Special Issue

Glacier Mass Balance and Variability

Message from the Guest Editor

Glaciers, as one of the key indicators of climate and cryosphere change, play a critical role in Earth's hydrological cycle, ecosystem stability, and global sea level. The primary objective of this Special Issue is to advance our understanding of glaciers and their interactions with the atmosphere and human activities and ultimately contribute to a deeper comprehension of climate dynamics and future projections. This Special Issue welcomes original research articles, review papers, and case studies that explore various aspects of glaciers, such as glacier mass balance, glacier retreat and advance, glacial hydrology, glacier–atmosphere interactions, glacial geomorphology, and the influence of glaciers on local and regional climate systems. We encourage submissions that adopt multidisciplinary approaches, integrating field observations, remote sensing, modeling, and historical analyses to provide a comprehensive understanding of glacier responses to climate change. Additionally, studies focusing on the impact of glacier dynamics on downstream ecosystems, water resources, and sea level rise are particularly encouraged.

Guest Editor

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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

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