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Novel Approaches and Metrics to Characterize and Predict Hydrometeorological Extremes: Machine Learning and Numerical Models

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Deadline for manuscript submissions:
closed (30 May 2023)

Message from the Guest Editors

Hydrometeorological extremes such as droughts and floods due to climate change present an urgent issue. These extremes are associated with increasing hydroclimatic intensity and more moisture held in air due to Clausius–Clapeyron scaling. While major efforts have been made to characterize and predict hydrometeorological extremes, this phenomenon remains a challenge due to the lack of proper approaches and metrics. This Special Issue aims to develop novel approaches and metrics to characterize and predict hydrometeorological extremes. We encourage submissions that are focused on leveraging machine learning techniques and numerical models. All related manuscripts are welcome. Topics of interest include, but are not limited to: the application of machine learning and numerical models for advancing the prediction skill of hydrometeorological extremes; the development of new approaches and metrics to quantify and predict hydrometeorological extremes; and the application of machine learning or other novel methods to improve climate models and hydrological models. Review articles are also encouraged.

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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

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