



Representation of Land Surface Processes in Weather and Climate Models

Guest Editor:

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Message from the Guest Editor

Land surface processes aim to describe the behaviour of global energy, water and carbon cycle from the surface components to enhance our capacity to monitor and predict the natural resources and their evolution in time. These processes are essential parts of numerical weather prediction and climate models. More realistic descriptions of processes and their interactions with the atmosphere is at the heart of research efforts to improve weather and climate forecasts. This Special Issue will include, but is not limited to, the following topics:

- Process understanding and interaction of the surface conditions (soil moisture, land surface temperature, snow, phenology etc.) with the atmosphere
- Representing anthropogenic effects (irrigation, crop modelling, land-use change etc.) in land surface models
- High-resolution land surface modelling for improved global application (extreme events, CO2 monitoring etc.)
- Evaluation and benchmarking of land surface model components





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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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