

Weicai Ye

Curriculum Vitae

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Education

- 2022.09– **Visiting Researcher, 3D Vision**, *ETH Zurich*, Switzerland.
2023.03 Research Topics: SLAM and Neural Rendering. Advised by [Prof. Marc Pollefeys](#)
- 2018–2023 **PhD, Computer Science**, *Zhejiang University (ZJU)*, China.
(expected) Research Interests: 3D Vision, especially SLAM, 3D Reconstruction, Neural Rendering and Scene Understanding. Supervised by [Prof. Guofeng Zhang](#) and [Prof. Hujun Bao](#)
- 2014–2018 **Bachelor of Computer Software Engineering**, *University of Electronic Science and Technology of China (UESTC)*, China.
National Encouragement Scholarship. Ranked 3rd of 111 Students.

Preprints

- [IntrinsicNeRF: Learning Intrinsic Neural Radiance Fields for Editable Novel View Synthesis](#)
Arxiv2022 **Weicai Ye**, Shuo Chen, Chong Bao, Hujun Bao, Marc Pollefeys, Zhaopeng Cui, and GuofengZhang.
[homepage](#), [code](#), [arxiv](#)
- [PVO: Panoptic Visual Odometry](#)
Arxiv2022 **Weicai Ye**, Xinyue Lan, Shuo Chen, Yuhang Ming, Xingyuan Yu, Zhaopeng Cui, Hujun Bao, and GuofengZhang. [homepage](#), [code](#), [arxiv](#)
- [PR-SLAM: Simultaneous Localization and Mapping with Planar Reconstruction](#)
Arxiv2022 Dong Wu, Haomin Liu, **Weicai Ye**, Longrui Dong, Guofeng Zhang and Hongbin Zha.
- [DeFlowSLAM: Self-Supervised Scene Motion Decomposition for Dynamic Dense SLAM](#)
Arxiv2022 **Weicai Ye**, Xingyuan Yu, Xinyue Lan, Yuhang Ming, Jinyu Li, Zhaopeng Cui, Hujun Bao, GuofengZhang. [homepage](#), [code](#), [arxiv](#)
- [iDF-SLAM: End-to-End RGB-D SLAM with Neural Implicit Mapping and Deep Feature Tracking](#)
Arxiv2022 Yuhang Ming, **Weicai Ye**, and Andrew Calway. [arxiv](#)
- [Improving Feature-based Visual Localization by Geometry-Aided Matching](#)
Arxiv2022 Hailin Yu, Youji Feng, **Weicai Ye**, Mingxuan Jiang, Hujun Bao, and Guofeng Zhang. [code](#), [arxiv](#)
- [Hybrid Tracker with Pixel and Instance for Video Panoptic Segmentation](#)
Arxiv2022 **Weicai Ye**, Xinyue Lan, Ge Su, Zhaopeng Cui, Hujun Bao, and Guofeng Zhang. [arxiv](#)

Publications

* denotes equal contribution.

- 2021 Tianxiang Zhang, Chong Bao, Hongjia Zhai, Jiazhen Xia, **Weicai Ye**, and Guofeng Zhang. ARCargo: Multi-Device Integrated Cargo Loading Management System with Augmented Reality. In *IEEE Cyber Science and Technology Congress (CyberSciTech)*, 2021.
- 2021 **Weicai Ye**, Hai Li, Tianxiang Zhang, Xiaowei Zhou, Hujun Bao, and Guofeng Zhang. SuperPlane: 3D Plane Detection and Description from a Single Image. In *IEEE Virtual Reality and 3D User Interfaces (VR)*, 2021.
- 2021 Xiangyu Liu, **Weicai Ye**, Chaoran Tian, Zhaopeng Cui, Hujun Bao, and Guofeng Zhang. Coxgraph: Multi-Robot Collaborative, Globally Consistent, Online Dense Reconstruction System. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021, **Best Paper Finalist Award on Safety, Security, and Rescue Robotics in memory of Motohiro Kiso**.
- 2020 Hailin Yu, **Weicai Ye**, Youji Feng, Hujun Bao, and Guofeng Zhang. Learning Bipartite Graph Matching for Robust Visual Localization. In *IEEE International Symposium on Mixed and Augmented Reality (ISMAR)*, 2020.
- 2020 Hai Li*, **Weicai Ye***, Guofeng Zhang, Sanyuan Zhang, and Hujun Bao. Saliency Guided Subdivision for Single-View Mesh Reconstruction. In *International Conference on 3D Vision (3DV)*, 2020.

Awards & Honors

- 2022 **Academic Rising Star at Zhejiang University.**
- 2021 **Best Paper Finalist Award on Safety, Security, and Rescue Robotics in memory of Motohiro Kiso**. in IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).
- 2019 **Zhijun He Outstanding Scholarship.**
- 2019 **Chiang Chen Industrial Charity Foundation Grant.**
- 2018 **Champion** of 2018 Cloudwalk Headcount Challenge with 31,500¥ Bonus.
- 2017 **National Encouragement Scholarship.**
- 2017 **Meritorious Winner** in Mathematical Contest Modeling.
- 2016 **First Prize** in Sichuan Province Contest District in China Undergraduate Mathematical Contest in Modeling.

Internship Experience

3D Vision Researcher Intern, SenseTime Group Inc. Hangzhou, China

- Jan- May, 2018 **3D Reconstruction of Indoor Scene of RGB-D Images.**
SemanticSLAM which Combines the Traditional SLAM, Semantic Segmentation, and Plane Detection.

Software Engineer Intern, Baidu Inc. Beijing, China

- Feb-Jul, 2017 **Video Search System.**
Video Retrieval with Given Text in real-time.

Skills

- Programming Python, C++, CUDA, Pytorch, TensorFlow, JAVA, LATEX
- Management Mentored 4 Junior Researchers at TUM, PKU, and ZJU.

Services

Conference reviewer: NeurIPS, CVPR, ECCV, ICRA, IROS, VR, ISMAR, AAAI, BMVC

Teaching Assistant

Spring, 2021: Computational Photograph

References

Prof. Marc Pollefeys

*Full Professor, Department of
Computer Science*

Computer Vision and Geometry Lab (CVG), ETH Zurich

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