

Jialing Liu

A Passionate SLAM Researcher

Hangzhou, China

✉ LiuJiaLing98@hotmail.com

🏠 zhixun25.github.io/JialingLiu.github.io

☎ +86-186-2078-2019



ABOUT ME

- **Programming:** C++, Objective-C, ROS, Python, Latex, Java.
- **Research Interests:** Multi-agent collaborative SLAM, semantic perception and localization with large language models, multi-agent task allocation and trajectory planning.
- **Language Skills:** Native Chinese, fluent English communication.
- **Hobbies:** Hiking, playing badminton.

EDUCATION

Zhejiang University of Technology, College of Computer Science and Technology

Ph.D student, Supervisor: [Shengyong Chen, Jianhua Zhang](#)

Hangzhou, China

Sep. 2019 - Expected Jun. 2025

Human-Robot Interfaces and Interaction Lab, Italian Institute of Technology

Visiting Researcher, Supervisor: [Arash Ajoudani](#)

Genoa, Italy

Nov. 2023 - Nov. 2024

Electronic and Computer Engineering, Hong Kong University of Science and Technology

Student Researcher, Supervisor: [Ming Liu](#)

Hongkong, China

Nov. 2022 - May. 2023

University of South China, School of Software

Bachelor of Engineer, Software Engineering; GPA: 3.3/4.0

Hengyang, China

Sep. 2015 - Jun. 2019

PUBLICATION

1. K. Chen, **J. Liu**, Q. Tong, X. Cheng, J. Zhang, Accurate Perception and Association of Objects for Humanoid Robots under Dynamic Visual SLAM, **IJHR 2024** (International Journal of Humanoid Robotics), IF=0.9, [paper](#)
2. **J. Liu**, K. Chen, R. Liu, Y. Yang, Z. Wang, J. Zhang, Robust and Accurate Multi-Agent SLAM with Efficient Communication for Smart Mobiles, **ICRA 2022** (International Conference on Robotics and Automation), **oral presentation**, [paper](#)
3. Q. Tong, L. Ma, K. Chen, **J. Liu**, J. Qian, J. Zhang, TXSLAM: A Monocular Semantic SLAM Tightly Coupled with Planar Text Features, **CSCWD 2022** (International Conference on Computer Supported Cooperative Work in Design), [paper](#)
4. **J. Liu**, R. Liu, K. Chen, J. Zhang, D. Guo, Collaborative Visual Inertial SLAM for Multiple Smart Phones, **ICRA 2021** (International Conference on Robotics and Automation), **oral presentation**, [paper](#), [collaborative mapping effect](#), [multi-user AR experience](#)
5. K. Chen, **J. Liu**, J. Zhang, Z. Wang, Accurate Object Association and Pose Updating for Semantic SLAM, **TITS 2021** (IEEE Transactions on Intelligent Transportation Systems), IF=7.9, [paper](#)
6. J. Zhang, **J. Liu**, K. Chen, Z. Pan, R. Liu, Y. Wang, T. Yang, S. Chen, Map recovery and fusion for collaborative AR of multiple mobile device, **TII 2020** (IEEE Transactions on Industrial Informatics), IF=11.7, [paper](#)
7. **J. Liu**, K. Chen, R. Liu, X. Cheng, J. Zhang, S. Chen, H. Zhang, A. Ajoudani, ALICE-SLAM: Accurate and Lite Communication Collaborative SLAM for Resource-Constrained Multi-Agent, **JSAC 2024 under review** (IEEE Journal on Selected Areas in Communications), IF=13.8
8. **J. Liu**, K. Chen, X. Cheng, S. Chen, H. Zhang, Object Enhanced Loop Closing With Semantic Distance Graphs, **TETC 2024 under review** (IEEE Transactions on Emerging Topics in Computing), IF=5.1
9. K. Chen, J. Xiao, **J. Liu**, Q. Tong, H. Zhang, R. Liu, J. Zhang, A. Ajoudani, S. Chen, Semantic Visual Simultaneous Localization and Mapping: A Survey, **TITS 2024 under review** (IEEE Transactions on Intelligent Transportation Systems), IF=7.9
10. K. Chen, **J. Liu**, Q. Tong, J. Zhang, S. Chen, A. Ajoudani, Cross-Viewpoint Robust Object Association and Mapping for Semantic Scene Understanding, **Industrial Robot 2024 under review**, IF=2.9

EXPERIENCE

- **Reviewer:** RA-L, ICRA, IROS, SMC, CSAE, MEIE.
- **Teaching Assistant:** The C Programming Language, from Sep. 2019 to Jan. 2020.
- **Award:** VI-SLAM Challenge, The Third, **ISMAR 2019** (IEEE International Symposium on Mixed and Augmented Reality).
- **Granted Chinese Patent:** J. Zhang, R. Liu, **J. Liu**, K. Yin, S. Chen, Towards SLAM-based outdoor Localization Using Consumer-Grade GPS and 2.5D Building Models, No. ZL201910939643.5.
- **Projects Involved:** Research on Human-Robot Collaboration Technology and Its Application in Aerospace Manufacturing, fund by **National Natural Science Foundation of China**.
- **Funding:** One-year funding from the China Scholarship Council (CSC) to visit Italian Institute of Technology, Half-year funding from Zhejiang University of Technology to visit Hong Kong University of Science and Technology.