

Chen Jianan

jianan.chen@connect.ust.hk

Last updated April, 2025

EDUCATION

Hong Kong University of Science and Technology

Feb. 2021 - Feb. 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

PUBLICATIONS

Chen. J., Kang. Y., Toumi. R., L. Zhang, M. Lu, D. Xi, Shi. X., (2025). Increasing Temporal Variability of Global Tropical Cyclone Near-Storm Rainfall Under Global Warming: Insights from CMIP6 HighResMIP Simulations. *Journal of Geophysical Research: Atmospheres*

Chen. J., Toumi. R., L. Zhang, M. Lu, D. Xi, Shi. X., (2025). Radial Rainfall Pattern Changes of Intense Over-Ocean Tropical Cyclones under Global Warming: Insights from an MRI HighRes CMIP6 Simulation *Geophysical Research Letters*. <https://doi.org/10.1029/2025GL116146>.

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://doi.org/10.1175/MWR-D-24-0174.1>.

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>

CONFERENCES

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 Climate Change: Science, Policy and Management (Instructor: Prof. Xiaoming Shi)	2023 Spring
---	-------------

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

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

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