

Special Issue

Observations and Modeling of Precipitation Extremes and Tropical Cyclones (2nd Edition)

Message from the Guest Editors

Extreme precipitation events have increased in frequency and intensity across many regions of the world due to climate variations. The simulations of climate models has also evidenced that precipitation extremes will intensify in the future in response to a warming climate. Various natural disasters, such as tropical cyclones, flooding, droughts, soil erosion, and landslides, are associated with extreme precipitation events. Anthropogenic forcing has been shown to have contributed to the intensification of precipitation extremes over northern hemisphere land. Therefore, research on extreme precipitation has become a hot topic. Different approaches have been used to model extreme precipitations, such as index analysis, frequency analysis, and spatial trend analysis. These methods use statistical technology to disperse the climatic factors into the related indices to examine the time interval of the recurrence of an extreme event for many years. The core aim of this Special Issue is to contribute novel modeling frameworks as well as innovative approaches for extreme precipitation modeling in the field of meteorology and safeguarding water resources under climate change.

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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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