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Remote Sensing of Surface Currents: Experiments, Theory, Numerical Simulation

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Message from the Guest Editors

The aim of this Special Issue is to describe and study the possibilities of remote sensing methods to characterize sea currents.

Today, there are many methods for measuring the characteristics of sea currents based on various physical principles. Remote methods, including satellite ones, appear to be the most promising due to their ability to observe large areas of water simultaneously. However, it should be noted that the development of technology to determine currents from remote data is still required.

- New experiments to determine various surface currents in the ocean, including in situ sub-satellite measurements;
- New satellite methods for measuring currents in the oceans, seas and inland waters;
- Studies on the redistribution of hydro- and bio-optical properties of water, water constituents, surfactant films, algae, and ice under the action of sea currents;
- Doppler (coherent) radar, optical and acoustical methods for measuring sea currents;
- The application of machine learning and artificial intelligence to determine and forecast the dynamics of currents.

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Special Issue

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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

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