DR. JANA B. HOUSER

Department of Geography
College of Arts and Sciences

Derby Hall
154 North Oval Mall
Columbus, OH 43210
Email: houser.262@osu.edu

EDUCATION

Ph. D. in Meteorology –2013
The University of Oklahoma, School of Meteorology
Adviser: Dr. Howard B. Bluestein
M. S in Meteorology – 2008
The University of Oklahoma, School of Meteorology
Adviser: Dr. Howard B. Bluestein
B. S. in Meteorology – 2004 (with distinction)
The Pennsylvania State University, Department of Meteorology

APPOINTMENTS

2022-Present – Associate Professor, The Ohio State University
2019-2022 – Associate Professor, Ohio University
2013-2019 – Assistant Professor, Ohio University
2005-2013 – Graduate Research Assistant, School of Meteorology, University of Oklahoma
2008, 2010, 2011 – Graduate Instructor, School of Meteorology, University of Oklahoma
2004 – Teaching Assistant, Department of Meteorology, Penn State

RESEARCH INTERESTS

- Radar-based observations of the evolution and life cycles of tornadoes and supercells.
- Sources and formation of near-ground rotation in supercells and tornadoes.
- Role of topography and ground surface type in tornado life cycle, strength, and path.
- Discrimination between tornadic and non-tornadic supercells and environments.
- Forecasting severe weather events.
- Microphysical properties of convective storms as inferred by dual-pol radar parameters.
- Climatology of severe weather events and environments in the U. S.
- Severe weather events occurring in the Ohio River Valley region.
- Precipitation structure, characteristics, dynamics and microphysics of land-falling atmospheric rivers
- Public response and perception to tornado and local severe weather threats.

GRANTS

- 2026: GRID-AI: Great Lakes Resilient Infrastructure & Decision making through AI, PI: Steven Quiring, CO-PI's: **Jana Houser,** Joseph Chan, Abdollah Shafieezadeh and Ramteen Sionsansi. Department of Energy. **$5,000,000, Submitted** 5/2026 (9/2026-8/2029)
- 2026: Grid Uncertainty Analytics for Resilience and Decision-making (GUARD), PI: Abdollah Shafieezadeh, Co PI's: Steven Quiring, **Jana Houser**, Parinaz Naghizedah, and Ramteen Siosansi. Department of Energy. **$1,250,000, Submitted** 4/2026. (11/2026-10/2029)

- 2026: AQPI: Demonstrate and Expand a 21st Century Radar, Modeling, and Decision Support System to Improve Resilience to Extreme Precipitation in a Mountainous, West Coast, Urban Area. Co PI's Jon Rutz and **Jana Houser, $150,000**, **Funded** 5/2026 (7/2026-6/2028)
- 2026: GCR: Astroparticle Meteorology: Integrating Astroparticle Physics and Meteorology for Coordinated Atmospheric Observation. **PI: Jana Houser,** National Science Foundation. $**3,211,911, Submitted** 2/2026 (1/2027-12/2031)
- 2026: Testing a novel approach for early detection of tornado formation to improve public warnings and awareness, PI: Anton Seimon, **CO-PI: Jana Houser**, National Geographic Foundation. **$50,000. Funded,** (4/2026-3/2028).
- 2025: Demonstration of Mobile Radar Observations of Landfalling ARs in Southern California: A Collaborative Research Opportunity between CW3E and Ohio State University (OSU). **PI: Jana Houser,** Subaward from "AQPI: Demonstrate and Expand a 21st Century Radar, Modeling, and Decision Support System to Improve Resilience to Extreme Precipitation in a Mountainous, West Coast, Urban Area." National Oceanic and Atmospheric Administration. **$150,000, Funded (7/1/2025-6/30/2027)**
- 2025: RAPID – Real-world Experiment on Investigating Influence of Terrain on Tornado Intensity and Behavior. PI: Grace Yan – Missouri College of Science and Technology. **CoPI: Jana Houser,** National Science Foundation. **$42,000, Funded** (4/1/2025-3/31/2027)
- 2025: Revolutionizing Observations of Severe Thunderstorms Using Cosmic Ray Muography. **PI: Jana Houser,** CoPI: William Luszczak. Presidential Research Excellence Accelerator Award. Submitted to the Ohio State University. **$50,000, Funded (1/1/2025-12/31/2026)**
- 2025: Grid Uncertainty Analytics for Resilience and Decision-making (GUARD). PI: Abdollah Shafieezadeh, CoPIs: **Jana Houser**, Steven Quiring, Parinaz Naghizadeh, and Sioshansi Ramteen. Submitted to the Department of Energy: HARMONY. **$1.25 million**, **Declined,** Submitted 4/2025.
- 2023: Good to Great Grant: Growing Ohio State's Meteorology Research, Education, and Outreach: A High Impact Investment Opportunity. **PI: Jana Houser,** Co PI: Joel Johnson. Submitted to The Ohio State University, **$1,750,000, Funded (9/1/2023-8/31/2028)**
- 2023: Collaborative Research: Investigating Terrain and Land Cover Effects on Tornadoes Using a Laboratory Tornado Simulator, Computational Fluid Dynamics Simulations, and Dual-Doppler Radar Observations. PI: Jana Houser. CoPI: Grace Yan. Submitted to the National Science Foundation ($376,554) **Declined**.
- 2023: Process-level Understanding of the Role of Soil Moisture un Tornadogenesis. PI: Steven Quiring. CoPI: Jana Houser. Submitted to the National Aeronautics and Space Administration. (Budget anonymized). **Declined**.
- 2023: CLIMA: Robust Climate Adaptation Planning for the Interdependent Energy System under Future Compound Convective Wind and Heat Risks: PI: Abdollah Shafieezade, CoPI's: Jana Houser, Steven Quiring, Parinaz Haghizadeh Ardabili. Submitted to the National Science Foundation: $897,796. **Declined**.
- 2018: An Investigation of the Correlation between Tornado Formation, Intensification, and Decay and Ground Features using Rapid-Scan Mobile Radar Observations, Damage Surveys, and GIS. **PI: Jana Houser**. Submitted to the National Science Foundation. AGS-1749504, **$360,323. Funded (5/1/2018-4/30/2023).**
- 2013: An Evaluation of Past Severe Thunderstorm Climatology and Overview of Stakeholder Response to Potential Future Changes in Severe Thunderstorm Events. **PI: Jana Houser**. Co-PIs: Harold Brooks, Alek Krautman. Submitted to the National Oceanic and Atmospheric Administration. **Recommended for funding, but funding cancelled for FY2013**

PUBLICATIONS

(Names with *'s next to them indicate students at the time the work was completed)

1) Salopek, B.*, S. Quiring, **J. Houser,** and J. Beck 2026: A Climatology of High-Shear Low CAPE Tornadoes in the Ohio Valley. *J. Appl. Meteor. And Clim.* Accepted pending revisions
2) Dang, J.*, **J. Houser,** and G. Yan 2026: Investigating the Influence of Land Cover on Tornadoes using a Coupled DES and CM1 simulation. Monthly Weather Review (Accepted pending revisions 2026.)
3) Luszczak, W*., **J. Houser,** and M. Kauer 2026: Atmospheric Muon Measurements Near Tornadic and Non-Tornadic Storms in the US Central Plains. Submitted to Physical Review 1/25/2026
4) Glodzik, A.*, **J. Houser**, and S. Quiring 2026: Investigating Relationships Between Soil Moisture and Tornadogenesis Using Surface-based Observations. Environmental Research Letters, submitted 12/18/2025
5) Bartlet, S., J. Cordeira, **J. Houser,** C. Davis, 2026: Atmospheric Rivers are a Frequent Source of Moisture Transport in Severe Convective Storm Environments. Geophysical Research Letters. 53, 8.
6) Dang, J.*, **J. B. Houser**, G. Yan, 2026: Investigating the influence of terrain on tornadoes by coupling an engineering LES with CM1. *Mon. Wea, Rev.* 154, 561-583.
7) Zinnbauer, J.*, and **J. B. Houser**, 2026: An Analysis of Radar Distance in TVS Detection and Tornado Warning Efficiency. *Journal of Operational Met*. 42-71. https://doi.org/10.15191/nwajom.2026.1405
8) Fischer, J., Dahl, J.M., Coffer, B.E., **Houser, J. L**., Markowski, P.M., Parker, M.D., Weiss, C.C. and Schueth, A., 2024. Supercell Tornadogenesis: Recent Progress in our State of Understanding. Bulletin of the American Meteorological Society.
9) **Houser, J. B.,** H. B. Bluestein, K. Thiem*, J. Snyder, Z. Wienhoff*, and D. Reif*, 2022: Additional evaluation of the spatiotemporal evolution of rotation during tornadogenesis using rapid-scan mobile radar observations. *Mon. Wea. Rev.* **150,** 1639-1666.
10) P. Kollias, R. D. Palmer, D. Bodine, T. Adachi; H. Bluestin, J. Y. N. Cho; C. Griffin; **J. Houser,** P. E. Kirstetter, M. R. Kumjian, J. M. Kurdzo, W. C. Lee, E. P. Luke, S. Nesbitt, M. Oue, A. Shapiro, A. Rowe, J. Salazar, R. Tanamachi, K. Tuftedal, X. Wang, D. Zrnic, B. P. Treserras. **2022**: Science Applications of Phased Array Radars; *Bulletin of the American Meteorological Society*. **103,** 2370-2390.
11) **Houser, J. B.,** N. McGinnis*, K. Butler*, H. Bluestein, J. Snyder and M. French, 2020: Statistical and empirical relationships between tornado intensity and both topography and land cover using rapid-scan radar observations and a GIS. *Mon. Wea. Rev.,* **148,** 4313-4338.
12) Bluestein, H. B., K. J. Thiem*, J. C. Snyder, and **J. B. Houser**, 2019: Tornadogenesis and early tornado evolution in the El Reno, Oklahoma, supercell on 31 May 2013. *Mon. Wea. Rev.,* **147,** 2045-2066**.**
13) Beveridge, S*., **J. B. Houser,** and S. Marzola*, 2019: A Statistical Evaluation of Tornado-Production Tendencies of Southernmost Supercells Compared to Adjacent Supercells in a North-South Oriented Line. *Electronic J. Severe Storm Meteor.,* **14**, http://www.ejssm.org/ojs/index.php/ejssm/article/view/167**.**
14) Bluestein, H. B., Thiem, K*. J., J. C. Snyder, and **J. B. Houser**, 2018: The multiple-vortex structure of the El Reno, Oklahoma tornado on 31 May 2013. *Mon. Wea. Rev.,* **146,** 2483-2502**.**
15) Wienhoff, Z. B*., H. B. Bluestein, L. J. Wicker, J. C. Snyder, A. Shapiro, C. L. Potvin, **J. B. Houser**, and D. W. Reif*, 2018: Applications of a spatially variable advection correction technique for temporal correction of dual-Doppler analyses of tornadic supercells. *Mon. Wea. Rev.,* **146,** 2949-2971**.**

16) Bluestein, H. B., Z. B. Wienhoff*, D. D. Turner, D. W. Reif*, J. C. Snyder, K. J. Thiem*, and **J. B. Houser,** 2017**:** A comparison of the fine-scale structures of a prefrontal wind-shift line and a strong cold front in the Southern Plains of the U. S. *Mon. Wea. Rev.,* **145,** 3307-3330.
17) **Houser, J. B.,** H. B. Bluestein, and J. C. Snyder, **2016**: A fine-scale radar examination of the tornadic debris signature and weak reflectivity band associated with a large, violent tornado. *Monthly Weather Review,* **144,** 4104-4130.
18) H. B. Bluestein, M. M. French, J. C. Snyder, and **J. B. Houser, 2016**: Doppler-radar observations of anticyclonic tornadoes in cyclonically rotating, right-moving supercells. *Mon. Wea. Rev.,* **144**, 1591-1616**.**
19) R. M. Wakimoto, N. T. Atkins, K. M. Butler, H. B. Bluestein, K. Thiem, J. C. Snyder, **J. Houser,** K. Kosiba, and J. Wurman, **2016**: Aerial Damage Survey of the 2013 El Reno Tornado Combined with Mobile Radar Data. *Mon. Wea. Rev.* **144,** 1749-1776**.**
20) **Houser, J. B.,** H. B. Bluestein, and J. C. Snyder, **2015**: Rapid-Scan, Polarimetric, Doppler Radar Observations of Tornadogenesis and Tornado Dissipation in a Tornadic Supercell: The "El Reno, Oklahoma" Storm of 24 May 2011. *Mon. Wea. Rev.* **143,** 2685–2710**.**
21) Bluestein, H. B., J. C. Snyder, and **J. B. Houser, 2015**: A multi-scale overview of the El Reno, Oklahoma, tornadic supercell of 31 May 2013. *Wea. Forecasting,* **30,** 525-552**.**
22) Wakimoto, R., N. T. Atkins, K. M. Butler*, H. B. Bluestein, K. Thiem, J. Snyder, and **J. Houser**, **2015**: Photogrammetric Analysis of the 2013 El Reno Tornado Combined with Mobile X-Band Polarimetric Radar Data. *Mon. Wea. Rev.* **143,** 2657-2683.
23) Bluestein, H. B. **J. B. Houser**, M. M. French, J. C. Snyder, G. D. Emmitt, I. PopStefanija, C. Baldi, R. T. Bluth, **2014**: Observations of the Boundary Layer near Tornadoes and in Supercells Using a Mobile, Collocated, Pulsed Doppler Lidar and Radar. *J. Atmos. Oceanic Technol. **31***, 302-325.
24) Pazmany, A. L, J. B. Mead, H. B. Bluestein, J. C. Snyder and **J. B. Houser**, **2012**: A Mobile, Rapid-Scanning, X-band, Polarimetric, (RaXPol) Doppler-Radar System. *J. Atmos. Oceanic Technol.,* **30,** 1398-1413.
25) Tanamachi R. L., H. B. Bluestein, **J. B. Houser**, S. Frasier, and K. Hardwick, **2012**: Mobile, X-band, polarimetric Doppler radar observations of the 4 May 2007 Greensburg, Kansas tornadic supercell, *Mon. Wea. Rev.*, **140**, 2103–2125.
26) **Houser, J. B.** and H. B. Bluestein, **2011**: Polarimetric and Dual-Doppler Observations of Kelvin-Helmholtz Waves during a Winter Storm. *J. Atmos. Sci.,* **68,** 1676-1702.

FIRST AUTHORED CONFERENCE PRESENTATIONS SINCE 2018:

*I did not attend conferences between March, 2020 and December 2021 due to university implemented travel restrictions during the Covid-19 pandemic.

1) **Houser, J. B. 2026: Conference Presentation:** Relating WSR-88D Observations of Tornadoes with Surface-Based Damage. 106th Annual meeting of the American Meteorological Society, Houston, TX.
2) **Houser, J. B. 2025: Conference Presentation:** Ditch the Final Exam! A practical way to assess end of semester learning. 105th Annual meeting of the American Meteorological Society, Education conference. New Orleans, LA
3) **Houser, J. B. 2025: Conference Presentation:** Investigating the Effects of Surface Roughness on Tornadoes using High-Resolution Numerical Modeling. 105th Annual Meeting of the American Meteorological Society, New Orleans, LA

4) **Houser, J. B. 2025: Conference Presentation:** The impacts of terrain and land cover on tornadoes using an ultra-fine resolution nested CFD model. Southern Appalachian Weather and Climate Workshop, Asheville, NC
5) **Houser, J. B. 2025: Workshop Presentation:** Radar-based Precipitation Identification for Intense Rain and Extreme Impacts. Atmospheric River Reconnaissance Workshop. San Diego, CA
6) **Houser, J. B. 2025: Conference Presentation:** The Effects of Terrain and Land cover on Tornado Path, Intensity and Structure using Ultra-High-Resolution Numerical Modeling. 21st Conference on Mesoscale Meteorology, American Meteorological Society, Boise, ID
7) **Houser, J. B. 2025: Conference Presentation:** Comparisons of Low-level and Mid-level Mesocyclone Characteristics for Tornadic and Non-Tornadic Supercells using Mobile Radar Observations. 21st Conference on Mesoscale Meteorology, American Meteorological Society, Boise, ID
8) **Houser, J. B. 2025: Invited Conference Presentation:** The effects of terrain and land cover on near ground tornado intensity, path and structure. 15th Americas Conference on Wind Engineering, American Society of Civil Engineers, Saint Louis, MO
9) **Houser, J. B. 2024: Conference Presentation:** What is "Tornadogenesis"?: A comparison of radar observations, visual cues, and storm reports. 104th Annual Meeting of the American Meteorological Society, Baltimore, MD
10) **Houser, J. B. 2024: Conference Presentation:** Atmospheric Rivers and their Correlations with Severe Weather Outbreaks in the Eastern U.S. International Atmospheric River Workshop, La Jolla, CA
11) **Houser, J. B. 2024: Conference Presentation:** Rapid-scan observations of tornadogenesis and sensitivities to radar-based thresholds: trends, questions and operational implications. 12th European Radar Conference, Rome, Italy
12) **Houser, J. B. 2024: Conference Presentation:** Correlating tornado intensity to land cover using observations and ultra-fine resolution CFD simulations. 31st Conference on Severe Local Storms, American Meteorological Society, Virginia Beach, VA
13) **Houser, J. B. 2024: Conference Presentation:** Ultra-fine scale CFD simulations investigating the effects of terrain on tornado intensity and path. 31st Conference on Severe Local Storms, American Meteorological Society, Virginia Beach, VA
14) **Houser, J. B. 2024: Conference Presentation:** What IS a tornado? A comparison between rapid-scan radar observations of tornado-like vortices and SPC OneTor reports. 31st Conference on Severe Local Storms, American Meteorological Society, Virginia Beach, VA
15) **Houser, J. B., 2024**: What is "Tornadogenesis"?: A comparison of radar observations, visual cues, and storm reports. 104th Annual Meeting of the American Meteorological Society, Baltimore, MD
16) **Houser, J. B.,** A. Glodziak, and S. Quiring **2023**: Investigating Spatial Relationships Between Soil Moisture and Tornado Events using SMAP, NASA Jet Propulsion Lab,CCS Workshop: Science of 10-km L-band Radiometry, Pascedena, CA
17) **Houser, J. B., 2023:** Determining the vertical sense of evolution of rotation during tornadogenesis using Rapid-Scan, Polarimetric Radar Data. American Meteorological Society 40th Conference on Radar Meteorology, Minneapolis, MN

18) **Houser, J. B., 2023:** Effects of Terrain and Land Cover on Radar-Observed 3-D Tornado Wind Fields. American Meteorological Society 20th Conference on Mesoscale Meteorology, Madison, WI
19) **Houser, J. B., 2023:** Rapid-Scan, Mobile Radar Observations of Tornadogenesis: Warning and Forecasting Implications. American Meteorological Society 32nd Conference on Weather Analysis and Forecasting, Madison, WI
20) **Houser, J. B., 2023:** Storm chasing with Students: An immersive severe storms structure and forecasting learning experience. 103rd Annual Meeting of the American Meteorological Society, Denver, CO.
21) **Houser, J. B., 2023:** Relationships between changes in tornado characteristics with variations in terrain and land cover. 103rd Annual Meeting of the American Meteorological Society, Denver, CO
22) **Houser, J. B., 2022:** Relationships between changes in tornado intensity and direction with variations in terrain and land cover. 11th European Conference on Radar in Meteorology and Hydrology, Locarno, Switzerland
23) **Houser, J. B., 2022:** Recent rapid-scan, mobile radar observations of tornadogenesis: Additional evidence supporting a non-descending process. 102nd Annual Meeting of the American Meteorological Society, Houston, TX.
24) **Houser, J. B., 2022:** An investigation of the relationship between topography and land cover with tornadogenesis and decay points in Oklahoma and Arkansas. 102nd Annual Meeting of the American Meteorological Society, Houston, TX.
25) **Houser, J. B., 2020:** Experiential learning in meteorology: Field studies of convection and severe storms. 100th Annual Meeting of the American Meteorological Society, Boston, MA.
26) **Houser, J. B.,** N. McGinnis, K. Butler, H. Bluestein, J. Snyder, and M. French, **2020:** Relating tornado intensity with surface topography and ground cover using rapid-scan mobile radar observations and a geographical information system framework. 100th Annual Meeting of the American Meteorological Society, Boston, MA.
27) **Houser, J. B.,** K. Butler, N. McGinnis, H. Bluestein and J. Snyder, **2019:** Relating changes in tornado intensity with surface topography and ground cover using rapid-scan mobile radar observations and GIS. American Geophysical Union, San Francisco, CA.
28) Houser, J. B., H. Bluestein, A. Seimon, J. C. Snyder, K. Thiem, and J. Allen **2018:** Rapid-scan radar observations of tornadogenesis. 100th Fall American Geophysical Union Fall Meeting, Washington, DC.[1]
29) Houser, J. B., A. Seimon, K. Thiem, S. Talbot, H. Bluestein, J. Snyder, J. Allen **2018:** Confirming bottom-up tornadogenesis in the 31 May 2013 El Reno tornado. 29th Conference on Severe Local Storms, American Meteorological Society, Burlington, VT.
30) **Houser, J. B.,** K. Butler, N. McGinnis, H. Bluestein, and J. Snyder **2018**: Correlations between topography and land cover with tornado intensity using rapid-scan mobile and WSR-88D radar observations in a Geographic Information System framework. 29th Conference on Severe Local Storms, American Meteorological Society, Burlington, VT.
31) Houser, J. B., A. Seimon, K. Thiem, H. Bluestein, and J. Snyder **2018:** Confirming bottom-up tornadogenesis in the 31 May 2013 El Reno tornado. 22nd Severe Storms and Doppler Radar Conference, National Weather Association, Ankeny, IA.
32) **Houser, J. B.,** A. Seimon, K. Thiem, H. Bluestein and J. Snyder **2018**: Novel Observations of the Genesis of the 2013 El Reno Tornado: Coupling Rapid-Scan Radar Data with Crowd-Sourced Visual Observations. 98th Annual Meeting of the American Meteorological Society, Austin, TX.
33) **Houser, J. B., 2018**: A team-based learning approach to meteorology: Putting students' education in their hands. 98th Annual Meeting of the American Meteorological Society, Austin, TX.

[1] This results from this presentation was widely picked up by the media and appeared in national press pieces, including The Washington Post, and Science Magazine News

INVITED PRESENTATIONS (Since 2018):

1) **Houser, J. B. 2026: Invited Presentation:** Thunderstorms, Tornados, and Storm Chasing. Alexander Elementary School 4th grade, In Person.
2) **Houser, J. B. 2026: Invited Presentation:** What can you do with a mobile radar? From California to Ohio and Everywhere In Between. Center for Western Weather and Water Extremes Seminar Series. San Diego, CA, In Person
3) **Houser, J. B. 2026: Invited Presentation:** What can you do with a mobile radar? Spotlight on the OSU-SPARROW. Center for Automotive Research External Advisory Board Meeting. Columbus, OH. In Person.
4) **Houser, J. B. 2026: Invited Presentation:** Tornadogenesis: What we know from theory, observations, and Rapid-Scan, Mobile Radar Observations. University of Mississippi Gues Speaker Series. Virtual.
5) **Houser, J. B. 2025: Invited Presentation:** Everything Tornadoes!!! Ohio State University Meteorology Club. Columbus, OH, Virtual.
6) **Houser, J. B. 2025: Invited Presentation:** Tornadoes: Beyond the TWISTERS Movie. Rural Action Luncheon Series. Athens Public Library, Athens, OH.
7) **Houser, J. B. 2025: Invited Presentation:** Tornadogenesis: Scientific Evidence, Philosophical Thoughts, and Forecasting Implications. Air Force Institute of Technology Seminar Series. Dayton, OH
8) **Houser, J. B. 2025: Invited presenter:** Tornadogenesis and Beyond: A potpourri of cool tornado topics. Central Ohio Chapter of the American Meteorological Society, Spring meeting
9) **Houser, J. B., 2024: Invited presenter:** Tornadogenesis: Scientific Evidence, Philosophical Thoughts, and Forecasting Implications, *Severe Storms and Doppler Radar Conference, National Weather Association, Ankeny, IA,* In Person.
10) **Houser, J. B., 2024: Invited presenter**: Tornado Climatology Breakout Session, *American Society of Civil Engineers,* In Person
11) **Houser, J. B., 2024: Invited guest lecturer**: Tornadoes and Tornadogenesis, *University of Wisconsin, Mesoscale Meteorology course*, Virtual
12) **Houser, J. B., 2024: Invited guest lecturer**: Correlating tornado intensity to terrain and land cover using observations and ultra-fine resolution CFD simulations, *The University of Nebraska, Mesoscale Meteorology Course,* In Person
13) **Houser, J. B., 2024: Invited presenter:** Rapid-Scan, Mobile Radar Observations of Tornadogenesis: Spatio-temporal Analysis, *University of Nebraska, Seminar Series,* In person.
14) **Houser, J. B., 2023: Invited presenter:** Living the Chase, *Ohio State University Geoweek*, Columbus, OH, In Person
15) **Houser, J. B., 2023: Invited presenter:** Observations of non-descending tornadogenesis and forecasting implications, *Kutztown University Seminar Series,* Kutztown, PA. In Person
16) **Houser, J. B., 2023: Invited presenter:** Observations of non-descending tornadogenesis and forecasting implications*, Technology against Tornadoes Symposium, University of Tennessee.* Virtual
17) **Houser, J. B., 2023: Invited presenter:** Recent advancements in our understanding of tornado evolution from rapid-scan mobile radar observations, *Ohio State University Weather and Climate Symposium.* In person
18) **Houser, J. B., 2023: Invited presenter:** Recent advancements in our understanding of tornado evolution from rapid-scan mobile radar observations, *IBM Environmental Research Division Seminar Series.* Virtual

19) **Houser, J. B., 2022: Invited presenter:** Recent advancements in our understanding of tornado evolution from rapid-scan mobile radar observations, *Central North Carolina Chapter of the American Meteorological Society,* Virtual
20) **Houser, J. B., 2021: Invited presenter:** Recent advancements in our understanding of tornado evolution from rapid-scan mobile radar observations, *Iowa State University Seminar Series*, Ames, IA.
21) **Houser, J. B., 2020: Invited presenter:** Batten down the hatches! Severe weather can happen anytime. *Ohio University Business Continuity Planners Luncheon*, Virtual.
22) **Houser, J. B., 2020: Invited presenter:** Nondescending tornadogenesis observations from rapid-scan mobile radar observations. *Seminar Series Department of Earth, Atmospheric, and Planetary Sciences, Purdue University*, Virtual.
23) **Houser, J. B., 2020: Invited presenter:** Recent advances in our understanding of tornadogenesis. *24th Annual Severe Storms and Doppler Radar Conference*, Virtual.
24) **Houser, J. B., 2019: Invited presenter**: Hypotheses and Observations of Tornadogenesis: What We Have Learned from Rapid-Scan Radar Case Studies. *13th Minnesota Severe Storms Conference, Spotter Network*, Minneapolis, MN.
25) **Houser, J. B., 2019: Invited presenter**: Hypotheses and Observations of Tornadogenesis: What We Have Learned from Rapid-Scan Radar Case Studies. *Severe Weather Seminar. Wichita, KS Weather Forecast Office, National Weather Service*, Virtual.
26) **Houser, J. B., 2019: Invited presenter:** Tornadoes: What We Know, How We Know It, and What We Still Need to Learn. *Ohio University Eco-lunch, Ohio University Center for Ecology and Evolutionary Studies*.
27) **Houser, J. B., 2018: Invited presenter**: Rapid-Scan Mobile Radar Observations of Tornadoes: What We Have Learned. *Central Region, National Weather Service Science and Operations Officer Monthly Webinar*.
28) **Houser, J. B. 2018: Invited presenter**: Rapid-Scan Mobile Radar Observations of Tornadoes: What We Have Learned. *Wilmington, OH Weather Forecast Office, National Weather Service Webinar*.
29) **Houser, J. B. 2018: Invited presenter:** Tornadoes: Chasing some of Earth's most powerful storms. *Federal Aviation Administration, Clinton County OH*.
30) **Houser, J. B., 2018: Invited presenter:** Tornadoes: Unraveling the Mysteries of one of Earth's most Powerful Storms. *Ohio University Science Café*.

FIELD PROJECTS:

1) National Geographic Project: 2026 – Radar coordinator for the Skyler 2 radar, acting with a crew of tornado chasers to document visual and radar-based observations of rotation prior to and during tornado formation.
2) Ohio State University Multi-Faceted Tornado Intercept Project: 2026 – Project coordinator organizing a French Documentary Film Crew, a drone penetrating engineering crew from Stanford University, a drone and ground-based photogrammetry crew from the University of Central Florida, a damage survey team from the Missouri University for Science and Technology, a ground-based storm penetrating crew, and a team measuring observations of the muon flux through the atmosphere.
3) Ohio State University Experiential Learning Course: ATMOSSC 5701, 2025
4) Professional consultant, Sean Casey Inc.
   Provided in field navigation and decision-making strategies for Sean Casey, a cinematographer filming tornadoes and severe storms, 2023.
5) Ohio University Spring Storm Chasing Study Away Experience, 2015, 2017, 2018, 2019, 2022.
6) University of Oklahoma Spring Field Experiment, 2007-2013, 2015.

Served in various capacities including driver, navigator, and research support personnel for several different mobile radar instruments during data collection thrusts of supercells and tornadoes.

7) Second Verification of the Origin of Rotation in Tornadoes Experiment (VORTEX-2), 2009-2010.
   Operator of a mobile Doppler lidar, 2010.
   Navigator for the Mobile Weather Radar 2005 X-band Phased Array vehicle, 2009.
8) Radar Observations of Tornadoes and Thunderstorms Experiment (ROTATE), 2004-2005.
   Navigator for the Tornado Intercept Vehicle, 2005.
   Navigator for a mobile Doppler radar, 2004.
9) Pennsylvania Mobile Radar Experiment (PAMREX), 2003.
   Operator of a mobile Doppler radar.

TEACHING EXPERIENCE

**Sabbatical was taken during the academic year of 2020-2021*
**Classes italicized were taught at Ohio University or the University of Oklahoma.*

Professor:

- Synoptic Analysis and Forecasting Lab (Geog 5940) Spring 2023, 2026
- Severe Weather Forecasting (Geog 5942) Spring 2023, 2024, 2025, 2026
- Synoptic Analysis and Forecasting (Geog 5941) Fall 2022, 2023, 2024, 2025
- *Synoptic Meteorology, (Geog 4060), Fall 2013-2021*
- *Mesoscale Meteorology (Geog 4070), Springs 2014, 2015, 2018-2022*
- *Seminar in Supercells and Tornadoes (Geog 4900/6100) Fall 2014, Spring 2017, Spring 2019*
- *Introduction to Meteorological Radar Systems, Observations and Theory (Geog 4035) Spring 2017, Fall 2018, 2021*
- *University Professor Special Course on Extreme Weather in the U.S. (UP 4901), Spring 2020*
- *Introduction to Meteorology (Geog 3010) Springs 2015, 2018*
- *Introduction to Physical Geography (Geog 1100) Spring 2014, Fall 2015, Fall 2017*
- *Geography Honor's Tutorial (Geog 2970T) Various semesters from 2015-present*
- *Tornado Chasing Field Experience (Geog 4930) Summer 2015, Summer 2017-2019, 2022*
- *Instructor (University of Oklahoma): Severe and Unusual Weather, (Metr 2603), Fall semesters 2008, 2010, 2011.*

TEACHING INTERESTS

-Synoptic meteorology
-Mid-latitude severe convective storms and tornadoes
-Radar meteorology
-Mesoscale meteorology
-Introductory atmospheric science
-Nontraditional classroom pedagogy and active learning methodology

MENTORING EXPERIENCE

Graduate Student Advisees (Chair of Committee)
Noah Harley, PhD. 2025-present
Samuel Porter, M. S. 2024-2026
Ashlee Ziegler, M. S. 2024-2026
Megan Cooper Berry, M. S. 2023- 2025

Benjamin Salopek, M. S. 2022-2023
Benjamin Price, M. S. 2021-2023
Patrick McMillan, M. S. 2021-2022
Lauren Warner, M. S. 2020-2022
Darby Johnson, M. S. 2019-2022
Rabeya Akter, M. S. 2019-2020
Michael Aufiero, M. S. 2018-2019
Tyler Muncy, M.S. 2018-2021
Krista Thomason, M. S. 2017-2019
James Foster, M.S. 2017-2019
Ian Bailey, M.S. 2016-2018
Christine Aiena, M.S. 2016-2018
Kelly Butler, M.S. 2015-2017
Nathaniel McGinnis, M.S. 2014-2016
Douglas Schuster, M.S. 2014-2016

Undergraduate Student Research Advisees
Ben Wang 2025 – Undergraduate research assistant
James Zinnbauer 2023 – 2025 (Ohio University Honors Tutorial Student)
Cris Kabatko 2024 – 2025 – Undergraduate research assistant
Noah Long 2024 – 2025 – Undergraduate research assistant
Daniel Baltes 2024 – 2025 – Undergraduate research assistant
Anna Glodziak 2023-2024 – Undergraduate research assistant
Kamran Chowdhury 2023-2024 – Undergraduate research assistant
Samuel Porter 2023-2024 – Undergraduate research assistant
Sean Whelan 2023-2024 – Undergraduate research assistant, Department Honors Research
Wesley Collins 2022-2023 – Undergraduate research assistant
Nathan Kuhr 2020-2022 (Honors Tutorial Student)
Miranda Silcott 2020-2021 (Department Honors Resesarch)
Erin Evans 2020 (Research assistant)
Susan Beveridge 2015-2019 (Honors Tutorial Student)
Andrea Lorek 2018-2019 (Research assistant)
Matthew Thigpen 2018-2019 (Research assistant)
Kevin Thiel 2017-2018 (Student research project)
Alec Prosser 2016-2017 (Student research project)
Charlotte Connely 2016 (Honors Tutorial Student
Kelsey Britt 2014-2016 (Student research project)
Sara Marzola 2014-2016 (Student research project)

AWARDS AND HONORS

- Martha L. Corry Faculty Fellow, The Ohio State University Department of Geography (2024-2029)
- Building Bridges Excellence Award Recipient, The Ohio State University College of Engineering (2024)
- University Professor Award Recipient (2019)
- College of Arts and Sciences Outstanding Faculty, Research, Scholarship and Creativity Award: Sciences Recipient (2019)
- Honor's Tutorial College Outstanding Tutor Award (2019)
- University Professor Award Nominee (2018)

- Jeanette G. Grasselli Brown Faculty Teaching Award for the Natural Sciences (2017)
- Bruning Teaching Fellow (2015-2016)
- American Meteorological Society First Place Student Presentation: Rapid-Scan Observations of Tornadogenesis, Intesification, and Decay from a Mobile Radar, 93rd AMS Annual Meeting (2013).
- University of Oklahoma Student Research and Performance Award: Second Place in Natural Sciences (2012).

PROFESSIONAL SERVICE

- ***Scientific and Technological Activities Commission Member*** – American Meteorological Society Committee for Severe Local Storms. **2016-2023**
- ***Associate Editor*** – Monthly Weather Review, American Meteorological Society, Jan **2018-Present.**
- ***Program Committee* –** 40th Conference on Radar Meteorology, American Meteorological Society **(2022-present)**
- ***Invited Conference Organization Committee Member*** – Southeast Appalachian Weather and Climate Workshop (Ashville, NC), **Jan 2021 – 2023**.
- ***Invited Grant Review Panelist*** – **National Science Foundation** Mid-Scale Research Infrastructure, Track II (**Feb, 2022)**
- ***Conference Organizer* –** Student and Early Career Scientist Conference on Severe Local Storms Topics **(Virtual, Nov 2021)**
- ***Invited Grant Review Panelist*** – **Deutsche Forschungsgemeienschaft** (German federal funding agency) Polarimetric Radar Operations meet Atmospheric Modelling Proposals, **7/12/2018, 11/2021.**
- ***Scientific and Technological Activities Commission Member*** – Chair Person for Severe Local Storms. **2021-Present**
- ***Invited Grant Review Panelist*** – **National Science Foundation** Disaster Resilience and Research Grants, Atmospheric and Geospace Science Division **(Fall 2020)**
- *Invited Reviewer* – Various grants for the National Science Foundation **(2017-Present)**
- *Invited Reviewer* – Alfred P. Sloan Foundation (**Spring 2019**).
- *Invited Reviewer* – National Environment Research Council Grant (**2019)**
- *Program Committee, Planning Committee, and Food and Beverage Committee Member* – 29th Conference on Severe Local Storms, American Meteorological Society, **2018-Present.**
- *Program Committee, Planning Committee, and Food and Beverage Committee Member* – 29th Conference on Severe Local Storms, American Meteorological Society, **2016-2018.**
- *Invited Reviewer* – Department of Commerce VORTEX-SE Proposals (2017-2018, 2018-2019 FY), **2017**, **2018**.
- ***Conference Organizer Co-Chair*** – 28th Conference on Severe Local Storms, American Meteorological Society, Portland, OR, 2014-2016
- *Invited Guest Speaker* – Athens AM radio show (WATH): The Kim and Ruth Show, 8/5/2015
- *Faculty Representative* – Ohio University Chapter of the American Meteorological Society, 2013-2019
- *Planning Committee Member* –27th Conference on Severe Local Storms, American Meteorological Society, Madison, WI, 2014
- *Student Presentation Judge* –27th Severe Local Storms Conference, American Meteorological Society,
- Madison, WI, 2014
- *Invited Speaker*–McConnelsville Public Library Summer Science Reading Program, June, 2014

UNIVERSITY SERVICE

- *Faculty Advisor* – The Ohio State University Meteorology Club (2022-present)
- *Consultant* – Ohio Up Close Art Exhibit: Turbulence (2019)

- *Invited Panelist* – Graduate Teaching Assistant Orientation (2019)
- *Faculty Support Member* – Ohio University Chapter of the American Meteorological Society (2014-2019)

DEPARTMENTAL SERVICE

- *Director of Undergraduate Studies* – The Ohio State University Geography Department, 2023-current
- *Communications and Media Committee CHAIR* – Ohio University Geography Department, 2021, 2022
- *Graduate Student Committee Member* – Ohio University Geography Department, 2021, 2022
- *Presentation for Faculty Discussion Series* – Team based learning – Ohio University Geography Department, 2019.
- *Evaluation Committee Member* – Ohio University Geography Department, 2018-2019
- *Undergraduate Student Committee Member* – Ohio University Geography Department, 2015-2016, 2017-2019
- *Communications/Media Committee Member* – Ohio University Geography Department 2018-2019
- *Awards Committee Member* – Ohio University Geography Department, 2015-2016; 2017-2018
- *Colloquium Committee Member* – Ohio University Geography Department, Spring 2017
- *Evaluation Committee Member* - Ohio University Geography Department, 2013-2014, 2016-2017
- *Ad-hoc Student Assessment Committee Member* – Ohio University Geography Department, 2015
- *Colloquium Committee Member* – Ohio University Geography Department, 2014-2015
- *Graduate Student Committee Member*–Ohio University Geography Department, 2013-2014

PROFESSIONAL DEVELOPMENT

- *Faculty Learning Community: Recruitment and Retention of Women in STEEM (the extra E is for economics),* Fall 2018-Spring 2019
- *Flipped Classroom Workshop,* Spring semester 2016
- *Bruning Teaching Academy,* 2015-2016 academic year
- *Team Based Learning Community,* Spring semester 2015
- *Tips and Tactics for Grant Writing Workshop*, February, 2015.
- *On the Cutting Edge: Early Career Workshop for Faculty in the Geosciences*, June 22-26, 2014
- *Introduction to Team-based Learning Seminar*, April 15, 2014
- *Service Learning Workshop,* April 3, 2014.
- *Taking Risks in Teaching Learning Community Seminar,* Spring Semester 2014.
- *University of Oklahoma Teaching Scholars Initiative Workshop,* October 2011, 2012
- *University of Oklahoma Graduate Research Assistant Grant Writing Workshop,* Fall 2012
- *Forward to Professorship Workshop for Women,* March 2012
- *University of Oklahoma Graduate Teaching Academy,* Fall 2011 - Spring 2012
- *EPSCOR NSF Grants Workshop,* April 2011
- *On the Cutting Edge: Preparing for an Academic Career in Geosciences* – August 2008