# Zhaoyi Wang

**Email**: zhaoyi.wang@geod.baug.ethz.ch

**Mobile**: (+41) 78-403-2561

**Personal webpage:** https://zhaoyiww.github.io/

**GitHub:** https://github.com/zhaoyiww

## Education

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|---|---|
| PhD Candidate in Geomatics - Institute of Geodesy and Photogrammetry, ETH Zürich | 10/2021 - present |
| MSc in Precision Metrology - University of Science and Technology of China (USTC) | 9/2018 - 6/2021 |
| BSc in Geomatics - Changsha University of Science and Technology (CSUST) [1/102] | 9/2014 - 6/2018 |

## Research Interests

- My research focuses on 3D deep learning, cross-modal data fusion (e.g., point clouds and RGB images), and feature extraction. I am particularly interested in applying these methods to point cloud registration and landslide monitoring.

## Core skills and competences

- **Expertise**: TLS scanning, UAV, Photogrammetric 3D reconstruction
- **Programming Languages & Tools:** Python, C++, MATLAB, CUDA, Shell scripting, Git, LaTeX, Linux
- **Frameworks & Libraries:** PyTorch, Open3D, OpenCV, COLMAP
- **Software:** Leica Cyclone, RiSCAN PRO, FARO SCENE, Pix4D Mapper, Metashape, CloudCompare, Unity
- **Languages**: Mandarin (Native), English (Professional Working Proficiency)

## Professional experiences

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| Research Intern - Dilusense Company, China | 3/2021 – 6/2021 |
| *Working on structural light camera calibration and range estimation* | |
| Summer School Student - International Geoinformatics Summer School at Wuhan University | 8/2020 |
| Exchange Student - Dept. of Land Surveying and Geo-Informatics, Hong Kong Polytechnic University | 7/2017 |

## Selected activities and achievements

- Best Presentation Award at the ISPRS Geospatial Week - Laser Scanning Workshop, 2023
- National Scholarship for Postgraduates - USTC, Top 2% (2020)
- Top Grade Scholarship - CSUST, Top 1% (4x, 2015 - 2018)
- Reviewer: ISPRS Journal of Photogrammetry and Remote Sensing

## Peer-reviewed publications

Z.Y. Wang, J.A. Butt, S.Y. Huang, T. Medić, A. Wieser. Dense 3D Displacement Estimation for Landslide Monitoring via Fusion of TLS Point Clouds and Embedded RGB Images. (Under-review, 2025)

Z.Y. Wang, S.Y. Huang, J.A. Butt, Y.Z. Cai, M. Varga, A. Wieser. Cross-Modal Feature Fusion for Robust Point Cloud Registration with Ambiguous Geometry. ISPRS Journal of Photogrammetry and Remote Sensing, 2025

Z.Y. Wang, J.A. Butt, S.Y. Huang, N. Meyer, T. Medić, A. Wieser. An Approach for RGB-Guided Dense 3D Displacement Estimation in TLS-Based Geomonitoring. ISPRS Annals - Laser Scanning Workshop, 2025

Z.Y. Wang, M. Varga, T. Medić, A. Wies er. Assessing the Alignment Between Geometry and Colors in TLS Colored Point Clouds. ISPRS Annals - Laser Scanning Workshop, 2023

Z.Y. Wang, T. Luo, W. Wang, Q.Q. Huang, X. Li. Fixing Positions and Orientations of Laser Trackers During Bundle Adjustment in Multi-Station Measurement. Measurement Science and Technology, 2020

**References available on:** https://gseg.igp.ethz.ch/people/scientific-assistance/zhaoyi-wang.html