Dong Li

✉ lidong8421bcd@gmail.com • Google Scholar • ⌨ DoongLi • 🔗 DongLi • 🌐 Homepage

EDUCATION AND EXPERIENCE

Guangdong Laboratory of Artificial Intelligence and Digital Economy   **Shenzhen, China**
*Visiting Student, Work with **Dr.Shoubin Chen***   *Sep. 2024 - Now*

University of Macau   **Macau**
*Research Assistant. at FST and SKL-IOTSC, Supervised by **Prof.Hui Kong***   *Jun. 2023 - Jun. 2024*

Southern University of Science and Technology (SUSTech)   **Shenzhen, China**
*Research Assistant. at AMAS Lab, Supervised by **Prof.Zhiyun Lin***   *Jun. 2022 - Jun. 2023*

Hefei University of Technology (HFUT)   **Hefei, China**
B.Eng. in Communication Engineering, The School of CSIE   *Sept. 2018 - Jun. 2022*

RESEARCH INTEREST

- **ROBOTIC**: Perception-aware Navigation, Semantic SLAM, Field Robotic and Robot-related Applications.
- **3D VISION**: Multi-view geometry, NeRF and 3D Gaussian Splatting, Higher-level Scene Understanding.

PUBLICATIONS * indicates equal contribution

- **Dong Li**, L. Chen, C.-Z. Xu, and H. Kong, "Umad: University of macau anomaly detection benchmark dataset," in *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pp. 5836–5843, 2024.

- M. Li, W. Chen, N. Cheng, J. Xu, **Dong Li**, and H. Wang, "**GARAD-SLAM: 3D GAussian splatting for Real-time Anti Dynamic SLAM**," *Submitted to International Conference on Robotics and Automation (ICRA), 2025.*

- L. Liang, Y. Tao, **Dong Li**, G. Liang, C. Wang, and X. Wu, "**Autonomous Navigation for 4WS-4WD Agricultural Robots with Omni-Directional Kinematics Model**," *Submitted to IEEE Robotics and Automation Practice (RA-P), 2024.*

- H. Wang, J. Xu, **Dong Li**, Z. Guo, and M. Li, "**DF-GS: Gaussian Splatting for Enhanced Scene Reconstruction in Foggy Environments**," *Submitted to ICME 2025.*

UNDERGRADUATE HONORS AND AWARDS

- 3rd of International Underwater Robot Competition, 2020
- First Prize of National Undergraduate Electronics Design Contest in Anhui Province, 2020
- Second Prize of RoboMaster Robotics Competition ,2020
- Third Prize of National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction, 2020
- Individual Scholarship, Hefei University of Technology, 2019, 2020, 2021
- During Dong Li's undergraduate period, he won a total of five national and international awards, more than ten provincial and ministerial awards, four patents, and one software copyright in the field of robotics and electronic design, 2018-2022

SERVICES

Academic Review Services..

- *International Conference on Robotics and Automation (ICRA) 2024 * 2*
- *IEEE Robotics and Automation Practice (RA-P) * 1*

Other Services..

- **Guest of 3DCVER**: Guest Contributor (57/4700+) at 3DCVER, a leading 3D visual research platform in China. I have been sharing 3D visual papers and assist beginners, 2022-Now.
- **Vice President of Electronic Information Innovation Student Lab**: Led a group of over 70 undergraduate members focused on electronic technology at the Hefei University of Technology, 2020-2021.
- **Teaching Assistant at HFUT**: Electronic Information Innovation Practice Course. Fall 2019-2021.
- **Vice President of Hefei Pearl Home**: Public Welfare Organization for College Students in Hefei Affiliated with the Xin Hua Education Foundation (XHEF), 2019-2020.

EXPERIENCE

Embodied AI Group **Guangdong Laboratory of Artificial Intelligence and Digital Economy**
Visiting Student *Jun. 2024 - Now*
- Develop a legged robot inspection and navigation system for underground scenarios.
- Design a rapid exploration method in structured indoor scenes for multimodal semantic mapping.

Faculty of Science and Technology(FST), and SKL-IOTSC **University of Macau**
Research Assistant *Jun. 2023 - Jun. 2024*
- I contributed to the development of the first large-scale reference-based anomaly detection benchmark dataset, collected by robots in real-world environments, comprising 6 distinct scenes, 120 sequences, 26,000 image pairs, and 140,000 comprehensive object annotation labels, while proposing an adaptive warping method for high-precision image alignment; further details can be found in the project link.

AMAS Lab **Southern University of Science and Technology**
Research Assistant *Sep. 2022 - Jun. 2023*
- Engaged in the design and testing of a mobile grasping robot platform, developing a tag-based grasping system and localization perception systems utilizing RFID, 3D/2D Lidar, and millimeter-wave radar.
- Conducted research and implemented dynamic SLAM, monocular SLAM, and object-level SLAM, focusing on leveraging object information to enhance and optimize SLAM systems.
- Mentored undergraduate students on robotics projects, who received offers from Cornell, UPenn, and NUS.

HFUT Robotics Team **Hefei University of Technology**
As a Co-founder and Algorithm Group Leader *Sept. 2019 - May 2021*
- Co-founded the robotics team and participating in the RoboMaster Robotics Competition hosted by DJI.
- Led the algorithm group, managed the project progress, and developed the vision algorithm for multiple robots.
- Developed modules for robot detection, tracking, and localization using Intel RealSense D435i, and implemented 2D laser SLAM, navigation, and path planning solutions for autonomous robots.
- Founded a robotics enthusiast team from scratch, expanding membership to over 60 members.

National College Students' Innovative Entrepreneurial Training Plan Program **HFUT**
Major Contributor *Apr. 2020 - Apr. 2022*
- **Project Name: Research on autonomous transportation control technology of AGV based on Lidar SLAM**. Developed a real-time 3D LiDAR and visual fusion SLAM algorithm optimized for Intel NUC. This project represented the Hefei University of Technology at the 15th National College Student Innovation and Entrepreneurship Conference (4/1369).

Electronic Information Innovation Lab **Hefei University of Technology**
Vice President of the Student Lab *Sept. 2019 - Jun. 2022*
- Developed and implemented object detection, machine vision, and dimension measurement applications using Raspberry Pi, OpenMV, and STM32. Achieved First Prize in the 2020 National Undergraduate Electronics Design Contest in Anhui Province, leading the team to first place.
- Served as Vice President of the student lab, overseeing the selection, training, and management of both new and returning members.

REFERENCES

Professor Zhiyun Lin (Email: linzy@sustech.edu.cn)...
Position: Full Professor, Deputy Dean of the School of System Design and Intelligent Manufacturing(SDIM), Southern University of Science and Technology, IEEE Fellow.

Professor Hui Kong (Email: huikong@um.edu.mo)...
Position: Associate Professor, Department of Electromechanical Engineering, The University of Macau.

Dr. Shoubin Chen (Email: chenshoubin@gml.ac.cn)...
Position: Researcher, Guangdong Laboratory of Artificial Intelligence and Digital Economy (Shenzhen).