

Alison Sara Criscitiello

MIT/WHOI Joint Program
Geology and Geophysics
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

Phone: 781-307-1311
Email: acriscit@mit.edu

Education

Ph.D. Candidate, Geology and Geophysics, MIT/WHOI Joint Program (expected graduation Fall 2013)

Thesis: Amundsen Sea sea-ice variability, atmospheric circulation, and spatial variations in snow isotopic composition from new West Antarctic firn cores

M.A., Earth and Environmental Science, Columbia University, Summa Cum Laude, May 2006

Thesis: The Response of Lemon Creek and Taku Glaciers to Climate

B.A., Earth and Environmental Science, Wesleyan University, Phi Beta Kappa, May 2003

Honors, Grants and Awards

- US DOE SCGF Fellow (2010-2013)
- American Alpine Club, Live Your Dream Grant (2012)
- Presidential Graduate Fellow, MIT (2008-2009)
- Faculty Fellow, Columbia University (2004-2006)
- American Alpine Club, Under 25 Mountaineering Fellowship Fund Grant (2006)
- Climate Center Grant, Lamont-Doherty Earth Observatory (2005)
- NASA Earth Systems Field Research Scholarship (2003, 2005)
- The Explorer's Club Young Explorers Award (2005)
- Phi Beta Kappa (inducted May 2003)
- Most Valuable Backcountry Ranger, National Park Service (2001)

Professional Experience

- Field research, Woods Hole Oceanographic Institution, West Antarctica, Winter 2009/10 and Winter 2010/11
- Mountain Guide, Mountain Trip Guiding Co., Denali and Aconcagua, Summer 2007 to present
- Field research, Woods Hole Oceanographic Institution, Greenland, July 2008 and July 2009
- Research Assistant, Geochemical Oceanography, Harvard University, Cambridge, MA, Summer 2007 to Summer 2008
- Geochemistry Lab Technician, Lamont-Doherty Earth Observatory, Summer 2006 to Spring 2007
- Field research, Lamont-Doherty Earth Observatory, Antarctica, RVIB Palmer, Winter 2004 and Winter 2007
- Field research, Lamont-Doherty Earth Observatory, Iceland, RVIB Discovery, Fall 2006
- Teaching Assistant, *Intro to Earth Sciences*, Columbia University, Spring 2006
- Glacier Survey Crew Leader, Juneau Icefield Research Program, Juneau, AK, Summer 2005
- Climbing Ranger, North Cascades National Park, Marblemount, WA, Summer 2004
- Climbing Ranger, Olympic National Park, Forks, WA, Summer 2001 and Summer 2002
- Teaching Assistant, *Oceanography* (Fall 2002), *Sedimentology and Stratigraphy* (Spring 2002), Dept. of Earth and Environmental Sciences, Wesleyan University

Activities and Leadership

- Science Advisory Board, Adventurers and Scientists for Conservation, 2010-present

- Member, International Glaciological Society, 2010-present
- Member, American Association for the Advancement of Science, 2004-present
- Member, Earth Science Women's Network, 2006-present
- Research Associate, The Canary Project, New York, NY, 2006
- U.S. Intern, North American Community Service Project, Veracruz, Mexico, 2004

Skills/Certifications

- Proficient in Matlab, Arc, Python, Idrisi Taiga
- Fluent in Spanish
- Emergency Medical Technician (EMT), Personal Survival at Sea, Advanced Wilderness Field Medicine, First Aid and CPR for the Professional Rescuer, Firefighter Type II, Swift Water Rescue, Basic Search and Rescue (SAR), High Angle and Glacier/Crevasse SAR

Publications

- Criscitiello, A.S.**, Das, S., Evans, M., Frey, K., Conway, H., Joughin, I., Medley, B., and Steig, E. (2013). Ice sheet record of recent sea-ice behavior and polynya variability in the Amundsen Sea, West Antarctica. *J. Geophys. Res.*, Vol. 118.
- Criscitiello, A.S.**, Das, S.B., Karnauskas, K., Evans, M., Frey, K., Joughin, I., Steig, E., McConnell, J., and Medley, B. (2013). Tropical Pacific influence on source and transport of marine aerosols to West Antarctica. *J. Climate*, submitted.
- Medley, B., Joughin, I., Das, S., Steig, E., Gogineni, P.S., **Criscitiello, A.S.**, van den Broeke, M.R., Lenaerts, J.T.M., Bromwich, D.H., and McConnell, J.R. (2012). New, high-resolution spatio-temporal accumulation rate measurements and their validation of climate models and implication for the recent sea-level contribution from West Antarctica. *GRL*, submitted.
- Criscitiello, A.S.**, Kelly, M.A., and Tremblay B. (2010). The Response of Taku and Lemon Creek Glaciers to Climate. *Arctic, Antarctic and Alpine Research*, Vol. 42, No. 1.

Conference Presentations

- Criscitiello, A.S.**, Das, S., Karnauskas, K., Evans, M., and Frey, K., Joughin, I., Steig, E., McConnell, J. (2012). Tropical influence on source and transport of marine aerosols to West Antarctica. IPICS, Giens, France.
- Criscitiello, A.S.**, Das, S., Karnauskas, K., Evans, M., and Frey, K., Joughin, I., Steig, E., McConnell, J. (2012). Tropical influence on source and transport of marine aerosols to West Antarctica. DOE Annual Meeting, Brookhaven National Lab, NY.
- Criscitiello, A.S.**, Das, S., Evans, M., and Frey, K., Joughin, I., Medley, B., Conway, H. (2011). Sea-ice behavior and biological productivity in the Amundsen Sea: New insight from West Antarctic Ice Sheet records. AGU, San Francisco.
- Criscitiello, A.S.**, Das, S., Evans, M., and Frey, K., Joughin, I., Medley, B., Conway, H. (2011). Sea-ice behavior and biological productivity in the Amundsen Sea: New insight from West Antarctic Ice Sheet records. DOE Annual Meeting, Oak Ridge National Lab, TN.
- McConnell, J., Pasteris, D., Bisiaux, M., Edwards, R., Albert, M., Anschultz, H., **Criscitiello, A.**, Curran, M., Das, S., Isaksson, E., Thomas, E., Taylor, K. (2011). Aerosol deposition in East and West Antarctica during recent millennia from continuous ice core measurements. 2nd Symposium on Polar Science, National Institute of Polar Research, Tokyo, Japan.
- Medley, B., Joughin, I., Conway, H., Das, S., **Criscitiello, A.**, Steig, E.J., Gogineni, P., Lewis, C. (2011). Accumulation rates across Pine Island and Thwaites Glaciers, West Antarctica. AGU, San Francisco.

- Criscitiello, A.S.,** Das, S., Medley, B., Joughin, I., Conway, H., Evans, M., and Frey, K. (2011). Methanesulfonic acid from snow pits and firn cores on the West Antarctic Ice Sheet: Implications for sea-ice extent reconstruction and biological productivity. Midwest Glaciology Meeting (MGM), Hanover, NH.
- Criscitiello, A.S.,** Das, S., Medley, B., Joughin, I., Conway, H., Evans, M., and Frey, K. (2010). Physical and chemical stratigraphy of snow pits on the West Antarctic Ice Sheet: Preliminary implications for sea-ice reconstruction. West Antarctic Ice Sheet (WAIS) Meeting, Lake Raystown, PA.
- Criscitiello, A.S.,** Robinson, L.F., Auro, M. (2010). Uranium-series absolute dating of ancient ice. Midwest Glaciology Meeting (MGM), Woods Hole, MA.
- Criscitiello, A.S.,** Robinson, L.F., Auro, M. (2009). Uranium-series absolute dating of ancient ice. Graduate Climate Conference (GCC), Seattle, WA.