

Ziqi Cui

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EDUCATION

Oregon State University (Corvallis, OR)

09/2017-06/2021

B.S. in Electrical and Computer Engineering

- GPA: 3.85/4.0
- Honor Roll (GPA 3.5+) for three consecutive years
- Tau Beta Pi Oregon Alpha Chapter member (ID: 046-03177-6) (2018 - present)

RESEARCH EXPERIENCES

Wireless Hi-Fi Plasma Speaker Design

09/2020-06/2021

Course Project (ECE441-441-443 Senior Project)

Objective: to design a wireless Hi-fi Plasma speaker with more fidelity, less transient distortion, as well as high frequency corresponding capability

Two-dimensional Transmission Line Modeling Method: An Algorithm Considering Frequency Dependency and Ionization

07/2020-09/2020

Researcher, Electric Power System Lab of University of Florida

Supervisor: Prof. Arturo S. Bretas

- Read papers on establishment of transmission line ionization models; familiarized myself with the characteristics and frequency dependence of 2-D transmission lines
- Incorporated the core idea of papers on soil ionization models with frequency-dependency; improved the ionization model formula to make it suitable for the frequency-dependent model
- Utilized Fourier Transform to analyze the input signal in the frequency domain and obtained the expression of 2-D transmission line, with respect to ionization and frequency-dependency
- Built a flowchart and modeled the 2-D transmission line considering ionization and frequency using MATLAB

Development and Application of Wellhead Chromatograph

08/2019-01/2020

Research Assistant, DEMA Instrument Research Institute of CNPC

- Edited PLC control unit; designed positive pressure working mode and bypass working mode
- Collected detector data, matched the explosion-proof requirements of the chromatograph and compared the parameters of different detectors
- Analyzed the data from the field test and compared the differences between the gas measurement results of total hydrocarbon and methane, through the wellhead chromatograph and the conventional chromatograph
- Innovated the method of using chromatograph in the field operation and improved the detection efficiency

Mini Sumo Robot Design

01/2020-06/2020

Course Project (ECE341-342 Junior Project)

- Designed PCB through Autodesk eagle
- Deployed and installed the ultrasonic sensors infrared sensors
- Selected, coded and debugged the robot motor driver
- Programed the main logic function for the robot

INTERNSHIP EXPERIENCE

CNPC Bohai Drilling Engineering Company Limited

07/2019-09/2019

Technology R&D Department, Dema Instrument Service Center

- Tuned, tested and assembled the sensors including pressure sensor, temperature sensor and conductivity sensor
- Designed IoT system for on-site production and IoT data collection and processing system

- Designed hardware data communication circuit board
- Tested user experience and improved the functions

PUBLICATIONS

TieJun Li ¹, **Zhoujun Zheng** ¹, **Ziqi Cui** ², 2020. *Development and Application of Wellhead Chromatograph. Mud Logging Engineering*. ISSN:1672-9803 CN:12-1371/TE

EXTRA-CURRICULUM ACTIVITIES

Member, Tau Beta Pi (The Engineering Honor Society)

11/2018-present

Oregon State University

- Arranged and organized annual orientation events and activities, and helped freshmen to select and enroll in engineering majors
- Cooperated with Robot Association to provide and arrange weekly engineering training for free on various basic skills, including oscilloscope usage, PCB soldering, and circuit analysis
- Participated in The *2019 Scientific and Technological Fair* for primary students, providing them with the opportunities to learn and to understand engineering knowledge

TECHINICAL SKILLS

C++, C, Matlab, Atmel Studio, ModelSim PE, SystemVerilog, Autodesk Eagle, ATLAS

HOBBIES

Electronic Keyboard (Nonprofessional Level-9), Trombone, Music Editing, Taekwondo (Black Belt), Basketball, Badminton