Wenbo Huang 黄文博

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RESEARCH EDUCATION

University of Chinese Academy of Sciences *Beijing, China*

Master of Microelectronics *Sep. 2021 - Jun. 2024 (Expected)*

- Research Department: Institute of Microelectronics of the Chinese Academy of Sciences

Shanghai Maritime University *Shanghai, China*

Bachelor of Electronic and Information Engineering *Sep. 2017 - Jun. 2021*

- GPA: 3.61/4.0 Ranking: 2/64
- Courses: Signal and System, Digital Circuit, Analog Circuit, Communication Principle, Automatic Control Principle, FPGA, Radar Principle, Principles of Mobile Communication.

RESEARCH SKILLS

Software COMSOL,MATLAB,KEIL,MULTISM

RESEARCH EXPERIENCE

Real-time Cancer Diagnosis System based on MEMS Technology *Shanghai, China*

Bachelor's Graduation Project *Feb. 2021 - Jun. 2021*

- Introduction: I split this project into four parts to realize it. First, study the peripheral analog and digital circuits of the micro cantilever; second, study the theoretical model of the micro cantilever and simulate and verify the conclusion; then, study the micro-nano biochemical devices of the micro cantilever; finally, design the control system and human-computer interaction equipment.
- Solution: First select the micro cantilever in the MEMS device as the core component of the diagnostic system, then design the peripheral analog circuit of the micro cantilever based on MULTISM and the digital circuit for input capture, and then model the micro cantilever through the differential equation of the micro cantilever, and use the COMSOL software to simulate and solve. On this basis, an automatic control sequence system for micro-nano biochemical devices was designed, and finally, the human-computer interaction equipment of STM32 and DGUS was used to realize this diagnostic system.

Design of Ship Emission Detection Pod based on LORA *Shanghai, China*

School-level Undergraduate Innovation Project *Apr. 2020 - Dec. 2020*

Project No: X20200611 Presider

- Introduction: This project aims to design the embedded electronics part of the UAV-based ship exhaust gas detection system. By using the UAV to carry the gas detection system, it can quickly detect the SO2 and CO2 gas concentration in the ship exhaust and determine whether its fuel sulfur content exceeds the standard. Then data transmission is carried out through LORA's communication method, which effectively solves the problem of ship emission detection in the absence of GSM/GPRS signals in the channel.
- Responsibility: I am mainly responsible for embedded system programming in the project.

Research on Wireless Group Charging of Mobile Phones *Shanghai, China*

MUNICIPAL UNDERGRADUATE INNOVATION PROJECT *Apr. 2019 - May. 2020*

Project No: S20190614 Participate

- Introduction: This project researches a mobile phone wireless group charging system based on a single-chip microcomputer to realize wireless group charging of multiple mobile phone devices, while real-time monitoring and feedback of the status information of the mobile phone wireless group charging.
- Responsibility: I am mainly responsible for the hardware design of the mobile phone group charging circuit in the project.

SELECTED COMPETITIONS

2021	**International 2nd Prize (Honorable Mentions)** , Mathematical Contest In Modeling	*Shanghai, China*
2020	**International 2nd Prize (Honorable Mentions)** , Mathematical Contest In Modeling	*Shanghai, China*
2020	**International 2nd Prize**, Asia and Pacific Mathematical Contest in Modeling	*Shanghai, China*
2020	**National 1st Prize**, "Huashu Cup" National College Students Mathematical Contest in Modeling	*Shanghai, China*
2020	**National 3rd Prize**, The 7th "Datang Cup" National College Student Mobile Communication 5G Technology Competition	*Shanghai, China*

SELECTED AWARDS

2021	**Excellent Bachelor's Graduation Thesis**, Shanghai Maritime University	*China*
2021	**Excellent Graduate** , Shanghai Maritime University	*China*
2019-2021	**Second Class Scholarship**, Shanghai Maritime University	*China*
2018	**Third Class Scholarship**, Shanghai Maritime University	*China*