Zihan Zhu

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github.com/zzh2000 | G85.2, CAB, Universitätstrasse 6, 8092 Zürich, Switzerland

Education

ETH Zürich   Zürich, CH
Doctor of Sciences, Direct Doctorate in Computer Science   *Sept. 2022 – present*
- Supervisor: Prof. Marc Pollefeys & Prof. Andreas Geiger
- **GPA: 6.00/6.00**

ETH Zürich   Zürich, CH
Master of Science in Computer Science   *Sept. 2022 – Sept. 2024*
- **GPA: 5.70/6.00**

Zhejiang University   Hangzhou, Zhejiang Province, CHN
Bachelor of Engineering in Computer Science and Technology   *Sept. 2018 – Jul. 2022*
- Mixed Class, CHU KOCHEN Honors College
- **GPA: 91.58/100 3.98/4.00**
- **Rank: 3/269**

Tianjin No.1 High School   Tianjin Municipal, CHN
                                                                                  Sept. 2015 - Jul. 2018

Publications

VIGS-SLAM: Visual Inertial Gaussian Splatting SLAM
- **Zihan Zhu**, Wei Zhang, Moyang Li, Norbert Haala, Marc Pollefeys, Daniel Barath
- **Under Review**   [Paper Link]   [Project Page]

NICER-SLAM: Neural Implicit Scene Encoding for RGB SLAM   Mar. 2024
- **Zihan Zhu***, Songyou Peng*, Viktor Larsson, Zhaopeng Cui, Martin R. Oswald, Andreas Geiger, Marc Pollefeys
- **3DV 2024 (Oral, Best Paper Honorable Mention)**   [Paper Link]   [Project Page]

NICE-SLAM: Neural Implicit Scalable Encoding for SLAM   June 2022
- **Zihan Zhu***, Songyou Peng*, Viktor Larsson, Weiwei Xu, Hujun Bao, Zhaopeng Cui, Martin R. Oswald, Marc Pollefeys
- **CVPR 2022**   [Paper Link]   [Project Page]

DROID-W: DROID-SLAM in the Wild   June 2026
- Moyang Li*, **Zihan Zhu***, Marc Pollefeys, Daniel Barath
- **CVPR 2026**   [Paper Link]   [Project Page]

WildGS-SLAM: Monocular Gaussian Splatting SLAM in Dynamic Environments   June 2025
- Jianhao Zheng*, **Zihan Zhu***, Valentin Bieri, Marc Pollefeys, Songyou Peng, Iro Armeni
- **CVPR 2025**   [Paper Link]   [Project Page]

NeRF On-the-go: Exploiting Uncertainty for Distractor-free NeRFs in the Wild   June 2024
- Weining Ren*, **Zihan Zhu***, Boyang Sun, Jiaqi Chen, Marc Pollefeys, Songyou Peng
- **CVPR 2024**   [Paper Link]   [Project Page]

WildPose: A Unified Framework for Robust Pose Estimation in the Wild   June 2026
- Jianhao Zheng, Liyuan Zhu, **Zihan Zhu**, Iro Armeni
- **CVPR 2026**

MCGS-SLAM: A Multi-Camera SLAM Framework Using Gaussian Splatting for High-Fidelity Mapping
- Zhihao Cao, Hanyu Wu, Li Wa Tang, Zizhou Luo, Wei Zhang, Marc Pollefeys, **Zihan Zhu**, Martin R. Oswald
- **ICRA 2026**   [Paper Link]   [Project Page]

Scalable Neural Indoor Scene Rendering   Aug. 2022
- Xiuchao Wu*, Jiamin Xu*, **Zihan Zhu**, Hujun Bao, Qixing Huang, James Tompkin, Weiwei Xu
- ACM Transactions on Graphics (TOG) 41(4) **(SIGGRAPH 2022)**   [Paper Link]   [Project Page]

Scalable Image-based Indoor Scene Rendering with Reflections   Aug. 2021
- Jiamin Xu, Xiuchao Wu, **Zihan Zhu**, Qixing Huang, Yin Yang, Hujun Bao, Weiwei Xu
- ACM Transactions on Graphics (TOG) 40(4) **(SIGGRAPH 2021)**   [Paper Link]

Awards

- Best Paper Honorable Mention Award at 3DV 2024

- 2019–2020, 2020–2021 Scholarship of Zhejiang Province

- 2019–2020, 2020–2021 Scholarship for Pilotage (CHU KOCHEN Honors College Outstanding Students Awards)

- 2020–2021 UNIQLO Scholarship

- ZJU Special Scholarship for Innovation, Social Services, Academic Performance, Foreign Exchange

- Bronze Medal in National Olympiad in Informatics

- Silver Medal in Asia Pacific Informatics Olympiad

Teaching Assistant

- [252-0579-00L] 3D Vision (Lecturer: Marc Pollefeys & Daniel Barath)   Spring 2026

- [252-0836-00L] Computer Science II (Lecturer: Felix Friedrich & Ralf Sasse)   Fall 2025

- [252-0579-00L] 3D Vision (Lecturer: Marc Pollefeys & Daniel Barath)   Spring 2025

Invited Talks

- Advancing Neural Implicit and 3DGS SLAM, ETH Advanced Topics in Embodied Intelligence Seminar   Sept. 2025

- Advancing Neural Implicit and 3DGS SLAM, Google Zurich   Mar. 2025

Supervised Master Students at ETH Zurich

- [Semester project] Valentin Bieri (Next: Master Thesis at Stanford University)   2024

- [Master thesis] Weining Ren (Next: PhD Student at the University of Hong Kong)   2023

- [3DV course project] Deheng Zhang (Next: PhD Student at INSAIT)   2022

- [3DV course project] Ganlin Zhang (Next: PhD Student at TU Munich)   2022

Experience

Research Intern   July 2021 – July 2022
Computer Vision and Geometry Group, ETH Zurich | Advisor: Prof. Marc Pollefeys   (remote) Zurich, CH
- Build a SLAM system using implicit neural representation with scene priors

Undergraduate Research Assistant   Nov. 2019 – July 2022
State Key Lab of CAD&CG | Advisor: Prof. Weiwei Xu   Hangzhou, Zhejiang Province, CHN
- Develop Image-based rendering system allowing real-time free-viewpoint rendering of large indoor scenes with reflections using multiple views captured by consumer-level RGB camera.
- Explore research topics on neural rendering and view synthesis.

Student Summer Research Fellowship   July 2020 – Aug. 2020
The University of Chicago | Advisor: Prof. Junchen Jiang   (remote) Chicago, IL, USA
- Build a video analytic pipeline benchmark.
- Design efficient video analytic pipeline that saves bandwidth and edge computation.

Service

- **Conference Reviewer:** CVPR, ICCV, ECCV, ICRA, IROS, SIGGRAPH, SIGGRAPH Asia, 3DV, AAAI

- **Journal Reviewer:** T-RO, RA-L, TVCG, TPAMI, TOG, IJCV