

Dr. Gary M. Lackmann

Professor

Department of Marine, Earth, and Atmospheric Sciences

North Carolina State University

Raleigh, North Carolina, 27695-8208

Telephone: (919) 515-1439

Education:

Ph.D., Atmospheric Science, University at Albany, State University of New York, Albany, NY, 1995: *Life Cycles of Mobile Upper Troughs and Maritime Cyclones during ERICA.*

M.S., Atmospheric Science, University of Washington, Seattle, WA, 1989: *Atmospheric Structure and Momentum Balance during a Gap-Wind Event in Shelikof Strait, Alaska.*

B.S., Atmospheric Science, University of Washington, Seattle, WA 1986

Professional Appointments:

Professor, North Carolina State University, Raleigh, NC (2009 – present)

Director of Graduate Programs, Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University, Raleigh, NC (2011 – 2016; Co-Director 2015 – 2016)

Associate Professor, North Carolina State University, Raleigh, NC (2004 – 2009)

Assistant Professor, North Carolina State University, Raleigh, NC (1999 – 2004)

Assistant Professor, State University of New York, College at Brockport, NY (1996 – 1999)

Postdoctoral Scientist, McGill University, Montreal, Quebec, Canada (1995 – 1996)

Physical Scientist, Naval Postgraduate School, Monterey, CA (1988 – 1989)

Physical Scientist, NOAA/Pacific Marine Environmental Lab., Seattle, WA (1985 – 1988)

Honors and Awards: (selected)

2019 Fellow, American Meteorological Society (elected)

2015 T. Theodore Fujita Research Achievement Award, National Weather Association

2014 Edward N. Lorenz Teaching Excellence Award, American Meteorological Society

2013 Alumni Association Outstanding Teacher Award, North Carolina State University

2012 – 2013 Outstanding Teacher Award, North Carolina State University

2012 Gold Excel Award, Association Media & Publishing (technical book category) for *Midlatitude Synoptic Meteorology: Dynamics, Analysis, and Forecasting* (AMS/U. Chicago)

2004 LeRoy and Elva Martin Award for Teaching Excellence, North Carolina State University

2003 National Weather Service Award for Collaborative Research, NOAA

2003 Editor's Award, *Monthly Weather Review*, American Meteorological Society

Texts:

Midlatitude Synoptic Meteorology: Dynamics, Analysis, and Forecasting (2011, Amer. Meteor. Soc./U. Chicago Press), 345 pp.

Lackmann, G. M., B. E. Mapes, and K. Tyle, 2017: *Synoptic-Dynamic Meteorology Lab Manual: Visual Exercises to Complement Midlatitude Synoptic Meteorology*. (2017, Amer. Meteor. Soc./U. Chicago Press), 120 pp.

Refereed Publications: (graduate students underlined when lead author)

(53) Jung, C., and G. M. Lackmann, 2019: Extratropical transition of Hurricane Irene (2011) in a changing climate. *J. Climate.*, **33**, Early Online Release.

(52) Wanik, D. W., E. N. Anagnostou, M. Astitha, B. M. Hartman, J. Yang, D. Cerrai, J. He, and M. E. B. Frediani, 2018: A case study on power outage impacts from future Hurricane Sandy scenarios. *J. Appl. Meteor. Climatol.*, **57**, 51–79. doi:10.1175/JAMC-D-16-0408.1.

(51) Marciano, C. G., and G. M. Lackmann, 2017: The South Carolina Flood of October 2015: Moisture transport analysis and the role of Hurricane Joaquin. *J. Hydrometeor.*, **18**, 2973–2990.

(50) Michaelis, A., J. A. Willison, G. M. Lackmann, and W. A. Robinson, 2017: Changes in winter North Atlantic extratropical cyclones in high-resolution regional pseudo-global warming simulations. *J. Climate*, **30**, 6905–6925.

(49) King, J., M. Parker, K. Sherburn, and G. Lackmann, 2017: Rapid evolution of cool season, low CAPE severe thunderstorm environments. *Wea. Forecasting*, **32**, 763–779. doi:10.1175/WAF-D-16-0141.1

(48) Sherburn, K. D., M. D. Parker, J. R. King, and G. M. Lackmann, 2016: Composite environments of severe and non-severe high-shear, low-CAPE convective events. *Wea. Forecasting*, **31**, 1899–1927. doi:10.1175/WAF-D-16-0086.1.

(47) Lackmann, G. M., 2015: Hurricane Sandy before 1900, and after 2100. *Bull. Amer. Meteor. Soc.*, **96**, 547–560. <http://dx.doi.org/10.1175/BAMS-D-14-00123.1>

(46) Willison, J., W. Robinson, and G. M. Lackmann, 2015: North Atlantic stormtrack sensitivity to warming increase with model resolution. *J. Climate*, **28**, 468–484. <http://dx.doi.org/10.1175/JCLI-D-14-00715.1>

(45) Marciano, C. G., G. M. Lackmann, and W. A. Robinson, 2015: Changes in U.S East Coast cyclone dynamics with climate change. *J. Climate*, **28**, 468–484.

(44) Baxter, M. A., G. M. Lackmann, K. M. Mahoney, T. E. Workoff, and T. M. Hamill, 2014: Verification of quantitative precipitation reforecasts over the Southeast United States. *Wea. Forecasting*, 1199–1207.

- (43) Michaelis, A., and G. M. Lackmann, 2013: Numerical modeling of a historic storm: Simulating the Blizzard of 1888. *Geophys. Res. Lett.*, 4092–4097. doi:10.1002/grl.50750.
- (42) Mallard, M. S., G. M. Lackmann, and A. Aiyyer, 2013: Atlantic hurricanes and climate change. Part II: Role of thermodynamic changes in decreased hurricane frequency. *J. Climate*, **26**, 8513–8528.
- (41) Mallard, M. S., G. M. Lackmann, A. Aiyyer, and K. A. Hill, 2013: Atlantic hurricanes and climate change. Part I: Experimental design and isolation of thermodynamic effects. *J. Climate*, **26**, 4876–4893.
- (40) Lackmann, G. M., 2013: The South-Central US flood of May 2010: Present and future. *J. Climate*, **26**, 4688–4709.
- (39) Willison, J., W. Robinson, and G. Lackmann, 2013: The importance of resolving mesoscale latent heating in the North Atlantic stormtrack. *J. Atmos. Sci.*, **70**, 2234–2250.
- (38) Tang, Q., L. Xie, G. Lackmann, and B. Liu, 2013: Modeling the impacts of the large-scale atmospheric environment on inland flooding during the landfall of Hurricane Floyd (1999). *Adv. Meteor.*, Article ID 294956, 16 pages. doi:10.1155/2013/294956.
- (37) Hill, K. A., and G. M. Lackmann, 2011: The impact of future climate change on TC intensity and structure: A downscaling approach. *J. Climate*, **24**, 4644–4661.
- (36) Mahoney, K. M., and G. M. Lackmann, 2011: The impact of environmental moisture on momentum transport in simulations of a mesoscale convective system. *Mon. Wea. Rev.*, **139**, 1352–1369.
- (35) Etherton, B. A., S. C. Arms, L. D. Oolman, G. M. Lackmann, and M. Ramamurthy, 2011: Using operational and experimental observations in geoscience education (The 2009 Unidata Triennial Users Workshop). *Bull. Amer. Meteor. Soc.*, **92**, 477–480.
- (34) Gentry M. S., and G. M. Lackmann, 2010: Sensitivity of simulated tropical cyclone structure and intensity to horizontal resolution. *Mon. Wea. Rev.*, **138**, 688–704.
- (33) Mahoney, K. M., G. M. Lackmann, and M. D. Parker, 2009: The role of convective momentum transport in the motion of a quasi-idealized mesoscale convective system. *Mon. Wea. Rev.*, **137**, 3316–3338.
- (32) Hill, K. A., and G. M. Lackmann, 2009a: Influence of environmental humidity on tropical cyclone size. *Mon. Wea. Rev.*, **137**, 3294–3315.
- (31) Hill, K. A., and G. M. Lackmann, 2009b: Analysis of idealized tropical cyclone simulations using the Weather Research and Forecasting Model: Sensitivity to turbulence parameterization and grid spacing. *Mon. Wea. Rev.*, **137**, 745–765.
- (30) Keighton, S., L. Lee, B. Holloway, D. Hotz, S. Zubrick, J. Hovis, G. Votaw, L. B. Perry, G. Lackmann, S. Yuter, C. Konrad, D. Miller, B. Etherton, 2009: A Collaborative Approach to Study Northwest Flow Snow in the Southern Appalachians. *Bull. Amer. Meteor. Soc.*, **90**, 979–991.

- (29) Jacobs, N. A., S. Raman, G. M. Lackmann, and P. P. Childs Jr., 2008: The influence of Gulf Stream induced SST gradients on the US East Coast winter storm of 24-25 January 2000. *Inter. J. Remote Sensing*, **29**:21, 6145–6174.
- (28) Brennan, M. J., G. M. Lackmann, and K. M. Mahoney, 2008: Potential vorticity (PV) thinking in operations: The utility of non-conservation. *Wea. Forecasting*, **23**, 168–182.
- (27) Mahoney, K. M., and G. M. Lackmann, 2007: The Effect of Upstream Convection on Downstream Precipitation. *Wea. Forecasting*, **22**, 255–277.
- (26) Palmieri, R., L. Tredway, D. Niyogi, and G. M. Lackmann, 2006: Development and evaluation of a forecasting system for fungal disease in turfgrass. *Met. Applications*, **13**, 405–416.
- (25) Brennan, M. J., and G. M. Lackmann, 2006: Observational diagnosis and model forecast evaluation of unforecasted incipient precipitation during the 24–25 January 2000 East Coast cyclone. *Mon. Wea. Rev.*, **134**, 2033–2054.
- (24) Stuart, N. A., P. S. Market, B. Telfeyan, G. M. Lackmann, K. Carey, H. E. Brooks, D. Nietfeld, B. C. Motta, and K. Reeves, 2006: The future of humans in an increasingly automated forecast process. *Bull. Amer. Meteor. Soc.*, **87**, 1497–1502.
- (23) Mahoney, K. M., and G. M. Lackmann, 2006: The Sensitivity of Numerical Forecasts to Convective Parameterization: A Case Study of the 17 February 2004 East Coast Cyclone. *Wea. Forecasting*, **21**, 465–488.
- (22) Fuentes, M., L. Chen, J. Davis, and G. M. Lackmann, 2005: A new class of nonseparable and nonstationary covariance models for wind fields. *Environmetrics*, **16**, 449–464.
- (21) Jacobs, N. A., G. M. Lackmann, and S. Raman, 2005: The combined effects of Gulf Stream-induced baroclinicity and upper-level vorticity on U.S. East Coast extratropical cyclogenesis. *Mon. Wea. Rev.*, **133**, 2494–2501.
- (20) Brennan, M. J., and G. M. Lackmann, 2005: The influence of incipient latent heat release on the precipitation distribution of the 24–25 January 2000 U.S. East Coast cyclone. *Mon. Wea. Rev.*, **133**, 1913–1937.
- (19) Reeves, H. D., and G. M. Lackmann, 2004: An Investigation of the Influence of Latent Heat Release on Cold-Frontal Motion. *Mon. Wea. Rev.*, **132**, 2864–2881.
- (18) Lackmann, G. M., and R. M. Yablonsky, 2004: On the role of the precipitation mass sink in tropical cyclogenesis. *J. Atmos. Sci.*, **61**, 1674–1692.
- (17) Brennan, M. J., G. M. Lackmann, and S. E. Koch, 2003: An analysis of the impact of a split-front rainband on Appalachian cold-air damming. *Wea. Forecasting*, **18**, 712–731.
- (16) Bailey, C. M., G. Hartfield, G. M. Lackmann, K. Keeter, and S. Sharp, 2003: An objective climatology, classification scheme, and assessment of sensible weather impacts for Appalachian cold-air damming. *Wea. Forecasting*, **18**, 641–661.

- (15) Lackmann, G. M., K. Keeter, L. G. Lee, and M. B. Ek, 2002: Model representation of freezing and melting precipitation: Implications for winter weather forecasting. *Wea. Forecasting*, **17**, 1016–1033.
- (14) Lackmann, G. M. 2002: Potential vorticity redistribution, the low-level jet, and moisture transport in extratropical cyclones. *Mon. Wea. Rev.*, **130**, 59–74.
- (13) Lackmann, G. M., 2001: Analysis of a surprise western New York snowstorm. *Wea. Forecasting*, **16**, 99–116.
- (12) Lackmann, G. M., D. Keyser, and L. F. Bosart, 1999: Energetics of an intensifying midtropospheric jet streak during the Experiment on Rapidly Intensifying Cyclones over the Atlantic (ERICA). *Mon. Wea. Rev.*, **127**, 2777–2795.
- (11) Lackmann, G. M., and J. R. Gyakum, 1999: Heavy cold-season precipitation in the Northwestern United States: Synoptic climatology and an analysis of the flood of 17–18 January 1986. *Wea. Forecasting*, **14**, 687–700.
- (10) Henderson, J., G. M. Lackmann, and J. R. Gyakum, 1998: Analysis of hurricane Opal’s forecast track using quasigeostrophic potential vorticity inversion. *Mon. Wea. Rev.*, **127**, 292–307.
- (9) Lackmann, G. M., J. R. Gyakum, and R. Benoit, 1998: Moisture transport diagnosis of a wintertime precipitation event in the Mackenzie River Basin. *Mon. Wea. Rev.*, **126**, 668–691.
- (8) Lackmann, G. M., D. Keyser, and L. F. Bosart, 1997: A characteristic evolution of upper-tropospheric cyclogenetic precursors during the Experiment on Rapidly Intensifying Cyclones over the Atlantic (ERICA). *Mon. Wea. Rev.*, **125**, 2529–2556.
- (7) Lackmann, G. M., and J. R. Gyakum, 1996: The synoptic- and planetary-scale signatures of precipitating systems over the Mackenzie River Basin. *Atmos.–Ocean*, **34**, 647–674.
- (6) Lackmann, G. M., L. F. Bosart, and D. Keyser, 1996: The synoptic- and planetary-scale environment for explosive wintertime cyclogenesis over the western North Atlantic Ocean. *Mon. Wea. Rev.*, **124**, 2672–2702.
- (5) Bosart, L. F., and G. M. Lackmann, 1995: Postlandfall tropical cyclone reintensification in a weakly baroclinic environment: A case study of hurricane David (September 1979). *Mon. Wea. Rev.*, **123**, 3268–3291.
- (4) Evans, M. S., D. Keyser, L. F. Bosart, and G. M. Lackmann, 1994: A satellite-derived classification scheme for rapid maritime cyclogenesis. *Mon. Wea. Rev.*, **122**, 1381–1416.
- (3) Ferber, G. K., C. F. Mass, G. M. Lackmann, and M. W. Patnoe, 1993: Snowstorms over the Puget Sound Lowlands. *Wea. Forecasting*, **8**, 481–504.
- (2) Lackmann, G. M., and J. Overland, 1989: Atmospheric structure and momentum balance during a gap-wind event in Shelikof Strait, Alaska. *Mon. Wea. Rev.*, **117**, 1817–1833.
- (1) Macklin, S. A., G. M. Lackmann, and J. Gray, 1988: Offshore-directed winds in the vicinity of Prince William Sound, Alaska. *Mon. Wea. Rev.*, **116**, 1289–1301.

Theses:

Lackmann, G. M., 1995: Life Cycles of Mobile Upper Troughs and Maritime Cyclones During ERICA. Ph.D. Thesis, Department of Atmospheric Science, University at Albany, State University of New York, 318 pp.

Lackmann, G. M., 1989: Atmospheric Structure and Momentum Balance During a Gap-Wind Event in Shelikof Strait, Alaska. M.S. Thesis, Department of Atmospheric Science, University of Washington, 65 pp.

Selected Non-Refereed Publications:

Orf, L., G. M. Lackmann, C. Herbster, A. Krueger, E. Cutrim, T. Whitaker, J. Steenburgh, and M. Voss, 2007: Models as educational tools. *Bull. Amer. Meteor. Soc.*, **88**, 1101–1104

Brennan, M. J., K. Keeter, A. J. Riordan, and G. M. Lackmann, 2005: Expanding educational horizons with a National Weather Service-North Carolina State University internship course. *Bull. Amer. Meteor. Soc.*, **85**, 1407-1409.

Lackmann, G. M. 2002: NWP Biases in freezing rain forecasts, *Bull. Amer. Meteor. Soc.* **83**, 1274–1275.

Guth, M. A. S., G. M. Lackmann, S. E. Kennedy, and K. W. Appel, 2002: Weather Research for Trading Profits. *The Risk Desk* **2**, No. 3, May 2002.

Service and Community Participation:

Councilor (elected), American Meteorological Society (2018 to present)
Co-Chair, UCAR UCACN NOAA National Centers Advisory Committee (2015 to 2018)
Member, UCAR UCACN NOAA National Centers Advisory Committee (2009 to 2015)
Member, AMS Board of Continuing Professional Development, (2013 to 2018)
Member, UCAR Development Testbed Center Science Advisory Board (2013 to 2016)

Editor-in-Chief, *Weather and Forecasting* (August 2017 to present)

Subject Area Editor: *Bulletin of the AMS* (2006 to 2013)

Associate Editor: *Monthly Weather Review* (January 1999 to 2004)

Reviewer, National Science Foundation (NSF)

Reviewer, U.S. Department of Energy (DOE)

Reviewer, U.S. National Oceanographic and Atmospheric Administration (NOAA)

Reviewer, U.S. National Atmospheric and Space Administration (NASA)

Reviewer, *Bulletin of the AMS*

Reviewer, *Journal of the Atmospheric Sciences*

Reviewer, *Nature*

Reviewer, *Nature, Climate Change*

Reviewer, *Weather and Forecasting*

Reviewer, *Journal of Applied Meteorology*

Reviewer, *Proceedings of the National Academy of Sciences (PNAS)*

Reviewer, *Quarterly Journal of the Royal Meteorological Society* (United Kingdom)

Reviewer, *Atmosphere–Ocean* (Canada)
Reviewer, *Tellus* (Sweden)
Reviewer, *Monthly Weather Review*
Reviewer, *Meteorology and Atmospheric Physics* (Europe)
Reviewer, *Journal of Hydrometeorology*
Reviewer, *International Journal of Climatology* (United Kingdom)
Reviewer, *Journal of Climate*
Reviewer, *Climate Dynamics*
Reviewer, *Journal of Applied Meteorology and Climatology*
Reviewer, *Meteorology and Atmospheric Sciences*
Reviewer, *Atmospheric Research*
Reviewer, *Journal of Geophysical Research*
Reviewer, *Central European Journal of Geosciences*
Reviewer, *Proceedings A, Royal Society* (Physics, United Kingdom)
Reviewer, *Atmospheric Chemistry and Physics*
Reviewer, *Geophysical Research Letters*
Reviewer, *Atmospheric Science Letters*
Reviewer, *Public Library of Science (PLOS ONE)*
Reviewer, *Natural Hazards*

Program Review, NC State Biological and Agricultural Engineering (Spring 2015)
Program Review, Millersville University (Fall 2012)
Chair, Unidata Users Committee, Fall 2006 to Fall 2009
Member, Unidata Users Committee (2004 to 2006)
Member, Unidata Policy Committee (2006 to 2012)
Member: AMS Committee on Weather Analysis and Forecasting, (1/2001 to 1/2004).
Member: AMS Committee on Broadcast Meteorologist Certification, (2003 to 2005)
Member: National Weather Association
Member: AMS Central Carolina Chapter
Member: Sigma Xi
Member, Oklahoma University WxChallenge advisory board (2010 to present)

Professional service on campus:

NC State University Promotion and Tenure Committee (2018-present)
College of Sciences Promotion and Tenure Committee (2017-present; chair 2017, member 2018)
Graduate Faculty Member (1999 – present)
Faculty Advisor: NCSU AMS Student Chapter, (9/2000 to present)
Faculty Advisor: NCSU MEAS Graduate Student Association, (2010 to 2015)
Faculty Advisor: NCSU MEAS Research Forecasting & Discussion club, (2015 to present)
Building Future Faculty Advisory Committee, 2015
Graduate Faculty Mentoring Award Selection Committee, 2015
HHMI Faculty Mentor, 2002
Park Program Faculty Mentor, 2001-2003, 2010-2012
Preparing the Professoriate Faculty mentor, 2006-2007, 2011-2012
Faculty representative, Student Chapter of American Meteorological Society, 1999 - present
University Grievance Committee

Physical and Mathematical Sciences Open House Volunteer
Departmental Undergraduate Curriculum Committee
Departmental Computing Committee
Departmental ETF Committee
Departmental Awards Committee
Departmental Space Committee
Departmental Info and Brochure Committee
Departmental WWW Committee
Departmental Teaching Evaluation Committee
Chair, 3 Departmental search committees
Member, 6 Departmental search committees

Graduate Thesis Advisor:

Ph.D. Dissertations (6)

Michael Brennan (NOAA Tropical Prediction Center)
Kevin Hill (A.I.R. Inc., Boston, MA, now Berkshire Hathaway)
Kelly Mahoney (NOAA/Earth Systems Research Laboratory)
Megan Mallard (formerly Gentry; US Environmental Protection Agency)
Neil Jacobs (co-advised with Sethu Raman; AirDat, Inc, Panasonic, now NOAA Deputy Dir.)
Allison Michaelis (UC San Diego/Scripps/CW3E)

M.S. Supervised (26)

Chris Bailey (NOAA Hydrometeorological Prediction Center)
Adam Baker (NOAA/NWS, Indianapolis, IN)
Lindsay Blank (Developmental Testbed Center, NCAR, Boulder, CO)
Matt Borkowski (Meso, Inc. Albany NY)
Michael Brennan (Continued for PhD)
Jason Caldwell (NOAA/NWS Lower Mississippi RFC)
Jason Cerjak (U.S. Air Force)
Jordan Dale (Energetics, Washington DC)
Nathanael Farrington (US Air Force)
Tiffany Gardner (Trinity Consulting, Dallas, TX)
Megan Gentry (Continued for PhD)
Briana Gordon (Sonoma Technology, San Francisco, CA)
Nicole Haglund (Oklahoma Climate Survey)
Kevin Hill (Continued for PhD)
Blair Holloway, M.S. (NWS, Greer, SC)
Kelly Mahoney (Continued for PhD)
Chris Marciano (ARA, Washington, DC)
Allison Michaelis (Continued for PhD)
Rebecca Miller (US EPA via ORAU)
Jacob Radford (Continuing for PhD)
Heather Reeves (Continued for PhD, now NOAA National Severe Storms Lab)
Wendy Sellers (NWS, Charleston SC)
Morgan Silverman (NASA Langley)
Jennifer Tate (NOAA Weather Prediction Center, College Park, MD)
Ana Torres-Vazquez (US EPA via ORAU)

Richard Yablonsky (University of Rhode Island)

Non-Thesis M.S. Graduate Advisees (5)

Michael Graves (May 2013)

Eric Santilli (May 2013)

Bradley McLamb (NC DENR)

Whitney Rushing (NOAA/NWS, Columbia, SC)

Yaosheng Chen (Penn State University)

Recent Invited Presentations:

“Low-Level Jets, Potential Vorticity, and Atmospheric Rivers”. CW3E/UCSD/Scripps Institution of Oceanography. 19 June 2019.

“Extratropical Transition of Tropical Cyclones in a Changing Climate”. National Center for Atmospheric Research (NCAR) Distinguished Lecturer Series, 14 March 2019

“Snow Lofting in Mesoscale Bands, and Operational Utility in Non-Traditional NWP Output Fields”. Weather Prediction Center Residence Series, 15 March 2019

“Expanding NWP Output for Analysis and Forecasting of Winter Storms” Northern Plains Weather Workshop, 5 November 2018, Keynote speaker.

“Science Café: A Better Way to Think About Forecasts?”, with Greg Fishel (WRAL TV), NC Museum of Natural Sciences, 8/30/2018 <https://www.facebook.com/naturalsciences/videos/greg-fishel-of-wral-and-gary-lackmann-professor-of-meteorology-at-nc-state-are-h/1036911763179687/>

“Challenges in the Numerical Simulation of Tropical Cyclones”, NC State Department of Nuclear Engineering, CASL Summer Institute, 13 August 2018, Keynote dinner speaker.

“Why is the numerical modeling of tropical cyclones so challenging?” NC State Research Computing Series, 14 March 2018, DH Hill Library

“Water vapor phase changes and the mesoscale dynamics of heavy precipitation.” American Meteorological Society Annual Meeting, Austin, Texas, January 2018. Special Session: The Role of Water in Shaping Features of the Climate System

“The role of water in mesoscale atmospheric dynamics” Southeastern Coastal and Atmospheric Processes Symposium (SeCAPS), Mobile, Alabama. 17 February 2018. Keynote talk

“Hurricane Joaquin’s role in the South Carolina Flood of October 2015” National Weather Center Colloquium, 17 October 2017: (Norman, Oklahoma)

“Winter Weather NWP, and Automated Detection of Mesoscale Snowbands”. (Lackmann and Radford), Webinar to National Weather Service offices, 13 December 2017

“Desktop Clouds”. College of Sciences, State of the Sciences event, NC State Hunt Library, 4/21/2017.

“Science Café: Critical Thinking”, with Greg Fishel, NC Museum of Natural Sciences, 4/20/2017 <http://naturalsciences.org/calendar/event/science-cafe-critical-thinking/>

- The South Carolina Flood of October, 2015*. AMS Annual Meeting, 16th Annual Student Conference. Seattle, Washington. Saturday 21 January 2017.
- “Climate Modeling Challenges for Tropical Cyclones”*. GEWEX Convection Permitting Climate Modeling Workshop, 8 September 2016.
- “Hurricane Joaquin and the South Carolina Flood of October 2015”*. National Center for Atmospheric Research, Boulder, CO, 27 June 2016.
- “Hurricane Joaquin’s Role in the South Carolina Flood of October 2015”*. Palmetto Chapter of the AMS, Allen Weber Mini-Tech conference, 4 March 2016. Keynote.
- “Collaboration, Visualization, and Communication Within and Beyond the Geosciences”*. Keynote presentation, AMS Summer Meeting, 4 August 2015.
- “Hurricane Katrina: Before, During, and Ten Years After”*. Invited presentation, NC State University, Coffee and Viz series, 20 March 2015.
- “Mathematics and Weather Forecasting”*. Invited presentation, North Carolina School of Science and Math, Delivered via Google owing to ice event, 6 March 2015.
- “Student Research, Climate Change, and Extreme Weather”*. Invited presentation, Raleigh Charter High School, Science Methods class, Raleigh, NC, 13 February 2015.
- “Climate Change and Hurricane Sandy”*. Invited presentation, University of Connecticut, Department of Civil & Environmental Engineering, Storrs, CT, 30 January 2015.
- “Balancing Change with Tradition in the Synoptic Lab”*. Invited presentation, 24th Symposium on Education, 95th AMS Annual Meeting, Phoenix, AZ, January 2015.
- “Some Conference ‘Best Practices’ for Student Attendees (and a few “worst practices)”*. Invited presentation, 14th Annual Student Conference, 95th AMS Annual Meeting, Phoenix, AZ, January 2015.
- “Climate Change and Hurricane Sandy”*. Invited presentation, National Center for Atmospheric Research, Developmental Testbed Center, Boulder, CO, 11 August 2014.
http://www.dtcenter.org/events/seminar/g_lackmann.mp4
- “Research at the Weather-Climate Interface”*. Invited presentation, EPA Climate Modeling Consortium Workshop, Chapel Hill, NC, 12 May 2014.
- “Weather Extremes and Climate Change”*. University at Albany Departmental Seminar, Albany, NY 17 January 2014.
- “Extreme weather and climate change”*. Departmental colloquium, University of Wisconsin, Madison, 21 October 2013.
- “Climate change: Mesoscale and synoptic-scale precipitation events”*. CLIVAR workshop on Large-Scale Meteorological Processes, University of California, Berkeley, 21 August 2013 (remote)

“Weather Extremes and Climate Change”. Central North Carolina Chapter, American Meteorological Society, 21 March 2013

“Hurricanes: Short-term prediction, and response to climate change”. ENCORE class, McKimmon Center, NCSU, 4 October 2012.

“Tropical cyclones, low-level jets, and thermodynamic climate change”. Canadian Meteorological and Oceanographic Society (CMOS), 2012 Congress joint with AMS Weather Analysis and Forecasting/Numerical Weather Prediction, Plenary presentation, 30 May 2012, Montreal, Quebec, Canada.

“Weather and educational inspiration: Getting weather into the classroom”. Lance Bosart Symposium, University at Albany, April 2012, Albany, NY.

“Cyclones and climate change”. Southeastern Coastal and Atmospheric Processes Symposium (SeCAPS), University of South Alabama. Keynote presentation, 24 March 2012, Mobile, AL.

“Environmental influences on tropical cyclones”. 50th Anniversary Celebration of Atmospheric Sciences at the University at Albany, 4 October 2010, Albany, New York.

“The structure of cyclonic systems in changing thermodynamic environments”. 50th Anniversary Scientific Program, Department of Atmospheric and Oceanic Sciences, McGill University, 24 September 2010, Montreal, Quebec, Canada.

“Replicating the Atlantic Hurricane Season of 2005, Ninety Years in the Future”. University of Hawaii, School of Ocean and Earth Science and Technology, 24 February 2010.

“The Unidata Difference: Within and Outside the Classroom”. Unidata 25th Anniversary Symposium, 15 October 2009, Boulder, CO.

“Meteorology, Storms, and Weather”. Presentation at Apex Middle School, 2 October 2009 [7th grade (~300 students)].

“Will Global Warming Bring Us More Powerful Hurricanes?” Sunday Lecture Series, North Carolina State University, 27 September 2009.

Selected Media Appearances/Interviews: (selected recent, incomplete)

CNN New Day, 12 September 2018: On Hurricane Florence

Chesterfield Observer, VA, 2018: Hurricane Florence

Richmond Times-Dispatch, 2018: Hurricane Florence

NPR State of Things, September 2018: Hurricane Florence

NBC Universal: <https://www.nbcnews.com/mach/video/tracking-florence-as-it-makes-landfall-1320039491878>

WRAL-TV, Raleigh, Joaquin, 6 October 2015

Charlotte News and Observer, Hurricane prediction, September 2015

WUNC-TV, Lightning, 16 September 2015

Arise News, regarding Hurricane Arthur, 2 July 2014

News and Observer (Raleigh and Charlotte) May 2014

NBC17, Raleigh, European vs. US Forecast Models, May 2013

Virginian-Pilot Newspaper, Norfolk, VA, 3 January 2013

PBS/NOVA, Interview regarding Hurricane Sandy, 7 March 2013, 20 August 2013

WRAL-TV, Raleigh, Hurricane Sandy, 11 November 2012

NBC17, Raleigh, Hurricane Sandy, October 2012

WRAL-TV, Raleigh, Greg Fishel 30-year Congratulations, 18 May 2011

National Public Radio WUNC, The State of Things, 28 April 2011

http://wunc.org/tsot/archive/Hurricane_Prediction.mp3/view

FIELD EXPERIENCE

Integrated Precipitation and Hydrology Experiment (IPHEX), 2014.

Stormscale Operational and Research Meteorology-Fronts Experiment Systems Test (STORM-FEST) 1992.

Coordinated Eastern Arctic Experiment (CEAREX) 1988–1989.