Xiaoli Zhou

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APPOINTMENTS & EDUCATION

NOAA/CIRES: Chemical Sciences Laboratory, R/CSL9; Cloud, Aerosol, & Climate group (Boulder, CO) — 2020-PRESENT
Research Associate (Research Scientist II)

University of Washington: Department of Atmospheric Sciences (Seattle, WA) — 2017-2020
Postdoctoral Research Associate
Mentor: Christopher S. Bretherton

McGill University (Montréal, Canada**):**
Ph.D., Atmospheric & Oceanic Sciences — 2017
Thesis title: Microphysical-Macrophysical Interactions in Marine Stratocumulus
M.S., Atmospheric & Oceanic Sciences — 2014
Thesis title: Clouds, Precipitation and Marine Boundary Layer Structure during the MAGIC field Campaign
Supervisor: Pavlos Kollias

Nanjing Univ. of Information Science and Technology (NUIST; Nanjing, China):
B.S., Atmospheric Science — 2009

INDUSTRIAL APPOINTMENT(S)

China Cargo Airline Ltd., Operation Control Center (Shanghai, China) — 2009-2012
Meteorological Technician

NONDEGREE EDUCATION AND TRAINING

National Aeronautics and Space Administration, Goddard Institute for Space Studies (NASA GISS, New York) — Aug.-Oct. 2015
Conduct collaborative research relevant to climate impact of clouds and aerosols

University of Cologne, Institute of Geophysics and Meteorology (Cologne, Germany) — May-Jul. 2014
Conduct collaborative research relevant to influence of drizzle on stratocumulus and organization

ITaRS Summer school in aerosol remote sensing, processes & applications (Romania) — Sept. 2013

Air Traffic Management Bureau of East China, Department of Meteorology (ATMB; Shanghai, China) — Aug. 2009-Feb. 2010
Certification program for Aeronautical Meteorological Forecaster

HONORS AND AWARDS

CFMIP Early Career Scientist Award	2021
Dr. & Mrs. Milton Leong Fellowships in Science, McGill University	2015
Student Poster Award in the ASR PI Meeting	2014
Grad Excellence Award, McGill University	2012-2014, 2016-2017
Canada Steamship Lines Award, McGill University	2013
Prix Peter Zwack Award, Meteo. & Ocean. Society of Canada	2013
Outstanding Student Scholarship, ATMB	2010
Outstanding Graduate Award; President's Scholarship; Pacemaker to Outstanding Student, NUIST	2009
NUIST Scholarship	2005-2009
Meteo. Bureau Weather Forecaster Certificate, China	2008
Outstanding Tri-A student of NUIST	2006, 2008

INVITED TALKS AND SEMINARS

NASA/GISS — Feb. 2023
Shallow cloud mesoscale organization and its interaction with aerosols

NOAA CSL All Hands meeting — Feb. 2022
How aerosols might affect low cloud feedback in a future warmer climate

2019 American Geophysical Union Fall Meeting, San Francisco, CA — Dec. 2019
Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation

Fudan University, Shanghai, China — Dec. 2019
Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation

Nanjing University, Nanjing, China — Dec. 2019
Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation

Pacific Northwest National Laboratory, Richland, WA — Mar. 2019
Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation and Observations from the ARM Eastern North Atlantic Site

University of Cologne, Institute of Geophysics and Meteorology, Cologne, Germany — Feb. 2019
Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation and Observations from the ARM Eastern North Atlantic Site

University of Cologne, Institute of Geophysics and Meteorology, Cologne, Germany — June 2014
Clouds, precipitation, and marine boundary layer structure during the MAGIC field campaign

Max Plan Institute for Meteorology, Hamburg, Germany — June 2014
Clouds, precipitation, and marine boundary layer structure during the MAGIC field campaign

FIRST-AUTHOR CONFERENCE PRESENTATIONS

103rd AMS Annual Meeting (Poster)	Jan. 2023
2022 AGU Fall Meeting (Oral)	Dec. 2022
16th AMS Conference on Cloud Physics (Oral)	Aug. 2022
ACPC2022-Aerosols, Clouds, Precipitation, and Climate (Oral)	May. 2022
CIRES Rendezvous 2022	May. 2022
2021 AGU Fall Meeting (Poster)	Dec. 2021
2021 CFMIP Meeting on Clouds, Precipitation, Circulation, and Climate Sensitivity (Virtual)	Sept. 2021
ACPC2021-Aerosols, Clouds, Precipitation, and Climate (Oral)	May. 2021
CIRES Rendezvous 2021 (Virtual)	May. 2021
2020 AGU Fall Meeting (Poster)	Dec. 2020
The SOAR (Southern Ocean Atmospheric Research) 2019 Workshop, Australia (Oral)	Nov. 2019
27th IUGG General Assembly, Canada (Oral)	Jul. 2019
2019 ARM PI meeting (Poster)	June 2019
UCP2019-Understanding Clouds and Precipitation, Germany (Poster)	Feb.2019
The Southern Ocean Science Meeting, NCAR (Oral)	Nov.2018
2018 CFMIP Meeting on Clouds, Precipitation, Circulation, and Climate Sensitivity, NCAR (Poster)	Oct. 2018
15th AMS Conference on Cloud Physics (Oral)	July 2018
2017 ARM PI meeting (Oral, Poster)	Mar. 2017
2016 AGU Fall Meeting (Poster)	Dec. 2016
2015 ARM PI meeting (Poster)	Mar. 2015
2014 ARM Fall working group meeting (Oral)	Nov. 2014
Univ. of Cologne, Inst. of Geophys. and Meteo., Germany (Oral)	June 2014
First MAGIC workshop, Brookhaven National Lab. (Oral)	May 2014
2014 ARM PI (Principal Investigator) meeting (Oral, Poster)	Mar. 2014
2013 ASR Fall working group meeting (Oral)	Nov. 2013
ITaRS summer school, Romania (Poster)	Sept. 2013

REFEREED PUBLICATIONS

Zhou, X., Kollias, P., & Lewis, E. R. (2015). Clouds, precipitation, and marine boundary layer structure during the MAGIC field campaign. *Journal of Climate*, *28*(6), 2420-2442.

Painemal, D., Chiu, J. Y. C., Minnis, P., Yost, C., **Zhou, X.**, Cadeddu, M., ... & Kollias, P. (2017). Aerosol and cloud microphysics covariability in the northeast Pacific boundary layer estimated with ship-based and satellite remote sensing observations. *Journal of Geophysical Research: Atmospheres*, *122*(4), 2403-2418.

Zhou, X., Heus, T., & Kollias, P. (2017). Influences of drizzle on stratocumulus cloudiness and organization. *Journal of Geophysical Research: Atmospheres*, *122*(13), 6989-7003.

Zhou, X., Ackerman, A. S., Fridlind, A. M., Wood, R., & Kollias, P. (2017). Impacts of solar-absorbing aerosol layers on the transition of stratocumulus to trade cumulus clouds. *Atmospheric Chemistry and Physics*, *17*(20), 12725-12742.

Zhou, X., Ackerman, A. S., Fridlind, A. M., & Kollias, P. (2018). Simulation of Mesoscale Cellular Convection in Marine Stratocumulus. Part I: Drizzling Conditions. *Journal of the Atmospheric Sciences*, *75*(1), 257-274.

Zhou, X., & Bretherton, C. S. (2019). Simulation of Mesoscale Cellular Convection in Marine Stratocumulus: 2. Nondrizzling Conditions. *Journal of Advances in Modeling Earth Systems*, *11*(1), 3-18.

Zhou, X., & Bretherton, C. S.. (2019). The correlation of mesoscale humidity anomalies with mesoscale organization of marine stratocumulus from observations over the ARM Eastern North Atlantic Site. *Journal of Geophysical Research: Atmospheres*, *124*(24), 14059-14071.

Zhou, X., Atlas, R., McCoy, I. L., Bretherton, C. S., Bardeen, C., Gettelman, A., ... & Ming, Y. (2021). Evaluation of cloud and precipitation simulations in CAM6 and AM4 using observations over the Southern Ocean. *Earth and Space Science*, *8*(2), e2020EA001241.

Zhou, X., Bretherton, C. S., Eastman, R., McCoy, I. L., & Wood, R. (2021). Wavelet Analysis of Properties of Marine Boundary Layer Mesoscale Cells Observed From AMSR-E. *Journal of Geophysical Research: Atmospheres*, *126*(14), e2021JD034666.

Zhou, X., Zhang, J., & Feingold, G. (2021). On the Importance of Sea Surface Temperature for Aerosol-Induced Brightening of Marine Clouds and Implications for Cloud Feedback in a Future Warmer Climate. *Geophysical Research Letters*, *48*(24), e2021GL095896.

Zhang, J., **Zhou, X.**, Goren, T., & Feingold, G. (2022). Albedo susceptibility of northeastern Pacific stratocumulus: the role of covarying meteorological conditions. *Atmospheric Chemistry and Physics*, *22*(2), 861-880.

Zhou, X. & Feingold, G. (2022). Impacts of Mesoscale Cloud Organization on Aerosol-induced Brightness. In preparation.

Zhou, X., Feingold, G., Painemal D., & Chiu J. C. (2022). Observational estimate of stratocumulus susceptibility across timescales. In preparation.

TEACHING EXPERIENCE

Co-Instructor
Cloud Microphysics and Dynamics, ATM S 535A/ESS 573A (graduate) 2019
Designed and taught six classes, University of Washington

Guest Lecturer
Introduction to Thermodynamics and Cloud Processes, ATM S 340 (undergraduate, primary majors) 2019
University of Washington

Exploring the Atmospheric Sciences, ATM S 220 (undergraduate, non-majors). 2018,2019
Topic: Low clouds and Climate
University of Washington

Course Assistant
Introduction to Atmospheric Sciences, ATOC 181; Science of Storms, ATOC 184; Natural Disasters, ATOC 185 2015-2017
McGill University

PROFESSIONAL SERVICE AND AFFILIATIONS

Session chair: 103rd AMS Annual Meeting, Denver 2023

Session chair: AGU 2022, Chicago 2022

Mentor: Chinese-American Oceanic and Atmospheric Association, Colorado Chapter 2022

Member: NOAA CSL Working Group for Equity and Inclusion 2020-2022

Founder and Organizer: UW Cloud Research Group (29 members) 2019-2020
Dept. of Atmospheric Sciences, University of Washington

Member, Women in Atmos., 2019-2020
Dept. of Atmospheric Sciences at UW

Colloquium Committee, Dept. of Atmospheric Sciences 2018-2019
University of Washington

Volunteer, World Weather Open Science Conference, Montréal, Canada 2014

Member, American Geophysical Union

Journal Reviewer: *Atmospheric Chemistry and Physics (ACP), Earth and Space Science (ESS), Geophysical Research Letters (GRL), Journal of Advances in Modeling Earth Systems (JAMES), Journal of the Atmospheric Sciences (JAS), Journal of Climate (JCLI), Journal of Geophysical Research: Atmospheres (JGR), Quarterly Journal of the Royal Meteorological Society (QJRMS), Monthly Weather Review (MWR), Nature Partner Journal (NPJ): Climate and Atmospheric Science, International Journal of Climatology, MDPI-Atmosphere*

Proposal Reviewer: *DOE National Laboratory SFA review panelist, ARM DOE field campaign proposal*

Book Reviewer: *Elsevier (provider)*

OUTREACH

Career Mentor: Chinese-American Oceanic and Atmospheric Association, Colorado Chapter 2022

Career Mentor: 2022 National Ocean Sciences Bowl 2022

Member: Working Group for Equity and Inclusion 2020-
NOAA Chemical Science Laboratory PRESENT

Presenter: Science, Technology, Engineering, and Math (STEM) fair at Park Orchard Elementary School, Kent, WA 2019