

RANDY ALAN PEPPLER

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Updated: August 2014

ADDRESS

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EDUCATION

Doctor of Philosophy in *Geography* 2011
Department of Geography and Environmental Sustainability, University of Oklahoma
Dissertation: *Knowing Which Way the Wind Blows: Weather Observation, Belief and Practice in Native Oklahoma* (excerpt published in *Weather, Climate and Society*, **2**, 200-209)

Master of Science in *Industrial Engineering* 1991
Department of Mechanical and Industrial Engineering, University of Illinois at Urbana-Champaign
Non-Thesis Option

Master of Science in *Atmospheric Science* 1982
Department of Geoscience, Purdue University
Thesis: *Mean State Energetics of Phases I, II, and III of GATE* (excerpt published in *Monthly Weather Review*, **111**, 359-369)

Bachelor of Science with Honors in *Atmospheric Science* 1980
Department of Geoscience, Purdue University
Honors Thesis: *An Analysis of Truncation Errors in Finite Difference Estimates of Geostrophic Wind and Relative Vorticity* (excerpt published in *Monthly Weather Review*, **112**, 575-583)

EMPLOYMENT AND POSITIONS

August 1995-Present: *Interim Director*, CIMMS (June 2014-present); *Associate Director*, CIMMS (1995-June 2014); *Assistant Director*, CIMMS/NOAA Relations (2004-present); *Manager*, ARM Program Data Quality Office (2000-present); *Associate Site Scientist*, Southern Great Plains Climate Research Facility for the ARM Program (1995-2000)

July 1991-August 1995: *Director*, Water and Atmospheric Resources Monitoring (WARM) Network, Illinois State Water Survey, University of Illinois at Urbana-Champaign, including: *Manager*, Illinois Climate Network; *Manager*, Cook County Illinois Raingage Network for U.S. Army Corps of Engineers Lake Michigan Diversion Accounting; *Manager*, Imperial Valley Water Authority of Mason and Tazewell Counties Raingage Network

June 1982-July 1991: *Research Meteorologist*, Illinois State Water Survey, University of Illinois at Urbana-Champaign, including research on: climate diagnostics of growing season (May-August) rainfall fluctuations over central North America; time series construction of the North Atlantic Oscillation Index and Southern Oscillation Index to investigate teleconnections with Moroccan, Sub-Saharan, and United States rainfall; West African precipitation/drought and Moroccan precipitation; tropical Atlantic surface circulation patterns associated with Sub-Saharan drought during the 1970s and early 1980s; interannual variability of the tropical Atlantic

FIELD RESEARCH EXPERIENCES

July 2009-September 2011: Southwestern, Central and Eastern Oklahoma. Interviewed Native American farmers and traditionalists, and was involved in participant-observation activities, to learn how the farmers know and conceptualize weather and climate and how they use this knowledge in revitalized efforts to farm sustainably, seek agricultural independence, and attain food sovereignty.

July 1992-August 1995: Mason and Tazewell Counties, Illinois. Conducted environmental fieldwork to construct, operate and maintain a rain gauge network for the Imperial Valley Water Authority.

July 1991-August 1995: State of Illinois. Conducted environmental fieldwork to operate and maintain the observation sites of the Water and Atmospheric Resources Monitoring (WARM) Network, including the Illinois Climate Network.

July 1991-August 1995: Cook County, Illinois. Conducted environmental fieldwork to construct, operate and maintain a rain gauge network for the U.S. Army Corps of Engineers.

RECENT PUBLICATIONS

Peppler, R. A., K. E., Kehoe, J. W. Monroe, A. K. Theisen, and S. T. Moore, 2014: Data quality program.

Atmospheric Radiation Measurement (ARM) Program, Meteor. Monogr., Amer. Meteor. Soc., accepted.

Klockow, K. E., R. A. Peppler, and R. A. McPherson, 2014: Tornado folk science in Alabama and Mississippi in the 27 April 2011 tornado outbreak. *GeoJournal*, **79**, doi:10.1007/s10708-013-9518-6.

Peppler, R., 2012: The call of the wild: Local weather insights in Native Oklahoma. *Weatherwise*, **65**(5), September/October, 33-39.

Klockow, K. E., and R. A. Peppler, 2012: Folk science: Local understandings of the tornado hazard on April 27, 2011. *Weather and Society Watch*, **6**(1), January 20, 2012, issue.

Peppler, R. A., 2010: "Old Indian Ways" of predicting the weather: Senator Robert S. Kerr and the winter predictions of 1950-51 and 1951-52. *Weather, Climate and Society*, **2**, 200-209.

Peppler, R. A., 2010: Fieldwork in Indian Country: A conversational experience. *Weather and Society Watch*, **4**(4), July 31, 2010, issue.

Klockow, K. E., and R. A. Peppler, 2009: Decision making and risk: Traveling to the 2007 AMS Annual Meeting. *Weather and Society Watch*, **3**(4), July 31, 2009, issue.

Peppler, R. A., C. N. Long, D. L. Sisterson, D. D. Turner, C. P. Bahrmann, S. W. Christensen, K. J. Doty, R. C. Eagan, T. D. Halter, M. D. Ivey, N. N. Keck, K. E. Kehoe, J.C. Liljegren, M. C. Macduff, J. H. Mather, R. A. McCord, J. W. Monroe, S. T. Moore, K. L. Nitschke, B. W. Orr, R. C. Perez, B. D. Perkins, S. J.

Richardson, K. L. Sonntag, J. W. Voyles, and R. Wagener, 2008: An overview of ARM Program Climate Research Facility data quality assurance. *The Open Atmospheric Science Journal*, **2**, 192-216.

RECENT CONFERENCE PRESENTATIONS

- Sovo, M., R. Ware, T. Fuller, K. Winton, R. Peppler, T. Troy, and W. Voelker, 2014: Perpetuation of cultural resources in Oklahoma: An intertribal traditional resources alliance. *Climate Change and Indigenous Peoples*, 2014 Association of American Geographers Annual Meeting, Tampa, FL, April 8-12. Presented by Peppler.
- Kehoe, K., R. Peppler, S. Moore, J. Monroe, and A. Theisen, 2014: ARM Data Quality Office Historical Data Quality Report (DQR) Review. *Fifth Atmospheric System Research (ASR) Science Team Meeting*, Potomac, MD, March 10-13, U.S. Department of Energy. Poster.
- Peppler, R., and L. Smith, 2014: Who gets to tell the story? Visualizing climate change through the lens of Indigenous Geographies. *Ninth Symposium on Policy and Socio-Economic Research*, 94th American Meteorological Society Annual Meeting, Atlanta, GA, February 2-6, Paper 5.2. Presented by Peppler.
- Peppler, R. A., and L. Smith, 2013: Visualizing climate change through the lens of Indigenous geographies. *Climate Change and Indigenous Peoples*, 2013 Association of American Geographers Annual Meeting, Los Angeles, CA, April 9-13. Presented by Peppler.
- Klockow, K. E., R. A. Peppler, R. Smith, N. C. Grams, A. Cannon, and R. A. McPherson, 2013: Tornado stories in central Oklahoma: Town Hall meetings to help understand local knowledge and beliefs. *Eighth Symposium on Policy and Socio-Economic Research*, 93rd American Meteorological Society Annual Meeting, Austin, TX, January 6-10. Presented by Peppler.
- Cannon, A., K. E. Klockow, M. Micozzi, R. A. Peppler, and H. E. Brooks, 2013: Comparative analysis of the tornado outbreaks of April 3-4, 1974 and April 27-28, 2011: Deriving population exposure fatality rate estimates for tornado outbreaks using Geographic Information Systems (GIS). *Eighth Symposium on Policy and Socio-Economic Research*, Amer. Meteor. Soc., Austin, TX, January 6-10, Paper 4A.1. Presented by Cannon.
- Moore, S., K. Kehoe, J. Monroe, R. Peppler, and A. Theisen, 2013: ARM Climate Research Facility Data Quality Office. *Fourth Atmospheric System Research (ASR) Science Team Meeting*, Potomac, MD, March 18-21, U.S. Department of Energy. Poster.
- Peppler, R. A., 2012: "Things are not balancing out" – Perceptions of a changing climate among Native farmers in southwestern Oklahoma. *Climate Change and Indigenous Peoples I – Indigenous Knowledge and Western Science*, 2012 Association of American Geographers Annual Meeting, New York City, NY, February 23-28.
- Klockow, K. E., and R. A. Peppler, 2012: "Folk Science": Local, situated understandings of the tornado hazard on April 27, 2011 in Alabama and Mississippi. *Seventh Symposium on Policy and Socio-Economic Research*, 92nd American Meteorological Society Annual Meeting, New Orleans, LA, January 22-26. Presented by Peppler.
- Cannon, A., K. E. Klockow, R. A. Peppler, and H. E. Brooks, 2012: Deriving population exposure fatality rate estimates for tornado outbreaks using Geographic Information Systems (GIS). *Seventh Symposium on Policy and Socio-Economic Research*, 92nd American Meteorological Society Annual Meeting, New Orleans, LA, January 22-26. Presented by Cannon.
- Peppler, R. A., 2011: Agriculture and food sovereignty as pathways to healthier and more sustainable lifestyles: Efforts among Native peoples in Oklahoma. *The Decolonization of Diet: Examining Health and Food Practices 2*, 2011 Association of American Geographers Annual Meeting, Seattle, WA, April 12-16.
- Kehoe, K. E., and R. A. Peppler, 2011: The Atmospheric Radiation Measurement Program Climate Research Facility: Building a climate data record to improve general circulation models for climate research and prediction. *The Generation and Use of Climate Data Records*, 2011 Association of American Geographers Annual Meeting, Seattle, WA, April 12-16. Presented by Kehoe.

- Peppler, R. A., 2011: Fieldwork in Indian Country: A conversational experience. *Sixth Symposium on Policy and Socio-Economic Research*, 91st American Meteorological Society Annual Meeting, Seattle, WA, January 23-27.
- Stalker, S. L., K. M. Kuhlman, H. Lazrus, R. A. Peppler, and K. E. Klockow, 2011: Public perceptions of the 10 May 2010 Oklahoma and the 17 June 2010 Minnesota tornado outbreaks. *Sixth Symposium on Policy and Socio-Economic Research*, 91st American Meteorological Society Annual Meeting, Seattle, WA, January 23-27. Presented by Stalker.
- Theisen, A., K. Kehoe, J. Monroe, S. Moore, T. Noensie, and R. Peppler, 2011: ARM Data Quality Office inspection tools and techniques. *Second Atmospheric System Research (ASR) Science Team Meeting*, San Antonio, TX, March 28-April 1, U.S. Dept. of Energy, Poster.
- Peppler, R. A., 2010: Knowing which way the wind blows: Weather observation, belief and practice among Native farmers in Oklahoma – first impressions. *Climate Change and Environmental Issues: Indigenous Peoples II*, 2010 Association of American Geographers Annual Meeting, Washington, DC, April 14-18.
- Peppler, R. A., 2010: Knowing which way the wind blows: Weather observation, belief and practice in Native Oklahoma (first impressions). *Fifth Symposium on Policy and Socio-Economic Research*, 90th American Meteorological Society Annual Meeting, Atlanta, GA, January 17-21.
- Monroe, J. W., S. T. Moore, K. E. Kehoe, and R. A. Peppler, 2010: Quality control tools at the ARM Climate Research Facility Data Quality Office. *First Atmospheric System Research (ASR) Science Team Meeting*, Washington, D.C., March 15-19, U.S. Dept. of Energy, Poster.
- Peppler, R. A., 2009: “Old Indian Ways” of knowing the weather: Weather predictions for the winters of 1950-51 and 1951-52. *Fourth Symposium on Policy and Socio-Economic Research*, 89th American Meteorological Society Annual Meeting, Phoenix, AZ, January 11-15.
- Moore, S., K. Kehoe, J. Monroe, and R. Peppler, 2009: Expanding the quality control techniques in use at the ARM Data Quality Office. *19th ARM Science Team Meeting*, Louisville, KY, March 30-April 4, U.S. Dept. of Energy. Poster.
- Peppler, R. A., 2008: Knowing weather and climate: How do peoples with extended interaction histories with the natural environment recognize or forecast meteorological events? *Third Symposium on Policy and Socio-Economic Research*, 88th American Meteorological Society Annual Meeting, New Orleans, LA, January 20-24.
- Klockow, K. E., and R. A. Peppler, 2008: To travel or not to travel: The case of AMS 2007. *Third Symposium on Policy and Socio-Economic Research*, 88th American Meteorological Society Annual Meeting, New Orleans, LA, January 20-24. Poster.
- Kehoe, K., R. Peppler, K. Sonntag, J. Monroe, S. Moore, T. Thompson, C. Schwarz, N. Hiers, S. Mullens, and K. Rabon, 2008: ARM Data Quality Office Update 2008. *18th ARM Science Team Meeting*, Norfolk, VA, March 10-14, U.S. Dept. of Energy. Poster.
- Peppler, R. A., 2007: Knowing weather and climate: How people understand, forecast and cope with meteorological events. *Weather and Society (WAS*IS) I*, 2007 Association of American Geographers Annual Meeting, San Francisco, CA, April 17-21.

DISSERTATION

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- Peppler, R. A., 2011: Knowing Which Way the Wind Blows: Weather Observation, Belief and Practice in Native Oklahoma. Ph.D. Dissertation, Dept. of Geography and Environmental Sustainability, University of Oklahoma, 298 pp.

RECENT AND UPCOMING CONFERENCES and CONFERENCE SESSIONS ORGANIZED AND/OR CHAIRED

- Tenth Symposium on Societal Applications: Policy, Research and Practice*, 95th American Meteorological Society Annual Meeting, Phoenix, AZ, January 4-8, 2015. Organizer and Co-Chair with K. E. Klockow.
- Ninth Symposium on Policy and Socio-Economic Research*, 94th American Meteorological Society Annual Meeting, Atlanta, GA, February 2-6, 2014. Organizer and Co-Chair with K. E. Klockow.
- Eighth Symposium on Policy and Socio-Economic Research*, 93rd American Meteorological Society Annual Meeting, Austin, TX, January 6-10, 2013. Organizer and Co-Chair with K. E. Klockow.
- “Climate Change and Indigenous Peoples II – Policies and Responses.” 2012 Association of American Geographers Annual Meeting, New York City, NY, February 23-28, 2012. Co-Chair with D. Herman.
- “Ways of Knowing: Communicating with Diverse Populations – The Role of Technology in Conveying ‘Ways of Knowing’.” *Seventh Symposium on Policy and Socio-Economic Research*, 92nd American Meteorological Society Annual Meeting, New Orleans, LA, January 22-26, 2012. Organizer and Co-Chair with H. Lazrus.
- “Ways of Knowing: Dismantling the Divide between Social and Natural Sciences in Weather and Climate Research.” *Sixth Symposium on Policy and Socio-Economic Research*, 91st American Meteorological Society Annual Meeting, Seattle, WA, January 23-27, 2011. Organizer and Co-Chair with H. Lazrus.
- “Ways of Knowing: Traditional Knowledge as Key Insight for Dealing with a Changing Climate.” *Fifth Symposium on Policy and Socio-Economic Research*, 90th American Meteorological Society Annual Meeting, Atlanta, GA, January 17-21, 2010. Organizer and Co-Chair with H. Lazrus.

RECENT TEACHING EXPERIENCE

- Instructor, University of Oklahoma, Fall 2014 (Course: Environment and Society, Department of Geography and Environmental Sustainability)
- Instructor, University of Oklahoma, Spring 2014 (Course: Environment and Society, Department of Geography and Environmental Sustainability)
- Instructor, University of Oklahoma, Spring 2013 (Course: Human Geography, Department of Geography and Environmental Sustainability)
- Guest Lecturer, University of Oklahoma, Summer 2012 (Course: Topics in Public Policy: Public Policy and Climate Change, Department of Political Science, M. Nowlin – Instructor), July 18: “Climate Change Research”
- Guest Lecturer, University of Oklahoma, Spring 2012 (Course: Design Studio 6, Department of Architecture, S. Pilat – Instructor), February 15: “National Weather Center Museum and Science Center”
- Guest Lecturer, University of Oklahoma, Spring 2011 (Course: Environment and Society, Department of Geography and Environmental Sustainability, H. Lazrus – Instructor), April 20: “Knowing Which Way the Wind Blows: Weather Observation, Belief and Practice Among Native Farmers in Oklahoma” and “Agriculture and Food Sovereignty: Efforts Among Native Peoples in Oklahoma”
- Guest Lecturer, University of Oklahoma, Spring 2011 (Course: Design Studio 6, Department of Architecture, S. Pilat – Instructor), March 7: “National Weather Center Museum and Science Center”
- Guest Lecturer, University of Oklahoma, Fall 2009 (Course: Contemporary Geographic Thought, Department of Geography and Environmental Sustainability, L. Smith – Instructor), December 1: “Risk and the Risk Society”
- Guest Lecturer, University of Oklahoma, Fall 2009 (Course: What is Science?, Honors College, L. Smith – Instructor), November 19: “Ways of Knowing about Climate Change”

RECENT MENTORSHIPS

- University of Oklahoma Research Experiences for Undergraduates Program, Summer 2011, Amber R. Cannon, East Central University: “Deriving Population Exposure Fatality Rate Estimates for Tornado Outbreaks Using Geographic Information Systems (GIS).” [With K. Klockow – University of Oklahoma, and H. Brooks – National Severe Storms Laboratory]
- University of Oklahoma Research Experiences for Undergraduates Program, Summer 2010, Sarah L. Stalker, St. Cloud State University: “Public Responses to the May 10, 2010, Norman, OK Tornado.” [With K. Kuhlman, H. Lazrus, and K. Klockow – University of Oklahoma]
- University of Oklahoma School of Meteorology Senior Capstone Project, Fall 2009-Spring 2010, Curtis McDonald and Kelsey Mulder: “Warning Decisions in Extreme Weather Events: Determining the Perception of Risks Associated with Flash Flooding in Boulder, Colorado.” [With G. Eosco and K. Klockow – University of Oklahoma, and J. Lazo and J. Demuth – National Center for Atmospheric Research]

RECENT AWARDS

- 2011 Dean’s Outstanding Service Award, University of Oklahoma College of Atmospheric and Geographic Sciences
- 2010 Ralph and Margaret Olson Scholarship, University of Oklahoma Department of Geography and Environmental Sustainability

RECENT GRANTS AND CONTRACTS FUNDED

- Battelle-Pacific Northwest National Laboratory, 2014-2017, R. A. Peppler and K. E. Kehoe (Co-P.I.s): “Data Quality Manager for the ARM Program.”
- Battelle-Pacific Northwest National Laboratory, 2010-2013, R. A. Peppler and K. E. Kehoe (Co-P.I.s): “Data Quality Manager for the ARM Program.” \$2,079,001.
- Battelle-Pacific Northwest National Laboratory, 2006-2009, R. A. Peppler (P.I.): “Data Quality Manager for the ARM Program.” \$1,490,581.

CURRENT PROFESSIONAL AFFILIATIONS

- Association of American Geographers – Member
- American Meteorological Society – Member