Ian C. Cornejo

NSF AGS Postdoctoral Research Fellow · Colorado State University · Fort Collins, Colorado

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EDUCATION

2026	PhD, Atmospheric and Oceanic Sciences, University of Wisconsin–Madison Dissertation: Echoes of Extreme Rainfall: Radar Perspectives of Multiscale Precipitation Controls
2023	MS, Atmospheric and Oceanic Sciences, University of Wisconsin–Madison Thesis: Orographic Controls on Extreme Precipitation associated with a Mei-yu Front
2020	BS, Atmospheric Sciences, University of Illinois Urbana-Champaign
2020	BS, Engineering Physics, University of Illinois Urbana-Champaign

APPOINTMENTS

Aug 2026–present	NSF AGS Postdoctoral Research Fellow, Colorado State University
Jul 2026	Postdoctoral Fellow, Colorado State University
May–Jun 2026	Postdoctoral Fellow, University of Wisconsin–Madison
2023	Graduate Visitor Program, NSF NCAR Earth Observing Laboratory, Remote Sensing Facility, Boulder

FELLOWSHIPS AND GRANTS

Aug 2026–present	AGS-PRF: Profiling Drop Size Distributions across Multiple Remote Sensing Platforms U.S. National Science Foundation, AGS Postdoctoral Research Fellowship, award AGS-2618039

PUBLICATIONS

Peer-reviewed

2026	**Cornejo, I. C.**, A. K. Rowe, M. M. Bell, and W.-Y. Chang, 2026: Modeling rainfall drop size distribution moments using an S-band polarimetric radar in complex terrain. *Q. J. R. Meteorol. Soc.* doi:10.1002/qj.70254
2025	**Cornejo, I. C.**, A. K. Rowe, M. J. Dixon, and U. Romatschke, 2025: Specific Attenuation-Based Rain-Rate Applicability to Varying Rainfall Intensity in Complex Terrain. *J. Atmos. Oceanic Technol.*, 42, 889–907. doi:10.1175/JTECH-D-24-0094.1
2024	**Cornejo, I. C.**, A. K. Rowe, K. L. Rasmussen, and J. C. DeHart, 2024: Orographic Controls on Extreme Precipitation Associated with a Mei-Yu Front. *Mon. Wea. Rev.*, 152(2), 531–551. doi:10.1175/MWR-D-23-0170.1

In review and revision

In revision	**Cornejo, I. C.**, A. K. Rowe, K.-S. Chung, S.-K. Yang, and J. C. DeHart: Leveraging Observations and Ensemble Model Skill to Identify Mesoscale Drivers of Extreme Mei-Yu Rainfall. *J. Geophys. Res. Atmos.*

SOFTWARE AND DATA

2026	EccoPy: open-source Python package for ECCO radar echo classification. doi:10.5281/zenodo.21840860
2025	**Cornejo, I. C.**, P. J. Marinescu, M. M. Bell, K. L. Rasmussen, and C. C. Nam, 2025: Pre-CIP 2021: Parsivel Disdrometer Data. NSF NCAR Earth Observing Laboratory. doi:10.26023/ABMZ-A2Z7-3N14
2023	**Cornejo, I. C.**, K. L. Rasmussen, and C. C. Nam, 2023: PRECIP: PARSIVEL Disdrometer Data. NSF NCAR Earth Observing Laboratory. doi:10.26023/68DF-F1JW-8H04

PRESENTATIONS

Invited talks

2023 Extreme Rainfall in Taiwan: Observations from NCAR's S-Pol Radar during PRECIP/TAHOPE 2022. NCAR Earth Observing Laboratory Seminar Series, Boulder, Colorado.

Conference presentations (first author)

2027 Catching the Drizzle: Validating Complete Profiled Drop Size Distributions from a Snow-Level Radar During TIME-SLICE CO (poster). AMS Annual Meeting, Denver, Colorado.
Cornejo, I. C., B. Dolan, M. M. Bell, and C. Williams

2026 Radar-Derived Insights of Microphysical Processes Using the NSF NCAR S-Pol Radar (poster). NSF NCAR Radar Technology Community Workshop, Boulder, Colorado.
Cornejo, I. C., A. K. Rowe, M. M. Bell, and W.-Y. Chang

2025 Radar-Derived Insights of Microphysical Processes during PRECIP 2022 (poster). AMS 41st International Conference on Radar Meteorology, Toronto, Canada. **1st Place Poster**.
Cornejo, I. C., A. K. Rowe, M. M. Bell, and W.-Y. Chang

2024 Specific Attenuation-based Rain Rate Applicability to the PRECIP/TAHOPE S-Pol Dataset near Complex Terrain (talk). 16th International Conference on Mesoscale Convective Systems (ICMCS), Gyeongju, South Korea. **Outstanding Student Presentation**.
Cornejo, I. C., A. K. Rowe, U. Romatschke, and M. J. Dixon

2024 Microphysical Processes leading to Heavy Mei-Yu Rainfall near Complex Terrain during PRECIP/TAHOPE (poster). 16th International Conference on Mesoscale Convective Systems (ICMCS), Gyeongju, South Korea.
Cornejo, I. C., A. K. Rowe, and M. M. Bell

2023 Validation and Intercomparison of Rain Rate Retrievals using the S-Pol Radar during PRECIP (poster). AMS 40th Conference on Radar Meteorology, Minneapolis, Minnesota.
Cornejo, I. C., A. K. Rowe, U. Romatschke, and M. J. Dixon

2023 Orographic Modifications to Heavy Mei-Yu Rainfall (talk). AMS 20th Conference on Mesoscale Processes, Madison, Wisconsin.
Cornejo, I. C., A. K. Rowe, K. L. Rasmussen, and Y. Zhang

2023 Orographic Controls on Extreme Precipitation associated with a Mei-Yu Front (talk). 15th International Conference on Mesoscale Convective Systems (ICMCS), Fort Collins, Colorado. **Outstanding Student Presentation**.
Cornejo, I. C., A. K. Rowe, and K. L. Rasmussen

2023 LROSE Tools to Estimate Surface Rain Rate (poster). 15th International Conference on Mesoscale Convective Systems (ICMCS), Fort Collins, Colorado.
Cornejo, I. C., B. Javornik, A. K. Rowe, J. C. DeHart, and M. J. Dixon

2022 Mei-yu Frontal Convergence and Heavy Rainfall in Taiwan's Complex Terrain (poster). AMS 20th Conference on Mountain Meteorology, Park City, Utah. **3rd Place Poster**.
Cornejo, I. C., A. K. Rowe, K. L. Rasmussen, and A. D. Nugent

2021 The Influence of Microphysical Processes in Extreme Rain Events Found in Complex Terrain (poster). Midwest Student Conference on Atmospheric Research. **2nd Place Poster**.
Cornejo, I. C., A. K. Rowe, K. L. Rasmussen, and A. D. Nugent

2021 The Influence of Microphysical Processes in Extreme Rain Events Found in Complex Terrain (poster). AMS Annual Meeting, Virtual.
Cornejo, I. C., A. K. Rowe, K. L. Rasmussen, and A. D. Nugent

AWARDS AND HONORS

2025 Wahl Award for Excellence as a Teaching Assistant, UW–Madison Atmospheric and Oceanic Sciences

2025 1st Place Poster, AMS 41st International Conference on Radar Meteorology

2024 Outstanding Student Presentation, 16th International Conference on Mesoscale Convective Systems (ICMCS)

2023 Lettau Award, UW–Madison Atmospheric and Oceanic Sciences

2023 Reid Bryson Scholarship Award, AOSS Community Poster Reception, UW–Madison

2023	Outstanding Student Presentation, 15th International Conference on Mesoscale Convective Systems (ICMCS)
2022	3rd Place Poster, AMS 20th Conference on Mountain Meteorology
2021	First-Year Graduate Student Award, UW–Madison Atmospheric and Oceanic Sciences
2021	2nd Place Poster, Midwest Student Conference on Atmospheric Research

FIELD CAMPAIGNS

2022	PRECIP 2022, Prediction of Rainfall Extremes Campaign in the Pacific, Taiwan and southern Japan Participant and science team member
2021	Pre-CIP 2021, Preparatory Rockies Experiment for the Campaign in the Pacific, Colorado Participant and science team member

WORKSHOPS AND MEETINGS

Nov 2026	INCUS Science Team Meeting, Fort Collins, Colorado
Mar 2026	NSF NCAR Radar Technology Community Workshop, Boulder, Colorado
May 2024	Innovations in Open Science (IOS) Planning Workshop: Community Expectations for a Geoscience Data Commons, NSF NCAR, Boulder, Colorado

TEACHING AND MENTORING

Spring 2023, 2024, 2025	Teaching Assistant, Synoptic Lab II, Mesoscale Meteorology (AOS 453), University of Wisconsin–Madison Research Experience for Undergraduates (REU) mentor: Night Zawlocki, Xander Turner, Ivan Sloan

SERVICE

Science leadership

Session chair, AMS 41st International Conference on Radar Meteorology (2025)
Session chair, AMS 40th Conference on Radar Meteorology (2023)
Session chair, AMS 20th Conference on Mesoscale Processes (2023)
Student assistant, AMS 20th Conference on Mesoscale Processes (2023)
Student assistant, AMS Collective Madison Meeting (2022)

Journal reviewer

Monthly Weather Review (2024–present)
Journal of Atmospheric and Oceanic Technology (2025–present)
Journal of Geophysical Research: Atmospheres (2026–present)
Scientific Reports (2026–present)
Terrestrial, Atmospheric and Oceanic Sciences (2026–present)

University of Wisconsin–Madison

Member, Colloquium Committee (2025–2026)
Graduate student representative, Curriculum Board (2023–2024)
Graduate student representative, Graduate Program Board (2023–2024)
Facilitator, High Impact Weather Group (2023)
STORM REU applicant reviewer (2023, 2024, 2026)

SKILLS

Programming	Python (proficient); MATLAB, NCL, shell scripting (intermediate); Julia, C++, Fortran (beginner)
Models	Weather Research and Forecasting (WRF) Model