

**ELLYN M. ENDERLIN, PhD**

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**EDUCATION**

**The Ohio State University**

Columbus, OH

**Ph.D. Earth Sciences**

August 2013

Advisor: Dr. Ian Howat

Dissertation: Observations and modeling of Greenland outlet glacier dynamics

**The Ohio State University**

Columbus, OH

**M.S. Geological Sciences**

March 2010

Advisor: Dr. Ian Howat

Thesis: Controls on west Greenland outlet glacier sensitivity to climate forcing

**Lehigh University**

Bethlehem, PA

**B.S. Environmental Science**

January 2008

Advisor: Dr. Joan Ramage Macdonald

Honors Thesis: Landsat TM and ETM+ derived snowline altitudes in the Cordillera Huayhuash and Cordillera Raura, Peru, 1986-2005

**AT A GLANCE**

- Research Assistant Professor at the University of Maine
- Studies marine-terminating glacier dynamics and ice-ocean interactions using a suite of remotely sensed data, in situ observations, and numerical ice flow models
- 11 peer-reviewed publications, 7 as first-author
- Awarded 2 NASA grants totaling \$349,654 & a \$172,086 NSF grant, all as PI
- Experience teaching Glaciology, Geomorphology, and introductory Earth Science
- Actively involved in outreach activities:
  - Co-chair: US national committee for the Association of Polar Early Career Scientists
  - Early career representative: Ice Sheet Mass Balance and Sea Level (ISMASS) international steering committee
  - Secondary school guest speaker: annual presentations on glaciers, climate change, and/or remote sensing with local area schools

## RESEARCH INTERESTS

- Understanding variability in the response of glaciers to climate change
- Ice-ocean interactions & how changes in the interactions can trigger glacier change
- Glacier crevassing & implications for dynamic change
- Predicting glacier behavior using numerical ice flow modeling & remote sensing techniques
- Relative influence of internal and external controls of tidewater glacier behavior

## GRANTS

### Awarded

- NASA Earth and Space Sciences Fellowship (2010-2013), *Observations and modeling of Greenland outlet glacier dynamics*, \$90,000, 3 years, Co-PI: Ian Howat (OSU/BPRC)
- NASA Research Opportunities in Space and Earth Sciences (4/23/14-4/22/16): Cryospheric Science, *Intra-annual Force Balance Analysis of Tidewater Glaciers*, \$259,654, 2 years, Co-PI: Shad O’Neel (USGS)
- NSF Arctic Research Opportunities (8/15/14 – 8/14/16), *Quantifying Greenland Iceberg Melt Rates using Remotely-sensed Data*, \$172,372, 2 years, Co-PI: Gordon Hamilton (UMaine)

### Pending

- PI: NSF Antarctic Research (5/1/17-4/30/20), *Antarctic Submarine Melt Variability from Remote Sensing of Icebergs*, \$367,133, 3-years, Co-PI: Gordon Hamilton (UMaine)
- PI: NASA IceBridge Science Team (3/1/17-2/29/20), *Critical Glacier Observations from Crevassed Regions using Lidar Measurements and High-Resolution Optical Imagery*, \$420,762, 3 years
- PI: NSF Arctic Natural Sciences (9/1/17 - 8/31/20), *Quantifying the impacts outlet glacier velocity seasonality on solid and liquid meltwater fluxes to glacial fjords and ocean basins*, \$803,462, 3 years, Co-PI: Twila Moon

## PUBLICATIONS (\*née E. M. McFadden)

**Enderlin, E. M.**, G. S. Hamilton, S. O’Neel, & T. Bartholomaeus (anticipated submission Sept. 2016). An empirical approach for estimating stress-coupling lengths for marine-terminating glaciers. *Frontiers in Cryo. Sci.*

**Enderlin, E. M.**, G. S. Hamilton, F. Straneo, & D. A. Sutherland, in review. Iceberg meltwater fluxes dominate the freshwater budget in Greenland’s glacial fjords. *Geophys. Res. Lett.*

Talpe, M. J., R. S. Nerem, E. Forootan, M. Schmidt, F. G. Lemoine, **E. M. Enderlin**, & F. W. Landerer, in review. Ice mass change in Greenland and Antarctica between 1993 and 2014 from satellite gravity measurements. *J. Geod.*

Van den Broeke, M., **E. M. Enderlin**, I. Howat, P. K. Munneke, B. Noël, W. van de Berg, E. van Meijgaard, & B. Wouters, 2016. On the recent contribution of the Greenland ice sheet to

- sea level change. *Cryosphere Special Issue: Mass balance of the Greenland Ice Sheet*, 10, 1-14, doi:10.5194/tc-10-1-2016.
- Xu, Z., E. Schrama, W. van de Wal, M. van den Broeke, & **E. M. Enderlin**, 2016. Improved GRACE regional mass balance estimates of the Greenland Ice Sheet cross-validated with the input-output method. *Cryosphere*, **10**, 895-912, doi: 10.5194/tc-10-895-2016.
- Lenaerts, J. T. M., D. Le Bars, L. van Kampenhout, M. Vizcaino, **E. M. Enderlin**, & M. R. van den Broeke, 2015. Representing Greenland ice sheet freshwater fluxes in climate models. *Geophys. Res. Lett.*, **42**, doi:10.1002/2015GL064738.
- Enderlin, E. M.** & G. S. Hamilton, 2014. Estimates of iceberg submarine melting from high-resolution digital elevation models: Applications to Sermilik Fjord, East Greenland. *J. Glaciol.*, **60**(224), doi:10.3189/2014JoG14J085.
- Enderlin, E. M.**, I. M. Howat, S. Jeong, M.-J., Noh, J. H. van Angelen, & M. R. van den Broeke, 2014. An improved mass budget for the Greenland ice sheet. *Geophys. Res. Lett.*, 866-872, doi: 10.1002/2013GL059010.
- Enderlin, E. M.**, I. M. Howat, & A. Vieli, 2013. The sensitivity of tidewater glacier flowline models to parameter uncertainty. *Cryosphere*, **7**, 1579-1590, doi:10.5194/tc-7-1579-2013.
- Enderlin, E.M.**, I.M. Howat, & A. Vieli, 2013. High sensitivity of tidewater glacier dynamics to shape. *Cryosphere*, **7**, 1007-1015, doi:10.5194/tc-7-1007-2013.
- Enderlin, E. M.** & I. M. Howat, 2013. Submarine Melt Rate Estimates for Floating Termini of Greenland Outlet Glaciers (2000-2010). *J. Glaciol.*, **59**(213), 67-75, doi:10.3189/2013JoG12J049.
- Walsh, K. M., I. M. Howat, Y. Ahn, & **E. M. Enderlin**, 2012. Changes in the marine-terminating glaciers of central east Greenland, 2000-2010. *Cryosphere* **6**, 211-220, doi:10.5194/tc-6-211-2012.
- \***McFadden, E. M.**, I. M. Howat, I. Joughin, B. E. Smith, & Y. Ahn, 2011. Changes in the dynamics of marine-terminating outlet glaciers in west Greenland (2000-2009). *J. Geophys. Res.*, **116**(F2), F02022, doi:10.1029/2010JF001757.
- \***McFadden, E. M.**, J. Ramage, & D. T. Rodbell, 2011. Landsat TM and ETM+ derived snowline altitudes in the Cordillera Huayhuash and Cordillera Raura, Peru, 1986-2005. *Cryosphere*, **5**, 419-430, doi:10.5194/tc-5-419-2011.
- Howat, I. M., J. E. Box, Y. Ahn, A. Herrington, & \***E. M. McFadden**, 2010. Seasonal variability in the dynamics of marine-terminating outlet glaciers in Greenland. *J. Glaciology* **56**(198), 601-613.

## RESEARCH EXPERIENCE

### University of Maine

Orono, ME

#### Research Assistant Professor

November 2014 – present

- Constructing force balance time series from high-resolution DEMs and synthetic aperture radar (SAR)-derived surface flow speeds to examine short-term variations in glacier dynamics at Columbia Glacier, Alaska and Helheim Glacier, East Greenland
- Comparing glacier force balance time series with environmental forcing datasets to determine the optimal spatial and temporal sampling intervals for future glacial studies
- Constructing iceberg submarine freshwater fluxes and area-averaged melt rates for ~12 of Greenland's large glacial fjords using high-resolution digital elevation models (DEMs)
- Assessing spatio-temporal variations in iceberg freshwater fluxes, melt rates and iceberg size in collaboration with oceanographer colleagues at Woods Hole Oceanographic Institution
- Generating high-resolution DEMs and assisting with analysis of ice shelf stability in the McMurdo Shear Zone, West Antarctica

### University of Maine

Orono, ME

#### Postdoctoral Research Associate

August 2013 – October 2014

- Developed a remote sensing method to estimate iceberg submarine freshwater fluxes and area-averaged melt rates using high-resolution DEMs
- Compared remote sensing-derived iceberg melt estimates for Sermilik Fjord, East Greenland and Ilulissat Fjord, West Greenland to assess the controls of iceberg melting
- Constructed high-resolution DEMs for Columbia Glacier, Alaska and Helheim Glacier, East Greenland for use in a comparative force balance analysis

### The Ohio State University

Columbus, OH

#### NASA Earth and Space Science Fellow

September 2010 - August 2013

- Used satellite-derived digital elevation models and surface speeds to construct annual grounding line discharge time series for 178 tidewater glaciers in Greenland for 2000-2012
- Quantified Greenland ice sheet mass loss using glacier discharge and surface mass balance time series and the assessed the changes in mass loss partitioning since 2000
- Estimated average melt season submarine melt rates beneath the floating termini of 13 tidewater glaciers in Greenland to quantify mass loss from submarine melting
- Developed a one-dimensional numerical ice flow (i.e., flowline) model for analysis of tidewater glacier behavior: the Matlab model code is free to download from my website with a user guide describing model details and recommended sensitivity tests
- Assessed the influence of fjord geometry on glacier behavior in response to an environmental perturbation using a flowline model
- Investigated glacier sensitivity to variations in effective viscosity using a numerical ice flow model to improve the validity of prognostic models of glacier dynamics

**The Ohio State University**

Columbus, OH

**Graduate Research Assistant**

June 2008 - September 2010

- Analyzed changes in terminus positions and surface elevations for 59 tidewater outlet glaciers in west Greenland using satellite imagery obtained from 2000-2009
- Examined West Greenland tidewater glacier terminus position, speed, and elevation changes from 2000-2009 to determine the magnitude and timing of changes in glacier dynamics
- Compared West Greenland glacier behavior, air temperature, and ocean temperature records from 2000-2009 to assess the influence of climate forcing on glacier behavior
- Assisted a Masters student with analyzing terminus positions, surface elevations, and speeds for tidewater glaciers in east Greenland

**Lehigh University**

Bethlehem, PA

**Undergraduate Research Assistant**

June 2005 - May 2008

- Quantified modern snowline elevation change in the Cordillera Huayhuash and Cordillera Raura, Peru using satellite imagery from the mid-1980s to early 2000s and used snowline change to infer regional atmospheric warming

**FIELD EXPERIENCE**

**McMurdo Shear Zone, Antarctica**

October 2014

**PI: Dr. Gordon Hamilton (UMaine)**

- Produced surface ice flow velocity grids using automated feature-tracking techniques to determine the optimal locations to perform geophysical surveys of buried crevasses
- Installed and repeatedly surveyed a stake network with high-precision GPS units in order to construct strain rate grids for stability analysis of the McMurdo Shear Zone

**Helheim Glacier-Sermilik Fjord, Greenland**

July 2014

**PI: Dr. Gordon Hamilton (UMaine)**

- Deployed and retrieved high-precision GPS units on the highly-crevassed Helheim Glacier terminus with Gordon Hamilton (UMaine) and an undergraduate assistant via helicopter to provide precisely-located reference points for scanning lidar observations of ice motion
- Conducted expendable conductivity, temperature, and depth (XCTD) surveys in open-ocean leads in the Sermilik Fjord ice mélange via helicopter for oceanographer colleagues
- Worked with helicopter pilots to select icebergs for 'iceberg tracker' GPS unit deployment for physical oceanographer collaborator Dave Sutherland (UOregon)
- Installed an automated weather station near the Helheim terminus with colleagues from the US Army Cold Regions Research and Engineering Laboratory

**Jokulsarlon Lagoon, Iceland**

April 2012

**PI: Dr. Ian Howat (OSU)**

- Supervised field program preparation and provided logistical support for a Masters student in the OSU Glaciology group
- Collected along- and across-lagoon conductivity, temperature, and depth (CTD) surveys in Jokulsarlon lagoon (adjacent to Breiðamerkurjökull Glacier) for estimates of glacier submarine melting
- Serviced a tide gauge & added a wind turbine to a time-lapse camera unit positioned in close proximity to the actively calving portion of the Breiðamerkurjökull terminus

**Russell Glacier and Jakobshavn Isbræ, Greenland**

July 2010

**Co-I: Dr. Ian Howat (OSU), Dr. Paul Morin (University of Minnesota)**

- Collected high-precision on- and off-ice static GPS points with colleagues from the U. Minnesota Polar Geospatial Center and post-processed data for high-resolution DEM coregistration
- Assessed safety conditions while collecting GPS data on a highly-crevassed glacier terminus

**Breiðamerkurjökull Glacier, Iceland**

March 2008, June 2008, April 2009

**PI: Dr. Ian Howat (OSU)**

- Installed 12 high-precision GPS stations on the glacier terminus and an off-ice GPS base station used for surface velocity and strain rate calculations during the melt season
- Assisted in the acquisition of ice-penetrating radar observations used to estimate ice thickness and ice-bed interface properties within the GPS grid
- Serviced GPS stations to ensure that battery power was maintained and solar panels were secured and properly functioning

**Quelccaya Ice Cap and Hualcan Glacier, Peru**

June 2008

**PI: Dr. Lonnie Thompson (OSU)**

- Collected paleo plant samples that emerged from the retreating Quelccaya Ice Cap, which provided a minimum date for the last period of reduced ice extent
- Assisted in snowpit sampling and shallow ice core collection for ice core drill site reconnaissance on Hualcan Glacier

**Cordillera Huayhuash, Peru**

June 2005

**PI: Dr. Joan Ramage Macdonald (Lehigh)**

- Collected quartzite samples for cosmogenic isotope analysis for constraining regional Last Glacial Maximum deglaciation dates

**ABSTRACTS (\*née E. M. McFadden)**

**Talks**

- Enderlin, E. M.** (invited), 2016 Controls of iceberg calving in tidewater glacier fjords. *IASC Workshop on the Importance of Calving for the Mass Budget of Arctic Glaciers*.
- Enderlin, E. M.**, G. S. Hamilton, & F. Straneo, 2016. Large Freshwater Fluxes from Melting Ice Mélange in Greenland Glacial Fjords. *International Glaciological Society Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, Int. Glac. Soc.* Abstract 74A2009.
- Enderlin, E. M.**, G. S. Hamilton, & F. Straneo, 2015. Submarine Melting of Icebergs in Sermilik Fjord, Southeast Greenland, Based on Satellite Remote Sensing and Hydrographic Observations. *International Symposium on Contemporary Ice-Sheet Dynamics, Int. Glac. Soc.* Abstract 73A1878.
- Enderlin, E. M.**, G. S. Hamilton, F. Straneo, & C. Cenedese, 2014. Submarine Melting of Icebergs from Repeat High-Resolution Digital Elevation Models. *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C32B-03.
- Enderlin, E. M.**, I. M. Howat, M.-J. Noh, M. R. van den Broeke, & J. van Angelen, 2014. An Improved Mass Budget for the Greenland Ice Sheet. *IASC Workshop on the Dynamics and Mass Budget of Arctic Glaciers & Network on Arctic Glaciology Annual Meeting*.
- Enderlin, E. M.**, I. M. Howat, M.-J. Noh, M. R. van den Broeke, & J. van Angelen, 2013. An Improved Mass Budget for the Greenland Ice Sheet. *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C31C-01.
- Enderlin, E. M.**, 2013. Submarine melt rates for Greenland outlet glaciers. *Program for Regional Climate Assessment (PARCA)*, NASA Polar Initiative Meeting.
- Enderlin, E. M.**, 2012. Do Variations in Outlet Width Influence Dynamic Sensitivity? *Tidewater Glaciers Workshop, Svalbard, Norway*.
- Enderlin, E. M.**, 2012. Observations and Modeling of Greenland Outlet Glacier Dynamics. *Program for Regional Climate Assessment (PARCA)*, NASA Polar Initiative Meeting.
- \***McFadden, E. M.**, I. M. Howat, & A. Vieli, 2011. Assessing How Marine-Terminating Glacier Geometry Controls Dynamic Sensitivity to Calving Using a Numerical Ice Flow Model. *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C31C-06.
- \***McFadden, E. M.**, I. M. Howat, Y. Ahn, I. R. Joughin, & W. Maslowski, 2009. West Greenland Outlet Glacier Sensitivity (2000-2009). *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C11A-06.
- \***McFadden, E. M.**, I. M. Howat, Y. Ahn, & I. Joughin, 2008. Controls on Greenland Outlet Glacier Sensitivity to Climate Forcing: A Comparative Approach. *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C32B-05.

## Posters

- Enderlin, E. M.**, G. S. Hamilton, & S. O’Neel, 2015. High-resolution force balance analyses of tidewater glacier dynamics, *Eos Transactions AGU*, Fall Meet. Suppl., C25C-0798.
- Enderlin, E. M.** & I. M. Howat, 2013. Re-examining the timing and magnitude of recent dynamic changes in NW Greenland, *U.S. CLIVAR Workshop: Understanding the response of Greenland’s marine-terminating glaciers to oceanic and atmospheric forcing*.
- Enderlin, E. M.**, I. M. Howat, & A. Vieli, 2012. High sensitivity of tidewater glacier dynamics to shape, *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C23C-0662.
- Enderlin, E. M.**, I. M. Howat, & A. Vieli, 2012. Assessing Glacier Sensitivity to Differences in Outlet Width Using a Numerical Ice Flow Model. *Glaciers and Ice Sheets in a Warming Climate, Int. Glac. Soc.* Abstract 63A253.
- \***McFadden, E. M.** & I. M. Howat, 2011. Assessing Geometric Controls on Tidewater Glacier Dynamics Using a Numerical Ice Flow Model. *International Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, Int. Glac. Soc.* Abstract 60A011.
- \***McFadden, E. M.** & I. M. Howat, 2010. Assessing Geometric Controls on Tidewater Glacier Sensitivity to Frontal Perturbations Using a Numerical Ice Flow Model. *Eos Transactions AGU*, Fall Meet. Suppl. Abstract C23B-0616.

## TEACHING INTERESTS

- Glaciology & Cryosphere-Climate Interactions
- Remote Sensing
- Climatology & Paleoclimatology
- Geomorphology
- Introductory Earth Science, Environmental Science, & Physical Geography

## TEACHING EXPERIENCE

### Instructor Honors Tutorial

Spring 2017

### Climate and the Cryosphere Seminar

- Developing a junior-level honors seminar on climate change and its impacts on the Cryosphere
  - content focused on Quaternary climate and Cryosphere change across a range of time scales
  - emphasis placed on Cryospheric change in Maine and the impacts on local ecosystems and communities
  - class format rotating between lectures on the Cryosphere as a recorder of climate change, discussions of peer-reviewed literature and popular media content, guest presentations by UMaine faculty, and field trips (ice core lab, snowpack sampling, lake ice coring, etc.)



**Instructor ERS602**

Spring 2015

**Glaciology Seminar**

- Developed a graduate-level Glaciology seminar for students conducting glacier research
- Introductory lectures on the major principles of glaciology (mass balance, ice flow, hydrology, dynamics, etc.) and their research applications tailored to meet the needs of the students enrolled in the course
- Student seminars:
  - 2-3 student-selected assigned readings per week
  - reading guides designed by student presenter to highlight discussion points
  - 30 minute student presentation of journal articles & associated background information
  - mediated discussion on assigned readings

**Substitute Lecturer ES121**

September 2012

**The Dynamic Earth**

- Lectured on mineral identification, silicate structure, magma, and igneous rocks to ~150 students enrolled in an introductory Earth Sciences course at The Ohio State University

**Lab Instructor ES550**

Spring 2011, Spring 2012

**Geomorphology**

- Developed 9 new 2-hour laboratory exercises designed for a class of ~25 undergraduate Earth Science majors and non-majors at The Ohio State University
- Revised laboratory exercises annually to improve the quality of student learning
- Taught introductory material for laboratory exercises using illustrations, demonstrations, and examples to ensure students were prepared with the appropriate background knowledge
- Assisted students with questions throughout laboratory exercises by providing one-on-one instruction on difficult concepts or exercises
- Encouraged student participation in laboratory exercises by varying the type of activity (computer-based vs. hands-on) and by developing a good rapport with students
- Conducted surveys regarding course content and the effectiveness of my teaching

**Student EduPL 894.32**

Winter 2012

**Higher Education Group Study: Course Design**

- Attended weekly 3-hour lectures on course design using the backwards design principle
- Applied backwards design to the development of an undergraduate Geomorphology course open to Earth Sciences majors and students from other disciplines
- Developed a Geomorphology course description and course syllabus used to convey the course goals and objectives to administrators and students, respectively
- Created a major scaffolded assignment and grading rubric for the Geomorphology course

### HONORS/AWARDS

- **Bangor Savings Bank Faculty Development Award**, University of Maine, 2016
- **NASA Early-Career Travel Award**, International Glaciological Society Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, 2016
- **Distinguished Senior Ph.D. Student Award**, The Ohio State University, 2013
- **Michael Johnson Graduate Scholarship**, The Ohio State University, 2012
- **NASA Earth and Space Sciences Fellowship**, The Ohio State University, 2010-2013
- **Rick Toracinta Graduate Scholarship**, The Ohio State University, 2010
- **University Fellowship**, The Ohio State University, 2008-2009
- **Foster Hewett Senior Undergraduate Award**, Lehigh University, 2008
- **Rhodes Scholarship Nominee**, Lehigh University, 2008
- **Presidential Scholar**, Lehigh University, 2008
- **Class of 1904 Scholarship**, Lehigh University, 2007-2008
- **Eckardt College Scholar**, Lehigh University, 2004-2008

### PROFESSIONAL SERVICE AND OUTREACH

- **Peer-reviewer**: Geophysical Research Letters; Journal of Geophysical Research-Earth Surface and -Atmospheres; Geology; Inverse Problems; Journal of Glaciology; The Cryosphere; Arctic, Antarctic, and Alpine Research; Earth and Planetary Science Letters; Cold Regions Science and Technology
- **Review Editor**: Frontiers in Cryospheric Sciences
- **Local Organizing Committee Member & Early Career Activity Coordinator**: International Arctic Science Committee Network on Arctic Glaciology Annual Meeting, January 2017
- **Co-opted Council Member**: International Glaciological Society, July 2016 - present
- **Co-chair**: Association of Polar Early Career Scientists United States National Committee (USAPECS), January 2015-present
- **Early Career Representative**: Ice Sheet Mass Balance and Sea Level (ISMSS) Steering Committee, July 2015-present
- **Undergraduate Research Supervisor**: University of Maine, 2014-present
- **Dissertation Committee Member**: University of Maine, 2015-present
- **8<sup>th</sup>-Grade Science Fair Judge**: Etna-Dixmont School, 2015-2016
- **High School Guest speaker**:
  - 12<sup>th</sup>-grade Physics & 9<sup>th</sup>-grade Physical Science (annual climate science, glaciology, and remote sensing presentations), Ellsworth High School, 2014-2016
  - 9<sup>th</sup> grade Physical Science, London High School, 2011-2013
  - Columbus Ohio Center of Science and Industry, December 2011
- **Panelist**: Bowdoin College Coalition for Expanding Reach of Earth Sciences (CERES) Women in Science panel, 2016

- **Scientific Session Convener:** American Geophysical Union Fall Meeting, 2014 & 2015
- **Council Member:** Association of Polar Early Career Scientists (APECS), 2013-2015
- **Co-convener:** Association of Polar Early Career Scientists Cryosphere Career Development Panel, American Geophysical Union Fall Meeting, 2013-2015
- **Keynote alumni presenter:** Earth and Environmental Science Department, Lehigh University, “Glaciers Gone Wild: Rapid Changes in Greenland Glacier Behavior Initiated at the Ocean’s Edge”, April 2014
- **Co-convener:** Getting out in the Field as a Skill Workshop, American Geophysical Union Fall Meeting, 2013
- **OSU Glaciology Group Outreach Coordinator/Chair:** 2011- 2013
- **Prospective Graduate Student Coordinator:** School of Earth Sciences, The Ohio State University, 2013
- **Graduate Student Representative:** School of Earth Sciences Activity Committee & School of Earth Sciences Diversity Committee, The Ohio State University, 2012 - 2013
- **School of Earth Sciences Graduate Student Representative:** The Ohio State University Council of Graduate Students, 2011 - 2012
- **Climate Change Interviewee:** NBC4 Columbus, April 2010
- **Water, Climate, and the Environment Division Representative:** School of Earth Sciences Graduate Studies Committee, 2009 – 2010

#### **WORKSHOPS & SYMPOSIA**

- **New Generation of Polar Researchers Leadership Symposium,** USC Wrigley/Boone Center for Environmental Research, CA, USA, May 2015
- **Tidewater Glaciers Workshop 2012,** Svalbard, Norway, August 2012
- **Karthaus Summer School on Ice Sheets and Glaciers in the Climate System,** Karthaus, Italy, September 2009

#### **PROFESSIONAL AFFILIATIONS**

- American Geophysical Union
- International Glaciological Society
- Association of Polar Early Career Scientists