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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.

Administrative Appointments

Associate Dean, Division of Physical and Mathematical Sciences, Franklin College of Arts and Sciences, University of Georgia, 2016–present.

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

Director, Program in Atmospheric Sciences, University of Georgia, 2000–2011.

Academic Appointments

Distinguished Research Professor, Department of Geography, University of Georgia, 2016–2021.

Professor, Department of Geography, University of Georgia, 2006–present.

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.

Awards and Honors

Fellow, American Association of Geographers, 2019.

Lifetime Achievement Award, American Association of Geographers, Climate Specialty Group, 2018.

Fellow, American Meteorological Society, 2017.

Creative Research Medal, University of Georgia, 2013.

Outstanding Alumni Award, University of North Dakota, Department of Geography, 2011.

Fulbright Scholar to Brazil, 2008.

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

Fulbright U.S.-Egypt Binational Exchange Scholar, 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). Downscaling of global to local scale climate change impacts around Thule Air Base, 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., N. Debbage, M. Jin, B. Johnson, P. Miller, C. Mitra, T. Mote (co-I), D. Niyogi, L. Ott, J. Santanello, and Z. Tao. 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). 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). 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, 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 ($1.499 million).

Robinson, D., G. Henderson, D. Leathers, and T. Mote (Co-PI). 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). 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.M. Shepherd. Regional climate simulations of southern forests. USDA Forest Service, 2009–2011 ($140,000).

Dupigny-Giroux, L.-A., M. Raphael, J.M. 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.M. 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). 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). 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), 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). 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).

Awarded, internal

Shepherd, J., S. Joye, T. Mote (co-PI), A. Grundstein, C. Meile, M. Welch-Devine, G. Nowak, E. Lipp, and B. Bledsoe (co-I). Transdisciplinary Earth System Science for Global Solutions and Public Engagement (ENGAGE), University of Georgia, 2020 ($4500).

Shepherd, J., J. Shannon, T. Mote (co-PI), S. Pilaar Birch. Enhancing and diversifying geosciences instruction through popular gaming platforms and multi-user virtual environments. University of Georgia STEM Initiative, 2015 ($7,910).

Mote, T. (PI). Development of web-based and advanced visualization instructional technologies in meteorology/climatology. Office of Instructional Support and development, University of Georgia, 1998 ($25,000).

Mote, T. (PI). Extreme temperatures in the Southeast U.S. associated with El Niño/La Niña events. University of Georgia Research Foundation, 1995 ($4,700).

Consultancy

Mote, T. A blended Northern Hemisphere snow dataset. National Oceanic and Atmospheric Administration, awarded to Rutgers University (D. Robinson, PI), 2001–2002 ($10,000).

Mote, T. Spatial and temporal variations of surface characteristics on the Greenland Ice Sheet as derived from passive microwave observations. National Aeronautics and Space Administration, awarded to the University of Nebraska-Lincoln (M. Anderson, PI), 1994–1995 ($3,000).

Publications

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Journal articles, in review or final preparation, students indicated with asterisks

4. *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*.

3. *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.*

2. *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 or in press, students indicated with asterisks

129. 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.

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

127. 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. doi

126. *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. doi

125. Washington, B., L. Seymour, and T. Mote, 2022: Modeling general circulation model bias via a combination of localized regression and quantile mapping methods. *Advances in Statistical Climatology, Meteorology, and Oceanography* (in press).

124. 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. doi

123. 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. doi

122. 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. doi

121. 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. doi

120. 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. doi

119. *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. doi

118. Barrett, B., G. Henderson, E. McDonnell, M. Henry, and T. Mote, 2020: Extreme Greenland blocking and high-latitude moisture transport. *Atmospheric Science Letters*, i21, e1002. doi

117. 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. doi

116. 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. doi

115. 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. doi

114. *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. doi

113. *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. doi

112. 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. doi

111. 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. doi

110. 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. doi

109. 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. doi

108. 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. doi

107. 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. doi

106. 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. doi

105. Washington, B., L. Seymour, T. Mote, and D. Robinson, 2019: 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. doi

104. 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. doi

103. 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, doi

102. 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. doi

101. 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. doi

100. 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. doi

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

98. 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. doi

97. 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. doi

96. 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. doi

95. 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. doi

94. 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. doi

93. 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. doi

92. 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. doi

91. 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. doi

90. 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. doi

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

88. 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. doi

87. 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. doi

86. 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*, 98, S136–S140. doi

85. 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. doi

84. 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. doi

83. 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. doi

82. 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. doi

81. 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, doi

80. 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. doi

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

78. 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. doi

77. 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. doi

76. Underwood, S.J., 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. doi

75. 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. doi

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

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

72. Mattingly, K., J. McLeod, J.M. 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. doi

71. 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. doi

70. 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.

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

68. 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. doi

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

66. 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. doi

65. 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. doi

64. 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. doi

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160. Mikulak, H., T. Mote, and G. Henderson, 2019: Seasonal and regional variations in Arctic blocking patterns. Annual meeting of the American Association of Geographers, Washington, DC.

159. Moraes, F., E. Pauline, T. Mote, and I. Boatman, 2019: The effects of Eastern and Central Pacific El Nino-Southern Oscillation on Caribbean precipitation anomalies. Annual meeting of the American Association of Geographers, Washington, DC.

158. Moraes, F., G. Kooperman, and T. Mote, 2019: The combined and individual effects of the North Atlantic Oscillation and the Atlantic Meridional Mode on early rainfall season precipitation in the insular Caribbean. Annual meeting of the American Geophysical Union, San Francisco, CA.

157. Mattingly, K., T. Mote, and X. Fettweis, 2019: Synoptic- and local-scale physical processes driving atmospheric river impacts on Greenland Ice Sheet surface mass balance. Annual meeting of the American Geophysical Union, San Francisco, CA.

156. Moustafa, S., A. Rennermalm, D. van As, I. Overeem, M. Tedesco, T. Mote, L. Koenig, L. Smith, B. Hagedorn, R. Sletten, A. Mikkelsen, B. Hasholt, X. Fettweis, L. Pitcher, and A. Hubbard, 2019: Comparison of model-observed runoff along the West Greenland Ice Sheet. Annual meeting of the American Geophysical Union, San Francisco, CA.

155. Wachowicz, L., H. Mikulak, K. Mattingly, and T. Mote, 2019: Relationships between episodes of extreme atmospheric blocking, associated moisture transport, and surface mass balance of Greenland. Annual meeting of the American Association of Geographers, Washington, DC.

154. Wachowicz, L., J. Preece, T. Mote, G. Henderson, and B. Barrett, 2019: Understanding Arctic blocking representation in climate models under a unique framework. Annual meeting of the American Association of Geographers, Washington, DC.

153. Ballinger, T., T. Mote, E. Hanna, and J. Miller, 2018: Melt season fringe interactions between Baffin Bay ice cover and the Greenland ice sheet. Annual meeting of the American Association of Geographers, New Orleans, LA.

152. Ballinger, T., T. Mote, E. Hanna, and J. Miller, 2018: Interconnectivity and drivers of Baffin Bay and Greenland melt/freeze onset. POLAR 2018, Davos, Switzerland.

151. Ballinger, T., T. Mote, K. Mattingly, E. Hanna, A. Bliss, D. van As, M. Prieto, S. Gharechahi, X. Fettweis, B. Noel, P. Smeets, and M. Ribergaard, 2018: Are transition season melt events on the Greenland Ice Sheet driven by Baffin Bay sea ice-atmosphere interactions? Annual meeting of the American Geophysical Union, Washington, DC.

150. Francis, D., C. Eayrs, J.-P. Chaboureau, T. Mote, and D. Holland, 2018: Poleward transport of African dust and its impact on Greenland ice melt. Annual meeting of the European Meteorological Society, Budapest, Hungary.

149. Mattingly, K., and T. Mote, 2018: Atmospheric river impacts on the surface energy budget of the Greenland ice sheet. Annual meeting of the American Association of Geographers, New Orleans, LA.

148. Mattingly, K., and T. Mote, 2018: Atmospheric river impacts on Greenland: A self-organizing map analysis. POLAR 2018, Davos, Switzerland.

147. Mattingly, K., T. Mote, and X. Fettweis, 2018: Atmospheric rivers induce Greenland Ice Sheet melt through enhanced longwave and turbulent fluxes. Annual meeting of the American Geophysical Union, Washington, DC.

146. Moraes, F., T. Mote, and P. Miller, 2018: The effect of the North Atlantic Oscillation, Atlantic Meridional Mode, and Sea Surface Temperature on Puerto Rico rainfall pattern. Annual meeting of the American Association of Geographers, New Orleans, LA.

145. Moustafa, S., A. Rennermalm, D. Robinson, T. Mote, D. van As, I. Overeem, R. Sletten, B. Hagedorn, A. Mikkelsen, and B. Hasholt, 2018: Drivers of extreme 2012 melt and basin-scale runoff from three catchments along the West Greenland ice sheet. Annual meeting of the American Geophysical Union, Washington, DC.

144. Miller, P., T. Mote, C. Ramseyer, A. Van Beusekom, G. González, 2018: A 42-Yr assessment of cloud-base-height trends in the Luquillo Mountains of eastern Puerto Rico using radiosonde observations from San Juan. Annual meeting of the American Meteorological Society, Austin, TX.

143. Ramseyer, C., and T. Mote, 2018: Future Rainfall Variability during the early rainfall season in Puerto Rico. Annual meeting of the American Association of Geographers, New Orleans, LA.

142. Ramseyer, C., P. Miller, and T. Mote, 2018: Statistical Downscaling of CMIP5 data to predict future dry day frequency in the El Yunque National Forest. Annual meeting of the American Geophysical Union, Washington, DC.

141. Tedesco, M., P. Alexander, X. Fettweis, E. Hanna, T. Mote, D. Porter, A. Rennermalm, B. Csatho, R. Bell, A. Boghosian, and N. Schlegel, 2018: Unprecedented (1851 - 2016) atmospheric conditions drive recent record surface and ice dynamic mass losses over the Greenland ice sheet. Annual meeting of the American Geophysical Union, Washington, DC.

140. Wachowicz, L., and T. Mote, 2018: Influence of precipitation on the surface energy budget during rain-on-snow events in the Mid-Atlantic United States. Annual meeting of the American Meteorological Society, Austin, TX.

139. Arthur, J., G. Henderson, D. Leathers, D. Robinson, D., and T. Mote, 2017: Atmospheric drivers associated with rapid ablation events in the Chesapeake Basin, 1980–2009. Annual meeting of the American Meteorological Society, Seattle, WA.

138. Ballinger, T., J. McLeod, and T. Mote, 2017: Climatological analysis of Alaska blocking patterns, 1958–2014. Annual meeting of the American Meteorological Society, Seattle, WA.

137. Henderson, G., J. Arthur, D. Leathers, D. Robinson, and T. Mote, 2017: Global and synoptic-scale forcings on extreme snow melt runoff Events. Annual meeting of the American Meteorological Society, Seattle, WA.

136. Liu, J., Z. Chen, J. Francis, M. Song, T. Mote, and Y. Hu, 2017: Has Arctic sea-ice loss contributed to increased surface melting of the Greenland ice sheet?. Annual meeting of the American Meteorological Society, Seattle, WA.

135. Mattingly, K., and T. Mote, 2017: Impacts of atmospheric moisture transport on Greenland Ice Sheet melt and energy balance. Annual meeting of the American Meteorological Society, Seattle, WA.

134. Mattingly, K., and T. Mote, 2017: Impacts of atmospheric moisture transport on the surface energy budget of the Greenland Ice Sheet. Annual meeting of the American Association of Geographers, Boston, MA.

133. Miller, P., and T. Mote, 2017: A climatology of weakly forced and pulse thunderstorms in the Southeast United States. Annual meeting of the American Meteorological Society, Seattle, WA.

132. Mote, T., 2017: Changes in Arctic climate and associated Greenland ice sheet mass balance during the 20th and early 21st Centuries. Annual meeting of the American Association of Geographers, Boston, MA.

131. Moustafa, S., Å. Rennermalm, D. van As, I. Overeem, M. Tedesco, T. Mote, L. Pritcher, and A. Hubbard, 2017: Comparison of modelled runoff with observed proglacial discharge across the western margin of the Greenland ice sheet. Annual meeting of the American Geophysical Union, New Orleans, LA.

130. Rennermalm, Å., M. Tedesco, T. Mote, P. Yager, E. Enderlin, L. Pitcher, L. Smith, D. van As, 2017: Greenland ice sheet freshwater export to surrounding oceans. Annual meeting of the Polar and Arctic Regional Climate Assessment, Greenland, MD.

129. Rennermalm, Å., M. Tedesco, T. Mote, P. Yager, E. Enderlin, L. Pitcher, L. Smith, D. van As, 2017: Greenland ice sheet freshwater export to surrounding oceans. UCAR CESM Working Group, Boulder, CO.

128. Tedesco, M., P. Alexander, X. Fettweis, S. Lutchke, T. Mote, A. Rennelmalm, and R. Bell, 2017: Recent summer atmospheric circulation changes over the Arctic drive a new partitioning of the Greenland ice sheet mass losses. Annual meeting of the Polar and Arctic Regional Climate Assessment, Greenland, MD.

127. Tedesco, M., P. Alexander, X. Fettweis, S. Luthcke, T. Mote, Å. Rennermalm, R. Bell, E. Hanna, and V. Walden, 2017: Linkages between atmospheric circulation and mass partitioning over the Greenland ice sheet. Annual meeting of the European Meteorological Society, Dublin, Ireland.

126. Wachowicz, L., and T. Mote, 2017: The role of atmospheric circulation on rain-on-snow driven ablation in the Eastern United States. Annual meeting of the American Meteorological Society, Seattle, WA.

125. Wachowicz, L., and T. Mote, 2017: Rain-on-snow in the Eastern United States: Associated variations in atmospheric circulation and surface energy budget. Annual meeting of the American Association of Geographers, Boston, MA.

124. Arthur, J., G. Henderson, D. Leathers, D. Robinson, and T. Mote, 2016: A climatology of peak stream discharge in relation to rapid ablation events in the Chesapeake Basin, 1950-2009. Annual meeting of the American Meteorological Society, New Orleans, LA.

123. Henderson, G., K. Masters, D. Leathers, D. Robinson, and T. Mote, 2016: Towards improved understanding of extreme snow melt runoff events: A Case Study of the Chesapeake Basin. Annual meeting of the American Meteorological Society, New Orleans, LA.

122. Mattingly, K., and T. Mote, 2016: Moisture transport regimes associated with large-scale organized convection over subtropical South America. Annual meeting of the American Meteorological Society, New Orleans, LA.

121. Mattingly, K., and T. Mote, 2016: Atmospheric rivers over the North Atlantic Ocean and their effects on the Greenland ice sheet. Annual meeting of the American Association of Geographers, San Francisco, CA.

120. Miller, P., and T. Mote, 2016: Applications of the term "pulse" as a thunderstorm mode descriptor. Annual meeting of the American Meteorological Society, New Orleans, LA.

119. Miller, P., and T. Mote, 2016: The utility of the term "pulse" within the thunderstorm mode nomenclature. Annual meeting of the American Association of Geographers, San Francisco, CA.

118. Moares, F., F. Aquino, and T. Mote, 2016: Large-scale atmospheric environment that develops Mesoscale Convective Systems in southern Brazil: The influence of Antarctica on subtropical extreme events. Scientific Committee on Antarctic Research Biennial Meeting, Kuala Lumpur, Malaysia.

117. Mote, T., C. Ramseyer, and P. Miller, 2016: On the role of the Saharan Air Layer in the 2015 Puerto Rico drought. Annual meeting of the SouthEastern Division of the Association of American Geographers, Columbia, SC.

116. Mote, T., M. Tedesco, I. Astuti, D. Cotten, and T. Jordan, 2016: Structure from motion using helicopter-based aerial photography over the West Greenland ablation zone. Annual meeting of the American Association of Geographers, San Francisco, CA.

115. Mote, T., R. Castelao, P. Yager, Å. Rennermalm, M. Tedesco, H. Luo, H. Oliver, S. Moustafa, G. van Dijken, and K. Arrigo, 2016: The impact of extreme melt on ocean stratification and productivity near West Greenland. Annual meeting of the Polar and Arctic Regional Climate Assessment, Greenland, MD.

114. Moustafa, S., A. Rennermalm, M. Tedesco, T. Mote, L. Koenig, L. Smith, B. Hagedorn, I. Overeem, R. Sletten, A. Mikkelsen, B. Hachelt, D. van As, and D. Hall, 2016: Characterizing

West Greenland ice sheet runoff losses from modeled and measured data. Annual meeting of the American Geophysical Union, San Francisco, CA.

113. Oliver, H., H. Luo, R. Castelao, G. van Dijken, K. Mattingly, J. Rosen, T. Mote, K. Arrigo, A. Rennermalm, M. Tedesco, and P. Yager, 2016: Extreme surface melting of the Greenland Ice Sheet increases growth potential for light-limited phytoplankton in the Labrador Sea. Annual meeting of the American Geophysical Union, San Francisco, CA.

112. Oliver, H., P. Yager, R. Castelao, T. Mote, and H. Luo, 2016: Modeling the sensitivity of coastal ocean primary production to extreme melting of the Greenland Ice sheet. Ocean Sciences Meeting, New Orleans, LA.

111. Ramseyer, C., and T. Mote, 2016: Climate downscaling of CMIP5 GCM simulations to northeast Puerto Rico precipitation variability and drought. Annual meeting of the American Association of Geographers, San Francisco, CA.

110. Ramseyer, C., and T. Mote, 2016: Historical Caribbean synoptic types and downscaling to northeast Puerto Rico precipitation variability using self-organizing maps. Annual meeting of the American Meteorological Society, New Orleans, LA.

109. Rennermalm, Å., M. Tedesco, L. Smith, L. Pitcher, T. Mote, P. Yager, S. Moustafa, M. Cooper, D. van As, B. Hasholt, and A. Mikkelsen, 2016: Understanding Greenland Ice Sheet runoff losses. Annual meeting of the American Geophysical Union, San Francisco, CA.

108. Rosen, J., and T. Mote, 2016: A synoptic climatology of Greenland ice sheet surface mass balance (1871-2012) using self-organizing maps. Annual meeting of the American Association of Geographers, San Francisco, CA.

107. Smith, L., L. Pitcher, B. Overstreet, Å. Rennermalm, V. Chu, J. Ryan, A. Hubbard, M. Cooper, C. Gleason, K Yang, M. Tedesco, and T. Mote, 2016: Meltwater runoff in a large supraglacial river in western Greenland compared with downstream proglacial river outflow. Annual meeting of the American Association of Geographers, San Francisco, CA.

106. Tedesco, M., T. Mote, X. Fettweis, E. Hanna, J. Jeyaratnam, J. Booth, R. Datta, and K. Briggs, 2016: Arctic Amplification and the Northward shift of a new Greenland melting record. Annual meeting of the European Geosciences Union, Vienna, Austria.

105. Tedesco, M., P. Alexander, K. Briggs, M. Linares, and T. Mote, 2016: Hyperspectral, photogrammetric and morphological characterization of surface impurities over the Greenland ice sheet from remote sensing observations. Annual meeting of the American Geophysical Union, San Francisco, CA.

104. Yager, P., H. Oliver, R. Castelao, H. Luo, K. Mattingly, J. Rosen, T. Mote, Å. Rennermalm, M. Tedesco, and G. van Dijken, 2016: Ice sheet meltwater impacts on coastal biological productivity - models and remote observations for southwest Greenland. Ocean Sciences Meeting, New Orleans, LA.

103. Masters, K., G. Henderson, D. Leathers, D. Robinson, and T. Mote, 2015: Understanding of extreme snow melt runoff events: a case study of the Chesapeake Basin. Annual meeting of the American Meteorological Society, Phoenix, AZ.

102. McLeod, J., and T. Mote, 2015: Assessing the role of precursor cyclones on the formation of extreme Greenland blocks and their impact on summer melting across the Greenland ice sheet. Annual meeting of the American Meteorological Society, Phoenix, AZ.

101. Mote, T., M. Tedesco, I. Astuti, D. Cotten, and T. Jordan, 2015: Structure from helicopter-based photography over the West Greenland ablation zone. Annual meeting of the American Geophysical Union, San Francisco, CA.

100. Mote, T., J. Rosen, H. Oliver, P. Yager, H. Luo, R. Castelao, E. Nobel, Å. Rennermalm, M Tedesco, G. Van Dijken, K. Arrigo, and S. Moustafa, 2015: The impact of extreme melt on ocean stratification and productivity near West Greenland. Ilulissat Climate Days 2015, Ilulissat, Greenland.

99. Moustafa, S., Å. Rennermalm, M. Tedesco, L. Koenig, L. Smith, B. Hagerdorn, I. Overeem, R. Sletten, A. Mikkelsen, B. Hasholt, D. Hall, and T. Mote, 2015: Longitudinal inter-comparison of modeled and measured West Greenland ice sheet meltwater runoff losses (2004–2014). Annual meeting of the American Geophysical Union, San Francisco, CA.

98. Oliver, H., P. Yager, R. Castelao, L. Hao, and T. Mote, 2015: Modeling the responses of primary production to extreme melting of the Greenland ice sheet. Gordon Research Conference, Lucca, Italy.

97. Rennermalm, A, A. Mikkelsen, I. Overeem, V. Chu, L. Smith, D. van As, and T. Mote, 2015: Spatial variation of Greenland ice sheet meltwater export inferred from river discharge observations. International Symposium on the Hydrology of Glaciers and Ice Sheets, Höfn, Iceland.

96. Rennermalm, Å., M. Tedesco, T. Mote, I. Overeem, A. Mikkelsen, and B. Hasholt, 2015: Greenland ice sheet meltwater export and river discharge. Ilulissat Climate Days 2015, Ilulissat, Greenland.

95. Robinson, D., T. Mote, and K. Love-Myers, 2015: Assessment of the Stability of a Satellite Snow Extent CDR from Station Snow Depth Observations. The Satellite Snow Product Intercomparison and Evaluation Experiment, Boulder, CO.

94. Smith, L., L. Pitcher, B. Overstreet, Å. Rennermalm, V. Chu, J. Ryan, A. Hubbard, M. Cooper, C. Gleason, K. Yang, M. Tedesco, T. Mote, and K. Young, 2015: Efficient removal of meltwater runoff through supraglacial streams and rivers on the southwestern Greenland ice sheet. Annual meeting of the American Geophysical Union, San Francisco, CA.

93. Tedesco, M., T. Mote, L. Smith, A. Rennerlmalm and D. Lampkin, 2015: Hyperspectral and photogrammetric helicopter-based measurements over western Greenland. Annual meeting of the American Geophysical Union, San Francisco, CA.

92. Yager, P., H. Oliver, R. Sherrell, S. Stammerjohn, P. St-Laurent, E. Hofmann, T. Mote, M. Tedesco, Å. Rennermalm, and R. Castelao, 2015: Ice sheet meltwater impacts on biological productivity in high-latitude coastal zones - observations and models for the west Antarctic and southwest Greenland. Annual meeting of the American Geophysical Union, San Francisco, CA.

91. Black, A., and T. Mote, 2014: Indirect fatalities from winter precipitation: An under- acknowledged killer in the United States. Annual meeting of the American Meteorological Society, Atlanta, GA.

90. Gensini, V., and T. Mote, 2014: Hazardous convective weather in the United States: A dynamical downscaling approach. Annual meeting of the American Meteorological Society, Atlanta, GA.

89. KC, B., J. Bell, S. Kethireddy, E. Dobbs, J. Luvall, M. Shepherd, T. Mote, and S. Goodrick, 2014: A wildfire, aerosol transport, and respiratory health case study. Annual meeting of the American Meteorological Society, Atlanta, GA.

88. Mote, T., J. McLeod, and M. Tedesco, 2014: Extreme Greenland Blocking Events and Their Impact on Summer Runoff Across the Greenland Ice Sheet. Annual meeting of the American Geophysical Union, San Francisco, CA.

87. *Mote, T., Å. Rennermalm, and J. McLeod, 2014: Understanding unseasonal melt and runoff from the Greenland ice sheet. Annual meeting of the American Meteorological Society, Atlanta, GA.

86. *Mote, T., Å. Rennermalm, and J. McLeod, 2014: Unseasonal melt and runoff from the Greenland ice sheet and associated atmospheric circulation. Annual meeting of the Association of American Geographers, Tampa, FL.

85. Rennermalm, Å., M. Tedesco, T. Mote, and I. Overeem, 2014: Greenland Rivers and ice sheet meltwater export to surrounding oceans. Annual meeting of the Association of American Geographers, Tampa, FL.

84. Gensini, V., C. Ramseyer, and T. Mote, 2013: Future Convective Environments in the Southeast U.S. 25th Conference on Climate Variability and Change. Annual meeting of the American Meteorological Society, Austin TX.

83. Hanna, E., X. Fettweis, S. Mernild, J. Cappelen, M. Ribergaard, C. Shuman, K. Steffen, L. Wood, and T. Mote, 2013: Atmospheric and oceanic climate forcing of the exceptional Greenland Ice Sheet surface melt in summer 2012. Annual meeting of the European Geosciences Union, Vienna, Austria.

82. *Mote, T., M. Albert, D. Hall, S. Nghiem, C. Shuman, M. Tedesco, N. Digirolamo, and G. Neumann, 2013: Analysis and historical perspective of the extensive surface melting on Greenland in July 2012. Annual meeting of the Association of American Geographers, Los Angeles, CA.

81. Robinson, D., T. Estilow, M. Anderson, D. Hall, G. Henderson, T. Mote, and M. Tschudi, 2013: Forthcoming Northern Hemisphere snow and ice earth system data records. Annual meeting of the American Geophysical Union, San Francisco, CA.

80. Tedesco, M., X. Fettweis, T. Mote, J. Wahr, P. Alexander, J. Box, and B. Wouters, 2013: Evidence and analysis of 2012 Greenland records from spaceborne observations, a regional climate model and reanalysis data. Polar and Arctic Regional Climate Assessment meeting, Greenbelt, MD.

79. Grundstein, A.J., B. Avant, S. Younger, A. Ignatius, T. Rasmussen, T. Mote, J.M. Shepherd, 2012: A methodology for hydrological modeling in data poor regions using TRMM precipitation data and MERRA reanalysis meteorological data. Annual meeting of the Association of American Geographers, New York, NY.

78. *Mote, T., M. Albert, D. Hall, S. Nghiem, C. Shuman, M. Tedesco, N. Digirolamo, and G. Neumann, 2012: Analysis and historical perspective of the extensive surface melting on Greenland in July 2012. Fall meeting of the American Geophysical Union, San Francisco, CA.

77. *Mote, T., S.H. Mernild, and G.E. Liston, 2012: Extending climate data records of Greenland Ice Sheet surface melt extent into the pre-satellite era. Annual meeting of the Association of American Geographers, New York, NY.

76. Nghiem, S., D. Hall, T. Mote, M. Tedesco, M. Albert, K. Keegan, C. Shuman, N. Digirolamo, and G. Neumann, 2012: The extreme melt event of 2012 across the Greenland ice surface - a sudden anomaly since the Medieval Warm Period. Annual meeting of the Geological Society of America, Charlotte, NC.

75. Robinson, D.A., T.W. Estilow, M.R. Anderson, D.K. Hall, G. Henderson, T. Mote, M. Tschudi, 2012: A new suite of Northern Hemisphere snow and ice earth system data records. Fall meeting of the American Geophysical Union, San Francisco, CA.

74. Wei, J., T. Mote, 2012: A synthesis of the point snow depth observations and a microwave satellite snow depth product. Annual meeting of the Association of American Geographers, New York, NY.

73. *Becker, L., T. Mote, and S. Goodrick, 2011: Effects of hurricane blowdown on regional climate of the U.S. Gulf Coast. Wind and Trees IUFRO Research Conference, Athens, GA.

72. *Mote, T., 2011: Evidence of recent climate change from the Greenland Ice Sheet. University of North Dakota, Department of Geography, Grand Forks, ND.

71. *Mote, T., J.M Shepherd, T.K. Anderson, B. KC, C. Ramseyer, 2011: Downscaling: Modeling global climate change effects locally. The Impact of Climate Change on Tribal Resource Management in the Southeast, Athens, GA.

70. *Mote, T., D. Kluver, and D. Robinson, 2011: Development of a gridded snowfall data set for North America. Snowfall Observations and Products in the 21st Century: Meeting the Needs of FEMA and the Climate Community, Estes Park, CO.

69. *Mote, T., 2011: Evidence of recent climate change from the Greenland Ice Sheet. University of Delaware, Department of Geography, Newark, DE.

68. Robinson, D., T. Estilow, G. Henderson, T. Mote, and D. Hall 2011: Integrated Northern Hemisphere terrestrial snow extent climate datasets. Fall meeting of the American Geophysical Union, San Francisco, CA.

67. Becker, L., and T. Mote, 2010: Effects of tropical cyclone damage on the climate of the U.S. Gulf Coast. Annual meeting of the American Meteorological Society, Atlanta, GA.

66. Becker, L., and T. Mote, 2010: Effects of tropical cyclone damage on the climate of the U.S. Gulf Coast. Annual meeting of the Association of American Geographers, Washington, DC.

65. Durkee, J., and T. Mote, 2010: The role of mesoscale convective complexes on rainfall and streamflow across subtropical South America. American Geophysical Union Meeting of the Americas, Foz do Iguaçu, PR, Brazil.

64. Ignatius, A., A. Grundstein, T. Rasmussen, T. Mote, J.M. Shepherd, 2010: Utilizing satellite-based and reanalysis precipitation data in hydrological modeling. Fall meeting of the American Geophysical Union, San Francisco, CA.

63. Lieberman, J., and T. Mote, 2010: Comparison of MODIS LST and SSM/I melt detection products on the Greenland ice sheet. Annual meeting of the Association of American Geographers, Washington, DC.

62. *Mote, T., 2010: Assessment of the stability of satellite snow cover CDRs using station snow depth observations. Fall meeting of the American Geophysical Union, San Francisco, CA.

61. *Mote, T., 2010: The role of mesoscale convective complexes in rainfall and streamflow across the Americas. Stout Lecture Series, University of Nebraska-Lincoln, Lincoln, NE.

60. *Mote, T., 2010: Assessment of the stability of satellite snow cover CDRs using station snow depth observations. Annual meeting of the Association of American Geographers, Washington, DC.

59. Mote, T., J. Durkee, and J.M. Shepherd, 2010: The influence of the South Atlantic Convergence Zone on South American Mesoscale Convective Complexes. American Geophysical Union Meeting of the Americas, Foz do Iguaçu, PR, Brazil.

58. Shem, W., T. Mote, and J.M. Shepherd, 2010: Validation of NARCCAP climate products for forest resource applications in the southeast United States. Annual meeting of the American Meteorological Society, Atlanta, GA.

57. Shem, W., T. Mote, and J.M. Shepherd, 2010: Validation of NARCCAP climate products for forest resource applications in the southeast United States. Fall meeting of the American Geophysical Union, San Francisco, CA.

56. Shepherd, J.M., T. Mote, S. Nelson, S. McCutcheon, P. Knox, J. Dowd, and M. Roden, 2010: An overview of synoptic, mesoscale and urban factors contributing to the disastrous Atlanta flood of 2009, 2010: American Meteorological Society Ninth Symposium on the Urban Environment, Keystone, CO.

55. Shepherd, J.M., S. Burian, M. Jin, T. Stallins, and T. Mote, 2010: Urban land cover and pollution: Do they create or alter precipitation and storms? Coweeta Summer Symposium, Otto, NC.

54. Robinson, D., M. Anderson, D. Hall, J. Maslanik, T. Mote, and S. Drobot, 2010: Development of Northern Hemisphere snow extent earth system data records. Fall meeting of the American Geophysical Union, San Francisco, CA.

53. Lacke, M., T. Mote and J.M. Shepherd, 2009: Aerosols and associated precipitation patterns in Atlanta. Annual meeting of the American Meteorological Society, Phoenix, AZ.

52. Lieberman, J., and T. Mote, 2009: Comparison of MODIS LST and SSM/I melt detection products on the Greenland ice sheet. Annual Meeting of the Southeast Division of the Association of American Geographers, Knoxville, TN.

51. Shepherd, J.M., D. Niyogi, T. Mote, and J. Entin, 2009: A climatological analysis associating spring tornadic activity with antecedent precipitation and drought in the Southeastern United States. Annual meeting of the American Meteorological Society, Phoenix, AZ.

50. Shepherd, J.M., and T. Mote, 2009: Urban effects on rainfall variability: Potential implications for Georgia's water supply. Georgia Water Resources Conference, Athens, GA.

49. *Mote, T., 2008: Development of microwave satellite-based snow climate data records. Fall meeting of the American Geophysical Union, San Francisco, CA.

48. Shepherd, J.M., A. Grundstein, and T. Mote, 2008: Quantifying the contribution of tropical cyclones to extreme rainfall along the coastal southeastern United States. Annual meeting of the Association of American Geographers, Boston, MA.

47. Shepherd, J.M., A. Grundstein, and T. Mote, 2008: Quantifying the contribution of tropical cyclones to extreme rainfall along the coastal southeastern United States, Annual meeting of the American Meteorological Society, New Orleans, LA.

46. *Mote, T., 2007: An integrated use of microwave instruments for assessing snow cover. Annual meeting of the Association of American Geographers, San Francisco, CA.

45. Shepherd, J.M., and T. Mote, 2007: Trends toward wetter hurricane basins, American Meteorological Society 19th Conference on Climate Variability and Change, San Antonio, TX.

44. Frye, J., J. Durkee, T. Mote, M. Lacke, H. Jeong, C. Fuhrmann, and G. Wassel, 2006: Effects of the North Atlantic Oscillation on Precipitation Type Distribution in the Eastern United States. Annual meeting of the American Association of Geographers, Chicago, IL.

43. Grundstein, A. and T. Mote, 2005: Relationship between snow cover and spring ?green up? in the USA Upper Midwest. Annual meeting of the Association of American Geographers, Denver, CO.

42. *Mote, T., and D. Robinson, 2005: Development and evaluation of snow depth data sets for North America. International Climate and Cryosphere (CliC) conference, Beijing, China.

41. Dyer, J., and T. Mote, 2004: The influence of snow depth on surface air temperatures. Annual meeting of the Association of American Geographers, Philadelphia, PA.

40. Grundstein, A., P. Todhunter, and T. Mote, 2004: Soil temperature/snowpack relationship in Eastern North Dakota. Annual meeting of the Association of American Geographers, Philadelphia, PA.

39. *Mote, T., and E. Powell, 2004: Greenland melt, surface mass balance and equilibrium line altitude from microwave radiometry, Fall meeting of the American Geophysical Union, San Francisco, CA.

38. *Mote, T., 2004: The Atlanta heat island, A rain-making machine? Northern Illinois University, Department of Geography, DeKalb, IL.

37. *Mote, T., and P. Dixon, 2004: The Atlanta heat island, A rain-making machine? Ain Shams University, Department of Geography, Cairo, Egypt.

36. *Mote, T., 2004: Evaluation of passive microwave and scatterometer measures of North American snow cover extent and depth. Annual meeting of the Association of American Geographers, Philadelphia, PA.

35. Wassel, G., W. Ashley, T. Mote, and M. Bentley, 2004: On the episodic nature of long-lived, convectively generated high-wind events in the United States. Annual meeting of the Association of American Geographers, Philadelphia, PA.

34. Dixon, P., and T. Mote, 2003: Moisture and temperature characteristics of Atlanta's urban heat island-induced precipitation days. Annual meeting of the Association of American Geographers, New Orleans, LA.

33. Frei, A., T. Mote, J. Miller, D. Robinson, A. Grundstein, and R. Brown, 2003: Snow covered area and water equivalent simulations in AMIP-2. Annual meeting of the Association of American Geographers, New Orleans, LA.

32. *Mote, T., and D. Robinson, 2003: Development and evaluation of a new daily snow depth data set for the continental United States. Annual meeting of the Association of American Geographers, New Orleans, LA.

31. Dixon, P., and T. Mote, 2002: Climatological patterns of Atlanta's urban heat island precipitation. Annual meeting of the Association of American Geographers, Los Angeles, CA.

30. Dixon, P., W. Ashley, J. Durkee, E. Powell, S. Trotter, T. Mote, and A. Grundstein, 2002: Precipitation contributions of mesoscale convective complexes in the southeastern United States. Annual Southeast Severe Storms Symposium, Starkville, MS.

29. Dyer, J., and T. Mote, 2002: Using SNTHERM to simulate the extreme snowmelt event that led to the 1997 Red River floods. Eastern Snow Conference, Stowe, VT.

28. Dyer, J., and T. Mote, 2002: Using a complex snowpack energy and mass balance model to simulate the extreme snowmelt event that led to the 1997 Red River floods. Annual meeting Association of American Geographers, Los Angeles, CA.

27. *Mote, T., and D. Robinson, 2002: Evaluation of a quality controlled daily snow depth dataset for the continental United States. Snow Watch Meeting, Silver Springs, MD.

26. Bentley, M., T. Mote, and P. Thebpanya, 2000: The utility of Landsat-7 ETM+ data for identifying agricultural damage due to severe thunderstorms in western Illinois. American Meteorological Society 13th Conference on Applied Climatology, Portland, OR.

25. Choi, J-N., V. Meentemeyer, and T. Mote, 2000: Spatial patterns of a heat index for the coterminous united states and its temporal trends. American Meteorological Society 12th Conference on Applied Climatology, Asheville, NC.

24. Grundstein, A., and T. Mote, 2000: A sensitivity analysis of SNTHERM modeled SWE. Fall meeting of the American Geophysical Union, San Francisco, CA.

23. *Mote, T. and A. Grundstein, 2000: A comparison of modeled, remotely sensed and measured snow water equivalent in the northern Great Plains. 12th Conference on Applied Climatology, American Meteorological Society, Asheville, NC.

22. *Mote, T., 2000: Application of microwave SWE algorithms in the northern Great Plains. Annual meeting of the Association of American Geographers, Pittsburgh, PA.

21. Bentley, M.L., and T. Mote, 1998: A synoptic climatology of derecho producing mesoscale convective systems: 1986-1995. American Meteorological Society 19th Conference on Severe Local Storms, Minneapolis, MN.

20. *Bentley, M., and T. Mote, 1998: A synoptic climatology of derecho producing mesoscale convective systems: 1986-1995. Annual meeting of the Association of American Geographers, Boston, MA.

19. Hunter, S., S.J. Underwood, T. Mote, M. Bentley, and R. Holle, 1998: Winter lightning in the Southeast U.S. and its relation to heavy frozen precipitation. American Meteorological Society 19th Conference on Severe Local Storms, Minneapolis, MN.

18. *Mote, T., 1997: Estimates of Greenland Ice Sheet ablation using microwave radiometric data. Annual meeting of the Association of American Geographers, Dallas, TX.

17. *Mote, T., 1996: Ablation estimates on the Greenland Ice Sheet from SMMR data. Fall meeting of the American Geophysical Union, San Francisco, CA.

16. *Mote, T., 1996: The anatomy of a heavy Southeast snowstorm. Annual meeting of the Association of American Geographers, Charlotte, NC.

15. Anderson, M., T. Mote, and W. Abdalati, 1995: A comparison of passive microwave techniques for detecting snowpack melt on the Greenland ice sheet. Fall meeting of the American Geophysical Union, San Francisco, CA.

14. Anderson, M., K. George, and T. Mote, 1995: Relationships between snow melt on the Greenland ice sheet and regional sea ice conditions. Annual meeting of the Association of American Geographers, Chicago, IL.

13. *Mote, T., 1995: Interaction of synoptic and mesoscale mechanisms responsible for Southeastern U.S. flooding from Tropical Storm Alberto. Annual meeting of the Association of American Geographers, Chicago, IL.

12. Anderson, M., T. Mote, and K. George, 1994: An analysis of Greenland surface snow melt and its association with regional sea ice conditions. Fall meeting of the American Geophysical Union, San Francisco, CA.

11. *Mote, T., 1994: A comparison of SSM/I data and modeled snowpack conditions for Dye-2, Greenland. Presented by C.M. Rowe at the Geological Survey of Greenland planning workshop on Early Detection of Changes on the Greenland Ice Sheet and Understanding Their Causes, Copenhagen, Denmark.

10. *Mote, T., and C. Rowe, 1994: A comparison of satellite microwave data and surface meteorological observations for Dye-2, Greenland. Annual meeting of the Association of American Geographers, San Francisco, CA.

9. Rowe, C., K. Kuivinen, M. Anderson and T. Mote, 1994: Indications of melt in near-surface ice core stratigraphy: Comparisons with passive microwave melt signals over the Greenland Ice Sheet. Annual meeting of the Association of American Geographers, San Francisco, CA.

8. Rowe, C., and T. Mote, 1994: Large scale sensible heat advection and snowmelt on the Greenland ice sheet. Fall meeting of the American Geophysical Union, San Francisco, CA.

7. Rowe, C., M. Anderson, T. Mote, and K. Kuivinen, 1994: Indications of melt in near surface ice core stratigraphy: Comparisons with passive microwave melt signals over the Greenland ice sheet. International Glaciological Society Symposium on the Role of the Cryosphere in Global Change, Columbus, OH.

6. *Mote, T., 1993: A synoptic climatology of snowpack melt events on the Greenland ice sheet. Annual meeting of the Association of American Geographers, Atlanta, GA.

5. Kuivinen, K., M. Anderson, T. Mote, and C. Rowe, 1992: Regionalization of Greenland ice sheet surface characteristics using passive microwave techniques. Annual meeting of the Association of American Geographers, San Diego, CA.

4. *Mote, T., 1992: Snowpack melt on the Greenland ice sheet as an indicator of climate variability. Fall meeting of the American Geophysical Union, San Francisco, CA.

3. *Mote, T., and M.R. Anderson, 1992: Sea ice melt and associated atmospheric circulation patterns in the Arctic. Annual Meeting of the Association of American Geographers, San Diego, CA.

2. *Mote, T., M. Anderson, K. Kuivinen, and C. Rowe, 1992: Spatial and temporal variations of snowpack melt on the Greenland ice sheet. International Glaciological Society's Conference on Remote Sensing, Boulder, CO.

1. *Anderson, M., and T. Mote, 1991: Sea ice movements in the Weddell Sea. Annual meeting of the Association of American Geographers, Miami, FL.

Instruction

GEOG/ATSC 1112: Introduction to Weather and Climate w/ Lab. Atmospheric composition and structure, clouds, precipitation, and atmospheric motion and winds. Organized weather systems, including air masses, fronts, and severe weather. Discussion of global climates includes circulation, wind systems, climate classification, and climate change.

ATSC/GEOG 3110: Climatology. Climatology from local to global scales. Topics include radiation/heat exchanges, the hydrologic cycle, global climate patterns, climate change, measurement and data sources, relationships of climate with ecosystem processes and human activities, climate forecasting.

ATSC/GEOG 3120: Weather Analysis and Forecasting w/ Lab. The collection, display, and application of weather data. The use of meteorological instruments, codes, maps, atmospheric soundings, and thermodynamics diagrams. Interpretation of weather maps using basic meteorological principles.

ATSC/GEOG 4120/6120: Synoptic Meteorology/Climatology. Theory and observations to understand mid-latitude weather systems. Focus is on application of quasi-geostrophic theory in weather forecasting. Analysis and interpretation of weather maps and numerical models. Development and life cycle of cyclones, fronts, and jet streams.

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

ATSC/GEOG 4155/6155: Hydrometeorology. Hydrometeorology bridges atmospheric sciences and hydrology, including formation and distribution of liquid and solid precipitation,

floods, and drought, and impacts on water resources. Topics address the observing, modeling, and forecasting of fluxes, flow, and storage of liquid water, ice, and water vapor, including interactions between the land surface and atmosphere.

GEOG 4350/6350: Remote Sensing of Environment. Remote sensing with emphasis on aerospace applications in the natural sciences. Fundamental properties of the electromagnetic spectrum and remote sensing devices such as multispectral cameras, thermal infrared line scanners, and radar imaging.

GEOG 8120: Seminar in Climatology. Advanced topics in physical climatology such as climate change, microclimatology, urban climatology, synoptic climatology applied climatology or climate policy.

GEOG 8810: Seminar in Human-Environment Relationships. Problems, methods, and techniques in human-environment relationships and economic development, including decision-making strategies in resource exploitation.

Graduate Advisory, Reading, or Examining Committees

Major professor, Ph.D.

Jonathan R. Preece, 2022. *Local and remote drivers of Greenland ice sheet surface mass loss under Arctic amplification.* (postdoctoral teaching and research associate, University of Georgia)

Lori J. Wachowicz, 2022. *Tropical sea surface temperature variability and its role on Arctic atmospheric circulation and sea ice.* (data scientist, KPMG)

Flávia Dias de Souza Moraes, 2021. *Drought in the insular Caribbean: Teleconnection effects, water resources, and vulnerability index.* (lecturer, Georgia State University)

Kyle S. Mattingly, 2019. *Connecting changes in poleward energy flux to Greenland ice sheet energy budget and mass balance: The role of moisture transport by atmospheric rivers.* (assistant scientist, Space Science and Engineering Center, University of Wisconsin-Madison)

Paul W. Miller, 2017. *Anticipating thunderstorm severity in weakly sheared atmospheres across the southeast United States.* (assistant professor, Louisiana State University)

Craig A. Ramseyer, 2016. *Regional climate forcing of precipitation and drought in the Luquillo Experimental Forest, Puerto Rico.* (assistant professor, Virginia Tech)

Alan W. Black, 2015. *Winter precipitation hazards and vulnerability in the United States.* (assistant professor, Southern Illinois University - Edwardsville)

Vittorio A. Gensini, 2014. *Hazardous convective weather in the United States: A dynamical downscaling approach.* (associate professor, Northern Illinois University)

Joshua D. Durkee, 2008. *Assessing the role of warm-season mesoscale convective complexes in subtropical South American precipitation variability.* (professor, Western Kentucky University)

John D. Frye, 2008. *An empirical study of the relationship between soil moisture and convection in the southern Great Plains.* (associate professor, University of Wisconsin-Whitewater)

Walker S. Ashley, 2005. *Derecho-producing convective systems in the United States: An assessment of derecho hazards and family formation.* (professor, Northern Illinois University)

Jamie L. Dyer, 2005. *Spatial and temporal trends in North American snow depth and relationships with streamflow and ablation.* (professor, Mississippi State University)

Mace L. Bentley, 1999. *A climatology of derecho producing mesoscale convective systems in the eastern United States, 1986–1995.* (professor, James Madison University)

Major professor, M.S.

Katrina Ducre, current

Zach Pilgrim, current.

Shelby Ingram, 2022. Saharan air layer influences on Puerto Rico hydrological response. (meteorologist, NOAA Southeast River Forecast Center)

Haylie N. Mikulak, 2019. *Influence of low-frequency atmospheric teleconnections on arctic blocking patterns.* (PhD student, Auburn University)

Lori J. Wachowicz, 2017. *Rain-on-snow in the eastern United States and associated surface energy budget and atmospheric circulation.* (data scientist, KPMG)

Joshua J. Rosen, 2017. *A synoptic climatology of Greenland ice sheet surface mass balance: A neural network/self-organizing map approach.* (physical scientist, U.S. Geological Survey)

Kyle S. Mattingly, 2014. *Atmospheric circulation associated with large, long-lived convective systems over subtropical South America.* (assistant scientist, Space Science and Engineering Center, University of Wisconsin-Madison)

Jordan T. McLeod, 2014. *Atmospheric bottlenecks over the Arctic: A climatological investigation of extreme Greenland blocking episodes and their relationship with precipitation anomalies across the United States.* (instructor, University of South Alabama)

Jingmei Wei, 2013. *A synthesis of point snow depth observations and a satellite snow depth product.* (MBA student, University of Maryland)

Anthony P. Bedel, 2012. *Climate change and associated fire potential for the southeastern United States in the 21st Century.* (meteorologist, Environmental Protection Agency)

Craig A. Ramseyer, 2011. *Forest fire aerosol forcing of precipitation along the U.S. south Atlantic coast.* (assistant professor, Virginia Tech)

Laura E. Becker, 2010. *The effects of tropical cyclone induced damage on the regional climate of the U.S. Gulf Coast.* (environmental scientist, State of Louisiana)

Jordan Pesses Lieberman, 2010. *Comparison of MODIS LST and SSM/I melt detection products on the Greenland ice sheet.* (geospatial analyst, U.S. Department of Defense)

Emily R. Kutney, 2009. *On the association of autumn Eurasian snow cover and winter North American temperatures.*

Matthew C. Lacke, 2007. *Aerosols and associated precipitation patterns in Atlanta.* (meteorologist, Air and Radiation Protection Division, Jefferson County Department of Health, Birmingham, AL)

Christopher M. Fuhrmann, 2006. *Severe convective wind environments in Georgia.* (associate professor, Mississippi State University)

Gregory A. Wassel, 2006. *A climatology of electrified convective snowfall events and their radar signatures.* (product manager, Franklin Energy)

Emily J. Powell, 2003. *Greenland equilibrium line from ERS-1/2 scatterometers and surface mass balance model data.* (climate services specialist, Florida State University)

Joshua D. Durkee, 2003. *The precipitation efficiency of warm-season mesoscale convective complexes in the United States.* (professor, Western Kentucky University)

Paul G. Dixon, 2002. *Climatological patterns of Atlanta's urban heat island-initiated precipitation.* (dean, Fort Hays State University)

Jamie L. Dyer, 2001. *Simulating the 1997 Red River floods utilizing a coupled snowpack and hydrologic model.* (professor, Mississippi State University)

Supervisory committee member, Ph.D.

Andrew Benjamin (U. Delaware, Geography), current. *The effects of increased urbanization on winter precipitation patterns in the Mid-Atlantic United States: A WRF modeling study.*

Rich Ross (U. Georgia, Statistics), 2022 *Topological data analysis for Rossby wave estimation.*

Natalie Teale (Rutgers U., Geography), 2020. *Investigating the relationship between atmospheric moisture transport and precipitation in the eastern United States.*

Benjamin Washington (U. Georgia, Statistics), 2020. *An adapted VAR EM imputation of climate data and statistical downscaling of temperature, precipitation and solar radiation in Puerto Rico.*

Hilde Oliver (U. Georgia, Marine Sciences), 2019. *Physical controls on light and nutrients in coastal regions receiving large fluxes of glacial meltwater.*

Brad Johnson, 2018. *The impact of urbanization on regional scale climate and winter precipitation.*

Rocio Rodriquez Granados (U. Georgia, Forestry and Natural Resources), 2016. *Indigenous perceptions of environmental change: Local realities and coping strategies in the Colombian Amazon.*

Lixin Wang, 2016. *Late Quaternary paleoenvironmental changes in southern Africa and Madagascar: Evidence from aeolian, fluvial, and cave deposits.*

Yawen Bao (U. Georgia, Crop and Soil Science), 2015. *Coupling the simclim system with crop simulation models for determining adaptation strategies under a changing climate: an application for maize production in the southeastern USA.*

John Mioduszewski, 2015 (Rutgers U., Geography). *Attribution of snow melt onset and linkages across the Northern Hemisphere cryosphere.*

Amanda J. Schroeder, 2015. *A spatio-temporal assessment of urban flooding in the United States.*

Binita KC, 2014. *Spatio-temporal assessment of current and future climate change vulnerability in Georgia.*

Theresa K. Andersen, 2013. *The "brown ocean" concept: A spatio-temporal and theoretical analysis of intensifying tropical cyclones over land.*

Chandana Mitra, 2011. *A synergistic study of urban land cover dynamics-premonsoonal rainfall relationships in Kolkata, India using climatological, remotely-sensed, and modeling methodologies.*

Mario A. Giraldo, 2007. *Complex landscapes analysis for ground and remote sensing estimations of soil water content.*

Sharon Trotter Ashley, 2006. *A geographical analysis of flood hazards in the United States.*

Nellie Elguindi, 2003 (U. Delaware, Geography). *Subgrid-scale snowcover heterogeneity and the effects of snowcover on mid-latitiude cyclones in the Great Plains.*

Jong-Nam Choi, 2001. *Statistical characteristics and synoptic patterns of persistent positive temperature anomalies in the United States, 1950–1995.*

Jon Anthony Stallins, 2000. *Barrier island morphology and dune vegetation pattern and process in the Georgia Bight.*

James W. Webster, 2000. *Speleothem evidence of late Holocene climate variation in the Maya Lowlands of Belize, Central American and archaeological implications.*

Andrew H, Ivester, 1999. *Quaternary geology of inland dunes in Georgia, U.S.A.*

S. Jeffrey Underwood, 1999. *A multi-scale climatology of wind-driven rain for the contiguous United States 1971–1995.*

Douglas W. Gamble, 1997. *Climatic and physiographic features associated with extreme unseasonable floods in the southeastern United States, 1950–1990.*

Supervisory committee member, M.S.

Victor Arraes Rocha Felix, current.

Lindsey Nixon, current.

J.D. Burke, 2022. *Spatio-temporal Analysis of Summertime Urban Lightning Patterns throughout the Charlanta Megaregion.*

Ian Boatman, 2019. *The development of an empirically-based definition of epidemic thunderstorm asthma.*

Patrick Kriebel (U. Georgia, Statistics), 2016. *Estimating precipitation volume distributions using data from the spatially dense CoCoRaHS network.*

Jared Rackley, 2015. *Southern Appalachian cold air damming (CAD): A climatology and simulation of case studies.*

Emily N. Wilson, 2012. *Case studies of clear-air turbulence: evaluation and verification of new forecasting techniques.*

Jiaying Wu, 2012. *A chironomid-based reconstruction of late holocene climate change in southern Costa Rica.*

Fang Zhao, 2011. *Precipitation changes near Three Gorges Dam, China.*

Theresa K. Andersen, 2010. *A climatological analysis of drought and tornadic activity in the southeastern United States.*

W. Michael Carter, 2009. *Mesoscale circulations in the urban-coastal environment: An observational and modeling analysis of sensitivity to high resolution representation of the urban canopy.*

Lauren M. Hand, 2008. *An investigation of warm season spatial rainfall variability in Oklahoma City: Possible linkages to urbanization and prevailing wind.*

Jennifer E. Jacobs, 2008. *An examination of variations in snow depth in the Rocky Mountains.*

Yan Zhou, 2008. *Atlanta's urban heat island under extreme heat conditions and potential mitigation strategies.*

Daria B. Kluver, 2007 (U. Delaware, Geography). *Characteristics and trends of North American snowfall from a comprehensive gridded data set.*

Richard M. Boutillier, 2004 (U. Delaware, Geography). *A synoptic evaluation of derechos in the northeastern United States.*

Jennifer Sheppard Doublin, 2003. *A spatial and temporal investigation of growing season droughts in the Southeast United States: An application of airmass and synoptic analyses.*

External evaluator

Libo Wang, Ph.D. (U. Alberta), 2006. *Satellite remote sensing of snow cover and snowmelt in the Arctic.*

Professional Activities

Executive Education

Southeastern Conference Academic Leadership Development Program, 2018–2019

University System of Georgia Executive Leadership Institute, 2014–2015

AAG Department Leaders Workshop, 2005, 2007, 2014

Editorial

Journal of Applied Meteorology and Climatology, associate editor, 2008–2011; editor, 2011–2015.

Geography Compass, section editor, 2007–2011.

Physical Geography, editorial board, 2016–.

Manuscript review

Annals of Glaciology
Arctic, Antarctic, and Alpine Research
Atmospheric Research
Atmospheric Research Letters
Cartography and Geographic Info. Science
Climate Dynamics
Climate Research
Climatic Change
The Cryosphere
Earth Interactions
Geocarto International
Geophysical Research Letters
Global Change Biology
Hydrological Processes
International Journal of Climatology
J. Applied Meteorology and Climatology
J. Climate
J. Geography
J. Geophysical Research
J. Glaciology
J. Hydrometeorology
Monthly Weather Review
Nature
Nature Climate Change
Nature Communication
Physical Geography

Science

Southeastern Geographer

Southwestern Geographer

Water Resources Research

Weather Climate and Society

Grant review

Alberta Ingenuity Foundation

French National Research Agency

National Atmospheric and Space Administration

National Geographic Society

National Oceanic and Atmospheric Administration

National Science Foundation

Netherlands Organization for Scientific Research

Southeast Regional Climate Center

Swiss National Science Foundation

South Carolina Sea Grant Consortium

Promotion, tenure and appointment review

Arizona State University

City College of New York

Dartmouth College

East Carolina University

James Madison University

Louisiana State University

Mississippi State University

Southern Illinois University

Texas A&M University

Texas Tech University

University of Alabama

University of Arkansas

University of California, Irvine

University of Connecticut

University of Delaware

University of Idaho

University of Illinois

University of Kansas

University of Maryland

University of North Carolina

USDA Forest Service

Western Kentucky University

External program review

James Madison University

University of Alabama

Memberships

American Association for the Advancement of Science, 2017–present.

American Association of Geographers, 1993–present.

Southeastern Division of the Association of American Geographers, 2001–present.

American Geophysical Union, 1992–present.

American Meteorological Society, 1993–present.

Service Activities

Departmental

Search Committee for Energy and Sustainability, chair, 2010–2011.

Computer Committee, member, 2007–present; chair, 2009–2011.

Search Committee for GIScience, chair, 2006–2007.

Graduate Coordinator, 2004–2006.

Adviser to Geography Graduate Student Organization, 2004–2006.

Search Committee for CRMS director, member, 2003–2004.

Department Initiatives and Tracks Committee, member, 2003–2004.

Faculty Adviser to student American Meteorological Society chapter, 2000–2011.

Faculty Adviser to student Gamma Theta Upsilon chapter, 2002–2004.

Undergraduate Coordinator, 2002–2004.

Undergraduate Adviser, 1999–2004.

Introduction to Weather and Climate, class coordinator, 1997-1998, 1999–2000, 2003–2005.

Search Committee for Franklin Fellow, member, 2003.

Advisory Committee, elected member, 1996–1998, 2004–2006; chair, 2006.

Departmental Colloquia Coordinator, 1996–1998.

Graduate Studies Committee, member, 1995–1996, 2000–2001.

Geosciences Learning Center Committee, member, 1994–1995.

Undergraduate Studies Committee, member, 1994–1995.

University

Faculty Affairs Advisory Group, member, 2022.

Credit Hour Review Committee, member, 2022.

Review, Vice President for Instruction, member, 2021-2022.

President Work Group on Research, member, 2020.

Provost Task Force on Academic Excellence, member, 2019–2020.

Provost Task Force on the Future of Computer Science, member, 2019–2020.

Graduate School Review and Dean Search Committee, member, 2019–2020.

Program review, Office of Global Education, member, 2019–2020.

Program review, Center for Applied Isotope Studies, chair, 2018.

Provost Committee on Textbook Costs, chair, 2017–2018.

Search Committee for Director of Geography, University of Nebraska, co-chair, 2017–2018.

Search Committee for Associate Director of the Honors Program, member, 2017.

Search Committee for Associate Dean of the Graduate School, chair, 2017.

Advisory Committee for the Georgia Informatics Institutes, co-chair, 2017.

Search Committee for Director of Development for Franklin College, member, 2015–2016.

Georgia Advanced Computing Resource Center Advisory Board, ex-officio member, 2014.

Franklin College Department Heads Retreat planning committee, chair, 2014.

Search committee in Digital History and Historic Preservation, member, 2013–2014.

Post-tenure review committee for College of Education, member, 2013–2014.

Program review, UGA Center for Archaeological Studies, chair, 2013–2014.

UCAR membership application, co-organizer, 2011–2012.

University Council, elected member, 2010–2012.

University Council, Strategic Planning Committee, member, 2011–2014.

Center for Integrative Conservation Research, member, 2010–present.

Georgia Center for Climate and Society, executive committee member, 2010–present.

Faculty of Water Resources, member, 2003–present.

Interdisciplinary Program in Atmospheric Sciences, director, 2000–2011.

Graduate Faculty Appointment/Reappointment Committee, member, 2003–2006; chair, 2006.

Institutional Assessment Committee, member, 1998–1999.

University System Graduate Faculty Executive Committee, student member, 1992–1994.

University Graduate Council, student member, 1992–1994.

Professional

NOAA Drought Task Force IV, member, 2020–2023.

Co-organizer, paper session, SCAR/IASC Polar 2018.

Co-organizer, Climate paper session, Annual meeting of the American Association of Geographers, 2018.

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

Member, NASA Cryospheric Sciences grant review panel, 2017.

Co-organizer, Climate paper session, Annual meeting of the American Association of Geographers, 2017.

Co-organizer, Climate paper and panel sessions, Annual meeting of the American Association of Geographers, 2016.

National Secretary, American Association of Geographers, 2015–2017.

Chair, Committee on Committees, American Association of Geographers, 2015–2017.

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

Co-organizer, Cryosphere paper/poster session, Fall meeting of the American Geophysical Union, 2015.

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

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

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

Member (elected), Membership Committee, University Corporation for Atmospheric Research, 2012–2018; Chair, 2016–2017.

Co-organizer, Cryosphere paper/poster session, Fall meeting of the American Geophysical Union, 2012.

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

Co-organizer, Cryosphere paper/poster session, Fall meeting of the American Geophysical Union, 2010.

Organizer and Chair, Cryosphere Specialty Group paper session, Association of American Geographers annual meeting, 2010.

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

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.

Last updated: January 20, 2023