Special Issue

Atmospheric Boundary Layer Processes, Characteristics and Parameterization

Message from the Guest Editors

The atmospheric boundary layer is distinguished from the rest of the atmosphere due to its unique characteristics, i.e., direct interaction with the Earth's surface and active turbulence. Understanding the dynamic and chemical processes in the boundary layer is of great importance in weather and air quality forecasting. Recently, with the improvement of observation and simulation techniques, our understanding of atmospheric boundary layer processes and characteristics has significantly improved. For example, the ultrasonic anemometer and large aperture scintillometer can provide information around turbulent exchanges, while the large eddy simulation technique simulates the detailed structure of turbulent eddies. This Special Issue is dedicated to reporting new findings with regard to atmospheric boundary layer processes, characteristics, and parametrization methods, including but not limited to turbulent exchange, transportation, and their parametrization; boundary layer jet; local atmospheric circulation; surface energy partitioning; atmospheric stability condition; pollutant distribution and transportation; etc.

Guest Editors

Prof. Dr. Yubin Li

School of Atmospheric Physics, Nanjing University of Information Science & Technology, Nanjing 210044, China

Prof. Dr. Jie Tang

Shanghai Typhoon Institute of China Meteorological Administration, Shanghai 200030, China

Deadline for manuscript submissions

closed (20 January 2023)

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/86137

Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

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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!

Editor-in-Chief

Dr. Daniele Contini
Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

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