Special Issue

Large-Scale Climate Change and Its Impacts on Weather Extremes

Message from the Guest Editor

Atmosphere is hosting a Special Issue dedicated to the latest research on large-scale climate change and its connection to extreme weather events. This issue aims to highlight recent advancements in understanding the magnitude, variability, teleconnectivity, and predictability of these phenomena. We invite contributions that employ a range of empirical, statistical, and modeling approaches, including but not limited to:Extreme value analysis methods and their application in hydroclimatology;

Probabilistic and multivariate statistical techniques; Comparative analyses of satellite and in situ hydrometeorological observations;

Multivariate probability distributions and their role in extreme event risk assessment;

Climate model evaluation and future projections of extreme weather patterns;

Impacts of climate change;

Weather extreme risk assessment;

Water resources and climate change:

Agricultural sustainability and climate change;

Mitigation of climate change;

Adaptation to climate change;

Urban sustainability and stormwater management under climate change;

Land use and soil erosion under climate change.

Guest Editor

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Deadline for manuscript submissions

closed (30 October 2025)



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About the Journal

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

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