

# Qingrui Zhao (赵清锐)

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## ABOUT

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I am a third-year Master's student at Beijing Institute of Technology (BIT). My research interest lies in enhancing the mobility and reliability of legged robots through robust perceptual algorithms and various sensor modalities. I also hold a vast interest in SLAM and mobile robots.

## EDUCATION

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### Beijing Institute of Technology

Beijing, China

*MSc in Mechanical Engineering*

2022/09 - 2025/7

Supervisor: Prof. [Qiang Huang](#)

#### Relevant Courses:

Matrix Analysis (88), Advanced Control Engineering (92), Micro-nano Robotics in Biomedical Engineering (95), Robot System Design and Applications (89)

### Beijing Institute of Technology

Beijing, China

*BEng in Mechatronical Engineering*

2018/09 - 2022/07

GPA: 3.6/4

#### Relevant Courses:

Linear Algebra (94), Mathematical Analysis for Engineering I, II (84, 85), Probability Theory and Mathematical Statistics (89), Theoretical Mechanics (98), Theory of Machines and Mechanisms (95), Mechatronic Control Technology (95), Basics of Python Programming and Artificial Intelligence (83)

## PUBLICATIONS

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Chao Li, Xuechao Chen\*, Qi Hengbo, Qingqing Li, **Qingrui Zhao**, Yongliang Shi, Zhangguo Yu, and Zhihong Jiang. "Feasible Region Construction by Polygon Merging for Continuous Bipedal Walking" accepted by *IROS*, 2024.

**Qingrui Zhao**, Mingyuan Li, Yongliang Shi, Xuechao Chen\*, Zhangguo Yu, Lianqiang Han, Zhenyuan Fu, Jintao Zhang, Chao Li, Yuanxi Zhang, and Qiang Huang. "LIKO: LiDAR, Inertial, and Kinematic Odometry for Bipedal Robots" in *ICRA*, 2024.

## PROJECTS

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### Cube Pusher [[github.com/Mr-Zqr/cube\\_pusher](https://github.com/Mr-Zqr/cube_pusher)]

2021/09 - 2022/02

Advisor: Prof. [Xuechao Chen](#)

This is a tiny robot designed as a class project. It is designed to fit into a competition and find wooden cubes and push them onto opposite colors on the ground. I was responsible for designing the structure of robots using SolidWorks and 3D printing, and for designing microcontroller expansion boards using Altium Designer to simplify electrical connections. We achieved second place in the final competition.

### Vector - A 2D Racing Game [[github.com/Mr-Zqr/Vector](https://github.com/Mr-Zqr/Vector)]

2019/03 - 2019/04

Advisor: A.P. [Fengnian Zhao](#)

This is a computer game about car racing written in C and C++ for the C Programming Language Practice course. I was the team leader and responsible for the game's architecture and interface design. We designed two modes for the game: "Flying Lap" for single-player mode and "Arena Battle" for two-player mode.

## HONORS

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**Excellent Student Scholarship** (graduate, Top 10%, departmental) *2022, 2023*  
**First Prize for "Challenge Cup" National College Student Extracurricular Academic Science and Technology Works Competition** *2023/04*  
**First Class Scholarship** (undergraduate, top 5%, departmental) *2019, 2020, 2021*

## SKILLS

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**Programming** C++, Matlab, Python  
**Frameworks** ROS, legged gym, mc\_rtc, Eigen  
**Tools** SolidWorks, Docker, GIT, Jupyter Notebook  
**Interests** Photography, Biking, Running

## LANGUAGE

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**Chinese** Mother tongue  
**English** IELTS: 8.0