

## **H06: Advances in Cold Regions Hydrology**

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### **Session Description**

Roughly half the world's population and all of Canada are dependent on water from cold regions, which are at the forefront of global warming and undergoing rapid change. The major hydrological events in cold regions are related to storage and melt of snow and ice and the related energetics of phase change, along with other cryospheric processes, resulting in a unique assemblage of hydrological processes and parameters that produce a very distinctive hydrological response. Because these regions will be strongly affected by climatic warming in the near future, we must advance our understanding of cold regions hydrological systems and their representation in numerical models to better manage uncertain water futures in the face of dramatically increasing risk. This session invites papers that describe recent advances in observations, process understanding, model development or model application in cold region environments. We particularly welcome papers that deal with the diagnosis of past hydrological change, shedding insight on the complexities of interacting cold region processes, or that focus on the application of models toward predicting future change in response to climate warming.

**Primary Affiliation:** Hydrology