

Angeline G. Pendergrass

University of Washington
Department of Atmospheric Sciences
apgrass@uw.edu
<http://www.atmos.washington.edu/~angie>

Education

- PhD, University of Washington, Department of Atmospheric Sciences, GPA 3.8, in progress.
- MS, University of Washington, Department of Atmospheric Sciences, 2009.
- BS, *Magna cum laude*, University of Miami, Meteorology, Math and Physics, GPA 3.98, 2006.

Professional experience

- *Graduate Research Assistant*, University of Washington, Sept 2009 Present
- *Teaching Assistant*, ATMS 111: Global Warming, University of Washington, Jan Mar 2011
- *CTD Watch stander*, Scripps Institution of Oceanography, R/V Melville, CLIVAR P6 (Leg 2), 4 Jan 10 Feb 2010
- *Teaching Assistant*, ATMS 101: Weather, University of Washington, Sept Dec 2007
- *Graduate Research Fellow* (NDSEG, ARCS, UW PCC), University of Washington, Sept 2006 Aug 2009
- *Math Tutor and grader*, University of Miami, 2003 2006
- *REU student*, REU Marine science in China, Qingdao, China, Summer 2005
- *REU student*, National Weather Center REU, Summer 2004
- *Undergraduate researcher*, University of Miami, Spring 2003

Publications

- Pendergrass, A.G. and D.L. Hartmann, 2012: Global-mean precipitation and black carbon in AR4 simulations. *Geophysical Research Letters*.
- Pendergrass, A.G., and G.J. Hakim, D.S. Battisti and G. Roe, 2011: Coupled air-mixed-layer temperature predictability for climate reconstruction. *Journal of Climate*.
- Pendergrass, A.G., and H.E. Willoughby, 2009: Diabatically Induced Secondary Flows in Tropical Cyclones. Part I: Quasi-Steady Forcing. *Monthly Weather Review*, 137, 805-821.

Research experiences

- *Global precipitation changes with climate*, Dennis Hartmann. Analysis of global-mean precipitation changes in CMIP3 models from the perspective of the atmosphere's energy budget. Found that black carbon is responsible for about half of the spread in global-mean precipitation change over the 21st Century in A1b scenario model runs. Posters presented at Gordon Conference on Radiation and Climate 2011 and AGU 2011; paper in review.

- *Paleoclimate data assimilation, Greg Hakim, David Battisti and Gerard Roe.* Design and evaluation of ensemble-based data assimilation systems for application to paleoclimate proxy data. Coded SPEEDY (an EMIC) and a QG channel model coupled to a slab ocean into a data assimilation system. Theoretical considerations using an ensemble system with a two-variable stochastic model. Resulted in a masters thesis and presentation, a paper, and a funded grant.
- *The effect of secondary circulation structure on intensification rate of an idealized hurricane-like vortex, Hugh Willoughby.* Sensitivity analysis of a simple 2D, steady-state model of a hurricane-like vortex exploring factors contributing to rapid intensification of hurricanes. Resulted in a paper.
- *Climate feedbacks on the surface radiation budget, Brian Soden.* Analyzed radiative feedback kernels for the surface radiation budget and applied them to climate changes in CMIP3 models. Resulted in an undergraduate honors thesis.
- *Analysis of a sea fog event on the Yellow Sea, Gang Fu.* Case study of a particularly dense sea fog event using satellite data, surface observations, and regional model output. Resulted in a project write-up and presentation.
- *Ensemble forecast bias correction, Kim Elmore.* Compared two methods of bias correction for surface temperature forecasts over New England. Resulted in a project write-up and presentation and a poster at AMS Annual Meeting 2005.
- *Water vapor transport in the Inter-American Seas, Chidong Zhang.* Analyzed profiler data from a ship-based profiler and water vapor tracer data from a model.

Teaching experience

- *Teaching assistant, Global Warming, Dargan Frierson.* Along with one other TA, designed homework, quizzes, and tests for 219 student lecture. Administered clicker questions each day of lecture. Designed and led 4 one-hour discussion sections per week.
- *Teaching assistant, Weather, Bob Houze.* Along with one other TA, designed and graded homework, quizzes, and tests for 180 student lecture. Designed and led 3 one-hour discussion sections per week.
- *Math tutor.* Tutored students for any match class offered by the university on a walk-in basis, including but not limited to calculus, probably and statistics.
- *Student assistant, Meteorological Instrumentation, Bruce Albrecht.* Helped run 300-level class aboard Royal Caribbean Explorer of the Seas. Gave tours to the public.
- *Grader, Linear algebra.* Graded homework assignments for a 300-level linear algebra class.

Other accomplishments and experiences

- *Fieldwork* At sea in the remote Southeast Pacific Ocean for 38 days.
- *Grant writing.* Helped write a grant that was successfully funded for my masters work.
- *Outreach.* Presentations to student groups visiting the department.
- *Graduate Climate Conference 2009.* Executive organizing committee for weekend conference of 80 climate graduate students. Along with 4 other students, acquired \$20,000 funding, put together all logistics and scientific program.