

## Education

### Shanghaitech University

Shanghai, China

Bachelor of Engineering, Electronic Information engineering

Overall GPA-**3.81/4.0**, Major Rank-**2/55**, Overall Rank-**8/230**

Sep. 2021 - Present

## 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), 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, Xinchun 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

Mentors: Prof. Liu Yu

6.2022 – 8.2023

ShanghaiTech University

- Using single-ended measurement to locate faults on the mixed-transmission line.
- Design a low-Cost inverter with brand-new devices for plugging renewable energy into Power grid.

### Motor and Motion-Control Lab

Mentors: Prof. Chen Jiahao

8.2023–Present

ShanghaiTech University

- Mechanical Design and Control for quasi-direct-drive bipedal robot.
- Nonlinear B-controller: design and optimization.

Ongoing

Ongoing

## Selected Projects and Competitions

### Robomaster

Robot Competition

9.2021-6.2022

- 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)

Individual Project

Summer 2023

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

### Bandit Algorithm

Group Project

Autumn 2022

- 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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Excellent Student	Top 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 1-2%	2023
Outstanding Individual in Industrial Practice		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, Power System

### Programming

C/C++, Python, MATLAB, AMPL

### Software

Altium Designer, SolidWorks, Kicad, CCS

### Languages

Chinese (Native), English (Fluent)