

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, 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

6.2022 – 8.2023

Advisors: 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

Advisors: Prof. Jiahao Chen

ShanghaiTech University

- Mechanical design and control for quasi-direct-drive bipedal robot.
- Nonlinear B-controller: design and optimization for dynamical gain controller.

Ongoing

Ongoing

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 ϵ -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

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

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

Courses and Skills

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)