Special Issue

Drift Modeling at Sea: Applications to Marine Pollution, Harmful Algal Blooms, Sargassum, and Search and Rescue Operations

Message from the Guest Editors

Modeling the drift of substances and objects at sea is one of the most pressing and challenging topics in marine science. Drift models are powerful tools that play a key role in emergency responses, environmental protection, and search and rescue; they can guide efforts to locate missing people, track the movement of oil spills, or monitor the spread of sargassum and harmful algal blooms. The ocean surface is a dynamic environment shaped by waves, winds, and air–sea exchanges. Predicting the fate of drifting objects or substances is complex; oil can be mixed beneath the surface, floating objects may capsize, and subsurface currents often transport material in a different manner to surface waters. We particularly welcome studies that apply drift models informed by oceanic and atmospheric systems, investigate uncertainty related to drift models, utilize dynamic systems theory for drift prediction, and demonstrate realistic applications of drift models. We invite authors to join us in advancing scientific understanding in this field and establishing practical solutions to one of the ocean's most critical challenges.

Guest Editors

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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.

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