



Atmospheric Boundary Layer: Observation and Simulation

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Message from the Guest Editors

Dear Colleagues,

Atmospheric boundary layer (ABL) is the lowest part of the atmosphere where most human activities take place. The studies on ABL are of vital importance to a number of applications, ranging from design of civil structures, aviation safety, pollutant dispersion, wind power production, and hazard mitigation of extreme weather events such as tropical cyclones, thunderstorms and tornados, etc. This Special Issue intends to highlight the recent progress in observing and simulating the ABL, contributing to clarify the characteristics and structure of the ABL and their role in human activities. Topics of interest include, but are not limited to:

1. ABL characteristics and structure such as wind and turbulence, and their effects on human activities;
2. State-of-the-art ABL observation instruments and data processing techniques;
3. Advancement of experimental techniques to simulate ABL such as wind tunnel testing;
4. Numerical modelling of ABL such as Numerical Weather Prediction (NWP) and Computational Fluid Dynamics (CFD);
5. Extreme weather events such as tropical cyclones, thunderstorms, and tornados.





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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!

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