

Special Issue

Weather and Climate Extremes: Observations, Modeling, and Impacts (2nd Edition)

Message from the Guest Editors

In recent decades, weather and climate extremes have attracted increasing attention due to their significant societal impact on multiple sectors, including agriculture, economy, and human health. Studies of past and future changes in weather and climate extremes use various sources of data: observations, including in situ observations; remote sensing data; derived data products such as reanalysis; and ensembles of general or regional circulation models run under various climate scenarios. This Special Issue covers all topics regarding the practices and challenges related to modeling extreme weather climate events and intends to enhance our current understanding and prediction of such extremes. Submissions that address a wide range of topics are welcome; this includes, but is not limited to, the assessment of weather and climatic extremes at local and regional scales and long-term changes and trends via the analysis of the following:

- Historical records or simulations based on climate models;
- Synoptic and seasonal conditions generating climate extremes;
- Social, economic, and environmental impacts.

Guest Editors

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Dr. Feifei Shen

Deadline for manuscript submissions

closed (20 May 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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