



## Permafrost Infrastructure

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### 7C - Permafrost and infrastructure dynamics along the Inuvik-Tuktoyaktuk Highway, NT

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The Inuvik-Tuktoyaktuk Highway (ITH) is a 140 km-long corridor connecting the Beaufort Delta region to the national highway system and is the only all-season road to the Canadian Arctic Coast. The highway was constructed across continuous permafrost terrain and intersects a number of geologic and ecological environments. Permafrost along the corridor typically contains excess ground ice (ice-rich) and ground temperatures range from  $<-5$  °C to  $-1$  °C. The construction of the ITH provided a unique opportunity to develop a societally-relevant, northern-driven permafrost research agenda. An agenda that supports the planning, regulation, and maintenance of infrastructure in a permafrost environment and allows for the monitoring of climate change, and informed adaptation.

This session will showcase the diversity of monitoring and research conducted along the ITH and contributions toward understanding permafrost-infrastructure interactions and developing applied solutions to challenges unique to permafrost conditions along the highway. The session has a multidisciplinary focus and welcomes talks highlighting different methods, designs and knowledge sources used in understanding permafrost-infrastructure interactions. This includes the importance of baseline information, its management, analysis, and communication to support decision making and the necessity for collaborative and interdisciplinary approaches to address infrastructure management challenges in a permafrost environment.

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