Bess G. Koffman

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Education

University of Maine, Orono, Maine — expected Spring 2013
Ph.D., Earth and Climate Sciences
Dissertation Title: *Atmospheric dust deposition in West Antarctica: Iron biogeochemistry, dust provenance and climatic significance.*
Advisor: Karl Kreutz

Carleton College, Northfield, Minnesota — June 2004
B.A., Geology, *magna cum laude*
Thesis Title: *Molecular phylogenetic analysis of a bacterial mat community, Le Grotte di Frasassi, Italy.*
Advisors: Jenn Macalady and Bereket Haileab

Carleton Geology Seminar in Italy, Osservatorio Geologico di Coldigioco, Italy — Fall 2003
Sea Education Association Semester S-179, Woods Hole, Massachusetts — Winter 2001

Professional Experience

Department of Earth and Atmospheric Sciences, Cornell University
Visiting Student, Natalie Mahowald's group — Fall 2012

School of Earth and Climate Sciences, University of Maine
University of Maine Dissertation Research Fellow — 2012-2013

Chase Distinguished Research Assistant — 2011-2012

Correll Graduate Research Fellow — 2010-2011

Graduate Research Assistant — 2007-2010

West Antarctic Ice Sheet (WAIS) Divide deep ice core drilling project — 2008-2010
Ice Core Handler Technician
Worked two field seasons logging and processing ice core on NSF-funded project in West Antarctica for the study of climate, cryobiology and ice sheet history. PI: Kendrick Taylor

Eastern Nevada Landscape Coalition, Ely, Nevada — 2006-2007
Crew Leader
For two field seasons, led field team evaluating desert plant ecological response to wildfire in the Great Basin and Mojave Desert

Virginia Institute of Marine Science, Gloucester Point, Virginia — 2005-2006
Laboratory Technician
Managed field program for marine biogeochemistry component of NSF Long-Term Ecological Research (LTER) project at Palmer Station, Antarctica. PI: Hugh Ducklow

Awards and Fellowships

Best Poster Award, International Partnerships in Ice Coring Sciences Open Science Meeting, Presqu' Ile de Giens, France, 2012

Winner, AGU "Lights, Camera, Science!" Student Video Competition, 2012

NSF Office of Polar Programs Postdoctoral Fellowship in Polar Regions Research 2013-2015. *"ANT-1204050: Evaluating New Zealand as a source of dust to West Antarctica during the Last Glacial Maximum"* $139,116

Best Oral Presentation, Physical Sciences and Technology (first place), University of Maine Graduate Student Research Exposition, 2012 $600

Graduate Dean's Undergraduate Mentoring Award (second place), University of Maine, 2012 $250

Graduate Teaching Award, Center for Excellence in Teaching and Assessment, University of Maine, 2012 $100

Graduate Research Excellence Award, College of Natural Sciences, Forestry and Agriculture, University of Maine, 2012 $1000

University of Maine Dissertation Research Fellowship, 2012-2013 $25,000

NSF Office of Polar Programs Postdoctoral Fellowship in Polar Regions Research, 2011 *Travel grant to visit Cornell University and Lamont-Doherty Earth Observatory* $1600

Chase Distinguished Research Assistantship, University of Maine, 2011-2012 $13,120 *"Testing the relationship between the Southern Hemisphere westerlies and atmospheric CO_2 over the past 2400 years"*

Antarctica Service Medal of the United States of America, 2011

Outstanding Service Award, College of Natural Sciences, Forestry and Agriculture, University of Maine, 2011 $1000

Correll Graduate Student Research Fellowship, University of Maine, 2010-2011 $17,288

"ThinkSwiss: Brainstorm the Future," a program of the Swiss State Secretariat for Education and Research and the Swiss Federal Department of Foreign Affairs, 2009 $1460

Best Oral Presentation, Physical and Mathematical Sciences (third place), University of Maine Graduate Student Research Exposition, 2009

CC^{21} Student Poster Competition, honorable mention, 2008

Lilianna M. Galasso Scholarship, University of Maine, 2008 $250

Sigma Xi, The Scientific Research Society, elected 2004

Larson International Fellowship, Carleton College, 2004 $3200

Publications

In Preparation

Koffman, B.G., Kreutz, K.J., and Mahowald, N.M., *In Preparation*. Changes in atmospheric circulation over the past 2400 years inferred from the WAIS Divide ice core dust record. *Climate of the Past.*

Koffman, B.G., Handley, M., Osterberg, E., and Kreutz, K.J., *In Preparation*. Evidence for the dependence of measured trace elemental concentrations on acidification strength and time. *Environmental Science and Technology*.

Submitted

Koffman, B.G., Kreutz, K.J., Kurbatov, A.V., and Dunbar, N., *Submitted*. Impact of known local and tropical volcanic eruptions of the past millennium on the WAIS Divide ice core microparticle record. *Geophysical Research Letters*.

In Press

Kreutz, K.J. and **Koffman, B.G**., *In Press.* Ice Core Methods: Glaciochemistry. In *Encyclopedia of Quaternary Science, second edition* (S.A. Elias, ed.), Elsevier Publishers, London.

Published

Breton, D.J., **Koffman, B.G.**, Kurbatov, A.V., Kreutz, K.J., and Hamilton, G.S., 2012. Quantifying signal dispersion in a hybrid ice core melting system. *Environmental Science and Technology*.

Koffman, B., Kreutz, K., Handley, M., Wells, M., Kurbatov, A., and Mayewski, P., 2008. A snowpit record of atmospheric Fe deposition in West Antarctica at the WAIS Divide site. *Geochimica et Cosmochimica Acta,* 72:12, p. A487-A487.

Macalady, J. L., Lyon, E.H., **Koffman, B**., Albertson, L.K., Meyer, K., Galdenzi, S. and Mariani, S, 2006. Dominant microbial populations in limestone-corroding stream biofilms, Frasassi cave system, Italy. *Applied and Environmental Microbiology*, 72:8, p. 5596-5609.

Lyon, E., **Koffman, B**., Meyer, K., Cleaveland, L., Mariani, S., Galdenzi, S., and Macalady, J.L., 2004. Geomicrobiology of the Frasassi Caves. In *Frasassi 1989-2004: Gli sviluppi nella ricerca* (S. Galdenzi, ed.), p. 152-157.

Presentations at National and International Meetings

Koffman, B.G., Kreutz, K.J. Changes in Southern Hemisphere atmospheric circulation over the past 2400 years inferred from the WAIS Divide ice core dust record. *Graduate Climate Conference 6,* Packwood Forest, WA, Oct. 2012.

Koffman, B.G., Kreutz, K.J. and Mahowald, N.M. Calibrating the WAIS Divide ice core dust record using climate model and reanalysis data. *IPICS Meeting*, Presqu' Ile de Giens, France, Oct. 2012

Koffman, B.G., Kreutz, K.J., Kurbatov, A.V., Dunbar, N.W. and Breton, D.J. The WAIS Divide microparticle record illuminates the nature of past volcanic eruptions and indicates variability in

Southern Hemisphere westerly wind intensity. *WAIS Divide Science Meeting*, La Jolla, CA, Sept. 2012

Koffman, B.G., Kreutz, K.J., and Mahowald, N.M. Changes in Southern Hemisphere atmospheric circulation over the past 2400 years inferred from the WAIS Divide ice core dust record. *Goldschmidt geochemistry conference*, Montreal, Canada, June 2012.

Koffman, B.G., Kreutz, K.J., Dunbar, N.W. and Kurbatov, A.V. Depositional phasing of volcanic aerosols in the WAIS Divide ice core over the past 2400 years. *AGU Fall Meeting*, San Francisco, CA, Dec. 2011

Kreutz, K.J., **Koffman, B.G.,** Breton, D.J., Dunbar, N.W., and Kurbatov, A.V. Seasonal to centennial-scale variability of microparticle concentration and size distribution in the WAIS Divide ice core over the past 2.4 ka. *AGU Fall Meeting*, San Francisco, CA, Dec. 2011

Koffman, B.G. and Kreutz, K.J. Microparticle insights into southern hemisphere climate variability over the past 2400 years. *WAIS Divide Science Meeting*, La Jolla, CA, Oct. 2011

Koffman, B.G., Kreutz, K.J., Breton, D.J., Dunbar, N.W., Kurbatov, A.V., Mayewski, P.A., and Wells, M.L. Seasonal to centennial-scale variability of microparticle concentration and size distribution in the WAIS Divide ice core over the past 2.4 ka. *XVIII INQUA Congress*, Bern, Switzerland, July 2011

Dunbar, N.W., Kurbatov, A.V., McIntosh, W.C., and **Koffman, B.G.** Antarctic tephrochronology: from visible layers to cryptotephra. *11th International Symposium on Antarctic Earth Sciences (invited talk)*, Edinburgh, Scotland, July 2011

Breton, D.J., **Koffman, B.G.,** Kreutz, K.J., and Hamilton, G.S. The WAIS Melt Monitor: An automated ice core melting system for meltwater sample handling and the collection of high resolution microparticle size distribution data. *AGU Fall Meeting*, San Francisco, CA, Dec. 2010

Koffman, B.G., Kreutz, K.J., Breton, D.J., Dunbar, N.W., Kurbatov, A.V., Mayewski, P.A., and Wells, M.L. Microparticle concentration in the WAIS Divide ice core over the past 2.3 ka: Seasonal variation and volcanic input. *WAIS Divide Science Meeting*, La Jolla, CA, Oct. 2010

Koffman, B.G., Marino, F., Castellano, E., and Kreutz, K.J. Geochemical Evidence of a Coherent Dust Source Signal in Antarctica? *DUSTSPEC: Dust Records for a Changing World workshop*, Palisades, NY, May 2010.

Koffman, B., Kreutz, K., Breton, D., Handley, M., Kurbatov, A., Dunbar, N., Mahowald, N., Mayewski, P., and Wells, M. Late Holocene record of microparticle and aerosol iron deposition in West Antarctica at the WAIS Divide site. NCCR Summer Climate School, Grindelwald, Switzerland, Aug. 2009.

Kreutz, K.J., **Koffman, B.,** Mayewski, P., Kurbatov, A., Wells, M., Handley, M., and Sneed, S. Modeling glacial-interglacial changes in dust and sea salt concentrations in West Antarctic deep ice cores: implications for Southern Hemisphere atmospheric dynamics, *PAGES Third Open Science Meeting,* Corvallis, OR, July 2009.

Koffman, B., Kreutz, K., Breton, D., Handley, M., Kurbatov, K., Dunbar, N., Mayewski, P., and Wells, M. A snowpit record of microparticle and aerosol iron deposition in West Antarctica at the WAIS Divide site. *WAIS Divide Science Meeting*, La Jolla, CA, Oct. 2009.

Koffman, B., Breton, D., Kreutz, K., Handley, M., and Kurbatov, A. Re-Engineering the UMaine Continuous Ice-Core Melter System for the WAIS Divide Ice Core. *WAIS Divide Science Meeting,* La Jolla, CA, Oct. 2009.

Koffman, B., Kreutz, K., Handley, M., Breton, D., Sneed, S., Wells, M., Kurbatov, K., and Mayewski, P. A snowpit record of atmospheric Fe deposition in West Antarctica at the WAIS Divide site, and updates on our continuous melter system. *WAIS Divide Science Meeting,* Denver, CO, Oct. 2008.

Koffman, B., Kreutz, K., Kurbatov, A., Mayewski, P., Wells, P., and Dunbar, N. Revisiting the Byrd ice core microparticle record, and implications for WAIS Divide. *WAIS Divide Science Meeting*, Kings Beach, CA, Oct. 2007.

Presentations at Local and Regional Meetings

Koffman, B., Kane, E., Griffin, S., Robinson, P., and Kreutz, K. Winds of Change: Ice core evidence for the role of the Southern Hemisphere westerly winds in regulating atmospheric carbon dioxide. Graduate Student Research Exposition, April 2012 *(won first place oral presentation in Physical Sciences and Technology).*

Koffman, B.G., Goldstein, S.L., Kaplan, M.R., Winckler, G., Mahowald, N.M., and Kreutz, K.J. Evaluating New Zealand as a source of dust to West Antarctica during the Last Glacial Maximum. Climate Change Institute Borns Symposium, April 2012.

Koffman, B., Kreutz, K., Breton, D., Dunbar, N., Kurbatov, A., Mayewski, P., and Wells, M. Microparticle concentration in the WAIS Divide ice core over the past 2.4 ka: Seasonal variation and volcanic input. Graduate Student Research Exposition, April 2011.

Breton, D., **Koffman, B**., Hamilton, G., and Kreutz, K. Applications of residence time theory for characterization of dispersion in continuous-flow ice core meltwater analysis. Climate Change Institute Borns Symposium, April 2011.

Koffman, B., Kreutz, K., Breton, D., Dunbar, N., Kurbatov, A., Mayewski, P., and Wells, M. Seasonal to centennial-scale variability of microparticle concentration and size distribution in the WAIS Divide ice core over the past 2.4 ka. Climate Change Institute Borns Symposium, April 2011.

Koffman, B., Marino, F., Castellano, E., Dunbar, N., Kreutz, K., Kurbatov, A., and Mayewski, P. Probable Australian dust source for West Antarctica. Climate Change Institute Borns Symposium, April 2010.

Koffman, B., Kreutz, K., Breton, D., Handley, M., Kurbatov, A., Dunbar, N., Mahowald, N., Mayewski, P., and Wells, M. Dust and iron biogeochemistry in West Antarctica at the WAIS Divide site. Climate Change Institute Borns Symposium, April 2009.

Koffman, B. and Kreutz K. Dust deposition in West Antarctica at the WAIS Divide site: recent fieldwork, results and upcoming research. Graduate Student Research Exposition, April 2009.

Koffman, B., Kreutz, K., Handley, M., Breton, D., Sneed, S., Wells, M., Kurbatov, K., and Mayewski, P. A snowpit record of atmospheric Fe deposition in West Antarctica at the WAIS Divide site, and updates on our continuous melter system. CC^{21} Climate Change Conference, October 2008 *(won honorable mention in student poster competition).*

Koffman, B., Kreutz, K., Handley, M., Sneed, S., Wells, M., Kurbatov, A., and Mayewski, P. A snowpit record of atmospheric Fe deposition in West Antarctica at the WAIS Divide site. Climate Change Institute Borns Symposium, May 2008.

Koffman, B., Kreutz, K., Handley, M., Wells, M., Kurbatov, A., and Mayewski, P. Atmospheric Fe deposition in West Antarctica inferred from snowpit record. Graduate Student Research Exposition, April 2008 *(won third place oral presentation in Physical and Mathematical Sciences)*.

Invited Talks

Cornell University Space and Planetary Sciences "Planetary Lunch," Nov. 2012

Lamont-Doherty Earth Observatory of Columbia University Fall Geochemistry Seminar Series, Sept. 2011

Cornell University Department of Earth and Atmospheric Sciences Fall Seminar Series, "Earth Trek Next Generation: New Talent, New Techniques, New Frontiers," Aug. 2011

Teaching and Mentoring Experience

University of Maine

Guest Speaker, University of Maine, Farmington, Introduction to Environmental Science, Spring 2012. Discussed climate change research and climate impacts in Maine.

Guest Speaker, The Anthropocene – The Age of Humans (ANT 290, 3 cr), Spring 2012. Taught two lectures on Earth's ice age cycles and paleoclimate reconstruction.

Course Coordinator, Graduate Seminar in Quaternary Studies (INT 500, 2 cr), Fall 2011. Course theme: "The influence of ocean circulation on Earth's climate at multiple time and space scales." Responsible for designing course, selecting and inviting guest speakers, establishing course reading list, facilitating discussions.

Advisor, Orono High School – UMaine Research Experience, Summer 2010 & 2011 Supervised high school student working to develop new SEM-EDS method to study atmospheric dust in ice cores; funded by NSF EPSCoR grant.

Teaching Assistant, Global Environmental Change (ERS 201, 4 cr), Spring 2010 & 2011 Involved in all aspects of course design, including projects, labs and exams. Taught selection of labs and lectures, co-facilitated field trips, developed and taught series of writing workshops, performed majority of grading for course.

Teaching Assistant, Beaches and Coasts (ERS 108, 3 cr), Spring 2011 Assisted professor in large lecture course (200 students) with A/V setup, taking notes during lectures, and proctoring exams for approximately half the semester.

Teaching Assistant, Earth Systems (ERS 200, 4 cr), Fall 2010 Had important role of maintaining sense of continuity for 14 students in a course with 4 different instructors. Held regular office hours, worked with students on their writing and presentation skills, and provided timely edits of students' 5-10 page research papers for each of the 3 course modules.

Laboratory Coordinator, Introduction to Geology (ERS 101, 4 cr), Fall 2010 Prepared weekly lab exercises for introductory geology courses; organized and maintained rock, mineral and map collections and safety equipment.

Guest Lecturer, Graduate Seminar in Quaternary Studies (INT 500, 2 cr), Fall 2010
Talk entitled: "Dust and ocean-atmosphere interactions in the middle-to-high latitudes of the Southern Hemisphere."

Guest Speaker, Master of Science in Teaching program, Fall 2010
Taught future science teachers about the scope of earth science research.

Laboratory supervisor to 5 undergraduate students and one masters student assisting with ice core paleoclimate research, 2007-2011. Provided ongoing mentorship to two young women scientists involved in paleoclimate research.

Gulf of Maine Foundation SURE Intern, Darling Marine Center, Summer 2002
Designed and taught marine science educational activities to all ages; served as the liaison between the research community and the public.

Chewonki Foundation, Wiscasset, Maine
Wilderness Instructor, Summer 2007

North Carolina Outward Bound School, Asheville, North Carolina
Logistics Coordinator, Summer 2005
Instructor, Winters 2007 and 2008

Boston University Sargent Center for Outdoor Education, Hancock, New Hampshire
School Program Instructor, 2004-2005

Litembo Secondary School, Litembo, Ruvuma, Tanzania
Visiting Science Teacher, Summer 2003
Taught basic science classes for several weeks to students in a remote village in southern Tanzania, for whom English was a third language.

Carleton College, Northfield, Minnesota
Teaching Assistant, Principles of Chemistry (CHEM 123, 6 cr), Fall 2001
Responsible for setting up and assisting with lab exercises, grading lab notebooks, and maintaining regular office hours.

Teaching Assistant, Geomicrobiology (GEOL 235, 6 cr), Winter 2004
Responsible for facilitating weekly lab exercises, helping coordinate field trips, grading lab reports, and maintaining regular office hours.

Public Outreach Talks (given to >485 people as of July 2012)

2012 Guest Scientist, Physics Camp, University of Maine (3 days)
Public lecture, Phoenix Rising School (all ages audience of 40 people)

2011 Guest speaker, Encore Leadership Corps, a statewide adult volunteer program administered by the UMaine Center on Aging
Co-facilitator, Asa Adams Elementary School field trip to the Climate Change Institute
Guest Speaker, "STORMS: Students and Teachers Observing and Recording Meteorological Systems" program through The Island Institute
Guest Speaker, Climate Change Science Day at the Climate Change Institute (presentations to ~100 students from high schools throughout Maine)
Guest Scientist, Expanding Your Horizons, part of the National Girls Collaborative Project aimed at advancing the agenda in gender equity for STEM

2010	Guest speaker, Sunbury Village retirement center, Bangor, Maine
	Invited Speaker, Coastal Studies for Girls, a high-school semester program focused on science and leadership
	Guest lecturer, Orono High School lunch seminar series
	Guest scientist, Expanding Your Horizons, part of the National Girls Collaborative Project aimed at advancing the agenda in gender equity for STEM
2008	Guest lecturer and panel organizer for 120-student audience, Upward Bound, a science program for underprivileged Maine youth
	Guest lecturer, Stillwater Montessori School
	Guest lecturer, Morison Memorial Elementary School

Media Coverage

2012	Invited for interview on Biddeford, Maine public access television program, "The Wandering Road with Micki Cope," 26 January 2012
2011	Invited to write guest essay, "Ice cores: archives of past climate" on "Punctuated Equilibrium" blog hosted by *The Guardian*, 10 June 2011
	Featured in article, "How do ice cores allow researchers to see climate change?" on "Punctuated Equilibrium" blog hosted by *The Guardian*, 12 May 2011
	Outreach video featured on the National Science Foundation's *Science 360 News Service: Breaking science that shapes your world* website, 11 May 2011
	Coverage of newly designed ice core melter system in *UMaine Today* magazine blurb, "Ice Time," Spring 2011 issue
	Outreach video featured on UMaine's *YouTube* channel and on WAIS Divide ice core project website
2010	Featured in *Antarctic Sun* magazine article, "On the line: researchers spend summer in deep-freeze to slice and dice WAIS Divide ice core," August 2010
	Featured in *Bangor Daily News* article, "Melting ice at core of climate study," July 2010
	Coverage of research on 3 local TV stations: WLBZ2 (NBC), WABI TV5 (CBS), and WFVX 7 (ABC and FOX), July 2010
2008	Co-wrote "The climate change debate: Is there really another side?" op-ed piece in the *Bangor Daily News* with father Ted Koffman, April 2008

University and Professional Service

2012-	Reviewer, *Journal of Glaciology*
Spring 2012	Judge, Center for Undergraduate Research Showcase, University of Maine
2011-	Member, Climate Change Institute Policy Action Committee.
2010-2012	Member, Climate Change Institute international field trip committee
2010-2012	Graduate Student Representative, Climate Change Institute, University of Maine
Fall 2010	Grant reviewer, University of Maine Graduate Student Government
2010-	Maine Climate News website graduate student response panel
2009-2011	Carleton College Alumni Admissions Representative
2008-2010	Visiting Speaker Coordinator, Dept. of Earth Sciences, University of Maine

Professional Memberships

American Association for the Advancement of Science • American Geophysical Union • Association for Early Career Polar Scientists • Geochemical Society • International Glaciological Society • Sigma Xi • Past Global Changes (PAGES)

Grants ($6960 awarded to date)

University of Maine Graduate Student Government
Student travel grant to present at WAIS Divide Science Meeting, La Jolla, California, 2012 $425

Graduate Climate Conference
Student travel grant to present at GCC 6, Packwood, Washington, 2012 $300

Goldschmidt 2012 Travel Grant Program
Student travel grant to present at Goldschmidt conference, Montreal, Canada, 2012 $800

University of Maine Graduate Student Government
Student travel grant to present at Goldschmidt conference, Montreal, Canada, 2012 $850

University of Maine Graduate Student Government
Student travel grant to present at AGU Fall Meeting, San Francisco, California, 2011 $342

American Geophysical Union
Student travel grant to present at AGU Fall Meeting, San Francisco, California, 2011 $500

University of Maine Climate Change Institute
Student travel grant to present at XVIII INQUA Congress, Bern, Switzerland, 2011 $600

University of Maine Department of Earth Sciences
Student travel grant to present at XVIII INQUA Congress, Bern, Switzerland, 2011 $600

University of Maine Graduate Student Government
Student travel grant to present at XVIII INQUA Congress, Bern, Switzerland, 2011 $850

University of Maine Graduate Student Government
Student travel grant to present at WAIS Divide Science Meeting, La Jolla, California, 2011 $468

On the Cutting Edge
Student travel grant to attend "Preparing for an Academic Career in the Geosciences" workshop at Stanford University, 2010 $425

University of Maine Department of Earth Sciences
Student travel grant to attend On the Cutting Edge workshop, 2010 $200

University of Maine Center for Excellence in Teaching and Assessment
Student travel grant to attend On the Cutting Edge workshop, 2010 $100

Geochemical Society
Student travel grant to present at Goldschmidt conference, Vancouver, Canada, 2008 $500

Additional Professional Preparation: Teaching

- "Education Renovation: Overhauling undergraduate STEM programs" online workshop, *American Academy for the Advancement of Science*, April 2012
- "Setting Goals for Effective and Innovative Courses" online workshop, *On the Cutting Edge* Pursuing an Academic Career in the Geosciences series, April 2012

- "Using Free-Response Questions to Probe Student Thinking" workshop, Maine Center for Research in STEM Education, March 2012
- "Rules and Reasons: Different Meanings of 'Understand' in Teaching and Learning" workshop, Maine Center for Research in STEM Education, April 2011
- "Grading in Science and Mathematics: A workshop for STEM graduate teaching assistants," Maine Center for Research in STEM Education, February 2011
- "Preventing and Responding to Academic Integrity Violations" workshop, University of Maine Center for Excellence in Teaching and Assessment, February 2011
- "The Pedagogy and Practice of Grading" workshop, University of Maine Center for Excellence in Teaching and Assessment, January 2011
- "Keys to Success for Women in Academia" career panel, University of Maine Climate Change Institute, October 2010
- "Preparing for An Academic Career in the Geosciences" workshop, *On the Cutting Edge*, Stanford University, July 2010, including the following sessions:
    - "Teaching Science: What Research Tells Us About Science and Learning"
    - "Designing Effective Science Courses"
    - "Developing Interactive Lectures"
    - "Review of Teaching Statements"
    - "Designing Effective Classroom/Laboratory Activities"
    - "Developing Your Students as Writers"
- "The Basics of Teaching" workshop, University of Maine Center for Excellence in Teaching and Assessment, April 2009
- "Policies and Practices that Improve Departmental Climate for Women in Engineering & Science" seminar with Elizabeth Creamer, University of Maine, March 2009
- "Teaching Our Students How to Read" workshop, University of Maine Center for Excellence in Teaching and Assessment, February 2008

Additional Professional Preparation: Research

- "Developing a Thriving Research Program and Balancing it with Teaching, Service and other Passions" online workshop, *On the Cutting Edge* Pursuing an Academic Career in the Geosciences series, May 2012
- "Tips for Effective Communication: Interpersonal Communication" workshop, University of Maine ADVANCE Rising Tide Center and the Center for Excellence in Teaching and Assessment, April 2012
- "Preparing for an Academic Job Interview" online workshop, *On the Cutting Edge* Pursuing an Academic Career in the Geosciences series, January 2012
- "Strategic Early Career Planning" online workshop, *On the Cutting Edge* Pursuing an Academic Career in the Geosciences series, May 2011
- "Negotiations in the Hiring Process" online workshop, *On the Cutting Edge* Pursuing an Academic Career in the Geosciences series, February 2011
- "Preparing for An Academic Career in the Geosciences" workshop, *On the Cutting Edge*, Stanford University, July 2010, including the following sessions:
    - "Presenting Yourself to Others"
    - "Beating the Imposter Syndrome: why we all feel like fakes, and why it does not matter"
    - "Moving Your Research Forward to New Settings: Primarily Undergraduate Institutions"

    - "Review of Research Statements"
    - "Mapping Your Career: Choices, Balance and Action Planning"
    - The Academic Job Search: Applications, Interviews, Teaching Demonstrations and Job Talks"
    - "Negotiating Before You Accept an Academic Position: Setting Yourself Up for Success"
    - "Strategic Early Career Planning"
    - "Taking Risks in Research – Going Outside Your Traditional and Comfortable Areas of Expertise and Thriving"
- DUSTSPEC: Dust Records for a Changing World workshop, Lamont-Doherty Earth Observatory, May 2010
- University of Florence, Italy: collaborated with F. Marino, E. Castellano and R. Udisti on particle-induced x-ray and gamma ray emission (PIXE-PIGE) analysis of dust in Antarctic snow, September 2009
- Member of book group, *Motherhood: The Elephant in the Laboratory,* University of Maine Center for Excellence in Teaching and Assessment, September 2009
- Swiss National Centers for Competence in Research (NCCR) Summer Climate School: "Climate Variability, Forcings, Feedbacks and Responses: The Long-Term Perspective," Grindelwald, Switzerland, August 2009
- Core Processing Line for the WAIS Divide ice core, National Ice Core Laboratory, Denver, CO, June 2008
- Presenting Data and Information, a one-day course taught by Dr. Edward Tufte, Boston, MA, March 2008

Relevant Graduate Coursework (GPA 3.95/4.00)

Aqueous and Terrestrial Geochemistry, Chemical Oceanography, Data Analysis Methods in Marine Science, Glaciology, Introduction to Climatology and Meteorology, Isotope Geology, Low Temperature-Pressure Geochemistry, Marine Biogeochemistry, NCCR Summer Climate School (2009), Oceans and Climate Change, Paleoecology, Quaternary Environments and Climatic Change, Quaternary Stratigraphy, Responsible Conduct of Research