

Curriculum Vitae

Dr. J. Marshall Shepherd
Department of Geography, Full Professor with Tenure
Associate Head, Department of Geography
Director, UGA Atmospheric Sciences Program
Georgia Athletic Association Distinguished Professor of Geography and Atmospheric Sciences
Host, Weather Channel Weather Geeks
Weather and Climate Contributor, Forbes

President, American Meteorological Society (2013)

Other Affiliations/Titles: Institute for Resilient Infrastructure Systems,
UGA Water Resources Faculty, College of the Environment, the joint UGA-U.S. Department of Agriculture
(USDA) Southern High Resolution Modeling Center (SHRMC), and the UGA Initiative for Climate and Society

Tenure Status: Tenured (2009)
Graduate Faculty Status: Appointed to Full Graduate Faculty at University of Georgia, March 2006
Appointed to Graduate Faculty at Purdue University, July 2008
Highest Degree: Ph.D. Physical Meteorology, Florida State University, Tallahassee, Florida, 1999

Academic Positions

January 2017-Present Associate Head, Department of Geography
August 2011-Present Full Professor, UGA Athletic Association Professor of Geography and Director,
Atmospheric Sciences Program, University of Georgia
January 2006-2011 Associate Professor, University of Georgia

Other Professional Employment

1991-1992 Meteorological Technician, NOAA-NWS, Tallahassee, Florida.
1991-1993 Consulting Meteorologist, Metropolitan Weather Solvers, Tallahassee, Florida.
1991-1993 Research Assistant, Mesoscale Meteorology Group, Florida State University,
Tallahassee, Florida.
1993-1993 Research Meteorologist, Science Systems and Applications, Inc., Lanham, Maryland.
1993-2005 Research Meteorologist, NASA Goddard Space Flight Center, Greenbelt Maryland. (including GPM
Deputy Project Scientist and a 1-year Detail at NASA Headquarters,)

RESEARCH AREAS AND EXPERTISE

My research seeks to understand aspects of Earth's hydrometeorological and hydroclimate system (i.e. cloud systems, thunderstorms, hurricanes, precipitation) using advanced satellites, experimental aircraft, radars, and sophisticated computer models. I also explore the physical, human, and socio-economic aspects of extreme weather and global climate change. I am also interested in innovative strategies to infuse research data into applications, outreach, and instructional communities.

Urbanization and the Weather-Hydroclimate System: The overarching goal is to characterize possible urban-related (land cover, anthropogenic heating, and pollution) influences on spatio-temporal variability in the hydroclimate and to pose sound physical explanations for such interactions using in-situ and remote sensing data and numerical models.

Tropical Precipitating Systems: The overarching research goal is to characterize and quantify precipitation within tropical precipitating systems. An extension of this research examines whether the contribution of tropical cyclones is changing in response to natural or anthropogenic climate change.

Extreme Weather and Climate Events: The goal of this research is to examine the relationship between extreme climate events and extreme manifestations of weather. This is a fertile area of research as the Inter-governmental Panel on Climate Change continues to project increased frequency and/or intensity of extreme water cycle events.

Climate Vulnerability: The goal of this research is to quantify current and future vulnerability of human populations, particularly under-represented groups, to long-term and episodic climate change events. This research was stimulated via a partnership with the USDA Forest Service.

Innovative Applications of Physical Geographic and Climate Data: This track encompasses a wide variety of research interests related to integrating weather and climate data/analysis into decision support systems and societal applications. Examples of this work include funding by the U.S. Forest Service (USFS) to explore the socio-political, weather, air quality, and health implications swirling around the long-running conflict between residents of the Newton community in Gainesville, Georgia and industrial pollutant sources. Other projects investigate the complex coupled human-natural system in urban environments and implications for public health. Recent projects have also explored the use of Multi-User Virtual Environments to teach Geosciences and expose minorities to STEM.

Diversity in the Atmospheric Sciences: Numerous activities and a grant from the National Science Foundation have forged a new area that straddles education and outreach. We have are developing innovative strategies for broadening the exposure of under-represented groups to climate science.

SUMMARY OF KEY LEADERSHIP POSITIONS

During my career, I have exhibited key leadership positions at the International and National Levels. A sample of my leadership activities includes:

2016-2017 SEC Academic Leadership Fellow: I was selected as one of four faculty leaders at the University of Georgia to participate in the SEC's Leadership Fellows program. This program selects potential Academic leaders and immerses them within 1-year leadership and higher administration program with peers at UGA and across the SEC schools.

Director, Atmospheric Sciences Program, University of Georgia (Current): In this role, I direct the AMS and Federally-credential atmospheric sciences program. The program addresses the needs of students interested in studying meteorology or climate science. Under my leadership, the University of Georgia became the 78th membership of the University Corporation for Atmospheric Research (UCAR) and a member of the WSI National Lightning Network. From 2008-2015, our program faculty has attracted over \$12 million dollars in extramural grants, contributed over 110 peer-reviewed journals, and provided key experts to the media and nation on weather and climate topics. For example, in February 2013, I briefed the U.S. Senate Committee on Environment and Public Works and in 2015 briefed members of the Congress and White House staff. My colleagues and I are also frequently sought for major media appearances or Opinion Editorials. Our program is also notably regarded on the UGA campus and is well supported by University Administrators, including President Jere Morehead. In 2015, we proposed a new Atmospheric Sciences major at the University of Georgia. The program was approved by the State Board of Regents in August 2016. I also secured the program's first major donor and endowment. In 2016, we partnered with the Office of Preparedness to make UGA the first SEC member of the WeatherSTEM network.

President of the American Meteorological Society (2013): The American Meteorological Society is one of the leading professional societies in the world, dedicated to weather, climate, and related sciences. As President of the organization, I was elected by the nearly 14,000 members and preside over the AMS Executive Council and Executive Committee, which oversees the organization and its multi-million dollar budget and portfolio. I also provided vision and leadership on issues of the day facing the weather, climate, and related communities. AMS publishes several of the highest rated and cited journals in weather and climate fields and is seen as a key broker of information and leadership on weather/climate issues of the day. In this role, I also served as the U.S. representative to the International Federation of Meteorological Societies (IFMS). I also chaired the Executive Council and Executive Committee and led the annual performance review of the Executive Director.

International and National Advisory Roles: I have served as a member of the Nature Conservancy (Georgia) Board of Trustees, Board of Climate Central, Mothers and Others for Clean Air Partnership Council, NOAA Science Advisory Board, NOAA Climate Working Group, Department of Energy ARM Science Board, NSF Advisory Committee for Environmental Research and Education, NSF Committee of Visitors, Biocomplexity Program, Earth

Science Subcommittee of the NASA Advisory Council, Mothers and Others for Clean Air Partnership Council, National Center for Atmospheric Research (NCAR) Director Search Committee, University Space Research Association (USRA) Earth Science Advisory Board, Department of Energy expert panel on Cool Roof Initiative and Climate Change, NASA/NOAA/Howard University Programmatic Advisory Committees and 2 National Academy of Science Studies (i. Implications of Climate Change on National Security and U.S. Naval Operations and ii. Urban Meteorology). I have also served on a World Meteorological Organization advisory committee related to aerosols, clouds, and precipitation and the external review committee for NOAA's Climate Prediction Center and Hydrometeorological Prediction Center. I was also a contributing author to a chapter in the 2007 IPCC report (AR4). At the University level, I also served on the 2013 UGA Provost Search Committee, the Franklin College of Arts and Sciences Faculty Senate and the Center for Integrative Conservative Research (CICR) Executive Committee.

Host, Weather Channel WxGeeks (Current): Weather Geeks is a pioneering national Sunday talk show on The Weather Channel. The show discusses contemporary weather and climate topics. The show has garnered strong critical reviews and an Award from the American Meteorological Society.

Editorships: I have served as an editor for both the Journal of Applied Meteorology and Climatology (JAMC) and Geography Compass. I have also served as the Climatology Editor for the Wiley/Association of American Geographers (AAG) Encyclopedia of Geography and the Associate Editor for Weather at the IEEE-sponsored Earthzine.

Former Deputy Project Scientist, NASA Global Precipitation Measurement (GPM) Mission: While at NASA Goddard Space Flight Center, I served as the Deputy Project Scientist on a major NASA mission seeking to measure precipitation from space. GPM will improve weather, climate, and hydrological forecasting and is slated for a 2014 launch date. In this role, I was a part of the scientific leadership team that interfaced with the engineers, NASA Headquarters staff, and international partners. GPM is an approximately \$1 billion dollar mission in aggregation.

INSTRUCTION AND CONTINUING EDUCATION

Courses taught in support of general physical geography curriculum within the Department of Geography and the Atmospheric Sciences Certificate program.

a. Description of Existing Courses Taught

ODY Odyssey Seminar-A freshman survey seminar started in Fall 2011. 1 hour. We explore concepts in Earth and climate observation from the vantage point of space.

GEOG 1112 (plus Honors Section (GEOG2120) occasionally). Introduction to Weather and Climate. 3 hours. Atmospheric composition and structure, clouds, precipitation, and atmospheric motion and winds. Organized weather systems, including air masses, fronts, and severe weather. Discussion of global climates includes circulation, wind systems, climate classification, and climate change. Typical enrollment: 88 to 300 students.

HON 1990H Honors College Seminar. 1 hour. Joint course with Warnell School of Forestry and Natural Resources. The course was a survey course on climate change and migratory birds and a pre-cursor to a course series funded by NASA (Shepherd as a co-Investigator).

GEOG 4140/6140. Satellite Meteorology/Climatology. 3 hours. Application of satellite remote sensing in meteorology and climatology. Applications include clouds, atmospheric water vapor and precipitation, the Earth's radiation budget, sea and land surface temperatures. Typical enrollment: 15 to 25 students.

GEOG 8120. Seminar in Climatology. 3 hours. Advanced topics in physical climatology such as climate change, microclimatology, urban climatology or synoptic climatology. Specific topics may vary. Topics that have covered include urban climate systems, cooling trends in the southeastern United States, climate policy, tropical meteorology, and Superstorm Sandy. Typical enrollment: 7 to 15 students.

GEOG 8290. Directed Problems in Physical Geography. 1-3 hours. Repeatable for maximum 9 hours credit. Advanced problems in physical geography. Topics vary.

GEOG 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit. Research while enrolled for a master's degree under the direction of faculty members.

GEOG 7005. Graduate Student Seminar. 3 hours. Repeatable for maximum 45 hours credit. Advanced supervised experience in an applied setting.

GEOG 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 45 hours credit. Thesis writing under the direction of the major professor. Non-traditional format: Independent research and thesis preparation.

GEOG 9005. Doctoral Graduate Student Seminar. 3 hours. Advanced supervised experience in an applied setting. This course may not be used to satisfy a student's approved program of study.

b. Description of New Courses Established by M. Shepherd

GEOG 4160/6160. Applied Climatology in the Urban Environment. 3 hours. (New Course Using Modification to existing Applied Climatology Course Name and Number). The interaction of the urban environment with the Earth's climate system including weather, climate, hydrology, carbon cycle, nitrogen cycle, and societal activities. The course also provides an opportunity for students to participate in an urban climate field experiment. Typical enrollment: 15 to 25 students.

Geog 4170/6170. Mesoscale/Radar Meteorology and Climatology. 2 hours + 2 hour lab. (New course, Spring 2010). Fundamental theory, analysis, and exercises on mesoscale weather phenomena and principles of radar meteorology. A major topical focus will be thunderstorms, mesoscale convective systems, and tornadic supercells. This course fills a gap in our Atmospheric Sciences Certificate curriculum. Our Atmospheric Sciences Certificate already meets major community benchmarks of the National Weather Service and AMS, but feedback from students and faculty establish the need for a course that addresses fundamentals of radar meteorology and mesoscale processes. Typical enrollment: 15 to 25 students.

Odyssey Seminar. Studying the Earth From the Perspective of Space. 1 hour. Freshman seminar examining all aspects of Earth system science from the perspective of space. The course will expose freshmen to current topics, methods, and discussion and integrate a significant writing component.

c. Other Instructional and Teaching Contributions

Climatology Laboratory: Key organizer and developer of new laboratory space acquired by the Department of Geography to support the growing climate group. The space includes 6-8 computer workstations, a projection and display system for weather discussions and lectures, a flat-screen monitor, and storage space for field equipment and demonstration kits. The lab has been an invaluable resource for instruction, graduate defenses, student community building, and research collaboration meetings.

Teaching Evaluations: The department uses a scoring system ranging from 1 to 5 points, with a score of 1 being the best score possible, 3 being an average score, and 5 being the worst score possible. This evaluation form changed in 2001 and now asks students to evaluate instructors in eight areas related to teaching effectiveness. My ratings are consistently at or near 1.0.

Innovative strategies: Through funding from the UGA Office of STEM (2015), we developed innovative strategies to use Multi-User Virtual Environments to teach Geosciences concepts. This project evolved into an NSF ITEST proposal involving Geography, Anthropology, and the College of Education.

Through funding from the Northeast Georgia Partnership for Reform in Science and Math (PRISM), I developed inquiry-based modules and lessons based on a realistic climate modeling system called EdGCM. These lessons are now an integral part of the instructional format of the Introduction to Weather and Climate laboratory (GEOG1112L). In developing these modules, we used the concept of today's students as "digital natives" and argued that learning tools must leverage their comfort level and exposure to new digital media.

Co-PI on a NASA-funded effort in the Warnell School of Forestry to create a three-course sequence on aspects of observing and modeling climate change-migratory bird relationships. My role is to provide lectures and resources on climate and guidance on integration of climate models like EdGCM. We developed a prototype Honors (HON 1990H) course that was team-taught for the first time in Spring 2010.

In 2006-2007, the AMS Online Weather Course, Module, and Tools were also introduced to the Geography Department's resources.

Founded Weather-Climate Science Chat Series with Alcova Elementary School (Gwinnett County) in 2013, <http://www.gwinnettdaily.com/news/2013/nov/13/alcova-fourth-graders-video-conference-with/>

(With Dr. John Knox) Developed an nationally-innovative graduate seminar course on Superstorm Sandy only a few weeks after the hurricane affected parts of the United States in the Fall of 2012. Their course was taught in the Spring of 2013 and was arguably the only course of its kind. The course was also completely blogged by both instructors: <http://deconstructingsuperstormsandy.blogspot.com>

Instructional Resources: Through my funded research, Department of Geography instructional resources/capacity were augmented with the renewal of the Idrisi Taiga software system (4/09) and the acquisition of a Dustrak air quality monitor to support micrometeorological studies (2008).

1. RECOGNITION AND OUTSTANDING ACHIEVEMENTS

- 2017 AMS Charles Franklin Brooks Award
- 2016 Selected as SEC Academic Leadership Development Program Fellow
- 2016 Florida State University, Spring Undergraduate Commencement Speaker
- 2015 Florida State University, Graduate Made Good (Highest Alumni Honor)
- 2015 AAG Excellence In Media Award
- 2015 Franklin College of Arts and Sciences General Sandy Beaver Award for Excellence in Teaching
- 2015 American Meteorological Society-National Weather Association C.L. Chandler Award to WxGeeks Team (shared with Weather Channel colleagues) for outstanding contributions to the community
- 2014 Distinguished UGA Athletic Association Professor in the Social Sciences Departments
- 2014 Captain Planet Foundation Protector of the Earth Award
- 2013 UGA Athletic Association Professor in the Social Sciences Departments
- 2011 Franklin College of Arts and Sciences Excellence in Diversity Leadership Award
- 2011 Promoted to Full Professor at the University of Georgia
- 2011 Received the AMS Charles Anderson Award
- 2011 Outstanding Alumni Award, FSU Black Alumni Association
- 2010 Awarded tenure at the University of Georgia
- 2010 Nominated to attend 2010 UGA Teaching Academy Faculty Symposium
- 2009 Inducted as a Fellow of the American Meteorological Society**
- 2007 Contributing Author to Nobel Prize Winning IPCC AR4**
- 2005 Black Enterprise Magazine "Hot List"
- 2005 Network Journal Magazine "Forty under 40" recipient
- 2004 Recipient of Presidential Early Career Award for Scientists and Engineers (PECASE)**
- 2004 NASA/GSFC Group Award for Contributions to the JASON Project
- 2004 Special Act Award (NASA OES)
- 2003 Peer Award for Scientific Research
- 2002 Recipient of NASA New Investigator Program Award
- 2001 Laboratory for Atmospheres Outreach Award
- 2001 NASA/GSFC Group Achievement Award
- 2001 Special Act Award for superior performance of a special act (Horizon team)
- 2001 Special Act Award for superior performance of a special act (Outreach Initiatives)
- 1999 1st African American to receive PhD in Meteorology from Florida State University**
- 1999 NASA/GSFC Special Act Award for superior performance
- 1999 NASA/GSFC Group Achievement Award-AGS Imager Team
- 1987-1993 American Meteorological Society (AMS)/TRW Industry Fellow

National Science Foundation (NSF) Fellow Competition (Honorable Mention)
Dolores Auzene Fellow (FSU).
Leslie N. Wilson Assistantship Recipient (FSU)
National Achievement Scholar
American Geological Institute Scholar
Chi Epsilon Pi Meteorology Honorary
Omicron Delta Kappa National Honorary
Who's Who Among College Students
Outstanding College Student of America
1990 National Collegiate Forecast Winner (Burlington, VT period).
1987 High School Valedictorian, Cherokee High School

SCHOLARLY ACTIVITIES

2. PUBLICATIONS

* Stringent Peer Review, **Invited and/or Carry Prestige and Recognition

Books Authored or Co-Authored

- 2016 National Academies of Sciences, Engineering, and Medicine. 2016. Attribution of Extreme Weather Events in the Context of Climate Change (includes **J.M. Shepherd as an author**). Washington, DC: National Academies Press. DOI: 10.17226/21852.
- 2014 Bortz, F. and **J.M. Shepherd**, 2014: Dr. Fred's Neighborhood Weather Watch. McGraw-Hill Publishers. 98 pp. 2nd Edition.
- 2012 National Research Council Committee on Urban Meteorology, 2012: Urban Meteorology: Scoping the problem, Defining the Need (includes **J.M. Shepherd as author**). The National Academies Press, Washington, D.C. http://www.nap.edu/catalog.php?record_id=13328.
- 2011 National Research Council Committee on National Security Implications of Climate Change for U.S. Naval Forces (includes **J.M. Shepherd as author**), 2011: National Security Implications of Climate Change for U.S. Naval Forces, The National Academies Press, Washington, D.C., 226 pp. http://www.nap.edu/catalog.php?record_id=12914
- 2000 Bortz, F. and **J.M. Shepherd**, 2000: Dr. Fred's Neighborhood Weather Watch. McGraw-Hill Publishers. 98 pp.

Books Edited or Co-Edited

Chapters in Books

- 2016 Andersen, T., and **J.M. Shepherd**, 2016: The Brown Ocean Effect: Re-intensification of Landfalling Tropical Cyclones. Hurricanes and Climate Change, Springer (Accepted)
- 2016 Mitra, C. and **Shepherd, M.**, 2016: Urban Precipitation: A global perspective. The Routledge Handbook of Urbanization and Global Environment Change. Edited by Karen C. Seto and William Solecki, Routledge, 581 pp.
- 2014 **Shepherd, M.** 2014: Space-based measurement of precipitation. Contributed essay in The Atmosphere, 13th Edition by Frederick Lutgens and Edward Tarbuck, Pearson, 466 pp.
- 2013 Hossain, F., A.M. Degu, A.T. Woldemichael, W Yigzaw, C. Mitra, **J.M. Shepherd**, and AHM Siddique-E Akbor, 2013: Water Resources Vulnerability in the Context of Rapid Urbanization of Dhaka City (a South Asian Megacity). Climate Vulnerability. Ed. Roger Pielke. Elsevier, 1570 pp.
- 2013 **Shepherd, J.M.**, 2013: Impacts of Urbanization on Precipitation and Storms: Physical Insights and Vulnerabilities. Climate Vulnerability. Ed. Roger Pielke. Elsevier, 1570 pp.
- 2013 Vose, J., T.L. Mote, **J.M. Shepherd**, B. KC, and C. Strother, 2013: Framing the future in the southern United States: Climate, land use and forest conditions. Climate Change Adaptation and Mitigation Management Options. Eds. J. Vose and K. Klepzig. Routledge. pp 9-43.

- 2013 Quattrochi, D. with K. Dow, J. Gaffney, P. Long, S. McNulty, **M. Shepherd**, S. Shuford, and B. Stone 2013: Climate interactions with the built environment in the Southeast USA, in *Climate of the Southeast United States: Variability, Change, Impacts, and Vulnerability*, NCA Regional Inputs Report, Eds. K. Ingram et al. Springer, pp 86-108. DOI: 10.5822/978-1-61091-509-0_5
- 2010 ****Shepherd, J.M.**, J.A. Stallins, M. Jin, and T.L. Mote, 2010: Urban effects on precipitation and associated convective process. *The Routledge Handbook of Human Ecology*. Eds. Ian Douglas et al. Taylor and Francis Books, 688 pp.
- 2010 **Shepherd, J.M.**, 2010: Essay entitled "Urbanization and its effects on key atmospheric and surface water cycle." In *Principles of Water Resources*, 3rd Edition by T. Cech. John Wiley and Sons, Inc. 546 pp.
- 2010 ****Shepherd, J.M.**, W. Shem, M. Manyin, L. Hand, and D. Messen, 2010: Modeling Urban effects on the precipitation component of the water cycle. Invited chapter for the book: *Geospatial Analysis and Modeling of Urban Environments*. Eds. X. Yao and H. Jaing. Springer Book Series and GIScience, 445 pp.
- 2009 ****Didier, T**, P. Artaxo, S. Yuter, and Y. Kaufman with contributing authors **J.M. Shepherd**, Z Levin, U. Baltensperger, G. Feingold, 2009: Chapter 5: Observational studies of the effects of aerosols on clouds and precipitation, *Assessment of the Effects of Pollution on Precipitation*. Eds. Levin, Z., and W. Cotton. Commissioned by The World Meteorological Organization/IUGG. International Aerosol Precipitation Science Assessment Group (IAPSAG). Springer. 386 pp.
- 2008 *Mitra C., **Shepherd J.M.**, and Jordan T. R., 2008: Assessment and dynamics of the urban growth in the city of Kolkata, India. Eds. A.K. Dutt, V. Wadhwa, B. Thakur, and G.M. Pomeroy. *Social Geography for the 21st Century*. (Contract with) Concept Publishing Company. New Delhi (In Press).
- 2008 Reynolds, S., Burian, S., **Shepherd, J.M.**, and Manyin, M., 2008: Chapter 7: Urban induced rainfall modifications on urban hydrologic response. In: *Reliable Modeling of Urban Water Systems*. Edited by W. James et al. Computational Hydraulics International. Guelph, Ontario, CA. pp. 99-122.
- 2008 ****Hou, A.Y.**, G.S. Jackson, C. Kummerow, and **J.M. Shepherd**, 2008: The Global Precipitation Measurement Mission. *Precipitation: Advances in measurement, estimation, and prediction*. Edited by Silas Michaelides. Springer. 540 pp.
- 2007 * and ****Lead Authors:** Trenberth, K.E., P.D. Jones, P. Ambenje, R. Bojariu, D. Easterling, A. Klein Tank, D. Parker, F. Rahimzadeh, J.A. Renwick, M. Rusticucci, B. Soden and P. Zhai Contributing Authors: R. Adler (USA), L. Alexander (UK, Australia, Ireland), H. Alexandersson (Sweden), R. Allan (UK), M.P. Baldwin (USA), M. Beniston (Switzerland), D. Bromwich (USA), I. Camilloni (Argentina), C. Cassou (France), D.R. Cayan (USA), E.K.M. Chang (USA), J. Christy (USA), A. Dai (USA), C. Deser (USA), N. Dotzek (Germany), J. Fasullo (USA), R. Fogt (USA), C. Folland (UK), P. Forster (UK), M. Free (USA), C. Frei (Switzerland), B. Gleason (USA), J. Grieser (Germany), P. Groisman (USA, Russian Federation), S. Gulev (Russian Federation), J. Hurrell (USA), M. Ishii (Japan), S. Josey (UK), P. Källberg (ECMWF), J. Kennedy (UK), G. Kiladis (USA), R. Kripalani (India), K. Kunkel (USA), C.-Y. Lam (China), J. Lanzante (USA), J. Lawrimore (USA), D. Levinson (USA), B. Liepert (USA), G. Marshall (UK), C. Mears (USA), P. Mote (USA), H. Nakamura (Japan), N. Nicholls (Australia), J. Norris (USA), T. Oki (Japan), F.R. Robertson (USA), K. Rosenlof (USA), F.H. Semazzi (USA), D. Shea (USA), **J.M. Shepherd** (USA), T.G. Shepherd (Canada), S. Sherwood (USA), P. Siegmund (Netherlands), I. Simmonds (Australia), A. Simmons (ECMWF, UK), C. Thorncroft (USA, UK), P. Thorne (UK), S. Uppala (ECMWF), R. Vose (USA), B. Wang (USA), S. Warren (USA), R. Washington (UK, South Africa), M. Wheeler (Australia), B. Wielicki (USA), T. Wong (USA), D. Wuertz (USA), 2007: Observations: Surface and Atmospheric Climate Change. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*. Eds. Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller. Cambridge University Press, Cambridge. United Kingdom and New York, NY, USA, 235-336. **Note: The Intergovernmental Panel on Climate Change shared in the Nobel Prize (2007).**
- 2007 ****Imhoff, M.**, L. Bounani, and **J.M. Shepherd**, 2007: The gray wave. *Our Changing Planet: A View from Space*. Eds. Robin G. Williams, Kim Partington, Claire Parkinson, and Michael D. King. Cambridge University Press. 500 pp.
- 2007 ****Smith, A.**, G. Asrar, Y. Furuhashi, A. Ginati, C. Kummerow, V. Levizzani, A. Mugnai, K. Nakamura, R. Adler, V. Casse, M. Cleave, M. Debois, J. Durning, J. Entin, P. Houser, T. Iguchi, R. Kakar, J. Kaye, M. Kojima, D. Lettenmaier, M. Luther, A. Mehta, P. Morel, T. Nakazawa, S. Neeck, K. Okamoto, R. Oki, G. Raju, **J.M. Shepherd**, E. Stocker, J. Testud, and E. Wood, 2007: International Global Precipitation

- Measurement (GPM) program and mission: An overview. *Measuring Precipitation from Space - EURAINSAT and the future*. Eds. V. Levizzani, P. Bauer, and F. J. Turk. Springer, 611-653.
- 2004 Burian, S.J., **J.M. Shepherd**, and P. Hooshalsadat, 2004: "Urbanization impacts on Houston rainstorms." *Innovative Modeling of Urban Water Systems*. Monograph 12. Edited by W. James. pp. 1-22.

Monographs

- 2010 ****Shepherd, J.M.**, J.A. Stallins, M. Jin, and T.L. Mote, 2010: Urbanization: Impacts on clouds, precipitation, and lightning. *Monograph on Urban Ecological Ecosystems*. Eds. Jacqueline Peterson and Astrid Volder. American Society of Agronomy-Crop Science Society of America- Soil Science Society of America, 354 pp.
- 2003 Tao, W.-K., R. Adler, D. Baker, S. Braun, M.-D. Chou, M. Jasinski, Y. Jia, R. Kakar, S. Lamg, W. K.-M. Lau, B. Lynn, M. Karyampudi, Z.-X. Pu, **J.M. Shepherd**, J. Simpson, D. Starr, Y. Wang, W. Weinman and P. Wetzel, 2003: Regional scale modeling at NASA Goddard Space Flight Center. Recent Research Developments in Atmospheric Science. *Research Signpost*. Volume 2, 52 pp.

Journal Articles (Peer-Reviewed)

- 2016 McLeod, J., **J.M. Shepherd**, and C. Konrad, 2016: Spatio-Temporal Rainfall Patterns Around Atlanta, Georgia and Possible Relationships to Urban Land Cover. *Urban Climate* (Submitted)
- 2016 Debbage, N., P. Miller, S. Poore, K. Morano, T. Mote, and **J.M. Shepherd**, 2016: A Climatology of Atmospheric River Interactions with the Southeastern United States Coastline. *Int. J. of Climatology* (Accepted)
- 2016 Grundstein, A., **J.M., Shepherd**, and S. Duzinski, 2016: Do Inflatable Bounce Houses Pose Heat-Related Hazards to Children? *Bulletin of the American Meteorological Society*.
<http://journals.ametsoc.org/doi/pdf/10.1175/BAMS-D-16-0103.1>
- 2016 **Shepherd, J.M.**, S. Burian, C. Lui, and S. Bernardes, 2016: Satellite Precipitation Metrics To Study The Energy-Water-Food Nexus within the Backdrop of an Urbanized Globe. *Earthzine*,
<http://earthzine.org/2016/05/31/satellite-precipitation-metrics-to-study-the-energy-water-food-nexus-within-the-backdrop-of-an-urbanized-globe/>
- 2016 **Shepherd, J.M.**, and P. Knox, 2016: The Paris COP21 Climate Conference: What Does It Mean for the Southeast? *Southeastern Geographer*, <https://muse.jhu.edu/article/622282>.
- 2016 Johnson Gaither, C., D. Himmelfarb, S. Hitchner, J. Schelhas, **J.M. Shepherd**, and B. KC, 2016. "Where the sidewalk ends": examining the potential for climate change mitigation in Atlanta's cascade community, *City and Society* (In Press).
- 2016 Sailor, D., **J.M. Shepherd**, S. Sheridan, B. Stone, L. K Kalkstein, A. Russell, J. Vargo, and T. Andersen, 2016: Improving Heat-Related Health Outcomes in an Urban Environment with Science-based Policy. *Sustainability*, 8, 1015; doi:10.3390/su8101015
- 2016 Schroeder, A., J. Basara, **J.M. Shepherd**, and S. Nelson, 2016: Insights into atmospheric contributors to urban flash flooding across the United States using an analysis of rawinsonde data and associated calculated parameters. *J. of Appl. Meteor. and Clim.* DOI: 10.1175/JAMC-D-14-0232.1
- 2015 Debbage, N., B. Bereitschaft, and **J.M. Shepherd**, 2015: Sensitivity of spatial metrics to land use classification scheme when assessing urban sprawl among large U.S. metropolitan areas. *Applied Spatial Analysis and Policy*. (Accepted).
- 2015 **Shepherd, J.M.**, and B. KC, 2015: Climate Change and African Americans in the United States. *Geography Compass*, 9/11, 579-591,10.1111/gec3.12244.
- 2015 Debbage, N., and **J.M. Shepherd**, 2015: The urban heat island effect and city contiguity. *Computers, Environment and Urban Systems*. Volume 54, November 2015, Pages 181-194.
- 2015 KC, Binita, **J.M. Shepherd**, and C. Johnson, 2015: Climate change vulnerability assessment in Georgia. *Applied Geography*, DOI: 10.1016/j.apgeog.2015.04.007.
- 2015 Shultz, J., **J.M. Shepherd**, R. Bagrodia, and Z. Espinel, 2015: Tropical cyclones in a year of rising global temperatures and a strengthening El Niño *Disaster Health*, Vol 2, Issue 3-4, 151-162.
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Book Reviews

- 2014 Review of Pearson Undergraduate Textbook, The Atmosphere: Introduction to Meteorology
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Other Publications

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- Washington Post, <https://www.washingtonpost.com/news/answer-sheet/wp/2016/03/02/you-heard-about-the-diversity-furor-at-the-academy-awards-heres-one-you-didnt-hear-about-but-should-have/>
- 2015 **Shepherd, J.M.**, various contributions to Forbes.com <http://www.forbes.com/sites/marshallshepherd/>
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- 2014 **Shepherd, J.M.**, 2014: Reflecting on MLK's Legacy Through the Lens of Weather and Climate. Washington Post Capital Weather Gang. <http://www.washingtonpost.com/blogs/capital-weather-gang/wp/2014/01/17/reflecting-on-mlks-legacy-through-the-lens-of-weather-and-climate/>
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- 1992 **Shepherd, J.M.**, 1992: A radar reflectivity-based algorithm for tropical cyclone location. Submitted and accepted on Nov. 24th, 1992 in partial fulfillment of a Master's Degree in Meteorology at Florida State University, Tallahassee, Fl. 32306.

3. GRANTS RECEIVED

Current Grants

01/01/15-12/31/18 (0.5 month, cost shared)

NASA, USIP: Digital Orbital Analysis of Water Resources for Georgia. Co-I with multiple investigators. PI Mishra. (UGA Budget, 446,218)

01/01/16-12/31/18 (1.0 month)

NASA, The Energy---Water---Food Nexus within the backdrop of an urbanized globe: How Can GPM help? PI. (UGA Budget, \$473,358)

01/01/15-12/31/17

USAF/AFRL University Nanosat Program: GeorgiaSat-1. Co-I with multiple investigators. PI Mishra. (UGA Budget, \$147,465)

Pending Grants

07/01/2017-06/30/2021

NIFA. Increasing resiliency of agriculture and forestry landscapes in the presence of climate variability in the Southeastern United States. Co-I with PI Liz Kramer and others. (UGA Budget, \$3,946,426.00)

03/01/2012-02/28/18

GWRI. Quantifying the relative contributions of the physical mechanisms responsible for the Atlanta 2009 Flood. PI Shepherd with Co-I Neil Debbage. (UGA Budget, \$40,440)

04/01/2017-03/31/2021

NSF. Understanding and Prediction of the Causal Chain of Flood Nonstationarity in Changing Urban Environments. PI Brian Bledsoe with multiple investigators. (UGA Budget, \$1,499,377)

01/01/2017-12/31/20

NASA: The Impact of Soil and Surface Moisture on Tropical Cyclone Reintensification Over Land. PI. (UGA Budget, \$316,516).

Past Funded Grants

07/01/12-06/30/16 NSF, RCN-SEES Urban Heat Island Network. Co-I with multiple investigators (UGA Budget, \$25,243).

10/01/2015-9/30/2016 (0.1 month) UGA Office of STEM. Enhancing and Diversifying Geosciences Instruction Through Popular Gaming Platforms and Multi-user Virtual Environments. Co-I with Suzanne Pilaar Birch, Jerry Shannon, and Tom Mote. (UGA Budget, \$7910)

01/06/2015-01/05/2016 (0.0 month) Franklin College of Arts and Sciences Office of Inclusion and Diversity Leadership. Co-I with Suzanne Pilaar Birch, Hilda Kurtz, and Jennifer Rice. Diversity in Geography Careers Seminar and Engagement Series (UGA Budget, \$3000)

10/07/13-10/6/15 (0.00)

Exploring Water Sustainability in Cities: A Course Module Linking Geoscience, Engineering, and Society, Funded through Carleton University (prime sponsor NSF through a \$10 Million Dollar, 5-year grant to Carleton College's Science Education Resource Center (SERC) is the recipient of a \$10 million, five-year National

Science Foundation (NSF) grant to create a national STEP Center that will prepare students who can leverage the geosciences to address societal challenges including natural hazards, resource issues, and environmental impacts. The center will conduct project InTeGrate: Interdisciplinary Teaching of Geoscience for a Sustainable Future), PI with Co-PIs M. Jha, M. Shepherd, G. Richard

11/1/2014-10/31/2016 (Initial 2 years funded, ~2.65 M)

NSF, LTER: The Interacting Effects of Hydroclimate Variability and Human Landscape in the Southern Appalachian Mountains. Multiple Co-Is (UGA Budget, \$8,080,620).

01/01/13-12/31/16 (1.0 month)

NASA, Process studies and a new framework for optimizing and managing global urban water systems in the GPM era. PI. (UGA Budget, \$455,521)

2012-2015 NASA, Combining satellite data and models to assess the impacts of urbanization on the continental United States surface climate. Co-I with L. Bounana, M. Imhoff, D. Quattrochi, et al. (UGA Budget, \$170,687).

2011-2014 Coweeta LTER (NSF/Gragson PI), Urbanization--Hydroclimate Feedbacks in the Appalachian--Piedmont Complex. PI (UGA Budget, \$99,000)

2013-2014 Improving Teacher Quality Grants Program, Higher Education Title II Part A, PL – 107 – 110, Higher Education, Teaching Climate Change Science in Middle and High Schools. Co-I (Budget, \$25,600)

2011-2012 NASA, The Brown Ocean Concept: A spatio-temporal and theoretical analysis of re-intensifying tropical cyclones over land. PI with graduate student Theresa Andersen (UGA Budget, \$28,400).

2010-2013, NASA, Influence of Humans on Precipitation Variability, Climate, and the Water Cycle: Preparing for the GPM era. PI with co-PIs S. Burian and Menglin Jin (UGA Budget, \$406,343).

2010-2013, NASA, Using geospatial data and field investigations to monitor effects of climate change on birds along elevational and latitudinal gradients Co-Investigator with J. Hepinstall, M. Conroy, R. Cooper (UFA Budget, \$449,765).

2008-2013, Department of Energy/SRNL, FY 2009-FY2012, Project Title: Integrated Hydrologic/Hydrodynamic Modeling System for Collection of Pollutant Signatures. Co-Investigator with A. Grundstein (PI), J. Bollinger, T. Mote, T. Rasmussen, and others (UGA Budget, \$750,000).

2012 UGA Provost Summer Research Award (UGA Budget, \$5000).

2010-2012. U.S. Forest Service, Climate Change and Social Vulnerability in the Southeast U.S and Africa. Principal Investigator (UGA Budget, \$15000).

2009-2012 U.S. Forest Service, Climate Change and Social Vulnerability in the Southeast U.S. Co-Investigator (UGA Budget, \$22000).

2009-2012 National Science Foundation, Creating a Diversity Climate Network (D-ClimNet) to enhance the climate sciences pipeline of minority students from high school to graduate levels. Co-PI with L. Giroux and M. Raphael (UGA Budget, \$58,418).

2007-2011-NASA Headquarters, FY 2006-2009, Impact of Humans on Precipitation Variability. Principal Investigator with co-investigators S. Burian (University of Utah) and M. Jin (University of Maryland) (UGA Budget, \$390,000).

2009-2011-U.S. Forest Service, Regional Climate Simulations of Southern Forests. Co-Investigator with T. Mote (UGA Budget, 130K).

2009-2011-U.S. Forest Service, Evaluation of WRF Model for SHRMC Activities. Co-Investigator with T. Mote (UGA Budget, 30K).

2006-2009-NASA, FY 2006-2009, Impact of Humans on Precipitation Variability. Principal Investigator with co-investigators S. Burian (University of Utah) and M. Jin (University of Maryland) (UGA Budget, \$390,000).

2010-Franklin College, Franklin Visiting Scholars Program. Travel grant for Dr. Dupigny-Giroux (Vermont) to visit UGA. (\$1000).

2008-1010-NASA, Water and Energy Cycle, An observational and modeling study of a rare tornadic storm in a major central business district: Possible linkages to drought and urban land cover. Principal Investigator with co-Investigator D. Niyogi (Purdue) (UGA Budget, \$45,632).

2007-2009-Defense Threat Reduction Agency, FY 2006-2008, Urban Enhancements to Meteorological Modeling and Observations. Co-Investigator with S. Burian (University of Utah) and M. Jin (University of Maryland) (UGA Budget, \$85790).

2008-2009-US Forest Service, Assessing air quality and perceptions of environmental hazards in the Newtown Community: A prototype UGA-U.S. Forest Service Initiative on environmental justice and green space engagement. Principal Investigator with co-Investigators T. Mote, N. Heynen, and C. Johnson (UGA Budget, \$7895).

2006-2007-Northeast Georgia Partnership for Reform in Science and Mathematics (PRISM) 2006-07

- Improving Teaching and Learning of Science and Mathematics at the Undergraduate Level, 2006-2007, Enhancing Climate Change Science Education Through Inquiry-Based Concepts and Real-World Simulations Co-Investigator, Robert Hill (UGA COE) (\$7790).
- 2006-2008-NASA Goddard Space Flight Center. Science Support for the Development of The NASA Global Precipitation Measurement Mission's Science Implementation Plan and Continuing Precipitation Science Team Activities (\$55,000).
- 2006-2007-NASA Goddard Space Flight Center. Developing a Framework for Understanding the Titanian Methane Cycle using Remote Sensing Techniques Developed for Studying Earth's Water Cycle. PI: Dr. Marshall Shepherd (UGA), Co-I: Terence Doiron/GSFC/555, Co-I: Chris Ruf/University of Michigan (\$75,000 in FY06 with possible FY07 extension, UGA Budget \$5120).
- 2006-2007-NASA Headquarters. Extension of PECASE funding. The Impact of Urbanization on Climate: Integrated Modeling to Couple urban growth, land use change and weather-climate (\$106,974).
- 2003-2006-NASA Headquarters. Research Opportunities for Precipitation Measurement Missions: Understanding the Impact of Urbanization on Short and Long Term Precipitation Variability and Land Surface Hydrologic Processes (\$275,000).
- 2003-2006-NASA NRA-02-OES-05 Research Opportunities for Precipitation Measurement Missions. The Impact of Precipitation Measurement Missions on Hydrologic and Water Resource Predictions. Co-I with PI C.P. Lidard (GSFC) and CO-I A. P. Georgakakos (Ga. Tech) (Unfunded co-PI).
- 2003-2005-NASA Headquarters. Impacts of Urban Surfaces on Rainfall Modification using Space-Based Rainfall Measurement, Numerical Models Simulations, and High-Density Gauge Validation: Science Impact, Applications, and Policy Implications. NASA New Investigator Program (300K/3 Years).
- 1999-2000-NASA GSFC. "Informal Science Education Supporting Weather Broadcasters On-Air with TRMM "Mini-Education Supplements" awarded by GSFC Director's Discretionary Fund (25K per year).
- 1994-1995- NASA Headquarters. Co-Investigator on proposal with Dr. Gerald Heymsfield and Dr. Brad Ferrier on research related to remote sensing of tropical mesoscale convective systems.

4. CONTRIBUTIONS OTHER THAN FORMAL PUBLICATIONS

Sessions Convened

- 2015 Co-convener (with NSF RCN co-PIs) Urban Climate Institute, Athens, Georgia (July)
- 2015 Co-convener (with Dr. Kim Cobb, Georgia Tech) AAAS Science Communications Workshop (January)
- 2014 Co-convener 2nd Urban Climate Institute, Atlanta, Georgia as a part of NSF RCN (July)
- 2014 Co-Organized Franklin Scholars Speaking Engagement with PeachState LSAMP Program. Dr. Calvin Mackie (May)
- 2014 Co-Organizer (along with Dr. Chandana Mitra), 2014, Urban Weather and Climates: Assessments and Responses. Urbanization and Global Environmental Change (UGEC) conference. Taipei, Taiwan. (November)
- 2013 Co-Convener of 1st Urban Climate Institute, Minneapolis, Minnesota as a part of NSF RCN
- 2011 Co-Organizer, 2012 AMS Session on Hydroclimate Applications of GPM, New Orleans, LA.
- 2008 Co-Convener of Fall 2008 AGU Union Session on Urbanization and Climate Change.
- 2006 Co-Convener (along with Dr. Tom Bell of NASA) of Spring American Geophysical Union session, "Aerosols, Pollution, and Urbanization Effects on Precipitation." Baltimore, MD.
- 2004 Co-Organizer of AMS Short Course on Satellite Data Assimilation at Annual AMS meeting.
- 2003 Co-Convener of Fall 2003 AGU Union Session on Urbanization and Climate Change.

Invited Talks, Special Presentations, Affiliations and Activities (Present to 1999):

- 2016 Invited Speaker, Athens-Clark County Democratic Party ((November)
- 2016 Invited Speaker, National Weather Association WxFest (September)
- 2016 Invited Speaker, Southwest Florida Chapter of the American Meteorological Society (April)
- 2016 Invited Speaker, University of South Florida Geography Department ((April)
- 2016 Invited Speaker, Congress and National Academy of Science for Extreme Weather Report Roll-Out (March)
- 2016 Invited Speaker, University of Missouri, LSSP 2016 (March)
- 2016 Invited Speaker, SECAPS University of South Alabama (March)
- 2016 Invited Speaker, AAAS Annual Meeting (February)
- 2016 Invited Speaker, GOES-R Short Course, Phoenix, AZ (January)

2016 Invited Moderator, U.S. Secretary of Commerce Pritzker and NOAA Administrator Sullivan, AMS Annual Meeting (January)

2016 Invited Moderator, Value Chain of Weather Panel, AMS Annual Meeting (January)

2015 Invited Speaker, Jackson State University, 40th Anniversary of Meteorology (November)

2015 Invited Speaker, GIPL Clergy Breakfast (November)

2015 Invited Speaker, Southeast Climate Consortium Meeting (October)

2015 Invited Speaker, AAAS 50th Anniversary of Climate Warning to US President (October)

2015 Invited Speaker, PeachState LSAMP Conference (October)

2015 Invited Speaker, EPA International Youth Symposium (September)

2015 Invited Speaker, National Black Nurses Association (July)

2015 Invited Participant, NASA Workshop on Scientific Challenges and Opportunities in the Weather Focus Area (April)

2015 Attended White House Science Fair (April)

2015 Invited Moderator, White House Champions of Change Event (February)

2015 Invited Keynote Speaker, Georgia Science Teachers Association (February)

2015 Invited AMS 23|5 Speaker, Phoenix, AZ (January)

2015 Invited Panelist, 10th Anniversary WAS*IS Panel, Phoenix, AZ (January)

2014 Invited Speaker, University of Illinois, Distinguished Ogura Lecture Series (October)

2014 Host, Weather Channel's Weather Geeks TV Show

2014 Featured as one of 97 Climate Scientists in 97 Hours of Consensus

2014 Invited Speaker, Mothers and Others for Clean Air Luncheon in Atlanta, Georgia (2014)

2014 Invited Speaker, Welcome to the Anthropocene Lecture Series, UGA (2014)

2014 Invited Speaker ICON Graduate Consortium Lecture Series, UGA (2014)

2014 Invited Speaker, Southern Extension Agent Climate Round-up, UGA (September)

2014 Invited Speaker, UGA Office of Institutional Diversity "Celebrate Diversity", UGA (September)

2014 Numerous Media Appearances for National Climate Assessment Rollout (May)

2014 Invited Speaker, Georgia Aquarium, Earthshare Leadership Breakfast, Atlanta, Georgia (April)

2014 Invited Speaker, Hall County Georgia Earth Day Program (April).

2014 Invited Speaker, Florida State Department of Meteorology, "Soil Moisture Implications for Extreme Weather" (April).

2014 Invited Speaker, Chi Epsilon Pi Banquet, Florida State University (April)

2014 Invited Plenary Speaker, AAG Presidential Forum, Tampa, Florida (April)

2014 Invited Speaker, CICR Sustainability Science Symposium and Workshop, UGA (February)

2014 Participated in White House "We the Geeks" Discussion on the Polar Vortex (January)
<http://www.whitehouse.gov/blog/2014/01/08/we-geeks-polar-vortex-and-extreme-weather>

2014 Appearance on CNN discussing Winter Weather Extremes (February)

2014 Appearance on CBS Face the Nation discussing Winter Weather Extremes (February)

2014 Appearance on PBS NOVA Episode on Typhoon Haiyan (February)

2014 Hammond Lecturer at University of Tennessee (January)

2013 Appearance on CNN discussing Winter Extreme Weather (December)

2013 Sagan National Lecture, Ohio Wesleyan University (November)

2013 Appearance on PBS NOVA Episode on Superstorm Sandy (October)

2013 Invited Speaker, Joint 2013 EUMETSAT Meteorological Satellite Conference and the 19th American Meteorological Society (AMS) Satellite Meteorology, Oceanography and Climatology Conference, Vienna, Austria (September)

2013 Invited Speaker, European Meteorological Society, Reading UK (September)

2013 Appearance on CBS Face the Nation discussing extreme weather events (Summer)

2013 Invited Speaker, International Forum of Meteorological Societies, Reading UK (September)

2013 Luncheon Speaker, Greenlaw, Georgia State Bar (July)

2013 Short-Course on Climate Change Lecturer, AMS Broadcast Meteorology Conference, Nashville (June)

2013 Plenary Speaker, SE Climate Center Workshop on Decisionmaking and Uncertainty (February)

2013 Guest Speaker, AMS/NWA Local Chapter Meeting: The Urban Rainfall Effect (February)

2013 Senate testimony on climate change to Committee on Public Works and the Environment (February)

2013 UGA Physics Department Colloquium Speaker (January)

2013 APERO Lecturer (January)

2012 Interviewed in numerous media outlets in the wake of Superstorm Sandy (e.g. Time, Popular Mechanics)

- NPR, Politico, and various local newspapers)
- 2012 Invited Speaker, Atlanta Botanical Gardens (August), Urbanization and Climate Change in SE.
 - 2011 Invited Speaker at USFS National Climate Assessment Stakeholders meeting, Atlanta, GA (July)
 - 2011 Invited Speaker, Peach State LSAMP Summer Student Orientation, Athens, GA (July)
 - 2011 Invited Assembly Speaker UGA Upward Bound (June). Topic: Climate and Careers
 - 2011 Invited Keynote Luncheon Speaker. "Urban effects on precipitation, storms, and flooding." Georgia Water Resources Conference, Athens, GA (April)
 - 2011 Invited lecture "Urban effects on precipitation, storms, and flooding." West Central Florida Chapter of the American Meteorological Society and the University of South Florida's Department of Geography, Environment and Planning (April)
 - 2011 Invited talk "Extreme urban flooding in the United States: An urban hydrometeorological perspective. AMS Annual Meeting, Conference on Planned and Inadvertent Weather Modification, Seattle, WA. (January)
 - 2010 Invited climate lecture to UGA Peach State Louis Stokes Alliance for Minority Participation Freshman Seminar (July)
 - 2010 Invited climate lecture to Fernbank Science Center Teacher Workshop in Dekalb County, GA (July)
 - 2010 Invited lecture on urban precipitation at Coweeta Summer Symposium, Oslo, NC (June)
 - 2010 Invited Panelist on Urban Climate at 2010 AAG Annual Meeting (April)
 - 2010 Invited keynote speaker on Climate Change, Council of Science Editors Conference, Atlanta, GA. (May)
 - 2009 Invited lecture on Climate Change to Athens Kiwanis Club
 - 2009 Invited panel lecturer at public program at the National Academy of Science in Washington, DC
 - 2008 Invited lecture on Georgia's Climate Change at Fernbank Museum of Nat. History, Atlanta, GA
 - 2008 Invited lecture on Climate Change at Emmanuel College, Franklin Springs, GA
 - 2008 Invited colloquium speaker, Florida State University, Department of Geography. Tallahassee, FL
 - 2008 Invited Black History Month Speaker, U.S. Forest Service, Athens, GA
 - 2007 Invited by Former GEOG1112 Student to deliver a Motivational Talk at Classic City High School, Athens, GA
 - 2007 Invited lecture on Human Impacts on the Water Cycle at Duke University (Focus Program), Durham, NC
 - 2007 Invited lecture at the Symposium on Evolution of Climate Modeling the Prediction of Climate Change and Science Policy in Boulder, CO
 - 2007 Invited talk for Ohio State University Department of Geography Seminar Series. "How Cities Affect the Water Cycle." Columbus, OH
 - 2007 Invited plenary speaker for the BHSI Spring Symposium: Climate, Ecology, and Infectious Disease. Athens, GA
 - 2007 Invited speaker to Athens-Clarke County Republican Party Monthly Meeting. Topic of discussion: Climate Change
 - 2006 Invited Speaker at NASA Goddard Space Center Engineering Seminar Series. Greenbelt, MD.
 - 2006 Panel Discussant 4621 Geographic Dimensions of Hurricane Katrina Plenary Session 2006 AAG meeting. Chicago IL
 - 2005 Guest lecturer at Smithsonian-GSFC Lecture Series —"What is going on with the 2004 and 2005 Hurricane Season?" Washington, DC
 - 2005 Invited lecturer at the Philosophical Society of Washington's fall lecture series on Friday evening. Title—"How Cities Affect Weather and Climate". Washington, DC
 - 2005 Invited talk on "Precipitation Measurement from Space" at the Goddard Memorial Symposium. Greenbelt, MD
 - 2004 Invited presentation at East Carolina University Geography Department. Invited talk on "How Cities Create Their Own Rainfall and Storms," was part of Geography Awareness Week at East Carolina University in Greenville, NC
 - 2004 Presented Lecture entitled "Are Cities Creating Their Own Rainfall" for the University of Maryland Baltimore County Center for Urban Environmental Research and Education and Department of Civil and Environmental Engineering Fall 2004 Seminar Series. Baltimore, MD
 - 2004 Invited keynote speaker on the Evening of April 29th, 2004 at Riverside Elementary School's annual Math/Science Night
 - 2004 Invited presentation on ongoing NASA research into Urbanization and Precipitation Variability at the University of Alabama-Huntsville

- 2003 Invited keynote Speaker at Cornell University for NASA Awareness Days. Ithaca, NY
- 2003 Invited speaker at NASA Days at Centennial of Flight Activities in Dayton, OH
- 2002 Invited speaker at the 2002 EOS IWG in Hunt Valley, MD on Nov 20th . "The impact of urbanization on the precipitation component of the water cycle: A new perspective."
- 2002 Invited Seminar on Rainfall Anomalies in Houston and GPM Mission at the University of Virginia Department of Environmental Sciences. Charlottesville, VA
- 2002 Invited Seminars at Pennsylvania State University Meteorology Department: (1) An Investigation of the Influence of Urban Areas on Rainfall Using the TRMM Satellite and a Cloud-Mesoscale Model and (2) Towards A Global Precipitation Mission. State College, PA
- 2001 Invited Lecturer at Washington College in Chestertown, Maryland. The lecture was entitled "The Use of NASA's Earth Science Enterprise Satellites to Monitor Environmental Change"

Other Speaking and Media Engagements (2011 to 1999)

- 2011 Interviewed by WCIU (Channel 26) in Chicago concerning 2011 Blizzard (February)
- 2010 Interviewed by Weather Channel for April 2010 Episode of Storm Stories about 2008 Atlanta tornado
- 2009 Interviewed by WXIA-TV (Atlanta) about historic Atlanta flooding in September 2009 (September)
- 2009 Interviewed by WFLA-TV (Tampa) about Hurricanes and Drought
- 2009 Featured on CNN International for Urban Climate Research
- 2008 Interviewed by Ivanhoe Media Services on Thunderstorm Asthma
- 2008 Expert lecturer on climate for NSF traveling PolarPalooza events (during the International Polar Year) in Atlanta, Georgia, Baton Rouge, Louisiana , and Raleigh, North Carolina
- 2007 Appeared on CBS Evening News discussing urban-induced rainfall
- 2007 Featured profile in Franklin Chronicle magazine
- 2007 Appeared on PBS' Georgia Weekly discussing 2007 hurricane season and climate change
- 2007 Featured profile in OVPR's Research Magazine Q&A segment
- 2007 Featured profile at Minority Environmental Leadership Development Institute's website: http://www.umich.edu/~meldi/4_profiles_minprof.html
- 2006 Presentation to Atlanta AMS Chapter on the UGA Atmospheric Sciences Program
- 2006 Interviewed by PBS Georgia Weekly on the 2006 Hurricane Season
- 2006 Interviewed by CBS 46 on August 10th, 2006 about research on urban-induced precipitation
- 2005 Numerous Presentations at NASA Goddard Space Flight Center to NASA Administrator, NOAA Administrator, National Weather Service Director International Delegations, Congressional Members, Staffers, and Agency Visitors
- 2005 Seminar on Earth's Changing Climate System to the University of Maryland-Baltimore County Physics-Earth Science Class of Amita Mehta. Baltimore, MD
- 2005 Seminar to the Sailing Group "Women Aboard" in Annapolis, MD
- 2005 Member of a NASA Delegation that Attended a Joint Meeting between the Laboratory for Atmospheres and Caribbean Climate Studies A NASA EPSCoR Project at the University of Puerto Rico, Mayaguez
- 2005 Panelist and Speaker at John F. Kennedy High School called "African-Americans in Science" Program
- 2004 Presentation to New York City Astronomy Students visiting NASA
- 2004 Interviewed by a PBS crew for a NOVA Program on the 2004 Atlantic Hurricane Season. The program aired on January 25th, 2005
- 2004 Interviewed by Maryland Public Television for a Special on Hurricane Isabel's Impacts on Maryland
- 2004 Two Presentations on NASA Precipitation Missions and Urban-Induced Weather for the Earth Explorers Institute Symposium held Monday-Thursday at NASA-GSFC and the Maryland Science Center
- 2004 Presentation/Moderator to NOAA-Department of Homeland Security Urban Meteorology Symposium (Sept. 22nd 2004, Rockville MD)
- 2004 Conducted Interviews with Major Media Organizations (Larry King Live, Today Show, NBC Nightly News, Fox News, CNN Lou Dobbs, BET Nightly News, and Numerous Local News Affiliates) to discuss how NASA is studying hurricanes during the 2004 Hurricane season
- 2004 Presentation to NASA Goddard Executive Council and Earth Science Directorate Management on Recent Satellite-Modeling study of Urban-induced Convection
- 2004 Presented a seminar entitled "NASA Efforts to Understand How Cities May Create Their Own Weather" at Bowie State University for the Department of Computer Science Seminar Series.

- 2004 Presented a seminar “Improving Weather Predictions: NASA’s perspective and Implications for Energy Management” at George Washington University. Washington, DC
- 2004 Presentation on Houston Rainfall Anomalies at 1st HEAT planning meeting in Boulder, CO.
- 2003 Guest on National Public Radio with Kojo Nmandi. (September 2003)
- 2003 Presentation to Jason Rothenberg (White House Office of Management/Budget) on the benefits of NASA satellite data and models to improved weather forecasts
- 2003 Appearance in a NASA recruitment DVD entitled "As Only NASA Can"
- 2003 Presentation of NASA ESE Science Accomplishments at the Goddard Memorial Symposium at the Greenbelt Marriott
- 2003 Presentation Satellite Data in Weather-Climate Prediction to Dr. Margaret Leinen, NSF
- 2002 Presentation "A downscaling analysis of the urban influence of rainfall" at the 2002 NASA Land Use Land Cover Change Science Team Meeting at the University of MD Conference Center
- 2002 Presentation to White House Science Advisor John Marburger on NASA Precipitation Program
- 2002 Appeared on Public Interest with Kojo Nandhi (NPR) to discuss technology and weather
- 2002 Attended 2nd GPM Partnership Workshop in Tokyo, Japan (May 2002)
- 2002 Presentation at George Washington University Space Policy Institute Symposium “Economic Value of Improved Weather and Climate Information” (March 2002). Washington, DC
- 2002 Overview of NASA Earth Science Activities: Atmospheric Science Component for a training session for National Park Service park rangers in Washington, DC
- 2002 Organized and hosted the 1st GPM Applications Workshop (February 2002). Beltsville, MD
- 2002 Presentation entitled “Large Forecast Centers Using TRMM Real-Time Data” at the Annual Meeting of the American Association for the Advancement of Science. Washington, DC
- 2001 Served on Congressional Black Caucus Science Braintrust Panel (September 2001)
- 2001 NASA CAMEX-4 Press Briefing at Jacksonville, FL NAS to Discuss Role of TRMM in the Field Campaign
- 2001 Overview Earth Sciences presentation to Department of Defense Air Force Fellows and Office of Management and Budget. Greenbelt, MD
- 2001 Presenter and Panelist at the City of New York’s Graduate Center Symposium on Science and Mathematics. New York, NY
- 2001 Presentation of NASA Earth Science Results to Delegation from Bahrain. Greenbelt, MD
- 2000 Presentation to Congressmen, NASA Administrator, and general public on remote sensing of weather and climate events at the Langley IMAX theatre of the National Air and Space Museum
- 2000 Presentation to Dr. Neal Lane, President Clinton’s Science Advisor, and high-ranking NASA and Japanese officials highlighting the accomplishments of the Earth System Enterprise’s TRMM and TERRA Spacecraft missions
- 1999 Presentation to White House Office of Science and Technology Policy and Office of Management and Budget officials on the capabilities in remote sensing for environmental monitoring
- 1999 Member of expert panel at the NASA’s 5th Model Institutes of Excellence Symposium. A lecture entitled “On the role of climate and weather processes within the Earth System: Perspectives from Remote Sensing and Implications for the Next Generation of Earth Scientists

5. SUPERVISION OF STUDENT RESEARCH

- Post Doctoral Advisor to Dr. Theresa Andersen, University of Georgia
- Doctoral Advisor to Ms. Kait Murano, University of Georgia
- Doctoral Advisor to Mr. Marcus Williams, University of Georgia
- Doctoral Advisor to Mr. Brad Johnson, University of Georgia
- Doctoral Advisor to Mr. Chris Strother, University of Georgia
- Doctoral Advisor to Mrs. Mariana Alfonso, University of Georgia
- Doctoral Advisor to Mr. Neil Debbage, University of Georgia
- Doctoral Advisor to Ms Ansley Long, University of Georgia (Fall 2016)
- Masters Advisor to Mr. Kelly Harris
- Doctoral Advisor to Dr. Amanda Schroeder, University of Georgia (Graduated in Summer 2015)
 - Dissertation: A spatio-temporal assessment of urban flooding within the United States.
- Doctoral Advisor to Dr. Binita KC, University of Georgia (Graduated in 2014)
 - Dissertation: Spatio-temporal assessment of climate change vulnerability in Georgia
- Doctoral Advisor to Dr. Theresa Anderson, University of Georgia (Graduated in August 2013)

Dissertation: The “brown ocean” concept: A spatio-temporal and theoretical analysis of intensifying tropical cyclones over land.

Doctoral Advisor to Dr. Chandana Mitra, University of Georgia (Graduated in May 2012)

Dissertation: The Dynamics of Urban Land Cover Growth in Kolkata, India and Potential Impacts on Pre-Monsoonal Precipitation: Project Impact or Natural Variation?

Master’s Advisor to Mr. Neil Debbage (Graduated in Aug 2014, U of GA doctoral program)

Thesis: Quantifying Urban Form Via Spatial Metrics and Its Climatic Implications

Master’s Advisor to Mr. Fang Zhao (Graduated in May 2011, U of MD doctoral program.)

Thesis: Precipitation Changes Near Three Gorges Dam

Master’s Advisor to Ms. Lauren Hand (Graduated in May 2008, employed by Dewberry, Inc.)

Thesis: An Investigation of Warm Season Rainfall Variability in Oklahoma City: Possible Linkages to Urbanization and Prevailing Wind

Master’s Advisor to Ms. Yan Zhou (Graduated in Summer 2008, U of MD doctoral program)

Thesis: Atlanta’s Urban Heat Island under Extreme Heat Conditions and Potential Mitigation Strategies

Master’s Advisor to Mr. Michael Carter (Graduated in Spring 2009, Miss. State Univ. doctoral program)

Thesis: Mesoscale Circulations in the Urban-Coastal Environment: A Modeling Analysis and Assessment of Sensitivity to High Fidelity Representation of the Urban Canopy

Master’s Advisor to Ms. Theresa Anderson (Graduated in Summer 2010, UGA doctoral program)

Thesis: A Climatological Analysis of Drought and Tornado Activity in the Southeastern U.S.

Post-Doctoral Research Collaborations with Dr. Willis Shem (Currently at DOE/ORNL)

Served as a member of the following student committees:

Mr. Paul Schmid’s Doctoral Committee, Purdue University (Current), Mr. Kyle Mattingly’s Doctoral Committee (Current), Mr. Dean Hardy’s Doctoral Committee (Current), Ms. Aneela Qureshi’s Doctoral Committee (Current), Mr. Craig Ramseyer’s Doctoral Committee (Current), Mr. Paul Miller’s Doctoral Committee (Current), Mr. Kyle Mattingly’s Doctoral Committee (Current), Mengshui Weng’s Doctoral Committee (Current), Mr. Robert Shackelford’s Master’s Committee (Current), Mr. Kyle Mattingly’s Master’s Committee (Graduated), Mr. Jordan McCloud’s Master’s Committee (Graduated), Mr. Jared Rackley’s Master’s Committee, Ms. Jordan Pesses, Master’s Committee (Graduated), Mr. Craig Ramseyer, Master’s Committee (Graduated), Mr. Pete Campana, Master’s Committee (Graduated), Ms. Laura Becker (Graduated), Mr. Matthew Lacke, Master’s Committee (Graduated), Ms. Elizabeth Smith, Master’s Committee, Montana State University (Graduated), Mr. Ian Chang, Master’s Committee, Northern Illinois, Dr. Victor Gensini’s Doctoral Committee (Graduated), Dr. Lei Ming, Doctoral Committee (Graduated), Purdue University (Graduated), Dr. ByungYun Yang, Doctoral Committee (Graduated), Dr. Matt Hauer’s Doctoral Committee (Graduated), Dr. Sergio Bernardes, Doctoral Committee (Graduated), Dr. Chris Furmhann, Doctoral Committee, University of North Carolina (Graduated), Dr. John Frye, Doctoral Committee, University of Georgia (Graduated), Dr. Joshua Durkee, Doctoral Committee, University of Georgia (Graduated), Dr. Sharon Ashley Doctoral Committee University of Georgia (Graduated), Dr. Sara Vieira Doctoral Committee at Georgia Tech (Graduated), Dr. Khalil Lezzaik’s Doctoral Committee (Graduated), Dr. Dean Hardy’s Doctoral Committee (Graduated).

Served as undergraduate research advisor for projects conducted by Toni Deanon, Alexandra Horst, David Nevius, and Michael Stewart.

Science Advisor for 3 NASA DEVELOP Projects from 2005 to 2013.

6. EDITORSHIPS AND EDITORIAL BOARDS

Current Weather Editor, Earthzine Magazine.

Current Climatology Editor, Association of American Geographers (AAG) Encyclopedia of Geography.

2007-2012 Editor, *Journal of Applied Meteorology and Climatology*. A leading journal in the field of meteorology and climatology and published by the American Meteorological Society.

2011 Guest Editor, *Earthzine Magazine* Spring Special Issue on Extreme Weather

2007-2010 Editor for *Geography Compass*.

2006-2007 Past member of the Editorial Board for *Geography Compass*.

7. CONVENTION/CONFERENCE PAPERS

Key Acronyms: Association of American Geographers (AAG), American Meteorological Society (AMS), American Geophysical Union (AGU), European Geophysical Union (EGU)

*Refereed paper associated with conference paper

- 2016 **Shepherd, J.M.**, A. Grundstein, and J. Knox, 2016: Are Bounce Houses Too Hot? AMS Annual Meeting, 7th Conference on Environment and Health, Phoenix, AZ
- 2016 Johnson, B., and **J.M. Shepherd**, 2016: Assessing urban impact on winter precipitation type using dual polarization radar, AMS Annual Meeting, 30th Conference on Hydrology, Phoenix, AZ
- 2015 Jennings, V., Chen, H. Floyd, M., **Shepherd, JM**, Wicker, L., Wolf, K., Zipperer, W. How to Successfully Present Research and Publish in Top Journals. Minorities in Agriculture, Natural Resources, and Related Sciences Annual Conference. 27 March 2015. Houston, TX
- 2015 Johnson, B., and **M. Shepherd**, Towards the Understanding and development of an urban-influenced climate framework. 95th American Meteorological Society Annual Meeting, Phoenix, AZ, 27th Conference on Climate Variability and Change.
- 2014 **Shepherd, M.** and S. Bernardes, 2014: Assessing Exposure of Infrastructure and Populations to Extreme Precipitation in the Southeastern United States. Southeastern Division of the AAG (SEDAAG), Athens, Georgia
- 2014 Andersen, T., **M. Shepherd**, and L. Bounoua, 2014: Using WRF-UCM to assess the impacts of an urban archipelago on weather in the Northeast US. AMS Annual Meeting, Atlanta, Georgia.
- 2014 KC, B., J. Bell, S. Kethireddy, E. Dobbs, J. Luvall, **J.M. Shepherd**, T. L. Mote, S. Goodrick, 2013. Infusing NASA satellite data to model air-quality for Southeast United States: A wildfire, aerosol transport, and respiratory health case study, 94th American Meteorological Society Annual Meeting, Atlanta, GA.
- 2014 Andersen, T., **J.M., Shepherd**, and L. Bounoua, 2014: Using WRF-UCM to assess the impacts of an urban archipelago on climate in the Northeast US. Poster. American Meteorological Society 94th Annual Meeting in Atlanta, GA, 11th Symposium on the Urban Environment, February 2-6
- 2014 Zhao, F., and **J.M. Shepherd**, 2014: Analyzing the Impact of the Three Gorges Reservoir on Local Precipitation with TRMM Satellite Data. 94th American Meteorological Society Annual Meeting, Atlanta, GA.
- 2014 Bloch, L., M. Faherty, L. Hample, J. Knox, V. Laux, T. Pastuszak, Z. Robbins, and **J.M. Shepherd**, 2014: Birds blown off course: HYSPLIT analysis of Northern Lapwing (NOLA) sightings in Massachusetts following Superstorm Sandy with application to citizen science. Presented at the American Meteorological Society (AMS) Annual Meeting, Atlanta, GA.
- 2014 Debbage, N. and **Shepherd, J.M.** April 2014. Urban Heat/Dry Islands: The Role of Density and Spatial Contiguity. Urban Climate and Environment Paper Session (Also Participated in Climate Specialty Group Student Paper Competition). Association of American Geographers Annual Meeting. Tampa Bay, Florida.
- 2014 Debbage, N. and **Shepherd, J.M.** February 2014. Quantifying Urban Form via Spatial Metrics and its Climatic Implications. Urban Energy and Water Balances Paper Session. American Meteorological Society Annual Meeting. Atlanta, Georgia.
- 2014 Debbage, N., Gonsalves, N., **Shepherd, J.M.**, and Knox, J. February 2014. Superstorm Sandy and Voter Vulnerability in the 2012 US Presidential Election. Hurricane Sandy and the Built Environment Poster Session. American Meteorological Society Annual Meeting. Atlanta, Georgia.
- 2013 KC, B., **J.M. Shepherd**, M. Madden, and C. Johnson, 2013. Spatio-Temporal Assessment of Climate Change Vulnerability in Georgia, Invited Speaker in Hollings Marine Laboratory, NOAA, Charleston, SC, October, 2013.
- 2013 KC, B., **J.M. Shepherd**, and C. Johnson, 2013. Climate Change Vulnerability Assessment in Georgia, Georgia Environmental Conference, Jekyll Island, GA, August, 2013
- 2013 KC, B., **J.M. Shepherd**, and C. Johnson, 2013. Climate Change Vulnerability Assessment in Georgia ASPRS Conference, Baltimore, MD, March, 2013
- 2013 KC, B., J. Bell, S. Kethireddy, E. Dobbs, J. Luvall, **J.M. Shepherd**, T. L. Mote, S. Goodrick, 2013. Infusing NASA satellite data to model air-quality for Southeast United States: A wildfire, aerosol transport, and respiratory health case study, SOFOR GIS Conference, Athens, GA, December, 2013
- 2013 Applied Climatology Panel, AMS Annual Meeting, Austin Texas. Perspectives on Applied Climatology.
- 2012 Hossain, F., W. Yigzaw, A. Degu, A.T. Woldemichael, **J.M. Shepherd** and C Mitra, 2012: Remote

- Sensing of Water Cycle and Land Use Patterns to Understand Water Resources Vulnerability of an Asian Mega City, AGU Chapman Conference on Remote Sensing of the Terrestrial Water Cycle, Waikoloa Beach Marriott in Kona, Hawaii, USA, 19 February - 22 February 2012.
- 2012 **Shepherd, M.**, and C. Strother, 2012: The "Ring of Asphalt" and changing precipitation in the Southern Appalachians, Coweeta LTER Summer Meeting, Otto, NC.
- 2012 Grundstein, A., B. Avant, S. Younger, A. Ignatius, T. Rasmussen, T. Mote, **M. Shepherd**, 2012: A Methodology for Hydrological Modeling in Data Poor Regions using TRMM Precipitation Data and MERRA Reanalysis Meteorological Data. AAG Annual Meeting, 24-28 February, New York, NY.
- 2012 Rasmussen T.C., A. Grundstein, T. Mote, **M. Shepherd**, A. Ignatius, B. Avant, S. Younger, 2012: Remote Sensing-Based River Fluxes, National Nuclear Security Administration (NA-22), U.S. Department of Energy, Washington D.C., December 1, 2012.
- 2011 Ignatius, A., A. Grundstein, T. Rasmussen, B. Avant, **M. Shepherd**, T. Mote, 2011: A Methodology for Hydrological Modeling in Data Poor Regions using Satellite-based and Reanalysis Meteorological Data. AAG Annual Meeting, 12-16 April, Seattle, WA.
- 2010 Ignatius, A., A. Grundstein, T. Rasmussen, T. Mote, and **M. Shepherd**, 2010: Utilizing Satellite-based Reanalysis Precipitation Data in Hydrological Modeling. AGU Annual Meeting, 13-17 December, San Francisco, CA.
- 2010 Avant, B., A. Ignatius, T. Rasmussen, A. Grundstein, T. Mote, and **M. Shepherd**, 2010: Coupling Tritium Release Data with Remotely Sensed Precipitation Data to Assess Model Uncertainties. AGU Annual Meeting, 13-17 December, San Francisco, CA.
- 2010 Ignatius, A., A. Grundstein, T. Rasmussen, T. Mote, **M. Shepherd**, J. Knox, J. Bollinger, A. Garrett, D. Hayes, 2010: The use of Merra reanalysis data and satellite-based precipitation estimates in hydrologic modeling. AAG Annual Meeting, 14-18 April, Washington, D.C.
- 2011 Chang, I., M. Bentley, and **J.M. Shepherd**, 2011: Spatial distributions of rainfall intensity maxima in intense tropical cyclones from the TRMM Multi-satellite precipitation analysis dataset. AGU Annual Meeting, San Francisco, Ca.
- 2011 Jin, M., R. Dickinson, and **J.M. Shepherd**, 2011: Using MODIS skin temperature to assess urban heat island and biosphere-land interactions, AGU Annual Meeting, San Francisco, CA.
- 2011 **Shepherd, J.M.**, 2011: Current and emerging perspectives on urban hydroclimate interactions. NASA PMM Science Team meeting, Denver, CO (invited).
- 2011 Ignatius, A., A. Grundstein, T. Rasmussen, B. Avant, **J.M. Shepherd**, and T. Mote, 2011: A methodology for hydrological modeling in data poor regions using satellite-based and reanalysis meteorological data, AAG Annual Meeting, Seattle, WA.
- 2011 Zhao, F., and **J.M. Shepherd**, 2011: Precipitation changes near Three Gorges Dam. AAG Annual Meeting, Seattle, WA.
- 2011 Jin, M., **J.M. Shepherd**, and W. Zheng, 2011: Urban aerosol direct effect on surface temperature. AMS Annual Meeting, Seattle, WA.
- 2011 Andersen, T., and **J.M. Shepherd**, 2011: A climatological analysis of drought and tornadic activity in the southeastern United States, AMS Annual Meeting, Seattle, WA.
- 2011 Mote, T.L., **J.M. Shepherd**, T.K. Anderson, B. KC, C. Ramseyer, 2011: Downscaling: Modeling global climate change effects locally. The Impact of Climate Change on Tribal Resource Management in the Southeast, Athens, GA.
- 2010 Shem, W.O., T.L. Mote, and **J.M. Shepherd**, 2010: Validation of NARCCAP climate products for forest resource applications in the southeast United States, American Meteorological Society, 18th Conference on Applied Climatology, Atlanta GA.
- 2010 Shem, W.O., T.L. Mote, and **J.M. Shepherd**. Validation of NARCCAP climate products for forest resource applications in the southeast United States, 2010: Fall meeting of the American Geophysical Union, San Francisco, CA.
- 2010 ***Shepherd, J.M.**, T.L. Mote, S. Nelson, S. McCutcheon, P. Knox, M. Roden, and J. Dowd, 2010: An overview of synoptic, mesoscale and urban factors contributing to the disastrous Atlanta flood of 2009, 9th Conference on the Urban Environment, Keystone, CO.
- 2010 ***Shepherd, J.M.**, T.L. Mote, S. Nelson, S. McCutcheon, P. Knox, M. Roden, and J. Dowd, 2010: An overview of synoptic and mesoscale factors contributing to the disastrous Atlanta flood of 2009, AAG Annual Meeting, Washington, DC.
- 2010 Ignatius, Amber, A. Grundstein, T. Rasmussen, T. Mote, **M. Shepherd**, J. Knox, J. Bollinger, A. Garrett, and D. Hayes, 2010: The use of MERRA reanalysis data in hydrologic modeling, AAG Annual Meeting.

- Washington, DC.
- 2010 Ignatius, Amber, A. Grundstein, T. Rasmussen, T. Mote, **M. Shepherd**, 2010: Utilizing Satellite-based and Reanalysis Precipitation Data in Hydrological Modeling, AGU Annual Meeting, San Francisco, CA.
- 2010 Avant, B., Ignatius, Amber, T. Rasmussen, A. Grundstein, T. Mote, **M. Shepherd**, 2010: Coupling Tritium Release Data with Remotely Sensed Precipitation Data to Assess Model Uncertainties, AGU Annual Meeting, San Francisco, CA.
- 2010 Giroux L., M. Raphael, **M. Shepherd**, and T. Mote, 2010: Attracting and retaining minority students in the climate sciences - the Diversity Climate Network (D-ClimNet),AAG Annual Meeting. Washington, DC.
- 2010 **Shepherd, J.M.**, 2010: Global evidence of hydroclimate changes due to urbanization, AMS Annual Meeting, Atlanta, GA.
- 2010 Sarnat, S., A. Grundstein, M. Klein, **J. M. Shepherd**, L. Naeher, T. L. Mote, and P. E. Tolbert, 2010: Examining vulnerabilities to thunderstorm-associated asthma in Atlanta, Georgia, AMS Annual Meeting, Atlanta, GA.
- 2010 Anderson, T., and **J.M. Shepherd**, 2010: A climatological analysis of antecedent drought and spring tornadic activity, AMS Annual Meeting, Atlanta, GA.
- 2010 Mitra, C., and **J.M. Shepherd**, 2010: Influence of urban land cover dynamics on pre-monsoonal precipitation in Kolkata, India, AMS Annual Meeting, Atlanta, GA.
- 2010 Shem, W., T.L. Mote, and **J.M. Shepherd**, 2010: Validation of Narecap climate products for forest resource applications in the southeast United States, AMS Annual Meeting, Atlanta, GA.
- 2010 *Carter, M., **J. M. Shepherd**, S. Burian, and I. Jeyachandran, 2010: Mesoscale circulations in the urban-coastal environment: a modeling analysis and assessment of sensitivity to high-fidelity representation of the urban canopy, AMS Annual Meeting, Atlanta, GA.
- 2010 Zhao, F. and **Shepherd, J.M.** Three Gorges dam management: in the face of altered Precipitation. Poster presented at the 2010 Lower Apalachicola-Chattahoochee-Flint (ACF) Water Conference and Summit: Managing reservoirs from a human and Ecological perspective, Bainbridge, Georgia.
- 2009 ***Shepherd, J. M.**, A. Grundstein, and T. L. Mote, 2009: Quantifying the contribution of tropical cyclones to extreme rainfall along the coastal southeastern United States. Inland Impacts of Tropical Cyclones Conference. Atlanta, Georgia.
- 2009 **Shepherd, M.**, S. Burian, and M. Jin, 2009: Can satellite-derived rainfall really detect urban rainfall anomalies? 89th Annual Meeting. Phoenix, AZ.
- 2009 ***Shepherd, M.**, D. Niyogi, T.L. Mote, and J. Entin, 2009: A climatological analysis associating spring tornadic activity with antecedent precipitation and drought in the Southeastern United States. 89th Annual Meeting. Phoenix, AZ.
- 2009 Burian, S., I. Jeyachandran, **M. Shepherd**, M. Carter, and M. Jin, 2009: Satellite-based approaches to determine urban characteristics: implications for NUDAPT and modeling. 89th Annual AMS Meeting. Phoenix, AZ.
- 2009 *Niyogi, D., **M. Shepherd**, M. Lei, W. Shem, and J. Entin, 2009: An observational and modeling study of a rare tornadic storm in a major central business district: Possible linkages to drought and urban land cover. 89th Annual Meeting. Phoenix, AZ.
- 2009 *Hand, L., and **J.M. Shepherd**, 2009: An investigation of warm season spatial rainfall variability in Oklahoma City: Possible linkages to urbanization and prevailing wind. 89th Annual Meeting. Phoenix, AZ.
- 2009 Mitra C, **J.M. Shepherd**, and T.R. Jordan, 2009: Assessment and dynamics of the urban growth in the city of Kolkata, India. 89th Annual Meeting. Phoenix, AZ.
- 2009 *Zhou, Y., and **J.M. Shepherd**, 2009: Atlanta's urban heat island under extreme heat conditions. 89th Annual AMS Meeting. Phoenix, Arizona.
- 2009 Carter, W.M., **J.M. Shepherd**, S. Burian, I. Jeyachandran, and M. Jin, 2009: Mesoscale circulations in the urban environment. 89th Annual AMS meeting. Phoenix, AZ.
- 2008 ***Shepherd, J.M.**, A. Grundstein, and T. L. Mote, 2008: Quantifying the contribution of tropical cyclones to extreme rainfall along the coastal southeastern United States. 2008 AAG Annual Meeting. Boston, MA.
- 2008 **Shepherd, J.M.**, 2008: Urban effects on Precipitation: Revisiting the 5-cities Study. 3rd TRMM International Science Conference. Las Vegas, Nevada.

- 2008 ***Shepherd, J.M.**, A. Grundstein, and T. L. Mote, 2008: Quantifying the contribution of tropical cyclones to extreme rainfall along the coastal southeastern United States. 88th Annual AMS Meeting. New Orleans, LA.
- 2008 Han, W., S. Burian, and **J.M. Shepherd**, 2008: Use of TRMM precipitation data to investigate urbanization effects on the water cycle. 3rd TRMM International Science Conference. Las Vegas, Nevada.
- 2008 Jin, M., **J.M. Shepherd**, and S. Burian, 2008: Urban aerosol effects and their direct effects on surface temperature. AGU Fall Meeting. San Francisco, CA, USA.
- 2008 Burian, S., **J.M. Shepherd**, M. Jin, and colleagues, 2008: Urban land surface characterization and aerosol adjustment enhancements to meteorological modeling. 12th Annual GMU Conference on Transport and Dispersion Modeling. Fairfax, VA.
- 2008 *Shem, W., and **J.M. Shepherd**, 2008: On the impact of urbanization on summertime thunderstorms in Atlanta: Two numerical model case studies. 2008 AAG Annual Meeting, Boston, MA.
- 2007 ***Shepherd, J.M.**, A. Grundstein, and T.L. Mote, 2007: Quantifying the contribution of tropical cyclones to extreme rainfall along the coastal southeastern United States. SEDAAG, Charleston, South Carolina.
- 2007 ***Shepherd, J.M.**, M. Manyin, and D. Messen, 2007: Projected regional climate changes in 2025 Houston due to urban growth. 2nd ICA Workshop on Geospatial Analysis and Modeling. Athens, GA. (Session Chair: Urban Modeling).
- 2007 ***Shepherd, J.M.**, M. Manyin, and D. Messen, 2007: The impact of current and future urbanization on coastal convective precipitation. AMS Forum: Climate Change Manifested by Changes in Weather. 87th AMS Annual Meeting. San Antonio, TX.
- 2007 **Shepherd, J.M.**, and T. Mote, 2007: Trends towards wetter hurricane basins. AMS Forum: Climate Change Manifested by Changes in Weather. 87th AMS Ann. Meeting. San Antonio, TX.
- 2007 Jin, M., **J.M. Shepherd**, L. Remer, et al., 2007: Urban aerosol effects on rainfall and clouds in USA and China. The Fourth International Ocean-Atmosphere Conference (COAA2007). Qingdao, China.
- 2007 *Shem, W., and **J.M. Shepherd**, 2007: Investigating the relationship between urban land use and precipitating convective systems over the Atlanta region. AMS 7th conference on urban environment. San Diego, California.
- 2007 Mitra, Chandana, and **J.M. Shepherd**, 2007: Assessment and modeling of urban sprawl in Kolkata. Annual AAG Meeting. San Francisco, California.
- 2007 Jin, M., and **J.M. Shepherd**, 2007: Urban aerosol impact on surface energy and hydrological cycles. . AMS Forum: Climate Change Manifested by Changes in Weather. 87th AMS Annual Meeting. San Antonio, TX.
- 2007 Jin, M. S J Burian, LA Remer, **J.M. Shepherd**, 2007 Urban aerosol effects on surface insolation and surface temperature. AGU Fall Meeting. San Francisco, CA.
- 2007 Jin, M. L. Remer, **J.M. Shepherd**, and S. Burian, 2007: Urban aerosol direct effect on surface skin temperature. A-Train-2007 Symposium. 22-25 October 2007. Lille Grand Palace, France.
- 2006 ***Shepherd, J.M.**, M. Manyin, and D. Messen, 2006: Projected regional climate changes in 2025 Houston due to urban growth. Special session called "Impact of Aerosols and Urbanization on Precipitation." Spring AGU Meeting. Baltimore, MD.
- 2006 ***Shepherd, J.M.**, M. Manyin, and D. Messen, 2006: Projected regional climate changes in 2025 Houston due to urban growth. AAG Annual Meeting. Chicago, IL.
- 2006 ***Shepherd, J.M.**, M. Manyin, and D. Messen, 2006: Projected regional climate changes in 2025 Houston due to urban growth. 6th Symposium on the Urban Environment at the 2006 Annual AMS meeting, Special session called "cities as agents of global change." Atlanta, Georgia.
- 2006 Niyogi, D., R.A. Pielke, Sr., J. Adegoke, H.I. Chang, T.Chase, E. Douglas, M. Gupte, C. Marshall, T. Matsui, P.C. Pyle, and **M. Shepherd**, 2006: Considering the role of aerosols and land-atmosphere interactions related to agriculture and urbanization in climate studies. AAG Annual Meeting. Land Cover/Land Use Session. Chicago, IL.
- 2005 **Shepherd, J.M.**, Burian, S, and S. Reynolds, 2005: Urban-induced precipitation and flooding. GPM International Partners Meeting. Tokyo, Japan.
- 2005 *Shannon Reynolds, Steven Burian, **J. Marshall Shepherd**, and Michael Manyin, 2005: The effect of urbanization-induced rainfall variability on hydrologic response: Linking mesoscale meteorological model output to an urban watershed model. Impacts of Global Climate Change World Water and Environmental Resources Congress. 2005 Raymond Walton - Editor, May 15–19, 2005, Anchorage, Alaska, USA.

- 2005 Pyle, P., D. Nigoyi, S. P. Arya, B. Wolfe, and **M. Shepherd**, 2005: The effects of urban land-surface processes on thunderstorm characteristics in the Indianapolis urban region. Fall AGU Session on Land Use/Land Cover Change, San Francisco, California.
- 2004 ***Shepherd, J.M.**, M. Manyin, S. Burian, and C. Garza, 2004: Status of NASA satellite, field observations, and numerical modeling addressing the impact of urbanization on short and long term precipitation variability. AMS Annual Meeting, Symposium on Planning, Nowcasting, and Forecasting in the Urban Zone. Seattle, WA.
- 2004 *Jin, M., **J. M. Shepherd**, and M.D. King, 2004: Urban aerosols and their interactions with clouds and rainfall: A case study for New York and Houston. Poster at AERONET workshop at Spain May 10-14.
- 2004 *Jin, M., **J.M. Shepherd**, and M.D. King, 2004: Urban modeling and urban aerosol-clouds-rainfall interactions. Invited seminar at NCEP OGP. April 20th. Camp Springs, MD.
- 2004 *Jin, M., **J.M. Shepherd**, and M.D. King, 2004: Urban land-atmosphere interactions using EOS, TRMM and NCAR modeling. Invited seminar at Beijing urban research center. June 22, 2004. Beijing, China.
- 2004 *Jin, M., **J.M. Shepherd**, and M.D. King, 2004: Urban aerosols and their interactions with clouds and rainfall: A case study for New York and Houston. Poster at MODIS workshop at Greenbelt, MD. July 13-15.
- 2003 **Shepherd, J.M.**, and S. Burian, 2003: A downscaling analysis of the urban influence of rainfall: TRMM satellite component. 12th Conference on Satellite Meteorology and Oceanography. Long Beach, CA.
- 2003 ***Shepherd, J.M.**, 2003: The impact of urbanization on the precipitation component of the water cycle: A new perspective. Observing and Understanding the Variability of Water in Weather and Climate. Long Beach, CA.
- 2003 *Burian, S., and **M. Shepherd**, 2003: "Influence of urban areas on diurnal rainfall patterns. Geological Society of America Abstracts with Programs. Vol. 35. Seattle, WA.
- 2002 **Shepherd, J.M.**, 2002: An investigation of the influence of urban areas on rainfall using a cloud-mesoscale model and TRMM Satellite. AMS 4th Conference on the Urban Environment. Norfolk, Va., May 17-20.
- 2002 **Shepherd, J.M.**, 2002: An investigation of the influence of urban areas on rainfall using a cloud-mesoscale model and TRMM satellite. GAPP/AMS Mississippi River Climate and Hydrology Conference. New Orleans, La., May 13-17.
- 2002 **Shepherd, J.M.**, 2002: An investigation of the influence of urban areas on rainfall using a cloud-mesoscale model and TRMM satellite. Spring AGU Meeting. Washington, D.C.
- 2002 **Shepherd, J.M.**, E.A. Smith, and A.V. Mehta, 2002: Towards the Global Precipitation Measurement (GPM) Mission: An International Partnership and Precipitation Satellite Constellation for Scientific Research and Applications on the Global Water/Energy Cycle. GAPP/AMS Miss. River Climate and Hydrology Conference. New Orleans, La., May 13-17.
- 2002 Smith, E., A. Mehta, and **M. Shepherd**, 2002: Science formulation of Global Precipitation Measurement (GPM). EGS XXVII General Assembly. Nice, France. April 21-26, 2002.
- 2001 **Shepherd, J.M.**, 2001: TRMM: Status of precipitation estimates and science highlights. 7th Int'l Conf. On Precipitation. Rockport Maine. June 30-July 2, 2001.
- 2001 **Shepherd, J.M.**, 2001: Rainfall modification by urban areas: Part I: Observations from space-borne rain radar aboard TRMM. 7th International Conference on Precipitation. Rockport Maine and 11th Conference on Satellite Meteorology. Madison, WI.
- 2000 **Shepherd, J.M.**, 2000: Sensitivity of diabatic heating profiles to environmental conditions under weak large-scale forcing. National Technical Association Annual Meeting. Hampton, VA.
- 2000 ***Shepherd, J.M.**, 2000: Rainfall morphology in semi-tropical convergence zones. Preprints of the 15th Conference on Hydrology. Long Beach, CA.
- 2000 **Shepherd, J.M.**, 2000: Addressing issues that society members face in their place of employment. Preprints of the 9th Conference on Education. Long Beach, CA.
- 2000 **Shepherd J.M.**, et al., 2000: Informal science education supporting weather broadcasters on-air with TRMM mini-education supplements. Preprints of the 9th Conference on Education. Long Beach, CA.
- 1999 ***Shepherd, J.M.**, 1999: Effects of moisture convergence characteristics on rainfall development in semi-tropical convergence zones. Preprints of the 23rd Conf. on Hurr. and Tropical Meteorology. Dallas, TX. 622-625.

- 1998 **Shepherd, J.M.**, 1998. On the improvement of model simulations using three-dimensional, heterogeneous water vapor fields in the initialization process. Preprints of the 10th Symposium on Meteorological Observations and Instrumentation and Observations. Phoenix, AZ.
- 1997 **Shepherd, J.M.**, 1997. Low-level moisture: Is it a convective control? Preprints of the 22nd Conference on Hurricanes and Tropical Meteorology. Ft. Collins, CO.
- 1995 *Heymsfield, G., **J.M. Shepherd**, and J. Spinhirne, 1995. Vertical precipitation structure obtained from ER-2 remote sensing observations for the COARE 22 February 1993 case. Preprints of the 21st Conference on Hurricanes and Tropical Meteorology. Miami, FL.

PUBLIC SERVICE

- 2014- Partnership Council, Mothers and Others Against Air Pollution
- 2013- Earth Science Subcommittee of the NASA Advisory Council
- 2016- NASA Precipitation Measurement Missions Science Team
- 2016- NASA-JAXA Joint Precipitation Measurement Missions Science Team
- 2016- AMS Nomination Committee
- 2012-2016 Project Associate for Urbanization and Global Environmental Change (UGEC) - an IHDP Core Project
- 2015-2016 National Academy of Sciences Panel on Extreme Weather-Climate Change Attribution
- 2015-2016 Nature Conservancy, Board of Trustees, Georgia
- 2015 NASA Precipitation Measurement Mission Panel
- 2012-2016 Past President, American Meteorological Society (AMS) and Executive Council Member
- 2012-2015 AAAS "What We Know" Panel
- 2013-2015 Board, Climate Central
- 2010-2014 AMS Membership Committee
- 2011-2014 NOAA Science Advisory Board
- 2012-2014 Department of Energy ARM Science Board
- 2014 UGEC International Conference Advisory Committee
- 2013 President of the American Meteorological Society
- 2013 Search Committee, National Center for Atmospheric Research (NCAR) Director
- 2011-2012 National Academy of Science Committee on Urban Meteorology.
- 2010 CENTRA War Game Scenarios on Climate and Security.
Past U.S. Department of Energy Cool Roofs Initiative Review Panel (nominated and selected)
- 2009-2010 External Review Panel for NOAA Climate Prediction Center/Hydrometeorological Prediction Center.
- 2009-2012 Past Advisory Committees for Howard University NOAA Center for Atmospheric Sciences and NASA University Research Center.
- 2009 Past Member of International Writing Team for the American Meteorological Society Policy Statement on Inadvertent Weather Modification.
- 2008-2011 NOAA Climate Working Group (Key external advisory body to NOAA on climate science.
- 2009-2010 National Academy of Science Panel on Climate Change Effects on U.S. Naval Operations and National Security
- 2009-2010 NASA Goddard Earth Science Director Search Committee.
- 2009-2010 2010 Co-Program Chair, American Meteorological Society Annual Meeting, Atlanta, GA.
- 2006-2009 Member of the American Meteorological Society Executive Council.
- 2006-2008 Member of the American Meteorological Society Executive Committee.
- 2005-2008 Team member on World Meteorological Organization (WMO) Panel to assess the effects of natural and anthropogenic particles on precipitation.
- 2008-2009 Planning Committee for NASA Symposium on Earth System Science at 20 Years.
- 2008-2009 External Review Panel for NOAA ISET Program at North Carolina A&T University.
- 2008 Served on NASA Hurricane Science Program Review Panel.
- 2007 Member of Atmospheric Science and Climate Literacy (ASCL) Workshop Organizing Committee.
- 2006 Invited Panelist to testify before the National Academies of Science Review Panel for the NASA Applied Sciences Committee.
- 1999-2009 Reviewer of Manuscripts for AMS Journal of Applied Meteorology and

- Climatology, AMS Journal of Hydrometeorology, Professional Geographer, Southeastern Geographer, Atmospheric Environment, Atmospheric Research, JGR-Atmospheres, Earth Interactions, Int. Journal of Climatology, Theoretical and Applied Climatology, Journal of Climate, The Professional Geographer, Geography Compass, Journal of Climate and Geophysical Research Letters, The Open Atmosphere Science Journal, International Journal of Applied Geospatial Research.
- 1999-2009 Reviewer of Proposals for Israel Science Foundation, Hong Kong Research Council, NASA, National Science Foundation (Physical Meteorology, Regional Geography, Geosciences Education), Department of Energy, National Oceanic and Atmospheric Administration.
- 2007-2009 Promotion Reviews for Dr. Menglin Jin (U of MD), Dr. Jeffrey Halverson (UMBC), Xiping Zeng (UMBC), David Sailor (Portland State).
- 2004 Chairman of NASA Laboratory for Atmospheres Peer Award Committee.
- 2003-2006 NASA Precipitation Science Team.
- 2001-2005 NASA Global Precipitation Measurement Mission (GPM) Deputy Project Scientist.
- 2002-2008 National Science Foundation Advisory Committee on Environmental Research and Education.
- 2004 NASA New Investigator Program Review Panel.
- 2004 Program Committee for 2004 Satellite Meteorology Conference.
- 2001-2003 Committee of Visitors for the Review of the NSF Biocomplexity in the Environment program.
Past Member of HEAT Inter-agency Planning Committee.
Past NASA Representative to User Requirements Sub-Group for the International Working Group Global Earth Observations.
Past Member NASA/GSFC Water Cycle Advisory Team.
- 2002-2004 AMS Committee on Satellite Meteorology (2002-2004).
- 2002 NASA Laboratory for Atmospheres Peer Award Selection Committee (2002).
- 1993-2005 Numerous NASA Committees: Code 900 DAAC Users Working Group, Technical Review Committee for Howard University Research Center, Source Evaluation Board (SEB) –Code 912.0 Support Contract Selection, GSFC Committee on Improving Communications with the Center Director, GSFC Committee to Standardize Promotion Criteria for Scientists, Goddard GSRP Fellowship Selection Committee.
- 1999-2001 Tropical Rainfall Measuring Mission (TRMM) Outreach Scientist (1999-2001).
- 1996-1998 Past chairman and member of the American Meteorological Society’s Board on Women and Minorities (member from 1994-1998).
- 1996-2001 Past chairman of Earth Science Directorate Multicultural Diversity Advisory Council.

Memberships: American Meteorological Society (AMS), Association of American Geographers (AAG), International Association for Urban Climate (IAUC), Sigma Xi.

OTHER SERVICE

- 2015 Helped lead the proposal for new UGA Major in Atmospheric Sciences
- 2013 Invited Matt Parker (Savannah River National Laboratory) to Geography Colloquium Lecture
- 2012 Led UGA application process for University Corporation for Atmospheric Research (UCAR)
- 2010 Invited Dr. Franco Einaudi (NASA) to campus for the Inaugural Climate and Society Lecture
- 2010 Invited Dr. Lesley Ann Dupigny-Giroux (Vermont) under a Franklin Visiting Scholars Grant
- 2010 Invited Dr. Sharon Nicholson for Department of Geography Colloquium
- 2010 Attended UGA Teaching Academy Faculty Symposium (April 2010).
- 2009 Moderated session on Climate and Rainfall Variability at 2009 Georgia Water Resources Conference.
- 2008 Invited by Dean of the Franklin College of Arts and Sciences to attend Faculty Breakfast with UGA Provost Mace (August 2008).
- 2007 Invited Presentation to Franklin College CliCurCmate Change Advisory Board (October 15, 2007).

Administrative and University Service:

- Member of UGA Climate and Society Initiative Steering Committee (Current)
- Member Georgia Athletic Association Board (Faculty representative) (Current)
- Member, UGA Stem Initiative Committee (Current)
- Member of the 2013 UGA Provost Search Committee

Member of the Office of the Vice President Distinguished Research Professor Selection Committee (Chair, 2015, Served 2013 to 2015)
Past Member of the CICR Executive Committee
Past Member of Franklin College of Arts and Science Task Force on Diversity and Inclusion
Past Chair, Geography Department 5-Year Planning Committee
Past GEOG1112 Faculty Coordinator
Past Member of Department of Geography Search Committee, GIS and Remote Sensing Faculty Position
Served on Curriculum Committee, Admissions Committee, Academic Standards Committee, Diversity Committee
Past Departmental Website Committee chair
Departmental Colloquium Committee (2008-2009))
Departmental Advisory Committee (2007-2009))
Departmental Graduate Studies Committee (2009)
Departmental Representative to Faculty Senate (2006-2009)
Departmental Faculty Meeting Scribe (2006)
Worked with Dept. Head Brook, Prof. Mote, and Prof. Grundstein on the establishment of a new Departmental Climatology Laboratory (2006)
Completed CITI Course in the Protection of Human Research Subjects (#414503)
Faculty Marshall at Fall (2006) and Summer (2007) Commencement Activities
Chair, Physical Geography Faculty Search Committee (2007)
Served as a reviewer for 2008 Excellence in Research by Graduate Student Award (December 2007)