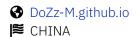
Zhongtao Guan



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Education

Shanghaitech University

Shanghai, China

Bachelor of Engineering, Electronic Information engineering Overall GPA-**3.80/4.0**, Major Rank-**2/55**, Overall Rank-**8/230**

Massachusetts Institute of Technology

Massachusetts, U.S. Special Student Program Overall GPA-**5.0/5.0** Sep. 2021 - Present

Feb. 2024 - May.2024

Publication

- 1. **Zhongtao Guan**, et al. "Accurate Single-Ended Fault Location for Cable-OHL Hybrid Transmission Lines", in Power and Energy Society General Meeting (PESGM), 2023.
- 2. Jiayu Yang, Yu Liu*, Kang Yue, **Zhongtao Guan**, Minfan Fu and Haoyu Wang, "Closed-Form Solutions of Mutual Inductance and Load for LCC-S Wireless Power Transfer Systems", in 3rd IEEE International Conference on Industrial Electronics for Sustainable Energy Systems, Jul. 2023.
- 3. Mengzhao Duan, Yu Liu*, Ze Liu, Xinchen Zou and **Zhongtao Guan**. 'A Group of Single-Ended Time-Domain Line Fault Location Methods Using Breaker Operation Information', in IEEE Power and Energy Society General Meeting (PESGM), 2023.
- 4. **Zhongtao Guan**, et al. "Cury: A Backdrivable Leg Design using Linear Actuators", International Conference on Intelligent Robots and Systems (IROS 2024), Under review.

Research Experience

SOFT AND MICRO ROBOTICS LABORATORY

Undergraduate Visiting Student Mentors: Prof. Kevin Chen

Jun.2024–Present Massachusetts Institute of Technology

Sensor autonomy of insect-scale robots.

SOFT AND MICRO ROBOTICS LABORATORY

UROP at MIT, Mentors: Prof. Kevin Chen

Jan.2024–May.2024 Massachusetts Institute of Technology

• Trajectory optimization and MPC tracking for a insect-scale hopping flapping wing robots.

Motor and Motion-Control Lab

Research Assistant, Mentors: Prof. Chen Jiahao

Aug.2023–Jan.2024 ShanghaiTech University

- Mechanical design and control of bipedal robot.
- Actuators design for bipedal robot for backdrivable and energy recovery.
- Design of four-in-one motor drivers.
- Using parameter curve for controller design.

Power System Protection & Automation Laboratory

Research Assistant, Mentors: Prof. Liu Yu

Jun..2022 – Aug..2023 ShanghaiTech University

- Fault Location of the mixed-transmission line using single-ended measurements.
- Low-Cost inverter design for renewable energy.

Robomaster 9.2021-6.2022

Robot Competition

- Lead and coordinate a group for experimental robot design and development.
- Responsible for mechanical design and routine maintenance.

Bandit Algorithm Autumn 2022

Group Project

• Realize and compare the performance of ϵ -greedy, UCB(upper confidence bound) and TS(Thompson Sampling) algorithms.

• Design more practical cases and adjust algorithms to obtain better performance.

Work and Volunteer Experience

Electric Circuit Spring 2023

Teaching Assistant ShanghaiTech University

• Responsible to course recordings, tutorial classes; Problem sets and answers.

Volunteer Teaching in Yunnan

Volunteer Teacher

Spring 2022

ShanghaiTech University

• Teaching Physics and Chinese for children in one of Dali's depressed village.

• Continue donating salary of teaching assistant through United Nations Children's Fund.

Awards

| Excellent Student | Top 1-3% | 2022 |
|--|-----------|------|
| Outstanding Individual in Social Practice | | 2022 |
| RoboMaster University Championship (Eastern Division) | 2nd Prize | 2022 |
| RoboMaster University Championship (National) | 3rd Prize | 2022 |
| Outstanding Teaching assistant | | 2023 |
| National Undergraduate Electronic Design Contest (Shanghai Division) | 2nd Prize | 2023 |
| Excellent Student | Top 1- 3% | 2023 |

Skills

| Programming | C/C++, Python, MATLAB, Julia, ŁATĘX |
|-------------|-------------------------------------|
|-------------|-------------------------------------|

Software Simulink, Altuim Designer, Kicad, Solidworks, Code Composer Studio

Framework Numpy, Git, Anaconda, FORCEPRO, SNOPT, AMPL

Platform Vicon Motion Capture System, Crazy File