research papers, and short communications, as well as Special Issues on particular subjects. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the maximum length of the papers.

Editor-in-Chief

Prof. Dr. Charitha Pattiaratchi

School of Engineering, The UWA Oceans Institute, The University of Western Australia, Perth, WA 6009, Australia

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