Shangyong Shi

| sshi28@jhu.edu | shangyongshi.github.io |

Johns Hopkins University

# RESEARCH INTERESTS

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

# EDUCATION

2021-2024 **Ph.D.** in Meteorology, **Florida State University**, FL, USA. Advisor: Guosheng Liu

2018-2020 **M.S.** in Meteorology, **Florida State University**, FL, USA. Advisor: Guosheng Liu

2014-2018 **B.S.** in Atmospheric Sciences, **Nanjing University**, Jiangsu, China

# EMPLOYMENTS AND EXPERIENCES

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| Sept 2024-Present | **Pim Postdoc Fellow,**Department of Earth and Planetary Sciences, Johns Hopkins University. Mentor: Benjamin Zaitchik |
| Oct 2023-May 2024  Jun 2023-Aug 2023 | **Research Intern*,*** Cooperative Institute for Satellite Earth System Studies, University of Maryland. Mentor: Huan Meng, Yongzhen Fan |
| Sept 2018-Aug 2022  Jun 2023-Aug 2024 | **Research Assistant*,*** Department of Earth, Ocean, and Atmospheric Science, Florida State University. Mentor: Guosheng Liu |
| Sept 2022-May 2023 | **Teaching Assistant*,*** Department of Earth, Ocean, and Atmospheric Science, Florida State University. Courses: Atmospheric Dynamics I and II |

# 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. Jeoung, 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

* Reviewer of Journal of Hydrology, 1 manuscript 2021
* Reviewer of Climate Dynamics, 1 manuscript 2021

# AWARDS

* 1st 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

University-level outstanding students (top 5% in NJU) 2015

# SKILLS

**Coding**: Python (numpy, pandas, xarray, HDF, sklearn…), Matlab, Fortran, C

**Platforms**: Linux, Github code management