

Xi Li

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Objective

To join GT_PRC lab will apply analog circuits design and analysis skills, and research experience

Education

Georgia Institute of Technology | Atlanta, GA

August 2018 - Present

Bachelor of Science in Electrical Engineering, GPA 3.97

Master of Science in Electrical Engineering

Expected Start at August 2021

Skills

Programming: Python(2 semesters), C++(2 semesters), C(2 semesters) MATLAB(simulink)

Hardware: Oscilloscope, logic analyzer, Microcontroller, signal generator, digital multimeter IMU

Software: Audacity, Altera Quartus II, NI LabVIEW, SolidWorks, Arduino Studio, CCS, Multisim

Languages: English (fluent), Chinese (native)

Experience

Georgia Institute of Technology | Atlanta, GA

CAV team member of EcoCAR Collegiate Competition Team

August 2020 - Present

1. Design sensor fusion hardware by radars and raptor microprocessor with CAN protocol
2. Use Simulink to create sensor fusion and controller block and produce .rpg files to run on raptor

Georgia Institute of Technology | Atlanta, GA

Research Assistant / School of Mechanical Engineering Hu's Lab

January 2019 - May 2019

1. Design and make a special device by SolidWorks to simulate the process of bees to transport pollen
2. Use software tracker to analyze 30 videos of the device to build function of force respect to time

Georgia Institute of Technology | Atlanta, GA

Research Assistant / School of Earth and Atmospheric Science

August 2019 - December 2019

1. Extract and prepare about 50 samples with metal and organic particles for analysis per day
2. Prepare 4 to 5 different types of chemical solution for daily experiments

Projects

FPGA Robot Project

Digital Design Lab, Georgia Institute of Technology

August 2019-December 2019

A team-based project to control robot based on FPGAs by VHDL to circle 7 reflectors randomly distributed within 3 weeks

2. Prepared 3 alternative algorithms to facing different situations which give us final scores better than 87% of class

Microcontroller control system Design

May 2020 - August 2020

Design controller solution for different plants and run MATLAB simulation to verify plausibility and apply it on microcontroller

1. Design state space module control model for user's plant module.
2. Apply C code to build control solution on microcontroller with consideration of digital signal and analog actuator to verify the solution to meet the user time requirement.

Relevant Coursework

Senior Analog Electronics Laboratory: Design analog electronic circuits such as amplifiers, filters, rectifiers, and oscillators. Validate designs and problem solutions by using mathematical and circuit simulation software. The final project is to build an op amp.

Analog Electronics: Analysis and design of electronic circuits and systems. Biasing, small-signal analysis, frequency response, feedback amplifiers, active filters, non-linear op-amp applications, and oscillators.

Embedded Systems Design: Processors, chipsets, busses, and I/O devices for high-end embedded systems. Embedded operating systems; device drivers and applications for embedded systems.

Advanced Programming Techniques for Engineering Applications: Course covers a number of programming techniques for distributed and parallel computing and other advanced methods, such as multiprecision arithmetic and nonblocking I/O.