

# Michael E. Brown

## Curriculum Vita

### EDUCATION

Ph.D. Geography (Emphasis: Climatology) 2000  
The University of North Carolina, Chapel Hill

Ph.D. Dissertation: "An Investigation of Coupled Synoptic and Mesoscale Environments in the Development and Enhancement of Severe Storms in North Carolina, South Carolina, and Virginia"

M.S. Geosciences (Emphasis: Meteorology) 1995 Mississippi State University.

Master's Thesis: "Land-Surface-Atmosphere Interaction Associated With Deep Convection In Illinois"

B.S. Geography (Meteorology Emphasis) 1991 Western Illinois University.

### EXPERIENCE

2013 - present	Professor Department of Geosciences Mississippi State University
2011 – present	State Climatologist State Climate Office Mississippi State University
2005 - 2013	Associate Professor Department of Geosciences Mississippi State University
2000 - 2005	Assistant Professor Department of Geosciences Mississippi State University
1998 - 2000	Visiting Assistant Professor Department of Geosciences Mississippi State University
1998 - 1999	Adjunct Researcher State Climate Office of North Carolina North Carolina State University

1995 – 1996      Instructor  
Geography Curriculum  
East Mississippi Community College

1993 - 1995      Graduate Teaching Assistant  
Department of Geosciences  
Mississippi State University

## **BOOKS / REPORTS**

**Brown, M. E.**, and C. L. Wax. 2012. Thunderstorms, Lightning Strikes, and Tornadoes in Mississippi. MAFES Bulletin 1198, Mississippi Agricultural and Forestry Experiment Station, Mississippi State University.

Sherman-Morris, K, C. L. Wax, **M. E. Brown**, 2011. Weather and Climate of Mississippi. Publisher: University Press of Mississippi (202pp).

**Brown, M. E.**, and C. L. Wax. 2010. Disaster Resistant University Hazard Mitigation Plan, Mississippi State University. Publisher: Federal Emergency Management Agency (126pp).

**Brown, M. E.**, 2008. Field Methods in Meteorology, 3<sup>rd</sup> edition (ISSN: 1539-7912) (165pp).

## **RESEARCH AND PUBLISHED WORK**

**M. E. Brown**, 2015 Use of Field Courses in the Geosciences. Submitted J of Geol Geosci.

Gutter, B, and **M. E. Brown**, 2014 Investigation of Vegetation Discontinuities Related to the Yazoo City Tornado Scar and Enhanced Convection. J of Geol Geosci 4: 185. Doi: 10.4172/2329-6755.1000185

Schummer, M. L., J. Cohen, R. M. Kaminski, C. L. Wax, and **M. E. Brown**, 2014. Atmospheric teleconnections and Eurasian snow cover as seasonal predictors of Mallard migration. J. of Wildfowl 4: 451-469.

Reagan M, **Brown M. E.**, Farney T, Kroot R, Owen N, et al., 2013 NCAA Football and Cloud-to-Ground Lightning: A Probability Analysis. J Geogr Nat Disast 3:112. doi: 10.4172/2167-0587.1000112

**M. E. Brown**, 2013: Large Venue Outdoor Events and Associated Lightning Risk, J Geol Geosci Vol. 2, No. 3.

**M. E. Brown**, 2013: Tornado Warnings and Public Action, J Geol Geosci Vol. 2, No. 2.

Sherman-Morris, K., **Brown, M.E.**, Dyer, J.L., McNeal, K.S., Rodgers, J.C., 2013 Teachers' Geoscience Career Knowledge and Implications for Enhancing Diversity in the Geosciences, *Journal of Geoscience Education*. 61, 326-333

Sherman-Morris, K., **Brown, M.E.**, 2012 Experiences of Smithville, Mississippi Residents with the 21 April 2011 Tornado, *National Weather Digest Vol 36, Num 1*.

Sherman-Morris, K., Rodgers, J.C., McNeal, K.S., **Brown, M.E.**, Dyer, J.L., 2011 (Submitted) Professional Development Strategies to Enhance Diversity in the Geosciences, *The Science Educator*.

Schummer, M. L., R. M. Kaminski, C. L. Wax, and **M. E. Brown**. 2010. Trends in a weather severity index (1950-2008) for wintering mallards and effects of atmospheric teleconnections in Eastern North America. *Ecological Applications* ISSN 1051-0761.

Schummer, M. L., R. M. Kaminski, C. L. Wax, and **M. E. Brown**. 2009. Predicting duck migration with a weather-severity index. *Delta Wildlife* 17(4):34-35.

Senkbeil, J. C., D. M Brommer, P. G. Dixon, **M. E. Brown**, and K. Sherman-Morris, 2009: The Perceived Landfall Location of Evacuees from Hurricane Gustav. *Natural Hazards*, (DOI 10.1007/s11069-009-9457-1).

**M. E. Brown**, and Jackson, J, 2009 Sounding-Derived Low-Level Thermodynamic Characteristics Associated With Tornadic And Nontornadic Supercell Environments In The Southeast United States. *National Weather Digest Vol. 33, No. 1, 15-26*.

Wax, C.L., J.W. Pote and **M.E. Brown**, 2009 "Integrating the Natural Climate Regime Into Management Plans for Swine Wastewater Lagoons." *Journal of Service Climatology*. Vol. 2, No. 4, 1-10.

Dixon, P. G., **M. E. Brown**, W. M. Carter, W. S. Gunter, J. S. Allen, A. M. Hayes, L. E. Becker, H. S. Eschete, R. P. Aylward, and K. N. Scheitlin, 2008: Predicting Atlantic hurricane paths using monthly surface pressure data. *The Geographical Bulletin* Vol. 49, No. 2, 77-86.

Dixon, P. G., **M. E. Brown**, K. Sherman-Morris, and B. L. Kirkland, 2008: Comments on (DIS) APPROVAL: Television Weathercasters Debate The Value Of Voluntary Credentials. *National Weather Digest*, 32, 61-65

Dixon, P. G., **M. E. Brown**, K. Sherman-Morris, and B. L. Kirkland, 2008: Meteorology Degrees and Certificates Offered by Mississippi State University. *National Weather Digest*, 32, 69-70

**Brown, M.E.**, and Wax, C, 2007: Temperature As An Indicator Of The Influence Of Landforms On Atmospheric Processes. *Phys. Geog.* Vol. 28, No. 2, 148-157.

Parnell, D. B., D. Brommer, P. G. Dixon, **M. E. Brown**, and D. W. Gamble, 2004: A survey of Hurricane Frances damage on San Salvador. *Bahamas J. of Sci.*, Vol. 12, No. 1 2–6.

**Brown, M.E.**, and McCann, B., 2004 “Relating Clustered Convective Events To Land-Surface Features in Mississippi.” *J. Oper. Met.* EJ2-2004.

**Brown, M.E.**, and Clark, R., 2004 “A Decadal County-By-County Tornado Risk Assessment For Mississippi: Using A Tornado Track And Housing Based Approach” Preprints, Southeast Severe Storms Symposium, National Weather Association (ISSN: 1545-6803).

**Brown, M.E.**, 2003 “ Identification of Non-Classical Mesoscale Circulations (NCMCs) and Their Potential Impact on Severe Storm Environments in Illinois” Preprints, Midwest Extreme and Hazardous Weather, American Meteorological Society.

**Brown, M.E.**, 2003 Editor, Southeast Severe Storms Symposium, 2002, Hosted by the National Weather Association / American Meteorological Society, Starkville, MS, (ISSN# 1538-5019)

**Brown, M.E.**, 2002 “The Spatial, Temporal, and Thermodynamic Characteristics of Southern-Atlantic United States Tornado Events.” *Physical Geography*. Vol. 23, No. 5, 401-417.

**Brown, M.E.**, 2002 “Field Methods in Meteorology” 139pp. (ISSN# 1539-7912)

**Brown, M.E.**, 2002 Editor, Southeast Severe Storms Symposium, 2002, Hosted by the National Weather Association / American Meteorological Society, Starkville, MS (ISSN# 1538-5019)

**Brown, M.E.**, Wax, C.L., and Pote, J.W., 2002 “Weather’s Role in Phenological Period Length of Mississippi Soybeans.” Proceedings, Mississippi Water Resources Conference. Mississippi Water Resources Research Institute

Gamble, D.W., **Brown, M.E.**, Parnell, D., Brommer, D., and Dixon, P.G., 2000 “Lessons Learned from Field Evaluation of Hurricane Floyd Damage on San Salvador Island, Bahamas.” *Bahamas J. Science*. 8: Num 1.

**Brown, M.E.**, “An Investigation Of Coupled Synoptic And Mesoscale Environments In The Development And Enhancement Of Severe Storms In North Carolina, South Carolina, And Virginia.” Doctoral Dissertation, The University of North Carolina, Chapel Hill, 2000

**Brown, M.E.**, and D.L. Arnold, 1998: Land-Surface-Atmosphere Interaction Associated with Deep Convection in Illinois. *Int. J.of Clim.* Vol. 18, 1637 - 1653.

**Brown, M.E.**, "Land-Surface-Atmosphere Interaction Associated With Deep Convection In Illinois," Master's Thesis, Mississippi State University, 1995.

## **PROFESSIONAL PRESENTATIONS**

Reagan, M., Howell, J., **Brown, M. E.**, Salem, T, 2014. National Weather Service Operational Benefits of Mississippi State University Soundings. National Weather Association 39th Annual Meeting Salt Lake City, UT.

Schummer, M. L., J. C. Coluccy, R. Kaminski, M. Notaro, **M. Brown**, C. Wax, L. Vanden Elsen, and S. Petrie. 2014. An open-access web-based tool for quantifying daily Weather Severity Index values in eastern North America for application in waterfowl research and management. Mississippi Flyway Meeting, Nashville, Tennessee.

Schummer, M.L., J.C. Coluccy, M. Notaro, R. Kaminski, **M. Brown**, C. Wax, J. Cohen, S. Petrie, and L. Vanden Elsen. 2013. Use of Weather Severity Indices for Estimating Influences of Climate Change on Waterfowl Populations, Waterfowl Habitat, & Hunter Opportunity & Demographics. Coping with Extreme Weather & Climate Change: Management Strategies for the Upper Midwest, Lacrosse, Wisc

Barrett F. Gutter and **M. E. Brown**, 2013 Investigation of Vegetation Discontinuities and the Enhancement of Convection Related to the April 27 2011 Multiple EF4 and EF5 Tornado Scars. National Weather Association 38th Annual Meeting Charleston, SC.

Matthew Reagan, **M. E. Brown**, 2013 Mississippi State University / National Weather Service, Memphis Mobile Sounding Project. National Weather Association 38th Annual Meeting Charleston, SC.

Matthew Reagan, **M. E. Brown**, T. Farney, R. Kroot, N. Owen, L. Watkins, T. Watkins, and B. Williams. 2013 NCAA Football and Cloud to Ground Lightning: A Probability Analysis. National Weather Association 38th Annual Meeting Charleston, SC.

**M. E. Brown**, 2013. Extreme Weather. C-CERT (*Invited / Keynote Presentation*)

Kathleen Sherman-Morris, Co-Authors: K. S. McNeal, J. Carroll, **M. E. Brown**, R. Clary, and J. Diaz-Ramirez. A Hazards Approach to Increase Awareness and Perceived Relevance of the Geosciences: Preliminary Results from a Project Designed to Enhance Diversity. Presented at the 21<sup>st</sup> Symposium on Education at the 93rd Annual meeting of the American Meteorological Society, Austin, TX.

**M. E. Brown**, 2012. Extreme Weather. C-CERT (*Invited / Keynote Presentation*)

B. Gutter, D. Cox, **M. E. Brown**, 2012. Investigation into Whether Vegetation Discontinuities Related to a Tornado Scar Can Enhance Convection. 10<sup>th</sup> Southeast Severe Storms Symposium.

K. Sherman-Morris, **M. E. Brown**, K. Brown, B. Bell, P. Jackson. 2012,. Warning Confirmation and Response in the 2011 Smithville, MS, Tornado, 2012. 106<sup>th</sup> Annual

Association of American Geographers, New York, New York.

Schummer, M. L., R. M. Kaminski, C. L. Wax, **M. E. Brown**, A. H. Raedeke, A. Petrie, and J. Tirpak, 2012. Long-Term Analysis and Future Forecasting of Climate Factors Influencing Autumn-Winter Distributions of Mallard in the Atlantic, Central, and Mississippi Flyways. National Fish and Wildlife Congress in Ottawa, Canada.

K. Sherman-Morris, **M. Brown**, K. Brown, B. Bell, P. Jackson, 2011 Experiences of Smithville, MS Residents with the April 27 Tornado. 66th annual meeting of the Southeastern Division of the Association of American Geographers, Savannah, GA

**Brown, M. E.**, K., Sherman-Morris, B., Bell, and K., Brown, 2011. The Residents of Smithville, MS: What Worked and What Didn't Work During an EF5 Tornado, National Weather Association 36<sup>th</sup> Annual Meeting, Birmingham, Alabama.

Reagan, M and **M. E. Brown**, 2011. Using CG Lightning as a Forecasting Tool for Severe Hail, National Weather Association 36<sup>th</sup> Annual Meeting, Birmingham, Alabama.

**Brown, M. E.**, K., Sherman-Morris, B., Bell, and K., Brown, 2011. The Role of the Broadcast Meteorologist During an EF5 Tornado as Described by the Residents of Smithville, MS, National Weather Association 36<sup>th</sup> Annual Meeting, Birmingham, Alabama (**Invited Presentation**).

**Brown, M. E.**, K., Sherman-Morris, B., Bell, and K., Brown, 2011. The Warning System and the Role of the National Weather Service During an EF5 Tornado as Described by the Residents of Smithville, MS, Presented to the Southern Region of the National Weather Service via Go-To-Meeting, Memphis, TN. (**Invited Presentation**)

Sherman-Morris, K., **M. E. Brown**, J. Dyer, K. McNeal, and J. Rodgers, 2011. Teaching and Learning about Geoscience: A Survey of Mississippi Science Teachers. 105th annual meeting of AAG, Seattle, WA

Mercer, A. and **M. E. Brown**, 2010. Using artificial-Intelligence to predict Mississippi lightning. 26<sup>th</sup> Annual American Meteorological Society, Severe Local Storms Conference, Denver, Colorado, October, 2010

Mercer, A. and **M. E. Brown**, 2010. Using artificial-Intelligence to predict Mississippi lightning. 9<sup>th</sup> Annual Southeast Severe Storms Symposium, Mississippi State University, September, 2010

Mercer, A. and **M. E. Brown**, 2010. An artificial-Intelligence Lightning Threat Algorithm. Northern Gulf Institute Annual Conference, Mobile, Alabama, May, 2010.

**Brown, M. E.**, D. Keeney, 2009. Using Lightning Data to Better Identify and Understand Relationships between Thunderstorm Intensity and the Underlying Topography of the Lower Mississippi River Valley. National Weather Association 34<sup>th</sup> Annual Meeting, Norfolk, Virginia.

J.C. Senkbeil D. M. Brommer, P.G. Dixon, **M.E. Brown**, K. Sherman-Morris Paper presented at 64 Meeting of Southeastern Division of the Association of American Geographers, Knoxville, TN: *Methods of Assessing the Perceived Threat Location of Hurricane Evacuees*.

Keeney, D., **M. E. Brown**, 2009. Relationship Between Vegetation boundaries and Severe Local Storms in the Delta Region of Mississippi. National Weather Association 34<sup>th</sup> Annual Meeting, Norfolk, Virginia.

Brommer, D. M., J. C. Senkbeil, **M. E. Brown**, P. G. Dixon, 2009: Meteorological Factors Affecting Hurricane Evacuation Decisions. *2009 Annual Meeting, Association of American Geographers*, Las Vegas, Nevada.

**Brown, M. E.**, D. Keeney, T. Merrell, A. Hipp, and V. Lemmermann, 2009. Football Stadiums and Lightning: First Down and First Aid. National Weather Association 34<sup>th</sup> Annual Meeting, Norfolk, Virginia.

Keeney, D., **M. E. Brown**, 2009. Lightning in the Arkansas and Mississippi Delta, 2009. 8th Annual Southeast Severe Storms Symposium, 2009. Abstract published (ISSN:1545-6803)

**Brown, M. E.**, R. Carley, A. Hipp, D. Keeney, V. Lemmermann, T. Merrell, and C. Rutledge, 2009. NCAA Football Stadiums and Related Lightning Risk in the Southeast U.S. 8th Annual Southeast Severe Storms Symposium, 2009. Abstract published (ISSN: 1545-6803)

Schummer, M. L., Kaminski, R. M., Wax, C. L., **Brown, M. E.**, Zimmerman, C. E., Raedeke, A. H., and Graber, D. A. 2009. Long-term Analysis of Climatic Factors Influencing Autumn-Winter Migration of Mallards in the Central, Mississippi, and Atlantic Flyways. North American Duck Symposium and Workshop, Toronto, Ontario, August 17-21, 2009.

Keeney, D., **M. E. Brown**. 2009. Lightning Trends of Severe Local Storms in the Delta Region of Mississippi. American Meteorological Society 89<sup>th</sup> Annual Meeting, Phoenix, Arizona

Keeney, D., **M. E. Brown**. 2008. Relationship Between Vegetation Boundaries and Severe Local Storms in the Delta Region of Mississippi. National Weather Association 33<sup>rd</sup> Annual Meeting, Louisville, Kentucky

McNeal, K., R. Rodgers, **M. E. Brown**, 2008, Paper presentation at 57<sup>th</sup> Annual Meeting of Southeastern Region of Geological Society of America, ?, NC: *The Use of Technologies to Foster Online Learning Communities in the Geosciences*. Presented by Karen McNeal. Co-authors: John Rodgers, Mike Brown.

Schummer, M. L., Kaminski, R. M., Zimmerman, C., **Brown, M. E.**, Wax, C. 2008. Weather-Related Indices of Autumn-Winter Dabbling Duck (*Anas* spp.) Migration Through Middle North America. Wildlife Society, Annual Meeting, Jackson, Mississippi.

McNeal, K.S., **M. E. Brown.**, Rodgers, J., and Sherman-Morris, K. 2008. The Use of Technologies to Foster On-Line Learning Communities in the Geosciences. In 2008 GSA Southeastern Section Spring Meeting, Section T10, Geological Society of America, Charlotte, April 10-12, *Conference abstracts with programs* 40(4): pp. xx.

Thomas, A., **M. E. Brown**, A Study of Relationships Between Population and Reported Tornadoes. 7th Annual Southeast Severe Storms Symposium, 2008. Abstract published (ISSN: 1545-6803)

Dixon, P. G., **M. E. Brown**, M. C. Carter, W. S. Gunter, J. S. Allen, A. M. Hayes, L. E. Becker, H. S. Eschete, R. P. Aylward, and K. N. Scheitlin, 2007: Predicting Atlantic hurricane paths using monthly surface pressure data. 2007 Southeastern Division of the AAG Annual Meeting, Charleston, SC

Thomas, A. \*, **M. E. Brown**, The Relationship Between Human Population Patterns and the Historical Tornado Database. National Weather Association 32<sup>nd</sup> Annual Meeting, Reno, NV

**M. E. Brown, 2007:** Severe Storms in the Southeast U.S. and the Role of a University. *Invited Lecture*, National Weather Service and National Weather Association, Memphis, TN.

Beal, T., and **M. E. Brown**, 2007: An Examination Of Thermodynamic And Shear Environments Associated With Cool-Season Tornadoes In The Southeastern United States. Preprints, Southeast Severe Storms Symposium, National Weather Association (ISSN: 1545-6803).

Jackson, J. D., **M. E. Brown**, 2006: Utilizing Lower-Atmospheric Thermodynamic Characteristics To Discriminate Between Tornado Strength Environments In The Southeast U.S. Preprints, Southeast Severe Storms Symposium, National Weather Association (ISSN: 1545-6803).

**Brown, M.E.**, and Clark, R., 2004 “A Decadal County-By-County Tornado Risk Assessment for Mississippi: Using a Tornado Track and Housing Based Approach” Presented at the 3<sup>rd</sup> Southeast Severe Storms Symposium, National Weather Association, Mississippi State University, January 2004 [Paper published: 2004 Preprints ISSN: 1545-6803]

**Brown, M.E.**, 2003 “Identification of Non-Classical Mesoscale Circulations (NCMCs) and Their Potential Impact on Severe Storm Environments in Illinois” Presented at the Midwest Extreme and Hazardous Weather Regional Conference, American Meteorological Society, Champaign, Illinois, October 2003 [Abstract published: 2003 Midwest Extreme and Hazardous Weather Regional Conference Abstracts]

Call, J, and **Brown, M.E.**, 2002 “The Spatial and Temporal Distribution and Thermodynamic Characteristics of Tornadoes in Mississippi.” Presented at the 57<sup>th</sup> Annual Conference of the Association of American Geographers Southeastern Division, Richmond Virginia, November 2002. [Abstract published: 2002 Annual Meeting Abstracts]

Wade, R, and **Brown, M.E.**, 2002 “A Preliminary Survey and Squall Line Climatology for NWSFOs Jackson, MS and Memphis, TN County Warning Areas.” Presented at the 57<sup>th</sup> Annual Conference of the Association of American Geographers Southeastern Division, Richmond Virginia, November 2002. [Abstract published: 2002 Annual Meeting Abstracts]

Storey, G, **Brown, M.E.**, and Rodgers, J, 2002 “An Analysis of Meteorological Variability Associated with Regional Heat-Related Deaths: A Killer Hot Topic.” Presented at the 57<sup>th</sup> Annual Conference of the Association of American Geographers Southeastern Division, Richmond Virginia, November 2002. [Abstract published: 2002 Annual Meeting Abstracts]

**Brown, M.E.**, Wax, C., and Pote, J., 2002 “Weather’s Role in Phenological Period Length of Mississippi Soybeans.” Presented at the 32<sup>nd</sup> Annual Mississippi Water Resources Conference.

Rodgers, J. III and **Brown, M.E.**, 2002 "The spatial distribution of tree damage in Starkville, MS following a severe downburst from a Mesoscale Convective System (Derecho)." Presented at the 98th Annual Conference of the Association of American Geographers, Las Angeles, CA, March 2002. [Abstract published: 2002 Annual Meeting Abstracts, CD-ROM]

**Brown, M.E.**, 2002 “The Spatial Distribution and Thermodynamic Characteristics of Carolina and Mississippi Tornado Events.” Presented at the 2002 Southeast Severe Storms Symposium. [Abstract published :2002 Southeast Severe Storms Symposium Program and Abstracts, ISSN:1538-5019]

McQuirter, J. M. and **Brown, M.E.**, 2001 “An Investigation of Pre- and Post-Rainfall Pesticide and Herbicide Contamination for the Standing Pine Watershed Surface Waterways” Presented at the 2001 Geological Society of America GSA Annual Meeting. Boston, Massachusetts November, 2001. [Abstract published: November, 2001, GSA Program and Abstracts, Vol 33, No. 6; ISSN 0016-7592]

**Brown, M.E.**, 2001 “Non-Classical Mesoscale Circulations.” Invited Lecture at the Baron Services Doppler Training Workshop, Huntsville, Alabama, August, 2001.

**Brown, M.E.**, 2000 “A Comparison of Great Plains Derived Severe Storm Indices Threshold Values to Mid-Atlantic Tornadic Storm Environments.” Presented at the 55<sup>th</sup> Annual Conference of the Association of American Geographers Southeastern Division, Chapel Hill, North Carolina, November, 2000. [Abstract published: 2000 Annual Meeting Abstracts]

**Brown, M.E.**, 2000 "A Synoptic and Mesoscale Investigation of Severe Local Storms in the Mid-Atlantic Region of the United States." Presented at the 96th Annual Conference of the Association of American Geographers, Pittsburgh, Pennsylvania, March 2000. [Abstract published: 2000 Annual Meeting Abstracts, CD-ROM]

P. Grady Dixon, David Brommer, Darren Parnell, Douglas W. Gamble, and **Michael E. Brown**, 2000 "Field Evaluation of Hurricane Floyd Damage to the Water Resources and Tourism Infrastructure of San Salvador Island, Bahamas." Presented at the 96th Annual Conference of the Association of American Geographers, Pittsburgh, Pennsylvania, March 2000. [Abstract published: 2000 Annual Meeting Abstracts, CD-ROM]

Gamble, D.W. and **Brown, M.E.**, 1999 "Field Evaluation of Hurricane Floyd Damage to the Water Resources and Tourism Infrastructure of San Salvador Island, Bahamas." Presented at the 54<sup>th</sup> Annual Meeting of the Southeastern Division of the Association of American Geographers, Tampa Bay, Florida, November 1999.

**Brown, M.E.**, 1999 "Operation of the North Mississippi Severe Storms Intercept Team During the Tornado Outbreak of January 21 - 22, 1999." Presented at the 3<sup>rd</sup> Annual Severe Local Storms Conference, Des Moines, Iowa.

**Brown, M.E.**, 1998 "Identification of Interactions Between Tropical Disturbances and Mid-latitude Circulations that Produce Heavy Rainfall" Presented at the 94th Annual Conference of the Association of American Geographers, Boston, Massachusetts. [Abstract published: 1998 Annual Meeting Abstracts, CD-ROM]

**Brown, M.E.**, 1998 "Identification of Interactions Between Tropical Disturbances and Mid-latitude Circulations that Produce Heavy Rainfall: A Regression Tree Approach" Presented at the 13th Annual Southeastern Conference of Graduate Students, Athens, Georgia.

**Brown, M.E.**, 1996 "The Influence of Lower Tropospheric Moisture on Circulations Generated Through Land-Surface-Atmosphere Interactions." Presented at the 92nd Annual Conference of the Association of American Geographers, Charlotte, North Carolina, [Abstract published: 1996 Annual Meeting Abstracts, p.36]

**Brown, M.E.** 1995 "Land-Surface-Atmosphere Interaction associated with Deep Convection in Illinois." Presented at the 48th Annual Meeting of the Southeastern Division of the Association of American Geographers, Knoxville, Tennessee, November 1995.

**Brown, M.E.**, and D.L. Arnold, 1995 "Land-Surface-Atmosphere Interaction associated with Deep Convection in Illinois." Presented at the 91st Annual Conference of the Association of American Geographers, Chicago, Illinois, March 1995 [Abstract published: 1995 Annual Meeting Abstracts, p.34]

## **GRANTS AND FUNDED RESEARCH**

June, 2015, PI  
NOAA  
Understanding the Variability in Severe Local Storm Environments in the Southeast U.S.  
Requested Funds 83,890 Funded

May, 2015, PI  
StateFarm  
Community Education and Scientific Engagement in Tornadoic Environments.  
Requested Funds 67,696 Funded

June, 2012-2014, PI  
NOAA / COMET  
Mesoscale Sounding from GOES and GOES-R during Variable Cloud Conditions.  
Requested Funds 26,061 Funded

April, 2012, CO-PI  
NOAA  
Geographic Location and Spatial Estimation of Risk in Tornado Warnings.  
Requested Funds 111,820

November, 2011, CO-PI  
A Predictive Modeling Framework for Tropical Cyclone Intensification and Associated  
Debris Generation and Inland Flooding Risk. Pending (156,041)

May, 2011, CO-PI  
COMET  
Development of an Artificial Intelligence Lightning Prediction Algorithm for the  
Southeast United States.  
Requested Funds 64,000

November, 2010, CO-PI  
NSF Geo  
Hazards TEAMS: Teacher Education & Activities for Minority  
Students in the Meteorological, Geologic and Hydrologic Hazards. TRACK 1  
Requested Funds 199,787 Funded

July, 2010, CO-PI  
NASA  
Formation of an Operational Lightning Forecast Tool Using Artificial Intelligence  
Techniques.  
Requested Funds 201,879

April, 2010, CO-PI  
COMET  
Development of an Artificial Intelligence Lightning Prediction Algorithm for Mississippi.  
Requested Funds 64,000

November, 2009, PI  
NSF  
Master of Science, Applied Meteorology Program (AMP)  
Requested Funds 699,984

April, 2009, CO-PI  
NSF  
Fueling the Geosciences educational pipeline: The development of a K-12 network to support minority participation  
Requested Funds 39,828 Funded

March, 2009, PI  
Comet/NOAA  
Classification of Climatological, Synoptic, and Mesoscale Patterns for Tornadoes in the Mid-South.  
Requested Funds 60,105

January, 2009, PI  
FEMA  
Creating a Disaster Resistant University  
Requested Funds 84,611 Funded

October, 2008, CO-PI  
NASA  
Drainage Basin Characterizations for the Assessment of Flood Probability for Improved Decision Support  
Requested Funds 395,666.00

August, 2008, PI  
MHI  
Determining whether 1994 wind zone installation requirements have affected tornado casualties in Manufactured Homes  
PI Requested Funds 24,698.00

August, 2008, CO-PI  
NSF  
SGER: Primary meteorological variables influencing hurricane evacuation decisions: A case study of Hurricane Gustav.  
Requested Funds 5,780.00 Funded

June, 2008, CO-PI  
NSF  
Knowledge Gaps, Relevant Experts and Hurricane Cultures: An Analysis of the Characteristics of Effective Communication About Hurricanes  
Requested Funds 318,110

September, 2007, PI

COMET

Submitted in conjunction with NWS-Memphis to UCAR, NOAA, Dept. of Commerce

Amount 45,293 Funded

November, 2007, PI

NSF

Hurricane Outreach and Public Education (HOPE)

PI, Requested Funds 125,148

November 2005, PI

Coastal Hazards Education Requested Funds \$201,788.00

August 2005, CO-PI

NASA, Integrating Climatic and Fuels Information into National Fire Risk Decision-Support Tools. 422,258 Funded

September 2005, Co-PI

NSF: SGER: Field survey of local storm surge

heights and wind damage associated with the landfall of Hurricane Katrina.

Requested Funds: 29,925.

September 2005, Co-PI

NOAA / COMET

Field survey of local storm surge heights and wind damage associated with the landfall of Hurricane Katrina.

\$5000 Funded.

November 2005, PI

Coastal Hazards Education (NSF# 0607924)

Requested Funds 201,788.00

September 2004, PI

Field Evaluation of Hurricane Damage to the Water Resources, Karst Environments, Tourism Infrastructure, and Emergency Response of San Salvador Island, Bahamas

Requested Funds 8,150.00

June 2004, Co-PI

A Climate-Based System for Predicting Probability of West Nile Virus Infection in Mississippi

Submitted to National Science Foundation

CO-PI. Requested Funds 875,986.00

May 2004, Co-PI

The Integration of Climate Data in the Prediction of West Nile Virus Infection in Mississippi: A Dynamic Modeling Approach)

Submitted to Southern Coastal Agromedicine Center

Requested Funds 14,102.00

February 2004

Gear Up Mississippi 2004

Submitted to Mississippi Institute of Higher Learning

Requested Funds 32,219.00

January 2004, Co-PI

Bahamian Island Precipitation

Submitted to the National Science Foundation

Requested Funds 376,999.00

February 2003, Co-PI

NSF

Meso-Gamma Scale Storm Events on San Salvador Bahamas

Requested Funds 373,444.00

August 2002, Co-PI

NSF

A new Scale for Island Precipitation

Requested Funds 85,334.00

November 2001, Co-PI

Evaluating Climate and Hydrological Changes of the Tombigbee River and Buttahatchie River Watersheds in Northeast Mississippi from Paleochannels. Requested Funds

11,625.00

March 2001, PI

The Relationship Between Climatic Variation and Giant Panda Behavior/Response at the Memphis Zoo, Memphis, Tennessee

Requested Funds 95,057.00

January 2001, Co-PI

Development and Validation of Remote Sensing Technology Applications to Facilitate the Mississippi Department of Environmental Quality's "Delisting" CWA § 303(d)

Evaluated Waters – Pesticides.

Requested funds: 255,179

## **ACTIVE PROFESSIONAL MEMBERSHIPS AND POSITIONS**

National Weather Association

Associate Editor, NWA Digest  
Seal of Approval Testing Chair  
Publications Committee

American Association of State Climatologists

State Climatologist, Mississippi

American Meteorological Society

Association of American Geographers

Southeastern Division of the Association of American Geographers

Editorial Board

Journal of Geography and Natural Hazards

Journal of Geology and Geosciences

## **PROFESSIONAL AWARDS**

2008-2009 Phil and Kari Oldham, Mentor of the Year Award, College of Arts & Sciences, Mississippi State University.

2011 Co-Researcher of the Month (September), College of Arts & Sciences, Mississippi State University

2014 Public Educator of the Year Award, National Weather Association.