Thomas L. Mote

Associate Dean Distinguished Research Professor

University of Georgia Franklin College of Arts and Sciences Athens, GA 30602

Administrative Appointments

Associate Dean, Franklin College of Arts and Sciences, University of Georgia, 2016–present

- Serve as liaison for the Physical and Mathematical Science units of Chemistry, Geology, Mathematics, Physics & Astronomy, Statistics, the School of Computing, and the Institute for Artificial Intelligence, which collectively enroll more than 2,000 undergraduate and graduate majors and have more than 200 faculty members (2016–present). Served as liaison for the Social and Behavioral Sciences units of Anthropology and Geography (2020–2021).
- Faculty Affairs
 - Lead faculty affairs for the college, including promotion and tenure, professional leave, faculty awards, and special professorships (2021-present).
 - Led college participation in multiple hiring initiatives, such as the Presidential Interdisciplinary Hiring Initiative in Data Science and Artificial Intelligence and the Invest in the Student Experience hiring initiative.
- Graduate Education
 - Served as liaison to the Graduate School, managing graduate program faculty status, reviewing new graduate programs, mentoring graduate coordinators, and overseeing graduate scholarships and fellowships (2016–2021).
 - Implemented Osborne Fellowship program for underrepresented graduate students, revised GSRA awards, initiated college-level graduate recruitment efforts, supported graduate mentor training, and supported training grant development.
 - Instituted college graduate coordinator workshops and graduate student exit survey; implemented annual graduate program self-assessments.
- Honors Education
 - Served as liaison to Jere W. Morehead Honors College and created incentive program for development of new Honors curriculum (2016–2021).
- Instruction
 - Managed the \$20+ million graduate teaching assistantship budget (2016–2021) and the summer instructional budget.

- Incentivized new summer courses and online instruction that contributed to growth of nearly 30% in summer credit hours (2016–2020).
- Led effort to reduce class sizes in First-Year Writing and expanded Small Class Initiative in collaboration with the Office of Instruction.
- Research and Scholarship
 - Led the Franklin College contribution to the successful Battelle Savannah River Alliance proposal for the management of DoE Savannah River National Laboratory, proposed the environmental science cluster of faculty hires in collaboration with the Savannah River Ecology Laboratory, contributed to the formation of the new University of Georgia Research Institute.
 - Played an integral role in the development of the new School of Computing, led the proposal writing team, and continue to lead implementation in Franklin College and coordination with the College of Engineering.

Head, Department of Geography, University of Georgia, 2011–2016

- Enhanced development efforts that resulted in the first endowed chair in department history.
- Led faculty efforts to increase annual research awards by one-third, and made several key faculty recruitments.
- Supported development of a major in Atmospheric Sciences and a new Certificate in Urban and Metropolitan Studies.
- Supported development of the interdisciplinary Small Satellite Research Laboratory and the Community Mapping Laboratory.
- Facilitated multiple space renovations, including the Center for Geospatial Research and the Environmental Change Laboratory.

Director, Program in Atmospheric Sciences, 2000-2011

 Founded and directed this interdisciplinary program, with administrative support from the Department of Geography, that now includes faculty affiliates from five departments and three colleges and is home to a graduate certificate program and an undergraduate major.

Academic Appointments

Distinguished Research Professor, Department of Geography, University of Georgia, 2016-

Professor, Department of Geography, University of Georgia, 2006-

Associate Professor, Department of Geography, University of Georgia, 1999–2006

Associate Professor, School of Aerospace Sciences, University of North Dakota, 1998–1999

Adjunct Assistant Professor, Department of Geography, University of Georgia, 1998–1999 Assistant Professor, Department of Geography, University of Georgia, 1994–1998

Education

Ph.D., Geography, University of Nebraska-Lincoln, 1994

M.A., Geography, University of Nebraska-Lincoln, 1991

B.A., Geography, University of North Dakota, 1988

Awards and Honors

Fellow, American Association of Geographers, 2019

Fellow, American Meteorological Society, 2017

Creative Research Medal, University of Georgia, 2013

Fulbright Scholar, Federal University of Rio Grande do Sul, Porto Alegre, Brazil, 2008

Outstanding Faculty Adviser, Franklin College of Arts and Sciences, University of Georgia, 2004

Fulbright Binational Exchange Scholar, Ain Shams University, Cairo, Egypt, 2004

Excellence in Teaching Award, Franklin College of Arts and Sciences, University of Georgia, 1997

Global Change Fellow, National Aeronautics and Space Administration, 1992-1994

Grants and Contracts

Awarded, external

Henderson, G., J. Guerard, A. Metzger, and T. Mote (Co-PI, UGA lead). Downscaling of global to local scale climate change impacts around Thule, Greenland. Strategic Environmental Research and Development Program, 2022–2025 (\$249,386 to UGA).

Mote, T. (PI), G. Gonzalez, P. Miller, and C. Ramseyer. Understanding the mechanisms associated with meteorological and hydrologic drought in the U.S. Caribbean. National Oceanic and Atmospheric Administration, 2020–2023 (\$507,198).

Shepherd, J., Debbage, N., Jin, M., Johnson, B., Miller, P., Mitra, C., Mote, T. (co-I), Niyogi, D., Ott, L., Santanello, J., and Tao, Z. Toward conceptualization and predictability: A multi-scalar analysis of urban-influenced hydrometeorological processes. National Aeronautics and Space Administration, 2020–2023 (\$1.753 million).

Tedesco, M., J. Cohen, and T. Mote (Co-PI, UGA lead). Collaborative Research: Exploring tropospheric and stratospheric pathways linking sea ice and snow cover changes to Greenland surface mass balance. National Science Foundation, 2019–2022 (\$247,635 to UGA).

Pringle, C., A. Covich, and T. Mote. LTER 6: Understanding environmental change in northeast Puerto Rico. National Science Foundation, 2019–2024 (\$547,798 subaward to UGA from University of Puerto Rico-Rio Piedras).

Henderson, G., B. Barrett, and T. Mote (Co-PI, UGA lead). Impacts on high-latitude infrastructure and operations from melt events driven by large-scale low-frequency atmospheric circulations. Strategic Environmental Research and Development Program, 2018–2021 (\$162,290 to UGA).

Miller, P., T. Mote (Co-I), and D. Mishra. Persistent hydrological consequences of hurricane interactions with the Georgia coastline. Georgia Sea Grant, 2018 (\$10,000).

Mote, T. (PI), and K. Mattingly. Connecting changes in poleward energy flux to Greenland ice sheet energy budget and mass balance: The role of moisture transport by atmospheric rivers. National Aeronautics and Space Administration, 2016–2019 (\$90,000).

Mishra, D., M. Adams, A. Burd, D. Cotten, R. Davis, W. Dennis, J. Jambeck, T. Jordan, M. Madden, T. Mote (Co-I), R. Pidaparti, J. Shepherd, and S. Ullrich. GeorgiaSat-1, USAF Research Laboratory, 2016–2018 (\$110,000).

Mote, T. (PI), K. Arrigo, R. Castelao, Å. Rennermalm, M. Tedesco, and P. Yager. From the ice sheet to the sea: An interdisciplinary study of the impact of extreme melt on ocean stratification and productivity near West Greenland. National Aeronautics and Space Administration, 2014–2018 (\$1.49 million).

Robinson, D., G. Henderson, D. Leathers, and T. Mote (Co-PI, UGA lead). Toward improved understanding of extreme snow melt runoff events under past, present, and future climate. National Oceanic and Atmospheric Administration, 2014–2018 (\$174,153 to UGA, \$597,031 total).

Mishra, D., A. Burd, D. Cotten, M. Shepherd, J. Jambeck, M. Adams, M. Madden, and T. Mote (Co-PI). Digital orbital analysis of water resources for Georgia. National Aeronautics and Space Administration, 2016–2018 (\$446,218).

Pringle, C., A. Covich, T. Mote, and F. Ballantyne. LTER 5b: Understanding environmental change in northeast Puerto Rico. National Science Foundation, 2016–2019 (\$405,000 subaward to UGA from University of Puerto Rico-Rio Piedras).

Pringle, C., A. Covich, and T. Mote. LTER 5a: Understanding environmental change in northeast Puerto Rico. National Science Foundation, 2012–2016 (\$112,000 subaward to UGA from University of Puerto Rico-Rio Piedras).

Robinson, D., and T. Mote (Co-PI, UGA lead). Snow ablation characteristics and melt-discharge relationships in the Columbia Basin. National Oceanic and Atmospheric Administration,

2014–2016 (\$44,900 to UGA).

Mote, T. (PI). Role of fog and wildland fire smoke in fatal motor vehicle accidents in the southeastern U.S. USDA Forest Service, 2011–2013 (\$30,000).

Mote, T., (PI) and J. Shepherd. Regional climate simulations of southern forests. USDA Forest Service, 2009–2011 (\$140,000).

Dupigny-Giroux, L.-A., M. Raphael, J. Shepherd, and T. Mote (Co-PI). Creating a diversity climate network (D-ClimNet) to enhance the climate sciences pipeline of minority students from high school to graduate school. National Science Foundation, 2009–2012 (\$58,418).

Mote, T., (PI) and J. Shepherd. Evaluation of WRF model for SHRMC activities. USDA Forest Service, 2008–2010 (\$30,000).

Bollinger, J., A. Garrett, A. Grundstein, T. Mote (Co-I), J. Shepherd, and T. Rasmussen. Integrated hydrologic/hydrodynamic modeling system for collection of pollutant signatures. Department of Energy, 2008–2011 (\$750,000 to UGA, \$1.50 million total).

Shepherd, J., N. Heynen and T. Mote (Co-PI). Assessing air quality and perceptions of environmental hazards in the Newtown Community: A prototype UGA-U.S. Forest Service initiative on environmental justice and green space engagement. USDA Forest Service, 2008–2009 (\$9000).

Robinson, D., M. Anderson, S. Drobot, D. Hall, and T. Mote (Co-PI, UGA lead). Development of Northern Hemisphere snow and ice climate data records. National Aeronautics and Space Administration, 2008–2013 (\$245,000 to UGA, \$1.88 million total).

Mote, T., (PI) Support of SHRMC MM5/WRF modeling activities. USDA Forest Service, 2007–2008 (\$73,000).

Mote, T., (PI). Support and operation of SHRMC modeling activities. USDA Forest Service, 2005–2007 (\$53,000).

Robinson, D., and Mote, T. (Co-PI, UGA lead). Global monitoring of continental snow cover combining satellite and in-situ sources. National Oceanic and Atmospheric Administration, 2004–2007 (\$90,000 to UGA).

Mote, T. (PI). Development and validation of MM5V3 for SHRMC. USDA Forest Service, 2003–2005 (\$140,010).

Robinson, D., D. Leathers, T. Mote (Co-PI, UGA lead), and A. Grundstein. A hybrid approach for evaluating and predicting interactions between the seasonal snow pack and the atmosphere. National Aeronautics and Space Administration, 2002–2005 (\$219,625 to UGA).

Mote, T. (PI). Development and support of a hazard assessment program for the Southern High Resolution Modeling Consortium. USDA Forest Service, 2001–2002 (\$270,767).

Robinson, D., A. Frei, D. Leathers, and T. Mote (Co-PI, UGA lead). Evaluation of snow water equivalent across grasslands regions. National Aeronautics and Space Administration, 1998–2001 (\$109,000 to UGA).

Mote, T. (PI). Infrastructure improvement grant for a satellite receiving station. National Science Foundation, 1998–1999 (\$20,000).

Mote, T. (PI). An investigation of the climatology, associated meteorology, and patterns of winter season cloud-to-ground lightning for the Southeast and Mississippi Valley regions of the U.S. UCAR Cooperative Program for Operational Meteorology, Education and Training, 1998–1999 (\$8,240).

Mote, T. (PI). Synoptic-scale features common to derecho producing mesoscale convective systems in the north-central Great Plains. UCAR Cooperative Program for Operational Meteorology, Education and Training, 1997–1998 (\$5,609).

Mote, T. (PI), and V. Meentemeyer. An equipment proposal to advance research and education in meteorology and climatology at the University of Georgia. National Science Foundation UCAR Unidata Program 1995–1996 (\$28,400).

Mote, T. (PI). Estimation of ablation rates on the Greenland ice sheet from microwave radiometric observations. National Aeronautics and Space Administration, 1995–1997 (\$68,798).

Mote, T. (PI). Spatial and temporal variations of passive microwave-derived surface melt on the Greenland ice sheet. National Aeronautics and Space Administration, 1992–1994 (\$44,000).

Publications

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Journal articles, in review or revision

Moraes, F., T. Mote, and T. Rasmussen. The role of physical geography on Puerto Rico water budget and potential groundwater recharge. Submitted to *Journal of Hydrology: Regional Studies*.

Preece, J., T. Mote, J. Cohen, L. Wachowicz, J. Knox, and M. Tedesco. Summer atmospheric circulation over Greenland in response to Arctic amplification and diminished spring snow cover. Submitted to *Nature Communication*.

Wachowicz, L., and T. Mote. Quantifying tropical contributions from El Niño diversity to Arctic moisture transport from Rossby wave breaking. Submitted to *Climate Dynamics*.

Journal articles, published

Mattingly, K., V. Turton, J. Wille, B. Noël, X. Fettweis, Å. Rennermalm, T. Mote, 2023: Increasing extreme melt in northeast Greenland linked to foehn winds and atmospheric rivers. *Nature Communication*, in press.

Washington, B., L. Seymour, and T. Mote, 2023: Modeling general circulation model bias via a combination of localized regression and quantile mapping methods. *Advances in Statistical Climatology, Meteorology, and Oceanography*, 9, 1–23.

Moraes, F., T. Mote, and L. Seymour, 2022: Ocean-atmosphere variability and drought in the Insular Caribbean. *International Journal of Climatology*, 42, 5016–5037.

Moon, T., K. Mankoff, R. Fausto, X. Fettweis, M. Tedesco, A. Wehrlé, B. Loomis, T. Mote, C. Jensen, N. Korsgaard, J. Box, J. Cappelen, and Ø. A. Winton, 2022: Greenland ice sheet in "State of the Climate in 2021." *Bulletin of the American Meteorological Society*, 103, S276–S259.

Preece, J., L. Wachowicz, T. Mote, M. Tedesco, and X. Fettweis, 2022: Summer Greenland blocking diversity and its impact on the surface mass balance of the Greenland Ice Sheet. *Journal of Geophysical Research: Atmospheres*, 127, e2021JD035489.

Hanna, E., J. Cappelen, X. Fettweis, S. Mernild, R. Motram, K. Steffen, T. Ballinger, T. Mote, and R. Hall, 2021: Greenland surface air temperature changes from 1981 to 2019 and implications for future ice-sheet melt and mass-balance change. *International Journal of Climatology*, 41, E1336–E1352.

Henderson, G., B. Barrett, L. Wachowicz, K. Mattingly, J. Preece, and T. Mote, 2021: Local and remote atmospheric circulation drivers of Arctic change: A review. *Frontiers in Earth Science*, 9, 709869.

Miller, P., M. Williams, and T. Mote, 2021: Modeled atmospheric optical and thermodynamic responses to an exceptional trans-Atlantic dust outbreak. *Journal of Geophysical Research: Atmospheres*, 126, e2020JD032909.

Moon, T., M. Tedesco, K. Mankoff, J. Box, J. Cappelen, R. Fausto, X. Fettweis, N. Korsgaard, B. Loomis, T. Mote, C. Reijmer, C. Smeets, D. van As, R. van de Wal, and Ø. Winton, 2021: Greenland ice sheet in "State of the Climate in 2020." *Bulletin of the American Meteorological Society*, 102, S257–S259.

Suriano, Z., D. Leathers, T. Mote, G. Henderson, T. Estilow, L. Wachowicz, D. Robinson, 2021: Declining North American snow cover ablation events. *International Journal of Climatology*, 41, 5213–5225.

Wachowicz, L., J. Preece, T. Mote, B. Barrett, and G. Henderson, 2021: Inconsistencies in historical trends of seasonal Greenland blocking under different blocking metrics. *International Journal of Climatology*, 41, E3263–E3278.

Barrett, B., G. Henderson, E. McDonnell, M. Henry, and T. Mote, 2020: Extreme Greenland blocking and high-latitude moisture transport. *Atmospheric Science Letters*, 21, e1002.

Mattingly, K., T. Mote, X. Fettweis, D. van As, K. Van Tricht, S. Lhermitte, and C. Pettersen, 2020: Strong summer atmospheric rivers trigger Greenland ice sheet melt through spatially varying surface energy balance and cloud regimes. *Journal of Climate*, 33, 6809–6832.

Miller, P., T. Mote, A. Kumar, and D. Mishra, 2020: Systematic precipitation redistribution following a strong hurricane landfall. *Theoretical and Applied Climatology*, 39, 861–872.

Moon, T., M. Tedesco, J. Andersen, J. Box, J. Cappelen, R. Fausto, X. Fettweis, B. Loomis, T. Mote, C. Reijmer, C. Smeets, D. van As, R. van de Wal, and Ø. Winton, 2020: Greenland ice sheet in "State of the Climate in 2019." *Bulletin of the American Meteorological Society*, 101, S257–S259.

Moraes, F., F. Aquino, T. Mote, J. Durkee, and K. Mattingly, 2020: Atmospheric characteristics favorable to the development of Mesoscale Convective Complexes in southern Brazil. *Climate Research*, 80, 43–58.

Wachowicz, L., T. Mote, and G. Henderson, 2020: A rain on snow climatology and temporal analysis for the eastern United States. *Physical Geography*, 41, 54–69.

Ballinger, T., T. Mote, K. Mattingly, A. Bliss, E. Hanna, D. van As, M. Prieto, S. Gharehchahi, X. Fettweis, B. Noël, P. Smeets, M. Ribergaard, and J. Cappelen, 2019: Greenland Ice Sheet late-season melt: Investigating multi-scale drivers of K-transect events. *The Cryosphere*, 13, 2241–2257.

Castelao, R., H. Luo, H. Oliver, Å. Rennermalm, M. Tedesco, A. Bracco, P. Yager, T. Mote, and P. Medeiros, 2019: Controls on the transport of meltwater from the southern Greenland ice sheet in the Labrador Sea. *Journal of Geophysical Research: Oceans*, 124, 3551–3560.

Francis D., C. Eayrs, J-P. Chaboureau, T. Mote, D. Holland, 2019: A meandering polar jet caused the development of a Saharan cyclone and the transport of dust toward Greenland, *Advances in Science and Research*, 1, 1–8.

Miller, P., A. Kumar., T. Mote, F. Moraes, and D. Mishra, 2019: Persistent hydrological consequences of Hurricane Maria and their coevolution with land surface recovery in Puerto Rico. *Geophysical Research Letters*, 46, 1413–1422.

Miller, P., T. Mote, and C. Ramseyer, 2019: An empirical study of the relationship between seasonal precipitation and thermodynamic environment in Puerto Rico. *Weather and Forecasting*, 34, 277–288.

Ramseyer, C., P. Miller, and T. Mote, 2019: Future precipitation variability during the early rainfall season in the El Yunque National Forest. *Science of the Total Environment*, 661, 326–336.

Tedesco, M., J. Box, J. Cappelen, R. Fausto, X. Fettweis, J. Andersen, T. Mote, C. Smeets, D. van As, and R. van de Wal, 2019: Greenland ice sheet in "State of the Climate in 2018." *Bulletin of the American Meteorological Society*, 100, S150–S152.

Washington, B., L. Seymour, T. Mote, and D. Robinson, 2018: Identifying and extracting a seasonal streamflow signal from remotely sensed snow cover in the Columbia River Basin. *Remote Sensing Applications: Society and Environment*, 14, 207–223.

Berdahl, M., Å. Rennermalm, A. Hamman, J. Mioduszweski, S. Hameed, M. Tedesco, J. Stroeve, T. Mote, T. Koyama, and J. McConnell, 2018: Southeast Greenland winter precipitation strongly linked to the Icelandic Low position. *Journal of Climate*, 31, 4483–4500.

Francis, D., C. Eayrs, J.-P. Chaboureau, T. Mote, and D. Holland, 2018: Polar jet associated circulation triggered a Saharan cyclone and derived the poleward transport of the African dust generated by the cyclone. *Journal of Geophysical Research: Atmospheres*, 123, 11899–11917,

Hanna, E., R. Hall, T. Cropper, T. Ballinger, L. Wake, T. Mote, and J. Cappelen, 2018: Greenland Blocking Index daily series 1851-2015: analysis of changes in extremes and links with North Atlantic and UK climate variability and change. *International Journal of Climatology*, 38, 3546–3564.

Mattingly, K., T. Mote, and X. Fettweis, 2018: Atmospheric river impacts on Greenland ice sheet surface mass balance. *Journal of Geophysical Research: Atmospheres*, 123, 8538–8560.

McLeod, J., T. Ballinger, and T. Mote, 2018: Assessing the climatic and environmental impacts of mid-tropospheric anticyclones over Alaska. *International Journal of Climatology*, 38, 351–364.

Miller, P., and T. Mote, 2018: The algorithmic detection of pulse thunderstorms within a large, mostly nonsevere sample. *Meteorological Applications*, 25, 629–641.

Miller, P., and T. Mote, 2018: Detecting severe weather potential in low signal-to-noise ratio regimes: Weakly forced thunderstorm environments in the Southeast United States. *Natural Hazards and Earth System Sciences*, 18, 1261–1277.

Miller, P., T. Mote, C. Ramseyer, A. Van Beusekom, M. Scholl, and G. González, 2018: A 42-yr inference of cloud base height trends in the Luquillo Mountains of northeastern Puerto Rico. *Climate Research*, 76, 87–94.

Oliver, H., H. Luo, R. Castelao, G. van Dijken, K. Mattingly, J. Rosen, T. Mote, K. Arrigo, Å. Rennermalm, M. Tedesco and P. Yager, 2018: Exploring the potential impact of Greenland meltwater on stratification, photosynthetically active radiation, and primary production in the Labrador Sea. *Journal of Geophysical Research: Oceans*, 123, 2570–2591.

Ramseyer, C., and T. Mote, 2018: Analyzing regional climate forcing on historical precipitation variability in northeast Puerto Rico. *International Journal of Climatology*, 38, e224–e236.

Tedesco, M., J. Box, J. Cappelen, R. Fausto, X. Fettweis, K. Hansen, M. Khan, S. Luthke, T. Mote, I. Sasgen, C. Smeets, D. van As, R. van de Wal, and I. Velicogna, 2018: Greenland ice sheet in "State of the Climate in 2017." *Bulletin of the American Meteorological Society*, 99, S152–S155.

Arrigo, K., G. van Dijken, R. Castelao, H. Luo, Å. Rennermalm, M. Tedesco, T. Mote, H. Oliver and P. Yager, 2017: Melting glaciers stimulate large summer phytoplankton blooms in southwest Greenland waters. *Geophysical Research Letters*, 44, 6278–6285.

Black, A., G. Villarini, and T. Mote, 2017: Effects of rainfall on vehicle crashes in six U.S. states. *Weather, Climate, and Society*, 9, 53–70.

Debbage, N., P. Miller, S. Poore, K. Morano, T. Mote, and J. Shepherd, 2017: A climatology of atmospheric river interactions with the southeastern United States coastline. *International Journal of Climatology*, 37, 4077–4091.

Mattingly, K., and T. Mote, 2017: Variability in warm-season atmospheric circulation and precipitation patterns over subtropical South America: Relationships between the South Atlantic Convergence Zone and large-scale organized convection over the La Plata basin. *Climate Dynamics*, 48, 241–263.

Miller, P., and T. Mote, 2017: Standardizing the definition of a "pulse" thunderstorm. *Bulletin of the American Meteorological Society*, 98, 905–913.

Miller, P., and T. Mote, 2017: A climatology of weakly forced and pulse thunderstorms in the Southeast United States. *Journal of Applied Meteorology and Climatology*, 56, 3017–3033.

Mote, T., C. Ramseyer, and P. Miller, 2017: The Saharan air layer as an early rainfall season suppressant in the Eastern Caribbean: The 2015 Puerto Rico drought. *Journal of Geophysical Research: Atmospheres*, 122, 10966-10982.

Tedesco, M., J. Box, J. Cappelen, R. Fausto, X. Fettweis, T. Mote, C. Smeets, D. van As, R. van de Wal, and I. Velicogna, 2017: Greenland ice sheet in "State of the Climate in 2016." *Bulletin of the American Meteorological Society*, 97, S136–S140.

Kluver, D., T. Mote, D. Leathers, G. Henderson, W. Chan, and D. Robinson, 2016: Creation and validation of a comprehensive 1 degree gridded North American dataset: Snowfall. *Journal of Atmospheric and Oceanic Technology*, 33, 857–871.

Liu, J., Z. Chen, J. Francis, M. Song, T. Mote, and Y. Hu, 2016: Has Arctic sea ice loss contributed to increased surface melting of the Greenland ice sheet?. *Journal of Climate*, 29, 3373–3386.

Luo, H., R. Castelao, Å. Rennermalm, M. Tedesco, A. Bracco, P. Yager, and T. Mote, 2016: Oceanic transport of surface meltwater from the southern Greenland ice sheet. *Nature Geoscience*, 9, 528–532.

Mattingly, K., C. Ramseyer, J. Rosen, T. Mote, and R. Muthyala. 2016: Increasing water vapor transport to the Greenland ice sheet revealed using self-organizing maps. *Geophysical Research Letters*, 43, 9250–9258.

McLeod, J., and T. Mote, 2016: Linked interannual variability of extreme blocking episodes to the recent increase in summer melting across the Greenland ice sheet. *International Journal of Climatology*, 36, 1484–1499.

Mioduszewski, J., Å. Rennermalm, Å. Hammann, M. Tedesco, E. Noble, J. Stroeve, and T. Mote, 2016: Atmospheric drivers of Greenland surface melt revealed by self organizing maps. *Journal of Geophysical Research: Atmospheres*, 121, 5095–5114.

Ramseyer, C., and T. Mote, 2016: Atmospheric controls on Puerto Rico precipitation using artificial neural networks. *Climate Dynamics*, 47, 2515–2526.

Tedesco, M., T. Mote, X. Fettweis, E. Hanna, J. Jeyaratnam, J. Booth, R. Datta, and K. Briggs, 2016: Arctic cut-off high drives the poleward shift of a new Greenland melting record. *Nature Communications*, 7, 11723.

Tedesco, M., J. Box, J. Cappelen, R. S. Fausto, X. Fettweis, K. Hansen, T. Mote, C. Smeets, D. van As, R. van de Wal, J. Wahr, 2016: Greenland ice sheet in "State of the Climate in 2015." *Bulletin of the American Meteorological Society*, 97, S140–S142.

Underwood, S., M. Schultz, M. Berti, C. Gregoretti, A. Simoni, T. Mote, and A. Saylor, 2016: Atmospheric circulation patterns, cloud-to-ground lightning, and locally intense convective rainfall associated with debris flow initiation in the Dolomite Alps of northeastern Italy. *Natural Hazards and Earth Systems Science*, 16, 509–528.

Black, A., and T. Mote, 2015: Effects of winter precipitation on automobile collisions, injuries, and fatalities in the United States. *Journal of Transport Geography*, 48, 165–175.

Black, A., and T. Mote, 2015: Characteristics of winter-precipitation-related transportation fatalities in the United States. *Weather, Climate and Society*, 7, 133–145.

Gensini, V., and T. Mote, 2015: Downscaled estimates of late 21st Century severe weather from CCSM3. *Climatic Change*, 129, 307–321.

Mattingly, K., J. McLeod, J. Shepherd, J. Knox, and T. Mote, 2015: A climatological assessment of Greenland blocking conditions associated with the track of Hurricane Sandy and historical North Atlantic hurricanes. *International Journal of Climatology*, 35, 746–760.

McLeod, J., and T. Mote, 2015: Assessing the role of precursor cyclones on the formation of extreme Greenland blocking episodes and their impact on summer melting across the Greenland ice sheet. *Journal of Geophysical Research: Atmospheres*, 120, 12,357–12,377.

Tedesco, M., J. Box, J. Cappelen, X. Fettweis, T. Mote, R. van de Wal, M. van den Broeke, C. Smeets, and J. Wahr, 2015: Greenland ice sheet in "State of the Climate in 2014." *Bulletin of the American Meteorological Society*, 96, S137–S139.

Gensini, V., and T. Mote, 2014: Examination of historical hazardous convective weather using dynamical downscaling. *Journal of Climate*, 27, 6581–6589.

Gensini, V., T. Mote, and H. Brooks, 2014: Severe-thunderstorm reanalysis environments and collocated radiosonde observations. *Journal of Applied Meteorology and Climatology*, 53, 743–751.

Gensini, V., C. Ramseyer, and T. Mote, 2014: Future convective environments in the Southeast U.S. *International Journal of Climatology*, 22, 1034–1043.

Hanna, E., X. Fettweis, S. Mernild, J. Cappelen, M. Ribergaard, C. Shuman, K. Steffen, L. Wood, and T. Mote, 2014: Atmospheric and oceanic climate forcing of the exceptional Greenland ice sheet surface melt in summer 2012. *International Journal of Climatology*, 34, 1022–1037.

Mioduszewski, J., Å. Rennermalm, D. Robinson, and T. Mote, 2014: Attribution of snow melt onset in northern Canada. *Journal of Geophysical Research: Atmospheres*, 119, 9638–9653.

Shepherd, J., A. Grundstein, and T. Mote, 2014: An analysis of seasonal biases in satellite and reanalysis rainfall products in the Savannah River basin. *Physical Geography*, 35, 181–194.

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Instruction (*courses developed)

GEOG/ATSC 1112: Introduction to Weather and Climate ATSC/GEOG 3110: Climatology ATSC/GEOG 3120: Weather Analysis and Forecasting * ATSC/GEOG 4/6120: Synoptic Meteorology/Climatology * ATSC/GEOG 4/6140: Satellite Meteorology/Climatology * ATSC/GEOG 4/6155: Hydrometeorology * GEOG 4/6350: Remote Sensing of Environment GEOG 8120: Seminar in Climatology GEOG 8900: Proseminar in Geography

Graduate and Postdoctoral Supervision

Postdoctoral supervisor

Jonathon R. Preece, 2023– Paul W. Miller, 2017–2018 Willis Shem, 2009–2010 Major professor, Ph.D.

Jonathan R. Preece, 2022 (postdoctoral research and teaching associate, University of Georgia)

Lori J. Wachowicz, 2022 (data scientist, KPMG)

Flávia Dias de Souza Moraes, 2021 (lecturer, Geosciences, Georgia State University)

Kyle S. Mattingly, 2019 (assistant scientist, Space Science and Engineering Center, University of Wisconsin-Madison)

Paul W. Miller, 2017 (assistant professor, Oceanography and Coastal Sciences, Louisiana State University)

Craig A. Ramseyer, 2016 (assistant professor, Geography, Virginia Tech)

Alan W. Black, 2015 (assistant professor, Geography, Southern Illinois University-Edwardsville)

Vittorio A. Gensini, 2014 (associate professor, Earth, Atmosphere and Environment, Northern Illinois University)

Joshua D. Durkee, 2008 (professor, Earth, Environmental and Atmospheric Sciences, Western Kentucky University)

John D. Frye, 2008 (associate professor, Geography, Geology and Environmental Science, University of Wisconsin - Whitewater)

Walker S. Ashley, 2005 (professor, Earth, Atmosphere and Environment, Northern Illinois University)

Jamie L. Dyer, 2005 (professor, Geosciences, Mississippi State University)

Mace L. Bentley, 1999 (professor, Integrated Science and Technology, James Madison University)

Major professor, M.S.

Katrina Ducre, current	Jingmei Wei, 2013	
Zachary Pilgrim, current	Anthony P. Bedel, 2012	
Shelby Ingram, 2022	Craig A. Ramseyer, 2011	
Haylie N. Mikulak, 2019	Laura E. Becker, 2010	
Joshua J. Rosen, 2017	Jordan Pesses Lieberman, 2010	
Lori J. Wachowicz, 2017	Emily R. Kutney, 2009	
Kyle S. Mattingly, 2014	Matthew C. Lacke, 2007	
Jordan T. McLeod, 2014	Christopher M. Fuhrmann, 2006	

Thomas L. Mote, C.V.

Gregory A. Wassel, 2006	P. Grady Dixon, 2002
Emily J. Powell, 2003	Jamie L. Dyer, 2001
Joshua D. Durkee, 2003	

Supervisory committee member for 24 Ph.D. and 17 M.S. students

Leadership Development

Southeastern Conference Academic Leadership Development Program, 2018–2019 University System of Georgia Executive Leadership Institute, 2014–2015 AAG Department Leaders Workshop, 2005, 2007, 2014

Service Activities

Promotion, tenure and appointment review

Arizona State	Mississippi State	U. Calif., Irvine	U. Maryland
City College NY	Southern Illinois	U. Connecticut	
Dartmouth	Texas A&M	U. Delaware	U. North Carolina
East Carolina	Texas Tech	U. Idaho	U.S. Forest Service
James Madison	U. Alabama	U. Illinois	
Louisiana State	U. Arkansas	U. Kansas	Western Kentucky

Professional

Session organizer, SCAR/IASC Polar 2018

Member, Military and Geography Study Committee, American Association of Geographers, 2017–2019

Member, NASA Cryospheric Sciences proposal review panel, 2017

Editorial board member, Physical Geography, 2016-

National Secretary, American Association of Geographers, 2015–2017

Chair, Committee on Committees, American Association of Geographers, 2015-2017

Member, Committee of Visitors, Social, Behavioral and Economic Sciences Directorate, National Science Foundation, 2015

Regional Councilor (elected), American Association of Geographers, 2014–2017

Chair, Local Arrangements Committee, Southeastern Division of the Association of American Geographers, 2014

Member (elected), Membership Committee, University Corporation for Atmospheric Research, 2012–2018; Chair, 2016–2018

Institutional Representative, University Corporation for Atmospheric Research, 2012–current

Editor, Journal of Applied Meteorology and Climatology, 2011–2015

External member, Program Review Committee, University of Alabama, 2010–2011

Session organizer, Annual meeting of the American Association of Geographers, 2010, 2016, 2017, 2018

Session organizer, Fall meeting of the American Geophysical Union, 2010, 2012, 2015

Member, National Aeronautics and Space Administration, Uncertainties in Earth Science Data Records Review Panel, 2010

Member, National Oceanic and Atmospheric Administration, Climate Change Data and Detection Review Panel, 2009

Associate Editor, Journal of Applied Meteorology and Climatology, 2008–2011

Editor, Geography Compass, 2007–2011

Member, National Academies of Science, Review Panel on NASA Applied Sciences, 2005–2007

Member, National Center for Atmospheric Research Unidata User's Committee, 2003-2005

Member, Association of American Geographers Grants Committee, 2003–2006

Member, Southeast Division of the Association of American Geographers Honors Committee, 2003–2004

Chair, Association of American Geographers Cryosphere Specialty Group, 1999–2001; Director, 1998–2000

Member, Southeast Regional Climate Center, Advisory Committee, 1995–1996

Member, Southeast Regional Climate Center, Strategic Planning Committee, 1994–1996

University

Elected Member, President's Advisory Committee, 2023–2026.

Member, Vice Provost for Academic Affairs Search Committee, 2022.

Member, Disability Resource Center unit review, 2022.

Member, Faculty Affairs Leadership Roundtable, 2022.

Member, Credit Hour Review Committee, 2022.

Member, Vice President for Instruction review, 2021. Member, Office of Global Engagement program review, 2019–2020. Member, President's Working Group on Research, 2020. Member, Provost's Task Force on Academic Excellence, 2019–2020. Member, Provost's Task Force on the Future of Computer Science, 2019–2021. Member, Graduate School Review and Dean Search Committee, 2019–2020. Chair, Program review, Center for Applied Isotope Studies, 2018 Member, Data Literacy Committee, 2018 Chair, Provost Committee on Textbook Costs, 2017-2018 Co-chair, Search Committee for Director of Geography, University of Nebraska, 2017–2018 Member, Search Committee for Associate Director of the Honors Program, 2017 Chair, Search Committee for Associate Dean of the Graduate School, 2017 Co-chair, Advisory Committee for the Georgia Informatics Institutes, 2017-Member, Search Committee for Director of Development for Franklin College, 2015–2016 Member, Georgia Advanced Computing Resource Center Advisory Board, 2014–2016 Chair, Franklin College Department Heads Retreat planning committee, 2014 Member, Search committee in Digital History and Historic Preservation, 2013–2014 Member, Post-tenure review committee for College of Education, 2013–2014 Chair, Program review, UGA Center for Archaeological Studies, 2013-2014 Elected member, University Council, 2010–2012 Member, University Council, Strategic Planning Committee, 2011–2014 Member, Center for Integrative Conservation Research, 2010–present Executive committee member, Georgia Center for Climate and Society, 2010–present Member, Faculty of Water Resources, 2003-present Member, Graduate Faculty Appointment/Reappointment Committee, 2003–2006; Chair, 2006 Member, Institutional Assessment Committee, 1998–1999 Student member, University of Nebraska Graduate Faculty Executive Committee, 1992–1994 Student member, University of Nebraska-Lincoln Graduate Council, 1992-1994

Departmental

Chair, Search Committee for Energy and Sustainability, 2010-2011 Associate Department Head, 2007–2011 Member, Computer Committee, 2007–present; Chair, 2009–2011 Chair, Search Committee for GIScience, 2006–2007 Graduate Coordinator, 2004–2006 Adviser, Geography Graduate Student Organization, 2004–2006 Member, Search Committee for CRMS director, 2003–2004 Member, Department Initiatives and Tracks Committee, 2003-2004 Faculty Adviser, American Meteorological Society chapter, 2000–2011 Faculty Adviser, Gamma Theta Upsilon chapter, 2002-2004 Undergraduate Coordinator, 2002–2004 Undergraduate Adviser, 1999–2004 Class Coordinator, Introduction to Weather and Climate, 1997–1998, 1999–2000, 2003–2005 Member, Search Committee for Franklin Fellow, 2003 Elected Member, Advisory Committee, 1996–1998, 2004–2006; Chair, 2006 Departmental Colloquia Coordinator, 1996–1998 Member, Graduate Studies Committee, 1995–1996, 2000–2001 Member, Geosciences Learning Center Committee, 1994-1995 Member, Undergraduate Studies Committee, 1994–1995

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