

ANDREA M. ALLAN

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EDUCATION

- Ph.D., August 2012 Geography, College of Earth, Ocean, and Atmospheric Sciences
Oregon State University (Corvallis, OR)
“Analyzing the present and future Pacific-North American teleconnection using a regional and global climate models”
Advisor: Dr. Steven W. Hostetler
- M.S., June 2007 Atmospheric Sciences, College of Oceanic & Atmospheric Sciences
Oregon State University (Corvallis, OR)
“Overestimation of cloud cover in the MODIS cloud product”
Advisor: Dr. James A. Coakley, Jr.
- B.S., May 2005 Meteorology, College of Earth & Mineral Sciences
Penn State University (University Park, PA)

RESEARCH EXPERIENCE

- Postdoctoral Research Associate**, Oregon State University July 2013–
College of Earth, Ocean, and Atmospheric Sciences present
- Supports various climate change projects through the statistical analysis of observational and modeled bioclimatic data
- Supervisor: Dr. Sarah L. Shafer*
- U.S. Geological Survey Student Research Scientist**, Oregon State University June 2009–
Ph.D. Research, College of Ocean and Atmospheric Sciences Sept 2012
- Explored the historical and future Pacific-North American teleconnection and its impacts on climate using global and regional climate model output
- Supervisor: Dr. Steven W. Hostetler*
- Student Research Scientist**, Oregon State University Dec 2009–
College of Earth, Ocean, and Atmospheric Sciences May 2010
- Developed an algorithm to identify false positives of snow cover in MODIS imagery using ENVI+IDL
- Supervisor: Dr. Anne Nolin*
- Faculty Research Assistant**, Oregon State University Oct 2007–
College of Forestry, Department of Forest Science July 2008
- Organized and analyzed observational data from AmeriFlux sites
- Supervisor: Dr. Beverly Law*
- Graduate Research Assistant**, Oregon State University Winter 2005–
M.S. Research, College of Ocean and Atmospheric Sciences Spring 2007
- Analyzed cloud fraction estimates in the MODIS cloud product using a partly cloudy pixel retrieval scheme on 250-m imagery data
- Supervisor: Dr. James A. Coakley, Jr.*

TEACHING EXPERIENCE

- Instructor**, ATS 320e The Changing Climate, Oregon State University
Baccalaureate Core Course in Science, Technology, and Society, 30 students Spring 2013
- Instructor**, GEOG 321 Climatology, University of Oregon
Undergraduate core course, 100 students Fall 2010
- Tutor**, ATS 210 Intro to Atmospheric Science, Oregon State University Fall 2009
- Graduate Teaching Assistant**, Oregon State University
Course (*Instructor*):
 - GEO 300e Environmental Conservation & Sustainability (*Lorene Becker*)
 - GEO 103e Deep Ocean (*Dr. Randall Keller*)
 - GEO 202 Earth System Processes (*Dr. Roy Haggerty*)
 - GEO 301 Map & Image Interpretation (*S. Mark Meyers*)
 - ATS 320 Man's Impact on Climate (*Dr. James A. Coakley, Jr.*)
 Fall 2008–
Spring 2009
- Fall 2005

TECHNICAL POSITIONS

- Programmer Analyst**, Penn State University
Pennsylvania State Climate Office Jan 2004–
Jun 2005
- Assessed the risk of wheat blight through the use of observational meteorological data obtained from ASOS weather stations.
- Technical Editor**, Penn State University
Earth and Environmental Systems Institute Jan 2004–
Jun 2005
- Edited professional journal articles and maintained a reference database
- Technical Specialist Intern**, Lockheed Martin IS&S, Valley Forge, PA Summer 2005
- Performed quality control tests on satellite data using various color-coding techniques, and reviewed and critiqued a preliminary version of weather forecasting software.
- Technical Specialist Intern**, Lockheed Martin IS&S, Valley Forge, PA Summer 2004
- Studied effects of meteorological variability on the radiometric environment using MODTRAN, and assessed the sensitivity of remote sensing algorithms to this meteorological variability.

HONORS, AWARDS, AND MEMBERSHIPS

- Outstanding Student Poster Presentation Award
3rd Annual Conference of the World Climate Research Programme October 2011
- Oregon Lottery Merit Graduate Scholarship (\$1,600) 2009–2010
- American Geophysical Union, American Meteorological Society, Chi Epsilon
Pi Meteorology Honors Society (Penn State University) Memberships

PUBLICATIONS

- 2016 Boeke, R.C., **A.M. Allan**, and J.A. Coakely Jr. Properties of marine stratocumulus obtained with partly cloudy pixel retrievals and found in the MODIS MOD06 cloud product. *J. Geophysical Res.* (in review).
- 2013 **Allan, A.M.**, S.W. Hostetler, and J.R. Alder. Analysis of the present and future winter Pacific-North American teleconnection in the ECHAM5 global and RegCM3 regional climate models. *Climate Dynamics*, DOI 10.1007/s00382-013-1910-x.
- 2011 Hostetler, S.W., Alder, J.R. and **Allan, A.M.**, 2011. Dynamically downscaled climate simulations over North America: Methods, evaluation and supporting documentation for users: U.S. Geological Survey Open-File Report 2011-1238, 64 pp.

PRESENTATIONS

*Presentations listed under maiden name

- 2013 **Allan, A.M.**, S.L. Shafer, P.J. Bartlein, L.M. Helbrecht, R.T. Pelletier, and B.C. Thompson. *Poster: Applying downscaled climate data to wildlife areas in Washington state, USA.* AGU Fall Meeting; San Francisco, CA.
- Allan, A.M.**, S.W. Hostetler, and J.R. Alder. *Talk: Analysis of the present and future winter Pacific-North American teleconnection in the ECHAM5 global and RegCM3 regional climate models.* Pacific Northwest Climate Science Conference; Portland, OR.
- 2011 **Allan, A.M.**, S.W. Hostetler, and J.R. Alder. *Poster: Analyzing the Pacific-North American pattern and its relationship to climate using RegCM3, a high-resolution regional climate model.* Poster presented at: Climate Research in Service to Society. WCRP Open Science Meeting; Denver, CO.
- Allan, A.M.**, S.W. Hostetler, and J.R. Alder. *Poster: Analyzing the present and future Pacific-North American teleconnection and its relationship to climate using the ECHAM5 global and RegCM3 regional climate models.* AGU Fall Meeting; San Francisco, CA.
- 2009 **Schuetz, A.M.***, S.W. Hostetler, and J. Alder. *Poster: 80-year regional climate simulations for North America: Changes in the mean state and its variability under transient CO₂.* AGU Fall 2009 Meeting; San Francisco, CA.
- Schuetz, A.M.***, J. Alder, and S.W. Hostetler. *Poster: Analyzing the surface hydrology of North America under doubled CO₂.* American Fisheries Society, Western Division Annual Meeting; Albuquerque, NM.
- 2006 **Schuetz, A.M.***, J.A. Coakley, and W.R. Tahnk. *Talk: Overestimation of cloud cover in the MODIS cloud product.* AGU Fall 2006 Meeting; San Francisco, CA.

CO-AUTHORED PRESENTATIONS

- 2010 Alder, J.R., S. Hostetler, and **A.M. Schuetz***. *Talk: A web-based application for regional climate simulations.* USGS Global Climate Change Conference, Denver, Colorado.

Hostetler, S.W., J. Alder, P. Bartlein, **A.M. Schuetz***, S. Shafer, R. Thompson, K. Izumi, P. Clark, and D. Pollard. *Talk*: Dynamically downscaled climate simulations over North America from 21 ka to 2100: Climate analysis, climate reconstruction and guidance for management decisions. USGS Global Climate Change Conference, Denver, Colorado.

CO-AUTHORED PRESENTATIONS (cont.)

- 2009 Hostetler, S.W., J. Alder, and **A.M. Schuetz***. *Talk*: Regional climate simulations for North America: changes in the mean state and its variability under a doubling of CO₂. American Fisheries Society, Western Division Annual Meeting, Albuquerque, New Mexico.
- 2006 Coakley, J.A., **A.M. Schuetz***, and W.R. Tahnk. *Talk*: Overestimation of cloud cover in the MODIS cloud product. MODIS Atmosphere Group Meeting, Washington, D.C.
- Coakley, J.A., W.R. Tahnk, and **A.M. Schuetz***. *Talk*: Partly cloudy pixel retrievals of cloud properties and MOD06 cloud products for marine stratocumulus. 12th Conference on Atmospheric Radiation, P4.43.

COMPUTER PROGRAMMING SKILLS

Proficient in NCL, IDL, Matlab, and FORTRAN
 Experience with ENVI, SQL, Perl, C++, MODTRAN, and HTML

SECURITY CLEARANCES

Top Secret Special Compartmented Information (Inactive)

OUTREACH AND COMMUNITY INVOLVEMENT

- Russell Academy Elementary School, Portland, OR Feb 2007
 • Guest presentation and demonstration about weather & climate
- National Ocean Sciences Bowl, *volunteer* Mar 2006
 Oregon State University

REFERENCES

- Dr. Steven W. Hostetler
 Research Scientist, U.S. Geological Survey
 Oregon State University
 541-737-8928
 steve@coas.oregonstate.edu
- Dr. Sarah L. Shafer
 Research Scientist, U.S. Geological Survey
 Oregon State University
 541-750-0946
 sshafer@usgs.gov
- Dr. James A. Coakley, Jr.
 Professor, Atmospheric Sciences
 College of Earth, Ocean, and Atmospheric Sciences
 Oregon State University
 541-737-5686
 coakley@coas.oregonstate.edu