



## Rapid Arctic Transitions due to Infrastructure and Climate Workshop

Arctic Science Summit Week 2019

26 May 2019, 9:00–18:00

Room 502, NArFU Intellectual Centre

Smolny Buyan, 1, Arkhangelsk



*Goal: Promoting sustainable Arctic infrastructure as a key research theme requiring a collaborative multidisciplinary approach involving scientists, local communities, governments and industry.*

**9:00 Welcome and introductions**

**9:20 Presentations: Impacts and interactions of climate and infrastructure in the Arctic**  
(15 min + 5 min Q&A *except as noted*)

- Response of permafrost environment to natural changes and human impact in the north of West Siberia (Yamal-Nenets Autonomous Okrug) (Leibman & Khomutov, Russia)
- Modeling circumpolar permafrost and permafrost thaw-related geohazards affecting infrastructure (Karjalainen, Finland)
- Impacts of climate change and infrastructure on reindeer herding in the Yamal peninsula (Laptander & Kumpula, Finland) (25 min + 5 min Q&A)

**10:30 Coffee and posters**

**11:00 Presentations: Approaches to research and adaptation** (15 min + 5 min Q&A each)

- T-MOSAic and RATIC: Connections and opportunities (Vincent, Canada)
- Navigating the new Arctic: Landscape evolution and adapting to change in ice-rich permafrost (Walker, USA)
- Sustainable housing in rural Alaska (Garber-Slaght, USA)
- Infrastructure stability estimation: Usage of GTN-P data and permafrost forecasting (Sergeev & Utkina, Russia)
- Social science perspectives on Arctic infrastructure (Schweitzer et al., Austria)

**13:00 Lunch**

**14:00 Research directions: Prague workshop synthesis**

**14:20 Breakout groups: Natural and social/built environment perspectives on research needs**

*What are the existing initiatives and projects in each sphere related to RATIC? What are some upcoming opportunities? What questions do we need to answer to achieve sustainable Arctic infrastructure? Which are most important? Which may be answered soon? Which will take longer or are unlikely to be answered in the foreseeable future?*

**15:30 Coffee and posters**

**16:00 Panel 1: Research priorities (report from breakout groups)**

**16:30 Panel 2: Advancing RATIC through linkages with T-MOSAic and other opportunities**

*What are the opportunities for advancing the goal of sustainable Arctic infrastructure through participation in T-MOSAic? What are some specific ideas for systems-level observation, monitoring and modeling related to infrastructure? What are the challenges from the social science perspective? How do we better engage indigenous communities, business and industry in this work? What T-MOSAic data products can be used to answer some of the key questions identified earlier in the day?*

**17:30 RATIC/T-MOSAic: Planning the next steps**

**18:00 Adjourn**