

Special Issue

Wind-Wave Interaction

Message from the Guest Editor

The Special Issue focus on the wind-wave interaction, which is a part of a more general problem of boundary layers in the air and water, separated by a moving interface. In order to accurately describe the interaction between wind and waves, it is necessary to obtain detailed information on: (1) the physics of wave drag and exchange by momentum, kinetic energy, heat and passive substances; (2) the spectral shape of a wind-wave interaction parameter and its asymptotic behavior both at high frequencies and low frequencies; (3) its dependence on wave energy, stratification and gustiness; (4) its directional distribution; (5) a range of applicability for the quasi-linear representation of wind input; (6) the physics and statistics of wave breaking and its dependence on wave spectrum and wind. More generally, the modeling of the air-sea interaction processes also requires additional information on: (1) the influence of surface waves on the turbulent exchange of momentum, heat, mass and passive substances between the air and water; (2) the role of surface waves in the dynamics of WBL, the mixed layer (ML) and the upper thermocline (UT).

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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