



Novel Algorithms and Advanced Computing Methods Application in Atmosphere

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Message from the Guest Editors

This Special Issue will feature the latest advances and developments in sustainable atmospheric management. New algorithms and advanced computing methods are useful in the prediction requirements of atmospheric data. The main themes of this Special Issue include but are not limited to the following:

- Application of advanced computing methods, including machine learning and deep learning, for precise atmospheric variable forecasting (modeling rainfall, air quality, flood, atmospheric aerosol prediction, solar radiation, wind speed, air temperature, evaporation, evapotranspiration, etc.).
- Utilization of advanced machine learning and deep learning models with ensemble models for solving atmospheric problems.
- Spatial and temporal modeling of atmospheric variables with the aid of advanced computing models.
- Coupling of data preprocessing techniques with machine learning and deep learning methods to capture noise and nonlinear atmospheric variables.
- Usage and development of novel optimization algorithms with machine learning methods to enhance their computing abilities.





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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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