

Special Issue

Recent Research on the Measurement and Modeling of Sea Ice

Message from the Guest Editors

Sea ice in the polar oceans plays a crucial role in the Earth's climate system, serving as both a barometer and amplifier of climate change. The ice acts as a reflective shield, reflecting a significant portion of incoming solar radiation back into space and helping to regulate the planet's temperature. Measurement and modeling of sea ice are crucial for determining and predicting its extent, thickness, and overall health. A wide range of different techniques are used to monitor and quantify sea ice conditions, including satellite observations, ice-penetrating radar and laser altimeters, field expeditions, and autonomous buoys. For this Special Issue, we welcome contributions focusing on any aspects of the measurement or modeling of polar sea ice, including but not limited to physical properties, seasonal evolution patterns, present and future extent, the sea ice ecosystem, effects on the polar environment, its role in moderating global climate change, or air-ice-ocean-wave interactions.

Guest Editors

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Deadline for manuscript submissions

closed (15 May 2026)



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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

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