Kevin W. Van Leer

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Education

2011-present	M.S. Candidate - University of Illinois at Urbana-Champaign (Atmospheric Sciences) Expected graduation: May 2013
2011	B.S. – Purdue University, West Lafayette, IN (Atmospheric Sciences) Minor in History

Professional Experience

2011-present University of Illinois, Department of Atmospheric Science,
Convective Modeling Group, Graduate Research Assistant
- Utilize numerical modeling for the simulation of atmospheric phenomenon
- Creation, storage, and use of large datasets for numerical and statistical analysis using Fortran, shell scripting, MATLAB, NCAR Graphics, Vis5d, and VisIT
- Use of NSF high-performance computing resources
- Presentation of research at regional and national academic conferences
- Applications of numerical fluid dynamics and microphysical processes
- Focus on the rapid intensification of severe thunderstorms

2011 Purdue University, Department of Earth and Atmospheric Sciences
Undergraduate Teaching Assistant (Synoptic Lab III)
- Designed and led weekly lab sessions for 400-level course
- Curriculum focused on atmospheric dynamics concepts
- Applications of theory through MATLAB programming
- Worked outside of classroom with students requiring additional assistance

2011 Purdue University, Department of Earth and Atmospheric Sciences
Senior Experience in Atmospheric Research, Organizer and Researcher
- Initiated a semester-long research course
- Designed and executed a field campaign in Mayaguez, PR
- Utilized field instruments to study effect of seabreeze on coastal areas
- Analyzed large datasets using Excel and MATLAB
- Organized logistical and financial details of campaign

2010 National Weather Center, Research Intern
Center for Analysis and Prediction of Storms - Research Experience for Undergrads
Atmospheric and Environmental Research, Inc.
- Utilized high-resolution satellite (Landsat & MODIS) for flood mapping
- Designed an analysis algorithm in MATLAB to categorize and map flood inundated areas
- Observed sensitivity of flood mapping to resolution of instrument
- Presented research findings in oral and written format

Technical Experience

Linux/Unix	Fortran	Vis5d	Weather Research & Forecasting (WRF)
Macintosh OS	Shell Scripting	VisIT	Geographic Information Systems (GIS)
Windows OS	Python	RIP	MATLAB
Microsoft Office	C	NCAR Graphics	AERMOD

Organizations and Honors

2012	Outstanding Student Oral Presentation (3rd Place) – AMS 29th Conf. on Severe Local Storms, *"Rapid Intensification Mechanisms Including the Role of Storm Mergers in the 22 May 2011 Joplin, MO Tornadic Storm"* (Nashville, TN)
2011	Outstanding Senior Undergraduate - Purdue University, Dept. of Earth and Atmospheric Sciences
2010-11	Vice President – Purdue University Meteorological Association – AMS Student Chapter
2010-11	Dean's List, Purdue University
2010	Attended the National Center for Atmospheric Research (NCAR) Undergraduate Leadership Workshop, nominated by department professors
2010	Dr. and Mrs. William Gommel Award for Academic Merit, Purdue University
2010	Outstanding Junior Undergraduate – Purdue University, Dept. of Earth and Atmospheric Sciences

Professional Publications

Van Leer, K.W., B.F. Jewett, and R.B. Wilhelmson, 2013: Rapid Intensification, Storm Merging, and the 2011 Joplin Tornado. *Bull. Amer. Meteor. Soc. Conf. Notebook*.

Professional Presentations

2012	Oral presentation at American Meteorological Society 26th Conference on Severe Local Storms, "*Rapid Intensification Mechanisms Including the Role of Storm Mergers in the 22 May 2011 Joplin, MO Tornadic Storm*" (Nashville, TN)
2012	Poster presented at WRF Model User's Workshop, "*Investigating Rapid Storm Intensification Mechanisms Including the Role of Storm Mergers in the 22 May 2011 Joplin, MO Tornadic Storm*" (Boulder, CO)
2011	Poster presented at AMS 10th Student Conference, "*Comparisons of flood affected area derived from MODIS and Landsat imagery*" (Seattle, WA)
2011	Poster presented at AMS 10th Student Conference, "*Observations of Local Scale Perturbations Resulting from Urban Environments*" (Seattle, WA)
2010	Poster presented at AMS 9th Student Conference, "*An Introductory Study of Warm Rain Productivity in Convective Clouds Influenced by Regional Climate Change*" (Atlanta, GA)
2010	Poster presented at AMS 9th Student Conference, "*Thunderstorm Identification and Geospatial Distribution Study*" (Atlanta, GA)

Relevant Coursework

| Numerical Fluid Dynamics | Theory of Probability | Air Quality Modeling |
| Boundary Layer Meteorology | Mesoscale Meteorology | Partial Differential Equations |

References

Dr. Brian Jewett
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