

Special Issue

Atmospheric Boundary Layer Modeling and Observation

Message from the Guest Editors

The atmospheric boundary layer (ABL) is the lowest layer of the atmosphere which is in contact with the surface of the Earth. In recognition of the significance of ABLs, the open-access journal *Atmosphere* is hosting a Special Issue to expand the current knowledge on new frontiers in ABL modeling and observations. Some open research topics related to this Special Issue include but are not limited to

- Diabatic ABLs: stable and unstable;
- Hurricane boundary layers;
- Wind energy and the role of the ABL;
- Urban micrometeorology;
- ABL over complex terrain and surface heterogeneity;
- Turbulent processes in ABLs;
- ABL parameterizations and closures;
- ABLs in numerical weather prediction models;
- Large-eddy simulations of ABLs;
- Data-driven discoveries of ABLs;
- New measurements of ABLs (e.g., eddy covariance, lidars, and sounding).

The goal of this Special Issue is to address some of the existing knowledge gaps in the understanding and modeling of ABLs and provide new insights into the fundamental physics of ABLs that have not been comprehensively established yet.

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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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