

Engineering Challenges in Mountain Permafrost

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Historically, the design of infrastructure is based on standard factors of safety that have been developed using past information and experience. However, in response to climate change, rapid changes in the permafrost environment in the mountains around the world result in this traditional approach being potentially unsafe. Therefore, new design concepts and strategies are required that consider potential changes in the foundation condition as the permafrost warms and unprecedented climate events. This presentation will highlight these challenges and introduce a risk based approach for geotechnical site investigations and the design of infrastructure in mountain permafrost.