

Junying Fang

✉ junyingfang1@gmail.com | 🏠 junyingfang.com

CURRENT POSITION

Assistant Research Scientist, Institute of Tropical and Marine Meteorology, China Meteorological Administration, Guangzhou, China
July 2023 - Present

EDUCATION

Ph.D. in Meteorology, Sun Yat-sen University, 2023

GPA: 3.86/4

Rank: 1/24

Thesis: The diurnal offshore propagation of global coastal rainfall

Advisor: Prof. Yu Du

B.S. in Atmospheric Sciences (Hydrometeorology), Nanjing University of Information Science & Technology, 2017

RESEARCH INTERESTS

- Climate change and extreme weather
- AI for science
- Interdisciplinary research

PUBLICATIONS

1. **Junying Fang**, Yu Du. Global coastal terrains push rainfall offshore. In preparation. 2024
2. **Junying Fang**, Yu Du. The contribution of MCS on diurnal offshore propagation of rainfall. In preparation. 2024
3. Kuai Dai, Xutao Li, **Junying Fang**, Yunming Ye, Demin Yu, Di Xian, Danyu Qin. Four-hour thunderstorm nowcasting using deep diffusion models of satellite. *arXiv preprint*. 2024
4. Hongpei Yang, Yu Du, Zijian Chen, **Junying Fang**. Could Developing Frontal Rainfall Influence Warm-sector Rainfall? *Geophysical Research Letters*. Accepted. 2024
5. **Junying Fang**, Yu Du. A global survey of diurnal offshore propagation of rainfall. *Nature Communications*. 2022

RESEARCH GRANTS

- 2023-2026 **Guangdong Provincial Fund for Basic and Applied Basic Research**, PI. Characteristics and Mechanisms of the Diurnal Variation and Offshore Propagation of Mesoscale Convective Systems along the South China Coast, ¥100,000 RMB
- 2024-2025 **Guangdong Meteorological Administration**, PI. Research and Forecasting on Multi-Scale Propagation Characteristics of Heavy Rainfall in the Guangdong-Hong Kong-Macao Greater Bay Area, ¥10,000 RMB
- 2024-2025 **Institute of Tropical and Marine Meteorology, China Meteorological Administration**, PI. Research on Coastal Heavy Rainfall Propagation in the Guangdong-Hong Kong-Macao Greater Bay Area Based on Multi-Source Observations and AI, ¥100,000 RMB

- 2021-2024 **National Natural Science Foundation of China**, Participant. Propagation Characteristics of Global Coastal Precipitation Diurnal Variation and Its Connection with Gravity Waves and Density Currents, ¥580,000 RMB
- 2020-2023 **Guangzhou Basic and Applied Research Project**, Participant. Propagation Characteristics of Global Coastal Precipitation Diurnal Variation and Its Relationship with Gravity Waves, ¥200,000 RMB
- 2018-2021 **National Key R&D Program**, Participant. Key Natural Disaster Monitoring, Early Warning, and Prevention, ¥430,000 RMB to SYSU

PRESENTATIONS

- Aug. 2023, the Meteorological Journal Development Seminar, Zhuhai, China (invited oral)
- Aug. 2023, the Young Meteorological Scientists Forum, Zhuhai, China (oral)
- Aug. 2023, the 5th Chinese Mesoscale Meteorology Forum, Yinchuan, China (oral)
- Jan. 2023, the Workshop of South China Monsoon Heavy Rainfall, Online (invited oral)
- Dec. 2022, the 58th Atmospheric Sciences Forum of Peking University, Online (invited oral)
- Aug. 2022, the 4th Chinese Mesoscale Meteorology Forum, Hangzhou, China (poster)
- May. 2021, the Heavy Rainfall Donghu Forum, Wuhan, China (oral)
- Apr. 2021, the 14th Conference on Mesoscale Convective Systems and High-Impact Weather in East Asia (ICMCS), Nanjing, China (poster)
- Jan. 2021, the 101st Annual Meeting of American Meteorological Society, Online (oral)
- Jan. 2021, the 3rd Chinese Mesoscale Meteorology Forum, Nanjing, China (poster)
- Dec. 2020, the 4th Workshop of Severe Weather International Consortium (SWIC), Zhuhai, China (poster)
- Nov. 2020, the Young Scientist Forum, Fuzhou, China (poster)
- Nov. 2019, the 2nd Chinese Mesoscale Meteorology Forum, Xiamen, China (poster)
- Mar. 2019, the 13th Conference on Mesoscale Convective Systems and High-Impact Weather in East Asia (ICMCS), Okinawa, Japan (poster)
- Dec. 2018 the Atmospheric Science Graduate Academic Forum, Guangzhou, China (oral)
- Oct. 2018, the 35th Annual Meeting of Chinese Meteorological Society, Hefei, China (oral)

AWARDS

- Poster presentation award at the 4th Chinese Mesoscale Meteorology Forum, 2022
- Oral presentation award at the 101st Annual Meeting of American Meteorological Society, 2021
- First-class PhD scholarship of Sun Yat-sen University, 2019
- Oral presentation award at the 35th Annual Meeting of Chinese Meteorological Society, 2018
- Oral presentation award at the Atmospheric Science Graduate Academic Forum, 2018

TEACHING

- Aug. 2020 - Jan. 2021: Teaching assistant for Synoptic Meteorology, Sun Yat-sen University
- Feb. 2021 - Jan. 2022: Teaching assistant for Climate Change, Sun Yat-sen University

SERVICE

- Journal Editor: The Innovation (Intern)
- Journal Review: Geophysical Research Letters, Journal of the Atmospheric Sciences, Journal of Geophysical Research: Atmospheres, International Journal of Climatology, Journal of Meteorological Research, Earth and Space Science, Ocean-Land-Atmosphere Research