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Advances in Land Surface Processes and Feedbacks on Climate and Climate Extremes

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Deadline for manuscript submissions:
20 March 2025

Message from the Guest Editors

Dear Colleagues,

This Special Issue of *Atmosphere* will publish original research focusing on advancing our understanding of the myriad interactions between the atmosphere and land surface/subsurface across scales, using observation and modelling approaches. We seek contributions on local, regional and global studies of land surface processes and feedback on near-surface temperature and precipitation extremes in a changing climate. We encourage submissions in, but not limited to, the following research areas:

1. Role of soil moisture and/or vegetation in the energy, water and carbon cycles;
2. Effects of and surface processes, interactions and modulating feedback on weather;
3. Land–atmosphere interactions and climate extremes (e.g., heatwaves and droughts);
4. Climate extremes: characteristics and trends;
5. Applications of machine learning technology to improve land surface parameterization schemes and physical processes;
6. Hydrometeorology;
7. Integration of observation, satellite remote sensing products, global reanalyses and models.

Dr. Kazeem Abiodun Ishola
Dr. Oluwafemi Adeyeri
Guest Editors

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Special Issue

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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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