Chen Jianan

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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. https://doi.org/10.1029/2025JD044655 ***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 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