*Updated 08/15/2025*

# AARON J. HILL

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University of Oklahoma
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## EDUCATION

Ph.D., Geosciences, Texas Tech University, Lubbock, TX, August 2019
Dissertation: *Demonstration of ensemble sensitivity-based targeted observing for convective-scale applications: Perfect-model experiments*
M.S., Atmospheric Science, Texas Tech University, Lubbock, TX, December 2014
Thesis: *Mesoscale data assimilation and ensemble sensitivity analysis towards improved predictability of dryline convection*
B.S., Atmospheric Science, University of Washington, Seattle, WA, June 2012

## APPOINTMENTS

Assistant Professor, School of Meteorology, University of Oklahoma, 2023-present
Affiliate Faculty, Department of Atmospheric Science, Colorado State University, 2023-present
Research Scientist II, Department of Atmospheric Science, Colorado State University, 2022-2023
Research Scientist I, Department of Atmospheric Science, Colorado State University, 2021-2022
Postdoctoral Research Fellow, Department of Atmospheric Science, Colorado State University, 2019-2021
Graduate Research Assistant, Department of Geosciences, Texas Tech University, 2012-2019
Graduate Student Visitor, Mesoscale and Microscale Meteorology Laboratory, National Center for Atmospheric Research, 2018
Undergraduate Research Assistant, Department of Atmospheric Science, University of Washington, 2011-2012

## RESEARCH INTERESTS

Data science and statistical methods, mesoscale meteorology, predictability and data assimilation, weather and forecasting, targeted observing, innovative observing systems

## HONORS AND AWARDS

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|---|---|
| Presidential International Travel Fellowship – University of Oklahoma | 2024 |
| Cross-Journal Editor's Award – American Meteorological Society | 2024 |
| "Paper of Note" – Bulletin of the American Meteorological Society | 2023 |
| Rising Star Award - Researcher, Walter Scott Jr. College of Eng. (CSU) | 2023 |
| WxChallenge Category 1 cumulative winner<br>Runner-up in Cold Bay, AK and Cheyenne, WY | 2019-2020 |
| Doctoral Dissertation Completion Fellowship | 2018-2019 |
| WxChallenge final-four finalist in end-of-year tournament | 2017 |
| Student Travel Award<br>20th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface | 2017 |
| Texas Tech University Geoscience Scholarship | 2013 |

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| Jurica Fellowship, Texas Tech University | 2012 |
| Atmospheric Sciences Achievement Award, University of Washington | 2012 |
| Phil Church Award, University of Washington | 2012 |
| Naval Weather Service Association Scholar | 2010-2012 |

## PROFESSIONAL SOCIETIES

| | |
|---|---|
| Member, American Meteorological Society | 2012-present |
| Member, American Geophysical Union | 2017-present |
| Member, National Weather Association | 2023-present |

## REFEREED PUBLICATIONS

_ ***- student advised***

### *IN PREP*

### *SUBMITTED*

14. Sudler, E., **A. J. Hill**, and C. R. Homeyer, 2025: Case Study of Artificial Intelligence Weather Prediction (AIWP) Models Performance for Hurricane Helene (2024). *Journal of Geophysical Research - Atmospheres*, in review.

13. White, E. and **A. J. Hill**, 2025: Severe weather forecasts using artificial intelligence weather predictions. *Artificial Intelligence for the Earth Systems*, in review.

12. McClung, B., A. McGovern, **A. J. Hill**, D. Schvartzman, and M. Stock, 2025: BoltCast: A comparison of convolutional and attention-based machine learning models for medium-range lightning prediction. *Artificial Intelligence for the Earth Systems*, in review.

### *ACCEPTED*

### *PUBLISHED*

11. Clark, A. J., K. A. Hoogewind, **A. J. Hill**, and E. D. Loken, 2025: Extended range machine-learning severe weather guidance based on the operational GEFS. *Weather and Forecasting*, 40, 1325–1343, doi.org/10.1175/WAF-D-24-0116.1.

10. Mazurek, A. C., **A. J. Hill**, R. S. Schumacher, and H. J. McDaniel, 2025: Can Ingredients-Based Forecasting be Learned? Disentangling a Random Forest's Severe Weather Predictions. *Weather and Forecasting*, 40, 237-258, doi.org/10.1175/WAF-D-23-0193.1.

9. **Hill, A. J.**, R. S. Schumacher, and M. R. Green, 2024: Observation Definitions and their Implications in Machine Learning-based Predictions of Excessive Rainfall. *Weather and Forecastin*g, 39, 1733-1750, doi.org/10.1175/WAF-D-24-0033.1.

8. **Hill, A. J.**, R. S. Schumacher, and I. L. Jirak, 2023: A new paradigm for medium-range severe weather forecasts: probabilistic random forest-based predictions. *Weather and Forecasting*, 38, 251-272, doi:10.1175/WAF-D-22-0143.1.

7. **Hill, A. J.** and R. S. Schumacher, 2021: Forecasting excessive rainfall with random forests and a deterministic convection-allowing model. *Weather and Forecasting*, 36, 1693-1711, doi:10.1175/WAF-D-21-0026.1.

6. Schumacher, R. S., **A. J. Hill**, M. Klein, J. Nelson, M. Erickson, S. M. Trojniak, and G. R. Herman, 2021: From random forests to flood forecasts: A research to operations success story. *Bulletin of the American Meteorological Society*, 102, E1742-E1755, doi:10.1175/BAMS-D-20-0186.1.

5. **Hill, A. J.**, C. C. Weiss, and D. C. Dowell, 2021: Influence of a portable near-surface observing network on experimental ensemble forecasts of deep convection hazards during VORTEX-SE, *Weather and Forecasting*, 36, 1141-1167, doi:10.1175/WAF-D-20-0237.1.

4. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2020b: Factors influencing ensemble sensitivity-based targeted observing prediction at convection-allowing resolutions. *Monthly Weather Review,* 148, 4497-4517, doi:10.1175/MWR-D-20-0015.1.

3. **Hill, A. J.**, G. R. Herman, and R. S. Schumacher, 2020a: Forecasting severe weather with random forests. *Monthly Weather Review*, 148, 2135--2161, doi:10.1175/MWR-D-19-0344.1.

2. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2016: Ensemble sensitivity analysis for mesoscale forecasts of dryline convection initiation. *Monthly Weather Review*, 144, 4161-4182. doi:10.1175/MWR-D-15-0338.1

1. Rasmussen, K. L., **A. J. Hill**, V. E. Toma, M. D. Zuluaga, P. J. Webster, and R. A. Houze, Jr., 2014: Multiscale analysis of three consecutive years of anomalous flooding in Pakistan *Quart. J. Roy. Meteor. Soc.*, 141, 1259-1276. doi:10.1002/qj.2433.

## OTHER PUBLICATIONS

CSU Source Article: "CSU machine learning model helps forecasters improve confidence in storm prediction", February 2023, https://tinyurl.com/u57ummbx.

The Conversation: "AI and machine learning are improving weather forecasts, but they wont replace human experts", May 2022

CSU Source Article: "From research to real world: CSU atmospheric scientists develop heavy rainfall forecast tool used nationwide", October 2021

## DATASETS

**Hill, A. J**., R. S. Schumacher, and M. L. Green, 2024: Data from: Observation definitions and their implications in machine learning-based predictions of excessive rainfall. Dryad, Dataset, https://doi.org/10.5061/dryad.kwh70rzdx

**Hill, A. J.**, R. S. Schumacher, and I. L. Jirak, 2023: Forecast dataset associated with "A new paradigm for medium-range severe weather forecasts: probabilistic random forest-based predictions. Dryad, Dataset, https://doi.org/10.5061/dryad.c2fqz61cv

Schumacher, R. S., **A. J. Hill**, M. Klein, J. A. Nelson, M. J. Erickson, S. M. Trojniak, and G. R.

Herman, 2021: Forecast dataset associated with “From random forests to flood forecasts: A research to operations success story”. Mountain Scholar repository, http://dx.doi.org/10.25675/10217/222367

## GRANTS AND CONTRACTS

### *Current*

***2024-2027:*** “Expand AI2ES for 4D space-time organization of precipitation processes, visualization tools, and workforce development”. National Science Foundation. Lead PI: Samuel Shen (UCSD). **Co-PI Aaron Hill.** $18,440.

***2024-2027:*** “Collaborative Research: What drives the most extreme rainstorms in the contiguous US?”. National Science Foundation. Lead PI: Russ Schumacher (CSU). **PI Aaron Hill.** $306,661; $794,634 total.

**2023-2026:** “Collaborative Research: Mesoscale Predictability Across Climate Regimes”. National Science Foundation. PIs: Brian Ancell (TTU), Kristen Rasmussen (CSU), Yonggang Wang (SUNY Oswego). **Co-PI: Aaron Hill.** $68,559; $946,017 total.

**2021-2024:** "Environmental and Storm-generated Controls in Modulating Quasi-linear Convective System Vertical Vorticity: Dynamics and Detection". National Oceanic and Atmospheric Administration. PIs: Christopher Weiss (TTU), Matthew Kumjian (PSU), Dan Dawson (Purdue), Vanna Chiemelwski (NSSL). **Co-PI: Aaron Hill**. $57,639; $1,589,283 total.

### *Completed*

**2021-2023:** "Medium-range excessive rainfall forecasts with machine learning models". National Oceanic and Atmospheric Administration Joint Technology Transfer Initiative. PI: Russ Schumacher. **Co-PI: Aaron Hill**. $338,943 to CSU.
**2020-2023:** "Generating calibrated forecast guidance for severe weather beyond day 1", National Oceanic and Atmospheric Administration Joint Technology Transfer Initiative. PI: Russ Schumacher. **Co-PI: Aaron Hill**. $433,209 to CSU.

## CLASSES/WORKSHOPS/COURSES TAUGHT

### *at University of Oklahoma*

METR 4970/5970: Special Topics: Numerical Weather Prediction, Fall 2025
METR 1313: Introduction to Programming for Meteorology, Spring 2024, 2025
METR 5970: Special Topics: AI for Environmental Science, Fall 2024

### *at other institutions*

***University of Washington***
ATM S 310: Introduction to Python, Guest Lecturer, October 2024
***Colorado State University***
ATS 780A7: Machine Learning for the Atmospheric Sciences, Guest Lecturer, March 2022
ATS 641: Mesoscale Meteorology, Guest Lecturer, March 2022
Department of Atmospheric Science Machine Learning Workshop, Colorado State University, Co -Instructor, January 2020
***Texas Tech University (graduate student)***
ATMO 3316: Severe and Hazardous Weather, Guest Lecturer, 2019
Writing Tutor: Graduate Student Writing Center, 2015, 2017-2018

ATMO 1300: Introduction to Atmospheric Science, Instructor, summer 2016, summer 2017
ATMO 1300: Introduction to Atmospheric Science, Guest Lecturer, 2015
ATMO 2301: Weather, Climate, and Human Activities, Guest Lecturer, 2014

**CURRENT GRADUATE STUDENTS**
Kelly Geiger (M.S. program)
Hanna McDaniel (M.S. program)
Christian McGinty (M.S. program)
Nathan Erickson (Ph.D. program, co-advised with Dr. Amy McGovern)

**FORMER GRADUATE STUDENTS**

**CURRENT UNDERGRADUATE STUDENTS**
Braelyn Long (undergraduate researcher)
Amanda Voth (undergraduate researcher)
Rebecca Oh (undergraduate researcher)
Evan Sudler (undergraduate researcher, 2025 NWC REU participant)

**UNDERGRADUATE STUDENT RESEARCHERS MENTORED**
Evan White, 2024-2025 (undergraduate researcher)
Ian Shank, 2025 (NWC REU participant)
Gabriel Cenker, Andrew Muehr, Victor Tiradoegas, Evan White, 2024 (Capstone senior project)
Evan Chladny, 2024 (former honors undergraduate student at University of Oklahoma)
Evan White, 2023 (current honors undergraduate student at University of Oklahoma)
Mitchell Green, 2023 (former undergraduate student at Central Michigan University)
Hanna McDaniel, 2022 (former undergraduate student at Florida State University)

**CURRENT POSTDOCTORAL FELLOWS**
Marina Vicens-Miquel, 2024 (co-supervised with Dr. Amy McGovern)

**PREVIOUS POSTDOCTORAL FELLOWS**

**CURRENT GRADUATE STUDENT COMMITTEES**
Ali Al Jabri (Ph.D. student, University of Oklahoma)
Madeline Diedrichsen (Ph.D. student, University of Oklahoma)
Jacob Escobedo (Ph.D. candidate, Colorado State University)
William Faletti (Ph.D. student, University of Oklahoma)
Benjamin Fellman (Ph.D. student, University of Oklahoma)
Michael Hosek (Ph.D. candidate, University of Oklahoma)
Andrew Justin (Ph.D. student, University of Oklahoma)
Jeffrey Lee (Ph.D. student, University of Oklahoma)
Brandon McClung (Ph.D. candidate, University of Oklahoma)
Tyler Pardun (Ph.D. student, University of Oklahoma)
Andrew Shearer (Ph.D. student, University of Oklahoma)
Grant Talkington (M.S. student, University of Oklahoma)

**PREVIOUS GRADUATE STUDENT COMMITTEES**

Matthew Ammon (M.S. 2025, University of Oklahoma)
Ryan Martz (M.S. 2025, University of Oklahoma)
Allie Mazurek (Ph.D. 2024, Colorado State University)
Emma Miller (M.S. 2025, University of Oklahoma)
Andrew Justin (M.S. 2024, University of Oklahoma)
Samuel Varga (M.S. 2024, University of Oklahoma)

## INVITED PRESENTATIONS

**** - presentation upcoming***

"AI for Severe Weather Forecasting". Hazardous Weather Testbed Spring Forecasting Experiment, May 2025.

"Supporting National Forecast Center Operations with Machine Learning-generated Outlooks." American Geophysical Union Fall Meeting, December 2024.

"AI4AI: Developing Actionable Insights with Artificial Intelligence for improved hazardous weather forecasts". Texas A&M Department of Atmospheric Sciences Fall Seminar Series, October 30, 2024.

Invited panelist for 8th Convection-Permitting Climate Modeling Workshop. September 2024.

Invited panelist for AMS Summer Community Meeting on NWP Development. August 2024.

"AI and Applications to Hazardous Weather Forecasting." ESIG 2024 Forecasting and Markets Workshop, Salt Lake City, UT, June 2024.

"Our New Forecasting Paradigm: Artificial Intelligence." 2024 Severe Storms and Doppler Radar Conference, Central Iowa NWA Chapter, March 2024.

"Understanding and Improving Predictability of High-Impact Weather Hazards Through the Lens of Machine Learning." American Geophysical Union Fall Meeting, virtual, December 2023.

"AI and Machine Learning in NWP: A look at Excessive Rainfall with the CSU-MLP." Winter Weather Workshop, NWS OKX WFO, virtual, November 15th 2023.

"Machine Learning for Operational Weather Forecasting." National Weather Service Eastern Region Science Sharing Webinar, virtual, October 2023.

"Machine Learning for Operational Weather Forecasting." National Weather Service SOO/DOH Meeting, Denver, CO, August 2023.

"Probabilistic Predictions of Severe Weather with Machine Learning." NWS WFO Indianapolis Regional Training, virtual, April 2023.

"Using Machine Learning to Identify Severe Weather and Excessive Rainfall Risk Areas." NWS Central Region Spring Seasonal Symposium, virtual, March/April 2023.

"A Forest of Forecasts? Leveraging Machine Learning for High-Impact Weather Forecasting." SUNY Albany Department of Atmospheric and Environmental Sciences, interview, March 2023.

"A Forest of Forecasts? Leveraging Machine Learning for High-Impact Weather Forecasting." University of Oklahoma School of Meteorology, interview, March 2023.

"Advancing High-Impact Weather Hazard Forecasting with Machine Learning." Florida State University Department of Earth, Ocean, and Atmospheric Sciences, interview, March 2023.

"Moving beyond dynamics-based weather forecasting toward machine learning." University of Nebraska-Lincoln Stout Lecture, February 2023.

"Generating probabilistic machine-learned forecasts for severe weather and excessive rainfall prediction." National Weather Service Central Region Headquarters, virtual, July 2022.
"Learning from machines: High-impact weather forecasting with Artificial Intelligence." University of Florida Department of Geography, virtual interview, March 2021
"Learning from machines: improving high-impact weather forecasts with Artificial Intelligence." Northern Illinois University Department of Geographic and Atmospheric Sciences, virtual interview, March 2021
"Machine learning for convection hazard forecasts." NWS Southern Region Science and Technology Services Division Science Circle, virtual, 2020
"Forecasting our future: machine learning and AI for high-impact weather." National Weather Association Annual Meeting, virtual, 2020
"Statistical tools for high-impact weather." Naval Postgraduate School, Monterey, CA, interview, 2020
"The utility of ensemble-sensitivity analysis for targeted observing, ensemble subsetting, and investigating environmental controls on storm characteristics." Cooperative Institute for Research in the Atmosphere, Fort Collins, CO, 2018

## OTHER PRESENTATIONS

***** - *presentation upcoming***
**_ - *student advised***
**^ - *won presentation award***

108. Schumacher, R. S. and **A. J. Hill**, 2025: "Representation of Mesoscale Processes in Extreme Rainstorms in the CONUS404 Convection-Permitting Simulation". 21st Conference on Mesoscale Processes, Boise, ID.

107. ^McGinty, C., **A. J. Hill**, and E. R. Nielsen, 2025: "Integrating SPC and WPC Outlooks to Predict Joint Tornado and Flash Flood Events". 21st Conference on Mesoscale Processes, Boise, ID.

106. McDaniel, H. J. and **A. J. Hill**, 2025: "Utilizing Machine Learning Techniques to Investigate Mesovortex Genesis and Evolution in Quasi-Linear Convective Systems". 21st Conference on Mesoscale Processes, Boise, ID.

105. Geiger, K. M., **A. J. Hill**, and R. S. Schumacher, 2025: "Investigating Environmental Influences on Nocturnal Summertime Extreme Rainfall Events in the United States Using Self Organizing Maps". 21st Conference on Mesoscale Processes, Boise, ID.

104. ^McClung, B. T., D. Schvartzman, **A. J. Hill**, M. Stock, and A. McGovern, 2025: BoltCast: Deep Learning for Long Term Lightning Prediction. 12th Conference on the Meteorological Application of Lightning Data, New Orleans, LA.

103. Clark, A., **A. J. Hill**, K. Hoogewind, A. Berrington, and E. Loken, 2025: Extended range machine-learning severe weather guidance based on the operational GEFS. 33rd Conference on Weather Analysis and Forecasting, New Orleans, LA.

102. Erickson, N., A. McGovern, and **A. J. Hill**, 2025: Deep Learning for Short-Term Characterization of Tornado Intensity. 24th Conference on Artificial Intelligence for Environmental Science, New Orleans, LA.

101. **Hill, A. J**., D. J. Bodine, S. M. Cavallo, B. G. Ilston, Z. J. Lebo, and D. Schvartzman, 2025: Preparing the Next Generation of Meteorological Data Scientists: Redesigning Curricula for Student Success. 34th Conference on Education, New Orleans, LA.

100. **Hill, A. J**., E. White, and J. Radford, 2025: An AI-Machine Learning Probabilities (AI-MLP) Forecast System for Hazardous Weather Prediction. 33rd Conference on Weather Analysis and Forecasting, New Orleans, LA.

99. **Hill, A. J.** and R. S Schumacher, 2025: Machine Learning Probability Ensembles for Medium-Range Excessive Rainfall Prediction. 24th Conference on Artificial Intelligence for Environmental Science, New Orleans, LA.

98. Madsen M., A. McGovern, D. Harrison, A. Clark, M. Baldwin, S. Ernst, J. T. Ripberger, and **A. J. Hill**, 2025: Perceptions and Performance of Global AI Models in the 2024 NOAA Hazardous Weather Testbed. 24th Conference on Artificial Intelligence for Environmental Science, New Orleans, LA.

97. Schumacher, R. S. and **A. J. Hill**, 2025: Quality-controlled databases of US extreme rainfall events based on gridded precipitation estimates and convection-permitting model output. 39th Conference on Hydrology, New Orleans, LA.

96. **Hill, A. J.**, 2024: Demystifying AI/ML. Storm Prediction Center Annual Forecaster Training, Norman, OK, November 2024.

95. **Hill, A. J.** and J. Radford, 2024: Postprocessing Data-Driven AI Forecasting Models for Hazardous Weather Prediction. 31st Conference on Severe Local Storms, Virginia Beach, VA, October 2024.

94. Clark A., K. Hoogewind, A. J. Hill, and E. Loken, 2024: Extended-Range Machine-Learning Severe Weather Guidance Based on the Operational GEFS. Workshop on Science, Predictability, Operations, Preparation and Response for High Impact Weather, Albany, NY, October 2024.

93. **Hill, A. J.**, 2024: Medium-Range Machine Learning Guidance Products for NWS Operations. NSSL Machine Learning Group, Norman, OK, September 2024.

92. Schumacher, R. S. and **A. J. Hill**, 2024: Extreme-rain-producing mesoscale convective systems in the contiguous US in observations and a convection-permitting regional climate model. International Conference on Mesoscale Convective Systems, Gyeongju City, South Korea, October 2024.

91. Schumacher, R. S. and **A. J. Hill**, 2024: Assessment of the representation of extreme rainfall in CONUS404. 8th Convection Permitting Climate Modeling Workshop, Fort Collins, CO, September 2024.

90. **Hill, A. J.** and others, 2024: Panel: FIG Town Hall Part 2: Forecasting Trends: The Balance between NWP and AI and How It Will Evolve in the Near or Distant Future. American Meteorological Society Webinar, June 2024.

89. **Hill, A. J.** and R. S. Schumacher, 2024: Medium-range Forecasts of Excessive Rainfall with the CSU-MLP. Hydrometeorological Testbed Flash Flood and Intensive Rainfall Experiment, virtual.

88. **Hill, A. J.** and R. S. Schumacher, 2024: Medium-Range Excessive Rainfall Prediction with Machine Learning. EGU General Assembly 2024, Vienna, Austria.

87. Gagne II, D. J., and Coauthors, 2024: Lessons Learned from Building Real-Time Machine Learning Testbeds for AI2ES. 14th Conference on Transition of Research to Operations, Baltimore, MD.

86. Green, M. R. L., **A. J. Hill**, and R. S. Schumacher, 2024: Understanding Training Data Components for Excessive Rainfall Machine-Learning Models: A look inside the Unified Flooding Verification System. 23rd Annual AMS Student Conference, Baltimore, MD.

85. ^Mazurek, A. C., R. S. Schumacher, and **A. J. Hill**, 2024: When Do Machine Learning Forecasts Succeed and Fail? Evaluating Synoptic Regimes Associated With a Random Forest's Good and Bad Severe Weather Predictions. 14th Conference on Transition of Research to Operations, Baltimore, MD.

84. ^Mazurek, A. C., **A. J. Hill**, R. S. Schumacher, and H. J. McDaniel, 2024: Ingredients-Based Explainability: Using Tree Interpreter to Disaggregate a Random Forest's Severe Weather Predictions. 23rd Conference on Artificial Intelligence for Environmental Science, Baltimore, MD.

83. Clark, A. J., K. A. Hoogewind, **A. J. Hill**, B. T. Gallo, A. Berrington, and E. D. Loken, 2023: Extended Range Machine-Learning Severe Weather Guidance Based on the Operational GEFS. 28th Conference on Numerical Weather Prediction, Madison, WI.

82. **Hill, A. J.** and R. S. Schumacher, 2023: How long of an observational record is needed for skillful ML-based forecasts of excessive rainfall? 32nd Conference on Weather Analysis and Forecasting, Madison, WI.

81. **Hill, A. J.,** D. C. Dowell, and C. C. Weiss, 2023: An Initial Assessment of Environmental Influences on QLCS-tornadogenesis from PERiLS Field Campaign Datasets and High-Resolution Simulations. 28th Conference on Numerical Weather Prediction, Madison, WI.

80. James, E. P., R. S. Schumacher, and **A. J. Hill**, 2023: Testing random forests for prediction of excessive rainfall based on the High-Resolution Rapid Refresh (HRRR). 32nd Conference on Weather Analysis and Forecasting, Madison, WI.

79. ^Mazurek, A. C., **A. J. Hill**, and R. S. Schumacher, 2023: Making Sense of Random Forest-Based Severe Weather Forecasts Using Tree Interpreter. 32nd Conference on Weather Analysis and Forecasting, Madison, WI.

78. Schumacher, R. S., **A. J. Hill**, and M. Klein, 2023: How Far Into the Medium Range Can Probabilistic Excessive Rainfall Forecasts be Extended? 32nd Conference on Weather Analysis and Forecasting, Madison, WI.

77. Schumacher, R. S. and **A. J. Hill**, 2023: Sources of Forecast Errors for Extreme-Rain-Producing Mesoscale Convective Systems. 20th Conference on Mesoscale Processes, Madison, WI.

76. Schumacher, R. S. and **A. J. Hill**, 2023: Progress Towards Medium Range Excessive Rainfall Forecasts with the CSU-MLP. Hydrometeorology Testbed Flash Flood and Intense Rainfall Experiment Seminar Series, virtual.

75. Schumacher, R. S. and **A. J. Hill**, 2023: Sources of Forecast Errors for Extreme-Rain-Producing Mesoscale Convective Systems. 15th International Conference on Mesoscale Convective Systems, Fort Collins, CO, 10.3.

74. **Hill, A. J.** and R. S. Schumacher, 2023: Leveraging the Power of Machine Learning for Excessive Rainfall Forecasting. 15th International Conference on Mesoscale Convective Systems, Fort Collins, CO, 12.7.

73. **Hill, A. J.** and R. S. Schumacher, 2023: Predictions of Severe Weather with Random Forests and the Global Ensemble Forecast System. European Conference on Severe Storms.

72. **Hill, A. J.** and A. Mazurek, 2023: The CSU-MLP Hazardous Weather Prediction System. National Weather Service Norman Weather Forecast Office, Norman, OK.

71. **Hill, A. J.** and A. Mazurek, 2023: The CSU-MLP Severe Weather Prediction System. Storm Prediction Center Spring Forecaster Training, Norman, OK.

70. Escobedo, J. A., R. S. Schumacher, **A. J. Hill**, 2023: Investigating Colorado State University- Machine Learning Probabilities Day-1 Excessive Rainfall Forecasts in the Southwest United States During the Summer Monsoon. 37th Conference on Hydrology, Denver, CO, poster 767.

69. **Hill, A. J.**, R. S. Schumacher, 2023: Exploring Definitions of Excessive Rainfall when Generating Machine Learning-based Probabilistic Excessive Rainfall Forecasts from a Global Reforecast Dataset. 37th Conference on Hydrology, Denver, CO, 13B.5.

68. **Hill, A. J.**, R. S. Schumacher, and I. Jirak, 2023: Understanding and Interpreting Medium-Range Predictions of Severe Weather with Random Forests. 22nd Conference on Artificial Intelligence for Environmental Science, Denver, CO, 5A.3.

67. **Hill, A. J.**, V. A. Gensini, and R. S. Schumacher, 2023: Medium-Range Machine Learning Forecasts for Severe Convective Storms. 22nd Conference on Artificial Intelligence for Environmental Science, Denver, CO, 11A.3.

66. James, E. P., R. S. Schumacher, and **A. J. Hill**, 2023: Random forests for prediction of excessive rainfall based on the High-Resolution Rapid Refresh (HRRR). 22nd Conference on Artificial Intelligence for Environmental Science, Denver, CO., 7B.1.

65. Mazurek, A., R. S. Schumacher, and **A. J. Hill**, 2023: Evaluating Random Forest-Based Predictions of Tornadoes, Wind, and Hail at Two- to Three-Day Lead Times. 22nd Conference on Artificial Intelligence for Environmental Science, Denver, CO., 11A.2.

64. ^McDaniel, H., **A. J. Hill**, and R. S. Schumacher, 2023: Investigating Predictor Importance for a Next-Day Severe Weather Hazard Machine Learning Model. 22nd Conference on Artificial Intelligence for Environmental Science, Denver, CO, poster 893.

63. McDaniel, H., **A. J. Hill**, and R. S. Schumacher, 2023: Investigating Predictor Importance for a Next-Day Severe Weather Hazard Machine Learning Model. 22nd Annual Student Conference, Denver, CO, poster S9.

62. Schumacher, R. S., **A. J. Hill**, and M. Klein, 2023: How Far Into the Medium Range Can Probabilistic Excessive Rainfall Forecasts be Extended? 22nd Conference on Artificial Intelligence for Environmental Science, Denver, CO., 7B.5.

61. McDaniel, H., **A. J. Hill**, and R. S. Schumacher, 2022: Investigating Predictor Importance for a Next-Day Severe Weather Hazard Machine Learning Model. American Geophysical Union Fall Meeting, Chicago, IL, poster 392.

60. **Hill, A. J.**, R. S. Schumacher, I. Jirak, 2022: Medium-Range Severe Weather Predictions with Random Forests. 30th Conference on Severe Local Storms, Santa Fe, NM, 4.1B.

59. Mazurek, A., R. S. Schumacher, and **A. J. Hill**, 2022: Evaluating Random Forest-Based Predictions of Tornadoes, Wind, and Hail at Two- and Three-day Lead Times. 30th Conference on Severe Local Storms, Santa Fe, NM, 7.1A.

58. Schumacher, R. S., **A. J. Hill**, and A. Mazurek, 2022: Probabilistic Forecast Guidance for Severe Convective Storms Using GEFS Reforecasts and Machine Learning. 30th Conference on Severe Local Storms, Santa Fe, NM, 1.3.

57. Schumacher R. S. and **A. J. Hill**, 2022: Advancing high-impact weather prediction with machine learning. DARPA FORWARD Conference, Fort Collins, CO, poster.

56. Schumacher, R. S. and **A. J. Hill**, 2022: Updates and Improvements to Colorado State University-Machine Learning Probabilities Excessive Rainfall Forecasts. Hydrometeorological Testbed Flash Flood and Intense Rainfall Experiment, virtual.

55. **Hill, A. J.**, 2022: Probabilistic Predictions of Severe Weather with Machine Learning. Columbia, SC Weather Forecast Office Severe Weather Workshop, virtual.

54. Cheeseman, M., B. Ford, Z. Rosen, E. Wendt, A. J. DesRosiers, **A. J. Hill**, C. L'Orange, C. Quinn, M. Long, S. H. Jathar, J. Volckens, and J. R. Pierce, 2022: Neighborhood Scale Variability of Co-incident PM2.5 and AOD: Results from Citizen Enabled Aerosol Measurements for Satellites (CEAMS). 24th Conference on Atmospheric Chemistry, poster.

53. Escobedo, J. A., R. S. Schumacher, and **A. J. Hill**, 2022: Colorado State University Machine Learning Probabilities Day 1 Probabilistic Excessive Rainfall Forecasts: Synoptic Regimes of the Best- and Worst-Performing Forecasts. 21st Annual Student Conference, poster

52. **Hill, A. J.** and R. S. Schumacher, 2022: Medium-range Predictions of Severe Weather with Machine Learning. 31st Conference on Weather Analysis and Forecasting/27th Conference on Numerical Weather Prediction, J7.2.

51. James, E. P., **A. J. Hill**, and R. S. Schumacher, 2022: A first guess day-one Excessive Rainfall Outlook based on a skill-weighted blend of random forest prediction systems, 21st Conference on Artificial Intelligence for Environmental Science, poster.

50. Nielsen, E. R. and **A. J. Hill**, 2022: Exploring Multi-Hazard Joint Probability Forecasts Through the Lens of Tornadoes and Flash Floods. 19th Conference on Mesoscale Processes, J3.4.

49. Schumacher, R. S., **A. J. Hill**, and I. L. Jirak, 2022: Probabilistic forecast guidance for severe convective storms using GEFS reforecasts and machine learning. 31st Conference on Weather Analysis and Forecasting/27th Conference on Numerical Weather Prediction, J7.4.

48. **Hill, A. J.** and R. S. Schumacher, 2021: Medium-range forecasts of hazardous weather with machine learning. 3rd NOAA Workshop on Leverage AI in Environmental Sciences, virtual.

47. **Hill, A. J.**, R. S. Schumacher, and J. Escobedo, 2021: Extending predictions of hazardous weather into the medium-range with machine learning. 2nd Knowledge-guided Machine Learning Workshop, virtual, poster.

46. **Hill, A. J.** and R. S. Schumacher, 2021: Advancing probabilistic prediction of high-impact weather using ensemble reforecasts and machine learning. National Weather Service AI Team, virtual.

45. **Hill, A. J.**, E. James, R. S. Schumacher, M. Klein, J. Nelson, and M. J. Erickson, 2021: CSU CAM-based First Guess Excessive Rainfall Outlook Products. Hydrometeorological Testbed Flash Flood and Intense Rainfall Experiment, virtual.

44. Schumacher, R. S. and **A. J. Hill**, 2021: Advancing Probabilistic Prediction of High-Impact Weather Using Ensemble Reforecasts and Machine Learning. UFS Webinar Series, virtual.

43. **Hill, A. J.** and R. S. Schumacher, 2021: Medium-range severe weather forecasts with random forests, 20th Conference on Artificial Intelligence for Environmental Science, 3.2.

42. **Hill, A. J.** and R. S. Schumacher, 2021: Short-term excessive rainfall forecasts using random forests and a deterministic convection-allowing model, 20th Conference on Artificial Intelligence for Environmental Science, joint 12.8.

41. Schumacher, R. S., **A. J. Hill**, M. Klein, J. Nelson, M. J. Erickson, and G. R. Herman, 2021: From Random Forests to Flood Forecasts: A Research to Operations Success Story, 11th Conference on Transition of Research to Operations, 14.9.

40. **Hill, A. J.** and R. S. Schumacher, 2020: Heavy precipitation and flash flood forecasts using random forests and convection-allowing models. 30th Conference on Weather Analysis and Forecasting/26th Conference on Numerical Weather Prediction, Boston, MA, J71.2.

39. **Hill, A. J.** and R. S. Schumacher, 2020: Random-Forest Severe Guidance from the GEFS. Storm Prediction Center Fall Forecaster Training.

38. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2020: Factors influencing ensemble sensitivity-based targeted observing predictions at convection-allowing resolutions, 24th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Boston, MA, 10.4.

37. **Hill, A. J.**, C. C. Weiss, and D. C. Dowell, 2020: Assimilating near-surface observations from a portable mesoscale network of StickNet platforms during VORTEX-SE with the High Resolution Rapid Refresh Ensemble. Severe Local Storms Symposium, Boston, MA., 950

36. **Hill, A. J.**, R. S. Schumacher, M. Klein, J. Nelson, and M. Erickson, 2020: First-guess excessive rainfall outlooks from machine learning models. Hydrometeorological Testbed Flash Flood and Intensive Rainfall Experiment.

35. McDonald, J. M., C. C. Weiss, and **A. J. Hill**, 2020: Properties of cold pools observed during the VORTEX-SE: Meso18-19 field campaign. Severe Local Storms Symposium, Boston, MA., 946

34. Schumacher, R. S., **A. J. Hill**, G. R. Herman, M. Erickson, B. Albright, M. Klein, and J. A. Nelson Jr., 2020: If a flood falls in a (random) forest, does it get counted? Advances and challenges in predicting excessive precipitation using machine learning. 30th Conference on

Weather and Forecasing / 26th Conference on Numerical Weather Prediction, Boston, MA., J71.3

33. Ancell, B. C., A. A. Coleman, and **A. J. Hill**, 2019: Ensemble sensitivity-based subsetting overview and evaluation activities at the 2018 NOAA HWT. European Geophysical Union General Assembly 2019, Vienna, Austria, EGU2019-2435.

32. Ancell, B. C., A. A. Coleman, and **A. J. Hill**, 2019: Ensemble sensitivity-based subsetting overview and evaluation activities at the 2018 NOAA HWT. 23rd Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Phoenix, AZ, paper 2.3A.

31. Weiss, C. C., E. C. Bruning, J. Dahl, and **A. J. Hill**, 2019: Texas Tech VORTEX-SE Activities. VORTEX-SE Workshop, Huntsville, AL.

30. Weiss, C. C., D. C. Dowell, N. Yussouf, and **A. J. Hill**, 2019: Insights into mesoscale and storm-scale predictability gained through ensemble sensitivity analysis. 23rd Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Phoenix, AZ, paper 20.1.

29. Ancell, B. C., A. A. Coleman, and **A. J. Hill**, 2018: Ensemble sensitivity-based subsetting overview and evaluation activities at the 2018 NOAA HWT. American Geophysical Union Fall Meeting, Washington, D.C.

28. Ancell, B. C., A. A. Coleman, **A. J. Hill**, and C. C. Weiss, 2018: Ensemble sensitivity-based subsetting overview and evaluation activities at the 2018 NOAA HWT. 29th Conference on Severe Local Storms, Stowe, VT, paper 3A.4.

27. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2018: Towards improving forecasts of severe convection along the dryline through targeted observing with ensemble sensitivity analysis. 29th Conference on Severe Local Storms, Stowe, VT, paper 14.2.

26. **Hill, A. J.**, C. C. Weiss, and D. C. Dowell, 2018: Exploring the utility of assimilating observations from a mesoscale network of StickNet platforms during VORTEX-SE with the High Resolution Rapid Refresh Ensemble. 29th Conference on Severe Local Storms, Stowe, VT, paper 74.

25. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2018: Ensemble-sensitivity analysis based observation targeting experiments for mesoscale convection forecasts and factors influencing observation-impact prediction. 22nd Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Austin, TX, paper 613.

24. Weiss, C. C., D. C. Dowell, **A. J. Hill**, J. McDonald, E. C. Bruning, and J. Dahl, 2018: An update on VORTEX-SE activities at Texas Tech University. 29th Conference on Severe Local Storms, Stowe, VT, paper 3B.1.

23. Weiss, C. C., D. C. Dowell, **A. J. Hill**, and N. Yussouf, 2018: Ensemble sensitivity analysis of controls on storm-scale vertical vorticity for two southeastern U.S. tornado events. 22nd Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Austin, TX, paper 610.

22. **Hill, A. J.**, C. C. Weiss, and B.C. Ancell, 2017: Ensemble-sensitivity analysis based observation
targeting for mesoscale convection forecasts and factors influencing observation-impact prediction. American Geophysical Union Fall Meeting, New Orleans, LA, paper NG31A-0157.

21. Weiss, C. C., E. C. Bruning, J. Dahl, D. C. Dowell, C. R. Alexander, **A. J. Hill**, and V. C. Chmielewski, 2017: Preliminary results from the 2016 and 2017 VORTEX-SE project. 9th European Conference on Severe Storms, Pula, Croatia, paper ECSS2017-155.

20. Kenyon, A. and **A. J. Hill**, 2017: Using Python to process and visualize real-time atmospheric data during VORTEX-SE. Scipy 2017: Scientific Computing with Python, Austin, TX.

19. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2017: Ensemble sensitivity-based observation targeting experiments for Southern Plains dryline convection. 21st Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Seattle, WA, paper 15.5.

18. Weiss, C. C, E. C. Bruning, J. Dahl, D. C. Dowell, C. R. Alexander, **A. J. Hill**, and V. C. Chmielewski, 2017: An overview of Texas Tech operations during VORTEX-SE 2016. Special Symposium on Severe Local Storms: Observation Needs to Advance Research, Prediction, and Communication, Seattle, WA, paper 939.

17. Weiss, C. C., D. C. Dowell, **A. J. Hill**, and N. Yussouf, 2017: Ensemble sensitivity analysis of controls on updraft rotation for two southeastern US tornado events. 21st Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Seattle, WA, paper 11.6.

16. Bruning, E. C., V. C. Chmielewski, C. C. Weiss, J. Dahl, **A. J. Hill**, C. J. Schultz, and J. Bailey, 2016: Flash size distributions characterized by mobile LMA deployments during VORTEX-SE. 28th Conference on Severe Local Storms, Portland, OR, paper 9.4.

15. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2016: Ensemble sensitivity-based observation targeting experiments for Southern Plains dryline convection. 28th Conference on Severe Local Storms, Portland, OR, paper 7B.6.

14. Weiss, C. C, E. C. Bruning, J. Dahl, D. C. Dowell, C. R. Alexander, **A. J. Hill**, and V. C. Chmielewski, 2016: An overview of Texas Tech operations during VORTEX-SE 2016. 28th Conference on Severe Local Storms, Portland, OR, paper 3.5.

13. Weiss, C. C., D. C. Dowell, **A. J. Hill**, and N. Yossouf, 2016: Ensemble sensitivity analysis of controls on updraft rotation for the 27 April 2011 Tornado Outbreak. 28th Conference on Severe Local Storms, Portland, OR, paper 137.

12. Ancell, B. C., **A. J. Hill**, and B. Burghardt, 2016: The TTU WRF ensemble prediction system. 2nd Ensemble Design Workshop for Convection Allowing Models, College Park, Maryland. MD.

11. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2016: Ensemble sensitivity-based observation targeting OSSEs for Southern Plains dryline convection. 20th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, New Orleans, LA, paper J7.7

10. **Hill, A. J.**, B. Burghardt, and B. C. Ancell, 2015: Advanced ensemble techniques for improved predictability of storm-scale features. 1st Ensemble Design Workshop for Storm-Scale Ensembles, Boulder, CO.

9. Ancell, B. C., **A. J. Hill**, and B. Burghardt, 2015: The use of ensemble-based senstivity with observations to improve predictability of severe convective events. 27th Conference on Weather Analysis and Forecasting / 23rd Conference on Numerical Weather Prediction, Chicago, IL, paper 8B.5.

8. Ancell, B. C., **A. J. Hill**, and B. Burghardt, 2015: The use of ensemble-based sensitivity with observations to improve predictability of severe convective events. Preprints, 19th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Phoenix, AZ, paper 9.1.

7. **Hill, A. J.**, C. C. Weiss, and B.C. Ancell, 2015: Mesoscale ensemble sensitivity and observation targeting of dryline convection. Preprints, 19th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface, Phoenix, AZ, paper 9.3.

6. Ancell, B. C., **A. J. Hill**, and B. Burghardt, 2014: The use of ensemble-based sensitivity and observations to improve predictability of severe convective events. American Geophysical Union Fall Meeting, San Francisco, CA, NG31B-3798.

5. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2014: Mesoscale ensemble sensitivity of dryline convective initiation. Preprints, 27th Conference on Severe Local Storms, Madison, WI, paper 8B.4.

4. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2014: Applicaiton of mesoscale ensemble-based sensitivity analysis to observation targeting. 26th Conference on Weather Analysis and Forecasting/22nd Conference on Numerical Weather Prediction, Atlanta, GA, paper 610.

3. **Hill, A. J.**, C. C. Weiss, and B. C. Ancell, 2013: Utilizing ensemble sensitivity for data denial experiments of the 4 April 2012 Dallas, Texas dryline-initiated convective outbreak using

West Texas Mesonet observations and WRF-DART data assimilation. Preprints, 15th Conference on Mesoscale Processes, Portland, OR, paper 11.

2. Houze, R. A., Jr., K. L. Rasmussen, and **A. J. Hill**, 2013: TRMM insights into recent floods in Pakistan. PMM Science Team Meeting, Annapolis, MD.

1. Houze, R. A., Jr., K. L. Rasmussen, **A. J. Hill**, and M. D. Zuluaga, 2013: Using TRMM Precipitation Radar to understand the Pakistan and India floods of 2010-2012. American Geophysical Union Fall Meeting, San Francisco, CA.

## PROFESSIONAL SERVICE

Member, AMS Forecast Improvement Group Executive Committee, 2024-present
Member, AMS Scientific and Technological Activities Commission Committee on Artificial Intelligence Applications to Environmental Science, 2024-present
Member, AMS Scientific and Technological Activities Commission Committee on Weather Analysis and Forecasting, 2019-present
5-yr Strategic Planning Subcommittee, Social Media Subcommittee, Mitchell Award Subcommittee Chair
Associate Editor, *Journal of the Atmospheric Sciences*, 2023-present
Associate Editor, *Artificial Intelligence for Earth Systems*, 2021-present
Associate Editor, *Monthly Weather Review*, 2020-present
Session Chair, AMS 21st Conference on Mesoscale Processes, 2025
Member, AMS 31st Conference on Severe Local Storms Program Committee, 2024
Member, AMS Policy Program Working Group, 2024
Co-Chair, AMS 23rd Conference on Artificial Intelligence for Environmental Science, 2024
Member, AMS 32nd Conference on WAF/28th Conference on NWP/20th Conference on Mesoscale Processes Program Committee, 2023
Member, AMS 30th Conference on Severe Local Storms Program Committee, 2022
Member, Research to Operations Nexus Meetup Planning Committee, 2021-2022
Chair, AMS 31st Conference on WAF/27th Conference on NWP Program Committee, 2020 -2022
Contributor, National Oceanic and Atmospheric Administration White Paper on exploring ways to increase the near-term operational utility of existing observations and analysis systems, 2021
Member, AMS 30th Conference on WAF/26th Conference on NWP Program Committee, 2019-2020
Team Manager, WxChallenge Competition, Texas Tech University, 2013-2019
Member, AMS 29th Conference on WAF/25th Conference on NWP Program Committee, 2017-2018
Rapporteur, 2017 NOAA R2O meeting and 2018 AMS Community Meeting
Member, 15th AMS Student Conference Planning Committee, 2015-2016
Poster Session Subcommittee and Session Chair
Member, 14th AMS Student Conference Planning Committee, 2014-2015
Secretary, American Meteorological Society Student Chapter, Texas Tech University, 2013-2015
Reviewer, Texas Tech University Undergraduate Research Conference, 2013 and 2014
President, American Meteorological Society Student Chapter, Texas Tech University, 2012-2013

President, American Meteorological Society Student Chapter, University of Washington, 2011-2012
Reviewer of scientific articles for 20 unique science journals
Reviewer of scientific proposals for:
*National Science Foundation*
*National Oceanic and Atmospheric Administration*
*German Federal Ministry of Education and Research*

## DEPARTMENTAL/UNIVERSITY SERVICE

Task Force Member, AI Research Working Group, University of Oklahoma, 2025
Member, Ed Cline Faculty Development Awards, University of Oklahoma, 2024-present
Graduate Studies Committee, School of Meteorology, University of Oklahoma, 2023-present
Graduate College Representative for 1 PhD student, present
Group Leader, SoM Mentoring Ecosystem, University of Oklahoma, 2024-2025
Member, SoM Director Search Committee, University of Oklahoma, 2025
Staff Representative, Department of Atmospheric Science, Colorado State University, 2021-2023
Colorado State University Research Experiences for Undergraduates (REU) Program, 2022
PROmoting Geoscience Research, Education, and SuccesS (PROGRESS) Program, 2021-2022
Atmospheric Science Department Mentoring Program, 2021-2022
Student Member, Texas Tech University College of Arts and Sciences Committee on Academic Programs, 2017-2018

## OUTREACH AND ENGAGEMENT

Interview with City St. Georges, University of London on AI in Weather Forecasting, May 9th 2025. https://theoffsetmag.com/ai-is-the-next-big-thing-in-weather-forecasting/
Interview with KTVI-TV in St. Louis to discuss the GEFS-MLP model, May 5th, 2025 https://www.youtube.com/watch?v=TcYTfbrT0zQ
Interview with OU journalism student about AI and weather forecasting, April 29th, 2025
Interview with National Geographic about nocturnal tornadoes, April 25th, 2025 https://www.nationalgeographic.com/environment/article/nocturnal-tornadoes-increasing-climate-change
Interview with NYTimes about privatization of weather services, February 3rd 2025 (not quoted)
Interview with Axios about GenCast, December 3rd, 2024 https://www.axios.com/2024/12/04/google-ai-weather-model-more-reliable
Interview with MIT Technical Report about GenCast, December 3rd, 2024 https://www.technologyreview.com/2024/12/04/1107892/google-deepminds-new-ai-model-is-the-best-yet-at-weather-forecasting/
Co-Lead, NWA Machine Learning Masters Class, Irving, TX, September 2024
Interview with Axios about NeuralGCM. July 22nd, 2024 https://www.axios.com/2024/07/22/google-ai-weather-climate-forecast-model
Interview with MIT Technical Report about NeuralGCM. July 18th, 2024 https://www.technologyreview.com/2024/07/22/1095184/a-new-weather-prediction-model-from-google-combines-ai-with-traditional-physics/
Knowledge expert for Snopes.com investigation. June 25th, 2024 https://www.snopes.com/articles/467283/solar-panels-tornadoes-thunderstorms/

Interview with Science News about QLCS tornadoes. June 13th,2024
Interview with Engineering about AI in weather forecasting. April 23rd, 2024
https://www.sciencedirect.com/science/article/pii/S2095809924003916
Interview with OU Nightly about medium-range weather forecasting. April 22nd, 2024.
Interview with VOX about AI-based weather forecasting, February 21st, 2024.
https://www.youtube.com/watch?v=hU4viZzTaRc
Interview with Scientific American regarding AI in weather forecasting, November 21st, 2023.
https://www.scientificamerican.com/article/ai-weather-forecasting-cant-replace-humans-yet/
Interview with KNX/CBS News Radio in Los Angeles, CA to discuss the role of AI in weather forecasting, November 15th, 2023. https://omny.fm/shows/knxam-on-demand/artificial-intelligence-is-faster-and-more-accurat
Interview with the Washington Post regarding a recent scientific article published by Google, November 14th, 2023. https://www.washingtonpost.com/weather/2023/11/14/weather-forecasting-artificial-intelligence-google/
Interview with The Coloradoan to discuss the CSU-MLP Forecasting System, March 2023, https://tinyurl.com/24c8r99k
Interview with 9News Denver to discuss the CSU-MLP Forecasting System, March 2023
Interview with KUNC to discuss recent flash-flood producing storms in Colorado, July 2021
Interview with Daily Toreador newspaper regarding severe storm research in the Texas Tech Atmospheric Sciences Group, September 2018
Interview with Texas Tech University Communications for the VORTEX-SE 2017 field program, February 2017
Interview with Alabama Public Radio for Texas Tech involvement with the VORTEX-SE field program, March 2016
Interview with Texas Tech University Climate Science Center Videos for Science series, February 2016
6th Grade Science Class, Tahoka Middle School, Tahoka, TX, Guest Speaker, 2015
Interview with Texas Living Magazine (online) regarding Texas weather, December 2015