

Education

University of Washington

Ph.D. student in Earth and Space Sciences; GPA: 3.67

Seattle, WA

September 2007 – present

- **Research – Modeling the thermomechanics of ice catchments in Greenland**

I have implemented a finite differences thermal model that treats the phase transitions of ice to water across an interior surface in polythermal glaciers and ice sheets. I am applying it to the Greenland ice sheet's major outlet glaciers to elucidate their fast movements and recent speedups. It addresses the near-term possible contribution of the Greenland ice sheet to sea level rise, and has application to subglacial hydrology and glacier sliding.

- **Program on Climate Change**

- [Graduate Climate Conference](#) – co-leader of organizing committee of an international, 82-student conference on climate change science and policy
- Climate Impacts in the Pacific Northwest [Summer Institute](#) – presenter of research on sea level rise
- King County Public Library Series – public lecturer on climate change in the Pacific Northwest
- [Sea level rise exhibit at Olympic Sculpture Park](#) – in partnership with Seattle Art Museum for International Day of Climate Action, 2009

- **Fieldwork**

- [Greenland supraglacial lakes](#) (2010, 2008) – GPS station deployment and field mapping
- [Antarctic ice stream flow](#) (2009) – GPS station monitoring and active-source seismology
- Glacier thinning in Olympic National Park (ongoing) – GPS surveys of glacier surface elevation

Case Western Reserve University

B.S in Physics; B.A. in English; GPA: 3.88

Cleveland, OH

August 2003 – May 2007

- **Research**

- Cryogenic Dark Matter Search – [Senior project](#): modeling, design, and commissioning of a multi-wire proportional chamber for screening dark matter detectors for ultra-low levels of radioactive contamination
- Holocene History of Lake Erie – Summer project: fluctuations of magnetic susceptibility and mineral content of sediment cores

Honors

Best Contribution in Surface Processes

[ESS Gala](#) research showcase

UW Earth and Space Sciences

March 2011

Research featured in magazine

[AGU presentation](#) highlighted in article “[Greenland poised on a knife edge](#)”

New Scientist magazine

January 8, 2011

Best Poster in Surface Processes

[ESS Gala](#) research showcase

UW Earth and Space Sciences

April 2010

Graduate Research Fellowship

National Science Foundation

March 2008

Elmer C. Stewart Memorial Award

Awarded to an outstanding undergraduate in experimental physics

CWRU Department of Physics

May 2007

Holden Prize

Best undergraduate essay: [Using Language to Transcend Language](#)

CWRU Department of English

April 2007

Krumhansl Prize

Awarded to an outstanding undergraduate woman in physics

CWRU Department of Physics

May 2007, May 2006

Selected Coursework

- **University of Washington coursework**

- Geophysical Fluids
- Continuum Mechanics
- [Flow of Wet-Bedded Glaciers](#) (student co-organizer)
- Writing for Scientific Audiences
- [Dynamics of Snow and Ice Masses](#)
- Geophysical Inverse Theory
- [Spectral Methods](#)
- [Physics of Ice](#)

- **Undergraduate coursework in geology**

- Introduction to Field Methods – [Precambrian history and mapping of the Death Valley area](#)
- Stratigraphy and Sedimentation

Presentations

A flow feedback lurking beneath Greenland's outlet glaciers CReSIS site review
[Internal oral presentation](#) to CReSIS group and NSF / NASA panel *April 6, 2011*

Temperate ice under Greenland's largest outlet glaciers Univ. of Washington
Oral presentation in Earth and Space Sciences Gala *March 30, 2011*

Temperate ice under Jakobshavn Isbrae, Greenland [American Geophysical Union](#)
[Poster presentation](#) at AGU fall meeting *December 14, 2010*

Warm, soft ice layer beneath Greenland's outlet glaciers? Univ. of Washington
[Oral presentation](#) at Graduate Climate Conference *October 15, 2010*

Modeling the thermal conditions of Jakobshavn Isbrae Univ. of Washington
Poster presentation in Earth and Space Sciences Gala *April 2, 2010*

Modeling polythermal ice and sliding in Greenland Univ. of British Columbia
Oral presentation at Northwest Glaciologists' Meeting *October 24, 2009*

The Likelihood of Sudden Sea Level Rise from Greenland Univ. of Washington
[Poster presentation](#) at Climate Impacts of the Pacific Northwest summer institute *September 14, 2009*