



New Insights into Remote Sensing Techniques, Analysis and Modeling for the Observation of Ocean Waves and Sea Ice Monitoring

Guest Editors:

Dr. Giacomo De Carolis

Institute for Electromagnetic Sensing of the Environment (IREA), National Research Council of Italy (CNR), Via Bassini, 15, 20133 Milan, Italy

Dr. Francesca De Santi

Institute for Electromagnetic Sensing of the Environment (IREA) - National Research Council of Italy (CNR) - via Bassini, 15 - 20133 Milano, Italy

Prof. Dr. Hayley H. Shen

Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY 13699-5710, USA

Deadline for manuscript submissions:

closed (1 June 2022)

Message from the Guest Editors

Ocean waves and sea ice are intimately connected. As ocean waves can affect the sea ice types, floes distribution and concentration, and thus the fluxes through the ocean-atmosphere interface, it is demanding to include waves-in-ice into the earth system of observation and modeling. The dramatic shrinking of the sea ice extent and volume allows winds to blow over longer fetches, thus developing higher and more energetic waves. Such waves favour the formation of grease and pancakes in the marginal ice zone and the fragmentation of ice floes in the depth of icefields, thereby contributing to the overall reduction of sea ice in the polar regions.

This Special Issue is aimed at gathering research works on all the aspects related to the measurement, observation, analysis methods of ocean waves and sea ice, also in conjunction with theoretical description, modeling and forecast in the polar, sub-polar and marginal seas. This can be achieved either by taking advantage of the available microwave, optical, acoustic data and imagery provided from above by space-, air-, ship-borne, UAV systems and from below by submarine and underwater vehicles.





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Center (WGSC), 2255, N. Gemini
Dr., Flagstaff, AZ 86001, USA

Prof. Dr. Dongdong Wang

Institute of Remote Sensing and
Geographic Information Systems,
Peking University, Beijing, China

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Remote Sensing Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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