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Education

- 2017–2020 **Ph.D., Atmospheric Science** (3.91/4.0), University of Washington
Dissertation: *A synthesis of observations of aerosol-cloud interactions over the pristine, biologically active Southern Ocean and the implications for global climate model predictions*
Supervisors: Robert Wood & Christopher S. Bretherton
- 2014–2017 **M.S., Atmospheric Science** (3.90/4.0), University of Washington (UW)
Thesis: *Identifying meteorological controls on open and closed mesoscale cellular convection associated with marine cold air outbreaks*
Supervisor: Robert Wood
- 2009–2014 **B.S., Physics with Atmospheric Option and Mathematics Minor** (4.0/4.0), New Mexico Institute of Mining and Technology (NMIMT)

Professional Experience

- 2024 – Present **Research Scientist II**
Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado Boulder & NOAA Chemical Sciences Laboratory (R/CSL9)
- 2022 – 2024 **Research Scientist I**
CIRES, University of Colorado Boulder & NOAA CSL (R/CSL9)
- 2020 – 2022 **NOAA Climate and Global Change Postdoctoral Fellow**
Mentor: Paquita Zuidema, University of Miami, Rosenstiel School
- Summer 2020 **Postdoctoral Researcher**
Mentors: Robert Wood & Christopher S. Bretherton, UW
- 2014 – 2020 **Graduate Research Assistant**
Supervisors: Robert Wood & Christopher S. Bretherton (2017 – 2020), UW
- 2012 – 2013 **Undergraduate Research Student**
Supervisors: Robert Wood & Andreas Muhlbauer, JISAO (Joint Institute for the Study of the Atmosphere and Ocean), UW
- Summer 2012 **Undergraduate Intern**
Supervisors: Robert Wood & Andreas Muhlbauer, JISAO Summer Research Experience for Undergraduates, UW

Key Metrics

Publications: h-index: 13, i10-index: 17, citations: 810, peer-reviewed: 27, in-preparation: 5, first authored: 7
Select Honors: AMS Graduate Fellowship (2014), NSF Graduate Research Fellowship (2014), Desert Research Institute Peter B. Wagner Memorial Award for Women in Atmospheric Sciences (2018), NOAA Climate and Global Change Postdoctoral Fellowship (2020), Co-chair Gordon Research Seminar: Radiation and Climate (2023 for 2025)
Presentations: invited: 10, seminars: 7, contributed: 45
Teaching and Mentoring: courses: 3, guest lectures: 4, mentees: 1
Field Campaign Involvement: CSET (2015), SOCRATES (2018), ATOMIC/EUREC⁴A (2020)

Research Interests

Aerosol, cloud, and precipitation processes; aerosol-cloud interactions and aerosol forcing; cloud radiative effects; low cloud feedback; mesoscale cloud organizational structures; environmental controls on boundary-layer clouds, including from circulation changes driven by atmospheric composition changes; socioeconomic policy impacts on the climate system; influences of aerosol-meteorology co-variability; Southern Ocean and other pristine aerosol environments; observational constraints on climate models and large-eddy simulations

Selected Honors and Awards

- International Space Science Institute (ISSI) International Team Proposal: *Constraining Trade-Cumuli Feedback by Means of Process Understanding*, Team Leads: G. George and H. Schulz, Team Members: X. Chen, L. Denby, R. Eastman, E. Fons, P. Garg, M. Janssens, I. Kruse, I. L. McCoy, and R. Vogel, Support for 2, Week-long Team Meetings at ISSI in Bern, Switzerland, 05/2023 - 05/2025
- National Science Foundation (NSF) Standard Grant Proposal (PD 06-5740 Climate and Large-Scale Dynamics): *Precipitation and Coalescence Scavenging in Shallow Southern Ocean Clouds*, R. Marchand (PI), R. Wood (co-PI), L. Kang (co-I), and I. L. McCoy (unfunded co-I), \$533,419, AGS-2124993, 10/01/2021 - 09/30/2024
- Department of Energy Atmospheric System Research (DOE-ASR) Proposal (DE-FOA-0002391): *Insights from ARM observations into aerosol processing and transport by extratropical cyclones and aerosol effects on cyclone clouds*, H. Gordon (PI), D. T. McCoy (co-PI), I. L. McCoy (unfunded co-I), and R. Wood (unfunded co-I), \$609,109, DE-SC002227, 09/01/2021 - 08/31/2024
- Virtual Outstanding Student and PhD candidate Presentation (vOSPP) Award, EGU General Assembly, 2021
- National Oceanic and Atmospheric Administration (NOAA) Climate and Global Change Postdoctoral Fellowship Proposal: *Understanding the role of cloud morphologies in low cloud feedbacks*, 2020, I. L. McCoy (PI) with P. Zuidema (unfunded, Mentor), \$162,525, administered by UCAR's Cooperative Programs for the Advancement of Earth System Science (CPAESS) under award NA18NWS4620043B, 11/30/2020 - 11/29/2022
- Outstanding Student Presentation Award, AGU Fall Meeting, 2019
- Outstanding Student Presentation Award, AGU Fall Meeting, 2018
- Desert Research Institute (DRI) Peter B. Wagner Memorial Award for Women in Atmospheric Sciences for McCoy et al. (2017), Support for visiting DRI to give invited seminar and \$1,500, 2018
- Peter Hobbs Student Prize for Best Oral Presentation at the AMS 15th Conference on Cloud Physics, \$200, 2018
- Best Student Poster Presentation with Co-Author Johannes Mohrmann at the AMS Annual Meeting 9th Symposium on Aerosol-Cloud-Climate Interactions, \$150 each, 2017
- NSF Graduate Research Fellowship Proposal: *Identifying meteorological controls on open and closed mesoscale cellular convection and understanding their response to climate change*, I. L. McCoy (PI) with R. Wood (unfunded, Academic and Research Advisor), Supporting 3 years of graduate school over 5 years at UW, 05/2014 - 05/2019
- AMS Graduate Fellowship, I. L. McCoy (PI), Supporting 2014/2015 academic year at UW, 09/2014 - 06/2015
- Brown Award: *To the graduating B.S. student judged by the faculty to be highest in scholarship, conduct, and leadership*, \$1,000, NMIMT, 2014
- Alumni Scholastic Award for Highest Graduating Departmental GPA, NMIMT, 2014
- Albert G. Petschek Award for Excellence in Physics, NMIMT Physics Departmental Award - *Senior Level*, 2014
- Abraham and Esther Brook Award for Excellence in Physics, NMIMT Physics Departmental Award - *Junior Level*, 2013

Publications

Peer-Reviewed

- [1] I. L. McCoy, M. C. Wyant, P. N. Blossey, C. S. Bretherton, and R. Wood. Aitken mode aerosols buffer decoupled mid-latitude boundary layer clouds against precipitation depletion. *Journal of Geophysical Research: Atmospheres*, 129(e2023JD039572), 2024. doi: <https://doi.org/10.1029/2023JD039572>

- [2] K. Selleagri, R. Simó, B. Wang, P. A. Alpert, K. Altieri, S. Burrows, F. E. Hopkins, I. Koren, I. L. McCoy, J. Ovadnevaite, M. Salter, and J. Schmale. Interconnections between marine ecosystems, aerosols and clouds: recent findings and perspectives. *In press (Elementa)*, 2024
- [3] R. Wood, M. Vogt, and I. L. McCoy. Aggressive aerosol mitigation policies reduce chances of keeping global warming to below 2C. *In press (Earth’s Future)*, 2024. doi: 10.22541/au.169953732.20309036/v1
- [4] C. Song, D. T. McCoy, T. Eidhammer, A. Gettelman, I. L. McCoy, D. Watson-Parris, C. J. Wall, G. Elsaesser, and R. Wood. Buffering of Aerosol-Cloud Adjustments by Coupling Between Radiative Susceptibility and Precipitation Efficiency. *Geophysical Research Letters*, 51(11):e2024GL108663, 2024. doi: <https://doi.org/10.1029/2024GL108663>
- [5] R. Eastman, I. L. McCoy, H. Schulz, and R. Wood. A survey of radiative and physical properties of North Atlantic mesoscale cloud morphologies from multiple identification methodologies. *Atmospheric Chemistry and Physics*, 24(11):6613–6634, 2024. doi: 10.5194/acp-24-6613-2024
- [6] B. Wolding, A. Rydbeck, J. Dias, F. Ahmed, M. Gehne, G. Kiladis, E. M. R. Dellaripa, X. Chen, and I. L. McCoy. Atmosphere–Ocean Coupled Energy Budgets of Tropical Convective Discharge–Recharge Cycles. *Journal of the Atmospheric Sciences*, 81(1):3–29, Jan. 2024. ISSN 0022-4928, 1520-0469. doi: 10.1175/JAS-D-23-0061.1
- [7] I. L. McCoy, D. T. McCoy, R. Wood, P. Zuidema, and F. A. Bender. The Role of Mesoscale Cloud Morphology in the Shortwave Cloud Feedback. *Geophysical Research Letters*, 50(2), Jan. 2023. ISSN 0094-8276, 1944-8007. doi: 10.1029/2022GL101042
- [8] C. J. Wall, J. R. Norris, A. Possner, D. T. McCoy, I. L. McCoy, and N. J. Lutsko. Assessing effective radiative forcing from aerosol–cloud interactions over the global ocean. *Proceedings of the National Academy of Sciences*, 119(46):e2210481119, 2022. doi: 10.1073/pnas.2210481119
- [9] R. Eastman, I. L. McCoy, and R. Wood. Wind, Rain, and the Closed to Open Cell Transition in Subtropical Marine Stratocumulus. *Journal of Geophysical Research: Atmospheres*, 127(20), Oct. 2022. ISSN 2169-897X, 2169-8996. doi: 10.1029/2022JD036795
- [10] J. Danker, O. Sourdeval, I. L. McCoy, R. Wood, and A. Possner. Exploring relations between cloud morphology, cloud phase, and cloud radiative properties in Southern Ocean’s stratocumulus clouds. *Atmospheric Chemistry and Physics*, 22(15):10247–10265, Aug. 2022. ISSN 1680-7324. doi: 10.5194/acp-22-10247-2022
- [11] M. C. Wyant, C. S. Bretherton, R. Wood, P. N. Blossey, and I. L. McCoy. High Free-Tropospheric Aitken-Mode Aerosol Concentrations Buffer Cloud Droplet Concentrations in Large-Eddy Simulations of Precipitating Stratocumulus. *Journal of Advances in Modeling Earth Systems*, 14(6), June 2022. ISSN 1942-2466, 1942-2466. doi: 10.1029/2021MS002930
- [12] I. L. McCoy, M. A. Vogt, and R. Wood. Absorbing Aerosol Choices Influences Precipitation Changes Across Future Scenarios. *Geophysical Research Letters*, 49(8), 2022. ISSN 0094-8276 1944-8007. doi: 10.1029/2022gl097717
- [13] P. K. Quinn, T. S. Bates, D. J. Coffman, L. M. Upchurch, J. E. Johnson, A. Brewer, S. Baidar, I. L. McCoy, and P. Zuidema. Wintertime Observations of Tropical Northwest Atlantic Aerosol Properties During ATOMIC: Varying Mixtures of Dust and Biomass Burning. *Journal of Geophysical Research: Atmospheres*, 127(8), 2022. ISSN 2169-897X 2169-8996. doi: 10.1029/2021jd036253
- [14] L. Kang, R. T. Marchand, R. Wood, and I. L. McCoy. Coalescence Scavenging Drives Droplet Number Concentration in Southern Ocean Low Clouds. *Geophysical Research Letters*, 49(7), 2022. ISSN 0094-8276 1944-8007. doi: 10.1029/2022gl097819
- [15] M. W. Christensen, A. Gettelman, J. Cermak, G. Dagan, M. Diamond, A. Douglas, G. Feingold, F. Glassmeier, T. Goren, D. P. Grosvenor, E. Gryspeerd, R. Kahn, Z. Li, P. L. Ma, F. Malavelle, I. L. McCoy, D. T. McCoy, G. McFarquhar, J. Mülmenstädt, S. Pal, A. Possner, A. Povey, J. Quaas, D. Rosenfeld, A. Schmidt, R. Schrödner, A. Sorooshian, P. Stier, V. Toll, D. Watson-Parris, R. Wood, M. Yang, and T. Yuan. Opportunistic experiments to constrain aerosol effective radiative forcing. *Atmospheric Chemistry and Physics*, 22(1):641–674, 2022. ISSN 1680-7324. doi: 10.5194/acp-22-641-2022
- [16] Y. Hu, X. Lu, P.-W. Zhai, C. A. Hostetler, J. W. Hair, B. Cairns, W. Sun, S. Stammes, A. Omar, R. Baize, G. Videen, J. Mace, D. T. McCoy, I. L. McCoy, and R. Wood. Liquid Phase Cloud Microphysical Property Estimates From CALIPSO Measurements. *Frontiers in Remote Sensing*, 2, 2021. ISSN 2673-6187. doi: 10.3389/frsen.2021.724615

- [17] R. Eastman, I. L. McCoy, and R. Wood. Environmental and Internal Controls on Lagrangian Transitions from Closed Cell Mesoscale Cellular Convection over Subtropical Oceans. *Journal of the Atmospheric Sciences*, 78(8): 2367–2383, Aug. 2021. ISSN 0022-4928. doi: 10.1175/Jas-D-20-0277.1
- [18] X. Zhou, C. S. Bretherton, R. Eastman, I. L. McCoy, and R. Wood. Wavelet Analysis of Properties of Marine Boundary Layer Mesoscale Cells Observed From AMSR-E. *Journal of Geophysical Research: Atmospheres*, 126(14), 2021. ISSN 2169-897X 2169-8996. doi: 10.1029/2021jd034666
- [19] I. L. McCoy, C. S. Bretherton, R. Wood, C. H. Twohy, A. Gettelman, C. G. Bardeen, and D. W. Toohey. Influences of Recent Particle Formation on Southern Ocean Aerosol Variability and Low Cloud Properties. *Journal of Geophysical Research-Atmospheres*, 126(8), Apr. 2021. ISSN 2169-897x. doi: ARTNe2020JD03352910.1029/2020JD033529
- [20] X. Zhou, R. Atlas, I. L. McCoy, C. S. Bretherton, C. Bardeen, A. Gettelman, P. Lin, and Y. Ming. Evaluation of Cloud and Precipitation Simulations in CAM6 and AM4 Using Observations Over the Southern Ocean. *Earth and Space Science*, 8(2), 2021. ISSN 2333-5084 2333-5084. doi: 10.1029/2020ea001241
- [21] G. Zheng, Y. Wang, R. Wood, M. P. Jensen, C. Kuang, I. L. McCoy, A. Matthews, F. Mei, J. M. Tomlinson, J. E. Shilling, M. A. Zawadowicz, E. Crosbie, R. Moore, L. Ziemba, M. O. Andreae, and J. Wang. New particle formation in the remote marine boundary layer. *Nat Commun*, 12(1):527, Jan. 2021. ISSN 2041-1723 (Electronic) 2041-1723 (Linking). doi: 10.1038/s41467-020-20773-1
- [22] G. M. McFarquhar, C. Bretherton, R. Marchand, A. Protat, P. J. DeMott, S. P. Alexander, G. C. Roberts, C. H. Twohy, D. Toohey, S. Siems, Y. Huang, R. Wood, R. M. Rauber, S. Lasher-Trapp, J. Jensen, J. Stith, J. Mace, J. Um, E. Järvinen, M. Schnaiter, A. Gettelman, K. J. Sanchez, C. S. McCluskey, L. M. Russell, I. L. McCoy, R. Atlas, C. G. Bardeen, K. A. Moore, T. C. J. Hill, R. S. Humphries, M. D. Keywood, Z. Ristovski, L. Cravigan, R. Schofield, C. Fairall, M. D. Mallet, S. M. Kreidenweis, B. Rainwater, J. D’Alessandro, Y. Wang, W. Wu, G. Saliba, E. J. T. Levin, S. Ding, F. Lang, S. C. H. Truong, C. Wolff, J. Haggerty, M. J. Harvey, A. Klekociuk, and A. McDonald. Observations of clouds, aerosols, precipitation, and surface radiation over the Southern Ocean: An overview of CAPRICORN, MARCUS, MICRE and SOCRATES. *Bulletin of the American Meteorological Society*, pages 1–92, Nov. 2020. ISSN 0003-0007 1520-0477. doi: 10.1175/bams-d-20-0132.1
- [23] I. L. McCoy, D. T. McCoy, R. Wood, L. Regayre, D. Watson-Parris, D. P. Grosvenor, J. P. Mulcahy, Y. Hu, F. A. Bender, P. R. Field, K. S. Carslaw, and H. Gordon. The hemispheric contrast in cloud microphysical properties constrains aerosol forcing. *Proceedings of the National Academy of Sciences*, 117(32):18998–19006, Aug. 2020. ISSN 1091-6490 (Electronic) 0027-8424 (Linking). doi: 10.1073/pnas.1922502117
- [24] J. Mohrmann, C. S. Bretherton, I. L. McCoy, J. McGibbon, R. Wood, V. Ghate, B. Albrecht, M. Sarkar, P. Zuidema, and R. Palikonda. Lagrangian Evolution of the Northeast Pacific Marine Boundary Layer Structure and Cloud during CSET. *Monthly Weather Review*, 147(12):4681–4700, 2019. doi: 10.1175/mwr-d-19-0053.1
- [25] C. S. Bretherton, I. L. McCoy, J. Mohrmann, R. Wood, V. Ghate, A. Gettelman, C. G. Bardeen, B. A. Albrecht, and P. Zuidema. Cloud, Aerosol, and Boundary Layer Structure across the Northeast Pacific Stratocumulus? Cumulus Transition as Observed during CSET. *Monthly Weather Review*, 147(6):2083–2103, June 2019. ISSN 0027-0644. doi: 10.1175/mwr-d-18-0281.1
- [26] I. L. McCoy, R. Wood, and J. K. Fletcher. Identifying Meteorological Controls on Open and Closed Mesoscale Cellular Convection Associated with Marine Cold Air Outbreaks. *Journal of Geophysical Research-Atmospheres*, 122(21):11678–11702, Nov. 2017. ISSN 2169-897x. doi: 10.1002/2017jd027031
- [27] A. Muhlbauer, I. L. McCoy, and R. Wood. Climatology of stratocumulus cloud morphologies: microphysical properties and radiative effects. *Atmospheric Chemistry and Physics*, 14(13):6695–6716, 2014. ISSN 1680-7324. doi: 10.5194/acp-14-6695-2014

In Preparation

- [1] I. L. McCoy, S. Baidar, P. Zuidema, W. Angevine, J. Kazil, A. Brewer, and G. Feingold. Dynamic Efficiency of Mesoscale Organized Trade Wind Cumulus. *In prep*
- [2] J. Kazil, I. L. McCoy, P. Narenpitak, T. Yamaguchi, and G. Feingold. Trade cumulus organization and the cloud response to aerosol in present and future climates. *In prep*
- [3] R. Eastman, I. L. McCoy, P. Zuidema, and H. Schulz. Increased Stratiform Clouds Observed by Caribbean Surface Cloud Observations. *In prep (Geophysical Research Letters)*

- [4] B. Wolding, I. L. McCoy, and H. Schulz. Shallow Cloud Contributions to Tropical Energy Discharge-Recharge Cycles. *In prep*
- [5] A. Mikkelsen, D. T. McCoy, T. Eidhammer, A. Gettelman, C. Song, N. D. Gordon, and I. L. McCoy. Constraining Aerosol-Cloud Adjustments with Surface Observations. *In prep*

Presentations

- [1] Telluride Science and Innovation Center Workshop: Aerosols and Clouds - Connections from the Laboratory to the Field to the Globe (**Invited**, Oral, Telluride, CO, 2024)
- [2] NASA Goddard Space Flight Center Climate and Radiation Laboratory Seminar (**Invited**, Oral, Online, 2024)
- [3] AGU Fall Meeting (Poster, Online and San Francisco, CA, 2023)
- [4] 3rd Workshop on Cloud Organisation and Precipitation Extremes (Oral, Online and Trieste, Italy, 2023)
- [5] International Space Science Institute International Team Workshop I (Oral, ISSI, Bern, Switzerland, 2023)
- [6] Gordon Research Conference on Radiation and Climate (**Invited**, Oral, Bates College, Lewiston ME, 2023)
- [7] Gordon Research Seminar on Radiation and Climate (Discussion Leader, Poster, Bates College, Lewiston ME, 2023)
- [8] Aerosols, Clouds, Precipitation, and Climate (ACPC) Workshop (Oral, Online and Houston TX, 2023)
- [9] EGU General Assembly (Poster, Online and Vienna, Austria, 2023)
- [10] AMS 103rd Annual Meeting (Oral, Denver CO, 2023)
- [11] AMS 103rd Annual Meeting (Poster, Denver CO, 2023)
- [12] AGU Fall Meeting (Poster, Chicago IL, 2022)
- [13] AMS Collective Madison Meeting (Poster, Madison WI, 2022)
- [14] 3rd Pan-GASS (Global Atmospheric System Studies) Meeting, Understanding and Modeling Atmospheric Processes (Oral, Monterey CA, 2022)
- [15] Cloud Feedback Model Inter-comparison Project (CFMIP) Meeting (Oral, Seattle WA, 2022)
- [16] NOAA Climate and Global Change 15th Summer Institute (Oral, Steamboat Springs CO, 2022)
- [17] EGU General Assembly (Oral, Online, 2022)
- [18] 2nd Workshop on Spatial Organisation of Convection, Clouds and Precipitation (Poster, presented by P. Zuidema as unable to attend in person, Utrecht, Netherlands, 2022)
- [19] EUREC⁴A/ATOMIC Two-Year Anniversary Celebration (Oral, Online, 2022)
- [20] AMS 102nd Annual Meeting (**Invited**, Oral, Online, 2022)
- [21] AMS 102nd Annual Meeting (Oral, Online, 2022)
- [22] High Latitude Clouds Virtual Meeting (**Invited**, Oral, Online, 2021)
- [23] Aerosols, Clouds, Precipitation, and Climate (ACPC) Workshop (Oral, Online, 2021)
- [24] University of Miami Rosenstiel School of Marine and Atmospheric Science Departmental Seminar (Oral, *Seminar*, Online, 2021)
- [25] Workshop on Spatial Organisation of Convection, Clouds and Precipitation (Poster, Online, 2021)
- [26] EGU General Assembly (**Invited**, Oral, Online, 2021)
- [27] EGU General Assembly (Poster, Online, 2021)
- [28] EUREC⁴A Symposium (Oral, Online, 2021)
- [29] AGU Fall Meeting (**Invited**, Poster, Online, 2020)

- [30] AGU Fall Meeting (Poster, Online, 2020)
- [31] ECS and Cloud Feedback Virtual Symposia (**Invited**, Oral, Online, 2020)
- [32] UW Atmospheric Sciences Departmental Atmospheric Chemistry and Physics Seminar - PhD Defense (Oral/Exam, *Seminar*, UW, Seattle WA, 2020)
- [33] AGU Fall Meeting (**Invited**, Oral, San Francisco CA, 2019)
- [34] AGU Fall Meeting (Poster, San Francisco CA, 2019)
- [35] UW Atmospheric Sciences Departmental Atmospheric Chemistry and Physics Seminar (Oral, *Seminar*, UW, Seattle WA, 2019)
- [36] Cloud Feedback Model Inter-comparison Project (CFMIP) Meeting (Oral, Mykonos, Greece, 2019)
- [37] AeroCom/Aerosat Meeting (Oral, Barcelona, Spain, 2019)
- [38] UW Atmospheric Sciences Departmental Atmospheric Chemistry and Physics Seminar (Oral, *Seminar*, UW, Seattle WA, 2019)
- [39] Understanding Clouds and Precipitation (Poster, Berlin, Germany, 2019)
- [40] AGU Fall Meeting (Oral, Washington D. C., 2018)
- [41] Southern Ocean Atmospheric Research Science Team Meeting (Oral, NCAR, Boulder CO, 2018)
- [42] UW Program on Climate Change Summer Institute (Poster, Friday Harbor Labs, San Juan Island WA, 2018)
- [43] Desert Research Institute (DRI) Peter B. Wagner Memorial Award Lecture (**Invited**, Oral, *Seminar*, Reno NV, 2018)
- [44] AMS 15th Conference on Cloud Physics (Oral, Vancouver, B.C. Canada, 2018)
- [45] AMS 15th Conference on Cloud Physics (Poster, Vancouver, B.C. Canada, 2018)
- [46] UW Atmospheric Sciences Departmental Generals Exam for PhD candidacy (Oral/Exam, UW, Seattle WA, 2017)
- [47] Jet Propulsion Laboratory Center for Climate Sciences and Keck Institute for Space Studies Summer School (Oral, California Institute of Technology, Pasadena CA, 2017)
- [48] Gordon Research Conference and Seminar on Radiation and Climate (Poster, Bates College, Lewiston ME, 2017)
- [49] Program on Climate Change Inaugural Spring Symposium (Oral/Pecha Kucha, UW, Seattle WA, 2017)
- [50] APS March Meeting (Oral, New Orleans LO, 2017)
- [51] UW Atmospheric Sciences Departmental Atmospheric Chemistry and Physics Seminar - Committee of Graduate Studies Masters Qualifier (Oral/Exam, *Seminar*, UW, Seattle WA, 2017)
- [52] AGU Fall Meeting (Oral, San Francisco CA, 2016)
- [53] Graduate Climate Conference (Poster, UW, Pack Forest WA, 2016)
- [54] International Conference on Clouds and Precipitation (Oral, Manchester UK, 2016)
- [55] UW Atmospheric Sciences Departmental First Year Qualifier (Oral/Exam, UW, Seattle WA, 2015)
- [56] Gordon Research Conference and Seminar on Radiation and Climate (Poster, Bates College, Lewiston ME, 2015)
- [57] Clouds and the Earth's Radiant Energy System (CERES) Science Team Meeting (Oral, UW, Seattle WA, 2015)
- [58] American Physical Society (APS) March Meeting (Poster, Baltimore MD, 2013)
- [59] AMS 12th Annual Student Conference (Poster, Austin TX, 2013)
- [60] APS Four-Corners Meeting (Poster, Socorro NM, 2012)
- [61] JISAO REU Presentation to UW Community (Poster, Seattle WA, 2012)

Professional Activities, Service, and Leadership Roles

Fieldwork and Other Scientific Training

- Community Earth System Model Tutorial, NCAR, Online, 08/03-07/2020
- Joint Campaign: NOAA ATOMIC (*The Atlantic Tradewind Ocean–Atmosphere Mesoscale Interaction Campaign*) and European EUREC⁴A (*EIucidating the Role of Clouds–Circulation Coupling in ClimAte*)
 - Campaign: 01-02/2020 based out of Bridgetown, Barbados, Caribbean. In-field experience 01/28-02/04/2020.
 - Sites: <https://psl.noaa.gov/atomic/> and <https://eurec4a.eu>
 - Student observer during field campaign including attending symposium (*From BOMEX to EUREC⁴A*, 01/31-02/02/2020, CIMH, Barbados) in Bridgetown, Barbados.
 - Utilizing campaign *in situ* and satellite observations during postdoc and at CIRES and NOAA CSL.
- NSF Field Program: SOCRATES (*Southern Ocean Cloud Radiation Aerosol Transport Experimental Study*)
 - Campaign: 01/15-02/26/2018 based out of Hobart, Tasmania, Australia. In-field experience 02/02-02/26/2018.
 - Site: https://www.eol.ucar.edu/field_projects/socrates
 - Active participant including acting as ground scientist, flying as mission scientist, and assisting in mission planning during daily weather briefings.
 - Utilized campaign *in situ* observations and modeling during PhD.
- Jet Propulsion Laboratory Center for Climate Sciences and Keck Institute for Space Studies Summer School, *Using satellite observations to advance climate models*, California Institute of Technology, Pasadena CA, 08/21-25/2017
- NSF Field Program: CSET (*Cloud System Evolution in the Trades*)
 - Campaign: 07/01-08/15/2015 based out of UW, Seattle WA, USA.
 - Site: https://www.eol.ucar.edu/field_projects/cset
 - Student observer during campaign including attending flight planning sessions and analyzing preliminary data.
 - Utilized campaign *in situ* and satellite observations and modeling during PhD.

Mentoring

- Mentor/research co-supervisor for early career scientist (completed her Atmospheric Science and Environmental Engineering dual B.S. at UW in 06/2022 and Natural Resources M.S. at Virginia Tech in 12/2023), 2019-2024
- Founding member and organizer of UW Atmospheric Sciences Undergraduate-Graduate Social Mentoring Program, UW, Seattle WA, 2015-2020

Outreach and Justice, Equity, Diversity, and Inclusion Efforts

- CIRES Implicit Bias in the Workplace Training, CIRES and NOAA CSL, Boulder, CO, 04/2024
- Member of Working Group for Equity and Inclusion, CIRES and NOAA CSL, Boulder, CO, 2023-
- Co-organized community events with the AMS Board on Representation, Accessibility, Inclusion, and Diversity (BRAID) Coriolis Committee for: the Coriolis Seminar Series (Online, 2022), the AMS Collective Madison Meeting (Madison WI, 2022), and the AMS Annual Meeting (Denver CO, 2023).
- 500 Women Scientists Ally-ship Skill Building Workshop, Online, 2022
- Member of UW Atmospheric Sciences Diversity and Inclusion Group, UW, Seattle WA, 2015-2020
- Member of UW Atmospheric Sciences Departmental Outreach Group, UW, Seattle WA, 2015-2019
- Member, Secretary (2011), and Vice-President (2012-2013) of the Society for Physics Students NMIMT Chapter, NMIMT, Socorro NM, 2010-2013

Academic Teaching

- Guest lecturer for *Climate System Physics*, Geeta Persad's graduate course at University of Texas at Austin, 10/2021 & 10/2023
- Co-organizer and course session leader for *Special Problems In Meteorology/Climatology: Justice and Equity in Academia and Beyond*, UW, 09–12/2021
- Guest lecturer for *Exploring the Atmospheric Sciences*, departmental undergraduate survey course, UW, 04/2019
- Guest lecturer for *The Science of Climate*, Dennis Hartmann's undergraduate course, UW, 04/2016
- Graduate teaching assistant for *Global Warming* under Dargan Frierson, UW, 09–12/2015
- Undergraduate learning coach (teaching assistant and peer mentor) for *Introduction to Weather and Climate* under Sharon Sessions, NMIMT, 01–05/2012

Conferences and Conference Sessions Organized

- Co-chair (elected), *Gordon Research Seminar: Radiation and Climate*, Conference Organizing including Oral and Poster Sessions and Early-Career Scientist Enrichment Opportunities, 2025 Gordon Research Conference and Seminar: Radiation and Climate
- Co-convener and co-chair, *Mesoscale Cloud Organization - The Role of Meteorology and Aerosols*, Oral and Poster Sessions, 2023-2025 AMS Annual Meeting
- Lead convener and co-chair, *Lagrangian and Climatological Transitions of Boundary Layer Clouds*, Oral and Poster Sessions, 2022 AMS Collective Madison Meeting
- Co-organizer and co-chair, *EUREC⁴A/ATOMIC Two-Year Anniversary Celebration*, Oral Online Sessions, 2022
- Co-convener and co-chair, *Atmospheric and Oceanic Processes Governing the Trade Wind Regions*, Oral and Poster Sessions, 2021 AGU Fall Meeting
- Co-convener and co-chair, *Advancing understanding of the coupling between clouds, convection, and circulation*, vPICO, Oral, and Poster Sessions, 2021-2023 EGU General Assemblies
- Lead convener (2021 - 2022), co-convener (2020 & 2023), and co-chair, *Lagrangian and Climatological Transitions of Warm Boundary Layer Clouds*, Oral and Poster Sessions, 2020-2023 AGU Fall Meetings
- Co-chair, *Boundary Layer Stratiform Clouds*, Oral Session, 2018 AMS 15th Conference on Cloud Physics

Committee Service

- AMS BRAID Coriolis Committee: Volunteer (2022-2023)
- AMS Committee on Cloud Physics: Student (2019-2021) and Full (2021-2024) Member
- APS Topical Group on the Physics of Climate: Member at Large (2018-2020)

Journal and Proposal Reviewer

Atmospheric Chemistry and Physics
AGU Advances
Earth Systems Science Data
Geophysical Research Letters
Journal of Advances in Modeling Earth Systems
Journal of the Atmospheric Sciences
Journal of Climate
Nature Communications
npj Climate and Atmospheric Science
NOAA Proposal Panel
Quarterly Journal of the Royal Meteorological Society

Professional Memberships

American Association for the Advancement of Science
American Geophysical Union
American Meteorological Society
Sigma Pi Sigma Honor Society