Special Issue

Nonlinear Wave–Structure Interactions and the Development of Advanced Numerical Models

Message from the Guest Editors

Nonlinear wave–structure interactions have posed a variety of challenges for the design and analysis of marine offshore structures, especially for the fast development of offshore renewable energies. Studies of the nonlinear wave–structure interactions will contribute to the development of science and engineering in the offshore industry. Numerical simulations have become common for nonlinear analysis, and advanced numerical models with high efficiency, accuracy and robustness are in demand. Aim and scope: This Special Issue will focus on the study of water wave–structure interactions with attention to nonlinear effects. Recent developments of advanced numerical models and high-fidelity numerical simulations are encouraged to be reported. The Special Issue will cover the following topics:

- Nonlinear wave theory;
- Second-order and tertiary wave interactions;
- Higher harmonic effects on wave structure interactions;
- Breaking waves and waves slamming on structures;
- Boundary element method;
- Finite element method;
- Volume of fluid method;
- Spectral method;
- Computational fluid dynamics;
- Any other methods such as SPH and LBM

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About the Journal

Message from the Editor-in-Chief

The *Journal of Marine Science and Engineering* (*JMSE*; ISSN 2077-1312) is an international peer-reviewed open access journal which provides an advanced forum for studies related to marine science and engineering. The journal aims to provide scholarly research on a range of topics, including ocean engineering, chemical oceanography, physical oceanography, marine biology and marine geosciences. We invite you to publish in our journal sharing your important research findings with the global ocean community.

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