

Shangyong Shi

Pim Postdoc Fellow, Johns Hopkins University

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RESEARCH INTERESTS

precipitation phase, snow-to-precipitation ratio, extreme precipitation, remote sensing, satellite precipitation retrieval, surface hydrology, machine learning, climate change

EDUCATION

Florida State University, Ph.D. , Meteorology. Advisor: Guosheng Liu	Tallahassee, FL Jan. 2021 – Aug. 2024
Florida State University, M.S. , Meteorology. Advisor: Guosheng Liu	Tallahassee, FL Sept. 2018 – Dec. 2020
Nanjing University, B.S. , Atmospheric Sciences	Nanjing, China Sept. 2014 – Jun. 2018
National Taiwan University, Exchange Student , Department of Atmospheric Sciences	Taipei, China Sept. 2016 – Jan. 2017

EMPLOYMENTS AND EXPERIENCES

Johns Hopkins University, Department of Earth and Planetary Sciences Pim Postdoc Fellow Mentor: Benjamin Zaitchik, Harihar Rajaram	Baltimore, MD Sept. 2024 - Present
University of Maryland, Cooperative Institute for Satellite Earth System Studies Research Intern Advisor: Yongzhen Fan, Huan Meng <ul style="list-style-type: none">Developed an orographic precipitation index to identify orographic snowfall. Incorporate new variables in the machine learning algorithm to reduce the orographic snowfall rate bias estimates from satellite microwave sensors.	College Park, MD Jun 2023 – Aug 2023, Oct 2023 – May 2024
Florida State University, Department of Earth, Ocean, and Atmospheric Science Research Assistant	Tallahassee, FL Sept. 2018 – Aug. 2022, Jun. 2023 – Aug. 2024
Florida State University, Department of Earth, Ocean, and Atmospheric Science Teaching Assistant <ul style="list-style-type: none">Course: Atmospheric Dynamics I and II.	Tallahassee, FL Sept. 2022 – May 2023
Nanjing University, School of Atmospheric Sciences Research Assistant, Dissertation <ul style="list-style-type: none">Studied the modification on the Indo-Western Pacific Ocean Capacitor Effect by the Pacific Meridional Mode in boreal spring. Student Innovative Project Leader <ul style="list-style-type: none">Simulated the Fujiwara Effect between two vortices in a rotating water tank.	Nanjing, China Sept. 2017 – Jun. 2018 Sept. 2015 – Jul. 2016

PUBLICATIONS

1. **Shi, S.**, Fan, Y., Dong, J., and Meng, H (2024). Developing a machine learning algorithm to improve orographic snowfall retrieval from satellite passive microwave sensors. (In preparation)
2. **Shi, S.***, & Liu, G (2024). Investigation on the sensitivity of the snow-to-precipitation ratio to temperature based on satellite data (In preparation)
3. **Shi, S.***, & Liu, G (2024). Improvements on Phase Classification Using Atmospheric Melting and Refreezing Energy Based on Soundings. *Journal of Geophysical Research: Atmospheres*, 129(10), e2023JD040030. <https://doi.org/10.1029/2023JD040030>.
4. Jeong, H., **Shi, S.**, & Liu, G.* (2022). A novel approach to validate satellite snowfall retrievals by ground-based point measurements. *Remote Sensing*, 14(3), 434. <https://doi.org/10.3390/rs14030434>
5. **Shi, S.***, & Liu, G. (2021). The latitudinal dependence in the trend of snow event to precipitation event ratio. *Scientific Reports*, 11(1), 18112. <https://doi.org/10.1038/s41598-021-97451-9>
6. **Shi, S.**, & Misra, V*. (2020). The role of extreme rain events in Peninsular Florida's seasonal hydroclimate variations. *Journal of Hydrology*, 589, 125182. <https://doi.org/10.1016/j.jhydrol.2020.125182>

PRESENTATIONS

1. **Shi, S.** (Jan. 2024). Developing a machine learning algorithm to improve orographic snowfall retrieval from satellite passive microwave sensors. JPSS Hydrology Initiative Telecon (Online)
2. **Shi, S.** (Dec. 2023). Improvements on Phase Classification Using Atmospheric Melting and Refreezing Energy Based on Soundings. *2023 AGU Annual Meeting* (Poster)
3. **Shi, S.** (Jan. 2023). Classifying precipitation phase with atmospheric soundings. *2023 AMS Annual Meeting* (Oral)

PEER REVIEW

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| • Reviewer of Asia-Pacific Journal of Atmospheric Sciences | 2024 |
| • Reviewer of Journal of Hydrology, 1 manuscript | 2021 |
| • Reviewer of Climate Dynamics, 1 manuscript | 2021 |

AWARDS

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| • 1 st place oral presentation among student entries in the Hydrology section | 2023 |
| • Member of Chi Epsilon Pi Meteorology Honor Society | 2019 |
| • National Scholarship for outstanding undergraduates (top 2% in NJU) | 2017 |
| • The Liao's Scholarship (University-level, top 2% in school, NJU) | 2016 |
| • The Liao's Scholarship (University-level, top 2% in school, NJU) | 2015 |
| • University-level outstanding students (top 5% in NJU) | 2015 |

SKILLS

- Coding: Python, Matlab, Fortran, C;
- Platforms: Linux, Github code management