

Jianan Chen

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EDUCATION

Hong Kong University of Science and Technology

Feb. 2021 -

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

UNPUBLISHED WORK

Chen, J. and Shi. X., (2024). Evaluation for the Impacts of Numerical Advection Schemes and Turbulence Modeling on Gray-Zone Simulation of a Squall Line. *Under revision* <https://eartharxiv.org/repository/view/6941/>

Chen, J., Toumi. R., Shi. X., (2024). Radial Rainfall Pattern Changes of Intense Over-ocean Tropical Cyclones under Global Warming. *Under review*.

PUBLICATIONS AND PRESENTATIONS

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)

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