

Curriculum Vitae

Geoffrey R. Marion

Department of Atmospheric Sciences
University of Illinois at Urbana-Champaign
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Education

University of Illinois at Urbana-Champaign, Ph.D. in Atmospheric Sciences, 2021
Dissertation: *Understanding and Anticipating Tornado Intensity in Supercell and Linear Convective Modes*
Advisor: Prof. Robert J. Trapp

University of Illinois at Urbana-Champaign, M.S. in Atmospheric Sciences, 2017
Thesis: *Controls of Updraft Size, Cold Pool Characteristics, and Potential Tornado Intensity in Supercell Thunderstorms*
Advisor: Prof. Robert J. Trapp

University of Illinois at Urbana-Champaign, B.S. with Distinction in Atmospheric Sciences, 2015

Appointments

Graduate Research Assistant, Summer 2016-Summer 2020
Graduate Teaching Assistant, Summer 2015-Spring 2016, Fall 2020-present
Undergraduate Research Assistant, Summer 2014-Spring 2015

Honors and Awards

Ogura Award for Outstanding Teaching Assistant, 2021
Outstanding Poster Presentation Award, SESE Research Review, 2016, 2018, 2020
Excellent Instructor (as rated by students), Spring 2016
Ogura Outstanding Undergraduate Research Award, 2015

Professional Society Memberships

American Meteorological Society
American Geophysical Union

Publications

In Preparation:

Marion, G.R., and R.J. Trapp: Understanding tornado intensity using idealized pseudostorm simulations. *Journal of the Atmospheric Sciences*, in preparation.

In Print:

Marion, G.R., and R.J. Trapp, 2021: Controls of tornado intensity in linear convective modes. *Journal of the Atmospheric Sciences*, <https://doi.org/10.1175/JAS-D-20-0164.1>

Marion, G.R., R.J. Trapp, and S.W. Nesbitt, 2019: Using overshooting top area to discriminate potential for large, intense tornadoes. *Geophysical Research Letters*, **46**, <https://doi.org/10.1029/2019GL084099>

Marion, G. R., and R. J. Trapp, 2019: The dynamical coupling of convective updrafts, downdrafts, and cold pools in simulated supercell thunderstorms. *Journal of Geophysical Research: Atmospheres*, **124**, <https://doi.org/10.1029/2018JD029055>

Trapp, R. J., **G. R. Marion**, and S. W. Nesbitt, 2018: Reply to “Comments on ‘The regulation of tornado intensity by updraft width.’” *Journal of the Atmospheric Sciences*, **75**, 4057-4061, <https://doi.org/10.1175/JAS-D-18-0276.1>

Trapp, R. J., **G. R. Marion**, and S. W. Nesbitt, 2017: The regulation of tornado intensity by updraft width. *Journal of the Atmospheric Sciences*, **74**, 4199-4211, <https://doi.org/10.1175/JAS-D-16-0331.1>

Presentations

Oral Presentations:

Marion, G.R. and R.J. Trapp, 2020: “Controls of quasi-linear convective system tornado intensity.” American Geophysical Union, Fall Meeting 2020

Marion, G.R., R.J. Trapp, and S.W. Nesbitt, 2018: “The dynamical coupling of convective updrafts, downdrafts, and cold pools in simulated supercell thunderstorms.” American Meteorological Society, 29th Conference on Severe Local Storms, Stowe, VT

Marion, G.R., R.J. Trapp, and S.W. Nesbitt, 2016: “The regulation of tornado intensity by updraft width. Part II: Idealized simulations.” American Meteorological Society, 28th Conference on Severe Local Storms, Portland, OR

Poster Presentations:

Marion, G.R. and R.J. Trapp, 2021: “Controls of quasi-linear convective system tornado intensity.” American Meteorological Society, 101st Annual Meeting

Marion, G.R., R.J. Trapp, and S.W. Nesbitt, 2020: "Using overshooting top area to discriminate potential for large, intense tornadoes." American Meteorological Society, 100th Annual Meeting, Boston, MA

Marion, G.R., R.J. Trapp, and S.W. Nesbitt, 2019: "Using overshooting top area to discriminate potential for large, intense tornadoes." National Weather Association, 44th Annual Meeting, Huntsville, AL

Marion, G.R., R.J. Trapp, and S.W. Nesbitt, 2018: "Using overshooting top area to discriminate potential for large, intense tornadoes." American Meteorological Society, 29th Conference on Severe Local Storms, Stowe, VT

Marion, G.R. and J.W. Frame, 2014: "Analysis and verification of 1300 UTC Storm Prediction Center Convective Outlooks." American Meteorological Society, 27th Conference on Severe Local Storms, Madison, WI

Contributed Presentations:

Grover, M., K. Bedka, R. J. Trapp, **G.R. Marion**, S. Nesbitt, and L. Di Girolamo, 2021: "Overshooting top area dashboard: A new resource for characterizing deep convection in real time." American Meteorological Society, 101st Annual Meeting

Sessa, M., R.J. Trapp, and **G.R. Marion**, 2021: "The observed relationship between pretornadic mesocyclone characteristics and tornado intensity with machine learning applications." American Meteorological Society, 101st Annual Meeting

Teaching

Graduate Teaching Assistant, Earth Systems Modeling, Fall 2020

Graduate Teaching Assistant, Introduction to Meteorology, Spring 2016

Graduate Teaching Assistant, Climate and Global Change, Fall 2015

Graduate Teaching Assistant, Severe and Hazardous Weather, Summer 2015