

CURRICULUM VITAE

4 July 2021

JOHN ANDREW KNOX

Josiah Meigs Distinguished Teaching Professor
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EDUCATION

Ph.D. in Atmospheric Sciences, 1996 Mathematics/Computer Science minor	University of Wisconsin-Madison
B.S. in Mathematics, 1988 Physics and English minors	University of Alabama at Birmingham (UAB) <i>Summa cum laude</i> with University Honors in Interdisciplinary Studies

PROFESSIONAL POSITIONS

2020-present	Josiah Meigs Distinguished Teaching Professor of Geography, UGA
2017-present	Professor, UGA Department of Geography
2017-19	Sandy Beaver Teaching Professor, UGA Department of Geography
2011-17	Associate Professor, UGA Department of Geography
2008-11	Assistant Professor, UGA Department of Geography
2002-08	Associate Research Scientist and Lecturer, UGA Faculty of Engineering
2002-08	Instructor and Advisor, UGA Department of Geography
2001-02	Instructor, UGA Departments of Geography and Engineering
1998-2000	Assistant Professor of Geography and Meteorology, Valparaiso University
1996-98	EOS Post-Doctoral Research Fellow, Columbia University and NASA/GISS
1992-96	Research Assistant, UW-Madison Dept. of Atmospheric & Oceanic Sciences
1990-91	Wisconsin Alumni Research Fellow, UW-Madison
1988-90, 1991-92	National Science Foundation Graduate Research Fellow, UW-Madison

SELECTED HONORS AND AWARDS (NON-TEACHING/ADVISING)

1983 U.S. Presidential Scholar
1983 National Merit Scholar
1983 Elks National Scholar
1988 Rhodes Scholar Finalist
1988 NSF Graduate Research Fellow
1988 ODK National Leader of the Year Finalist
1988 Phi Kappa Phi National Fellow
1991 Wisconsin Alumni Research Fellow
1996 NCAR Advanced Study Program (ASP) Post-Doctoral Fellowship (declined)
1997 NASA/GISS Best Popular Science Award
2003 William Henry Fox Talbot Prize for Visual Excellence in a College Textbook
2007 APEX Grand Award for Publication Excellence in Writing, *Phi Kappa Phi Forum*

2009 RMS/IBM Award for Meteorological Innovation That Matters, Highly Commended
 2010 National Weather Association T. Theodore Fujita Research Achievement Award
 2011 “Final Four” forecaster, WxChallenge national weather forecasting contest tournament
 2014 M. G. Michael Award (excellence in research), UGA Franklin College of Arts and Sciences
 2020 Fellow, American Meteorological Society

TEACHING

SELECTED TEACHING-RELATED HONORS AND AWARDS:

1994 UW Wahl Meteorology Teaching Award
 1994-95 UW-Madison Teaching Fellow
 2000 Valparaiso University XEΠ Meteorology Honor Society (honorary member)
 2004 Who’s Who Among America’s Teachers
 2005, 2010, 2011 UGA Student Government Association Professor Recognition Award
 2005 UGA Order of Omega Annual University Appreciation Dinner Honoree
 2009 UGA Russell Hall Last Lecture (invited)
 2010 Franklin Residential College Dean’s Tea speaker (invited)
 2011 The Teaching Company contract (only 200 professors selected nationwide since 1990)
 2011 Sandy Beaver Excellence in Teaching Award, UGA Franklin College of Arts and Sciences
 2012 The Princeton Review, *Best 300 Professors* (only geography professor in U.S. selected)
 2013 UGA Richard B. Russell Award for Excellence in Undergraduate Teaching
 2014 CASE/Carnegie Foundation for the Advancement of Teaching Georgia Professor of the Year
 2016 SouthEastern Division of the American Association of Geographers (SEDAAG) Excellence in Teaching Award
 2017 UGA Franklin College General Sandy Beaver Teaching Professorship
 2017 Clarke County Board of Education Certificate of Excellence
 2017 UGA Teaching Academy
 2018 UGA Center for Teaching and Learning Senior Teaching Fellow
 2020 American Meteorological Society Edward N. Lorenz Teaching Excellence Award
 2020 UGA Josiah Meigs Distinguished Teaching Professorship (first Geography professor to win)

CLASSROOM TEACHING EXPERIENCE (115 evaluated lecture/lab sections; 15 not evaluated)

**2001- Assistant and Associate Professor, UGA Department of Geography
 Lecturer, University of Georgia Departments of Geography and BAE (97 evaluated)**

COURSE NUMBER	COURSE TITLE	TEACHING EVALUATIONS (1 = best)
GEOG 1111	Introduction to Physical Geography	1.21; 1.35; 1.26; 1.48; 1.21; 1.17; 1.28; 1.25; 1.27; 1.23; 1.29; 1.52
ATSC/GEOG 1112	Introduction to Weather and Climate	1.16; 1.20; 1.21; 1.21; 1.26; 1.33; 1.24; 1.27; 1.18; 1.23; 1.11; 1.81; 1.47; 1.51; 1.53; 1.30; 1.34; 1.29
GEOG 2110H	Introduction to Physical Geography (Honors)	1.27; 1.29
GEOG 2120H	Introduction to Weather and Climate (Honors)	1.60
GEOG 3120	Weather Analysis and Forecasting	1.36
GEOG 3130	Atmospheric Hazards	1.05; 1.32; 1.00; 1.00; 1.29
GEOG 4120/6120	Synoptic Meteorology and Climatology	1.00
GEOG 4111/6111	Atmospheric Thermodynamics	1.38
GEOG 4114/6114	Atmospheric Dynamics II	1.00; 1.22; 1.20

ATSC/GEOG 4116/6116+L	Introduction to Data Assimilation	1.33/1.00; 1.00/1.07; 1.06/1.13; 1.00; N/A; 1.00/1.00
ATSC/GEOG 4121/6121	Weather Forecasting Seminar	1.00; 1.11; 1.13; 1.13; 1.00; 1.00; 1.00; 1.00; 1.00; 1.00; 1.00; 1.11; 1.00; 1.00; 1.25; 1.00; 1.00; 1.00; 1.00; 1.00
GEOG/ENGR 4180	Aviation Meteorology/Aviation Wx Hazards	1.14; 1.06; 1.22; 1.28; 1.09; 1.09; 1.10
ATSC/GEOG 4911/6911	Collaborative Research in Atmos. Sci.	1.00; 1.00; 1.00; 1.09; 1.00
GEOG 4921/6921	Directed Topics: Computing in Atmos. Sci. (co-taught)	2.17/1.58
GEOG 4980H	Directed Reading and/or Projects (Honors)	N/A
GEOG 8120	Climatology Seminar	1.43; 1.00; 1.00
GRSC 7770	Graduate Seminar (TA Training)	N/A; N/A; N/A; N/A; N/A; 1.25
HONS 1990H	Proseminar: Reweaving the Rainbow	1.29; 1.91
ENGR 4113/6113+L	Introduction to Geophysical Fluid Dynamics	1.05/1.04; 1.02
ENGR 8101-2-3-4	Computational Engineering (co-taught)	1.45; 1.66; 1.10; 1.23; 1.25; 1.10; 1.00
FYOS 1001	First Year Odyssey Seminar (FYOS): Prediction	N/A
FYOS 1001	FYOS: Research University	N/A; N/A
FYOS 1001	FYOS: Writing a UGA Weather Textbook	N/A

1998-2000 Assistant Professor of Geography and Meteorology, Valparaiso University (15)

MET 103	Introductory Meteorology	1.56; 1.90; 1.68; 1.32
MET 103L	Laboratory (7 times)	N/A
GEO 210/MET 215	Climatology	1.75; 1.67
GEO 210L/MET 215L	Climatology computer lab (twice)	N/A
MET 290/CC 300	Reweaving the Rainbow	1.30
MET 330	Meteorological Computer Applications	2.02; 1.91
MET 372	Atmospheric Dynamics I (co-taught)	1.55; 1.68
MET 372L	Atmospheric Dynamics I Laboratory (twice)	N/A
MET 373	Atmospheric Dynamics II	1.92; 1.74
MET 373L	Atmospheric Dynamics II Laboratory (twice)	N/A
MET 385C	Aviation Field Course	2.00
MET 490	Aviation Meteorology	1.92

1997 Assistant Professor, Barnard College of Columbia University (1)

EESC 2100	Climate Semester (co-taught)	1.06
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1993-94 Teaching Assistant, UW-Madison Dept. of Atmospheric and Oceanic Sciences (2)

AOS 101	Weather and Climate (discussion sections)	1.34
AOS 322	Atmospheric Dynamics I Laboratory	1.00

UNIVERSITY-AND-COMMUNITY-WIDE EDUCATIONAL EVENT

Eclipse Blackout Between The Hedges. Conceived of, co-planned and co-hosted an educational event at Sanford Stadium coinciding with the 99.1% total eclipse in Athens, GA on August 21, 2017. **Approximate attendance: up to 20,000**, making it the largest such event in the United States during the 2017 eclipse and one of the largest eclipse-related educational events in world history. Event coupled with outreach to over 20 K-12 schools throughout the Athens area that reached another 17,000. **Audience reached by event via media: approximately 2 million readers and viewers.** **Awarded a 2017 Certificate of Excellence by the Clarke County Board of Education.**

STUDENT ADVISING AND MENTORING

ADVISING-RELATED HONORS AND AWARDS:

2014 Outstanding Academic Advisor Award, Faculty Division, UGA Franklin College of Arts and Sciences

GRADUATE STUDENT RESEARCH ADVISING AND MENTORING:

Major professor (9): Pete Campana (co-major; M.S., 2009): Thesis title: *Water usage in Athens, Georgia as a result of the 2007 drought event and analysis of future water availability*
 Myron Petro (M.S., 2011): Thesis title: *Late-summer heat waves and their impact on hyperthermia-related deaths in football players*
 Emily Wilson (M.S., 2012) Thesis title: *Case studies of clear-air turbulence: evaluation and verification of new forecasting techniques*
 Aneela Qureshi (ABD, 2014)
 Jared Rackley (M.S., 2015) Thesis title: *Southern Appalachian cold air damming (CAD): A climatology and simulation of case studies*
 Emily Castellucci (Ph.D., 2016) Dissertation title: *Student-centered geographic information science education: Flipping the classroom, graduate students on curriculum, and QGIS*
 Emily Sullivan (M.S. 2018) Thesis title: *Climatology of volcanic ash dispersal from a Mount Rainier eruption using USGS Ash3D with NCEP/NCAR Reanalysis data: Potential impacts on commercial Airspace*
 Emily Pauline (M.S., 2019) Thesis title: *Improving NCEI's Climate Extremes Index and revising the CDC's Social Vulnerability Index to analyze climate extremes vulnerability in the United States*
 Nicholas Morgan (M.S. expected 2022)

Ph.D. committee member (9): Jamie Dyer (Ph.D., 2005)
 Dennis Robinson (Georgia Institute of Technology Ph.D., 2006)
 John Frye (Ph.D., 2008)
 Violeta Toma (Georgia Institute of Technology Ph.D., 2008)
 Alan Black (Ph.D., 2014)
 Paul Miller (Ph.D., 2017)
 Andrew Thomas (Ph.D. expected 2022)
 Lori Wachowicz (Ph.D. expected 2022)
 Jonathon Preece (Ph.D. expected 2023)

M.S. committee member (8): Chris Fuhrmann (M.S., 2006)
 Greg Wassel (M.S., 2006)
 Rick DiMaio (Northern Illinois University M.S., 2012)
 Neil Debbage (M.S., 2014)
 Kyle Mattingly (M.S., 2014)
 Lauren Anderson (M.S., 2015)
 Todd Nims (M.S., 2017)
 Sheryl Baggett (M.A. expected 2020)

SELECTED UNDERGRADUATE RESEARCH ADVISING AND MENTORING:

Advisor to Spring 2021 UGA researcher Jada Smith. Research topic: Weather-related bounce house accidents worldwide.

Advisor to Spring 2018 UGA researcher Richard Garmong. Research topic: High-resolution modeling of north Georgia mesoscale phenomena.

Advisor to Spring 2015-Summer 2016 UGA researchers Brendan Mazanec, Merrick Sullivan and Spencer Hall. Research topic: Social media responses to Hurricane/Superstorm Sandy.

Advisor to Spring 2015-Summer 2016 UGA researcher David Nevius. Research topic: Clear-air turbulence and wet-bulb temperature estimation. 1st prize, UGA Department of Geography Undergraduate Research Conference poster competition.

Advisor to Spring-Summer 2012 UGA researcher Jared Rackley. Research topic: "Verification of Clear Air Turbulence Across the Eastern and Central U.S." 1st prize, UGA Department of Geography Undergraduate Research Conference poster competition.

Advisor to 2008 National Weather Association Meteorological Satellite Applications Award submission by UGA undergraduate Sarah Dillingham. Title: "Applying GOES-12 Water Vapor and Total Column Ozone Observations to the 12-13 November 2003 Lake Erie Seiche."

National Weather Association Remote Sensing Committee, NWA Undergraduate Meteorological Satellite Applications Award oversight subcommittee, 2006-07.

Opening remarks, 2006 Undergraduate Conference, UGA Department of Geography, April 28, 2006.

Advisor to Spring 2007 UGA student researcher Jarrett Bachman. Research topic: "Climatological, Geographical, and Financial Analysis of PGA Tour Tournament Sites and the 2007 PGA Tour."

Advisor to Summer 1999 Valparaiso University student researcher, Stino Iacopelli.
Research topic: "Mesoscale Dynamics of the Record-Breaking 10 November 1998 Mid-Latitude Cyclone: A Satellite-Based Case Study." Winner of: 1999 Association of American Geographers West Lakes Region undergraduate paper award; 1999 National Weather Association Meteorological Satellite Applications Award; 2000 VU Celebration of Undergraduate Scholarship Board of Directors Award

Advisor to Spring 1999 Valparaiso University independent study student Esther Jansen. Research topic: "The Amazing Clear-Air Turbulence Event of 21 October 1996."

OTHER UNDERGRADUATE ADVISING AND MENTORING (selected):

Undergraduate Coordinator, UGA Atmospheric Sciences Program, 2004-present.

Nominee, UGA Franklin College Outstanding Advisor Award, 2005, 2008, 2010.

Faculty Advisor, UGA Chi Epsilon Pi meteorology/atmospheric sciences honor society, 2020-now.

Faculty Advisor, UGA circle of Omicron Delta Kappa leadership honor society, 2020-present.

Faculty Advisor, UGA Aviation Club, 2009-present.

Faculty Advisor, UGA Demosthenian Literary Society (debating), 2011-2017.

Faculty Sponsor, UGA chapter of Gamma Theta Upsilon geography honor society, 2013-2015.

Teacher/advisor to winners of 6 AMS Graduate Fellowships (Chibe, Schumacher, Stroman, Srock, C. Williams, Mazurek), 8 AMS Senior Named/Undergraduate/Minority Scholarships (Kowalski, Hsu, Henderson, C. Williams, Hannah, Mazurek, Houston, Bowden), and 5 NOAA Ernest Hollings Scholarships (Bachman, Mazurek, Boyle, Fiveash, McSweeney), 1998-present.

PUBLICATIONS (320; underlined indicates current or former student/advisee)

Google Scholar Citations: 1590, h-index of 23, i10 index of 38.

BOOKS (5):

Knox, J. A., 2021: *Atmospheric Dynamics: An Introduction*. in preparation.

Knox, J. A., 2021: *Columns at the Arch*. Self-published, in preparation.

Ackerman, S. A., and J. A. Knox, 2018: *Meteorology: An Interactive Understanding of the Atmosphere (Version 5.0)*, Top Hat. First edition on Brooks/Cole won a 2003 William Henry Fox Talbot Prize for visual excellence in a college textbook. Nearly 20,000 copies sold nationally and internationally through four editions.

Knox, J. A. (Editor-in-Chief), 2014: *Fifty Years of U.S. Presidential Scholars: In Pursuit of Excellence*. Faircount Media Group, 180 pp.

Knox, H. B., and J. A. Knox, 2011: *Five Mile Presbyterian Church, Birmingham, Alabama*. Self-published, 26 pp.

PEER-REVIEWED RESEARCH (64):

Knox, J. A., T. E. Gill, C. A. Williams, J. Smith, L. V. Boggs, and H. Skyppek, 2021: Wind-related bounce house accidents: Meteorological, regulatory, and outreach contexts. Proposal approved for *Bulletin of the American Meteorological Society*, in preparation.

Knox, P., J. Knox, E. Pauline, C. Scarborough, and H. Stuckey, 2019: The weather and climate of Wormsloe and surrounding areas. Chapter 1 of *Social Roots: Reconnecting Lowcountry Foodways with the Landscape*, ed. Sarah Ross. UGA Press, in press.

Harvey, V. L., R. Lieberman, G. Manney, J. A. Knox, M. Hitchman, P. Hitchcock, T. Hirooka, Y. Tomikawa, and T. Sakazaki, 2021: Upper Stratosphere and Lower Mesosphere. Chapter 11 of SPARC Reanalysis Intercomparison Project, in review since 2019.

Pauline, E., J. A. Knox, L. Seymour, and A. J. Grundstein, 2021: Revising NCEI's Climate Extremes Index and the CDC's Social Vulnerability Index to Analyze Climate Extremes Vulnerability across the United States. *Bulletin of the American Meteorological Society*, **102**, E84-E98.

Black, A. W., Knox, J. A., and J. A. Rackley, 2019: Tornado debris from the 23 May 2017 "Tybee Tornado." *Bulletin of the American Meteorological Society*, **100**, 217-222.

Harvey, V. L., and J. A. Knox, 2019: Beware of Inertial Instability masquerading as gravity waves in stratospheric temperature perturbations. *Geophysical Research Letters*, <https://doi.org/10.1029/2018GL081142>.

Kerr, G. H., M. J. Krocak, M. D. Flournoy, and J. A. Knox, 2018: Weathering Together: Building a climate of diverse community perspectives. *Bulletin of the American Meteorological Society*, **99**, 2150.

Knox, J. A., E. N. Wilson, N. J. Morgan, E. M. Sullivan, and D. S. Nevius, 2018: Aviation Meteorology. *Oxford Bibliographies*.

- Stewart, A. E., J. A. Knox, and P. Schneider, 2018: Reaching students and parents through weather science and safety workshops for teachers. *Bulletin of the American Meteorological Society*, **99**, 1545-1555.
- Knox, J. A., D. Nevius, and P. N. Knox, 2017: Two simple and accurate approximations for wet-bulb temperature in moist conditions, with forecasting applications. *Bulletin of the American Meteorological Society*, **98**, 1897-1906.
- Grundstein, A. J., J. A. Knox, J. Vanos, E. R. Cooper, and D. Casa, 2017: American football and fatal exertional heat stroke: A case study of Korey Stringer. *International Journal of Biometeorology*, **61**, 1471-1480.
- Fujiwara, M., J. S. Wright, G. L. Manney, L. J. Gray, J. Anstey, T. Birner, S. Davis, E. P. Gerber, V. L. Harvey, M. I. Hegglin, C. R. Homeyer, J. A. Knox, K. Krüger, A. Lambert, C. S. Long, P. Martineau, B. M. Monge-Sanz, M. L. Santee, S. Tegtmeier, S. Chabrillat, D. G. H. Tan, Y. Zyulyaeva, D. R. Jackson, S. Polavarapu, G. P. Compo, R. Dragani, W. Ebisuzaki, Y. Harada, C. Kobayashi, W. McCarty, K. Onogi, S. Pawson, A. Simmons, K. Wargan, J. S. Whitaker, and C.-Z. Zou, 2017: Introduction to the SPARC Reanalysis Intercomparison Project (S-RIP) and overview of the reanalysis systems. *Atmospheric Chemistry and Physics*, **17**, 1417-1452. doi:10.5194/acp-17-1417-2017.
- Williams, C. A., P. W. Miller, A. W. Black, and J. A. Knox, 2017: Throwing caution to the wind: National Weather Service wind products as perceived by a weather-salient public. *Journal of Operational Meteorology*, **5**, 103-120.
- Knox, J. A., and P. N. Knox, 2017: Atmospheric/general circulation. *The Wiley-AAG International Encyclopedia of Geography: People, the Earth, Environment, and Technology*, Volume V, 243-250.
- Kohl, E., and J. Knox, 2016: My drought is different from your drought: A case study of the policy implications of multiple ways of knowing drought. *Weather, Climate, and Society*, **8**, 373-388. <http://dx.doi.org/10.1175/WCAS-D-15-0062.1>
- Knox, J. A., B. Mazanec, E. Sullivan, S. Hall, and J. Rackley, 2016: Analysis of the Twitter Response to Superstorm Sandy: Public Misconceptions and Reconceptions of an Extreme Atmospheric Hazard. *Atmospheric Hazards*, ed. Jill Coleman, InTech, 21-40.
- Miller, P. W., A. W. Black, C. A. Williams, and J. A. Knox, 2016: Quantitative assessment of human wind speed overestimation. *Journal of Applied Meteorology and Climatology*, **55**, 1009-1020. <http://journals.ametsoc.org/doi/abs/10.1175/JAMC-D-15-0259.1>
- Miller, P. W., A. W. Black, C. A. Williams, and J. A. Knox, 2016: Maximum wind gusts associated with human-reported nonconvective wind events and a comparison to current warning issuance criteria. *Weather and Forecasting*, **31**, 451-465. <http://journals.ametsoc.org/doi/abs/10.1175/WAF-D-15-0112.1>
- Knox, J. A., A. W. Black, J. A. Rackley, E. N. Wilson, J. S. Grant, S. P. Phelps, D. Nevius, and C. Dunn, 2016: Automated turbulence forecasting strategies. Chapter 12 in *Aviation Turbulence: Processes, Measurement, Prediction*, Robert Sharman and Todd Lane, eds., Springer, 243-260.
- Stewart, A. E., C. A. Williams, M. D. Phan, A. L. Horst, E. D. Knox, and J. A. Knox, 2016: Through the eyes of the experts: Meteorologists' perceptions of the probability of precipitation. *Weather and Forecasting*, **31**, 5-17.

- Rackley, J. A., and Knox, J. A., 2016: A climatology of Southern Appalachian cold air damming. *Weather and Forecasting*, **31**, 419-432. <http://journals.ametsoc.org/doi/abs/10.1175/WAF-D-15-0049.1>
- Stewart, A. E., J. A. Knox, and P. Schneider, 2015: Piloting and evaluating a workshop to teach Georgia teachers about weather science and safety. *Journal of Geoscience Education*, **43**, 271-284.
- Schumacher, R. S., D. M. Schultz, and J. A. Knox, 2015: Influence of terrain resolution on banded convection in the lee of the Rocky Mountains. *Monthly Weather Review*, **143**, 1399-1416.
- Ellrod, G. P., J. A. Knox, P. F. Lester, and L. J. Ehernberger, 2015: Clear Air Turbulence. In: Gerald R. North (editor-in-chief), John Pyle and Fuqing Zhang (editors). *Encyclopedia of Atmospheric Sciences*, 2nd edition, Vol. 1, 177-186. (Invited)
- Mattingly, K., J. McLeod, J. Knox, J. M. Shepherd, and T. Mote, 2014: A climatological assessment of Greenland blocking conditions associated with the track of Hurricane Sandy and historical North Atlantic hurricanes. *International Journal of Climatology*, doi: 10.1002/joc.4018.
- Charlevoix, D., R. Pandya, A. Bridger, T. Gill, E. Hampton, R. Herman, J. Knox, W.-W. Li, and D. Stanitski, 2014: New directions for the AMS Symposium on Education. *Bulletin of the American Meteorological Society*, **95**, 1465-1467.
- Debbage, N., N. Gonsalves, J. M. Shepherd, and J. A. Knox, 2014: Superstorm Sandy and voter vulnerability in the 2012 US Presidential Election: a case study of New Jersey and Connecticut. *Environmental Hazards*, **13**(3): 181-199. DOI: 10.1080/17477891.2014.891500.
- Grundstein, A., E. Cooper, M. Ferrara, and J. Knox, 2014: The geography of extreme heat hazards for American football players. *Applied Geography*, **46**, 53-60.
- Knox, J. A., J. A. Rackley, A. W. Black, V. A. Gensini, M. Butler, C. Dunn, T. Gallo, M. R. Hunter, L. Lindsey, M. Phan, R. Scroggs, and S. Brustad, 2013: Tornado debris characteristics and trajectories during the 27 April 2011 Super Outbreak as determined using social media data. *Bulletin of the American Meteorological Society*, **94**, 1371-1380. <http://journals.ametsoc.org/doi/abs/10.1175/BAMS-D-12-00036.1>
Research was featured in 454 newspapers worldwide with an equivalent ad value of \$400,568, not including 2.33-minute segments on *NBC Nightly News* and NBC's *Today* show.
- Schultz, D. M., and J. A. Knox, 2013: Young Lewis Fry Richardson in Yorkshire. *Weather*, **68**, 66-67.
- Durkee, J. D., C. M. Fuhrmann, J. A. Knox, and J. D. Frye, 2012: Ageostrophic contributions to a nonconvective high wind event in the Great Lakes region. *National Weather Digest*, **36**, 27-41.
- McCann, D. W., J. A. Knox, and P. D. Williams, 2012: Improvements in clear-air turbulence forecasting based on spontaneous imbalance theory: The ULTURB algorithm. *Meteorological Applications*, **19**, 71-78. DOI:10.1002/met.260.
- Campana, P., J. A. Knox, A. J. Grundstein, and J. Dowd, 2012: The 2007-2009 drought in Athens, GA USA: A climatological comparison and an assessment of future water availability. *Journal of the American Water Resources Association*, **48**, 379-390. DOI: 10.1111 /j.1752-1688.2011.00619.x

- Knox, J. A., J. D. Frye, J. D. Durkee, and C. M. Fuhrmann, 2011: Nonconvective high winds associated with extratropical cyclones. *Geography Compass*, **5**(2), 63-89. (Invited review paper)
- Knox, J. A., A. S. Bachmeier, W. M. Carter, J. E. Tarantino, L. C. Paulik, E. N. Wilson, G. S. Bechdol, and M. J. Mays, 2010: Transverse cirrus bands in weather systems: A grand tour of an enduring enigma. *Weather*, **65**, 35-41.
- Ellrod, G. P., and J. A. Knox, 2010: Improvements to an operational clear air turbulence diagnostic index by addition of a divergence trend term. *Weather and Forecasting*, **25**, 789-798.
- Schumacher, R. S., D. M. Schultz, and J. A. Knox, 2010: Convective snowbands downstream of the Rocky Mountains in an environment with conditional, dry symmetric, and inertial instabilities. *Monthly Weather Review*, **138**, 4416-4438.
- Grundstein, A. J., C. Ramseyer, F. Zhao, J. L. Pesses, P. Akers, A. Qureshi, L. Becker, J. A. Knox, and M. Petro, 2010: A retrospective analysis of United States football hyperthermia deaths. *International Journal of Biometeorology*, DOI 10.1007/s00484-010-0391-4.
- Parham, T. L., Jr., C. Cervato, W. A. Gallus, Jr., M. Larsen, P. Stelling, J. Hobbs, T. Greenbowe, T. Gupta, J. A. Knox, and T. E. Gill, 2010: The InVEST volcanic concept survey: Exploring student understanding about volcanoes. *Journal of Geoscience Education*, **58**, 213-223.
- Knox, J. A., D. W. McCann, and P. D. Williams, 2009: Reply to Plougonven et al.'s "Comments on 'Application of the Lighthill-Ford theory of spontaneous imbalance to clear-air turbulence forecasting'". *Journal of the Atmospheric Sciences*, **66**, 2511-2516.
- LaMoreaux, H. K., G. A. Brook, and J. A. Knox, 2009: Late Pleistocene and Holocene environments of the Southeastern United States from the stratigraphy and pollen content of a peat deposit on the Georgia Coastal Plain. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **280**, 300-312. (#24 hottest article in *Palaeo*³ for July-September 2009; impact factor 2.405, #1 in geography, physical and paleontology)
- Knox, J. A., 2008: Recent and future trends in U.S. undergraduate meteorology enrollments, degree recipients and employment opportunities. *Bulletin of the American Meteorological Society*, **89**, 873-883. (2nd-most accessed article in entire AMS electronic archive during July 2008)
- Knox, J. A., D. W. McCann, and P. D. Williams, 2008: Application of the Lighthill-Ford theory of spontaneous imbalance to clear-air turbulence forecasting. *Journal of the Atmospheric Sciences*, **65**, 3292-3304. (#9 most-accessed article in AMS archives during October 2008)
- Schultz, D. M., and J. A. Knox, 2007: Banded convection caused by frontogenesis in a conditionally, symmetrically, and inertially unstable environment. *Monthly Weather Review*, **135**, 2095-2100.
- Lacke, M. C., J. A. Knox, J. D. Frye, A. E. Stewart, J. D. Durkee, C. M. Fuhrmann, and S. M. Dillingham, 2007: A climatology of non-convective wind events in the Great Lakes region. *Journal of Climate*, **20**, 6012-6022.
- Knox, J. A., and P. R. Ohmann, 2006: Iterative solutions of the gradient wind equation. *Computers & Geosciences*, **32**, 656-662.
- Knox, J. A., and S. A. Ackerman, 2005: What do introductory meteorology students want to learn? *Bulletin of the American Meteorological Society*, **86**, 1431-1435. (Cover article)

- Knox, J. A., and V. L. Harvey, 2005: Global climatology of inertial instability and Rossby wave breaking in the stratosphere. *Journal of Geophysical Research-Atmospheres*, **110** (D6), D06108, DOI 10.1029/2004JD005068.
- Knox, J. A., 2003: Inertial instability. *Encyclopedia of the Atmospheric Sciences*, J. R. Holton, J. Curry, and J. Pyle, Eds., Academic Press, 1004-1013. (Invited)
- Iacopelli, A. J., and J. A. Knox, 2001: Mesoscale dynamics of the record-breaking 10 November 1998 mid-latitude cyclone: A satellite-based case study. *National Weather Digest*, **25**, 33-42. (Invited)
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- Knox, J. A., 1999: "Pentecost 30 June 1993" (poem), *Wisconsin Academy Review*, **45** (3), 37-38. Republished in *Valparaiso Poetry Review*, **2** (1) and *The Cresset*, **64** (6), 9. Chosen as the "Poem of the Week" by *Valparaiso Poetry Review*, June 24, 2008.
- 86 newspaper columns in *The Red & Black* (circulation circa 17,000), 2004-2015.
- 19 book or film reviews in *Choice* (12; circulation 35,000), *Phi Kappa Phi Forum* (4; circulation 120,000), *Metropolitan Universities* (2), and *Sanctuary* (1), 1994-present.
- 8 Science & Technology columns authored for *Phi Kappa Phi Forum*, 1996-99.
- SELECTED INVITED REVIEWS, SUMMARIES AND ESSAYS (12):**
- Knox, J. A., 2016: Review of S. Miller's *Applied Thermodynamics for Meteorologists*. *Physics Today*, 58-60. (Invited book review)
- Stewart, A. E., C. A. Williams, M. D. Phan, A. L. Horst, E. D. Knox, and J. A. Knox, 2016: Through the experts' eyes: Meteorologists' perceptions of the probability of precipitation. *Bulletin of the American Meteorological Society*, **97**, 905. (Invited Paper of Note summary)
- Knox, J., 2015: Unsung hero (A remembrance of Sam Schuman). *Honors in Practice*, **11**, 15-16.
- Knox, J. A., 2013: Review of J. Shonk's *Introducing Meteorology: A Guide to Weather*. *Bulletin of the American Meteorological Society*, **94**, 1745-1746. (Invited book review)
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- Knox, J. A., 2012: Review of *Advances in Earth Observation of Global Change*, edited by Emilio Chuvieco, Jonathan Li, and Xiaojun Yang. *Bulletin of the American Meteorological Society*, **93**, 1068.
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- Schultz, D. M., R. S. Schumacher, and J. A. Knox, 2007: The unappreciated threat from inertial instability. *Bulletin of the American Meteorological Society*, **88**, 1537. (Invited conference presentation summary)
- Knox, J., 2006: Alfred Woodcock, a natural scientist. *Phi Kappa Phi Forum*, **86** (4), 6-7. (Invited column)

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- Knox, J. A., 1997: Generalized nonlinear balance criteria: Theory and applications. Preprints, *11th Conference on Atmospheric and Oceanic Fluid Dynamics*, American Meteorological Society, Tacoma, WA, 86-90.
- Knox, J. A., and M. H. Hitchman, 1997: The interaction of convectively excited gravity waves with inertially unstable flows in the equatorial middle atmosphere. Preprints, *11th Conference on*

Atmospheric and Oceanic Fluid Dynamics, American Meteorological Society, Tacoma, WA, 292-296.

- Knox, J. A., 1997: Do we understand clear-air turbulence in anticyclonic flows? Preprints, 7th *Conference on Aviation, Range and Aerospace Meteorology*, American Meteorological Society, Long Beach, CA, 202-205.
- Knox, J. A., 1997: Advanced Stupid Calculator Tricks: Iterative solution of the gradient wind equation. Preprints, 6th *Symposium on Education*, American Meteorological Society, Long Beach, CA, 139-142.
- Knox, J. A., and S. R. Silberberg, 1997: L. F. Richardson's Forecast Factory: An active learning experiment in four acts. Preprints, 6th *Symposium on Education*, American Meteorological Society, Long Beach, CA, 48-51.
- Knox, J. A., and B. D. Hoggatt, 1996: Mesoscale dynamics of mid-level convection in an intense mid-latitude anticyclone. Preprints, 7th *Conference on Mesoscale Processes*, Royal Meteorological Society/American Meteorological Society, Reading, UK, 453-455.
- Knox, J. A., 1996: Stupid Calculator Tricks: How to make temperature conversion equations inspiring. Preprints, 5th *Symposium on Education*, American Meteorological Society, Atlanta, GA, 97-100.
- Knox, J. A., and S. A. Ackerman, 1996: Teaching the extratropical cyclone with the *Edmund Fitzgerald* storm. Preprints, 5th *Symposium on Education*, American Meteorological Society, Atlanta, GA, 91-96.
- Knox, J. A., and P. J. Croft, 1996: Storytelling in the atmospheric dynamics classroom. Preprints, 5th *Symposium on Education*, American Meteorological Society, Atlanta, GA, 101-104.
- Knox, J. A., 1996: Inertial processes in atmospheric dynamics. Part One: Inertial flow. Preprints, 5th *Symposium on Education*, American Meteorological Society, Atlanta, GA, 85-90.
- Knox, J. A., 1995: Isentropic interpolation in the middle atmosphere. Preprints, 1st *Conference on Isentropic Analysis and Forecasting*, Millersville University Chapter of the American Meteorological Society, Millersville, PA, 34-36.

EXTRAMURAL AND INTRAMURAL GRANTS (25; Total activity: \$6.58 million; To UGA: \$1,210,119)

Weather and Climate Software License for Teaching and Forecasting Applications. UGA Learning Technologies Grant. \$13,500; Funded 7/21-6/22.

Hidden Figures in the Atmospheric Sciences. UGA Franklin College of Arts and Sciences Innovation in Multicultural Curriculum Grant. \$2000; Funded 12/20-5/21.

Data Assimilation Experiments Using WRF in the Undergraduate Classroom. NCAR Computational and Information Systems Laboratory University Allocation. 402,000 hours of core use computer time; Funded 4/19-5/19.

An Updated and Free GEOG 1112L Laboratory Manual. UGA Affordable Course Materials Grant. \$5000; Funded 3/19-6/19.

Solidarity and Storytelling: Debris and Visual Expressions of Collective Community After the 2019 Lee County Tornado (co-PI); CU-Boulder Natural Hazards Center; \$1,925; Funded 3/19-6/19.

A 3D Active Teaching Tool for Learning about Atmospheric Sciences (3D-ATTLAS): Incorporating Augmented Reality into a Cutting-Edge Weather and Climate Teaching Solution at UGA (co-PI); Learning Technologies Grant, UGA Center for Teaching and Learning; \$21,017; Funded 7/17-6/18.

Writing Intensive Program, UGA Franklin College of Arts and Science; 2 full-time TA positions. Approx. \$12,000. Funded 8/15-12/15.

M. G. Michael Award (excellence in research), UGA Franklin College of Arts and Sciences; \$3000; Funded 7/14-6/15.

Collaborative Research in Atmospheric Science: Probability Forecasting-Perception of the Probability of Precipitation (co-PI); UGA Innovative Instruction Grant Program; \$5000; Funded 5/13-8/13.

Development of a Hands-On Laboratory Component of a New Geography/Atmospheric Science Course, Introduction to Data Assimilation (PI); UGA Innovative Instruction Grant Program; \$5000; Funded 5/12-8/12.

Improving Clear Air Turbulence Forecasts at the NOAA/NWS/NCEP/Aviation Weather Center with State-of-the-Art Research Diagnostics (PI); UCAR/COMET; \$60,000; Funded 7/09-6/12.

Teaching Science Teachers about Masters of Disaster in Socioeconomically and Climatologically Vulnerable Counties of Georgia (co-PI); National Science Foundation; \$149,642; Funded 8/10-8/12.

Teaching Science Teachers About Masters of Disasters (consultant); Georgia Teacher Quality in Higher Education Program; \$31,000; Funded 6/10-6/11.

Teaching Science Teachers About Masters of Disasters (consultant); Georgia Teacher Quality in Higher Education Program; \$31,000; Funded 6/09-6/10.

Climatological and Demographic Aspects of Late-Summer Heat Waves in Georgia (PI); UGARF; \$9707.10; Funded 1/09-12/09.

Development, Implementation and Research of Rotating-Tank Laboratory Experiments in Undergraduate Geosciences Courses at the University of Georgia (co-PI); USG Board of Regents STEM Initiative; \$7990; Funded 11/08-6/09.

Integrated Hydrologic/Hydrodynamic Modeling System for Collection of Pollutant Signatures (co-I); DOE; \$750,000 to UGA; Funded 10/08-10/11.

Teaching Science Teachers About Masters of Disasters (consultant); Georgia Teacher Quality in Higher Education Program; \$31,000; Funded 6/08-6/09.

Enhancing Undergraduate Geography Courses with New Data-Intensive Multimedia Modules on the Ozone Hole and El Niño (PI); PRISM; \$4000; Funded 8/04-2/05.

The Assimilation Process in the Earth, Space and Social Sciences (PI); Georgia Space Grant; \$5562; Funded 3/04-2/05.

Mesoscale Tropopause Dynamics Diagnosed in GOES (PI); NOAA/NESDIS; \$66,000; Funded 10/03-9/05.

Diagnostic Studies of Tropical Dynamics with UARS and CRISTA (co-I); NASA (Subcontract to NWRA); \$72,000; Funded 11/01-2/04.

Hands-On Cutting-Edge Scientific Visualization in Meteorology (PI); Valparaiso University Danztler Fund; \$2000; Funded 4/99-5/00.

Explaining the *Edmund Fitzgerald* Shipwreck: Synoptic-Dynamic Analysis of Mesoscale Surface Jets Associated with Mid-Latitude Cyclones (PI); Valparaiso University Summer Research Fellowship; \$2500; Funded 11/98-8/99.

GISS Institute on Climate and Planets (co-I); NASA; \$5,300,000; Funded 6/98.

INVITED ORAL PRESENTATIONS (64)

Seoul National University, Seoul, South Korea, September 8, 2020: “The Science of Tornado Debris Research.”

University of South Florida Weather, Climate and Society REU, June 17, 2020: “Why Should We Care About Tornado Debris?”

Presidential Scholars Foundation Ask Me Anything event, May 20, 2020: “Ask John Knox Anything!”

AMS Student Conference, Plenary Session, January 11, 2020: “Failing My Way to the Lorenz Award.”

Renaissance Weekend, Charleston, SC, December 29, 2018: “Wildfires, Hurricanes, and Endless Summer.”

Second Annual GeoBee Retreat, Atlanta, GA, February 17, 2018: “Geography as a Way of Life.”

University of South Carolina Department of Geography Colloquium, Columbia, SC, October 27, 2017: “Tornadoes and Hurricanes and Social Media, Oh My!”

Tampa Area Committee on Foreign Relations, Tampa, FL, September 26, 2017: “Thin Ice: The Destabilizing Effect of Climate Change on Foreign Policy and National Security.”

Athens Human Rights Festival, Athens, GA, May 6, 2017: “Education as a basic human rights, globally and locally.”

Renaissance Weekend, Charleston, SC, December 31, 2016: “How weather is predicted.” (with Pam Knox)

Renaissance Weekend, Charleston, SC, December 29, 2016: “Climate in the Age of Trump.”

Renaissance Weekend, Charleston, SC, December 29, 2016: “Drought, Politics and Climate Change in the Southeast U.S.” (with Pam Knox)

UGA Demosthenian Literary Society Workshop on Logical Fallacies, October 25, 2016.

UGA Franklin Residential Community Dean’s Tea, April 5, 2016: “‘What is now proved was once, only imagin’d’: Global climate change in 2015 and beyond.”

Emmanuel College Cultural Awareness Program, Royston, GA, March 2, 2016: “A Christian scientist—no, not that kind!”

UGA Center for Simulational Physics, Athens, GA, February 2, 2016: “From pets to petaflops: The rise and triumph of weather forecasting as a computational science.”

University of Alabama at Birmingham (UAB) Horizons presentation, January 27, 2016: “The UAB miracle and its obstructionists.”

Renaissance Weekend, Charleston, SC, December 31, 2015: “Using Facebook to do real tornado science.”

Renaissance Weekend, Charleston, SC, December 30, 2015: “Rain, rain go away: The South Carolina floods of October 2015.” (with Pam Knox)

- Alpha Upsilon Circle of Omicron Delta Kappa, University of Georgia, November 4, 2015: “Everything I ever needed to know about leadership I learned from a kids’ book about rabbits.”
- Staff of Georgia State Rep. Spencer Frye, October 7, 2015: “Digging for Data: Becoming I.F. Stone in the Digital Age.”
- University of Alabama at Birmingham (UAB) University Honors Program inaugural Alumni Lecture Series address, September 23, 2015: “What We’ve Learned from the Debris of the April 2011 Tornado Outbreak Using Social Media.”
- University of South Alabama Department of Earth Sciences, March 9, 2015: “Beyond llamas and dresses: How to use social media data for scientific research of tornado debris.”
- Renaissance Weekend, Charleston, SC, December 30, 2014: “What are tornadoes?”
- Renaissance Weekend, Charleston, SC, December 29, 2014: “Dynamics of weather and climate.”
- Renaissance Weekend, Charleston, SC, December 29, 2014: “Meteorological applications of social media data.”
- Central Alabama chapter of the National Weather Association, May 19, 2014: “Tornado debris characteristics and trajectories during the 27 April 2011 Super Outbreak as determined using social media data.”
- Athens Science Café, April 23, 2014: “Winds of change: Using social media to study the weather.”
- 12th Annual Southeast Severe Storms Symposium, Mississippi State University, April 4, 2014: “Tornado debris characteristics and trajectories during the 27 April 2011 Super Outbreak as determined using social media data.” (Keynote speaker)
- UGA Center for Teaching and Learning UGA Award-Winning Faculty Series, Athens, GA, March 18, 2014: “Active Learning With Large Classes: Strategies That Work Better With 100 Students Than 10 Students.”
- UGA GRSC 8200 Communicating Science and Scholarship, Athens, GA, September 23, 2013: “Tornado debris research at UGA: A case study of scientist-media interactions.”
- United Kingdom Met Office and the Institute of Physics in Scotland, Eskdalemuir Observatory, Langholm, Dumfriesshire, Scotland, August 1, 2013: “Richardson and his development of numerical weather prediction while at Eskdalemuir” (with David M. Schultz).
- Science Café, Spirit and Truth Fellowship of Knoxville, Knoxville, TN, July 13, 2013: “Tornado debris research using social media.”
- UGA Franklin Residence Hall Dean’s Tea Lecture Series, Athens, GA, April 8, 2013: “Tornado debris research at UGA; or, how I used Facebook to do more than post cat photos.”
- UGA Tate Society, Athens, GA, October 21, 2012: “Specialization is for insects, serendipity is for human beings.”
- University of Wisconsin-Milwaukee Department of Mathematical Sciences, October 5, 2012: “Doing tornado debris research with social media: Results from the April 27, 2011 Tornado Super Outbreak.”

Delta Air Lines, Atlanta, GA, December 9, 2011: “Clear-Air Turbulence (CAT) Forecasting Research at the University of Georgia.”

University of Georgia Demosthenian Literary Society All Night Meeting, February 19, 2011: “Specialization is for insects, serendipity is for human beings.”

University of Georgia Franklin Residence Hall Dean’s Tea Lecture Series, Athens, GA, September 14, 2010: “Specialization is for insects, serendipity is for human beings.”

North Carolina State University Department of Marine, Earth and Atmospheric Sciences, Raleigh, NC, April 30, 2010: “New directions in clear-air turbulence forecasting.”

University of South Florida American Meteorological Society Chapter, Tampa, FL, March 23, 2010: “L. F. Richardson’s forecast factory fantasy: Active learning of weather forecasting in four acts.”

The Teaching Company, Chantilly, VA, February 25, 2010: “Modern Weather Forecasting.”

University of Georgia Russell Hall Last Lecture Series, Athens, GA, October 27, 2009: “Specialization is for insects, serendipity is for human beings.”

University of Georgia Department of Physics and Astronomy, Athens, GA, August 27, 2009: “The physics of clear-air turbulence (CAT): An unsolved mystery.”

Southeast Division of the Association of American Geographers, 63rd Annual Meeting, Greensboro, NC, November 24, 2008: “Hurricane West Winds”: Observations of high wind events associated with mid-latitude cyclones in the Great Lakes region (“New Voices in SEDAAG” physical geography session)

American Meteorological Society/American Geophysical Union 16th Biennial Heads and Chairs Meeting, Boulder, CO, October 17, 2008: “Recent and future trends in U.S. undergraduate meteorology enrollments, degree recipients, and employment opportunities.”

University of Wisconsin-Madison Atmospheric and Oceanic Sciences Colloquium, Madison, WI, March 10, 2008: “New dynamical directions in clear-air turbulence forecasting.”

University of Georgia Department of Geography, Athens, GA, March 4, 2008: “The Hurricane West Wind: Coupling basic research on mid-latitude cyclones with pedagogy.”

American Meteorological Society Student Conference, New Orleans, LA, January 19, 2008: “A reality check on the science job market.”

University of New Mexico University Honors Program, Albuquerque, NM, February 26, 2007: “Wavemaking in the sky and sea.”

Naval Research Laboratory Hurlburt Colloquium speaker, Washington, DC, October 26, 2006: “Using GOES measurements of total column ozone to study cyclone windstorms.”

The JASON Project, JASON Argonauts Boot Camp, Milwaukee, WI, June 26 and 30, 2006: “The monster storm that hit the *Edmund Fitzgerald*.”

UNC-Charlotte Department of Geosciences, February 23, 2006: “Advances in clear-air turbulence forecasting.”

Georgia State University Department of Anthropology and Geography, Atlanta, GA, February 1, 2005: “Climatologies of stratospheric anticyclones and tropospheric cyclones.”

Florida Institute of Technology Division of Marine and Environmental Systems, Melbourne, FL, September 8, 2000: “The dynamics of clear-air turbulence in anticyclonic regions.”

Valparaiso University Lumina Awards ceremony keynote speaker, April 2, 2000.

Geological Society of America, Southeastern Section, Charleston, WV, March 31, 1998: “Exploring phase space with temperature-conversion equations.”

Millersville University of Pennsylvania Department of Earth Sciences, Millersville, PA, March 12, 1998: “Baroclinic instability: From the Eady Expressway to the Charney Thoroughfare.”

Valparaiso University Department of Geography and Meteorology, Valparaiso, IN, February 26, 1998: “Quasi-geostrophic balance concepts—and beyond!”

NCEP/Aviation Weather Center, National Weather Service, Kansas City, MO, December 3, 1997: “Re-examining clear-air turbulence mechanisms.”

University of Wisconsin-Milwaukee Department of Geosciences, January 17, 1997: “Inertial instability in the tropical stratosphere and over the Milwaukee suburbs.”

NASA/Goddard Institute for Space Studies, New York, NY, February 12, 1996: “The unexplored world of inertial instability–gravity wave interactions.”

University of Michigan Space Physics Research Laboratory, Ann Arbor, MI, December 19, 1995: “Inertial instability: From denial to acceptance to relevance of a fundamental atmospheric process.”

University of Cambridge Department of Applied Mathematics and Theoretical Physics, Atmospheric Dynamics Group, Cambridge, UK, September 21, 1992: “Theory and observations using PV in the equatorial middle atmosphere.”

SUMMARY OF OTHER RESEARCH AND EDUCATION PRESENTATIONS

Over 20 seminars at universities and government agencies on three continents, 1992-present.

Over 30 talks at AAG, AMS, AGU, EGS, IUGG, NWS, NWA and Sigma Xi meetings, 1992-present.

Over 30 posters at AMS, AGU, EGS, EGU, IUGG, NWA, and Sigma Xi meetings, 1991-present.

Over 40 lectures/speeches, primarily to pre-college and introductory-level audiences, 1990-present.

Interviews with:

(Print) Associated Press, *Science*, *Nature*, *USA Today*, *The Atlantic Monthly*, *Science News*, *Correio Braziliense* (Brasilia, Brazil), *The Daily Telegraph* (London, UK), *Newsweek Russia*, *Atlanta Journal-Constitution*, *Athens Banner-Herald*, *Birmingham (AL) Business Journal*, *The Birmingham (AL) News*, *The Grant (NE) Tribune-Sentinel*, *Chattanooga (TN) Times-Free Press*, *On Wisconsin*, *UAB Alumni Magazine*, *The Red & Black* (multiple)

(TV) *NBC Nightly News*; *NBC Today* show, *WxGeeks*, *Master of Disaster* TV show, The Weather Channel (multiple), Discovery Channel Canada (segment), CNN International, American Institute of Physics, CBS Atlanta, Fox 5 Atlanta, WFQX-TV, Marquette, MI; WPBN-TV, Traverse City, MI; Grady NewSource, Athens, GA (multiple)

(Radio/Internet) WCCO radio, Minneapolis (1-hour interview); WBBM radio, Chicago; WeatherBrains (multiple shows), The Big Show (statewide Michigan radio); WIBC radio,

Indianapolis, WGAU radio, Athens; WUGA radio, Athens, WUOG radio, Athens, WXAG radio, Athens, WJOX radio, Birmingham, AL

PROFESSIONAL SERVICE ACTIVITIES

PROFESSIONAL MEMBERSHIPS:

Association of American Geographers (AAG)	Southeastern Division of AAG (SEDAAG)
National Council for Geographic Education	National Association of Geoscience Teachers
American Geophysical Union (AGU)	American Meteorological Society (AMS)
Royal Meteorological Society	National Weather Association (NWA)
Great Lakes Shipwreck Museum (life member)	Keats-Shelley Association of America

JOURNAL EDITORSHIPS, ETC.:

Editor, *Bulletin of the American Meteorological Society*, 2018-2021.
 Associate Editor, *Journal of Operational Meteorology*, 2014-2015.
 Associate Editor, *Journal of Geoscience Education*, 2006-10.
 Associate Editor, *Journal of Geophysical Research (JGR)-Atmospheres*, 2005-07.
 Associate Editor, *National Weather Digest*, 2000-04; 2008-09.
 Series Editor, Wiley-Royal Meteorological Society Advancing Weather and Climate Science Series, 2013-2018.
 Editor-in-Chief, U.S. Presidential Scholars 50th Anniversary publication, 2012-2014.
 Guest Editor, “Weather and Climate” issue of *Phi Kappa Phi Forum*, Spring 1999.
 Advisory Board member, *Journal of College Science Teaching*, 1998-2001.

NATIONAL AND REGIONAL COMMITTEES:

Member, AMS Annual Meeting Oversight Committee, 2019-present.
 Member, USRA Earth Science Council, 2016-present.
 Faculty Co-Chair, AMS Student Conference, 2017-2021.
 Chair, AMS Board on Higher Education, 2015-2017; Member, 2011-17.
 Chair, AMS Edward N. Lorenz Teaching Excellence Award committee, 2012-17, 2020.
 Member, AMS Charles E. Anderson Award committee, 2015-16.
 Member, AMS History Committee, 2014-2016.
Ex officio member, AMS Drafting Committee, The Bachelor’s Degree in Atmospheric Science Statement, 2016-17.
 Member, SEDAAG Annual Meeting Planning Committee, 2014.
 Member, GOES-R Algorithm Development Executive Board, 2009-2012.
 Member, AAG Committee on College Geography and Careers, 2008-11.
 Member, AGU Atmospheric Dynamics Committee, 2001-2005.
 Member, SEDAAG Audit Committee, 2009-10.
 Member, NWA Remote Sensing Committee, 2005-07.
 Member, AMS Middle Atmosphere Committee, 2003-06.

CONFERENCE LEADERSHIP ROLES:

Creator and convener, Workshop on “How Can We Teach Atmospheric Dynamics Better,” NAGT Earth Educators’ Rendezvous, online, July 12, 2021.

Co-convenor, Workshop on “High-Impact Wind Events Without High Winds,” Royal Meteorological Society/NCAS Conference on High Impact Weather and Climate, Manchester, UK, July 7-9, 2016.

Session chair, “Animals, Humans, and Land Use” session, SouthEastern Division of the Association of American Geographers, Columbia, SC, November 20, 2016.

Panelist, Renaissance Weekend, Expert Panel on “Turning Down the Earth’s Thermostat,” Charleston, SC, December 29, 2015.

Panelist, AMS Town Hall Meeting on Future Directions for Employment for Newly Graduated Meteorologists, AMS 95th Annual Meeting, January 7, 2015.

Session Co-Chair, Innovative Approaches to Teaching Synoptic Meteorology, 24th AMS Symposium on Education, January 7, 2015.

Co-Moderator, AMS Information Statement on Bachelor’s Degree in Atmospheric Sciences, 24th AMS Symposium on Education, January 6, 2015.

Moderator, Renaissance Weekend, Expert Panel on “Not Simply Hot Air?”, Charleston, SC, December 29, 2014.

Member, Planning Committee and Job Trends/Skills Session Chair, AMS/AGU Heads and Chairs Meeting, Boulder, CO, October 16-17, 2014.

Session Co-Chair, Interdisciplinary Research and Education in Precipitation Forecasting and Extreme Events, 23rd AMS Symposium on Education, February 4, 2014.

Session Co-Chair, Innovative Approaches to Teaching Atmospheric Dynamics, 23rd AMS Symposium on Education, February 3, 2014.

Organizer and Moderator, Panel of Teaching Award Winners, 22nd AMS Symposium on Education, January 7, 2013.

Session chair, Societal Factors in Severe Weather, 26th AMS Conference on Severe Local Storms, November 7, 2012.

Program committee member, AMS Symposium on Education, 2012-present.

Co-coordinator, AMS 2010 Annual Meeting Weather Briefings, January 18-21, 2010.

Program committee member, AMS 2005 Joint Meeting of Climate Variations, Atmospheric and Oceanic Fluid Dynamics, and the Middle Atmosphere, June 12-17, 2005.

Session chair, Mesospheric and Thermospheric Science (Including TIMED) session, 13th AMS Conference on the Middle Atmosphere, June 13, 2005.

Session chair, General Middle Atmosphere (Radiation/Chemistry/Transport) session, 13th AMS Conference on the Middle Atmosphere, June 13, 2005.

Co-convenor, “Balance 2002” special session at the Spring 2002 AGU meeting, Washington, D.C., May 28-31, 2002.

Session co-chair, Balanced Models, Ocean Dynamics and Lab Experiments session, “Balance 2002” special session at the Spring 2002 AGU meeting, Washington, D.C., May 29, 2002.

Session co-chair, Vortex-Wave Dynamics Posters session, “Balance 2002” special session at the Spring 2002 AGU meeting, Washington, D.C., May 30, 2002.

Session co-chair, Atmospheric Patterns Posters session, “Balance 2002” special session at the Spring 2002 AGU meeting, Washington, D.C., May 31, 2002.

Session chair, Potential Vorticity Dynamics session, 13th AMS Conference on Atmospheric and Oceanic Fluid Dynamics, Breckenridge, CO, June 5, 2001.

Co-convenor, “Balance 2001” meeting at the XXVIth Assembly of the European Geophysical Society, Nice, France, March 25-30, 2001.

Co-convenor, “Balance 2000” meeting at the XXVth Assembly of the European Geophysical Society, Nice, France, April 25-29, 2000.

Session chair, Atmosphere Dynamics session, “Balance 2000” meeting at the XXVth Assembly of the European Geophysical Society, Nice, France, April 25, 2000.

Session chair, Potential Vorticity session, “Balance 2000” meeting at the XXVth Assembly of the European Geophysical Society, Nice, France, April 27, 2000.

Session chair, Topographic Waves and Currents session, 12th AMS Conference on Atmospheric and Oceanic Fluid Dynamics, New York, NY, June 8, 1999.

Session chair, Tropical Dynamics session, 10th AMS Conference on the Middle Atmosphere, Tacoma, WA, June 25, 1997.

OTHER SELECTED PROFESSIONAL LEADERSHIP AND TRAINING ROLES:

Member, Weather Research Working Group, Sub Group Meeting for High Impact Weather, 2018-present.

Member, High Impact Weather Task Team on Meteorological Processes and Predictability, 2016-present.

External evaluator, Metropolitan State University Department of Earth and Atmospheric Sciences, Denver, CO, October 10-11, 14, 2016.

External evaluator, Georgia Institute of Technology School of Earth and Atmospheric Sciences, Atlanta, GA, March 29-31, 2016.

External evaluator, University of Miami Rosenstiel School of Marine and Atmospheric Sciences atmospheric sciences undergraduate program, Miami, FL, February 15-16, 2016.

Participant, 2015 GSI/EnKF Tutorial, Boulder, CO, August 10-14, 2015.

Invited participant, 2nd Workshop on Aviation Turbulence Impact and Mitigation, Washington, DC, September 3-4, 2014.

Invited participant, U.S. THORPEX Legacy Planning Meeting, Silver Spring, MD, June 5-6, 2014.

Invited participant, WMO/WWRP Second High Impact Weather Project workshop, Silver Spring, MD, June 2-4, 2014.

Invited participant and presenter, Workshop on Aviation Turbulence, Boulder, CO, August 28-29, 2013.

Deputy chair, UGA UCAR site visit, April 12, 2012.

Invited panelist, SEDAAG 65th Annual Meeting panel session on “Graduate School and the Tenure Track,” November 23, 2010.

Invited reviewer and participant, GOES-R Algorithm Development Executive Board, 2010 GOES-R Algorithm Working Group Meeting, Madison, WI, June 7-11, 2010.

Invited participant, program review, Saint Louis University Department of Earth and Atmospheric Sciences, April 2010. (Declined due to conference and teaching conflicts.)

Invited participant, UGA Teaching Academy Academic Affairs Faculty Symposium, Helen, GA, March 26-27, 2010.

Invited participant and speaker, Red Cross “Masters of Disaster” workshop for pre-college science teachers, University of Georgia, June 15-18, 2009.

Invited participant, National Oceanographic Partnership Program/ National Oceanographic and Atmospheric Administration Ocean Science, Technology and Operations Workforce Workshop, Naval Research Laboratory, Monterey, CA, November 10-12, 2008. (Declined due to travel restrictions and teaching load.)

Participant and oral presenter, Workshop on Teaching Weather and Climate Using Laboratory Experiments, University of Chicago, June 18-20, 2008.

Invited participant and speaker, Red Cross “Masters of Disaster” workshop for pre-college science teachers, University of Georgia, June 9-13, 2008.

Participant, National Association of Geoscience Teachers virtual workshop “New Worlds for Geoscience Teaching: Using Online Games and Environments,” April 21-24, 2008.

Invited participant and poster presenter, 1st Spontaneous Imbalance Workshop, NorthWest Research Associates, Seattle, WA, August 7-10, 2006.

Scientist Team, Signals of Spring (NASA-sponsored distance learning program), 2002-04.

Invited participant, Institute for Mathematics and its Applications Mathematics in the Geosciences workshop on “Reduced Descriptions of Coupled GFD Systems (Slow Manifolds in the Ocean and Atmosphere),” Minneapolis, MN, February 11-15, 2002.

Participant, NATO Advanced Study Institute on Numerical Modeling of the Global Atmosphere, Il Ciocco, Castelvechio Pascoli, Tuscany, Italy, May-June 1998.

Participant, 2nd Annual Summer School in Geophysical and Environmental Fluid Dynamics, University of Cambridge, Cambridge, UK, September 1992.

PROFESSIONAL REVIEWS:

Research Articles/Reports for:

Bulletin of the American Meteorological Society

Journal of the Atmospheric Sciences

Journal of Climate

Monthly Weather Review

Weather and Forecasting

Journal of Applied Meteorology and Climatology
Journal of Atmospheric and Oceanic Technology
Earth Interactions
Journal of Geophysical Research-Atmospheres
Geophysical Research Letters
 Scientific Reports (nature.com)
 Nature (informal expert review)
Climate Dynamics
Meteorological Applications
International Journal of Climatology
Journal of Computational and Applied Mathematics
Atmosphere
Atmospheric Science Letters
National Weather Digest
Journal of Operational Meteorology
Journal of Aviation Technology and Engineering
 NOAA (outside expert review, OAR Paper of the Year Award)
 American Nuclear Society

Education Articles for:

Bulletin of the American Meteorological Society
Computers & Geosciences
Journal of Geoscience Education
Eos, Transactions of the American Geophysical Union
Journal of Earth System Science Education
Mathematical Geology
Advances in Geosciences
Journal of College Science Teaching

Grant Proposals for:

NSF (MRI; AGS/PDM; CMG, NSF 09-520; GEO/ATM, NSF 08-1; GPG, NSF 00-2; Division of Earth Sciences)
 NERC Standard Grant and New Investigator Scheme (UK)
 German Research Foundation (research pre-proposal)
 Research Council of Norway (climate education proposal)
 NASA (NRA-98-OES-04; NRA-97-MTPE-07)
 NASA/GISS 1997 School-Year Research Proposals (three)
 USG Board of Regents STEM Mini-Grant Proposals (three)

Books (internal reviews):

Reynolds et al., *Physical Geography*, McGraw-Hill
Numerical Modeling of the Global Atmosphere in the Climate System, NATO ASI series
 Salby, *Fundamentals of Atmospheric Physics* (2nd edition), Elsevier
 Mak, *Atmospheric Dynamics*, Cambridge University Press
 Ershkovich et al., *Introduction to Fluid Dynamics Through Problems with Solutions*,
 Cambridge University Press
 Kiusalaas, *Numerical Methods in Engineering with Python*, Cambridge University Press
Weather and Climate, John Wiley & Sons

Conte et al., *Physical Geography*, Brooks/Cole
 Lutgens and Tarbuck, *The Atmosphere*, Prentice-Hall
 Carbone, *The Atmosphere Laboratory Manual*, Prentice-Hall
 Schoenfeld and Magnan, *Mentor in a Manual*, Magna Publishing

UNIVERSITY SERVICE:

Chair, Undergraduate Studies Committee, UGA Department of Geography, 2012-2015;
 Member, 2004-present.
 Academic Program Coordinator, UGA Atmospheric Sciences Major, 2017-present.
 Evaluator, Florida International University tenure and promotion case, 2021.
 Evaluator, University of North Carolina at Charlotte tenure and promotion case, 2021.
 Member, UGA Atmospheric Sciences Lecturer Search Committee, 2018-2019.
 Awards Selection Committee, UGA Franklin College of Arts and Sciences, 2015-2017; Chair, 2017.
 Member, UGA Geography Departmental Life Committee, 2018.
 Member, UGA Chapter of Phi Kappa Phi Executive Committee, 2016-2020.
 Member, UGA Torrance Center Advisory Board, 2013-2017
 Member, UGA Office of Emergency Preparedness Advisory Committee, 2013-present.
 Local Manager, UGA WxChallenge national weather forecasting contest team, 2008-2018.
 Evaluator, Rutgers University tenure and promotion case, 2016.
 Chair, UGA Department of Geography ad hoc committee on major recruitment, 2013.
 Member, UGA Department of Geography post-tenure review committees (3), 2013, 2015.
 Evaluator, Saint Louis University tenure and promotion case, 2012.
 Member, UGA Statistics Department statistics education search committee, 2010-11.
 Member, Colloquium Committee, UGA Department of Geography, 2011.
 Co-Chair, UGA University Testing Service Review Committee, 2008-09.
 Member, UGA Faculty of Engineering Seminar Series Committee, 2009-2010.
 Evaluator, Columbia University (NY) promotion case, 2006.
 Member, Marine Engineering Program Area, UGA Faculty of Engineering, 2002-2008.
 Member, Adjunct Faculty committee, UGA Department of Biological and Agricultural
 Engineering, 2005.
 Member, working group on mathematics and engineering curriculum, UGA Department of
 Biological and Agricultural Engineering, 2003-04.
 Member/library liaison, VU Administrative Committee on Environmental Sciences, 1999-2000.

SELECTED LOCAL, REGIONAL AND NATIONAL LEADERSHIP ACTIVITIES:

Elected Member, Clarke County (GA) Board of Education, 2017-2020. Chair, Policy Committee,
 2019; Vice Chair, Finance Committee, 2018-2019; Vice Chair, Government Relations
 Committee, 2018-2020. (CCSD: 13,000 students, \$170 million annual budget)
 National Chair, U.S. Presidential Scholars Alumni Association, 2015-present; Vice Chair, 2014-2015;
 Chair, Distinguished Alumni Committee/History and Archives Committee, 2004-present. Chair,
 Anniversaries Committee, 2016-2019. Member, Seed Grant Committee, 2018-2020.
 Vice Chair, Presidential Scholars Foundation Board of Directors, 2020-present; member, 2015-now.
 Judge, Television News, George Foster Peabody Awards, 2013, 2014.
 Chair, Presbyterian Student Center Board of Directors, Athens, GA, 2005-07. Honorary Advisor,
 Presbyterian Student Center student organization, 2010-present. Member, Waddel Fellowship
 Committee, 2015-2020.
 Mentor, Clarke County Mentor Program, 2015-2019.
 Grand Awards Judge, Climatology, 59th Intel International Science and Engineering Fair, 2008.
 Board of Advisors, Catacombs Coffeehouse, Madison, WI, 1992-96; 2003-06.