

Castle A. Williams

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EDUCATION

The University of Georgia, Franklin College of Arts and Sciences Athens, GA
Ph.D. in Geography Expected May 2020

- Advisor: Dr. Andrew Grundstein
- Dissertation: *Should severe weather messages wear uniforms? The effects of visual and spatial inconsistencies on information seeking behaviors.*

Masters of Science in Geography 2014- 2016

- Advisor: Dr. Andrew Grundstein
- Thesis: *Children forgotten in hot cars: A hybrid mental models approach for improving public health messaging*

Bachelor of Science in Atmospheric Sciences 2009-2014

Bachelor of Science in Geography 2009-2014

Bachelor of Science in Psychology 2009-2014

RESEARCH INTERESTS

Weather & Risk Communication, Societal Impacts of Weather, Behavioral Geography, Atmospheric Hazards

METEOROLOGY AND SOCIETAL APPLICATIONS EXPERIENCE

The Alliance for Integrative Approaches to Extreme Environmental Events

Inaugural Steering Committee Member April 2017-Present

- Responsible for stewarding the Alliance and promoting a vision to ensure a safer society from environmental extremes through innovative partnerships, transformative interdisciplinary research, and effective knowledge mobilization.

American Meteorological Society – Committee on Effective Communication of Weather and Climate Information

Athens, GA

Student Member January 2017-Present

- Facilitate effective communication of weather, water, and climate information within our sciences and to the larger user community, especially our most important “user,” the general public.

Weather Hype Podcast - A weather and societal impacts podcast

Athens, GA

Co-Founder

March 2016-Present

- Create bi-monthly audio podcast on weather and climate issues relating to society and the many publics.
- Schedule interviews and produce content with guests in meteorology, climate, and social science.
- Edit audio podcasts using Audacity software for publication on iTunes, Google Play, and other podcasting apps.
- Develop branding materials for promoting podcast through self-maintained website and social media.

National Weather Association – Committee on Societal Impacts

Athens, GA

Committee Member

January 2016-Present

- Advise and service the National Weather Association (NWA) in matters related to societal impacts of weather and climate.
- Raise awareness, encourage, and support efforts within the NWA relating to societal impacts of weather and climate.
- Support the application of social science principles into operational meteorology and decision support for hazardous weather and high impact events, as well as day-to-day forecasting and operations.
- Develop and strengthen relationships between social scientists, operational meteorologists, and decision makers, particularly those responsible for public safety.

Weather and Society * Integrated Studies (WAS*IS) Students Organization

Athens, GA

Co-Founder

January 2015-Present

- Established organization to bring together students passionate about social science in weather and climate.
- Maintain social media presence for organization and update members on relevant opportunities and events.
- Host events at American Meteorological Society annual meetings to advertise our organization.

PEER- REVIEWED PUBLICATIONS

- **Williams, C.A.**, and Grundstein, A.J. (2017). Children Forgotten in Hot Cars: A mental models approach for improving public health messaging. *Injury Prevention*. Published Online First: 09 August 2017. doi: [10.1136/injuryprev-2016-042261](https://doi.org/10.1136/injuryprev-2016-042261)

- **Williams, C.A.**, Miller, P.W., Black, A.W., and Knox, J.A. (2017). Throwing caution to the wind: National Weather Service wind products as perceived by a weather-salient sample. *Journal of Operational Meteorology*. 5(9), 103-120.
- Miller, P.W., Black, A.W., **Williams, C.A.**, and Knox, J.A. (2016). Maximum wind gusts associated with human-reported nonconvective wind events and a comparison to current warning issuance criteria. *Weather and Forecasting*. 31(2), 451-465. doi:
- Miller, P.W., Black, A.W., **Williams, C.A.**, and Knox, J.A. (2016). Quantitative assessment of human wind speed overestimation. *Journal of Applied Meteorology and Climatology*. 55(4), 1009-1020. doi: <http://dx.doi.org/10.1175/waf-d-15-0112.1>
- Stewart, A.E., **Williams, C.A.**, Phan, M.D., Horst, A.L., Knox, E., Knox, J.A. (2016). Through the Eyes of the Experts: Meteorologists' Perception of the Probability of Precipitation. *Weather and Forecasting*, 31(1), 5-17. doi: <http://dx.doi.org/10.1175/waf-d-15-0058.1>
- Grundstein, A.J., **Williams, C.A.**, Phan, M.D., Cooper, B. (2015). Regional Heat Safety Thresholds for Athletics. *Applied Geography*, 56, 55-60. doi: <http://dx.doi.org/10.1016/j.apgeog.2014.10.014>
- Williams, C. A., and Eosco, G. M. Is a consistent message achievable? A multidisciplinary framework for defining 'consistency' in the weather enterprise. *Bulletin of the American Meteorological Society (BAMS)*. *In preparation*.

BOOK CHAPTERS

- Grundstein, A.J., and **C. A. Williams** (2018). Heat exposure and the general public: Health impacts, risk communication, and mitigation measures. In *Human Health and Physical Activity During Heat Exposure* (pp. 29-43). Springer, Cham. Available online at: https://link.springer.com/chapter/10.1007/978-3-319-75889-3_3

OTHER PUBLICATIONS

- **Williams, C.A.** and P.W. Miller, (2016, September). Fighting fatigue: The role of warning frequency in the weather enterprise. *The Weather Social*: <https://thewxsocial.com/2016/09/09/fighting-fatigue-the-role-of-warning-frequency-in-the-weather-enterprise/>
- Stewart, A. E., **C. A. Williams**, M. D. Phan, A. L. Horst, E. D. Knox, and J. A. Knox, 2016: Through the experts' eyes: Meteorologists' perceptions of the probability of precipitation. *Bulletin of the American Meteorological Society*, **97**, 905. (Papers of Note summary)
- WeatherHype Podcast: A podcast for casual weather conversation. Hosted by **Castle Williams** and Minh Phan. This podcast tackles important weather/society-related stories to

educate listeners in a very informal, unstructured way. Available on iTunes, Google Play, Stitcher, and other podcast applications: <http://www.weatherhypepodcast.com/>

FELLOWSHIPS & FUNDING

Grants:

- **Implications of inconsistent visual displays on end user uncertainty, risk perception, and behavioral intentions**, A Grundstein, J. So, and C. A Williams.
Joint Technology Transfer Initiative (JTTI), National Oceanic and Atmospheric Administration (\$178,203) 2018-2020

Fellowships:

- **Graduate Research Internship Program**, In partnership with National Science Foundation and National Weather Service (\$5,000) 2017-2018
- **Graduate Research Fellowship**, National Science Foundation (\$138,000) 2015-2020
- **AMS Graduate Fellowship**, American Meteorological Society (\$25,000) 2014-2015

Scholarships:

- **AMS Named Scholarship**, American Meteorological Society (\$2,000) 2013-2014
- **Merle C. Prunty, Jr. Scholarship**, UGA Department of Geography (\$2,000) 2011-2012

CONFERENCE PRESENTATIONS

Presentations at Professional Meetings:

- **Williams, C.A.**, and Grundstein, A.J. (2018, January). *Consistency and Weather Communication: A Multidisciplinary Perspective on the Use of “Consistency.”* Oral presentation at the UGA Geography Graduate Research Symposium, Athens, GA. Received Best Presentation Award.
- **Williams, C.A.**, and Grundstein, A.J. (2018, January). *Consistency and Weather Communication: A Multidisciplinary Perspective on the Use of “Consistency.”* Oral presentation at the National American Meteorological Society Conference, Austin, TX.
- **Williams, C.A.**, Sprague J., Eosco, G.M., Jacks, E., Hawkins, M., Pirring, A.T., and Klockow, K.E. (2018, January). *Expanding the NWS Hazard Simplification Project: An Exploration of Non-Precipitation Products.* Oral presentation at the National American Meteorological Society Conference, Austin, TX.
- Hawkins, M., Jacks, E., Ferrell J.G., Horvitz, A., Pirring, A.T., **Williams, C.A.**, and Eosco, G.M. (2018, January). *NWS Hazard Simplification: Effective Communication of Heat*

Hazards. Oral presentation at the National American Meteorological Society Conference, Austin, TX.

- **Williams, C.A.**, and Grundstein, A.J. (2016, January). *Turning up the Heat on Parents and Caregivers: Risk Perceptions of Forgetting a Child in a Hot Car*. Oral presentation at the National American Meteorological Society Conference, New Orleans, LA. Received a Student Presentation Award from the Seventh Conference on Environment and Health.
- **Williams, C.A.**, Miller, P.W., Black, A.W., and Knox, J.A. (2016, January). *Throwing Caution to the Wind: National Weather Service Wind Products as Perceived by a Weather-Savvy Public*. Oral presentation at the National American Meteorological Society Conference, New Orleans, LA. Received Third Place at Large from the 11th Symposium on Societal Applications: Policy, Research, and Practice.
- **Williams, C.A.**, Miller, P.W., Black, A.W., and Knox, J.A. (2015, October). *Throwing Caution to the Wind: A Weather-Savvy Perspective on Wind Terminology and Wind Damage*. Poster presentation at the National Weather Association Conference, Oklahoma City, OK.
- **Williams, C.A.**, Phan, M.D., Grundstein, A.J., Cooper, B. (2015, January). *A Proposed Regional System of Categorizing Wet Bulb Globe Temperature for Athletic Outdoor Policy*. Oral presentation at the National American Meteorological Society Conference, Phoenix, AZ.
- **Williams, C. A.**, Stewart, A.E., Phan, M.D., Horst, A.L., Knox, E., Knox, J.A. (2015, January). *Through the Eyes of the Experts: The Perception of the Probability of Precipitation*. Poster session presented at the National American Meteorological Society Student Conference, Phoenix, AZ.
- **Williams, C.A.**, Phan, M.D., Grundstein, A.J., Cooper, B. (2014, October). *Geographically-Based Heat Safety Thresholds in Athletics*. Oral presentation at the Conference of Applied Geography, Atlanta, GA.
- Phan, M.D., **Williams, C.A.**, Grundstein, A.J., Cooper, B. (2014, September). *A Proposed Regional System of Categorizing Wet Bulb Globe Temperature for Athletic Outdoor Policy*. Oral presentation at the International Congress of Biometeorology, Cleveland, OH.
- **Williams, C. A.**, Stewart, A.E., Horst, A.L., Phan, M.D., Knox, E., Brough, B., Knox, J.A. (2014, April). *Through the Eyes of the Experts: The Perception of the Probability of Precipitation*. Poster session presented at University of Geography - Geography Undergraduate Conference, Athens, GA.
- **Williams, C. A.**, Stewart, A.E., Horst, A.L., Phan, M.D., Knox, E., Brough, B., Knox, J.A. (2014, February). *Through the Eyes of the Experts: The Perception of the Probability of Precipitation*. Oral presentation at the National American Meteorological Conference, Atlanta, GA.
- Phan, M.D., **Williams, C.A.**, Grundstein, A.J., Cooper, B. (2014, February). *Regional WBGT Heat Safety Thresholds for Athletics*. Poster session presented at the National American Meteorological Student Conference, Atlanta, GA.

- **Williams, C.A.**, Phan, M.D., Grundstein, A.J., Cooper, B. (2013, November). *An Investigation of Extreme Wet-Bulb Globe Temperatures Across the Contiguous United States*. Poster session presented at the Southeastern Division of the Association of American Geographers, Roanoke, VA.

Panels at Professional Meetings:

- **Williams, C.A.** (2016, January). *Communicating uncertainty in weather and climate – From Probability of Precipitation to Beyond CO₂*. Town hall panel session during the National American Meteorological Conference, New Orleans, LA.

QUOTED

- Shepherd, M. (2018, September). Five things that must change after Hurricane Florence. *Forbes*. Retrieved from: <https://www.forbes.com/sites/marshallshepherd/2018/09/17/five-things-that-must-change-after-hurricane-florence/#1d4a287724a9>
- Breslin, S. (2018, September). 42 children have died in hot cars in 2018 – More than the Average for an entire year. *Weather.com*. Retrieved from: https://weather.com/safety/heat/news/2018-09-05-hot-car-deaths-above-average?utm_source=eGaMorning&utm_campaign=8846c27b53-eGaMorning-9718&utm_medium=email&utm_term=0_54a77f93dd-8846c27b53-71063218&mc_cid=8846c27b53&mc_eid=c09a25d7ef
- Shepherd, M. (2018, July). Five confessions of a weather-climate scientist visiting iconic national parks. *Forbes*. Retrieved from: <https://www.forbes.com/sites/marshallshepherd/2018/07/04/5-confessions-of-a-weather-climate-scientist-visiting-iconic-national-parks/#24aa663f4592>
- University of Georgia Research (2018). Preventing deaths of children in hot cars. Retrieved from: <https://ugaresearch.uga.edu/new-research-aims-to-prevent-deaths-of-children-in-hot-cars/>
- Luton, J. (2017, September). New research focuses on hot car deaths. *UGA Today*. Retrieved from: <https://news.uga.edu/new-research-aims-to-prevent-deaths/>
- Shepherd, M. (2016, June). Does it get hot enough in a car to bake turkey? *Forbes*. Retrieved from: <http://www.forbes.com/sites/marshallshepherd/2016/06/13/does-it-get-hot-enough-in-a-car-to-bake-turkey/#3b890efc5e01>
- Shepherd, M. (2016, April). “Turn around don’t drown” is a cute slogan: Why some don’t do it. *Forbes*. Retrieved from: <http://www.forbes.com/sites/marshallshepherd/2016/04/19/turn-around-dont-drown-is-a-cute-slogan-why-some-dont-do-it/#519d41e13695>
- Shepherd, M (2015, November). Do you (or your meteorologist) understand what 40% chance of rain means? *Forbes*. Retrieved from: <http://www.forbes.com/sites/marshallshepherd/2015/11/27/do-you-or-your-meteorologist-understand-what-40-chance-of-rain-means/#346f952e7d16>

RESEARCH EXPERIENCE

National Weather Service – Graduate Research Internship Program Silver Spring, MD

Intern May 2017-Present

- Expanding the Hazard Simplification Project to address non-precipitation hazards (i.e., extreme heat and high winds).
- Acting as a Social Science Subject Matter Expert for the Hazard Simplification Project.

National Science Foundation – Graduate Research Fellowship Program Athens, GA

Research Assistant June 2015-Present

- Working on research with a fellowship from the National Science Foundation Graduate Research Fellowship.

Federal Emergency Management Agency - Region IV Atlanta, GA

Pathways Intern February 2015-October 2015

- Worked on a research project, with The Hurricane Program, involving coastal vulnerability of states in FEMA Region IV.

AMS Graduate Fellowship – American Meteorological Society Athens, GA

Research Assistant August 2014-May 2015

- Worked on research with a fellowship from the American Meteorological Society's 21st Century Campaign.

University of Georgia – Department of Geography Athens, GA

Research Assistant February 2013-May 2014

- Worked on a joint grant with the National Institutes of Health.
- Mapped a spatial relationship of temperature and heat index within the Atlanta-Metro Area for an in-depth epidemiological study.
- Used ArcGIS software and various programming languages to evaluate data.
- In collaboration with Dr. Andrew Grundstein and Emory University.

TEACHING AND ADVISING EXPERIENCE

Department of Geography Athens, GA

Introduction to Physical Geography Teaching Assistant Fall 2018 - Present

Office of the Vice President for Instruction Athens, GA

Peer Advisor and Co-Creator August 2011-May 2012, August 2013-May 2014

- Assisted freshmen-year students with creating successful study strategies.
- Helped freshmen students become familiarized with a new college setting.
- Offered outside tutoring assistance for freshmen students.
- Provided freshmen students with a strong, positive, and academic influence.

College of Education

Athens, GA

Sign Language Teaching Assistant

Summer 2011, Spring 2012- Spring 2013

- Assisted professor with any organizational tasks prior to the start of class.
- Created lesson plans and filled in during the professor's absence.
- Graded papers and handled confidential information.
- Assisted students who required additional tutoring.

HONORS AND AWARDS

- Best Presentation Award, UGA Geography Graduate Research Symposium Spring 2018
- Third Place at Large, AMS Conference on Societal Applications Spring 2016
- Student Presentation Award, AMS Conference on Environment & Health Spring 2016
- Atlas Award Recipient for Academic Achievement Spring 2014
- Third Place, AMS Weather Ready Nation Poster Competition Spring 2014
- Presidential Scholar Fall 2012
- Top 100 UGA Student Workers Fall 2010-Spring 2011
- Dean's List 2009, 2012, Spring and Summer 2013
- UGA Honor's Day Invitee (Top 5%) Spring 2010

SERVICE

Professional Service:

- *Co-Chair*, Matt Parker Communication Workshop entitled: "“(In)Consistency in a Social Media World: Communication Reflections of the 2017 Hurricane Season” January 2018
- *Chair*, Building Professional Relationships. Session at the National AMS Student Conference January 2018
- *Co-Organizer*, Consistency of Graphics in the Weather Enterprise NWA Webinar – Societal Impacts Committee March 2017
- *Co-Chair*, Today's Insights and a Vision for Tomorrow. Session at the National AMS Student Conference January 2017
- *Co-Chair*, Social Science, Communication, and the Weather Enterprise. Panel session at the National AMS Student Conference January 2017
- *Student Member*, AMS Committee on Effective Communication of Climate and Weather Information 2017-2019

- *Member*, AMS Student Conference Planning Committee 2016-2018
- *Committee Member*, NWA Societal Impacts Committee 2016-2018

Departmental Service:

- *Organizing Committee*, UGA Geography Undergraduate Conference 2017-2018
- *Organizing Committee*, UGA Geography Undergraduate Conference 2016-2017
- *Judge*, UGA Geography Graduate Research Symposium February 2017
- *Co-Chair*, UGA Geography Graduate Student Association 2016-2017
- *Organizing Committee*, UGA Geography Undergraduate Conference 2015-2016
- *Social Coordinator*, UGA Geography Graduate Student Association 2015-2016
- *Graduate Representative*, UGA Local Chapter of AMS 2014-2016

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

- National Weather Association (NWA) 2015-present
- International Society of Biometeorology (ICB) 2014-present
- Co-Creator, Weather and Society Integrated Studies (WAS*IS) Students 2014-present
- American Meteorological Society – National and Local Member 2011-present
- The International Environmental Communication Association 2016-2017

SKILLS

- Microsoft Suite (Word, Excel, PowerPoint, etc.).
- Adobe Suite (Photoshop, After Effects, Pro Premiere).
- Programming Languages (HTML, Java, and R)
- Geographic Information Systems (ArcGIS, ArcMap).
- Podcast Producing and Audio Editing (Audacity)

TRAINING

- Human Subjects Training
- CITI – Social and Behavioral Research
- CITI – Social and Behavioral Internet-based Research
- IS-100: Introduction to Incident Command Systems (FEMA)
- IS-200: ICS for Single Resources and Initial Action Incidents (FEMA)
- IS-700: National Incident Management System (FEMA)
- IS-800: National Response Framework (FEMA)