

# Lebin LIANG

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 [LebinLiang](#) |  [LebinLiang](#)

Shenzhen, Guangdong, China

## OBJECTIVE

Actively seeking PhD positions for Fall 2026 enrollment or later, with a dedicated research focus on Human-Computer Interaction (HCI) and Human-Robot Interaction (HRI).




## EXPERIENCE

- **SONY (CHINA) CO., LTD SHENZHEN BRANCH (RDC-Shenzhen)**  Jan 2025 - Aug 2025  
*Robotics Inter* Shenzhen, China
  - Developed low-level systems for legged robots, including STM32-based multi-joint motor/servo control and custom PCB driver boards with CAN, RS485, and EtherCAT communication.
  - Conducted dynamics modeling and reinforcement learning-based motion control, with Sim2Real deployment and validation in Isaac Gym.
  - Designed and implemented safety mechanisms such as disconnection detection, emergency power-off, and power monitoring systems.
- **DJI (RoboMaster)**  Summer/Winter 2020 - 2023  
*Teaching Assistant* Shenzhen, China
  - Planned and organized multiple STEAM robotics camps (100+ students each) focusing on robotics and embedded systems.
  - Designed and delivered an embedded systems curriculum centered on an "Indoor Robot Logistics and Transportation" theme.
  - Developed ROS (Robot Operating System) driver packages for RoboMaster EP robots and created comprehensive teaching materials.

## EDUCATION





- **University of Chinese Academy of Sciences (U.S. News 54)** Sept 2023 - June 2026 (Expected)  
*M.Eng. in Electronic Information* Beijing, China
  - GPA: 3.77/4.0
  - Advisors: [Prof. Can Wang](#) and [Prof. Xinyu Wu](#), Shenzhen Institute of Advanced Technology (SIAT), CAS
- **South China Agricultural University (Best Chinese Universities Ranking 100)** Sept 2019 - June 2023  
*B.Eng. in Agricultural Mechanization and Automation* Guangzhou, China
  - GPA: 4.31/5.0 (Rank: 1st/30)
  - Advisor: [Prof. Zhiyan Zhou](#) and [Prof. Xiwen Luo](#), South China Agricultural University and Academician of the Chinese Academy of Engineering

## HONORS AND AWARDS

- **National Scholarship for Undergraduates** Oct. 2020  
*Awarded by Ministry of Education of China*
  - Prestigious national-level scholarship, awarded to top 1% of undergraduates in China.
- **First-Class Scholarship** 2021 – 2022  
*South China Agricultural University*
  - Merit-based academic scholarship, awarded annually to top-performing students at SCAU.
- **Academic Excellence Scholarship** 2023  
*Awarded by University of Chinese Academy of Sciences*
- **IEEE ICRA 2024 RoboMaster University Sim2Real Challenge** June 2024  
*Awarded by IEEE International Conference on Robotics and Automation* 
  - Achieved **Second Prize** in a competitive university-level Sim2Real robotics challenge.
- **21st National Collegiate RoboMaster Competition - Super Confrontation** Aug 2022  
*Organized by DJI* 
  - Awarded **National First Prize** as a key member of the university team.
- **16th National University Smart Car Competition - iFlytek Smart Restaurant Group** Aug 2021  
*Organized by Ministry of Education, China* 
  - Awarded **National First Prize**, demonstrating excellence in autonomous systems and task completion.

- [C1] **Lebin Liang**, Haotian Rao, Guohao Shen. (2023). **A Real-time Framework for UAV Indoor Self-Positioning and 3D Mapping Base on 2D Lidar, Stereo Camera and IMU**. In *Proceedings of the IEEE International Conference on Real-time Computing and Robotics (RCAR 2023)*, pp. Datong, China. DOI: 10.1109/RCAR58764.2023.10249971. (First Author)
- [J1] Z. Zhou, X. Yu, **Lebin Liang**, et al. (2023). **Design and Experiment of Navigation Control System for Translational Row Shifting of Four-Wheel Steering Boom Sprayer**. *Transactions of the Chinese Society for Agricultural Machinery*, 54(7), 12-22. DOI: 10.6041/j.issn.1000-1298.2023.07.007. (Second Student Author)

## PROJECTS

- **4WD-4WS Autonomous Sprayer Navigation Control System** 2021 - 2023  
*Project Lead, National Student Innovation Program*  Video
  - Led development of a 4WD-4WS agricultural sprayer with RTK-GPS & IMU for autonomous row shifting and omnidirectional path tracking.
  - Built an 8-DOF chassis kinematic model with PID trajectory tracking, and designed an STM32-based embedded controller with CAN/USB communication.
  - Outcome: Project rated "Excellent," with 1 software copyright and 1 co-authored EI-indexed paper.
- **Indoor Autonomous Quadrotor UAV System with RGBD & LiDAR Fusion** 2022 - 2023  
*Individual Project*  Video
  - Developed VIO-based indoor UAV localization using RGBD cameras, achieving precise position control.
  - Integrated PX4 hardware, LiDAR navigation, and 3D mapping within a ROS framework; evaluated VIO algorithms (VINS-Mono, ORB-SLAM2).
  - Built LiDAR point cloud transformations and occupancy grid maps to support autonomous navigation.
- **Autonomous Infantry Robot Development (RoboMaster Competition)** 2021 - 2022  
*Navigation Team Lead, Taurus Robotics Team (SCAU)*  Video
  - Led a team in developing navigation and perception systems for RoboMaster AI Challenge infantry robots.
  - Built ROS-based architecture with Gazebo simulation; implemented sensor fusion (odometry, IMU, LiDAR) for localization and navigation.
  - Applied computer vision (OpenCV) for armor recognition and autonomous target tracking; managed STM32 hardware and software integration.
- **National University Smart Car Competition** 2020 - 2021  
*Team Captain (2021) / Member (2020)*  Video
  - **As Captain (2021, iFlytek Smart Restaurant Group):** Led team to develop a Mecanum wheel robot; implemented indoor localization and multi-task allocation (QR code recognition, target detection) using LiDAR & IMU; built ROS-based multi-task scheduling framework. (National First Prize)
  - **As Member (2020, Outdoor Opto-Electronic Group):** Contributed to Ackermann steering car for indoor localization & path planning; designed its embedded controller.

## SKILLS

- **Languages:** English (CET-6), Mandarin (Native), Cantonese (Native)
- **Programming:** C++, Python, C, Shell Scripting
- **Technologies & Software:** ROS (Noetic, Humble), Linux (Ubuntu), Git, Docker, STM32 Microcontrollers, FreeRTOS, ESP32, TensorFlow, PyTorch (Basic)
- **Robotics & AI:** SLAM, Visual-Inertial Odometry (VIO), Path Planning, Computer Vision, Control Systems, RL (Basic), Sensor Fusion (LiDAR, IMU, Camera)
- **CAD/EDA Tools:** Altium Designer, SolidWorks, MATLAB, Gazebo, Isaac Gym

## ADDITIONAL INFORMATION

- **Interests:** Robotics (Legged, Mobile, UAVs), AI for Robotics, Embedded Systems Design, Autonomous Navigation, Computer Vision, Control Systems, Human-Computer Interaction and Human-Robot Interaction
- **Portfolio:** [LebinLiang.github.io](https://LebinLiang.github.io)
- **Google Scholar:** [Lebin Liang](#)
- **Availability for PhD:** Fall 2026 or later.