

## Cold Regions Research Centre Days

21-22 November, 2019

### Day 1: Thursday, 21 November

- 08:00 08:30 Reception (coffee/tea & name tags)  
 08:30 09:00 Bill Quinton: *Welcome from the Director, Cold Regions Research Centre*  
 Richard Nemesvari: *Welcome from the Dean, Faculty of Arts, Wilfrid Laurier University*  
 Geoff Kershaw: *Welcome from the Early Career Researchers and land acknowledgement*  
 Banakonda Kennedy Kish Bell: *Welcome from Office of Indigenous Initiatives and opening prayer*

### SESSION 1: Ecology of Cold Regions

Geoff Kershaw (Convener)

- 09:00 09:15 Cory Wallace: *Seed dispersal models explain patch and sub-basin scale patterns of shrub recruitment*  
 09:15 09:30 Kristine Haynes: *The role of hummock microtopography in the changing discontinuous permafrost landscape*  
 09:30 09:45 Tom Pretty: *Analysis of aquatic invertebrates in subarctic lakes with watersheds affected by forest fire*  
 09:45 10:00 Ari Yamaguchi: *Lake- and organismal-level drivers of differential fish mercury concentrations in subarctic lakes*  
 10:00 10:15 Julia Zazzarini: *Size characteristics of Yellow Perch following the introduction of Smallmouth Bass*

10:15 10:30 **Break**

### SESSION 2: Hydrology in a Changing Climate

Mackenzie Schultz (Convener)

- 10:30 10:45 Shaghayegh Safsari: *Spatial analysis of geographical boundaries and transformation of hydrological features*  
 10:45 11:00 Tom Misztela: *Spring freshet and channelization processes in a snow-filled sub-arctic catchment, NWT*  
 11:00 11:15 Dilshan Kariyawasam: *Changes in thermokarst lakes along the Inuvik-Tuktoyaktuk Highway corridor*  
 11:15 11:30 Geoff Kershaw: *Distinguishing alpine valley landcover classes based on surface and subsurface hydrology*  
 11:30 11:45 Genevieve Brown: *A regional hydrological model of the Liard River basin*

12:00 1:00 **Lunch & Poster Session (see page 3)**

- 13:00 14:00 Dr. Maria Strack: *Protecting the boreal peatland carbon storehouse – managing for greenhouse gas reductions*

14:00 14:15 **Break**

### SESSION 3: Ecosystem Response to Environmental Stressors

Jeremy Leathers (Convener)

- 14:15 14:30 Matt Teillet: *Impacts of transportation infrastructure on river ecology and local fisheries in the NWT*  
 14:30 14:45 Pieter Aukes: *Using DOM to understand the terrestrial-aquatic linkage among sub-arctic taiga shield lakes*  
 14:45 15:00 Mahkameh Taheri: *Improved fill and spill hydrological process in wetland-dominated landscapes*  
 15:00 15:15 Mason Dominic: *Geophysical characterization and temporal comparison of discontinuous permafrost terrain*  
 15:15 15:30 Brenden Disher: *Characterizing the transitional role of treed bogs in the zone of discontinuous permafrost*

15:30 15:45 **Break**

### SESSION 4: Ice Processes

Cory Wallace (Convener)

- 15:45 16:00 Mia Stratton: *Identifying the role of hydrological changes in a tributary driving ice-jam formation at the PAD*  
 16:00 16:15 Olivia Carpino: *The trajectory of permafrost environments in northwestern Canada*  
 16:15 16:30 Elizabeth Webb: *The Beaufort Gyre*  
 16:30 16:45 Barun Majumder: *Sublimation of snow - let's dig deeper*  
 16:45 17:00 Michelle Liu: *Review of insulative bituminous materials for the protection of permafrost*

17:00 **End of day**

Early Career Researchers: *Announcement on evening agenda.*

## Cold Regions Research Centre Days

21-22 November, 2019

### Day 2: Friday, 22 November

08:30 09:00 Reception (coffee/tea & name tags)  
09:00 09:15 Bill Quinton: *Welcome from the Director, Cold Regions Research Centre / Announcements*

#### Session 1: Approaches and Applications

Evan Wilcox (Convener)

09:15 09:30 Laura Neary: *Use of continuous lake level measurements for hydrological monitoring*  
09:30 09:45 Neala MacLeod Farley: *Building a sustainable food system in Délı̄nę: digital storytelling and traditional knowledge*  
09:45 10:00 Alanna Robbins: *Using social media to enhance community engagement in environmental research*  
10:00 10:15 Chiranjib Chaudhuri: *Integrated discrete environmental analytics system (IDEAS); a new big data platform*

10:15 10:30 **Break**

#### Session 2: Ecological Processes

Laura Neary (Convener)

10:30 10:45 Cory Savage: *Use of artificial substrate samplers for biomonitoring of lakes in the Peace-Athabasca Delta*  
10:45 11:00 Katherine Standen: *Environmental drivers of plant community composition and function*  
11:00 11:15 Charles-Matt Chanyi: *Impacts of wildfires on zooplankton populations in the Sahtú settlement region*  
11:15 11:30 Karisa Tyler: *Ecohydrological controls of boreal peatland development in northeastern Alberta, Canada*  
11:30 11:45 Jeremy Leathers: *Assessing the potential of legacy mining pollution-affected peatlands*

12:00 13:00 **Lunch and Poster Session (see page 3)**

13:00 14:00 Dr. Jim Buttle: *Forest hydrology in a changing climate – the Turkey Lakes Watershed Forest Harvesting Experiment*

14:00 14:15 **Break**

#### Session 3: Models and Mechanisms

Katherine Standen (Convener)

14:15 14:30 Qianyu Chang: *Estimating LAI, biomass, and rainfall interception capacity of dwarf shrubs*  
14:30 14:45 Élise Devoie: *A novel approach to freeze-thaw modelling applied to discontinuous permafrost*  
14:45 15:00 Brandon Van Huizen: *Investigating the Influence of melting seasonal ground ice on the spatial variability of ET*  
15:00 15:15 Angela Elgie: *Impact of seismic lines on the hydrology of bogs in discontinuous permafrost zone*

15:15 15:30 **Break**

#### Session 4: Dynamic Lake Ecosystems

Charles-Matt Chanyi (Convener)

15:30 15:45 Anita Ghosh: *Investigating lake sediment profiles in the PAD for hydrological change from hydroelectric regulation*  
15:45 16:00 Heather Jovanovic: *Looming blooms - how climate warming in cold regions encourages toxic cyanobacteria growth*  
16:00 16:15 Evan Wilcox: *Controls on the hydrological variability of thermokarst lakes between Inuvik and Tuktoyaktuk, NWT*  
16:15 16:30 Caleb Girard: *Reconstructing the role of a "trigger tributary" on ice-jam induced flooding at the PAD*

16:30 16:45 **Closing remarks**

16:45 **End of day**

Early Career Researchers: *Announcement on evening agenda.*

**Cold Regions Research Centre Days**  
21-22 November, 2019

**Poster Presentations**

1. Fereidoun Rezanezhad: *Winter carbon losses in wetland ecosystems under current and future climates*
2. Stephanie Marshall: *The chronic toxicity of nitrate to sensitive aquatic invertebrates to low calcium waters*
3. Ryan Cheung: *Changes of temperature and precipitation extremes in Ontario: Insights from analysing observations and climate model simulations*
4. Kathleen Brown: *Evaluating the effects of climate change on closed-drainage lakes near the Peace-Athabasca Delta using paleolimnology*
5. Naveela Sookoo: *Rescuing USSR historical surface weather observations to support cold region research*
6. Jessica McCuaig: *Impacts of wildfire on permafrost thaw and subsequent carbon storage*
7. Adam Kuhrt: *Prey selectivity exhibited by Ninespine Stickleback (*Pungitius pungitius*) in arctic streams*
8. Danielle Nowosad: *Freshwater benthos in the Canadian arctic: using DNA barcoding to assess biodiversity, phylogeography, and ecological factors*
9. Timothy Ensom: *Hydrothermal regimes of stream channels in the Tuktoyaktuk coastlands and Anderson Plain, NWT*
10. Branden Walker: *Trail Valley Creek Research Station: An Overview*

**Note:** participants are welcome to display additional posters as poster space permits.

Cold Regions Research Centre



Excellence since 1987