

## Education

### Shanghaitech University

09. 2021 - Present

Shanghai, China

School of Information Science and Technology

Bachelor of Engineering, Electronic Information Engineering

Overall GPA: **3.81/4.0**, Major rank: **2/55**, Overall rank: **8/230**

## Publication

1. **Zhongtao Guan**, Jun Wan, Yu Liu\*, Dian Lu, Mengzhao Duan and Renke Huang. "Accurate Single-Ended Fault Location for Cable-OHL Hybrid Transmission Lines", in Power and Energy Society General Meeting (PESGM), Orlando, Florida, USA, 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 the 3rd IEEE International Conference on Industrial Electronics for Sustainable Energy Systems, Jul. 2023.
3. Mengzhao Duan, Yu Liu\*, Ze Liu, Xincheng 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.

## Research Experience

### Power System Protection & Automation Laboratory

6.2022 – 8.2023

Advisor: Prof. Yu Liu

ShanghaiTech University

- Develop a single-ended measurement to locate faults on the mixed-transmission line.
- Design a low-cost inverter with new types of devices for plugging renewable energy.

### Motor and Motion-Control Lab

8.2023 – Present

Advisor: Prof. Jiahao Chen

ShanghaiTech University

- Control and Design of a quasi-direct-drive bipedal robot.
- Nonlinear B-controller: a dynamical gain controller.

**In preparation**

**In preparation**

## Selected Projects and Competitions

### 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.

### National Undergraduate Electronic Design Contest (Shanghai Division)

Summer 2023

Individual Project

- Realize single-phase-loop and close-loop control algorithms on STM32 microcontroller.
- Design related PCB use Altium Designer.

### Bandit Algorithm

Autumn 2022

Group Project

- Realize and compare the performance of  $\epsilon$ -greedy, UCB (upper confidence bound) and TS (Thompson Sampling) algorithms.
- Design more practical cases and adjust algorithms to reach better performance.

## Work and Volunteer Experience

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### Electric Circuit

Head Teaching Assistant

Spring 2023

ShanghaiTech University

- Responsible to course recording, tutorial classes; set homeworks and corresponding answers.
- Collaborated with Professor Yu Liu on grading and exam supervision.
- 2023 SIST Outstanding Teaching Assistant.

### 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

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<b>Outstanding Student</b>	Top 3%	2022
<b>Outstanding Individual in Social Practice</b>		2022
<b>RoboMaster University Championship (Eastern Division)</b>	2nd Prize	2022
<b>RoboMaster University Championship (National)</b>	the 3rd Prize	2022
<b>Outstanding Teaching Assistant</b>		2023
<b>National Undergraduate Electronic Design Contest (Shanghai Division)</b>	2nd Prize	2023
<b>Outstanding Student</b>	Top 1-2%	2023
<b>Outstanding Individual in Industrial Practice</b>		2023

## Courses and Skills

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### Coursework:

Introduction to Power Electronics, Probability and Statistics, Numerical Optimization, Introduction to Control, Introduction to Programming, Signals and Systems, Electric Circuit (as TA), Digital/Analog Circuit, Power System, Modern Woodworking Design and Practice

### Programming

C/C++, Python, MATLAB, AMPL, Pygmo, Numpy, Scipy, Pandas

### Software

Altium Designer, SolidWorks, KiCad, CCS

### Languages

Chinese (Native), English (Fluent)