Zhangyu SUN

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EDUCATION

The Chinese University of Hong Kong, Hong Kong, China *2021.09 - 2025.08*
Ph.D. in Earth and Atmospheric Sciences
Thesis Title: A Comprehensive Study of Rock Glacier Distribution, Velocities, and Water Storage in High Mountain Asia
Thesis advisor: Lin Liu
GPA: 3.975/4.0

Graz University of Technology, Graz, Austria *2024.01 - 2024.06*
Visiting Ph.D. student in Remote Sensing and Photogrammetry
Co-supervisor: Tobias Bolch

Wuhan University, Wuhan, China *2018.09 - 2021.06*
Master in Geodesy and Geomatics
Thesis Title: Global Modelling of High-Accuracy Tropospheric Key Parameters Based on ERA5 Data
Thesis advisor: Yibin Yao
GPA: 3.85/4.0

Technical University of Munich, Munich, Germany *2019.10 - 2020.06*
Double-degree Master in Earth Oriented Space Science and Technology
GPA: 1.1/1.0

Wuhan University, Wuhan, China *2014.09 - 2018.06*
Bachelor in Navigation Engineering
GPA: 3.88/4.0

RESEARCH INTERESTS

The Application of Geodetic and Remote Sensing Technologies in Monitoring Periglacial Landforms

Atmospheric Error Modeling and Correction in Geodetic Techniques

Machine/Deep Learning in Geoscience Applications

SELECTED PUBLICATIONS

1. **Zhangyu Sun**, Yan Hu, Adina Racoviteanu, Lin Liu, Stephan Harrison, Xiaowen Wang, Jiaxin Cai, Xin Guo, Yujun He, and Hailun Yuan (2024). TPRoGI: A comprehensive rock glacier inventory for the Tibetan Plateau using deep learning. Earth System Science Data, 16(12), 5703–5721. https://doi.org/10.5194/essd-16-5703-2024.

2. **Zhangyu Sun**, Lin Liu, Chengyan Fan, Yan Hu, Francesca Baldacchino, Atanu Bhattacharya, Ella Wood, and Tobias Bolch (2025). Unveiling large-scale velocity characteristics of rock glaciers in the Tibet-Pamir-Karakoram region using InSAR. International Journal of Applied Earth Observation and Geoinformation (accepted).

3. **Zhangyu Sun**, Bao Zhang, and Yibin Yao (2021). Improving the Estimation of Weighted Mean Temperature in China Using Machine Learning Methods. Remote Sensing, 13(5), 1016. https://doi.org/10.3390/rs13051016.

4. **Zhangyu Sun**, Bao Zhang, and Yibin Yao (2019). An ERA5-based model for estimating tropospheric delay and weighted mean temperature over China with improved spatiotemporal resolutions. Earth and Space Science, 6(10), 1926-1941. https://doi.org/10.1029/2019EA000701.
5. **Zhangyu Sun**, Bao Zhang, and Yibin Yao (2019). A global model for estimating tropospheric delay and weighted mean temperature developed with atmospheric reanalysis data from 1979 to 2017. Remote Sensing, 11(16), 1893. https://doi.org/10.3390/rs11161893.
6. Yibin Yao, **Zhangyu Sun**, and Chaoqian Xu (2018). Establishment and evaluation of a new meteorological observation-based grid model for estimating zenith wet delay in ground-based global navigation satellite system (GNSS). Remote Sensing, 10(11), 1718. https://doi.org/10.3390/rs10111718.
7. Yibin Yao, **Zhangyu Sun**, Chaoqian Xu, Liang Zhang, and Yangyang Wan (2018). Development and assessment of the atmospheric pressure vertical correction model with ERA-interim and radiosonde data. Earth and Space Science, 5(11), 777-789. https://doi.org/10.1029/2018EA000448.

SELECTED CONFERENCES

1. **Zhangyu Sun**, Lin Liu, Yan Hu, and Chengyan Fan (2024). Assessing rock glacier velocities on the Tibetan Plateau using satellite SAR interferometry, EGU General Assembly Conference, Vienna, Austria.
2. **Zhangyu Sun**, Yan Hu, Lin Liu, Adina Racoviteanu, and Stephan Harrison (2023). Mapping and inventorying rock glaciers on the Tibetan Plateau from Planet Basemaps using deep learning, EGU General Assembly Conference, Vienna, Austria.
3. **Zhangyu Sun**, Yan Hu, Lin Liu, Adina Racoviteanu, and Stephan Harrison (2022). Mapping Rock Glaciers on the Tibetan Plateau from Planet Basemaps Using Deep Learning, AGU Fall Meeting, Chicago, U.S.

SELECTED HONORS AND AWARDS

Ernst Mach Grant, weltweit, Austria *2023*

Hong Kong PhD Fellowship, Hong Kong *2021*

National Graduate Scholarship of China, China *2019*

Lei Jun Scholarship, Wuhan University *2019*

Top Ten Academic Stars of Wuhan University, Top 20 Finalists, Wuhan University *2019*

Lei Jun Scholarship, Wuhan University *2017*

Yu Gang Song Xiao Scholarship, Wuhan University *2016*

National Scholarship of China, China *2015*

SKILLS

Technology: GNSS, optical remote sensing, InSAR, QGIS, machine learning, deep learning

Programming language: Python, MATLAB, C++, C#, C, Shell

Language: Chinese (Mandarin, First language), English (Fluent)