



**2018 Workshop on Permafrost Coastal Erosion–Research Coordination Network
(PCE-RCN)**

October 11-12, 2018

**International Arctic Research Center (IARC), University of Alaska Fairbanks
Fairbanks, Alaska
www.PCE-RCN.org**

AGENDA

Contact info:

- Ming Xiao, workshop lead organizer; Email: mxiao@engr.psu.edu
- Louise Farquharson, workshop co-organizer, local contact;
Email: lmfarquharson@alaska.edu

Aim of this workshop: To introduce PCE-RCN network members and begin the coordination of a transdisciplinary Research Network to identify challenges of and solutions to permafrost coastal erosion and its socioecological impacts in the Arctic. Day 1 will be a series of interdisciplinary presentations and discussions that focus on key components of Arctic coastal erosion and its socioecological impacts and related engineering solutions; plenty of time will be set aside for the participants to meet and discuss individually and in small groups. Day 2 will be used to preliminarily identify the challenges addressing permafrost coastal erosion, identify the research needs, outline a plan to address the research needs. We will also explore potential knowledge gaps which would most benefit from synthesis and collaboration.

Hotel and shuttle information: If you will fly to Fairbank and will stay at the Pike’s Waterfront Lodge, you can call the hotel to arrange free shuttle. Please call 907-456-5200 extension 0 to request a pickup. The hotel website is: <https://www.pikeslodge.com>

Oct 10, 2018: participants to arrive in Fairbanks, AK.

Ice breaker at the UAF Pub, Wood Center, Lower Campus, 6-8pm. The shuttle will leave from outside Pike's Waterfront Lodge at 5:45pm.

The Workshop will be held in the International Arctic Research Center (IARC), University of Alaska Fairbanks. Shuttle will departure from the hotel on each day at 7:45am to IARC, where free buffet breakfast will be served. Free buffet lunch will also be served at IARC. Participants will be transported from the Workshop venue to hotel at the end of each day.

October 11, 2018, Day 1

8:00 to 8:40 am: [Registration and breakfast at IARC 501](#)

8:40 – 9:00: Welcome project introduction and objectives, symposium objectives, and schedule (Ming Xiao)

9:00 – 9:15: Participant self-introduction

Session 1: Overview of key components of the PCE-RCN

9:15 – 9:30 Vladimir Romanovsky: Arctic warming

9:30 – 9:45 Benjamin Jones: Physical process

9:45 – 10:00 Guangqing Chi: Social impacts and research tools

10:00 – 10:15 Kathy Halvorsen: Ecological impacts

10:15 – 10:30 Ming Xiao: Looking forward to engineering solutions

10:30 – 10:45 [Coffee break](#)

Session 2: Forcing factors

10:45 – 11:00 Hajo Eicken: Arctic sea ice and ocean changes that matter along the coast

11:00 – 11:15 Andy Mahoney: Landfast sea ice in a changing arctic

11:15 – 11:30 Nicole Kinsman: Resolving relative sea level trends in the arctic

11:30 – 11:45 Jeremy Kasper: Oceanographic forcing of erosion along the Beaufort sea coast

11:45 – 12:00 Torre Jorgenson: Influence of terrain and permafrost characteristics on coastal erosion.

12:00 – 1:45 [Catered buffet lunch, then tour University of Alaska Museum of the North](#)

Session 3: Physical process: rates, process, and monitoring

1:45 – 2:00 Ann Gibbs: Rates and patterns of coastal change in northern Alaska

2:00 – 2:15 Louise Farquharson: Regional variability in Arctic-Alaska coastal dynamics

2:15 – 2:30 Craig Tweedie: Monitoring and community involvement (BAID)

2:30 – 2:45 Evan Kane: Interactive effects of history, plant functional groups, and hydrology on carbon mineralization after permafrost thaw

2:45 – 3:00 [Coffee break](#)

3:00 – 4:00 **Breakout group discussion** (discussion led by workshop organizers)

Breakout into disciplinary groups: discussion can be based on key regions and could become the focuses of synthesis papers: Bering, Chukchi, Beaufort, pan-Arctic.

- Discuss key knowledge gaps
- Brainstorm potential areas for synthesis
- Discuss key areas of focus that would most benefit from collaboration across topics.

4:00 – 5:00 Report of group discussion by each breakout group to all workshop participants. Open discussion.

5:00 – 6:00 Shuttle back to hotel, break, personal time

6:00 – 9:00 [Group Dinner](#), Pike's Waterfront Lodge, participants to cover dinner cost, signing up is needed to know the number of attendees.

October 12, 2018, Day 2

8:00 to 8:45 am: Breakfast at IARC 501, Ming Xiao announcing plan and day overview

Session 4: Aspects of Socio-demographics and natural environment

8:45 – 9:00 Eddie Hunsinger: Alaska Demographic Data: Trends and Resources

9:00 – 9:15 Roman Sidortsov: Stranded assets and energy justice: ethics argument on behalf of future generations

9:15 – 9:30 Vladimir Alexeev: Migration and emergence of barrier islands in Arctic Alaska

Session 5: Lessons and knowledge learned from non-Arctic regions

9:30 – 9:45 Ann Tickamyer: Best practices in integrating gender into biophysical, environmental, and climate change research.

9:45 – 10:00 David Flaspohler: How might coastal permafrost erosion influence wildlife? What we know and what needs further study.

10:00 – 10:15 Brian Thiede: Climatic variability and human migration in low- and middle-income countries: Evidence using census data

10:15 – 10:30 Coffee break

Session 6: Coastal infrastructure and hazard mitigation

10:30 – 10:45 Robin Bronen: Integration of environmental science with social science and policy

10:45 – 11:00 Jacqueline Overbeck: Alaska coastal mapping and monitoring activities to support inter-governmental decision making on flood and erosion hazards: community planning, disaster preparation, mitigation, and relocation

11:00 – 11:15 De Anne Stevens: Overhauling the Alaska State hazard mitigation plan hazard profiles: Why it matters.

11:15 – 11:30 Alec Bennett: Exploring future threats to coastal infrastructure

11:30 – 11:45 Chris Maio: Reconstructing storm surges in the NW Chukchi

11:45 – 1:00 Catered buffet lunch

1:00 – 2:00 Phase 1, breakout group discussion. Breakout group discussion led by workshop organizers. Identify potential working groups, outline synthesis products/ manuscripts.

2:00 – 2:30 Coffee break

2:30 – 3:00 Phase 2, breakout group discussion (opportunity for mixing groups). Further work on drafting synthesis products/ manuscripts. Prepare PPT for group discussion report.

3:00 – 4:00 Discussion: breakout groups to report key points, discuss future steps.

4:00 – 4:15 Ming: closing statements, moving forward with the PCE-RCN.

4:15PM: Workshop ends. Shuttle back to hotel.

Optional and informal post-workshop gathering at Hoodoo Brewery, 5:00-7:00pm.

Workshop organizing committee:

- Ming Xiao, Associate Professor of Civil Engineering, Department of Civil and Environmental Engineering, Penn State University. mxiao@engr.psu.edu
- Vladimir Romanovsky, Professor of Geophysics, Geophysical Institute and the Department of Geosciences, University of Alaska Fairbanks. veromanovsky@alaska.edu
- Benjamin Jones, Research Assistant Professor, University of Alaska Fairbanks. bmjones3@alaska.edu
- Louise Farquharson, Research Associate, Geophysics Institute, University of Alaska Fairbanks. lmfarquharson@alaska.edu
- Kathy Halvorsen, Professor of Natural Resource Policy, Department of Social Sciences Department, Michigan Technological University. kehalvor@mtu.edu
- Guangqing Chi, Associate Professor of Rural Sociology and Demography, Penn State University. gchi@psu.edu
- Min Liew, Doctoral student, Department of Civil and Environmental Engineering, Penn State University. MUL393@psu.edu.

PCE-RCN participants (20) (not including the organizing committee members)

Names	Title, Specialty	Affiliations
Andy Mahoney	Associate Research Professor in Geophysics	Geophysical Institute University of Alaska Fairbanks
Jeremy Kasper	Research Associate Professor	Institute of Northern Engineering, University of Alaska Fairbanks
Nicole Kinsman	Alaska Regional Advisor for NGS	NOAA/NOS/National Geodetic Survey, Alaska
Jacqueline Overbeck	Geologist, coastal process and hazards	Alaska Division of Geological & Geophysical Surveys (DGGS)
De Anne Stevens	Geologist, hazard mitigation	Alaska DGGS
Eddie Hunsinger	State Demographer	Alaska Department of Labor and Workforce Development
Roman Sidortsov	Assistant Professor of Energy Policy, environmental justice	Michigan Technological University
David Flaspohler	Professor of Avian Ecology	Michigan Technological University
Evan Kane	Assistant Professor of Soil Science	Michigan Technological University
Brian Thiede	Assistant Professor of Rural Sociology and Demography	Pennsylvania State University
Ann Tickamyer	Professor of Rural Sociology and Demography	Pennsylvania State University
Ann Gibbs	Geologist	USGS, Pacific Coastal and Marine Science Center, Santa Cruz, CA
Craig Tweedie	Professor of Environmental Science	University of Texas, El Paso
Robin Bronen	Executive Director	Alaska Institute for Justice
David Swanson	Ecologist	National Park Services, Fairbanks, Alaska
Torre Jorgenson	Ecologist	Alaska Ecoscience, Fairbanks, Alaska
Hajo Eicken	Director of IARC, Professor of Geophysics	International Arctic Research Center (IARC), and Department of Geosciences, University of Alaska Fairbanks
Vladimir Alexeev	Research Professor	International Arctic Research Center (IARC), University of Alaska Fairbanks
Alec Bennett	Programmer	International Arctic Research Center (IARC), University of Alaska Fairbanks
Chris Maio	Assistant Professor of Coastal Geography	Department of Geoscience, UAF