

## Special Issue

# Study on Mathematical and Numerical Modeling of Water Waves

### Message from the Guest Editor

Water wave generation, propagation, and evolution in open sea and coastal areas are complex phenomena whose representations are challenging problems of marine science and engineering. These phenomena can involve very different spatial scales: thousands of kilometers, in the case of tsunami generation and propagation; kilometers or hundreds of meters, for problems of coastal engineering and sediment transport; tens of meters, in the case of problems of resonant wave oscillations in harbors or local scour around piers and breakwaters. The mathematical and numerical representation of these phenomena can be obtained via depth-averaged equations, two dimensional and fully three-dimensional equations. This Special Issue is devoted to papers concerning analytical and numerical studies on water waves and their possible application to marine science and engineering; the methodology can be analytical or numerical; contributions can be theoretical, numerical, or applicative.

---

### Guest Editor

Dr. Giovanni Cannata

Department of Civil, Constructional and Environmental Engineering,  
Sapienza University of Rome, 00184 Rome, RM, Italy

---

### Deadline for manuscript submissions

closed (20 February 2023)



## Journal of Marine Science and Engineering

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.0



[mdpi.com/si/128719](https://mdpi.com/si/128719)

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

[mdpi.com/journal/](https://mdpi.com/journal/)

[jmse](https://jmse)





# Journal of Marine Science and Engineering

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.0



[mdpi.com/journal/  
jmse](https://mdpi.com/journal/jmse)



## 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.

---

### Editor-in-Chief

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

---

### Author Benefits

#### High Visibility:

indexed with Scopus, SCIE (Web of Science), Ei  
Compendex, GeoRef, Inspec, AGRIS, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Marine) / CiteScore - Q2 (Ocean  
Engineering)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is  
provided to authors approximately 15.6 days after  
submission; acceptance to publication is undertaken in 1.9  
days (median values for papers published in this journal in  
the first half of 2025).