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Curriculum Vitae
Department of Geography
University of South Carolina, Columbia, SC 29208
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EDUCATION

2006, Ph.D., Natural Resources Management and Engineering, University of Connecticut, Storrs, CT. Dissertation: *Aerosol transport and dispersion measurements in the near surface boundary layer* (advisor: David R. Miller)
2002, M.S., Electrical Engineering, The Pennsylvania State University, University Park, PA. Thesis: *A Rayleigh Lidar system for studying middle atmospheric dynamics over Maui* (advisor: Timothy J. Kane)
2000, B.S.E. with Honors, Electrical Engineering, University of Connecticut, Storrs, CT

EMPLOYMENT

2025-present: Professor, University of South Carolina, Department of Geography
2016-2024: Associate Professor, University of South Carolina, Department of Geography
2010-2016: Assistant Professor, University of South Carolina, Department of Geography
2008-2010: Assistant Professor, Louisiana State University, Department of Environmental Sciences
2006-2008: Post-Doctoral Research Fellow, University of Connecticut, Department of Natural Resources Management and Engineering

Additional Appointments

2020 – present: Pearce Faculty Fellow, University of South Carolina Honors College
2009- 2019: Adjunct Professor, Louisiana State University, School of Plant, Environmental, and Soil Sciences
2007-2012: Assistant Professor in Residence, University of Connecticut, Department of Natural Resources Management and Engineering

PUBLICATIONS

(*denotes student lead-authored publication)

Books

Hiscox, A.L, editor, “Conceptual Boundary Layer Meteorology”, Academic Press/Elsevier, 2022. <https://doi.org/10.1016/C2018-0-01664-3>

Referred Journal Articles

Sun, J., Bhimireddy, S. R., Kristovich, D. A. R., Wang, J., **Hiscox, A. L.**, Mahrt, L., & Petty, G. W. (2025). Impacts of Terrain Slope and Surface Roughness Variations on Turbulence Generation in the Nighttime Stable Boundary Layer. *Journal of Geophysical Research: Atmospheres*, 130(6). <https://doi.org/10.1029/2024jd041815>

- Bhimireddy, S.R., J. Sun, J. Wang, D. A. R. Kristovich, and **A. L. Hiscox**, (2024), Effect of Small-Scale Topographical Variations and Fetch from Roughness Elements on the Stable Boundary Layer Turbulence Statistics, *Boundary-Layer Meteorology*, 190, 3 (2024) <https://doi.org/10.1007/s10546-023-00855-5>
- Hiscox**, A. Bhimireddy, S. R, J. Wang, D. A. Kristovich, J. Sun, E. G. Patton, S. P. Oncley, and W.O. Brown, (2023). Exploring Influences of Shallow Topography in Stable Boundary Layers: The SAVANT Field Campaign. *Bulletin of the American Meteorological Society*, 104, E520-E541.
- Bhimireddy, S. R, J. Wang, **A. Hiscox**, and D. A. Kristovich. (2022). Influence of Stability, and Surface Roughness on Turbulence during the Stable Atmospheric Variability and Transport (SAVANT) Field Campaign, *Journal of Applied Meteorology and Climatology*, 61 (9), 1273-1289.
- Dattamudi, S., J.J. Wang, S.K. Dodla, R. DeLaune, **A. Hiscox**, H. Viator, C. Jeong (2020). Mass concentration and size distribution of particles released from harvesting and biomass burning of sugarcane, *Agricultural and Environmental Letters*, 5,1, doi:10.1002/ael2.20028
- *McCombs, A.G., **A.L. Hiscox**, and A.E. Suyker, (2019) Point to Grind Conversion in Flux Footprints: Implications of Method Choice and Spatial Resolution for Regional Scale Studies, *Boundary Layer Meteorology* 172:457-479 doi:10.1007/s10546-019-00455-2
- Dattamudi, S. J.J. Wang, S.K. Dodla, H.P. Viator, R. DeLaune, **A. Hiscox**, M. Darapuneni, C. Jeong, P. Colyer, (2019) Greenhouse Gas Emissions as Influenced by Nitrogen Fertilization and Harvest Residue Management in Sugarcane Production, *Agrosystems, Geosciences & Environment*, 2:1 doi:10.2134/age2019.03.0014
- *McCombs, A.G., **A.L. Hiscox**, C. Wang, A. Desai, A. Suyker, and S. Biraud, (2018) Carbon flux phenology from the sky: Evaluation for maize and soybean, *J. of Atmospheric and Oceanic Tech.* 35: 877-892, <https://doi.org/10.1175/JTECH-D-17-0004.1>
- Richardson, B., T. M. Strand, H. Thistle, **A. Hiscox**, M. O. Kimberley, and W. C. Schou (2017), Influence of a Young Pinus Radiata Canopy on aerial spray drift, *Trans. ASABE* 60(6): 1851-1861 doi:<https://doi.org/10.13031/trans.12497>. **ASABE Superior Paper Award**
- Hiscox**, **A.L.**, and S. Flecher. 2016. Introducing a smoke prediction tool for small scale agricultural burn management. *Southeastern Geographer*, **56** (3): 297-316., doi:10.1353/sgo.2016.0035.
- Shook, E., M.E. Hodgson, S.Wang, B.Behzad, K.Soltani, **A.L. Hiscox**, and J. Ajayakumar. 2016. CyberGIS and Parallel Cartographic Modeling. *International Journal of Geographical Information Science*. **30**:2355–2376, doi:10.1080/13658816.2016.1172714.
- Hiscox**, **A.L.**, M.R. Rudnicki, and D.R. Miller, 2015. Understanding turbulent kinetic energy (TKE) stationarity within a forest canopy. *Agricultural and Forest Meteorology* 214-215:124-133.
- Hiscox**, **A.L.**, S. Flecher, J.J.Wang, and H.P. Viator, 2015. A comparative analysis of potential impact area of common sugar cane burning methods. *Atmospheric Environment* 106: 154-164.
- Bagtzoglou, A. C., E. D. Kenney, **A. Hiscox**, and D. R. Miller, 2014. Optimization-Based Atmospheric Plume Source Identification. *Environmental Forensics* 15:147-158.
- Holmen, B. A., J. Kasumba, **A. Hiscox**, J. Wang, and D. R. Miller, 2013. Mechanized and Natural Soil-to-Air Transfer of Trifluralin and Prometryn from a Cotton Field in Las Cruces, New Mexico. *Journal of Agricultural and Food Chemistry* 61:9776-9783.

- *Granucci, D.V., M. Rudnicki, **A.L. Hiscox**, H-B. Su, and D.R. Miller, 2013. Quantifying the effects of freezing on tree way frequency. *Agricultural and Forest Meteorology* 168: 10-14.
- Miller, D.R., L.R.Khot, **A.L. Hiscox**, M. Salyani, T.D. Walker, and M. Farooq, 2012. Effect of Atmospheric Conditions on Near ground Coverage of Fogger Applications in a Desert Surface Boundary Layer. *Transactions of the ASABE* 55(2): 351-361.
- *Haggard, B.J., D. Weindorf, and **A. Hiscox**, 2012. Evaluation of the Predictive Capabilities of Landsat 7 ETM+ on 50 cm Mean Annual Soil Temperature in the Transylvanian Plain, Romania. *European Journal of Soil Science* 63(2): 299-310.
- Wang, J., T. W. Sammis, D. R. Miller, **A. L. Hiscox**, D. Granucci, B. Holmén, J. Kasumba, M. K. Shukla, and S. O. Dennis, 2011. Simulated regional PM10 dispersion from agricultural tilling operations using Hysplit4. *Transactions of the ASABE* 54(5): 1659-1667.
- Khot, L.R., D.R. Miller, **A.L. Hiscox**, M. Salyani, T.D. Walker, and M. Farooq, 2011. Lidar extrapolation of droplet catch measurements in aerosol application treatments. *Atomization and Sprays* 21(2):149-158
- *Kasumba, J., B. A. Holmen, **A. Hiscox**, J. Wang, and D. Miller, 2011. Agricultural PM10 emissions from cotton field disking in Las Cruces, NM. *Atmospheric Environment* 45(9):1668-1674.
- Wang, J., D. R. Miller, T. W. Sammis, **A.L. Hiscox**, W. Yang, and B. A. Holmén, 2010. Local dust emission factors for agricultural tilling operations. *Soil Science* 175: 194-200.
- Hiscox, A.L.**, D. R. Miller, and C. Nappo, 2010. Plume Meander and Dispersion in a Stable Boundary Layer. *Journal of Geophysical Research* 115: D21105 2156-2202.
- Nappo, C., **A. L. Hiscox**, and D. R. Miller. 2010. A Note on Turbulence Stationarity and Wind Persistence within the Stable Planetary Boundary Layer. *Boundary Layer Meteorology* 136(10): 165-174.
- Wang, J., **A. L. Hiscox**, D. R. Miller, T. H. Meyer, and T. W. Sammis. 2009. A Comparison of Lagrangian Model Estimates to Light Detection and Ranging (LIDAR) Measurements of Dust Plumes from Field Tilling. *Journal of the Air and Waste Management Association* 59: 1370-1378.
- Wang, J., **A. L. Hiscox**, D. R. Miller, T. H. Meyer, and T. W. Sammis. 2008. A Dynamic Lagrangian, Field-Scale Model of Dust Dispersion from Agriculture Operations. *Transactions of the ASABE* 51(5): 1763-1774.
- Nappo, C. J., D. R. Miller, and **A. L. Hiscox**. 2008. Wave-modified flux and plume dispersion in the stable boundary layer. *Boundary Layer Meteorology* 129(2): 211-223.
- Holmén, B. A., D. R. Miller, **A. L. Hiscox**, W. Yang, J. Wang, T. Sammis, and R. Bottoms. 2008. Near-source particulate emissions and plume dynamics from agricultural field operations. *Journal of Atmospheric Chemistry* 59: 117-134.
- Hiscox, A.L.**, D. R. Miller, B. A. Holmén, W. Yang, and J. Wang. 2008. Near field dust exposure from cotton field tilling and harvesting. *Journal of Environmental Quality* 37: 551-556.
- Hiscox, A. L.** and D. R. Miller. 2006. Dispersion of fine spray from aerial applications in stable atmospheric conditions. *Transactions of the ASABE* 49 (5): 1513-1520.
- Hiscox, A.L.**, C. J. Nappo, and D. R. Miller. 2006. A Note on the use of lidar images of smoke plumes to measure dispersion parameters in the stable boundary layer. *Journal of Oceanic and Atmospheric Technology* 23 (8): 1150-1154.
- Meyer, T. and **A.L. Hiscox**. 2005. Position errors caused by GPS height of instrument blunders. *Survey Review* 38(296): 262-273.

Book Chapters

Robertson, B. W., Dow, K., Cutter, S. L., Salinas, J., Carbone, G., **Hiscox, A.** (in press). Severe weather and infrastructure: A case study in communicating extreme heat risks with public health professionals. In K. K. Stephens & K. M. Faust (Eds.), *Handbook of infrastructure communication*. Wiley

Hiscox, A. 2022. Working in the in-between: Defining the boundary layer. In: *Conceptual Boundary Layer Meteorology*, A. Hiscox (ed). Academic Press, Cambridge, MA pp. 1–18. <https://doi.org/10.1016/B978-0-12-817092-2.00008-4>.

McCombs, A. and **A. L. Hiscox** 2022. Always in flux: The nature of turbulence. In: *Conceptual Boundary Layer Meteorology*, A. Hiscox (ed). Academic Press, Cambridge, MA pp. 19–35. <https://doi.org/10.1016/B978-0-12-817092-2.00005-9>

Kewei, Y., **A.L. Hiscox**, and R. DeLaune 2013. Greenhouse gas emissions by static chamber and eddy flux methods. In: *Method in Biogeochemistry of Wetlands*, R.D. DeLaune, Reddy, K.R., C.J. Richardson, and J. P. Megonigal (eds.). SSSA Book Series 10, Soil Science Society of America, Inc. Madison, WI., pp 427-438.

Hiscox, A. L. and M. Macaуда, 2012. Airborne toxic chemicals. In: *The Encyclopedia of Sustainability Science and Technology*, R. A. Meyers (ed), Springer, NY., pp 298-309.

Published Datasets

Lead PI for the following datasets related to SAVANT:

Hiscox, A., Benitez-Nelson, N. 2022. IOP CTEMPS DTS Data. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/CS2P-9DDT-K908>.

Wang, J., Kristovich, D., Hiscox, A. 2020. Dustrack Aerosol Data. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/2K8F-C4MC-HE05>.

Kristovich, D., Wang, J., Hiscox, A. 2020. UIUC Doppler Lidar Data. Version 0.1. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/H2RW-JG1C-NS0C>

Hiscox, A. 2020. USC Aerosol Lidar Data. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/P037-92A3-RH06>.

NCAR/EOL In-situ Sensing Facility. 2021. NCAR/EOL ISFS Surface Meteorology and Flux Products, 5-minute, geographic coordinate and tilt corrected winds. Version 2.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/NKWR-EYWS-5J0W>.

UCAR/NCAR - Earth Observing Laboratory. 2021. NCAR/EOL ISS Surface Meteorology Data. Version 2.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/GY8A-SFK9-1Y12>.

Petty, G. 2019. SAVANT Field Site Orthophoto and High Resolution DEM. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/9X98-348Q-V14>.

UCAR/NCAR - Earth Observing Laboratory. 2018. NCAR/EOL ISS All-sky Camera Imagery. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/T7AX-F06C-C501>

UCAR/NCAR - Earth Observing Laboratory. 2019. NCAR/EOL ISS Ceilometer Data. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/FCH1-5AVT-QV0E>

NCAR/EOL In-situ Sensing Facility. 2020. NCAR/EOL ISS 449 MHz Modular Wind Profiler Products, 5 and 30 minute Winds. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/K6J3-MJG4-RG0D>.

NCAR/EOL In-situ Sensing Facility. 2020. SAVANT: NCAR/EOL ISS 449 MHz Modular Wind Profiler Moments. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/GPV8-089T-HB0H>.

UCAR/NCAR - Earth Observing Laboratory. 2019. National Weather Service High Resolution Radiosonde Data. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/7GF7-DHHD-6E0S>.

NCAR/EOL In-situ Sensing Facility. 2020. SAVANT: NCAR/EOL ISS Sodar-RASS Data. Version 1.0. UCAR/NCAR - Earth Observing Laboratory. <https://doi.org/10.26023/PSDT-PFEP-YY09>.

Other published datasets:

Hiscox, April, 2022, "2017 Solar Eclipse Temperature and Wind Observations", <https://doi.org/10.7910/DVN/7C3W40>, Harvard Dataverse, V1

Published Conference Proceedings

Hodgson, M.E., A. McCombs, A. Hiscox, 2015. Sensitivity of Flux Footprint Modelling to Geographic Resolutions and Autocorrelation. *Journal for Geographic Information Science: GI Forum*. S. 90 – 93 [doi:10.1553/giscience2015s90]

Hiscox, A.L. 2013. Lidar measurement techniques for understanding smoke plume dynamics in sugarcane production. *Renewable Energy and the Environment*, OSA Technical Digest (online) (Optical Society of America 2013) paper EM2A.1 [doi: 10.1364/E2.2013.EMA2A.1] **[Invited]**

Wang, J., T.W. Sammis, D.R. Miller, A.L. Hiscox, D. Granucci, B. Holmen, J. Kasumba, M. K. Shukla, and S. O. Dennis, 2010. Modeling PM10 regional transport from disking operations. *International Symposium on Air Quality and Manure Management for Agriculture*, Dallas, TX. ASABE Publication Number 711P0510cd. [doi:10.13031/2013.32614]

- Su, H., M. Rudnicki, A. Hiscox, V. Webb, and D. Miller, 2009. Large-eddy simulation of the aerodynamic interactions between canopy roughness sublayer turbulence and tree-sway motions. *Proceedings of the 2nd International Conference Wind Effects on Trees*, Freiburg, Germany. pp 59-65.
- Hiscox, A.L., D.R. Miller and C.J. Nappo, 2008. The use of lidar to measure plume dispersion in the stable boundary layer. *Proceedings of 24th International Laser Radar Conference*, Boulder, CO. paper no. S03O-03.
- Nappo, C.J., Hiscox, A.L., and D.R. Miller, 2008. Atmospheric turbulence and diffusion estimates derived from plume image analysis. 88th American Meteorological Society Annual Meeting, New Orleans, LA. *Amer. Meteor. Soc.* 4.5 [available at: <https://ams.confex.com/ams/pdfpapers/128980.pdf>]
- Wang, J., D.R. Miller, A.L. Hiscox, T. Sammis, 2008. Development and validation of a Lagrangian model for dust generated by agricultural tilling. 28th Conference on Agricultural and Forest Meteorology, Orlando, FL. *Amer. Meteor. Soc.* 3.5 [available at: <https://ams.confex.com/ams/pdfpapers/139021.pdf>]
- Hiscox, A.L., D.R. Miller, C.J. Nappo, J. Wang, D. Zajic, Y.P. Yee, E.D. Creegan, and R.M. Cionco, 2007. Nighttime aerosol dispersion and concentration measurements in the stable boundary layer via elastic backscatter lidar. 3rd Symposium on LIDAR Atmospheric Applications, San Antonio, TX. *Amer. Meteor. Soc.* 5.3 [available at: <https://ams.confex.com/ams/pdfpapers/117052.pdf>]
- Hiscox, A.L., D.R. Miller, and C.J. Nappo, 2006. Remote quantification of plume aerosol concentrations over agricultural and forest canopies. 27th Conference on Agricultural and Forest Meteorology, San Diego, CA, *Amer. Meteor. Soc.*, 1.15 [available at: <https://ams.confex.com/ams/pdfpapers/110396.pdf>]
- Miller, D.R., A.L. Hiscox, C.J. Nappo, J. Wang, D. Zajic, Y. Yee, E.D. Creegan, R.M. Cionco, R.E. Dumais, Jr., and J.B. Ross, 2006. Joint Observational Research on Nocturnal Atmospheric Dispersion of Aerosols: The JORNADA study. 17th Conference on Biometeorology and Aerobiology/27th Conference on Agricultural and Forest Meteorology, San Diego, CA, *Amer. Meteor. Soc.*, J3.6 [available at: <https://ams.confex.com/ams/pdfpapers/110395.pdf>]
- Nappo, C.J., D.R. Miller, A.L. Hiscox, E. Creegan, Y. Yee, and D. Zajic 2006. An episode of intermittent turbulence in the nighttime PBL during the JORNADA field study. 17th Symposium on Boundary Layers and Turbulence/27th Conference on Agricultural and Forest Meteorology, San Diego, CA. *Amer. Meteor. Soc.*, J4.4 [available at: <https://ams.confex.com/ams/pdfpapers/110394.pdf>]
- Hiscox, A.L. and D.R. Miller, 2006. Quantifying the amount of aerial spray in the air over time for vector control operations. *Proceedings of the American Society of Agricultural and Biological Engineers*, Portland, OR. Paper number 061008 [doi: 10.13031/2013.20571]
- Miller, D.R., B.A. Holmén, A.L. Hiscox, W. Yang, J. Wang, T. Sammis, and R. Bottoms, 2006. Dust emissions from cotton farming operations. *Proceedings of the American Society of Agricultural and Biological Engineers*, Portland, OR. Paper number 064024, [doi: 10.13031/2013.20905]
- Hiscox, A.L., D.R. Miller, 2006. Quantifying aerosol mass remotely from real-time lidar measurements. *Proceedings of Workshop on Agricultural Air Quality: State of the Science*, Potomac, MD, pp 756-759.
- Holmen, B.A., D.R. Miller, A.L. Hiscox, W. Yang, J. Wang, T.W. Sammis, and R. Bottoms, 2006. Aerosol emission from field planting operations. *Proceedings of Workshop on Agricultural Air Quality: State of the Science*, Potomac, MD, pp. 169-172.

- Miller, D.R., A.L. Hiscox, B.A. Holmen, W. Yang, T. Sammis, and R. Bottoms, 2005. Aerosol Plumes Emitted from Field Planting Operations Measured with lidar. American Society of Agricultural Engineers International Meeting, Tampa, FL.
- Hiscox, A.L., C.J. Nappo, and D.R. Miller, 2005. Plume Model Dispersion Parameters Measured with lidar. American Society of Agricultural Engineers International Meeting, Tampa, FL.
- Hiscox, A.L., C.J. Nappo, and D.R. Miller, 2004. Evidence of nighttime wave-turbulence interactions above a hardwood forest canopy. 26th Conference on Agricultural and Forest Meteorology, Vancouver, British Columbia., *Amer. Meteor. Soc.*, 8.5 [available online f <https://ams.confex.com/ams/pdfpapers/79440.pdf>]
- Miller, D.R., M. Salyani, and A.L. Hiscox, 2003. Remote measurement of spray drift from orchard sprayers using LIDAR. *Proceedings of the American Society of Agricultural and Biological Engineers*, Las Vegas, NV, Paper number 021093.
- Hiscox, A.L., B. Hallowell, J. Enderle, 2000. Tap-Tap Environmental Controls Unit and Intercom. In *Proceedings of the IEEE 26th Annual Northeast Bioengineering Conference*, Storrs, CT. pp 149-150, and pp 151-152. [3rd Place Undergraduate Student Paper Competition.]

Other Publications

- Thistle, H. and A.L. Hiscox, 2023. Dispersion of ROD: Near-field Atmospheric Dispersion and Movement of Spores Through and Out of Forest Canopies, Report to State of Hawaii.
- Hiscox, A.L., 2021. Atmospheric science: Air pollution at night. Open Access Government. June 2021.
- Hiscox, A.L., 2021. Understanding how air pollution spreads. Futurum Careers. <https://doi.org/10.33424/FUTURUM110>
- Hiscox, A.L. 2017. Scientist at work: Why this meteorologist is eager for an eclipse, www.theconversation.com August 7, 2017.
- Hiscox, A.L., 2010. Lidar: A new way to see, *ASABE Resource Magazine*, July/August 2010, 17(4) pp12-13. [Invited]
- Wang, J., A.L. Hiscox, D.R. Miller, T.W. Sammis, W. Yang, and B. Holmen, 2009. A note on the measurement of dust emissions from moving sources in agricultural field operations. NM State University, Agricultural Experiment Station, Research Report 767.

GRANTS AND FELLOWSHIPS (DIRECT TOTAL: \$1,212,976)

External Grants and Funding Received

- NSF – 2023-2028: Collaborative Research: RII Track-2 FEC: Where We Live (WWL): Local and Place Based Adaptation to Climate Change in Underserved Rural Communities. (Institutional Lead PIs: S. Cutter, L. Alessa, L. Singletary,)
- NSF – Physical and Dynamic Meteorology 2022-2025: Collaborative Research: Understanding Interactions between Mesoscale and Microscale Flows in the Stable Boundary Layer over Shallow Terrain (PI: A. Hiscox, co-PIs: J. Wang, D. Kristovich, J. Sun total: \$881,551, Hiscox: \$273,725)
- NOAA – CSTAR 2022-2025: Addressing geographical and social diversity in heat-health messaging, (PI: Kirstin Dow, co-PIs: Gregory Carbone, Susan Cutter, April Hiscox and

Brett Robertson), Collaborative Science, Technology, and Applied Research (CSTAR) Program (total \$450,000)

USDA-SBIR 2022: Radar-based Spray Drift Detection and Quantification System, Sub-contract from Application Insights, LLC, (total: \$175,000, Hiscox: \$23,053)

NSF – Physical and Dynamic Meteorology 2017-2022: Collaborative Research: SAVANT – Stable Atmospheric Variability AND Transport (PI: A. Hiscox, co-PIs: J. Wang, D. Kristovich, total: \$904,554, Hiscox: \$410,865)

South Carolina Space Grant. 2017. Carolina Eclipse Initiative Proposal: The Air Across the Path (A. Hiscox \$1,925)

U.S. Forest Service. 2016-2018. Identifying Maimaiga Source Strength (A. Hiscox, \$40,000)

Scion Sabbatical Fellowship. 2015. Use of Backscatter Lidar to Quantify the Influence of Mechanical Turbulence on Spray Drift Above A Forest Canopy. (A. Hiscox and T. Strand, \$30,000NZD.)

U.S. Forest Service. 2013-2015. Regional Models for Use in Understanding Maimaiga Outbreaks, (A. Hiscox \$55,000)

U.S. Forest Service. 2012-2013. Mixing Height Calculation for Aerial Spray Applications, (A. Hiscox \$10,000)

U.S. Department of Agriculture – AFRI. 2010-2014. Atmospheric Emissions of Nitrous Oxide, Ammonia, and Particulate Matter from Subtropical Sugarcane Production (PI: J.J.Wang, co-PIs: A. Hiscox, S. Viator, R. DeLaune, T. Hymel, and R. Sheffield, total: \$595,956, Hiscox sub-award: \$100,216)

NSF-Physical and Dynamic Meteorology. 2009-2014. Collaborative Research: Measurement and Modeling of Aerodynamic Interactions between Tree-Sway Motion and Turbulence in and above a Forest Canopy. (A. Hiscox, \$ 147,524)

U.S. Forest Service. 2008- 2012. Mixing Height from Lidar Returns for Use in Aerial Spray Dispersion Modeling (A. Hiscox, \$45,000)

U.S.D.O.D.: Armed Forces Pest Management Board. 2008-2009. Improving Application Methods for Effective Control of Sand Flies in Military Environments. (PI: M. Salyani, co-PIs: M. Farooq, T. Walker, D. Miller, and A. Hiscox. total: \$200,000, UConn sub-award: \$22,155)

Internal Grants and Funding Received

USC Office of Undergraduate Research Magellan Award 2022: Sophia Grimsley - Identifying Boundary Layer Structure from Aircraft Observations of Hurricanes - \$1,658

CAS Teaching Incubator Associate 2019-2021. \$10,000

CAS Undergraduate Research Enhancement Award 2018: Sean McGill: Ballooning for the Scientific Method \$1,000

SPARC: Alexandria McCombs: Agricultural Land Use Change Effects on Atmospheric Carbon Dioxide in the US Great Plains. 2016. \$5,000

ASPIRE: Advanced Support for Innovative Research Excellence, Track I. 2015-2016. Characterization of Forest Fire Smoke Plume Dynamics with an Eye-Safe Scanning Lidar. \$14,912.

Provost Visiting Scholar's Program. 2015-2016. Collaborative Work on the Quantification of above Canopy Mechanical Turbulence. (visitor Dr. Tara Strand – Scion Forestry Research, New Zealand). \$8,601.

Provost Visiting Scholar's Program. 2012. Meteorology of Forests in Motion, Provost Visiting Scholar's Program. (visitor Dr. Mark Rudnicki – The University of Connecticut) \$9,000.

LSU Council on Research. 2009 Summer Stipend Award. \$5,000.

INVITED SEMINARS

- Hiscox, A.L. “Shallow Terrain Influences on Turbulence in the Stable Boundary Layer” Climate and Space Sciences and Engineering, University of Michigan, March 2023
- Hiscox, A.L. “Variability in Turbulence Regimes During the SAVANT Field Campaign” NCAR/EOL January 2021
- Hiscox, A.L., “Smoke and Mirrors: Measuring the Atmospheric Boundary Layer in Time and Space for Understanding Land-Air Interactions”, Nelson School of the Environment, University of Wisconsin, Madison Wisconsin, 2018.
- Hiscox, A.L. and M.J. Stewart, “The Air Across the Path: Meteorological Changes Associated with the Total Solar Eclipse”, USC Physics Colloquium, May 5, 2017
- Hiscox, A.L., B. Richardson, and T. Strand, “Aerial Spraying for Pest Eradication: Lidar and Turbulence Observations for New Insights”, Ministry of Primary Industries, Wellington, New Zealand. 2015.
- Hiscox, A.L., “Seeing the Wind in A New Light: Exploring New Measurement Techniques for Forest Meteorology” Scion Science Seminar Series, Rotorua, New Zealand. 2015.
- Hiscox, A.L., “Seeing the Wind Through the Forest: Understanding the Dynamic Interactions of Turbulence and Tree Sway”, Department of Geography and Earth Sciences, University of North Carolina-Charlotte, Charlotte, NC. 2014.
- Hiscox, A.L., “Exploring the Dispersion and Turbulence in the Near Surface Boundary Layer”, Laboratory for Environmental Physics, University of Georgia-Griffin, Griffin, GA. 2012.
- Hiscox, A.L., “Aerodynamic Interactions Between Tree-Sway Motion and Turbulence In and Above a Forest Canopy: Preliminary Results”, School of Renewable Natural Resources, Louisiana State University, Baton Rouge, LA. 2010.
- Hiscox, A.L., “Dispersion in the Atmospheric Boundary Layer: Implications for Agriculture”, LSU Department of Plant Pathology and Crop Physiology, Louisiana State University, Baton Rouge, LA. 2010.
- Hiscox, A.L., “Dust and Dispersion from Agricultural Operations”, School of Plant, Environmental and Soil Sciences Seminar Series, Louisiana State University, Baton Rouge, 2009.
- Hiscox, A.L. “Understanding Lidar Measurements: The nitty-gritty on dealing with all the Data!”, Space Dynamics Laboratory, Logan, UT. 2008.

INVITED SEMINARS (NON-RESEARCH)

- Hiscox, A.L. “Non-linear Theories: Thoughts on Finding Success” Keynote address for Undergraduate Scholars Program Administrators Association Scholar Summit, October 2023.
- Hiscox, A.L. “Chasing the Wind” University of South Carolina Last Lecture Series April 2023

CONFERENCES

Oral Presentations (presenter in bold, *denotes student presented)

- ***Boncyk M**, Blake CE, Kimenju SC, Kamau JW, Ambikapathi R, Frongillo EA, Wang C, Hiscox A, Avula R, Matangi ES, Ndanu P, Ghosh S, Gunaratna NS. 2025. Heat exposure in Kenya’s outdoor food markets: Assessing the spatiotemporal association of temperature with food availability during a food market census. Oral presentation for

- Agriculture, Nutrition, and Health Academy Week 2025; Dar es Salaam, Tanzania, June 25-26, 2025.
- Sun, J.,** S. Bhimireddy, D. Kristovich, J. Wang, A. Hiscox, L. Mahrt, G. Petty. 2024. Impacts of Surface Roughness and Shallow Terrain Variations on Turbulence Intensity in the Nighttime Stable Boundary Layer. AGU Annual Meeting, Washington DC
- Hiscox, A.,** G. Carbone, F. Alsheimer, K. Dow, M. Hohlfeld. 2024. Land Cover Variability in Wet Bulb Globe Temperature Observations. 104th American Meteorological Society Annual Meeting, Baltimore MD.
- Bhimireddy S., J. Sun, J. Wang, **A. Hiscox**, D. Kristovich. 2023. Effects of Surface Roughness and Radiative Fluxes on Stable Boundary Layer Turbulent Fluxes during SAVANT. AGU Annual Meeting. San Francisco, CA.
- Nappo, C.,** A. Hiscox, J. Sun, S.R. Bhimireddy, D.A. Kristovich, J. Wang. 2023. A Climatology of Coherent Disturbances in the Stable Boundary Layer over Simple Terrain. 103rd American Meteorological Society Annual Meeting, Denver CO.
- Bhimireddy, S.R.,** J. Wang, A. Hiscox, and D. A. Kristovich. 2023. Effect of Fetch and Terrain Slope on Turbulence Characteristics Along a Shallow Gully in Stable Boundary Layers. 103rd American Meteorological Society Annual Meeting, Denver CO.
- Bhimireddy, S.R.,** J. Wang, A. Hiscox, and D. A. Kristovich. 2022. Influence of Stability and Surface Roughness on Turbulence during the Stable Atmospheric Variability and Transport (SAVANT) Field Campaign. 102nd American Meteorological Society Annual Meeting, Virtual Meeting.
- Kristovich, D. A.,** J. Wang, A. Hiscox, S. R. Bhimireddy, V.P. Ghate, R. Kotamarthi, J. M. Keeler, C. H. Boyer. 2022. Doppler and Raman Lidars for Observations near Complex Surfaces. 102nd American Meteorological Society Annual Meeting, Virtual Meeting.
- Bhimireddy, S. R.,** J. Wang, A. Hiscox, and D. A. Kristovich. 2021. Aerosol and Doppler Lidar Observations of Nocturnal Drainage Flows in Shallow Gully Topographies during the Stable Atmospheric Variability and Transport (SAVANT) Field Campaign. American Meteorological Society 101st Annual Meeting/11th Symposium on Lidar Atmospheric Applications. Virtual Meeting.
- Bhimireddy, S. R.,** J. Wang, A. Hiscox, and D. A. Kristovich. 2021. Turbulence and Boundary Layer Characteristics during the Stable Atmospheric Variability and Transport (SAVANT) Field Campaign. American Meteorological Society 101st Annual Meeting/21st Symposium on Meteorological Observation and Instrumentation. Virtual Meeting.
- Kristovich, D.A.,** J. Wang, and A.L. Hiscox. 2020. A SAVANT case study: aerosol transport in drainage/converging flows at a shallow gully. American Meteorological Society/21st Joint Conference on the Applications of Air Pollution Meteorology with the A&WMA. Boston, MA.
- Hiscox, A.L.,** J. Wang, D.A.R. Kristovich, E.G. Patton, J. Sun, W.O. Brown, N.J. Sokol, A.R. Desai, G.W. Petty, and C. J. Nappo. 2019. SAVANT: A Field Campaign for the Stable Boundary Layer. Ninth Symposium on Lidar Atmospheric Applications. Phoenix, AZ.
- *Sokol, N.** and A.L. Hiscox. 2018. Analyzing Sweep-Ejection Momentum Transfer in a Forest Canopy. 23rd Symposium on Boundary Layers and Turbulence. Oklahoma City, OK.
- Dunker, C.,** T. Strand, and A. Hiscox. 2018. Turbulence Statistics Within and Above a Nearly Sparse Forest Canopy. 23rd Symposium on Boundary Layers and Turbulence. Oklahoma City, OK.

- Hiscox, A.L.,** A.G. McCombs, and S. McGill, 2018. Balloons, Lasers, and Drones: The Great American Eclipse of 2017, Combining Research and Outreach in Total Darkness. 98th Annual Meeting of the American Meteorological Society, January 2018, Austin, TX.
- Hiscox, A.L.,** A. G. McCombs, and M. J. Stewart, 2017. First results of eclipse induced pressure and turbulence changes in South Carolina. AGU Fall Meeting, New Orleans, LA.
- Hiscox, A.L.** 2017. Intermittency, Stationarity, and Stability: Tools to parameterize the grey zone? Meteorology And Climate - Modeling for Air Quality, Davis, CA September 13-15 2017. [Invited]
- Richardson, B.,** T. Strand, H. Thistle, and A. Hiscox. 2016. The influence of a young pine canopy on aerial spray drift. 2016 ASABE Annual International Meeting, Orlando, FL.
- Hiscox, A.L.,** T. Strand, H. Thistle, and B. Richardson. 2016. Using Lidar to Compute and Above Canopy Mass Balance of Aerially Applied Sprays. 32nd Conference on Agricultural and Forest Meteorology, Salt Lake City, UT.
- *McCombs, A.** Hiscox, B. Marosites, C. Wang, and A. Suyker. 2016. Correlation of Net Ecosystem Carbon Exchanges observations and remotely sensed spectral signals at Maize Fields in Nebraska. 32nd Conference on Agricultural and Forest Meteorology, Salt Lake City, UT.
- *McCombs, A.G.,** S.T., Allen, April L. Hiscox, K.W. Krauss, J. Duberstein, and W.H. Connor, 2016: Atmospheric Carbon Flux Drivers in a Degraded Coastal Swamp. 22st Annual Palmetto Chapter of the American Meteorological Society Allen Weber Mini-Technical Conference. March 4, 2016. Columbia, SC.
- *McCombs, A.G.*,** S.T., Allen, April L. Hiscox, K.W. Krauss, J. Duberstein, and W.H. Connor, 2016: Atmospheric Carbon Flux Drivers in a Degraded Coastal Swamp. 2016 Hobcaw Research Symposium, February 12, 2016. Georgetown, SC.
- Hiscox, A.L.,** A. McCombs and S. Allen. 2016. Carbon and Water Fluxes in a Degraded Coastal Swamp. 2016 AAG Annual Meeting, San Francisco, CA.
- *McCombs, A.** and A.L. Hiscox. 2016. Drought Impacts on Carbon Concentrations at the Duke Forest AmeriFlux Station. 2016 AAG Annual Meeting, San Francisco, CA.
- Hiscox, A.L.** 2016. Choosing and Academic Adviser. 15th Annual Student Conference/96th American Meteorological Society Annual Meeting, New Orleans, LA. [Invited]
- Hiscox, A.L.,** T. Strand, H. Thistle, and B. Richardson. 2016. Lidar Calibration Techniques for Quantifying Spray Drift. 18th Symposium on Meteorological Observation and Instrumentation/96th American Meteorological Society Annual Meeting, New Orleans, LA.
- *McCombs, A.,** A. L. Hiscox and A. R. Desai. 2016. Quality Control in the AmeriFlux Network: Filling the Gaps. 18th Symposium on Meteorological Observation and Instrumentation/96th American Meteorological Society Annual Meeting, New Orleans, LA.
- *Allen, S.,** A. McCombs, A. L. Hiscox, K. W. Krauss, J. Duberstein, W. H. Conner, and R. F. Keim, 2016 Salinity and Hydrology Control Evapotranspiration From a Degraded Coastal Swamp. 14th Symposium on the Coastal Environment/96th American Meteorological Society Annual Meeting, New Orleans, LA.
- *McCombs, A.,** A. L. Hiscox, S. T. Allen, K. W. Krauss, J. Duberstein, and W. H. Conner. 2016. The Effects of Chronic Salinity on the Carbon Cycle of Strawberry Swamp, SC. 14th Symposium on the Coastal Environment/96th American Meteorological Society Annual Meeting, New Orleans, LA.
- Hiscox, A.L.** 2015. Canopy Scavenging Trials. PM 23/6/3 Workshop at Annual Meeting of the Association of Agricultural and Biological Engineers, New Orleans, LA. [Invited]

- Miller, D.R.**, Z. Xue, M. Rudnicki, and A. Hiscox, 2014. Group Tree Sway in a Coniferous Forest. 20th International Congress of Biometeorology, Cleveland, OH.
- Hiscox, A.L.**, 2014. Some aspects of TKE in the CRSL. 31st Conference on Agricultural and Forest Meteorology, Portland, OR.
- Hiscox, A.L.**, G. Carbone, 2014. Updates on Observational Capabilities at USC. Palmetto Chapter AMS Mini-Technical Conference, Columbia, SC.
- Hiscox, A.L.**, M. Rudnicki, and D. Miller, 2014. Application of Planar Fit Corrections to Turbulence in a Forest Canopy Roughness Sublayer. 18th Joint Conference on the Applications of Air Pollution Meteorology with the A&WMA/94th Annual Meeting of the AMS, Atlanta, GA.
- Hiscox, A.L.**, 2013. Long Term Statistics of Tree-Sway, Winds, and Turbulence in a Forest Canopy. Annual Meeting of the Assoc. of American Geographers, Los Angeles, CA.
- Hiscox, A.L.**, J.J. Wang, S. Viator and R. Sheffield, 2012. Wind Influences on the Dispersion of Aerosols Emitted from Pre- and Post- Harvest Sugarcane Field Burning Practices. 30th Conference on Agricultural and Forest Meteorology, Boston, MA.
- Su, H-B**, M. Rudnicki, A. Hiscox, and D. Miller, 2012. SwayLES: A coupled large-eddy simulation tree-sway model. 30th Conference on Agricultural and Forest Meteorology, Boston, MA.
- Rudnicki, M.**, A.L. Hiscox, D. Miller, and H-B Su, 2012. Sway Measurement of a Large Array of Trees Coupled With Canopy Turbulence – An Overview. First Conference on Atmospheric Biogeosciences, Boston, MA.
- *Newman, A.**, R. Kiem, and A.L. Hiscox, 2012. Evaporation as a Factor in Coastal Wetland Forest Hydrology. State of the Coast, New Orleans, LA.
- Hiscox, A.L.**, M. Rudnicki, H-B Su, and D. R. Miller, 2012. Long-Term Statistics of Turbulence, Winds, and Pressure Fluctuations in a Forested Environment. 20th Symposium on Boundary Layers and Turbulence, Boston, MA.
- Hiscox, A.L.**, J. J. Wang, S. Viator, R. DeLaune, R. Sheffield, and T. Hymel, 2012. A Comparison of the Spatial Distribution of Smoke Plumes Emitted From Pre- And Post-Harvest Sugarcane Field Burning Practices. Annual Meeting of the Assoc. of American Geographers, New York, NY.
- Hodgson, M.E.** and A. Hiscox, S. Wang, B. Behzad, S. Flecher, Y. Liu, and A. Padmanabhan, 2012. Cartographic Modeling Language Approach for CyberGIS: A Demonstration with Footprint Models. First International Conference on Space, Time, and CyberGIS, Urbana, IL. **[Invited]**
- Hodgson, M.E.** and A. Hiscox, S. Wang, B. Behzad, S. Flecher, K. Soltani, Y. Liu, and A. Padmanabhan, 2012. A Parallelized Cartographic Modeling Language (CML)-Based Solution for Footprint Models. First International Conference on Space, Time, and CyberGIS, Urbana, IL. **[Invited]**
- Rudnicki, M, D.**, Granucci, D. Miller, A. Hiscox, and H-B. Su, 2011. Quantifying the Effects of Freezing on Tree Sway Frequencies. 6th International Conference on Wind and Trees, Athens, GA.
- Su, H-B**, M. Rudnicki, A. Hiscox and D. Miller, 2011. A coupled 3-D Large Eddy Simulation Tree-Sway Model (SwayLES). 6th International Conference on Wind and Trees, Athens, GA.
- Miller, D. R.**, M. Rudnicki, A. Hiscox, and H-B. Su, 2011. Wind in Trees Biomechanical Responses. Society of American Foresters Annual Meeting, Oahu, HI.
- Hiscox, A.L.**, H. Thistle and E. Furtak-Cole, 2011. Lidar Derived Mixing Heights for Dispersion Modeling. Annual Meeting of the Assoc. of American Geographers, Seattle, WA.

- *Haggard, B.,** D. Weindorf, A. Hiscox, T. Rusu, and H. Cacoven, 2010. 10cm Soil Temperature Data Validation and Model in the Transylvanian Plain, Romania. American Society of Agronomy, Association, Crop Science Society of America, and Soil Science Society of America International Annual Meetings, Long Beach, CA.
- Hiscox, A.L.,** D. R. Miller and C. J. Nappo, 2010. Quantification of Plume Meandering Motions in the Stable Boundary Layer. 19th Symposium on Boundary Layers and Turbulence, Keystone, CO.
- Nappo, C.J.,** A.L. Hiscox, and D. R. Miller, 2010. The Stationarity of Sub-Mesoscale Turbulence in the Stable Planetary Boundary Layer. 19th Symposium on Boundary Layers and Turbulence, Keystone, CO.
- Miller, D.R.,** A.L. Hiscox, and J. Wang, 2010. Dispersion of Spray from Insect Foggers in Stable Boundary Layers. 19th Symposium on Boundary Layers and Turbulence, Keystone, CO.
- Wang, J.,** T.W. Sammis, D.R. Miller, A.L. Hiscox, and D.V. Granucci, 2009. Simulate Regional PM10 Dust Dispersion from Tilling Operations Using Hysplit4. 7th World Congress on Computers in Agriculture, Reno, NV.
- *Kasumba, J.,** B. Holmen, A. Hiscox, J. Wang, and D. Miller, 2009. Measurement of Agricultural Field Emissions – Real World Herbicides in Vapor and Particle Phases. 36th Northeast Regional Meeting of the American Chemical Society, Hartford, CT.
- Hiscox, A.L.,** D.R. Miller, M. Salyani, T. Walker, and M. Farooq, 2009. Effects of Atmospheric Stability on Aerosol Spray. American Society of Agricultural and Biological Engineering International Meeting, Reno, NV.
- Hiscox, A.L.,** Lidar for Monitoring Spray Drift, 1st North American Conference on Precision Fruit Spraying, Canandaigua, NY. 2008 **[Invited]**
- Hiscox, A.L.,** D.R. Miller, and C.J. Nappo, 2008. Plume Behavior as Controlled by the Stable Boundary Layer. 18th Symposium on Boundary Layers and Turbulence, Stockholm, Sweden.
- Hiscox, A.L.,** D. R. Miller, W. C. Hoffman, B. K. Fritz, and D. Martin, 2008. The Effect of Atmospheric Surface Layer Turbulent Structures on Aerially Applied Agricultural Sprays. 28th Conference on Agricultural and Forest Meteorology, Orlando, FL.
- Wang, J.,** T. Sammis, A.L. Hiscox, D. R. Miller, W. Yang, and B. A. Holmen, 2007. Field-Scale Dynamic Modeling of Agricultural-Operation Dust Dispersion. International Symposium on Air Quality and Waste Management for Agriculture, Broomfield, CO.
- Hiscox, A.L.,** W.C. Hoffmann, and D.R. Miller, 2007. Measuring Aerial Spray Swaths and Drift with Lidar. American Society of Agricultural and Biological Engineering International Meeting, Minneapolis, MN.
- Hiscox, A.L.,** D.R. Miller, and J. Wang, 2007. Dust Exposure and Emissions Factors From Cotton Field Preparation Determined from Lidar Measurements. American Society of Agricultural and Biological Engineering International Meeting, Minneapolis, MN.
- Hiscox, A.L.,** D.R. Miller, and C.J. Nappo, 2006. Remote Quantification of Plume Aerosol Concentrations and Plume Spread over Agricultural Canopies. 7th International Aerosol Conference, St. Paul, MN.
- Miller, D.R.,** A.L. Hiscox, C.J. Nappo, J. Ross, 2005. Aerial Spray Plume Dispersion Measured with Lidar. American Society of Agricultural Engineers/National Agricultural Aviation Association Technical Session, Reno, NV.
- Hiscox, A.L.,** and D.R. Miller, 2003. Lidar Calibration of Orchard Spray Drift. Northeast Agricultural and Biological Engineering Conference, Storrs, CT.

Poster Presentations (*denotes student authored and presented)

- Sun, J. S. Bhimireddy, D. Kristovich, J. Wang, A. Hiscox, L. Mahrt, G. Petty. 2025. Impacts of Terrain Slope and Surface Roughness Variations on Turbulence Generation in the Nighttime Stable Boundary Layer. European Geophysical Union General Assembly, Vienna, Austria.
- Kristovich, D.A., S. Bhimireddy, J. Wang, A.L. Hiscox, J. Sun. 2024 Multi-platform Observations of Intermittent Nocturnal Drainage Flows in Shallow Terrain. 104th American Meteorological Society Annual Meeting. Baltimore, MD
- Zhao, Q, J. Liu, J. Wang, S.R. Bhimireddy, D.A. Kristovich, A. L. Hiscox, J. Sun, C. Nappo. 2024. Plume Spread Under Drainage Conditions at Shallow Topography in SAVANT Field Campaign. 104th American Meteorological Society Annual Meeting. Baltimore, MD
- *Seikel, K. and A.L. Hiscox. 2024 Comparing Non-Gradient Model to Nocturnal Eddy Covariance Measurements of Trace Gases Over Land Surfaces. 104th American Meteorological Society Annual Meeting. Baltimore, MD
- *Benitez-Nelson, N., A.L. Hiscox, D.A. Kristovich, J. Wang, S.R. Bhimireddy and J. Sun. 2023. Lessons from a Novel DTS Deployment: Calibration and Combining Instrumentation. 103rd Annual American Meteorological Society Meeting. Denver, CO.
- Hiscox, A.L., A.R. Desai. 2020. Leveraging Field Campaigns as Educational Resources. American Meteorological Society 20th Symposium on Meteorological Observation and Instrumentation. Boston, MA.
- *Steeves, N. and A. L. Hiscox, 2020. An Investigation of Surface Inversion Characteristics in Shallow Topography. American Meteorological Society 19th Student Symposium. Boston, MA
- *McGill, S. and A. L. Hiscox, 2019. Ballooning for the Scientific Method: How I Learned to Stop Worrying and Love the Weather Balloon. American Meteorological Society 28th Symposium on Education. Phoenix, AZ.
- McCombs, A., S.T. Allen, and A.L. Hiscox, 2018. Carbon Flux Drivers in a Degraded Coastal Swamp. 33rd Conference on Agricultural and Forest Meteorology. Boise, ID.
- McCombs, A., S.T. Allen, and A.L. Hiscox, 2018. The Influence of Cold fronts Passage on Turbulent Fluxes in a Forested Coastal Wetland. 19th Symposium on Meteorological Observations and Instrumentation/98th American Meteorological Society of America Annual Meeting, Austin, TX.
- Hiscox, A.L., 2017. Correlating Tree Vibration Frequencies with Turbulence Events to Interpret Gust Impressions, Special Symposium on Meteorological Observations and Instrumentation/97th American Meteorological Society of America Annual Meeting, Seattle, WA.
- *McCombs A. and A.L. Hiscox, 2017. Influence of Boundary Layer Height Parameterization of 2D Footprint Models for Short Flux Towers. 21st Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface/97th American Meteorological Society Annual Meeting, Seattle, WA.
- Hiscox, A.L. and K. Ertell, 2014. Measuring Turbulent Gust Impressions in a Forested Canopy. American Geophysical Union Fall Meeting, San Francisco, CA.
- *McCombs, A. and A. L. Hiscox, 2014. Changes in Carbon Flux at the Duke Forest Hardwood AMERIFLUX Site Due to Land Cover/Land Use Changes. American Geophysical Union Fall Meeting. San Francisco, CA.

- *Datta Mudi, S., J. J. Wang, S. K. Dodla and A.L. Hiscox, 2014. Micrometeorological Analysis of Diurnal Ammonia Emissions from Subtropical Sugarcane Production. American Society of Agronomy Annual Meeting, Long Beach, CA.
- Hiscox, A.L. and S. Battersby, 2014. Visualization Techniques for Identification of Coherent Wind Motions Through Waving Vegetation In A Forested Ecosystem. Annual Meeting of the Assoc. of American Geographers. Tampa, FL.
- Hodgson, M.E. and A.L. Hiscox, S. Wang, B. Behzad, S. Flecher, Y. Liu, and A. Padmanabhan, 2012. Cartographic Modeling Language Approach for CyberGIS: A Demonstration with Footprint Models. The First International Conference on Space, Time, and CyberGIS, Urbana, IL.
- *Newman, A., R. Kiem, and A.L. Hiscox, 2011. Evaporation from the Free Water Surface of a Flooded Forest. American Geophysical Union Fall Meeting, San Francisco, CA.
- *Dodla, S., J. Wang, C. Jeong, S. Dattanudi, R. DeLaune, S. Viator, A.L. Hiscox, R. Sheffield and T. Hymel, 2011. Effect of Nitrogen Fertilization, Harvesting and Residue Management Practices on Greenhouse Gas, Ammonia, and Particulate Matter Emissions in Sugarcane Production. Soil Science Society of America Annual Meeting, San Antonio, TX.
- Hiscox, A.L., M. Rudnicki, H-B Su, A. Finger and E. Furtak-Cole, 2011. Persistence of Turbulence In and Above a Forest Canopy. IUFRO Wind and Trees Conference, Athens, GA.
- *Kasumba, J., B. A. Holmen, A.L. Hiscox, J. Wang and D.R. Miller 2010. Measurement of Real-World Herbicides in Vapor and Particle Phases on a Cotton Field In Las Cruces, NM. 29th Annual Conference of the American Association for Aerosol Research, Portland, OR.
- *Granucci, D.V., M. Rudnicki, A.L. Hiscox, H.B. Su and D.R. Miller, 2010. Sway Frequency Analysis of Wind-Loaded Trees Under Freezing Conditions. 29th Conference on Agricultural and Forest Meteorology, Keystone, CO.
- *Finger, A., E. Furtak-Cole, A.L. Hiscox, M. Rudnicki and H.B. Su, 2010. Turbulence Stationarity within a Forest Canopy. 29th Conference on Agricultural and Forest Meteorology, Keystone, CO.
- Hiscox, A.L., D.R. Miller, and C.J. Nappo, 2009. Measuring Plume Meander in the Nighttime Stable Boundary Layer with Lidar. American Geophysical Union Fall Meeting, San Francisco, CA.
- *Kasumba, J., A.L. Hiscox, J. Wang, D.R. Miller, B.A. Holmen, 2009. Measurement of Agricultural Field Emissions – Real World Herbicides in Vapor and Particle Phases. 28th Annual Conference of the American Association for Aerosol Research, Minneapolis, MN.
- Hiscox, A.L., T. Kane, A. Gerrard and S. Eckermann, 2002. Atmospheric Wave Propagation: Modeling and Results Associated with Maui-MALT. American Geophysical Union, Spring Meeting, Washington D.C.
- Hiscox, A.L., T. Kane, A. Gerrard and S. Eckermann, 2001. Atmospheric Wave Propagation: Modeling and Results Associated with Maui-MALT. Advanced Maui Optical and Space Surveillance Technical Conference, Maui, HI.

Panelist

Climate Communications through the Arts, 2021 Carolinas Climate Resilience Conference, May 10-12, 202, Durham, NC (virtual attendance)

TEACHING

University of South Carolina

GEOG 104: Introduction to Physical Geography
GEOG 202: Introduction to Weather and Climate (Core and Honors)
SCHC 283/380: Broadcast Meteorology (co-taught with Dr. Greg Carbone)
SCHC 337: Environmental Measurements and Instrumentation
GEOG 310: Making Geography (part of 2020 CAS themed semester: Justice)
GEOG 371: Air Pollution Climatology
SCHC 484: Climate Change and Environmental and Public Health (co-taught with Dr. Megan Weis)
GEOG 571: Microclimatology
GEOG 740: Research Trends in Geography
GEOG 746: Seminar in Climatology

Louisiana State University

ENVS 7950: Environmental Physics
ENVS 4950: Remote Sensing for Environmental Science
ENVS 7950: Air Pollution Meteorology

University of Connecticut

NRME 242: Natural Resources Measurements

SERVICE

Student Committees

(8 complete and 2 in-progress as chair; 11 complete and 1 in-progress as member)

Completed Graduate Advisees

Michael Hohlfeld, M.S. Geography, May 2024 “Exploring heat variations in Columbia, South Carolina”
Nicole Steeves, M.S., Geography, December 2022 “A climatology of surface inversions in shallow terrain”
T. Grant Farmer, M.S. Geography, December 2022. non-thesis
Michael Stewart, M.S., Geography, May 2018 “Internal gravity wave detection and prediction during the 21 August 2017 total solar eclipse”
Alexandria McCombs, PhD, Geography, May 2017, “Representing the relationships between field collected carbon exchanges and surface reflectance using geospatial and satellite-based techniques”
Wesley (June) Skeeter, M.S. Geography, May 2015, “Ammonium concentrations above a Louisiana sugarcane field”
Katherine Ertell, M.S. Geography, December 2014, “Dynamic mapping of tree-sway frequency and the turbulent co-spectral gap in a dense canopy environment”
Sara Flecher, M.S. Geography, August 2013, “An assessment of technology adoptability in sugarcane burning smoke plume mitigation”
Danielle Tabb, M.S., Natural Sciences, June 2009, (non-thesis program at LSU)

Completed Undergraduate Honors Thesis

Madeline DeCarlo, B.S. May 2022 “An examination of weather forecast accuracy in Columbia, SC by source and lead time”
Lily Wooters, B.A. May 2022 “Sustainability in fashion: The personal, the global, and the practical”
Sophia Grimsley, B.S. May 2022 “Identifying boundary layer structure from aircraft observations of hurricanes”
Eva James, B.S. May 2020, “Assessing the Feasibility, Costs, and Benefits of Transitioning Part of the University of South Carolina Shuttle Fleet to an Alternative Fuel Source and Promoting Anti-Idling Strategies”
Patrick Harsggard, B.S., May 2012, “An assessment on weather to use rocket science”

Current Graduate Advisees

Madison Nordberg, M.S. Geography
Katherine Seikel, M.S. Geography
Benjamin Marosites, PhD Geography

Current Graduate Committees (other than as Chair)

Graduate Committee Member (Completed)

Peter Tereszkieicz, PhD, Geography, University of South Carolina 2023
Stafford Mullin, M.S., Geography, University of South Carolina 2022
Mayra Roman-Riveria, PhD., Geography, University of South Carolina 2020
Erika Chin, PhD, Geography, University of South Carolina 2019
Jennifer Simmons, M.S., Geography, 2017
Sanku Datta Mudi, PhD, Plant, Environmental and Soil Science, Louisiana State University, 2016
Kristy Carter, M.S., Geography, 2016
Kim Rodgers, M.S., Geography, 2015 (non-thesis)
Bonnie Epstein, M.S., Geography, 2014 (non-thesis)
Patrick Barrineau, M.S., Geography, 2012
B.J. Haggard, PhD, Plant, Environmental and Soil Science, Louisiana State University, 2012
Stephanie Johnson, M.S., Plant, Environmental and Soil Science, Louisiana State University, 2010

Departmental Service

Research Methodologies workshop for Graduate Students Fall 2023
Curriculum Committee 2021/22, 2022/23 (chair) 2023/24 (chair)
Alumni Committee 2022/23
Peer Review Committee 2020/21, 2021/22
Minghi Lecture Committee 2020/21, 2021/22
Graduate Admissions (Chair) 2018/19, 2019/20
Core Assessment Coordinator 2019/20, 2020/21
Colloquium Coordinator 2016/17
Undergraduate Advisor 2014-2017
Faculty Senator 2013-2015
Weather Station Supervisor 2010-present
Search Committees:

Bridge to Faculty, Physical Geography 2023-2024
Assistant Professor, GIS, 2022-2023
Geography Department Chair, 2021
Undergraduate Coordinator, 2016
Assistant Professor, GIS, 2014-2015
Associate Professor, Remote Sensing, 2012-2013
Professor, Remote Sensing, 2011-2012
Assistant Professor, Human Dimensions of Natural Resources (UConn), 2006-2007

College and University Service

Mentor, PROPEL program, 2023-2024
Panelist, PROPEL program, 2022
CAS Diversity and Inclusion Committee 2019-2021
Top Scholar Review Committee, 2019/20, 2020/21, 2021/22, 2022/23, 2023/24
Fulbright Review Committee 2021
ASPIRE II Review Committee, 2016
Provost Social Sciences Grant Review Committee, 2014, 2016
University Move-In Crew, 2016
University of South Carolina Faculty Welfare Committee, 2012-2015
First Year Reading Experience Discussion Leader 2011, 2012, 2015
Preston Associate, 2011-2017
Faculty Advisor, USC Fencing Club, 2013-2021
LSU Faculty Friend, 2009-2010
UConn College of Agriculture and Natural Resources, Graduate Student Council, 2003-2004

Public Outreach/Community Service

Carolina News Interview – Campus Weather Station, 2023
White Knoll Elementary School High Altitude Ballooning for The Scientific Method, 2018-2020
Guest Speaker, Girl Scouts of Irmo, 2019, 2020
ECLIPSE Media: Calgary Radio Station, WLTX, and various University Media outlets, 2017
Eclipse Event: ~400 participants of all ages in outreach events during the eclipse, 2017
Science-a-thon participant, 2017, 2018, 2019, 2020, 2021
Science Mentor – Lexington 1 Women in Science Conference March 2017
Co-Instructor Duke TIP program, “Eye of the Storm”, 2017
Contributor, “Ask the Expert”, Charlotte Observer, 2015
Activity Assistant, Duke TIP program, “Weather and Climate”, 2014, 2015
Content Lecturer, GEOFEST, 2011
Judge, Gamma Sigma Delta Special Award, Louisiana State Science Fair, 2009
Judge, Louisiana Junior Science and Humanities Symposium, 2009, 2010
Guest Speaker, Boardman Foundation for Women in Science Luncheon, 2005
Guest Speaker, Girl Scouts of State College, 2002

Scholarly/Professional Organizations and Journals

American Meteorological Society, member 2004-present,
Editor, Journal of Applied Meteorology and Climatology, 2021-present
Associate Editor, Journal of Applied Meteorology and Climatology, 2019-2020

Member, Ad-Hoc awards policy committee, 2016
Chair and Organizer, 31st Conference on Agricultural and Forest Meteorology, 2014
Scientific and Technical Advisory Committee- Agricultural and Forest Meteorology,
2011-2017, Chair 2016-2017
Board on Atmospheric Biogeosciences, 2014-2020
Chair for Sessions 30th and 31st Conference on Agricultural and Forest Meteorology
Member, Palmetto Chapter 2011-present

Workshops, Panels, and Professional Development

Agricultural and Forest Meteorology, Journal, Editor 2025-present
AgDISP Modernization Project Workshop, Houston TX 2024
Invited Panelist, Research Leadership Series, Central Michigan University, “Inspiring
others with Scholarly and Creative Work”, 2023
University of South Carolina, Emerging Leaders Program 2023-2024
DOE Southeast Land-Atmosphere Research Opportunities Workshop 2023
NCAR Observational Facilities Advisory Panel (OFAP), 2022-2023
Participant, ASCENT Workshop, 2009
Panel Member, American Society of Environmental Sciences Symposium, 2008, 2009
Participant, NSF Lower Atmospheric Observing Facilities Users’ Workshop, 2007

Promotion and Tenure Reviews

Texas Tech University 2022
Clemson University 2022
University of California at Davis 2021

Proposal Reviews

DOE Panel 2025
NSF – Geosciences Panel 2021, 2022, 2025
NSF – MRI, 2019
NSF – Geography and Spatial Systems, 2015
NSF – Physical and Dynamic Meteorology, Panel, 2015
NSF – Physical and Dynamic Meteorology, 2009, 2010, 2011, 2014, 2019, 2020,
2022, 2024
NSF-CAREER, 2011, 2012
USDA SBIR Phase I and II, 2010, 2011, 2013, 2014, 2016
Hong-Kong Research Grant Program 2010, 2012

Manuscript Reviews

Earth Systems (2023), Tellus A: Dynamic Meteorology and Oceanography (2020), Boundary
Layer Meteorology (2019, 2020), Earth-Space Science (2018), Annals of The AAG (2017),
Agricultural and Forest Meteorology (2016, 2017, 2020, 2021, 2022, 2024), Journal of
Geophysical Research (2014, 2017), Atmospheric Environment (2016), Sensors (2016), Biofuels
and Bioenergy (2016), Biomass and Bioenergy (2023), Quarterly Journal of the Royal
Meteorological Society (2014), Geophysical Research Letters (2014, 2020), Journal of
Atmospheric and Oceanic Technology (2012, 2013, 2015, 2019, 2021), Journal of Atmospheric
Science (2021), Journal of Applied Meteorology and Climatology (2013, 2014, 2018, 2019,
2020), International Journal of Biometeorology (2012), Atmospheric Research (2011), Journal of
ASTM International (2010), Applied Optics (2010), Optics Letters (2009), Journal of

Environmental Quality (2008, 2010,2013), CIGR EJournal (2008), Journal of Cotton Science (2008), Transactions of the American Society of Agricultural and Biological Engineers (2006, 2008, 2009, 2010, 2011, 2012, 2013,2016, 2019)

Book Reviews

Accuracy Reviewer, “Exercises for Weather and Climate 9th Edition” for Pearson Education
Reviewer, “Living Physical Geography” for Macmillan Education
Reviewer, “Physical Geography” for Oxford University Press
Reviewer, Book proposal, “Physical Geography Tomorrow” for W.H. Freeman
Reviewer, 3rd Edition of “Environmental Physics” for Elsevier Press
Reviewer, “Introduction to Air Pollution Science” for Jones and Bartlett Learning

Association of American Geographers, member 2010-present

Judge, Climate Specialty Group Student Presentation Competition, 2011-2016

American Society of Agricultural and Biological Engineers, member 2005-2012, 2016-2020

Chair, Committee PM-23/6 Application Systems, 2009-2011

Secretary, Committee PM-23/6 Application Systems, 2007-2009

The American Geophysical Union, member 2002-present

Co-Convener "Student Contributions to Aeronomy Research" Spring 2002 AGU Meeting

IEEE, The Institute of Electrical and Electronic Engineers, 1997-2006

Treasurer, IEEE Student Chapter, The University of Connecticut 1998-2000

HONORS AND AWARDS

2023 Michael J. Mungo Award for Undergraduate Teaching

2023 Garnet Apple Award for Teaching Innovation

2021 American Meteorological Society STAC Outstanding Service Award

Citation: For outstanding service to many scientific and academic communities including the agricultural and forest meteorology community and tremendous outreach to the public

2021 College of Arts and Sciences Fellowship for participation in the National Center for Faculty Development and Diversity Faculty Success Program

2018 ASABE Superior Paper Award

2003-2006 University of Connecticut College of Agricultural Ph.D. Research Assistantship

2005 Recipient Bishop-Carder Scholarship

2005 2nd place Student paper competition, College of Agriculture and Natural Resources Graduate Research Forum

2000-2001 First Year Weiss Fellow, Pennsylvania State University

2001 Fred C. and M. Joan Thompson Graduate Fellowship in Electrical Engineering

1996-2000 University of Connecticut Presidential Scholarship Recipient

Honor Societies

Tau Beta Pi National Engineering Honor Society

Eta Kappa Nu National Electrical Engineering Honor Society

Golden Key National Honor Society

New England Scholar, 1999, 1998

Who's Who Among America Colleges and Universities 2000