Special Issue

Study on Ocean Submesoscale Dynamics and Wave–Current Interactions

Message from the Guest Editor

Ocean submesoscale dynamics refers to the physical processes that occur in the ocean at spatial scales of about 1–100 km, and at time scales of hours to days. These processes are important for understanding the ocean's circulation and biogeochemistry, and for predicting and mitigating the impacts of extreme weather events and climate change.

One important aspect of submesoscale dynamics is the interaction between ocean currents and waves. Waves can interact with ocean currents in several ways, including modifying the surface roughness of the ocean, inducing the mixing of different water masses, and generating small-scale eddies and turbulence. These interactions can have significant impacts on the transport and distribution of heat, salt, and nutrients in the ocean, and on the behavior of marine organisms.

Another important aspect of submesoscale dynamics is the formation and evolution of oceanic fronts. Fronts are regions where water masses with different properties meet and mix. Submesoscale processes play a key role in the formation and maintenance of fronts, and can have important ecological and biogeochemical implications.

Guest Editor

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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.

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