

Tyler Fricker

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Education

Florida State University, Tallahassee, FL, Geography, PhD, 2019

Florida State University, Tallahassee, FL, Geography, MS, 2015

The Ohio State University, Columbus, OH, Environment and Natural Resources, BS, 2013

Professional Experience

Assistant Professor, School of Sciences, University of Louisiana Monroe, 2020–Present

Visting Assistant Professor, Department of Geography, Texas A&M University, 2019–2020

Awards and Appointments

Endowed Professor of Geoscience, University of Louisiana Monroe, 2023–Present

Earth Science Section Chair, Louisiana Academy of Sciences, 2023–Present

Faculty Fellow, Hazard Reduction & Recovery Center, Texas A&M University, 2019–2020

Three Minute Thesis Finalist, Florida State University, 2017

University Research Assistant, Department of Geography, Florida State University, 2016–2017

University Teaching Assistant, Department of Geography, Florida State University, 2014–2019

University Mentor, Department of Geography, Florida State University, 2013–2014

Trustee Scholar, The Ohio State University, 2009–2013

Barnebey Family Scholar, The Ohio State University, 2011

Bert W. Martin Fund Scholar, The Ohio State University, 2010

Grants

NASA Research Initiation Awards. *Leveraging surface observations and satellite imagery to map urban extreme temperatures in northern Louisiana* - \$178,106 (In Review)

Unidata Equipment Awards. *Deploying a JupyterHub Server to Support Education and Research at ULM* - \$15,044

Louisiana Board of Regents Support Fund Enhancement Program. *Developing an Improved Geosciences Curriculum Through a Data Science Perspective* - \$29,780

Experiment Weather and Atmospheric Science Grant - \$3,501

Publications

2024

Fricker, T. and T. A. Murphy (2024). “Quantifying the Effects of the KULM Radar on Local Climatology, Operational Success, and Societal Impacts of Tornadoes”. In: *Journal of Applied Meteorology and Climatology*, p. In Review.

Moore, T. W., T. A. DeBoer, and T. Fricker (2024). “Multi-timescale exploration of teleconnection/tornado activity relationships in the Southeastern United States”. In: *Theoretical and Applied Climatology*, p. In Review.

2023

Fricker, T., T. Wells*, J. T. Allemeier*, and A. Baxter* (2023). “Digitizing and Geocoding Historical Records to Improve an Understanding of Tornado Climatology”. In: *The Professional Geographer*, pp. 1-13. DOI: 10.1080/00330124.2023.2169176. URL: <https://doi.org/10.1080/00330124.2023.2169176>.

Schroder, Z. and T. Fricker (2023a). “Expanding the historical”outbreak” climatology between 1880 and 1989”. In: *Natural Hazards*. DOI: 10.1007/s11069-023-05986-z. URL: <https://doi.org/10.1007/s11069-023-05986-z>.

Schroder, Z. and T. Fricker (2023b). “Exploring the overlap: comparing STORGIS and ONETOR data between 1950 and 1989”. In: *Theoretical and Applied Climatology*. ISSN: 1434-4483. DOI: 10.1007/s00704-023-04755-z. URL: <http://dx.doi.org/10.1007/s00704-023-04755-z>.

2022

Fricker, T. and D. L. Allen (2022). “A place-based analysis of tornado activity and casualties in Shreveport, Louisiana”. In: *Natural Hazards*. DOI: 10.1007/s11069-022-05373-0. URL: <https://doi.org/10.1007/s11069-022-05373-0>.

Murphy, T. A., T. M. Stetzer*, L. Walker*, T. Fricker, B. Bryant, et al. (2022). “Analysis of the 12 April 2020 North Louisiana Tornadoic QLCS”. In: *Journal of Operational Meteorology* 10.4, pp. 43-62. DOI: 10.15191/nwajom.2022.1004. URL: <https://doi.org/10.15191/nwajom.2022.1004>.

2021

Fricker, T. and C. Friesenhahn* (2021). “Tornado fatalities in context: 1995-2018”. In: *Weather, Climate, and Society*. DOI: 10.1175/wcas-d-21-0028.1. URL: <https://doi.org/10.1175/wcas-d-21-0028.1>.

2020

Fricker, T. (2020a). “Evaluating tornado casualty rates in the United States”. In: *International Journal of Disaster Risk Reduction* 47, p. 101535. DOI: 10.1016/j.ijdrr.2020.101535. URL: <https://doi.org/10.1016/j.ijdrr.2020.101535>.

Fricker, T. (2020b). “Tornado-Level Estimates of Socioeconomic and Demographic Variables”. In: *Natural Hazards Review* 21.3, p. 04020018. DOI: 10.1061/(asce)nh.1527-6996.0000379. URL: [https://doi.org/10.1061/\(asce\)nh.1527-6996.0000379](https://doi.org/10.1061/(asce)nh.1527-6996.0000379).

Moore, T. W. and T. Fricker (2020). “Tornadoes in the USA are concentrating on fewer days, but their power dissipation is not”. In: *Theoretical and Applied Climatology* 142.3-4, pp. 1569-1579. DOI: 10.1007/s00704-020-03402-1. URL: <https://doi.org/10.1007/s00704-020-03402-1>.

2019

Elsner, J. B., T. Fricker, and Z. Schroder (2019). “Increasingly Powerful Tornadoes in the United States”. In: *Geophysical Research Letters* 46.1, pp. 392-398. DOI: 10.1029/2018gl080819. URL: <https://doi.org/10.1029/2018gl080819>.

Fricker, T. and J. B. Elsner (2019). “Unusually Devastating Tornadoes in the United States: 1995-2016”. In: *Annals of the American Association of Geographers*, pp. 1-15. DOI: 10.1080/24694452.2019.1638753. URL: <https://doi.org/10.1080/24694452.2019.1638753>.

2018

Ellis, K. N., L. R. Mason, K. N. Gassert, J. B. Elsner, and T. Fricker (2018). “Public perception of climatological tornado risk in Tennessee, USA”. In: *International Journal of Biometeorology*. DOI: 10.1007/s00484-018-1547-x. URL: <https://doi.org/10.1007/s00484-018-1547-x>.

Elsner, J. B., T. Fricker, and W. D. Berry (2018). “A model for U.S. tornado casualties involving interaction between damage path estimates of population density and energy dissipation”. In: *Journal of Applied Meteorology and Climatology*. DOI: 10.1175/jamc-d-18-0106.1. URL: <https://doi.org/10.1175/jamc-d-18-0106.1>.

2017

Fricker, T., J. B. Elsner, and T. H. Jagger (2017). “Population and energy elasticity of tornado casualties”. In: *Geophysical Research Letters*. DOI: 10.1002/2017gl073093. URL: <https://doi.org/10.1002/2017gl073093>.

Fricker, T., J. B. Elsner, V. Mesev, and T. H. Jagger (2017). “A dasymetric method to spatially apportion tornado casualty counts”. In: *Geomatics, Natural Hazards and Risk*, p. 1–15. DOI: 10.1080/19475705.2017.1386724. URL: <http://dx.doi.org/10.1080/19475705.2017.1386724>.

2016

Elsner, J. B., T. Fricker, H. M. Widen, C. M. Castillo, J. Humphreys, et al. (2016). “The Relationship between Elevation Roughness and Tornado Activity: A Spatial Statistical Model Fit to Data from the Central Great Plains”. In: *J. Appl. Meteor. Climatol.* 55.4, pp. 849-859. DOI: 10.1175/jamc-d-15-0225.1. URL: <http://dx.doi.org/10.1175/JAMC-D-15-0225.1>.

Elsner, J. B., T. H. Jagger, and T. Fricker (2016). “Statistical Models for Tornado Climatology: Long and Short-Term Views”. In: *PLOS ONE* 11.11. Ed. by J. A. A~nel, p. e0166895. DOI: 10.1371/journal.pone.0166895. URL: <http://dx.doi.org/10.1371/journal.pone.0166895>.

2015

Fricker, T. and J. B. Elsner (2015). “Kinetic Energy of Tornadoes in the United States”. In: *PLOS ONE* 10.7, p. e0131090. DOI: 10.1371/journal.pone.0131090. URL: <http://dx.doi.org/10.1371/journal.pone.0131090>.

Widen, H. M., T. Fricker, and J. B. Elsner (2015). “New Methods in Tornado Climatology”. In: *Geography Compass* 9.4, pp. 157-168. DOI: 10.1111/gec3.12205. URL: <http://dx.doi.org/10.1111/gec3.12205>.

2014

Fricker, T., J. B. Elsner, P. Camp, and T. H. Jagger (2014). “Empirical estimates of kinetic energy from some recent U.S. tornadoes”. In: *Geophysical Research Letters* 41.12, pp. 4340-4346. DOI: 10.1002/2014gl060441. URL: <https://doi.org/10.1002/2014gl060441>.

*Undergraduate Student

Participation in Conferences and Professional Meetings

Conferences

Fricker, T. (2024). *Toward the Development of a U.S. Multi-Hazards Spatial Database for the Twenty-First Century*. Paper presented at: AAG Annual Conference.

Fricker, T., and T. A. Murphy (2022). *Quantifying the Effects of the KULM Radar on Local Climatology, Operational Success, and Societal Impacts of Tornadoes*. Poster presented at: 30th Conference on Severe Local Storms.

Fricker, T. (2022). *Tornado Fatalities in Context: 1995–2018*. Poster presented at: AAG Annual Conference.

Fricker, T. (2020). *Surviving the storm: United States tornado fatalities in context*. Paper presented at: AAG Annual Conference.

Fricker, T. (2019). *Unusually devastating tornadoes*. Paper presented at: AAG Annual Conference.

Fricker, T. (2018). *Unusually devastating tornadoes*. Paper presented at: SEDAAG Annual Conference.

Fricker, T. (2018). *Social correlates of tornado casualties*. Paper presented at: AAG Annual Conference.

Fricker, T. (2017). *Elasticity of tornado casualties*. Paper presented at: Applied Geography Annual Conference.

Fricker, T. , J. B. Elsner, and T. H. Jagger (2017). *Energy and population elasticity of tornado casualties*. Paper presented at: AAG Annual Conference.

Fricker, T. , and J. B. Elsner (2016). *Energy and population elasticity of tornado casualties*. Paper presented at: SEDAAG Annual Conference.

Fricker, T. , and J. B. Elsner (2016). *Energy and population elasticity of tornado casualties*. Poster presented at: 28th Conference on Severe Local Storms.

Fricker, T. , and J. B. Elsner (2016). *Tornado casualty maps*. Paper presented at: AAG Annual Conference.

Fricker, T. , J. B. Elsner, H. Widen, T. Jagger, and V. Mesev (2016). *Mapping tornado casualties and energy*. Paper presented at: AMS Annual Conference.

Fricker, T. , J. B. Elsner, and T. Jagger (2015). *Spatial climatology of tornado energy*. Paper presented at: SEDAAG Annual Conference.

Fricker, T. (2015). *Empirical Estimates of tornado kinetic energy from U.S. tornadoes (2007-2013)*. Paper presented at: AAG Annual Conference.

Fricker, T. (2014). *Empirical estimates of tornado kinetic energy using the Storm Prediction Center's tornado database*. Paper presented at: SEDAAG Annual Conference.

Fricker, T. (2014). *Empirical estimates of kinetic energy from some recent tornadoes*. Poster presented at: AAG Annual Conference.

Workshops

Fricker, T. (2016). *A Dasymetric Method to Estimate Tornado Casualties Spatially*. Poster presented at: 2016 Severe Convection and Climate Workshop.

Invited Talks

Fricker, T. (2023). *An Evolving Tornado Casualty Landscape in the United States*. University of Wisconsin-Eau Claire Colloquium.

Fricker, T. (2023). *An Evolving U.S. Tornado Casualty Landscape*. Sea Grant/FEMA Webinar.

Fricker, T. (2022). *Tornado Behavior and Impacts in a Changing World*. Louisiana State University Geography and Anthropology Colloquium.

Fricker, T. (2022). *Tornado Behavior and Impacts in a Changing World*. Towson University Geography and Environmental Planning Colloquium.

Fricker, T. (2022). *Tornado Casualties in the United States*. University of Arkansas Geosciences Colloquium.

Fricker, T. (2020). *Tornado Casualties in the United States: A Geographic Perspective*. University of Kansas Geography and Atmospheric Science Colloquium.

Fricker, T. (2018). *The Vulnerable: How Race, Age and Poverty Relate to Tornado Casualties*. National Tornado Summit.

Conference and Workshop Organization

Session Chair: Hazards, Risks, and Disasters Specialty Group: Risk Modeling and Governance. 2024 American Association of Geographers Annual Meeting, Honolulu, HI.

Session Chair: Tornadoes, Climate, and Society (I and II). 2020 American Association of Geographers Annual Meeting, Denver, CO.

Session Chair: Tornadoes, Climate, and Society. 2019 American Association of Geographers Annual Meeting, Washington, DC.

Session Chair: Tornadoes, Climate, and Society (I and II). 2018 American Association of Geographers Annual Meeting, New Orleans, LA.

Session Chair: Tornadoes, Climate, and Society. 2017 American Association of Geographers Meeting, Boston, MA.

Session Co-Chair: Tornadoes, Climate, and Societal Impacts. 2016 American Association of Geographers Annual Meeting, San Francisco, CA.

Teaching Experience

University of Louisiana Monroe

GEOG 1001 Regional Geography (I)

GEOG 1002 Regional Geography (II)

GEOG 2005 Sports Geography
GEOS 1001 Earth Science
GEOS 1002 Natural Disasters and Hazards
GEOS 4035 Principles of Geographic Information Systems
GEOS 4045 Advanced Geographic Information Systems
GEOS 4050 Remote Sensing of The Environment

Texas A&M University

GEOG 203 Planet Earth
GEOG 360 Natural Hazards
GEOG 380 Workshop in Environmental Studies

Florida State University

GEO 4251 Climate Change and Storms
GEO 3423 Sports Geography
GEO 2200C Physical Geography
GEO 1330 Environmental Science

Undergraduate Mentorship

Endowed Professor Student Researchers: Kylie Lacrouts

Emerging Scholars Program: Shayne Bratton, Sawyer Delatte, Hayden Lester, Ashley Mabile, Gabriel Hebert, and Reece Peterson

Undergraduate Research Opportunity Program: John Thomas Allemeier and Amelia Baxter

Academic Service

Refereed Journals: Atmosphere, Bulletin of the American Meteorological Society (BAMS), BMJ Open, Climate Dynamics, Injury, International Journal of Biometeorology, International Journal of Disaster Risk Reduction, International Journal of Geo-Information, Journal of Civil and Environmental Engineering, Journal of Climate, Journal of Applied Meteorology and Climatology, Papers in Applied Geography, PLOS ONE, Professional Geographer, Stochastic Environmental Research and Risk Assessment, Weather, Climate, and Society, Weather and Forecasting

M.S. Thesis Committee Member (2)

Advisor, ULM American Meteorological Society

President, Graduate Researchers of Geography, Florida State University

Professional Organizations

American Geophysical Union

American Meteorological Society

American Association of Geographers

Southeastern Division of the American Association of Geographers