Special Issue

Extreme Weather Detection, Attribution and Adaptation Design

Message from the Guest Editors

Extreme events can lead to substantial loss of property and life. The timely and accurate predictions of these events can potentially mitigate some of these losses by providing decision support to stakeholders and communities. The skillful prediction of such extreme events through numerical weather prediction (NWP), statistical techniques, or their combination in hybrid dynamical-statistical methods is crucial for managing preparedness, emergency response, and mitigation of impacts. However, the prediction of rainfall extremes remains challenging in NWP due to various causes, including model deficiencies and initial-value problems. Several approaches for assimilating precipitation observations in NWP models have been developed to improve the model's initial states and subsequent short-range forecasts. This Special Issue invites papers on observational and numerical modeling studies of extreme events, encourage to explore extreme events related to past and near-future hazards. We also would like to include articles that use observations and modeling techniques to understand the physics of rainfall extremes and further enhance overall model forecast skills.

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Editor-in-Chief

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