

# Castle A. Williams

210 Field St., Rm. 215, Athens, GA 30602

[www.castlewilliams.com](http://www.castlewilliams.com) ♦ [castleaw@uga.edu](mailto:castleaw@uga.edu)

## **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, Research to Operations.

## **RELEVANT COURSEWORK**

---

- Risk Communication
- Health Communication
- Persuasion Communication
- Survey Research
- Qualitative Methods
- Quantitative Methods
- Disaster Management
- Geographic Information Systems

## **WEATHER ENTERPRISE EXPERIENCE**

---

### **Impact360 Alliance**

*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 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 Eosco, G. M. Is a consistent message achievable? A multidisciplinary framework for defining ‘message consistency’ in the weather enterprise. *Bulletin of the American Meteorological Society (BAMS)*. **In Review**.
- **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>

## **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](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 (JTII), 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.**, Grundstein, A.J, and So, J. (2019, June). *Should Severe Weather Graphics Wear Uniforms? A Qualitative Look at the SPC's Convective Outlook Graphic Among Members of the Public*. Oral presentation at the American Meteorological Society Broadcast Meteorology and Warning Communication Conference, San Diego, CA.
- **Williams, C.A.**, and Grundstein, A.J. (2019, January). *Is a Consistency Message Achievable? A Multidisciplinary Look at Defining 'Consistency' in the Weather Enterprise*. Oral presentation at the National American Meteorological Society Conference, Phoenix, AZ.
- **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., Piring, 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., Piring, 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 11<sup>th</sup> 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.** (2019, September). *Perspectives on the R2O Transition Process*. Panel session during the Office of Weather and Air Quality's Social and Behavioral Science Research to Operations Workshop, Silver Spring, MD.
- **Williams, C.A.** (2016, January). *Communicating uncertainty in weather and climate – From Probability of Precipitation to Beyond CO<sub>2</sub>*. Town hall panel session during the National American Meteorological Conference, New Orleans, LA.

**QUOTED**

---

- Budnick, N. (2019, August). When memory fails. *The Weather Channel*. Retrieved from: <https://features.weather.com/when-memory-fails/>
- 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-9\\_7\\_18&utm\\_medium=email&utm\\_term=0\\_54a77f93dd-8846c27b53-71063218&mc\\_cid=8846c27b53&mc\\_eid=c09a25d7ef](https://weather.com/safety/heat/news/2018-09-05-hot-car-deaths-above-average?utm_source=eGaMorning&utm_campaign=8846c27b53-eGaMorning-9_7_18&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**

---

### **University of Georgia – Department of Geography**

Athens, GA

*Research Assistant*

January 2019 - Present

- Successfully led a research team in the development of a NOAA JTTI grant proposal, statement of work, project deliverables, and transition plan.
- Responsible for managing the project's goals, milestones, and deliverables.
- Conducted qualitative and quantitative social science research outlined by NOAA JTTI grant proposal and statement of work.
- Collaborated with operational meteorologists at the Storm Prediction Center for transitioning research to operations.

### **National Weather Service – Graduate Research Internship Program**

Silver Spring, MD

*Intern*

May 2017-May 2018

- Worked alongside operational meteorologists and social science contractors to assist on the NWS Hazard Simplification Project.
- Conducted social science survey research to expand on the Hazard Simplification Project to address non-precipitation hazards (i.e., extreme heat and high winds).
- Acted as a social science subject matter expert for the Hazard Simplification Project.
- This internship was a joint effort between the National Weather Service and the National Science Foundation.

### **National Science Foundation – Graduate Research Fellowship Program**

Athens, GA

*Research Assistant*

June 2015-August 2018

- Conducted qualitative social science research for a fellowship with the National Science Foundation Graduate Research Fellowship.

### **Federal Emergency Management Agency - Region IV**

Atlanta, GA

*Pathways Intern*

February 2015-October 2015

- Conducted quantitative social science research and user centered design research, 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

- Conducted social science research for a fellowship with the American Meteorological Society's 21<sup>st</sup> 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

- Instructed undergraduate students in a laboratory setting.
- Responsible for co-creating curriculum with other teaching assistants.
- Graded papers and handled confidential information.

**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



## **SERVICE**

---

### Professional Service:

- *Chair*, Improving Communication of Dangerous Weather. Session at AMS Broadcast Meteorology and Warning Communication Conference. June 2019
- *Co-Chair*, Issues with (In)Consistency in the Warning and Forecast Process: Part II. Session at the National AMS Conference January 2019
- *Student and Early Career Task Force*, AMS Centennial Committee June 2018 - September 2019
- *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:

- *Space Committee*, UGA Geography Department 2019-2020
- *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

## **REVIEWER**

---

- Bulletin of the American Meteorological Society (BAMS) 2019
- Southeastern Geographer 2019
- Traffic Injury Prevention 2018

## **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 & 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)