

## Todd Austin Murphy

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Department of Atmospheric Science  
University of Louisiana at Monroe  
Monroe, LA 71209  
Office: 318.342.3428  
E-mail: murphy@ulm.edu

## EDUCATION

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2015            **University of Alabama in Huntsville**, Huntsville, AL  
                  **Ph.D.**, Atmospheric Science  
2010            **Ph.D.**, Atmospheric Science  
                  **M.S.**, Atmospheric Science  
  
2008            **University of South Alabama**, Mobile, AL  
                  **B.S.**, Meteorology

## PROFESSIONAL EXPERIENCE

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2014-            **Dept. of Atmospheric Science, University of Louisiana at Monroe**, Monroe, LA  
                  Assistant Professor  
  
2012-2014      **Dept. of Atmospheric Science, University of Alabama in Huntsville**, Huntsville, AL  
                  Instructor  
2008-2014      **Dept. of Atmospheric Science, University of Alabama in Huntsville**, Huntsville, AL  
                  Graduate Research Assistant  
  
2007-2008      **Dept. of Earth Sciences, University of South Alabama**, Mobile, AL  
                  Teaching Assistant

## GRANTS AND CONTRACTS

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2018-19      **Murphy, T.A.**, J. Bhattacharjee, M.S. Chenoweth, and K.D. Leppert: *MRI: Acquisition of a Portable Doppler Wind Lidar for Atmospheric Science Research and Education*. NSF: MRI program. \$274,857 (extramural grant) *recommended for funding*

2018-19      **Murphy, T.A.**, Sounding Sites during MESO18-19. NOAA: VORTEX-SE program. \$33,489 (extramural contract)

2018            **Murphy, T.A.**, Radar and sounding support during targeted Spring 2018 VORTEX-SE deployments. NOAA: VORTEX-SE program. \$12,190 (extramural contract)

2016-18      Brown, M., **T.A. Murphy**, and R.A. Wade: *Understanding the Variability of Southeastern Severe Storm Environments using Mobile Soundings during VORTEX-SE*. NOAA: FY16 VORTEX-SE program. Collaborating institutions: Mississippi State University and University of Alabama in Huntsville. \$247,750 (\$83,800 ULM part) (extramural grant)

2016-17      **Murphy, T.A.**, and K.D. Leppert: *AWIPS-II Infrastructure Upgrade at the University of Louisiana at Monroe*. UCAR: 2016 Unidata Equipment Awards. \$17,904 (+ \$1,068 ULM match) (extramural grant)

2016-17      **Murphy, T.A.**, and K.D. Leppert: *Integrating Research and Education Through Continuous Atmospheric Temperature and Moisture Profiles*. Louisiana Board of Regents: Traditional Enhancement Program. \$139,500 (+ \$21,495 ULM match) (extramural grant)

- 2015-16 Brown, M., M.D. Parker, and **T.A. Murphy**: *Understanding the Variability and Predictability of Southeastern Severe Storm Environments using Mobile Soundings during VORTEX-SE*. NOAA: VORTEX-SE program. Collaborating institutions: Mississippi State University and North Carolina State University. \$227,038 (\$58,519 ULM part) (extramural grant)
- 2016 **Murphy, T.A.**, *The Weather Channel Guest Speaker*. ULM CAES: Salary Recovery Funds. \$950 (intramural grant)
- 2015 **Murphy, T.A.**, *Mobile Radar Truck Hands-On Exhibit & Seminar*. ULM CAES: Salary Recovery Funds. \$750 (intramural grant)
- 2015 **Murphy, T.A.**: *The University of Louisiana at Monroe's Polarimetric Doppler Weather Radar – Teaching, Research, and Operations*. ULM CAES: Dean's Faculty Support Fund for travel to present at 37<sup>th</sup> Conference on Radar Meteorology. \$832 (intramural grant)
- 2015 **Murphy, T.A.**: *ULM Synoptic Meteorology Teaching Laboratory Computer Update*. ULM CAES: Computer Refresh Funds (via proposal submitted to Salary Recovery Funds). \$3,700 (intramural grant)

#### PROPOSED (NOT FUNDED):

- 2017-19 **Murphy, T.A.**, R.A. Wade, and W. Terwey: *Understanding the Variability of Southeast Severe Environments in the Presence of Complex Terrain*. NOAA: FY17 VORTEX-SE program. Collaborating institutions: University of Alabama in Huntsville and University of South Alabama. \$295,004 (\$86,454 ULM part) (extramural grant)
- 2017-20 Buban, M.S., R. Dobosy, T.R. Lee, T. P. Meyers, and **T.A. Murphy**: *Collaborative Research for PREEVENTS Track 2: Using observations from the VORTEX-SE to improve predictions of tornado formation by identifying land surface forcings responsible for convection initiation and low-level vorticity enhancement*. NSF: PREEVENTS program. Collaborating institutions: NOAA/ARL/ATDD and Oak Ridge Associated Universities. \$719,895 (\$90,746 ULM part) (extramural grant)
- 2015 Murillo, E., and **T.A. Murphy**: *Severity of Tornado Outbreaks in the Southeastern United States versus the Great Plains*. NSF/Louisiana Board of Regents (LA EPSCoR SURE). \$4,500 (extramural grant). \*Scored 89% in reviews; funding approval at 90%. Student led proposal.

#### PEER-REVIEWED PUBLICATIONS

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- Murphy, T.A.**, R.A. Wade, and B.C. Carcione, 2016: Observations and operational considerations of the 4 June 2013 chaff event in north Alabama. *J. Operational Meteor.*, **4** (3), 34–45.
- Knupp K.R., **T.A. Murphy**, T.A. Coleman, R.A. Wade, S. Mullins, C.J. Schultz, E.V. Schultz, L. Carey, A. Sherrer, E.W. McCaul, B. Carcione, S. Latimer, A. Kula, K. Laws, P.T. Marsh, and K. Klockow, 2014: Meteorological overview of the devastating 27 April 2011 tornado outbreak. *Bull. Amer. Meteor. Soc.*, **95**, 1041–1062.
- Coleman, T.A., **T.A. Murphy**, K.R. Knupp, L.D. Carey, and M.E. Anderson, 2014: Extensive observations of the transition region of a winter storm. *J. Operational Meteor.*, **2** (1), 1–12.
- Murphy, T.A.**, and K.R. Knupp, 2012: An analysis of cold season supercell storms using the synthetic dual-Doppler technique. *Mon. Wea. Rev.*, **141**, 602–624.

## OTHER FORMAL PUBLICATIONS

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**Murphy, T.A.**, 2015: Interactions of wave-like reflectivity segments with deep convection and subsequent mesocyclogenesis and tornadogenesis. University of Alabama in Huntsville, 194 pp. (Ph.D. dissertation)

**Murphy, T.A.**, 2010: Super Tuesday storm variability. University of Alabama in Huntsville, 173 pp. (M.S. thesis)

## CONFERENCE PROCEEDINGS

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*Annotations: \*Student Author; +Presentation Award*

**Murphy, T.A.**, C. Entremont, D. Lamb, and C. Palmer, 2018: Early Operational Successes of the University of Louisiana at Monroe's S-band Polarimetric Doppler Radar. *15<sup>th</sup> Southeastern Coastal and Atmospheric Processes Symposium*, Mobile, AL, University of South Alabama.

**Murphy, T.A.**, R.A. Wade, A.W. Lyza\*, and K.R. Knupp, 2018: An Examination of Convective Enhancement within Complex Terrain on 5 April 2017 during VORTEX-SE. *15<sup>th</sup> Southeastern Coastal and Atmospheric Processes Symposium*, Mobile, AL, University of South Alabama.

Wade, R.A., **T.A. Murphy**, D.D. Turner, T.R. Lee, M. Buban, P. Pangle\*, A.W. Lyza\*, and K.R. Knupp, 2017: Understanding the Variability of Southeastern Severe Storm Environments using Mobile Soundings during VORTEX-SE. *3<sup>rd</sup> VORTEX-SE Science Workshop*, Huntsville, AL.

Brown, M., M.D. Parker, **T.A. Murphy**, and A. Wade, 2017: Understanding the Variability and Predictability of Southeastern Severe Storm Environments using Mobile Soundings during VORTEX-SE. *3<sup>rd</sup> VORTEX-SE Science Workshop*, Huntsville, AL.

Wade, R.A., **T.A. Murphy**, D.D. Turner, T.R. Lee, M. Buban, P. Pangle\*, A.W. Lyza\*, and K.R. Knupp, 2017: A Comparison of Atmospheric Profilers and Environmental Soundings in Complex Terrain during the 2017 VORTEX-SE Field Campaign. *38<sup>th</sup> Conference on Radar Meteorology*, Chicago, IL, Amer. Meteor. Soc., P288.

**Murphy, T.A.**, C. Entremont, B. Hughes, D. Lamb, and M. Mayeaux, 2017: Early Operational Successes of the University of Louisiana at Monroe's S-band Polarimetric Doppler Radar. *38<sup>th</sup> Conference on Radar Meteorology*, Chicago, IL, Amer. Meteor. Soc., P223

**Murphy, T.A.**, R.A. Wade, A.W. Lyza\*, and K.R. Knupp, 2017: An Examination of Convective Enhancement within Complex Terrain on 5 April 2017 during VORTEX-SE. *38<sup>th</sup> Conference on Radar Meteorology*, Chicago, IL, Amer. Meteor. Soc., P150.

**Murphy, T.A.**, T. Aydell\*, I. Bordelon\*, S. Kreller\*, A. Melancon\*, H.M. Mallinson\*, and E.M. Murillo\*, 2016: An Overview of ULM Participation in the VORTEX-SE Field Program. *28<sup>th</sup> Conference on Severe Local Storms*, Portland, OR, Amer. Meteor. Soc., P78.

\*Lyza, A.W., **T.A. Murphy**, D.M. Conrad\*, and K.R. Knupp, 2016: Environmental Evolution and Storm-Scale Observations of the 31 March 2016 Northern Alabama Tornado Event during VORTEX-SE. *28<sup>th</sup> Conference on Severe Local Storms*, Portland, OR, Amer. Meteor. Soc.

\*Mallinson, H.M., and **T.A. Murphy**, 2016: Comparing Environmental Conditions of Convective Storms Producing Damaging Winds and Hail. *LSU-S Student Scholars Forum*, Shreveport, LA, LSU-Shreveport.

+\*Murillo, E.M., and **T.A. Murphy**, 2016: Classification and Analysis of Tornado Outbreaks in Dixie Alley and Tornado Alley. *LSU-S Student Scholars Forum*, Shreveport, LA, LSU-Shreveport. **Awarded "Best Undergraduate Oral Presentation"**

- \*Mallinson, H.M., and **T.A. Murphy**, 2016: Comparing Environmental Conditions of Convective Storms Producing Damaging Winds and Hail. *15<sup>th</sup> Annual American Meteorological Society Student Conference*, New Orleans, LA, Amer. Meteor. Soc., S99.
- \*Murillo, E.M., and **T.A. Murphy**, 2016: Classification and Analysis of Tornado Outbreaks in Dixie Alley and Tornado Alley. *15<sup>th</sup> Annual American Meteorological Society Student Conference*, New Orleans, LA, Amer. Meteor. Soc., S87.
- \*Lisauckis, C.A., K.R. Knupp, **T.A. Murphy**, T.A. Coleman, and A.W. Lyza\*, 2016: Investigating Tornadogenesis Events within the ARMOR Domain. *15<sup>th</sup> Annual American Meteorological Society Student Conference*, New Orleans, LA, Amer. Meteor. Soc., S78.
- Murphy, T.A.**, A.T.C. Hanks, and E.A. Pani, 2015: The University of Louisiana at Monroe's Polarimetric Doppler Radar – Teaching, Research, and Operations. *37<sup>th</sup> Conference on Radar Meteorology*, Norman, OK, Amer. Meteor. Soc., P264.
- \*Lisauckis, C.A., K.R. Knupp, **T.A. Murphy**, and A.W. Lyza\*, 2015: Storm Mode Variability over northern Alabama within the Domain of the ARMOR Radar. *37<sup>th</sup> Conference on Radar Meteorology*, Norman, OK, Amer. Meteor. Soc.,
- Wade, R., K. Knupp, D. Phillips, **T.A. Murphy**, A. Sherrer, A. Mayhew, A. Lyza\*, and B. Freitag\*, 2015: MIPS observations of the kinematic, thermodynamic, and microphysical characteristics of lake-effect snow bands during The Ontario Winter Lake-effect Systems (OWLeS) Field Project. *37<sup>th</sup> Conference on Radar Meteorology*, Norman, OK, Amer. Meteor. Soc.,
- \*Lyza, A.W., **T.A. Murphy**, and K. Knupp, 2014: Overview of the 28-29 April 2014 Tennessee Valley Tornado Outbreak. *27<sup>th</sup> Conference on Severe Local Storms*, Madison, WI, Amer. Meteor. Soc., P120.
- Murphy, T.A.**, and K.R. Knupp, 2014: Prevalence and characteristics of atmospheric waves in severe weather environments. *94<sup>th</sup> American Meteorological Society Annual Meeting*, Atlanta, GA, Amer. Meteor. Soc., P837.
- Murphy, T.A.**, T.A. Coleman, and K.R. Knupp, 2013: Observations and analysis of atmospheric waves during the historic April 27, 2011 tornado outbreak. *38<sup>th</sup> National Weather Association Annual Meeting*, Charleston, SC, Nat. Wea. Assoc.
- Murphy, T.A.**, T.A. Coleman, and K.R. Knupp, 2013: Observations and analysis of atmospheric waves during the historic April 27, 2011 tornado outbreak. *36<sup>th</sup> Conference on Radar Meteorology*, Breckenridge, CO, Amer. Meteor. Soc., P258.
- Murphy, T.A.**, T.A. Coleman, and K.R. Knupp, 2013: Observations and analysis of atmospheric waves during the historic April 27, 2011 tornado outbreak. *11<sup>th</sup> Annual Southeast Severe Storms Symposium*, Starkville, MS, Mississippi State University.
- Murphy, T.A.**, T.A. Coleman, and K.R. Knupp, 2012: Observations and analysis of atmospheric waves during the historic April 27, 2011 tornado outbreak. *26<sup>th</sup> Conference on Severe Local Storms*, Nashville, TN, Amer. Meteor. Soc., P107.
- Murphy, T.A.**, R.A. Wade, T.A. Coleman, and K.R. Knupp, 2012: Analysis and recent observations of wave interactions in North Alabama. *9<sup>th</sup> Southeastern Coastal and Atmospheric Processes Symposium*, Mobile, AL, University of South Alabama.
- Murphy, T.A.**, R.A. Wade, T.A. Coleman, and K.R. Knupp, 2012: Analysis and recent observations of wave interactions in North Alabama. *10<sup>th</sup> Annual Southeast Severe Storms Symposium*, Starkville, MS, Mississippi State University.

- Murphy, T.A.**, T.A. Coleman, R.A. Wade, and K.R. Knupp, 2012: Radar overview and visual documentation of the 27 April 2011 tornadic outbreak. *92<sup>nd</sup> American Meteorological Society Annual Meeting*, New Orleans, LA, Amer. Meteor. Soc., J1.1.
- +**Murphy, T.A.**, R.A. Wade, T.A. Coleman, and K.R. Knupp, 2011: Observations and operational importance of wave like features interacting with quasi-linear convective systems. *36<sup>th</sup> National Weather Association Annual Meeting*, Birmingham, AL, Nat. Wea. Assoc. **Awarded “Best Graduate Student Oral Presentation”**
- Murphy, T.A.**, T.A. Coleman, and K.R. Knupp, 2011: Preliminary observations of convective initiation and mesocyclone interactions with atmospheric waves on 27 April 2011. *36<sup>th</sup> National Weather Association Annual Meeting*, Birmingham, AL, Nat. Wea. Assoc.
- Murphy, T.A.**, R.A. Wade, T.A. Coleman, and K.R. Knupp, 2011: Observations of wave-like features interacting with a tornadic line-echo wave pattern. *35<sup>th</sup> Conference on Radar Meteorology*, Pittsburgh, PA, Amer. Meteor. Soc., 4B.6.
- Murphy, T. A.**, R.A. Wade, T.A. Coleman, and K.R. Knupp, 2011: Recent radar observations of wave-like features interacting with quasi-linear convective systems. *35<sup>th</sup> Conference on Radar Meteorology*, Pittsburgh, PA, Amer. Meteor. Soc., 191713.
- Murphy, T.A.**, and K.R. Knupp, 2010: Super Tuesday storm variability. *25<sup>th</sup> Conference on Severe Local Storms*, Denver, CO, Amer. Meteor. Soc., P8.20.
- Murphy, T.A.**, and K.R. Knupp, 2010: Super Tuesday storm variability. *7<sup>th</sup> Southeastern Coastal and Atmospheric Processes Symposium*, Mobile, AL, University of South Alabama.
- Murphy, T.A.**, and K.R. Knupp, 2009: Variability in the kinematic structure of Super Tuesday storms. *34<sup>th</sup> Conference on Radar Meteorology*, Williamsburg, VA, Amer. Meteor. Soc., 5B.2.
- Murphy, T.A.**, and M. Anderson, 2009: A North Alabama winter weather event: From a dual-pol perspective. *6<sup>th</sup> Southeastern Coastal and Atmospheric Processes Symposium*, Mobile, AL, University of South Alabama.

## ADDITIONAL PRESENTATIONS

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### Invited presentations

Mar. 2017	“ULM Radar Update,” NWS Shreveport Monroe SKYWARN Class
Oct. 2016	“ULM Radar Update,” NWS Shreveport Monroe SKYWARN Class
Jun. 2016	“VORTEX-SE: Year 1 Review & Year 2 Preview,” Central Mississippi AMS/NWA Chapter
Apr. 2016	“Tornado Climatology & the ULM Polarimetric Doppler Radar,” Louisiana Bankers Association Emergency Preparedness Meeting
Jul. 2015	“ULM’s Polarimetric Doppler Weather Radar,” Southeast Texas/Southwest Louisiana AMS/NWA Chapter
May 2015	“ULM’s Polarimetric Doppler Weather Radar,” Central Mississippi AMS/NWA Chapter
Feb. 2015	“Atmospheric Gravity Waves,” Science Speaker Series, Louisiana School for Math, Science, and the Arts
Apr. 2014	“Atmospheric Gravity Waves,” University of Louisiana at Monroe
Mar. 2014	“Gravity Wave Interactions with Convection,” Nashville Severe Weather Awareness Day
Mar. 2013	“April 27, 2011 Tornado Outbreak,” Nashville Severe Weather Awareness Day
Jan. 2013	“April 27, 2011 Tornado Outbreak,” Middle Tennessee Chapter of the NWA
Feb. 2012	“Doppler Radar and Polarimetric Analysis,” 3 <sup>rd</sup> Annual Rocket City Weather Fest
Sep. 2011	“April 27, 2011 Tornado Outbreak,” 2 <sup>nd</sup> Annual Rocket City Weather Fest

## TEACHING EXPERIENCE

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*Annotations: \*New course development by T. Murphy.*

### **University of Louisiana at Monroe**

Earth Science (GEOS 1001)\*: SU15, SU17, SU18  
Natural Disasters and Hazards (GEOS 1002)\*: SU15, SU16, SU17, SU18  
Introduction to the Atmosphere (ATMS 1001): FA15, W16, SU17, W17, SU18  
Introduction to Severe Weather (ATMS 1002): SP15, SU15, SP16, SU16, SP17, SU17, SP18, SU18  
Basic Meteorology Lab I (ATMS 1003): FA15  
Weather Analysis and Forecasting (ATMS 2000): FA14, FA15, FA16, FA17  
Dynamic Meteorology I (ATMS 3005): SP15  
Dynamic Meteorology II (ATMS 3006): FA14  
Intermediate Weather Forecasting (ATMS 3025)\*: SP16, SP17, SP18  
Synoptic Meteorology Laboratory (ATMS 4003): FA14, FA15, FA16, FA17  
Mesoscale Meteorology (ATMS 4004): SP15, SP16, SP17, SP18  
Radar Meteorology (ATMS 4006)\*: SP16, SP18

### **University of Alabama in Huntsville**

Severe & Hazardous Weather (ATS/ESS 112): 2012–2014 *substitute instructor*  
Synoptic Meteorology (ATS/ESS 452): SP12, SP13  
Forecasting Mesoscale Processes (ATS 454/554): SP14  
Atmospheric Thermodynamics and Cloud Physics (ATS 541): 2012–2014 *substitute instructor*  
Ground Based Remote Sensing (ATS 671): 2012–2014 *substitute instructor*

### **University of South Alabama**

Dynamic Meteorology I (MET 354): Fall 2007 *teaching assistant*  
Dynamic Meteorology II (MET 355): Spring 2008 *teaching assistant*  
Computer Applications in Meteorology (MET 420): Summer 2008 *teaching assistant*

## LEADERSHIP, SERVICE, AND OUTREACH

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### **University of Louisiana at Monroe**

2018- MESO18-19 Field Program Planning Committee (NOAA VORTEX-SE Program)  
2018- Program Coordinator, Atmospheric Science  
2017- UCAR Member Representative for ULM  
2016- Doctoral Committee Member, Tony Lyza, Dept. of Atmos. Science, Univ. Alabama in Huntsville  
2015- Faculty Advisor, ULM HAWCS (High Altitude Weather Collection with Soundings) balloon team  
2014- Webmaster, Department of Atmospheric Science  
2014- Faculty Advisor, ULM Student Chapter of the American Meteorological Society  
2014- Student Recruitment Coordinator, Department of Atmospheric Science  
2018 NOAA, VORTEX-SE Research Program, Proposal Reviewer  
2018 Member, ULM Emergency Preparedness Committee  
2016-17 Member, Mathematics Faculty Search Committee  
2017 National Science Foundation (NSF), Major Research Instrumentation (MRI) Proposal Review Panel  
2017 Reviewer, AMS Journal of Applied Meteorology and Climatology  
Apr. 2018 AIC “Innovators Among Us” Weather Balloon Demonstration  
Apr. 2018 ULS “Day at the Capitol” Representative and Weather Balloon Launch  
Apr. 2018 Weather Balloon Launch, Louisiana Purchase Gardens & Zoo Easter Eggstravaganza  
Nov. 2017 Research participant and presentation, VORTEX-SE Science Workshop  
Oct. 2017 Radar Ribbon Cutting Tour Leader & Media Interviews (KNOE, KTVE, KEDM, LA Radio Network)  
Sept. 2017 Weather Balloon Launch and Speaker, Grace Episcopal School 4<sup>th</sup> Grade Class  
June 2017 Co-Organizer and Presentation, ULM Radar Partners Meeting with NWS and GOHSEP  
Apr. 2017 Guest Seminar on Tornadoes & Weather Balloon Launch, Lee Junior High School  
Apr. 2017 Weather Balloon Launch, Louisiana Purchase Gardens & Zoo Easter Eggstravaganza  
Feb. 2017 Collaboration Visit, Louisiana Universities Marine Consortium

Feb. 2017 Weather Balloon Launch, LearningTECH/Quest School  
 2016 Member, College of Arts, Education, & Sciences Fundraising Committee  
 Nov. 2016 Research participant and presentation, VORTEX-SE Workshop and Planning Meeting  
 Sept. 2016 Interview (local TV), KNOE, Recent ATMS Grants  
 June 2016 Weather Balloon Launch, Girls Power Up STEM Summer Camp  
 Feb. 2016 Weather Balloon Launch, Jesus Good Shepherd School  
 Feb. 2016 Interview (local TV), KNOE, Benefits of ULM Radar  
 Feb. 2016 Interview (newspaper), The News Star, ULM participation in Vortex-SE  
 Feb. 2016 Judge, LSU-S Student Scholars Forum  
 2014-15 Member, School of Sciences Scholarship and Awards Committee  
 2014-15 Member, Atmospheric Science Faculty Search Committee  
 Nov. 2015 Interview (local TV), KTVE, ULM participation in Vortex-SE  
 Nov. 2015 Interview (local TV), KNOE, ULM participation in Vortex-SE  
 Nov. 2015 Research participant, VORTEX-SE Steering Workshop and Planning Meeting  
 Oct. 2015 ULM ATMS representative, STEM Recruiting at St. Fredericks Catholic High School  
 Oct. 2015 Early Career Faculty Guest, UCAR Members Meeting  
 Sep. 2015 Interview (local radio), KEDM, Vortex-SE and ULM Radar  
 Jul. 2015 Instructor, Bayou Discovery Camp  
 May 2015 ULM representative, WiFi Committee, National Weather Service – Jackson, MS  
 Feb. 2015 Research seminar & recruiting visit, Louisiana School for Math, Science, and the Arts  
 Feb. 2015 Judge, Louisiana High School Technology Online Challenge

#### **Undergraduate Researchers Supervised at the University of Louisiana at Monroe**

Spring 2018 VORTEX-SE field observation team (18 students)  
 Spring 2018 Sachin Thapa, ULM Emerging Scholars Program (\$500 internal grant)  
 Fall 2017 Brandon Cohen, ULM Emerging Scholars Program (\$500 internal grant)  
 Spring 2017 Taylor Aydell, Isaiah Bordelon, Brandon Cohen, Collin Landry, Alex Melancon, Sisam Shrestha, Nicholas Slaughter, and Sachin Thapa (VORTEX-SE field balloon team)  
 Fall 2016 Taylor Aydell, ULM Emerging Scholars Program (\$500 internal grant)  
 Fall 2016 Devorea McMillian, ULM Emerging Scholars Program (\$500 internal grant)  
 Spring 2016 Taylor Aydell, Isaiah Bordelon, Stephen Kreller, Holly Mallinson, Alex Melancon, and Elisa Murillo (VORTEX-SE field balloon team)  
 Spring 2016 John Dopieralla, ULM Emerging Scholars Program (\$500 internal grant)  
 Spring 2016 Sisam Shrestha, ULM Emerging Scholars Program (\$500 internal grant)  
 2015-16 Elisa Murillo, “Severity of Tornado Outbreaks in the Southeastern United States versus the Great Plains,” *unfunded research project*  
 2015-16 Holly Mallinson, “Characteristics of Damaging Wind Events,” *unfunded research project*  
 Fall 2015 Collin Landry, ULM Emerging Scholars Program (\$500 internal grant)  
 Fall 2015 Cameron Dauterive, ULM Emerging Scholars Program (\$500 internal grant)

#### **University of Alabama in Huntsville**

2008-14 Public tour lead for UAH severe weather research vehicles  
 Exhibit at 94<sup>th</sup> Annual AMS Meeting, Atlanta, GA (2014)  
 STEM outreach event at Hampton Cover Middle School, Huntsville, AL (2013)  
 AMS outreach event at Buckhorn High School, Huntsville, AL (2013)  
 41<sup>st</sup> Conference on Broadcast Meteorology, Nashville, TN (2013)  
 11<sup>th</sup> Annual Southeast Severe Storms Symposium, Starkville, MS (2013)  
 9<sup>th</sup> Southeastern Coastal and Atmospheric Processes Symposium, Mobile, AL (2012)  
 3<sup>rd</sup> Rocket City Weather Fest, Huntsville, AL (2012)  
 2<sup>nd</sup> Rocket City Weather Fest, Huntsville, AL (2011)  
 Various elementary, middle, and high school groups (2008-14)  
 2011-12 Graduate Student Representative, Department of Atmospheric Science  
 2011-12 Lead graduate student for new student recruiting, Department of Atmospheric Science  
 2011, 12 Planning committee and volunteer, Rocket City Weather Fest  
 2011 National Weather Service Emergency Response Meteorologist (ER-MET) (assisted in tornado track surveys after 27 April 2011 outbreak)

### **Undergraduate Researchers Supervised at the University of Alabama in Huntsville**

- 2014 Chris Lisauckis, “A Climatology of Wave-like Reflectivity Segments,” senior capstone project  
2013 Elizabeth Lawson, “Synoptic Analysis of the 27 April 2011 Tornado Outbreak,” senior capstone project

### **ADDITIONAL RESEARCH OR PROFESSIONAL ACTIVITIES**

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- 2014- Science-PI, ULM polarimetric S-band Doppler weather radar  
2011- Member, National Weather Association  
2008- Member, American Meteorological Society

#### **Research Field Deployments**

- 2018-19 MESO18-19 (sub-field campaign under VORTEX-SE program)  
2016-18 Verification of the Origins of Rotation in Tornadoes Experiment – Southeast (VORTEX-SE)  
2013-14 Ontario Winter Lake-effect Systems (OWLeS)  
2011-13 Atmospheric Boundary Identification and Delineation Experiment III (ABIDE-III)  
2008-12 UAH Tornadoes & Hurricanes, Observations, & Research (THOR)

- Radar analysis experience (single and multi-Doppler) using the following software: SOLOII, SOLO3, NCAR RadX, REORDER, CEDRIC, GRLevel2 Analyst, Py-ART
- Data analysis and visualization using the following software: IDL, NCL, Python, PV-Wave, Fortran
- Experience operating and troubleshooting the following research instruments: S-, C-, and X-band polarimetric Doppler radars, Doppler wind profilers, microwave profiling radiometers, lidar ceilometers, Doppler wind lidars, parsivel disdrometers, electric field mills, hotplate precipitation sensors, high-resolution time-lapse weather camera, iMet mobile sounding system
- Actively manage the following research instruments at ULM: S-band polarimetric Doppler radar, Radiometrics 35-channel microwave radiometer, two iMet mobile sounding systems, OTT PARSIVEL disdrometer

### **AWARDS AND HONORS**

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- 2018 Outstanding Faculty Award for Teaching, College of Arts, Education, and Sciences, ULM  
2017-19 Endowed Professor in Geosciences, ULM  
2011 Graduate Research Assistant of the Year, University of Alabama in Huntsville  
2011 Best Graduate Student Oral Presentation, 36<sup>th</sup> Annual National Weather Association Meeting  
2007 Dr. Bill Williams Endowment Scholarship, University of South Alabama