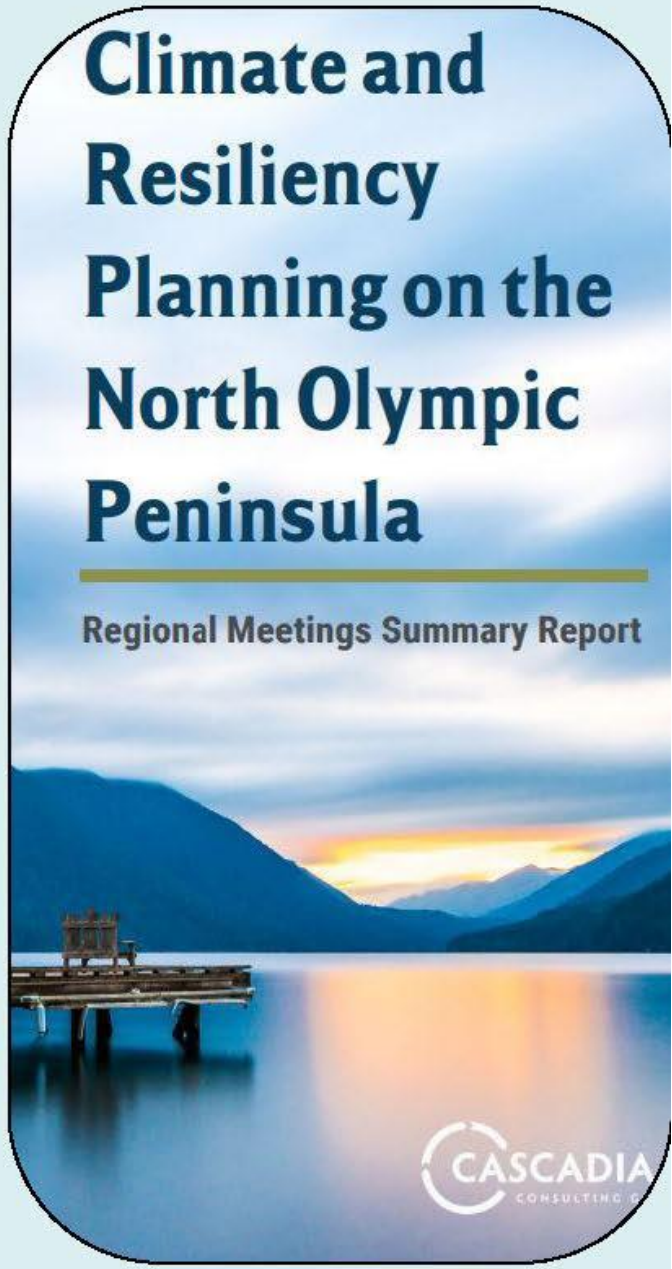
Climate Adaptation: Evaluation and new Directions

August (Gus) Wettstein

- SEFS MS student. Studying formal climate adaptation planning and barriers to transformational adaptation.
- Connected with North Olympic Development Council (NODC) as a community partner. Research project is intended to aid the NODC and its regional partners in ongoing adaptation efforts.
- PCC funds have enabled me to travel for interviews, community events, presentations, and focus groups, with more planned in summer.
- I will be attending AAG thanks to the PCC's support. I will be presenting on the outcomes of this work. Specifically, an in-progress paper on the value of STS theories for adaptation evaluation and critical adaptation studies.



Quantifying near-surface temperature lapse rates: a path to improved melt estimates for the Juneau Icefield, Alaska

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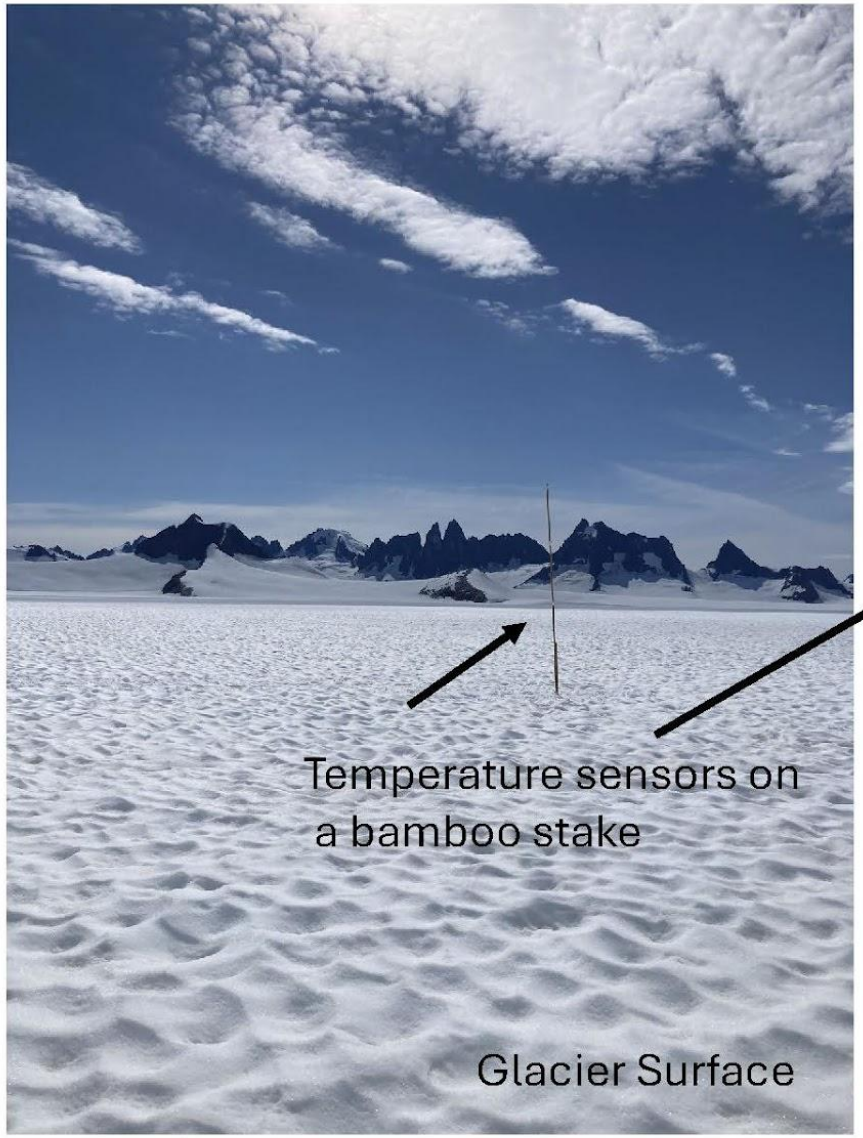


Glacier melt projections usually assume a standard value for temperature change with elevation, but this is not always accurate. This spring, **we will deploy an array of low-cost temperatures sensors on the Juneau Icefield to better characterize near-surface temperature lapse rates***.

*Generously supported by the PCC Research Accelerator Program

Mira Berdahl, PI
UW, ESS

Daniel Otto, PhD Student
UW, ESS

Jessica Badgeley, Postdoc
Dartmouth University

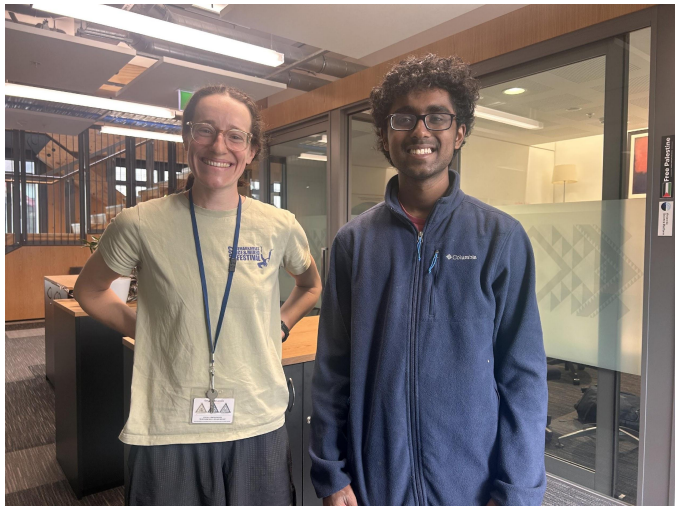
Painting with Data: Communicating Arctic Climate Change through Art and Science

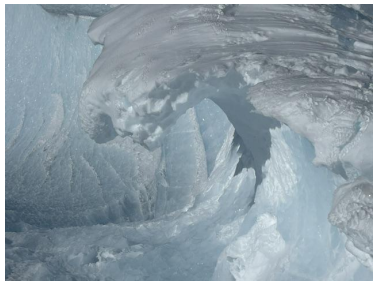
Funded by the PCC Climate Solutions Award and led by Carlyn Schmidgall, PhD student in Oceanography

Collaboration with artist and science communicator Jill Pelto (right) to produce artwork using data collected on the NASA Salinity and Stratification at the Sea Ice Edge research cruise in the Arctic Ocean.

Artwork will debut at an event at the School of Oceanography in Fall 2025, and the art exhibit will travel to public spaces and academic conferences.

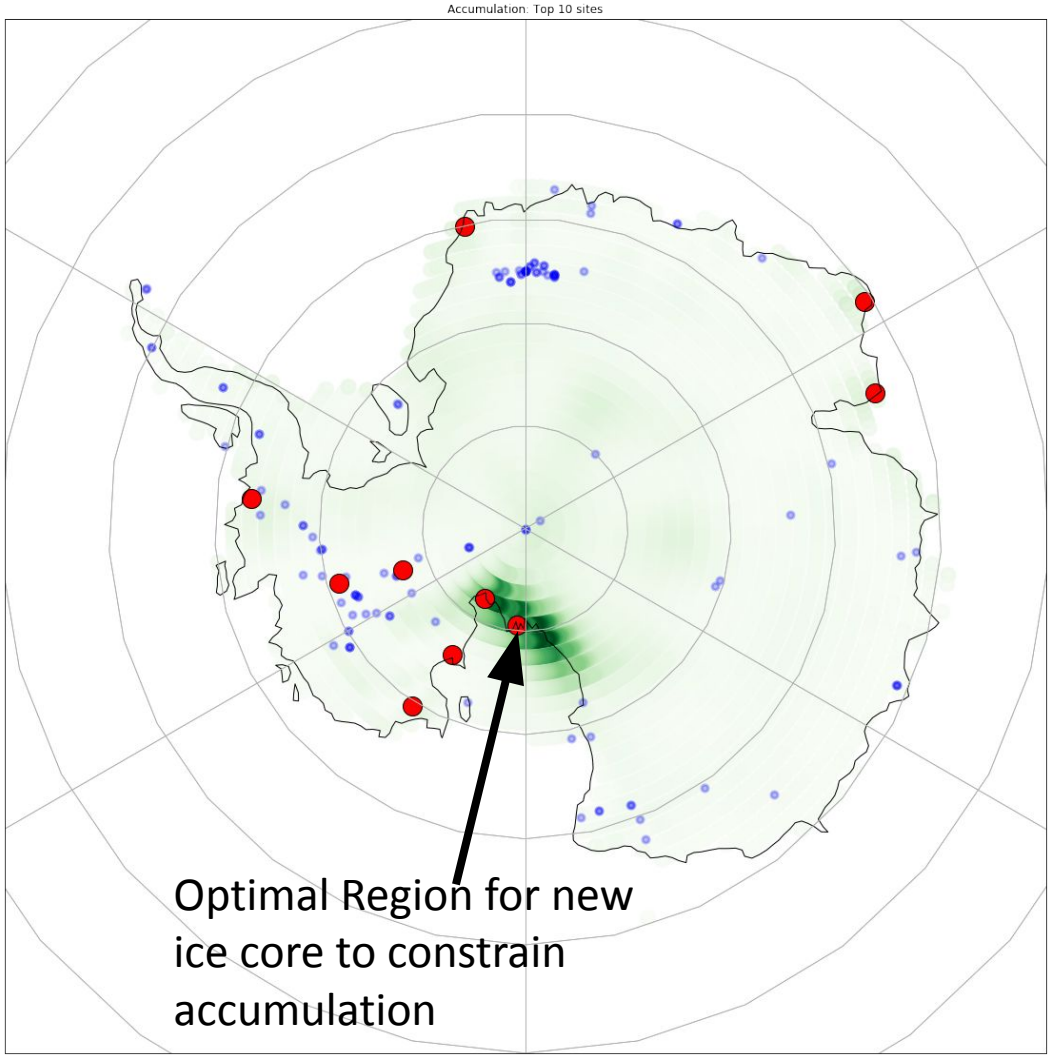
PCC Research Accelerator Award: Optimal Sensor Analysis for Identifying Shallow Antarctic Ice Core Drilling Locations





Olivia Truax – Lecturer, U. Canterbury, NZ; Affiliate Assistant Professor, UW
Advik Eswaran – Undergrad, Princeton
T.J. Fudge, Associate Research Professor, ESS, UW

We are developing a technique for selecting ice-core sites based on the ensemble Kalman filter optimal sensor methodology. We find an unsampled region at the base of Transarctic Mountains on the Ross Ice Shelf as the optimal site for a future ice core to constrain Antarctic accumulation and its contribution to global sea level.

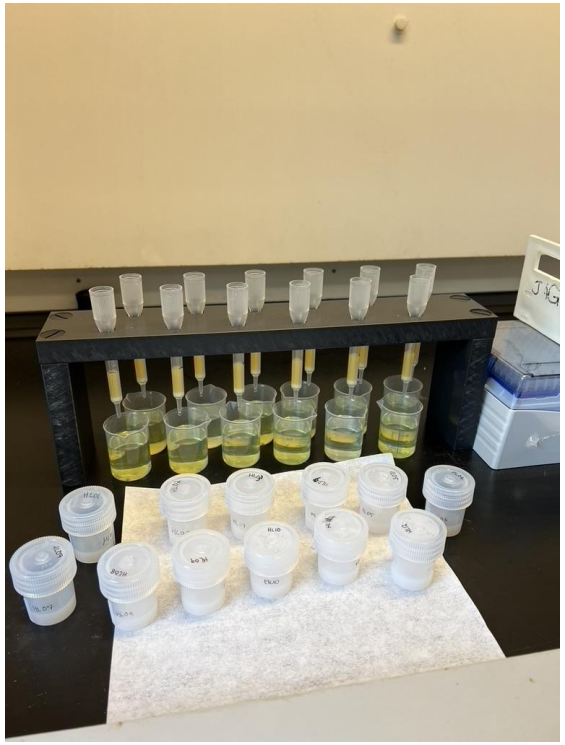


Calibrating a stopwatch to study past climates at the University of Washington

PI: Frankie Pavia
UW Oceanography

Co-PI: Marjorie Cantine
UW ESS

Predicting our climate future requires that we accurately and precisely measure rates of change using accurate dating of past climate archives. We are developing a critical geochemical tool, a spike, that will allow us to precisely date paleoclimate archives including fossils, sediments, and rocks. PCC Research Accelerator funding is allowing us to calibrate a spike of precisely known composition to serve as the lynchpin for uranium-series dating studies at the University of Washington.



To what extent do organic farmers select seeds to adapt to climate change?

A community-engaged MS thesis by Masha Vernik, with support from PCC Climate Solutions Fund

- Interviewed 30 farmers using organic practices in western WA
  - Research **guided by Organic Seed Alliance**, which advocates for organic seed production
  - Offered **complimentary soil tests** to participating farmers, thanks to PCC Climate Solutions Fund
- Sharing research results at:
  - **Tilth Conference** - organic farmers & farming communities
  - **Organic Seed Growers conference** - seed breeders, growers, and companies
  - **Association of American Geographers conference** - academics in the geography field
- Will attend Political Ecology workshop in Wageningen, NL
  - Connect local findings to global trends in agrarian communities
  - Support communication of findings to broader audiences

Thank you to PCC for making my research possible!

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PCC Fellows

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2024 PCC Graubard Graduate Fellowship Awards

Tara Kalia (OCEAN)

Claire Jensen (ESS)

Iana Ferguson (ATMOS)

Thank you to William Calvin and Katherine Graubard for establishing and supporting the Graubard Fellowship and Climate Research Acceleration Fund