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Updated: April 2015

EDUCATION

Ph.D., University of Georgia, March 1993
Geography with a specialization in applied climatology
Dissertation title: *A sub-synoptic climatology of heavy rain over the Appalachian region*

M.S., University of Virginia, December 1988
Environmental science with a specialization in meteorology
Thesis Title: *An examination of cold air outbreaks over eastern North America*

B.S., Virginia Polytechnic Institute, June 1985
Geophysics with a minor in geology

Certified Consulting Meteorologist, April 2007 to present
American Meteorological Society

PROFESSIONAL EXPERIENCE

CURRENT POSITIONS

Associate Professor, Department of Geography, University of North Carolina at Chapel Hill, 1999 to present.

Director, Southeast Regional Climate Center, Chapel Hill, 2010-present

Adjunct Professor, Department of Marine Earth and Atmospheric Sciences, North Carolina State University, 2010-present.

PAST POSITIONS

Deputy Director and Regional Climatologist, Southeastern Regional Climate Center, Chapel Hill, 2007-2009

Assistant Professor, Department of Geography, University of North Carolina at Chapel Hill, 1993-1999.

Science and Math Tutor, Athletic Department, University of Georgia, 1990-1992.

Graduate Teaching Assistant, Department of Geography, University of Georgia, 1989-1992.

Graduate Research Assistant, Department of Environmental Science, University of Virginia, 1986-89.

Graduate Teaching Assistant, Department of Environmental Science, University of Virginia, 1986-88.

High School Earth Science Teacher, Pulaski County Public Schools, Virginia 1985-1986.

RESEARCH GRANTS AND CONTRACTS

Konrad, C. E. 2010-2015: Southeast Regional Climate Center. NOAA. \$2,914,560.

Konrad, C. E. 2012-2015: Carolinas Regional Integrated Science Assessments. NOAA. \$127,735.

Konrad, C.E. 2012-2013: Climate – public health toolbox. NOAA. \$50,000.

Konrad, C.E. 2010-2012: Southeast regional climate assessment. NOAA. \$275,593.

Robinson, P.J, and **C. E. Konrad**: 2007-2010: Regional Climate Centers. NOAA, \$1,308,173.

Stallins, J.A., Bentley, M., **Konrad, C. E.**, Diem, J. 2003-2007: Complex controls on the distribution of lightning characteristics and property damage in an urbanized region. National Science Foundation, \$96,473

Konrad, C. E. Synoptic climatology of precipitation forcing fields over the eastern U.S. 2000-2003, National Science Foundation. BCS-9911315. \$106,905.

Band, L. E., **Konrad, C. E.**, Moody, A. Drought vulnerability in the Catawba River basin. 2003-2004, Duke Energy Foundation, \$100,000.

Rindfuss, R. R., Walsh, S. J., Entwisle, B., **Konrad, C. E.**, Moody, A., Curran, S. Sawangdee, Y., 1997-2000: Soil, water, and pixels: A study of Nang Rong, Thailand. NASA. \$570,000.

Robinson, P. J. and **C. E. Konrad** 1997: Active meteorology: An introduction to weather and climate. Chancellor's Task Force on Instructional Technology. \$29,826.

Konrad, C. E., 1997. Atmospheric controls on the intensity of heavy rainfall associated with landfalling tropical disturbances in the southeastern United States. University Research Council. \$1,000.

Walsh, S. J., Butler, D. R., **Konrad, C. E.**, and R. Peet. 1994-1996: The Roanoke River bioserve: A preliminary assessment of the impact of flow modification on hydrology, geomorphological processes, and vegetation. The Nature Conservancy. \$113,571.

Konrad, C. E. 1994: A synoptic climatology of springtime temperature variability International Business Machines Fund Award. \$3,000.

Konrad, C. E. and V. Meentemeyer. 1991-1992: Subsynoptic characteristics of heavy rain over the Appalachian region. National Science Foundation SES-9105628. \$2,650.

PUBLICATIONS

REFEREED ARTICLES AND MEMOS

- Kovach, M.M. and **C.E. Konrad** 2015: Area-Level Risk Factors for Heat-Related Illness in Rural and Urban Locations across North Carolina, USA. *Applied Geography*, 60, 175-183.
- Kovach, M.M. and **C.E. Konrad** 2014: Meteorological impacts of inland moving tropical cyclones. *Physical Geography*, 27, 245-271.
- Fuhrmann, C.M., **C.E. Konrad**, M.M Kovach, J.T. McLeod, W.G. Schmitz, and P.G. Dixon: 2014: Ranking of tornado outbreaks in the United States and their climatological characteristics. *Weather and Forecasting*, 29, 684-701.
- Knox, P.N., C.M. Fuhrmann, and **C.E. Konrad** 2014: Challenges and opportunities for Southeast agriculture in a changing climate: Perspectives from State Climatologists. *Southeastern Geographer*, 54, 118-136.
- Fuhrmann, C.M. and **C.E. Konrad**. 2013: A trajectory approach to analyzing the ingredients associated with heavy winter storms in central North Carolina. *Weather and Forecasting*, 28, 647-667.
- Kunkel, K.E., L.E. Stevens, S.E. Stevens, L. Sun, E. Janssen, D. Weubbles, **C.E. Konrad**, C.M. Fuhrmann, B.D. Keim, M.C. Kruk, A. Billot, H. Needham, M. Shafer, and J.G. Dobson, 2013: *Regional Climate Trends and Scenarios for the U.S. National Climate Assessment. Part 2: Climate of the Southeast United States*. NOAA Technical Report NESDIS 142-2.
- Fuhrmann, C.M. **Konrad, C.E.**, Kovach, M., and D.J. Perkins. 2011: The August 2007 Heat Wave in North Carolina: Meteorological factors and local variability. *Physical Geography*, 32, 217-240.
- Perry, L. B., **Konrad, C. E.**, Hotz, D. G., and Lee, Lawrence. 2010: Synoptic classification of snowfall events in the Great Smoky Mountains, USA. *Physical Geography*, 31,156-171.
- Konrad C.E.** and L. B. Perry, 2010: Relationships between tropical cyclones and heavy rainfall in the Carolina region of the United States. *The International Journal of Climatology*, 30,522-534.
- Keighton, S., Lee, L., Holloway, B., Hotz, D., Zubrick, S. Hovis, J. Votaw, G, Perry, L.B., **Konrad, C. E.**, Miller, D., and Etherton, B. 2009: A collaborative approach to study northwest flow snow in the southern Appalachians. *Bulletin of the American Meteorological Society*, 90, 977-991.
- Fuhrmann, C.M., **Konrad, C. E.**, and L. E. Band, 2008: Climatological perspectives on the rainfall characteristics associated with landslides in western North Carolina. *Physical Geography*, 29, 289-305.
- Perry L. and C. E. **Konrad**, 2007: Antecedent upstream air trajectories associated with northwest flow snowfall in the Southern Appalachians, USA. *Weather and Forecasting*, 22, 334-352.
- Martin, J. and **C.E. Konrad**, 2006: Directional characteristics of potentially damaging wind gusts in the Southeast United States. *Physical Geography*, 27, 155-169.

- Perry L. and **C. E. Konrad, 2006**: Relationships between northwest flow snowfall and topography in the Southern Appalachians. *Climate Research*, 32, 35-47.
- Chen, F. and **C. E. Konrad, 2006**: A synoptic climatology of summertime heat and humidity in the Piedmont Region of North Carolina. *Applied Meteorology and Climatology*, 45, 674-685.
- Murphy, M. and **C. E. Konrad, 2005**: Spatial and temporal patterns of thunderstorm events that produce cloud-to-ground lightning in the interior southeastern United States. *Monthly Weather Review*, 133, 1417-1430.
- Konrad, C. E.**, Meaux, M. F., and D. A. Meaux, 2002: Relationships between tropical cyclone attributes and precipitation totals: Considerations of scale. *The International Journal of Climatology*, 22, 237-247.
- Konrad, C. E.**, 2001: Diurnal variations in the landfall times of tropical cyclones over the eastern United States. *Monthly Weather Review*, 129, 2627-2631.
- Konrad, C. E.**, 2001: The heaviest precipitation events over the eastern United States: Considerations of scale. *Journal of Hydrometeorology*, 2, 309-325.
- Colucci, S. J., Baumhefner, D. P., and **C. E. Konrad**, 1999: Numerical Prediction of a cold-air outbreak: A case study with forecast ensembles. *Monthly Weather Review*, 127, 1538-1550.
- Konrad, C. E.**, 1998: Intramonthly indices of the Pacific / North American teleconnection pattern and their relationship with temperature characteristics over the United States. *Theoretical and Applied Climatology*. 60, 11-19.
- Konrad, C. E.**, 1998: A hydroclimatological analysis of the lower Roanoke River basin. *Physical Geography*. 19, 15-34.
- Konrad, C. E.**, 1998: Persistent planetary scale circulation patterns and their relationship with the intensity of cold air outbreaks over the eastern United States. *The International Journal of Climatology*. 18, 1209-1221.
- Konrad, C. E.**, 1998: An empirical approach for delineating the spatial patterns of freezing rain in the Appalachian region of the USA. *Climate Research* 10, 217-227.
- Konrad, C. E.**, 1997: Synoptic features associated with heavy rainfall over the interior southeastern United States. *Weather and Forecasting*, 12, 553-567.
- Konrad, C. E.**, 1996: Relationships between the intensity of cold air outbreaks and the evolution of synoptic and planetary scale features across North America. *Monthly Weather Review*, 124, 1067-1083.
- Konrad, C. E.**, 1996: Relationships between precipitation event attributes and topography in the southern Blue Ridge Mountains of the southeastern United States. *The International Journal of Climatology*, 16, 49-62.
- Konrad, C. E.**, 1995: When to plan outdoor activities: The diurnal and seasonal patterns of wetness in the southeastern United States. *The Southeastern Geographer*, 35, 150-167.

- Konrad, C. E.**, 1995: An investigation of maximum precipitation rates in the southern Blue Ridge Mountains of the Southeastern United States. *Climate Research* 5, 159-166.
- Konrad, C. E.**, 1994: Moisture trajectories associated with heavy rainfall in the Appalachian region of the United States. *Physical Geography*, 15, 227-248.
- Konrad, C. E.**, and V. Meentemeyer, 1994b: Lower tropospheric warm air advection patterns associated with heavy rainfall over the Appalachian region. *The Professional Geographer*, 46, 143-155.
- Konrad, C. E.**, and S. J. Colucci, 1989: An examination of extreme cold air outbreaks over eastern North America. *Monthly Weather Review*, 117, 2687-2700.
- Konrad, C. E.**, and S. J. Colucci, 1988: Synoptic climatology of 500 mb circulation changes during explosive cyclogenesis. *Monthly Weather Review*, 116, 1431-1443.

BOOK CHAPTERS

- Konrad, C.E.** and C.M. Fuhrmann, 2013: Climate of the Southeast United States: Past, present and future. In Ingram, K.T., K. Dow, and L. Carter (Eds.) *Climate of the Southeast United States: Variability, Change, Impacts, and Vulnerability*, Island Press: Washington D.C.

REPORTS

- Walsh, S. J., Butler, D. R., **Konrad, C. E.**, and R. Peet. 1997: Summary Report: The Roanoke River Bioreserve: A Preliminary Assessment of the Impact of Flow Modification on Hydrology, Geomorphological Processes, and Vegetation. The Nature Conservancy.
- Konrad, C. E.**, 1997: Component Report: A hydroclimatological analysis of the Roanoke River Basin. The Nature Conservancy.

CONFERENCE PROCEEDINGS

- Fuhrmann, C.M., R.P. Connolly, and **C.E. Konrad**, 2009: Winter storms: An overlooked source of death, destruction, and inconvenience in the Carolina Piedmont region. *Proceedings of the Eastern Snow Conference*, 66, 45-58.
- Fuhrmann, C.M., and **C.E. Konrad** 2008. "Synoptic-scale airflow and moisture transport associated with freezing rain events in central North Carolina." *Proceedings of the Eastern Snow Conference*, Lake Morey, VT
- Perry, B. **Konrad, C.E.**, Lee, L. G., and D.Hotz . 2007. Synoptic Classification of Snowfall Events in the Great Smoky Mountains, USA. *64th Proceedings of the Eastern Snow Conference*, St. Johns Newfoundland, May 29-June 2.
- Perry, B. and **C. E. Konrad**. 2006. Synoptic patterns associated with the record snowfall of 1960 in the southern Appalachians. *63rd Proceedings of the Eastern Snow Conference*, Newark, DE, June 8-10.

- Perry, B. and **C. E. Konrad**. 2005. The Influence of the Great Lakes on snowfall patterns in the southern Appalachians. *62nd Proceedings of the Eastern Snow Conference*, Waterloo, Ontario, Canada, June 7-10.
- Perry, B. and **C. E. Konrad**. 2004. Northwest flow snowfall in the southern Appalachians: Spatial and synoptic patterns. *61st Proceedings of the Eastern Snow Conference*, Waterloo, Portland, ME, June 9-11.
- Konrad, C.E.** 2002. Long term trends in the spatial and temporal character of precipitation events in the eastern U.S. Preprints of the 13th Conference on Applied Climatology, May 13-16, Portland, OR. American Meteorological Society, Boston, MA, 169-172.
- Konrad, C. E.** 2001. Relationships between tropical cyclone attributes and precipitation totals: Considerations of scale. Preprints of the Symposium on Precipitation Extremes, January 14-18, Albuquerque, NM. American Meteorological Society, Boston, MA, 304-307.
- Konrad, C.E.** 2000. Secular trends in the size of extreme precipitation events in the eastern U.S. Preprints of the 12th Conference on Applied Climatology, May 8-11, Asheville, NC. American Meteorological Society, Boston, MA, 102-106.
- Townsend, P.A., S.J. Walsh, and **C. E. Konrad**, 1997. Hydroclimatological Influences on Landscape Change along the Lower Roanoke River Floodplain, NC, U.S. Regional Association, International Association for Landscape Ecology, 12th Annual Symposium, Durham, NC.
- Konrad, C. E.**, 1993: A synoptic climatology of heavy rain in the Appalachian region based on warm air advection patterns. Preprints of the 13th Conference on Weather Analysis and Forecasting, August 2-6, Vienna, VA. American Meteorological Society, Boston, MA, 373-374.
- Konrad, C. E.**, 1988: Extreme cold air outbreaks over eastern North America. National Center for Atmospheric Research (NCAR) Colloquium on Synoptic Meteorology, July 5-22, Boulder, CO, 89-98
- Colucci, S. J., **Konrad, C. E.** and D. Walker, 1987: Large scale circulation changes during explosive cyclogenesis: synoptic climatology and diagnostic studies. Preprints of the Sixth Extratropical Cyclone Workshop, February 17-20, Monterey CA.
- Colucci, S. J. and **C. E. Konrad**, 1987: Synoptic climatology and diagnostic studies of bomb-block couplets in the atmosphere. National Center for Atmospheric Research (NCAR) Colloquium on Long Wave Atmospheric Phenomenon, July 6-24, Boulder, CO, 105-116.

PRESENTATIONS (*Lead authored only*)

Climate Change in North Carolina. Presented at the American Public Works Association (APWA) annual meeting, June 17-19, 2015. Hickory, NC

Climate Perspectives: A Web-Based Tool for Assessing the Unusualness of the Weather. Presented at the 43rd Conference on Broadcast Meteorology. June 10-12, 2015. Raleigh, NC.

Characterizing Weather Events and Variability in the Context of Climate Change and Health Research. Invited presentation at the 2015 Water Microbiology Conference, May 18-21 2015. Chapel Hill, NC.

Determining fine-grained climatological patterns of dryness and drought across the Carolinas. Presented at the Climate Prediction Applications Science Workshop, March 24-26 2015, Las Cruces, NM

The Climate of the Carolinas: Past, Present, and Future. Invited presentation at North Carolina Central University. March 23, 2015. Durham, NC.

Climate – Public Health Research Engagement and Tool Development. Presented at the annual RISA Meeting. January 14, 2015. Charleston, SC

Relationships between temperature and heat-related illness in North Carolina. Presented at the 95th Annual Meeting of the American Meteorological Society. January 7, 2015. Phoenix, AZ

The spatial patterns of tornado vulnerability across the United States. Presented at the 68th Conference of the Southeastern Division of the Association of American Geographers. November 24, 2014. Athens, GA.

Relationships between temperature and heat-related illness in North Carolina. Presented at the 20th International Congress of Biometeorology. September 30, 2015. Cleveland, OH

Regional variations in tornado vulnerability to tornado outbreaks across the United States. Presented at the 21st conference on Applied Climatology. June 11, 2014. Denver, CO.

Research Projects at the Southeast Regional Climate Center. Invited presentation at the Climate Modeling Consortium Workshop. May 12, 2014. Research Triangle Park, NC.

Introduction to the Web-based Tool: Climate Perspectives. Invited presentation at the Carolinas Climate Resilience Conference. April 29, 2014. Charlotte, NC.

The Climate of the Carolinas: Past, Present, and Future. Invited presentation at the Carolinas Climate Resilience Conference. April 29, 2014. Charlotte, NC.

Introduction to Climate Modeling. Invited presentation at the Center for Disease Control (CDC) on building climate resilience in Florida. April 15, 2014. Orlando, FL.

Trends in tornado vulnerability across the United States. Preprints of the 110th Conference of the Association of American Geographers. April 8th, 2014. Tampa, FL.

Trends in tornado vulnerability across the United States. Presented at the 67th Conference of the Southeastern Division of the Association of American Geographers. November 25, 2013. Roanoke, VA.

Typhoon Haiyan in the Philippines: Atmospheric description and climatological context. Invited presentation at the Asian Studies seminar. November 14, 2013. Chapel Hill, NC

Climate hazards across Florida: Determining impacts on public health. Invited presentation at a CDC BRACE seminar. May 29, 2013. Tallahassee, FL.

Regional variations in vulnerability to tornado outbreaks in the eastern United States. Preprints of the 109th Conference of the Association of American Geographers. April 10th, 2013. Los Angeles, CA.

The climate of the Southeast: Extremes, impacts, and future projections. Invited webinar presentation at the Southern Confer Pine Map monthly meeting. April 20th, 2012. Raleigh, NC.

Climate Perspectives: A new tool for assessing the current state of the climate across the southeastern U.S. Presented at Blacksburg Weather Service. April 6, 2011. Blacksburg, VA.

The climate of the Southeast: Extremes, impacts, and future projections. Invited plenary presentation at the National Climate Assessment (NCA) health sector meeting. February 13, 2012. Charleston, SC.

Assessing the magnitude and societal impacts of the 25-28 April 2011 tornado outbreak. Presented at the 92nd Annual Meeting of the American Meteorological Society. January 25, 2011. New Orleans, LA.

The climate of the Southeast: Extremes, impacts, and future projections. Invited plenary presentation at the Climate Conversations workshop. January 13, 2012. Charleston, SC.

The climate of the Southeast: Extremes and impacts. Invited plenary presentation at the Writer's Workshop for the National Climate Assessment. September 26, 2011. Atlanta, GA.

Climate services and the Southeast Regional Climate Center. Invited presentation at the Research Triangle Institute (RTI). September 8, 2011. Research Triangle Park, NC.

The role of climate in food and waterborne diseases: Floods and droughts. Presented at Climate and Public Health in NC: Emerging Risks and Opportunities" workshop in Chapel Hill, NC on August 19, 2011

Climate services and the Southeast Regional Climate Center. Invited presentation at the NOAA Hollings Marine Lab". July 28, 2011. Charleston, SC.

Climate Perspectives: A new tool for assessing the current state of the climate across the southeastern U.S. Presented at the 19th Conference on Applied Climatology. July 19, 2011. Asheville, NC.

Climate change resources and NOAA: The Regional Climate Centers (RCCs). Invited presentation at the Annual Meeting of the American Planning Association. April 10, 2011. Boston, MA.

Recent climate variability and extremes: Is greenhouse warming responsible? Invited Presentation at Marine Mammal Day held at The North Carolina Natural Science Museum. January 29, 2011. Raleigh, NC

Climate Perspectives: A new tool for assessing the current state of the climate across the southeastern U.S. Presented at the 91th Annual Meeting of the American Meteorological Society. January 25, 2011. Seattle, WA.

- Meteorological and climatological perspectives on the August 2007 heat wave in North Carolina.*
Presented at the 64th Conference of the Southeastern Division of the Association of American Geographers. November 22, 2010. Birmingham, AL.
- The Southeast Regional Climate Center.* Invited presentation at the American Association of State Climatologist (AASC) meeting". July 13, 2010. South Lake Tahoe, CA.
- Spatial and temporal patterns of summer season precipitation across the Carolina Coastal region.*
Invited presentation to the Geography Department at East Carolina University. March 31, 2010. Greenville, NC.
- Using large scale circulation indices to predict the intensity of cold air outbreaks over extended time scales across the Southeastern U.S.* Presented at the 90th Annual Meeting of the American Meteorological Society. January 18-21, 2010, Atlanta, GA.
- Using large scale circulation indices to predict the intensity of cold air outbreaks over extended time scales across the Southeastern U.S.* Presented at the 63rd Conference of the Southeastern Division of the Association of American Geographers. November 23-24, 2009, Knoxville, TN.
- Using large scale circulation indices to predict the intensity of cold air outbreaks over extended time scales across the Southeastern U.S.* Presented at the Carolinas and Virginia Climate Conference, October 20-21 2009, Wilmington, NC.
- The Clustering of Extreme Weather Events with Respect to Time and Their Relationship with the Planetary Scale Circulation.* Presented at the Climate Prediction Applications Science Workshop, March 24-27 2009, Norman, OK
- The Clustering of Extreme Weather Events with Respect to Time and Their Relationship with the Planetary Scale Circulation.* Presented at the Annual Meeting of the Association of American Geographers. March 22-27 2009, Las Vegas, NV
- The Clustering of Extreme Weather Events with Respect to Time and Their Relationship with the Planetary Scale Circulation.* Presented at the 62nd Conference of the Southeastern Division of the Association of American Geographers. November 24-25, 2008, Greensboro, NC.
- Global Climate Change: How are the Weather Patterns Going to Change across the Southeastern U.S.?*
Keynote speech given at The Florida Environmental Health Association Annual Meeting. August 13-14, 2008, West Palm Beach, FL
- Relationships between Heavy Rainfall and Tropical Cyclones in the Carolina region of the U.S.* Preprints of the 104th Conference of the Association of American Geographers. April 15-19, 2008, Boston, MA
- Future Trends in the Frequency and Intensity of Hurricanes.* Invited Presentation on November 12-13, 2007 at the North Carolina Beach, Inlet, and Waterway Association Annual Conference, Carolina Beach, NC

Heavy Rainfall associated with Tropical Cyclones in the Carolinas. Invited presentation on September 28, 2007 to the Department of Environmental Sciences at the University of Virginia, Charlottesville, VA

The Hydrological Significance of Tropical Cyclones in the Carolina Region of the United States. The IGU Commission for Water Sustainability Annual Conference, August 13-15 2007, Asheville, NC

The New Southeastern Regional Climate Center. 2007 Climate Workshop NWS Eastern Region and Southern Region on June 20-21 2007, Peachtree City, GA.

Hurricanes in the Carolinas: Why does it rain so much? Invited presentation on January 26, 2007 to the Department of Geography at the University of North Carolina at Chapel Hill, Chapel Hill, NC.

Relationships between tropical cyclones and heavy precipitation in the Carolinas. Preprints of the 16th Conference on Applied Climatology. January 14-18, 2007. San Antonio, TX.

Heavy rainfall associated with tropical cyclones in the Carolinas. Invited presentation on March 17, 2006 to the Department of Geography at the University of North Carolina at Greensboro, Greensboro, NC.

The Superpositioning of Synoptic Scale Features in Connection with Heavy Rainfall across the Eastern United States. Preprints of the 102nd Conference of the Association of American Geographers. March 6-12, 2006 Chicago, IL

Regional variations in the synoptic patterns associated with warm season heavy rainfall across the eastern United States. Preprints of the 59th Conference of the Southeastern Division of the Association of American Geographers. November 18-22, 2005, West Palm Beach, FL

The Positioning of Synoptic Scale Features Relative to the Locations of Heaviest Rainfall Across the Southeastern U.S. Invited presentation at the CSTAR workshop at NC State University, October 6-7, 2005, Raleigh, NC

Diurnal and Seasonal Variations in the Clarity of Celestial Observations as Inferred from Visibility Data. Invited presentation on October 14, 2005 to the Raleigh Astronomy Club, Raleigh, NC.

A Synoptic Climatology that Sheds Light on the Excessive Rainfall Associated with Hurricane Frances and Ivan. Invited presentation on March 25, 2005 to the Department of Geography at the University of Georgia, Athens, GA.

A Synoptic Climatology that Sheds Light on the Excessive Rainfall Associated with Hurricane Frances and Ivan. Invited presentation on February 21, 2005 to the Department of Marine, Earth, and Atmospheric Sciences at the North Carolina State University, Raleigh, NC.

What Can Climatologies Tell Us About the Excessive Rainfall associated with Hurricanes Frances and Ivan? Invited presentation on October 21, 2005 to the Department of Geography and Planning at Appalachian State University, Boone, NC.

Easterly flow snowfall in the Appalachians: Synoptic processes and spatial patterns. Presentation to the Blacksburg, VA Weather Service. June 8, 2004, Blacksburg, VA.

Easterly flow snowfall in the Appalachians: Synoptic processes and spatial patterns. Preprints of the 61st Eastern Snow Conference. June 9-11, 2004, Portland, ME.

Regional Variations in the Relationships Between Atmospheric Circulation and Warm season Precipitation Attributes. Preprints of the 100th Conference of the Association of American Geographers. March 14-20, 2004, Philadelphia, PA.

Heavy rainfall associated with tropical cyclones in the Southern U.S. Invited presentation on January 15, 2004 to the Curriculum in Ecology, University of North Carolina, Chapel Hill, NC.

Heavy rainfall associated with tropical cyclones in the Southern U.S. Invited presentation on October 23, 2003 to the Department of Geography and Anthropology, Georgia State University, Atlanta, GA.

The influence of synoptic scale circulations and moisture patterns on the spatial variability of warm season precipitation. Invited presentation on September 24, 2003 to the Central North Carolina Chapter of the American Meteorological Society, Research Triangle Park, NC.

What climatologies can tell us about rainfall associated with inland tropical systems. Invited presentation on May 13, 2003 at the Mid-Atlantic Conference on the Inland Effects of Tropical Systems, Raleigh, NC.

Using synoptic climatologies to address why Hurricane Floyd produced record flooding in eastern North Carolina. Invited presentation on October 10, 2002 to the Department of Marine Sciences, University of North Carolina, Chapel Hill, NC.

Long term trends in the spatial and temporal character of precipitation events in the eastern U.S. Preprints of the 13th Conference on Applied Climatology, May 13-16, 2002, Portland, OR.

Synoptic climatological comparisons of precipitation events across the Appalachian mountains. Invited presentation on May 2, 2002 to the Department of Environmental Science, Appalachian Laboratory, University of Maryland, Frostburg, MD

Using synoptic climatologies to address why Hurricane Floyd produced record flooding in eastern North Carolina. Invited presentation on April 5, 2002 to the Geography Department, East Carolina University, Greenville, NC

A Precipitation Events Climatology that relates event characteristics to evolving synoptic weather features. Preprints of the 98th Conference of the Association of American Geographers. March 20-23, 2002, Los Angeles, CA.

Climatology research, teaching, and service in the Geography Department at UNC-Chapel Hill Presentation on October 26, 2002 at the 25th Anniversary Celebration of the North Carolina State Climatology Office, Raleigh, NC.

- Relationships between tropical cyclone attributes and precipitation totals: Considerations of scale.* Preprints of the Symposium on Precipitation Extremes, January 14-18, Albuquerque, NM.
- Diurnal variations in the landfall times of tropical cyclones over the eastern United States.* Preprints of the 55th Conference of the Southeastern Division of the Association of American Geographers. November 23-25, 2001, Chapel Hill, NC.
- Secular trends in the size of extreme precipitation events in the eastern U.S.* Preprints of the 12th Conference on Applied Climatology, May 8-11, 2000, Asheville, NC.
- Secular trends in the size of extreme precipitation events in the eastern U.S.* Preprints of the 96th Conference of the Association of American Geographers. April 4-8, 2000, Pittsburgh, PA.
- An empirical approach for delineating the spatial patterns of freezing rain in the Appalachian region of the USA.* Preprints of the 94th Conference of the Association of American Geographers. March 25-29, 1998, Boston, MA.
- Connections between Heavy Precipitation and Trends in Global Circulation.* Lunch time presentation to the Department of Geography, University of North Carolina. March 18, 1998, Chapel Hill, NC.
- Patterns of Heavy Rainfall in Space and Time.* Invited presentation to the Geography Department, Mary Washington College. January 27, 1998, Fredricksburg, VA.
- Intramonthly indices of the Pacific / North American teleconnection pattern and their relationship with temperature characteristics over the United States.* Preprints of the 52nd Conference of the Southeastern Division of the Association of American Geographers. November 23-25, 1997, Birmingham, AL.
- Synoptic features associated with heavy rainfall over the interior Southeastern United States.* Preprints of the 93rd Conference of the Association of American Geographers. April 1-6, 1997, Fort Worth, TX.
- Anomalous circulation regimes and their association with the intensity of cold air outbreaks over the southeastern United States.* Preprints of the 51st Conference of the Southeastern Division of the Association of American Geographers. November 24-26, 1996, Athens, GA.
- The Roanoke River Bioreserve: A Preliminary Assessment of the Impact of Flow Modification on Hydrology, Geomorphological Processes, and Vegetation.* With S. J. Walsh, D. R. Butler, and R. Peet. November 22, 1996, School of the Environment, Duke University, Durham, NC.
- Cold air outbreaks over eastern North America.* Department of Geography Colloquium, University of North Carolina, April 19, 1996, Chapel Hill NC.
- Relationships between the intensity of cold air outbreaks and the evolution of synoptic and planetary scale features across North America.* Preprints of the 92nd Conference of the Association of American Geographers. April 9-13, 1996, Charlotte, NC.

Climatic and anthropogenic influences on the lower Roanoke River basin in North Carolina. 18th Applied Geography Conference. November 8-11, 1995, Arlington, VA.

Moisture trajectories associated with heavy rainfall in the Appalachian region of the United States. 91st Meeting of the Association of American Geographers. March 14-18, 1995, Chicago, IL.

When to plan outdoor activities: The diurnal and seasonal patterns of wetness in the southeastern United States. 49th Meeting of the Association of American Geographers Southeast Division, November 19-22, 1994 Virginia Beach, VA.

Connections Between Heavy Rainfall and the Ridging Patterns Present in Various Atmospheric Fields. 48th Meeting of the Association of American Geographers Southeast Division, November 20-23, 1993, Greensboro, NC.

Synoptic Scenarios of Heavy Rain Over the Appalachian Region. 89th Annual Meeting of the Association of American Geographers. April 6-10, 1993, Atlanta, GA.

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