

Jianan Chen

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EDUCATION

Hong Kong University of Science and Technology

Feb. 2021 - Jan. 2025

PhD student in Atmospheric Environmental Science

Supervisor: Prof. Xiaoming Shi

Imperial College London

Mar. 2024 - Aug. 2024

Visiting PhD student in atmospheric physics

Supervisor: Prof. Ralf Toumi

The University of Manchester

Sept. 2018 - June 2020

Bachelor of Science in Environmental Science (Atmospheric Science)

Thesis advisor: Prof. Geraint Vaughan

Nanjing University of Information Science and Technology

Sept. 2015- June 2018

Bachelor of Science in Atmospheric Science

ACADEMIC POSITIONS

The University of Hong Kong

Feb. 2025 - present

Post Doctoral Fellow, Department of Earth Sciences

Supervisor: Prof. Dazhi Xi

UNPUBLISHED WORK

Chen, J., Toumi, R., Shi, X., (2025). Radial Rainfall Pattern Changes of Intense Over-ocean Tropical Cyclones under Global Warming. *Under review*.

PUBLICATIONS AND PRESENTATIONS

Chen, J. and Shi, X., (2025). Impacts of Numerical Advection Schemes and Turbulence Modeling on Gray-Zone Simulation of a Squall Line. *Monthly Weather Review* <https://eartharxiv.org/repository/view/6941/>

Chen, J. and Shi, X., (2023). Quantifying Global-Warming Response of the Orographic Precipitation in a Typhoon Environment with Large-Eddy Simulations. *Journal of Climate*. DOI:<https://doi.org/10.1175/JCLI-D-23-0018.1>

Shi, X., Y. Liu, **Chen J.**, H. Chen, Y. Wang, Z. Lu, R.Q. Wang, J. Fung, C. W.W. Ng, 2024: Escalating Tropical Cyclone Precipitation Extremes and Landslide Hazards in South China under Global Warming. *npj Climate and Atmospheric Science*. <https://doi.org/10.1038/s41612-024-00654-w>

Chen. J. and Shi. X., (2023). Assessing the Impact of Turbulence Parameterization and Advection Schemes on Gray Zone Simulations of Squall Lines. ***Poster Presentation. AGU Fall Meeting 2023***, December 2023 (San Francisco, California, U.S.)

Chen. J. and Shi. X., (2023). Pseudo Seeder-feeder Mechanism in Orographic Precipitation in a Typhoon Environment and its Response to Global Warming. ***Poster Presentation. Asia Oceania Geosciences Society Annual Meeting 2023***, August 2023 (Singapore, Singapore)

Chen. J. and Shi. X., (2022). LES Study of the Interaction between Mountain Waves and Typhoon Outer Region Rainfall under Global Warming. ***Oral Presentation. AGU Fall Meeting 2022***, December 2022 (Chicago, Illinois, U.S.)

Chen. J. and Shi. X., (2022). Quantifying the Global-Warming Response of the Orographic Precipitation in a Typhoon Environment with Large-Eddy Simulations. ***Oral Presentation. AMS 20th Conference on Mountain Meteorology***, June 2022 (Park City, Utah, U.S.)

TEACHING

Teaching Assistant. Division of Environment and Sustainability, HKUST 2023 Spring
Climate Change: Science, Policy and Management (Instructor: Prof. Xiaoming Shi)

Teaching Assistant. Division of Environment and Sustainability, HKUST 2022 Fall
Climate Change Impacts and Extreme Weather Events (Instructor: Prof. Eun Soon IM)

Teaching Assistant. Division of Environment and Sustainability, HKUST 2022 Spring
Introduction to Sustainability (Instructor: Prof. Xiaoming Shi)

PROFESSIONAL SKILLS

Programming Language

Python Matlab Fortran

Atmospheric Models

Cloud Modeling 1 (CM1), Weather Research and Forecasting Model (WRF)

AWARDS

HKUST RedBird Academic Excellence Award for PhD students

HKSAR Government Scholarship Fund – Endeavour Merit Award

Oversea Research Award

Research Travel Grant Award (University Grants Committee, Hong Kong, SAR)

Fist Class Honor Bachelor Degree from The University of Manchester, UK