

Special Issue

Theories and Techniques in Intelligent Digital Twins in Marine Science and Engineering

Message from the Guest Editors

There are many scenarios where people will find it difficult to study and interact directly with real-world marine entities due to various physical limitations. Digital twins can easily bridge the gap between humans and the physical world across spatial and temporal dimensions. To create such intelligent digital twins, advanced theories and techniques should be explored in areas such as intelligent marine big data acquisition and processing, hardware and algorithms for intelligent data computing, and multi-modal enhanced data visualization, among others. This Special Issue will aim at consolidating views in recent trends and major challenges for those topics. We present a platform and forum to disseminate state-of-the-art research and trends in this context and help to exchange new thoughts and perspectives. The Special Issue topics of interest include but are not limited to:

- Vision-based 3D modelling for marine applications;
- Multi-sensory based underwater 3D perception;
- Deep learning in data computing;
- Point-cloud manipulation and processing;
- Ubiquitous intelligence and computing for marine science;
- Digital twin in oceanology;
- Multi-modal data visualization.

Guest Editors

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Deadline for manuscript submissions

closed (31 October 2025)



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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

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.5 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the second half of 2025).