ANN M. SYROWSKI

Research Assistant
Department of Atmospheric Sciences
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EDUCATION

M.S. Atmospheric Sciences, May 2012 **University of Illinois at Urbana-Champaign**
Thesis title: "Internal vs. external forcings in supercell interactions and their impact on storm morphology and intensity"
B.S. Geology, May 2009 **University of Dayton, Dayton, OH**

EMPLOYMENT EXPERIENCE

May 2012 – Current: Research Assistant, Dept. of Atmospheric Sciences, University of Illinois
Primary responsibilities: Scientific analysis of severe storm mesocyclogenesis using the Weather Research and Forecasting (WRF) model, development of peer-reviewed publications, and presentation of research findings.

Aug. 2009 – May 2012: Graduate Research Assistant, Dept. Atmos. Sciences, Univ. of Illinois
Primary responsibilities: Developed and analyzed data of WRF storm simulation ensembles, including code development and use of multiple statistical and 3-D visualization tools, and gave presentations at six scientific meetings.

Feb. 2007 – May 2009: Research Assistant, Dept. of Geology, University of Dayton
Primary responsibilities: Downscaled and removed biases from output of four global climate models, used Geographic Information System (GIS) tools to analyze results, and made projections of future extreme precipitation trends.

TECHNICAL EXPERIENCE

1. Three years experience with Weather Research and Forecasting (WRF) model, including benchmarks; parameterization, physics and resolution testing; severe storm simulation; and developing and applying analysis codes to multi-terabyte WRF data sets
2. Three years experience with visualization and analysis software for large datasets, including Read Interpolate Plot (RIP), Vis5D, VAPOR, and NCAR Graphics
3. Primary computer programming language: FORTRAN, with C Shell scripting
4. Two years experience with GIS software, ArcGIS v9.0 and v10.0
5. Two years experience with basic statistical downscaling techniques, particularly distribution mapping
6. Three years experience with supercomputers at the National Center for Supercomputing Applications (NCSA), Pittsburgh Supercomputing Center (PSC), the National Institute for Computational Sciences (NICS), and San Diego Supercomputing Center (SDSC), including code and I/O optimization for high-resolution ensemble simulations with WRF
7. Three years experience with Unix/Linux-based operating systems and productivity tools
8. Proficient with Microsoft Word, PowerPoint, and Excel advanced data analysis tools

AWARDS

G. H. Springer Award for Outstanding Undergraduate Research, Univ. of Dayton, 2009
University of Dayton President's Scholarship

PUBLICATIONS AND PRESENTATIONS

Reviewed publications

Syrowski, Ann, Brian F. Jewett, and Robert B. Wilhelmson, 2012: "*Internal vs. external forcings in supercell interactions,*" in preparation for submission to *Monthly Weather Review*.

Scientific conferences

Syrowski, Ann, Brian F. Jewett and Robert B. Wilhelmson, 2012: *An assessment of internal and external forcings in supercell interactions and their impact on storm morphology*. 26th Conference on Severe Local Storms. American Meteorological Society (AMS). Denver, CO.

Jewett, Brian F., Jay Alameda, Ann Syrowski, and Robert Wilhelmson, 2012: *Ensemble modeling of storm interaction with XSEDE*. XSEDE12. Chicago, IL.

Syrowski, Ann, Brian F. Jewett, and Robert B. Wilhelmson, 2011: *Assessment of supercell mesocyclogenesis in a suite of idealized WRF simulations of storm interaction.* 13th WRF Users Workshop. NCAR. Boulder, CO.

Syrowski, Ann, Brian F. Jewett, and Robert B. Wilhelmson, 2011: *Determining mechanisms for the intensification and maintenance of two interacting cells using a suite of idealized numerical simulations*. 14th Conference on Mesoscale Processes. AMS. Los Angeles, CA.

Syrowski, Ann, Brian F. Jewett, and Robert B. Wilhelmson, 2011: *Evaluation of Morrison, Milbrandt & Yau, and Thompson microphysics schemes in a suite of high-resolution, idealized supercell simulations*. 12th WRF Users Workshop. NCAR. Boulder, CO.

Syrowski, Ann, Brian F. Jewett, and Robert B. Wilhelmson, 2011: *Impacts of cell interaction on storm intensification: A dynamical and microphysical perspective*. 15th Severe Storms and Doppler Radar Conference. Central Iowa National Weather Association. Ankeny, IA.

Syrowski, Ann, Brian F. Jewett, and Robert B. Wilhelmson, 2010: *Impacts of cell interaction on storm intensification: A dynamical and microphysical perspective*. 25th Conference on Severe Local Storms. AMS. Denver, CO.

Syrowski, Ann, and Shuang-Ye Wu, 2009: *Projecting future extreme precipitation for the Great Miami River Watershed, OH*. Association of American Geographers 54th Annual Meeting.

RELEVANT COURSEWORK

Numerical Fluid Dynamics / Synoptic Dynamics / Tropical Dynamics / Mesoscale Meteorology / Physical Meteorology / Applied Meteorology/ Weather Systems / Geographic Information Systems / Structural Geology / Sedimentology / Mineralogy / Petrology / Differential Equations / Calculus I, II, and III / Engineering Physics I, II, and III

TEACHING

Teaching Assistant: Colorado Field Course – GEO 303 – Summer, 2008
Geographic Information Systems – GEO 450 – Fall 2008

LEADERSHIP

Secretary, Univ. of Illinois Chapter of the American Meteorological Society
Charter member, Vice President, Sigma Gamma Epsilon Earth Science Honorary Fraternity

REFERENCES

Prof. Robert M. Rauber
University of Illinois
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Dr. Brian F. Jewett
University of Illinois
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