



## Recent Advances in Understanding and Modelling of Ship-Ice Interaction

Guest Editors:

**Dr. Mikko Suominen**

Department of Mechanical  
Engineering, Aalto University,  
02150 Espoo, Finland

**Dr. Fang Li**

Department of Mechanical  
Engineering, Aalto University,  
02150 Espoo, Finland

Deadline for manuscript  
submissions:

**closed (25 December 2021)**

### Message from the Guest Editors

Dear Colleagues,

Ship performance in level ice has been traditionally applied as a design point when a newbuilding is designed. However, due to global warming, the thickness of sea ice cover has been reducing. As a result, the extent of level ice cover is diminishing, and the extent of floe ice is increasing. This applies to multi-year ice at the polar regions but also to the sea areas where only first-year ice appears, as the winters are milder. Simultaneously, ships operate more extensively in open water conditions that favor hull optimization for open water conditions resulting in non-conventional icebreaking hull form designs.

As the traditionally considered interaction process is changed due to the ice conditions and hull form, new aspects in modelling the ship-ice interaction process and new knowledge on the interaction are required. The purpose of this Special Issue is to publish the most exciting research with respect to the above subjects and to provide a rapid turnaround time regarding reviewing and publishing, disseminating the articles freely for research, teaching, and reference purposes.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Charitha Pattiaratchi**  
Oceans Graduate School and The  
UWA Oceans Institute, The  
University of Western Australia,  
Perth, WA 6009, Australia

## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed with Scopus, SCIE (Web of Science), GeoRef, Inspec, AGRIS, and other databases.

**Journal Rank:** JCR - Q1 (Engineering, Marine) / CiteScore - Q2 (*Civil and Structural Engineering*)

## Contact Us

---

*Journal of Marine Science and  
Engineering* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/jmse  
jmse@mdpi.com  
X@JMSE\_MDPI