

CURRICULUM VITAE
Heather M. Archambault

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EDUCATION

- Aug 2011 Ph.D. in Atmospheric Science
University at Albany/SUNY, Albany, NY
Advisors: Lance F. Bosart and Daniel Keyser
Dissertation: *The downstream flow response to recurving tropical cyclones in the western North Pacific*
- Aug 2005 M.S. in Atmospheric Science
University at Albany/SUNY, Albany, NY
Advisors: Lance F. Bosart and Daniel Keyser
Thesis: *Cool-season regime transition and its impact on precipitation in the northeastern United States*
- May 2002 B.S. in Meteorology
Minor, Global Business Strategies in the Earth, Energy, and Materials Industries
Pennsylvania State University, University Park, PA

RESEARCH EXPERIENCE

- Sep 2011–present ***National Research Council Postdoctoral Research Associate***
Naval Postgraduate School, Monterey, CA
Investigate how diabatic processes associated with the interaction between recurving western North Pacific tropical cyclones and the jet stream impact the predictability of the downstream flow evolution.
Advisors: Pat Harr and Rich Moore.
- Apr–Jul 2010 ***Advanced Studies Program Graduate Student Visitor***
National Center for Atmospheric Research, Boulder, CO
Collaborated with Chris Davis on potential vorticity diagnostics of the diabatic signature of tropical cyclone–jet stream interaction during extratropical transition. Met with NCAR and visiting scientists and delivered an informal seminar to scientists in the Mesoscale and Microscale Meteorology division.
- 2003–2011 ***Graduate Research Assistant***
University at Albany/SUNY
Conducted research on extratropical transition, cold-air outbreaks, planetary-scale regime transitions, Rossby wave packets, and meso- and synoptic-scale aspects of heavy precipitation events.

TEACHING EXPERIENCE

- Fall 2008 ***Instructor, Synoptic Laboratory I***
University at Albany/SUNY
Taught a senior-level course covering fundamental topics in synoptic–dynamic meteorology; assumed responsibility for all aspects of the course.
- Spring 2009 ***Graduate Teaching Assistant, Synoptic Laboratory II***
University at Albany/SUNY
Collaborated with the instructor in preparing map discussions and writing homework assignments, quizzes, and exams, gave stand-in lectures, and held office hours for a senior-level course covering advanced topics in synoptic–dynamic meteorology.
- 2003–2005, Spring ***Graduate Teaching Assistant, Weather Analysis and Forecasting***
University at Albany/SUNY
Led weekly map discussions, held office hours, and graded assignments, quizzes, and exams for a sophomore-level forecasting course.
- 2002–2004, Fall ***Graduate Teaching Assistant, Severe and Hazardous Weather Analysis and Forecasting***
University at Albany/SUNY
Supervised biweekly student-led forecast discussions, held office hours, and graded assignments, quizzes, and exams for a junior-level forecasting course.
- 2001–2002 ***Undergraduate Teaching Assistant, Introductory Meteorology***
Pennsylvania State University
Performed experiments, prepared and presented lectures, wrote and graded quizzes, and assigned course grades for the laboratory section of a general education meteorology course.

OTHER PROFESSIONAL POSITIONS

- Jun–Aug 2002 ***Intern Meteorologist***
Aquila, Inc., Kansas City, MO
Constructed climatologies used to price weather derivatives.
- 2001–2002 ***Forecast Apprentice***
Weather Communications Group, Pennsylvania State University
Wrote New York City, Boston, and Washington, D.C. forecasts and prepared graphics for the *New York Times* weather page.

PROFESSIONAL SERVICE

Panelist, “Looking back on recent TC field programs: Lessons learned, questions going forward”, 15th Cyclone Workshop, Pacific Grove, CA, Mar 2011.

Working group member, “New Research and Field Experiments in Extratropical Transition”, Seventh International Workshop on Tropical Cyclones, WMO/WWRP, La Réunion, FR, Nov 2010.

Lead forecaster, “The Pre-Depression Investigation of Cloud-systems in the Tropics” (PREDICT) field campaign, National Science Foundation, St. Croix, U.S. Virgin Islands, Sep 2010.

Forecaster, “THORPEX Pacific-Asian Regional Campaign” (T-PARC), Naval Postgraduate School, Monterey, CA, Aug 2008.

Session chair 15th Cyclone Workshop, Pacific Grove, CA, Mar 2011.
14th Cyclone Workshop, Saint-Adele, QC, Sep 2008.

Reviewer *Monthly Weather Review* (AMS)
Journal of Climate (AMS)
Geophysical Research Letters (AGU)

Contributor, *Times Union* “Weather and Climate Blog” (<http://blog.timesunion.com/weather/>)

HONORS AND AWARDS

Best Poster Award
WCRP Open Science Conference, Denver, CO, 2011

Advanced Studies Program Graduate Student Visitor Award
National Center for Atmospheric Research, 2010.

1st Place, Graduate Student Division and Overall – Cheyenne, WY
National Collegiate Weather Forecasting Contest, 2002.

Joel N. and Peggy Myers Scholarship for Excellence in Weather Forecasting
Dept. of Meteorology, Pennsylvania State University, 2002.

Robert O. Cole Award
Dept. of Meteorology, Pennsylvania State University, 2002.

Dean’s Freshman Scholarship
College of Earth and Mineral Sciences, Pennsylvania State University, 1998.

PROFESSIONAL MEMBERSHIPS AND HONOR SOCIETIES

American Meteorological Society, 2002–present

Chi Epsilon Pi National Honor Society, 2001–present

REFEREED PUBLICATIONS

Archambault, H. M., D. Keyser, and L. F. Bosart, 2010: Relationships between large-scale regime transitions and major cool-season precipitation events in the northeastern United States. *Mon. Wea. Rev.*, **138**, 3454–3473.

Archambault, H. M., L. F. Bosart, D. Keyser, and A. Ayyer, 2008: Influence of large-scale flow regimes on cool-season precipitation in the northeastern United States. *Mon. Wea. Rev.*, **136**, 2945–2963.

Evans, C., **H. M. Archambault**, J. M. Cordeira, T. J. Galarneau, Jr., K. S. Griffin, A. Johnson, W. Komaromi, S. Monette, P. Muradyan, B. Murphy, M. Riemer, J. Sears, B. Tang, and S. Thompson, 2011: The Pre-Depression Investigation of Cloud-systems in the Tropics (PREDICT) field campaign: Perspectives of early career scientists. *Bull. Amer. Meteor. Soc.* (in press).

Bosart, L. F., J. M. Cordeira, T. J. Galarneau, Jr., B. J. Moore, and **H. M. Archambault**, 2011: An analysis of multiple predecessor rain events ahead of tropical cyclones Ike and Lowell (10–15 September 2008). *Mon. Wea. Rev.* (in press).

PUBLICATIONS IN PREPARATION

Metz, N. D., **H. M. Archambault**, A. F. Srock, T. J. Galarneau, Jr., and L. F. Bosart, 2011: A comparison of South American and African preferential pathways for cold surges. *Mon. Wea. Rev.*

Bosart, L. F., J. M. Cordeira, and **H. M. Archambault**, 2011: Linked extreme weather events over the Americas in October and November 2007, *Mon. Wea. Rev.*

Archambault, H. M., L. F. Bosart, and D. Keyser, 2011: A climatological analysis of the downstream flow response to recurving tropical cyclones in the western North Pacific. *Mon. Wea. Rev.*

Archambault, H. M., D. Keyser, and L. F. Bosart, 2012: A compositing study of the downstream flow response to recurving tropical cyclones in the western North Pacific. *Mon. Wea. Rev.*

OTHER PUBLICATIONS

Archambault, H. M., 2010: Large-scale flow reconfigurations over North America associated with recurving western North Pacific tropical cyclones. Extended abstracts, 29th Conference on Hurricanes and Tropical Meteorology, Tucson, AZ, Amer. Meteor. Soc., 1D.2.

Jones, S. C., **H. M. Archambault**, J. Beven, L. F. Bosart, J. Callaghan, J. Cordeira, J. Evans, P. Harr, D. Keyser, N. Kitabatake, R. McTaggart-Cowan, R. Torn, and C. Velden, 2010: New research and field experiments in extratropical transition. Seventh International Workshop on Tropical Cyclones. La Réunion, FR, WMO/WWRP (Available online at http://www.cawcr.gov.au/projects/iwtc/documentation/2_4.pdf).

Archambault, H. M., D. Keyser and L. F. Bosart, 2009: The extratropical flow response to recurving western North Pacific tropical cyclones. NOAA NWS Science and Technology Infusion Climate Bulletin, Dec 2009. (Available online at http://www.nws.noaa.gov/ost/climate/STIP/34CDPW/Digest_dec09_p0.htm)

Archambault, H. M., 2005: Cool-season regime transition and its impact on precipitation in the northeastern United States. M.S. thesis, Department of Earth and Atmospheric Sciences, University at Albany, State University of New York, 163 pp.

Archambault, H. M., D. Keyser, L. F. Bosart, and A. Aiyyer, 2004: Cool-season regime transition and its impact on precipitation in the northeastern United States. Extended abstracts, 1st THORPEX International Science Symposium, December 2004, Montreal, QC.

Archambault, H. M., L. F. Bosart, D. Keyser, and R. H. Grumm, 2004: Large-scale regime transition and its relationship to significant cool-season precipitation events in the Northeast. Preprints, 20th Conference on Weather Analysis and Forecasting, January 2004, Seattle, WA, CD-ROM, paper P1.8.

SEMINARS

- Apr 2011 Recurving western North Pacific tropical cyclones as precursors to flow reconfigurations and extreme weather events over North America. University of Oklahoma School of Meteorology, Norman, OK.
- Jun 2010 Large-scale flow reconfigurations over North America associated with recurving western North Pacific tropical cyclones. NOAA Earth System Research Laboratory/Physical Sciences Division, Boulder, CO.
- Sep 2006 Cool-season regime transition and its impact on Northeast precipitation. NCEP Climate Prediction Center, Camp Springs, MD.
- Apr 2005 Cool-season regime transition and its impact on precipitation in the northeastern United States. University at Albany/SUNY, Albany, NY.

INVITED PRESENTATIONS

- Jul 2006 Cool-season regime transition and its impact on Northeast precipitation. Second Annual Eastern United States Weather Conference, Baltimore, MD.
- Nov 2005 Cool-season regime transition and its impact on precipitation in the northeastern United States. 6th Southern New England Weather Conference, Brookline, MA.

OTHER SELECTED PRESENTATIONS

- Oct 2011 Recurving tropical cyclone-jet stream interactions over the Western North Pacific and their influence on the midlatitude circulation. WCRP Open Science Conference (poster). Denver, CO.
- May 2011 Recurving TC-jet stream interactions. Part 1: A climatology and composite analysis. Fifth Tropical Workshop, Dedham, MA.
- Mar 2011 Reduced predictability and extreme weather events over North America following the recurvature of western North Pacific tropical cyclones. 15th Cyclone Workshop, Pacific Grove, CA.
- Jan 2011 The observed extratropical flow response to recurving western North Pacific tropical cyclones. 23rd Conference on Climate Variability and Change/91st American Meteorological Society Annual Meeting, Seattle, WA.
- Nov 2010 High-impact weather and reduced predictability over the United States associated with the recurvature of western North Pacific TC Malakas (2010). 12th Annual Northeast Regional Operational Workshop (NROW), Albany, NY.
- May 2010 Large-scale flow reconfigurations over North America associated with recurving western North Pacific tropical cyclones. 29th Conference on Hurricanes and Tropical Meteorology, Tucson, AZ.

May 2010	Large-scale flow reconfigurations over North America associated with recurving western North Pacific tropical cyclones. 2nd Winter T-PARC Workshop, Boulder, CO.
Oct 2009	The extratropical flow response to recurving western North Pacific tropical cyclones. 34th NOAA Annual Climate Diagnostics and Prediction Workshop, Monterey, CA.
Jul 2009	Predictability associated with interactions between recurving West Pacific TCs and the extratropical large-scale flow. IAMAS–IAPSO–IACS Joint Assembly, Montreal, QC.
Jun 2009	Predictability associated with interactions between recurving West Pacific TCs and the extratropical large-scale flow. 24th Conference on Weather Analysis and Forecasting, Omaha, NE.
Sep 2008	Relationships between large-scale regime transitions and major cool-season precipitation events in the Northeast U.S. 14th Cyclone Workshop, Saint-Adele, QC.
Sep 2008	Predictability associated with interactions between recurving West Pacific TCs and the extratropical large-scale flow. 14th Cyclone Workshop, Saint-Adele, QC.
Apr 2008	Predictability associated with interactions between recurving West Pacific TCs and the extratropical large-scale flow. 28th Conference on Hurricanes and Tropical Meteorology, Orlando, FL.
Nov 2007	Recurving typhoons as precursors to an early season Arctic outbreak over the continental U.S. 9th Annual NROW, Albany, NY.
Jun 2007	Interactions between recurving West Pacific tropical cyclones and the extratropical large-scale flow. 23rd Conference on Weather Analysis and Forecasting, Park City, UT.
Mar 2007	Predictability of the January 22–24 2005 Northeast blizzard. 32nd Annual Northeastern Storm Conference (NESC), Springfield, MA.
Oct 2006	Impacts of recurving West Pacific tropical cyclones on extratropical predictability in the Northern Hemisphere. 13th Cyclone Workshop, Pacific Grove, CA.
Mar 2006	Cool-season regime transition and its impact on precipitation in the northeastern United States. 31st Annual NESC, Saratoga Springs, NY.