

# **Randy J. Chase**

## **Curriculum Vitae**

Cooperative Institute for Research in the Atmosphere  
3925A West Laporte Ave.  
Fort Collins, CO 80521  
Email: randy.chase@colostate.edu

## **EDUCATION**

2021

Ph.D. Atmospheric Sciences  
University of Illinois at Urbana-Champaign, Urbana, IL  
Dissertation Title: Improving active remote sensing retrievals of snowfall at microwave wavelengths: an emphasis on the global precipitation measurement mission's dual-frequency precipitation radar  
Dissertation Advisers: Stephen Nesbitt and Greg McFarquhar

2018

M.S. Atmospheric Sciences  
University of Illinois at Urbana-Champaign, Urbana, IL  
Thesis title: Evaluation of triple-frequency radar retrieval of snowfall properties using coincident airborne in-situ observations during olympex  
Thesis Advisers: Stephen Nesbitt and Greg McFarquhar

2016

B.S. Double major: Meteorology, Water Resources  
Minor in Mathematics  
State University of New York (SUNY), Brockport, NY

## **PROFESSIONAL APPOINTMENTS**

2023 – present

Global Cloud Retrieval Scientist (Research Scientist I)  
Cooperative Institute for Research in the Atmosphere (CIRA)  
Colorado State University

2021 – 2023

Postdoctoral Research Associate  
NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography (AI2ES)  
University of Oklahoma

## PUBLICATIONS

Summary:

| Total: 19 | First Author: 7 | Citations: 461 | h-index: 11 | i10-index: 12 |

2024

**19** Pletcher, M. D., Veals, P. G., Wessler, M., ... **Chase, R. J.** and Steenburgh, W. J. 2024: Validation of Cool-Season Snowfall Forecasts at a High-Elevation Site in Utah's Little Cottonwood Canyon. *WAF*, *accepted*.

<https://doi.org/10.1175/WAF-D-23-0176.1>

**18** Sherman, Z., ..., **Chase, R. J.** 2024, ... 2024: Effective Visualization of Radar Data for Users Impacted by Color Vision Deficiency. *BAMS inbox*, *accepted*.

<https://doi.org/10.1175/BAMS-D-23-0056.1>

**17** **Chase, R. J.**, McGovern A., Homeyer, C., Marinescu, P. and Potvin, C. 2024: Machine Learning Estimation of Maximum Vertical Velocity from Radar. *Artif. Intell. Earth Syst.*, **3**, 230095.

<https://doi.org/10.1175/AIES-D-23-0095.1>

2023

**16** McGovern, A., Bostrom, A., McGraw, M., **Chase, R. J.**, Gagne II, D. J., Ebert-Uphoff, I., Musgrave, K. and Schumacher, A. 2023: Identifying and Categorizing Bias in AI/ML for Earth Sciences, *Bull. Amer. Meteor. Soc.*, **105**, E567–E583.

<https://doi.org/10.1175/BAMS-D-23-0196.1>

**15** Bostrom, A., Demuth, J., Wirz, C., ..., **Chase, R. J.**, ..., and Williams J. 2023: Trust and Trustworthy Artificial Intelligence: A Research Agenda for AI in the Environmental Sciences. *Risk Analysis*, 00, 1–16.

<https://doi.org/10.1111/risa.14245>

**14** McGovern, A., **Chase, R. J.**, Flora, M., Gagne II, D. J., Lagerquist, R., Potvin, C. K., Snook, N. and Loken, E. 2023: Machine Learning for Convective Weather. *AIES*, 1-61

<https://doi.org/10.1175/AIES-D-22-0077.1>

**13** **Chase, R. J.**, Harrison, D. R., Lackmann G. and McGovern A. 2023: A Machine Learning Tutorial for Operational Meteorology, Part II: Neural Networks and Deep Learning. *WAF*, **38**, 1271–1293.

<https://doi.org/10.1175/WAF-D-22-0187.1>

**12** McGovern, A., Gagne II, D. J., Wirz, C. D., Ebert-Uphoff, I., Bostrom, A., ... **Chase, R. J.**, ... Peterson, T. 2022: Trustworthy Artificial Intelligence for Environmental Sciences: An Innovative Approach for Summer School, *Bull. Amer. Meteor. Soc.*, **104**, E1222–E1231

<https://doi.org/10.1175/BAMS-D-22-0225.1>

2022

**11** Finlon, J. A., McMurdie, L. and **Chase, R. J.** 2022: Investigation of microphysical properties within regions of enhanced dual-Frequency ratio during the IMPACTS field campaign. *Journal of Atmospheric Science*, **79**, 2773–2795.  
<https://doi.org/10.1175/JAS-D-21-0311.1>

**10** **Chase, R. J.**, Nesbitt, S. W., McFarquhar, G. M., Wood, N. B. and Heymsfield, G. M. 2022: Direct comparisons between GPM-DPR and CloudSat snowfall retrievals. *JAMC*, **61**, 1257-1271. <https://doi.org/10.1175/JAMC-D-21-0081.1>

**9** **Chase, R. J.**, Harrison, D. R., Burke, A., Lackmann G. and McGovern A. 2022: A Machine Learning Tutorial for Operational Meteorology, Part I: Traditional Machine Learning. *WAF*, **37**, 1509-1529. <https://doi.org/10.1175/WAF-D-22-0070.1>

2021

**8** **Chase, R. J.**, Nesbitt, S. W. and McFarquhar, G. M. 2021: A dual-frequency radar retrieval of two parameters of the snowfall particle size distribution using a neural network. *JAMC*, **60**, 341 – 359.  
<https://doi.org/10.1175/JAMC-D-20-0177.1>

**7** Turk, F. J., Ringerud, S. E., Camplani, A., Casella, D., **Chase, R. J.**, Ebtehaj, A. , . . . Wood, N. 2021: Applications of a CloudSat-TRMM and CloudSat-GPM Satellite coincidence dataset. *MDPI Remote Sensing*, **13**, 2264.  
<https://doi.org/10.3390/rs13122264>

2020

**6** **Chase, R. J.**, Nesbitt, S. W. and McFarquhar, G. M. 2020: Evaluation of the microphysical assumptions within GPM-DPR using ground-based observations of rain and snow. *MDPI Atmosphere*, **11**, 619.  
<https://doi.org/10.3390/atmos11060619>

**5** Ding, S., McFarquhar, G. M., Nesbitt, S. W., **Chase, R. J.**, Poellot, M. R. and Wang, H. 2020: Dependence of mass-dimensional relationships on median mass diameter. *MDPI Atmosphere*, **11**, 756.  
<https://doi.org/10.3390/atmos11070756>

2019

**4** Tridon, F., Battaglia, A., **Chase, R. J.**, Turk, J., Leinonen, J., Kneifel, S., Mroz, K., Finlon, J. A., Bansemer, A., Tanelli, S., Heymsfield, A., and Nesbitt, S. W. 2019: The microphysics of stratiform precipitation during OLYMPEX: compatibility between 3-frequency radar and airborne in situ observations. *Journal of Geophysical Research Atmospheres*, **124**, 8764–8792.  
<https://doi.org/10.1029/2018JD029858>

2018

**3** **Chase, R. J.**, Finlon, J. A., Borque, P., McFarquhar, G. M., Nesbitt, S. W., Tanelli, S., Sy, O. O., Durden, S. L. and Poellot, M. 2018: Evaluation of triple-frequency radar

retrieval of snowfall properties using coincident airborne in-situ observations during OLYMPEx. *Geophys. Res. Lett.*, 45, 5752 – 5760.

<https://doi.org/10.1029/2018GL077997>

**2** Leinonen, J., Lebsock, M. D., Tanelli, S., Sy, O. O., Dolan, B., **Chase, R. J.**, Finlon, J. A., von Lerber A. and Moisseev, D. 2018: Retrieval of snowflake microphysical properties from multi-frequency radar observations. *Atmospheric Measurement Techniques*, 11, 5471 – 5488.

<https://doi.org/10.5194/amt-11-5471-2018>

2016

**1** Gerken, T., Wei, D., **Chase, R. J.**, Fuentes, J. D., Schumacher, C., Machado, L. A., . . . Trowbridge, A. M., 2016: Downward transport of ozone rich air and implications for atmospheric chemistry in the Amazon rainforest. *Atmospheric Environment*, 124, 64-76.

<https://doi.org/10.1016/j.atmosenv.2015.11.014>

### Submitted or in preparation

**Chase, R. J.**, Dolan, B., Rasmussen, K., Shulte, R., Stephens, G., and van den Heever, S. 2024: A multi-frequency spaceborne radar perspective of deep convection. *JAMC*, *in review*.

<https://arxiv.org/abs/2406.17110>

Schulte, R., **Chase, R. J.**, Dolan B., Marinescu P. J., Posselt, D. J., Rasmussen K. and van den Heever, S. 2024: Unclouding the Correlations: A Principal Component Analysis of Convective Environments. *GRL*, *submitted*.

<https://essopenarchive.org/doi/full/10.22541/essoar.172280686.69970864/v1>

Schmidt, T., . . . **Chase, R. J.**, . . . and McGovern A. 2024: Gridded Hail Nowcasting using UNets, Lightning Observations, and the Warn-on-Forecast System. *WAF*, *in review*.

**Chase, R. J.**, Haynes, K., and Ebert-Uphoff, I. 2024: Score based diffusion nowcasting of GOES imagery. *AIES*, *in prep*.

### AWARDS AND HONORS

2023

AMS AIES/WAF Editor Award

2020

AGU Technical Committee Student Award

2016

The Father James B. Macelwane Annual Award in Meteorology (AMS)

The Chancellor's Award of Student Excellence (SUNY)

The School of Science and Mathematics Undergraduate Award (SUNY Brockport)

2015

The David S. Johnson Endowed Undergraduate Scholarship (AMS)  
Leader of the Year, United States Tennis Association

## **GRANTS AND FELLOWSHIPS**

### **Selected: PI**

2017 – 2020

Use of GPM field campaign in-situ cloud measurements to evaluate precipitation retrieval assumptions.

NASA Earth and Space Science Graduate Fellowship  
\$45,000 per year

### **Selected: Collaborator**

2023 – 2026

Advancing understanding of cold cloud and precipitation processes using NASA airborne data and deep learning microphysical retrievals

NASA ROSES '22: Weather and Atmospheric Dynamics Proposal

Main PI: Stephen Nesbitt

### **Submitted**

None at this time

### **Not selected**

Planned for 2024 – 2025

Satellite TRacked Evolution of the Atmosphere with Machine Learning for Imagery Nowcasting Experiments (STREAMLINE)

NOAA FY24 HPCC: Program's Information Technology Incubator

Main PIs: Jaime Daniels and Jason Apke

Planned for 2024 – 2027

Leveraging NASA airborne radar data to inform retrievals of atmospheric moist convection from past, current, and future spaceborne weather radar missions

NASA Early Career Investigator Program in Earth Science

Main PIs: Randy Chase

## **PRESENTATIONS**

### **Invited**

2023

Chase, R. J. (2023): AI/ML for Precipitation: Where Are We and Where Should We Go? Invited abstract for the AGU 2023 Fall meeting. 13 December 2023.

Chase, R. J. (2023): Machine Learning Tutorials for Meteorologists. Invited seminar for Environment and Climate Change Canada seminar series, oral presentation, 5 December 2023.

Chase, R. J. (2023): Machine Learning Tutorials for Meteorologists. Invited seminar for University of North Dakota seminar series, oral presentation, 2 November 2023.

Chase, R. J. (2023): Machine Learning Tutorials for Meteorologists. Invited seminar for NWS Northern Plains SOO Community Meeting, oral presentation, 7 September 2023.

Chase, R. J. (2023): Is Machine Learning for Numerical Weather Prediction a *Symbiotic* Relationship? Invited seminar for IBM weather. 1 August 2023.

2022

Chase, R. J. (2022): Machine Learning Tutorials for Meteorologists. Invited seminar for University of Utah, oral presentation, 5 October 2022.

Chase, R. J., Hoffman, K., Stechman, D., Homeyer, C., Potvin, C. and McGovern A. (2022): Machine Learning Estimation of Storm Updrafts. Invited seminar for the Cooperative Institute for Research in the Atmosphere (CIRA), oral presentation, 13 September 2022.

2021

Chase, R. J. (2021): Machine Learning for Meteorology. Guest Lecture for GPH 413/513: Meteorologic Instrumentation and Measurement at Arizona State University. Oral Presentation. November 2021.

Kirschbaum, D., Fuchs Z. and Chase, R. J. (2021): American Geophysical Union: Precipitation Technical Committee Early Career Scientists Panel. American Geophysical Union Fall Meeting, online, invited panelist December 2021.

2020

Chase, R. J., Nesbitt, S. W., McFarquhar, G. M., Tridon, F. and Leinonen, J. S. (2020): Improving active remote sensing through the use of multiple frequencies, in-situ data and neural networks. Invited oral presentation for department seminar, University of Alabama at Huntsville/National Space Science and Technology Center, Huntsville AL, 19 February 2020.

2018

Chase, R. J. (2018): Behind the camera and beyond the greenscreen: A look at your everyday weather forecast. American Chemical Society (Lake and Ashtabula County section) Invited Presentation, oral presentation, Cleveland, OH, 20 July 2018.

## General

2025

**Chase, R. J.**, Haynes, K., Haynes, J. and Ebert-Uphoff, I. (2025): Score based diffusion nowcasting of GOES imagery. American Meteorological Society Annual Meeting. New Orleans, LA, 12 – 16 January 2025.

Harmala, M. S., **Chase, R. J.**, Marinescu, P. J. and Stechman, D. (2025): Evaluating Machine Learning Updraft Retrieval skill: Convective Storm Case Studies, American Meteorological Society Annual Meeting. New Orleans, LA, 12 – 16 January 2025.

Remmers, C., Dolan, B., Schulte, R., and **Chase, R. J.** (2025): Observing the Relationship between Changes in Reflectivity and Vertical Velocity in Convection. American Meteorological Society Annual Meeting. New Orleans, LA, 12 – 16 January 2025.

Auth, R., **Chase, R. J.**, Freeman, S., Marinescu, P. and van den Heever, S. (2025): Global Distributions and Characteristics of Overshooting Tops. American Meteorological Society Annual Meeting. New Orleans, LA, 12 – 16 January 2025.

Haynes, K., Slocum C., Knaff, J., Musgrave, K., **Chase, R. J.**, Razin, N., and Ebert-Uphoff, Imme (2025): Creating synthetic Passive Microwave Observations Using Deep Learning to Aid Tropical Cyclone Forecasting. American Meteorological Society Annual Meeting. New Orleans, LA, 12 – 16 January 2025.

2024

Haynes, K., **Chase, R. J.**, Slocum, C., Knaff, J., Musgrave, K., Razin, N., and Ebert-Uphoff, I. (2024): Utilizing U-Net and Diffusion Models to Create Synthetic Passive Microwave Imagery. American Geophysical Union Fall Meeting. Washington DC, 9 – 13 December 2024.

Bukowski, J., Saleeby, S., **Chase, R. J.**, Posselt, D., Dolan, B., Grant, L., Leung, G., Marinescu, P., Rasmussen, K., Singh, I., Storer, R., and van den Heever, S. (2024): Sensitivity of Modeled Tropical Anvils to Ice Aggregation. American Geophysical Union Fall Meeting. Washington DC, 9 – 13 December 2024.

Dolan, B., van den Heever, S., Kollias, P., Marinescu, P., Posselt, D., **Chase, R. J.**, Rasmussen, K., Schulte, R., Bukowski, J., Singh, I. and Grant, L. (2024): The NASA INCUS mission and observations of convective mass flux through reflectivity differencing. European Radar Conference. Rome Italy, 9 – 13 September 2024.

2023

**Chase, R. J.**, Dolan, B., Kollias, P., Rasmussen, K. L., Stephens, G. L. and van den Heever, S. C. (2023): GPM KaPR Deep Convection Observations: Insight for Future Spaceborne Radar Missions. American Meteorological Society radar meteorology conference. Minneapolis, MN, oral presentation, 28 August – 01 September 2023.

Dolan, B., Bukowski, J., **Chase, R. J.**, ... and van den Heever, S. C. (2023): Quantitative Analysis of the Delta-t Approach for Estimating Convective Mass Flux.

American Meteorological Society radar meteorology conference. Minneapolis, MN, oral presentation, 28 August – 01 September 2023.

Posselt, D., Storer, R. L., Schulte, R., Marinescu, P. J., **Chase, R. J.**, Tanelli, S., and van den Heever, S. R. (2023): State Dependent Sensitivity of Spaceborne Radar to Ice Cloud Microphysical Assumptions. American Meteorological Society radar meteorology conference. Minneapolis, MN, oral presentation, 28 August – 01 September 2023.

van den Heever, S. C., ... **Chase, R. J.**, ... and Takahashi, H. (2023): Tropical Convection through the lens of the INCUS mission. American Meteorological Society radar meteorology conference. Minneapolis, MN, oral presentation, 28 August – 01 September 2023.

Sherman, Z., ... , **Chase, R. J.**, ... and Gardner S. T. (2023): Effective Visualization of Radar Data for Users Impacted by Color Vision Deficiency. American Meteorological Society radar meteorology conference. Minneapolis, MN, oral presentation, 28 August – 01 September 2023.

**Chase, R. J.**, Harrison, D., Burke, A., Lackmann, G. and McGovern, A. (2023): Machine Learning Tutorials for Meteorologists. American Meteorological Society annual meeting, Denver, CO, oral presentation, 9 – 12 January 2023.

2022

**Chase, R. J.**, Hoffman, K., Stechman, D., Homeyer, C., Potvin, C. and McGovern, A. (2022): Machine learning estimation of storm updrafts. ECMWF–ESA Workshop on Machine Learning for Earth Observation and Prediction. Reading, United Kingdom, poster presentation, 14 – 17 November 2022.

**Chase, R. J.**, Hoffman, K., Stechman, D., Homeyer, C., Potvin, C. and McGovern, A. (2022): Machine learning estimation of storm updrafts. American Meteorological Society severe and local storms conference. Santa Fe, NM, oral presentation, 24 – 27 October 2022.

**Chase, R. J.**, and McGovern A. (2022): Deep Learning Parameter Considerations When Using Radar and Satellite Measurements. American Meteorological Society annual meeting, virtual, oral presentation, 24 – 27 January 2022.

Lopez, D., Nesbitt, S., and **Chase, R. J.** (2022): Generating cloudSat reflectivity using passive microwave brightness temperatures and cGANS. American Meteorological Society annual meeting, virtual, oral presentation, 24 – 27 January 2022.

2021

**Chase, R. J.**, McGovern, A. and Lagerquist, R. (2021): Next hour tornado prediction dual-polarization radar signatures gleaned from deep learning and explainable artificial intelligence. *3rd NOAA Workshop on Leveraging AI in Environmental Sciences*, Virtual, poster presentation, September 2021.



- Chase, R. J.,** Spychalla, L. , Robinson J., McGovern, A., Williams, J. K., Allen, J. and Snook, N. (2021): Near real-time hail forecasts using machine learning and convective allowing models. *3rd NOAA Workshop on Leveraging AI in Environmental Sciences*, Virtual, oral presentation, September 2021.
- 2020 **Chase, R. J.,** Nesbitt, S. W. and McFarquhar, G. M. 2020: Global retrieved snowfall properties using a neural network and GPM-DPR. American Geophysical Union Fall Meeting, Online, oral presentation, December 2020
- Chase, R. J.,** Nesbitt, S. W., McFarquhar, G. M., Tridon, F. and Leinonen, J. S. 2020: Improving active remote sensing through the use of multiple frequencies, in-situ data and neural networks. American Meteorological Society annual meeting, Boston MA, oral presentation, 13 – 16 January 2020.
- 2019 **Chase, R. J.,** Nesbitt, S. W., McFarquhar, G. M., Tridon, F. and Leinonen, J. S. 2019: Improving active remote sensing through the use of multiple frequencies, in-situ data and neural networks. American Geophysical Union Fall Meeting, San Francisco CA, oral presentation, 9 – 13 December 2019
- 2018 **Chase, R. J.,** Borque, P., Finlon, J., Nesbitt, S. W., McFarquhar, G. M. and Dolan, B. 2018: In-situ and radar investigation of snow aggregation in Northwest Midlatitude Cyclones. American Meteorological Society conference on cloud physics and atmospheric radiation, Vancouver, British Columbia, Canada, oral presentation, 8 – 13 July 2018.
- 2017 Leinonen, J., Lebsock, M. D., Tanelli, S., Sy, O. O., Dolan, B., **Chase, R. J.** and Finlon, J. 2017: Triple-frequency radar retrievals of snowfall properties from the OLYMPEX field campaign. American Geophysical Union Fall Meeting, New Orleans, LA, poster presentation, 11 – 15 December 2017.
- Nesbitt, S. W., **Chase, R. J.,** Finlon, J., Borque, P. and McFarquhar, G. 2017: Evaluation of GPM algorithm assumptions using GPM-GV data. Precipitation Measurement Mission Science Team Meeting, San Diego, CA, oral presentation, 16 – 20 October 2017.
- Chase, R. J.,** Nesbitt, S. W., McFarquhar, G. M., Borque, P., Finlon, J., Tanelli, S., and Poellot, M. 2017. Evaluation of triple-frequency retrieval of snowfall properties using coincident airborne in-situ and radar observations collected during OLYMPEX. American Meteorological Society Radar Conference, Chicago, IL, poster presentation, 28 August – 1 September 2017.
- 2016 **Chase, R. J.,** McFarquhar, G. M., Nesbitt, S. W., Borque, P., Poellot, M. R., Heymsfield A. J., and Bansemer, A., 2016: Microphysical Measurements during OLYMPEX. Precipitation Measurement Mission Science Team Meeting, Houston, TX, poster presentation, 24-27 October 2016.

- Chase, R. J.,** Fuentes, J. D., Gerken, T., Wei, D., Schumacher, C., Machado, L. A., Nascimento dos Santos, R., and Springston, S., 2016: Convection and redistribution of tropospheric ozone in central Amazonia. 8<sup>th</sup> Annual Symposium on Aerosol, Cloud and Climate Interactions at the 96<sup>th</sup> AMS annual meeting, New Orleans, LA, poster presentation, January 2016.
- 2015
- Chase, R. J.,** Fuentes, J. D., and Gerken, T., 2015: Downward transport of ozone due to convection near Manaus, Brazil. 14<sup>th</sup> Annual AMS Student Conference, Phoenix, AZ, poster presentation, January 2015.

## **TEACHING EXPERIENCE**

- 2017
- Graduate Teaching Assistant  
ATMS 140: Climate and Global Change  
University of Illinois
- 2014 – 2016
- Mathematics Tutor  
Academic Success Center Tutoring  
SUNY Brockport
- 2015
- Undergraduate Teaching Assistant  
ESC 211 Introduction to Meteorology  
SUNY Brockport

## **SERVICE TO PROFESSION**

### **Volunteer positions**

- 2021 – present
- Associate Editor  
Artificial Intelligence for the Earth Systems (AIES)  
American Meteorology Society
- 2024
- Reviewer  
31<sup>st</sup> Severe and Local Storms Conference  
American Meteorology Society  
October 21<sup>st</sup> – October 25<sup>th</sup>, Virginia Beach Virginia
- 2023
- Topical subcommittee chair (artificial intelligence and machine learning)  
40<sup>th</sup> Radar Conference  
American Meteorology Society

August 28<sup>th</sup> – September 1<sup>st</sup>, Minneapolis Minnesota

2019 – 2021

Scientific and Technological Activities Commission (STAC) Member  
Planned and Inadvertent Weather Modification  
American Meteorology Society

## Panels

2021

Proposal Review Panel Member  
NASA's Research Opportunities in Space and Earth Science (ROSES)

## Reviews

2018 – present

67 total verified reviews

Journals (**total reviews** *journal name (publisher)*)

**17** *Artificial Intelligence for Earth Systems (AMS)*

**10** *Weather and Forecasting (AMS)*

**10** *Journal of Applied Meteorology and Climatology (AMS)*

**5** *Journal of Atmospheric and Oceanic Technology (AMS)*

**4** *Remote Sensing (MDPI)*

**4** *Geophysical Research Letters (AGU)*

**3** *Remote Sensing of the Environment (Elsevier)*

**2** *Atmosphere (MDPI)*

**3** *Atmospheric Measuring Techniques (EGU)*

**3** *Journal of Geophysical Research: Atmosphere (AGU)*

**3** *Monthly Weather Review (AMS)*

**1** *Earth and Space Science (AGU)*

**1** *Education for Chemical Engineers (Science Direct)*

**1** *Quarterly Journal of the Royal Meteorological Society (RMetS)*

**1** *Bulletin of the American Meteorological Society (AMS)*

## Media Coverage

2024

Bult, L. (2024, Feb). Can AI help us predict extreme weather? *Vox*.  
<https://youtu.be/hU4viZzTaRc?si=4pLwBvO4GO8tTOg2>

## EXTRA TRAINING

2021

Pod Member  
Unlearning Racism in Geoscience (URGE)

University of Oklahoma

2015

Sports Leadership Certification  
Student Life: Leadership Development  
SUNY Brockport

## **MENTORING**

### **PhD Committees**

Michael Pletcher

Committee: Jim Steenburgh, Randy Chase, Courtney Strong, Peter Veals

Anticipated Defense: Summer 2025

University of Utah

### **Students**

2024

Miles Harmala (CSU REU)  
Charlie Remmers (CSU REU)

2022

Kayla Hoffman (OU REU)  
Alex Nozka (OU undergraduate intern)  
Lydia Spychalla (OU undergraduate intern)  
Daniel Lopez (UIUC undergraduate intern)

2021

Lydia Spychalla (OU REU)  
Jordan Robinson (OU REU)  
Daniel Lopez (UIUC undergraduate intern)

## **COMPUTER EXPERIENCE/LANGUAGES**

Python (including: xarray, dask, tensorflow, pytorch, sklearn, matplotlib)

Linux/Unix

High Performance Computing (i.e., SLURM/SBATCH)

## **AUXILLARY PROFESSIONAL INTERNET RESOURCES**

Google Scholar

<https://scholar.google.com/citations?user=65CXtA4AAAAJ&hl=en>

ORCID

<https://orcid.org/0000-0002-2606-7612>

Github

<https://github.com/dopplerchase>

Web Of Science

<https://www.webofscience.com/wos/author/record/574217>

Twitter

<https://twitter.com/DopplerChase>

Website

[dopplerchase.github.io](https://dopplerchase.github.io)