



Cold Region Engineering Modelling, Characterization, Observations and Testing

8C - Geomechanics and Engineering Geophysics for Permafrost Characterization

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Designing and maintaining resilient infrastructure in cold regions is a critical challenge for northern communities and governments. Stakeholders are looking for geotechnical approaches to improve the resilience of existing infrastructure and to enable the design and construction of new, sustainable, climate-resilient infrastructure in changing cold regions. To this end, it is essential to understand the physical and mechanical properties of permafrost, as these properties will determine the future performance of infrastructure in a changing climate.

In this session, we invite contributions in areas of the novel site or material characterization methods, techniques, and tools that further our understanding of the physical and mechanical properties of frozen ground. These include recent advances in geomechanical and geophysical measurement techniques to assess spatial and temporal variation of the ground's physical properties or incorporate these data for next-generation models of frozen ground and its response. These techniques provide new tools to better understand, analyse, and predict the behaviour of frozen ground.

Keywords: Geomechanics, Engineering Geophysics, Frozen Ground

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