

Jie Gao

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Education

Rice University	Houston, Texas	08/2022 – 08/2024 (expected)
Master of Electrical and Computer Engineering		
University of Mississippi	Oxford, Mississippi	08/2019 – 06/2022
Bachelor of Science in Electrical and Computer Engineering		
Current GPA: 3.60/4.00 (Cum Laude)		

Skills

Hardware: FPGA (Xilinx Nexys 7, Zynq 7000) and MCU (STM32, 8051, etc.)

Development Environment: Vivado, Vitis, Matlab Simulink, Multisim, LTspice, and Keil5.

Computer-Aided Design Software: Visio, Kicad, and AutoCAD.

Coding Skills: VHDL & Verilog HDL, MATLAB, C, Python, System Verilog, and Shell.

Relevant Experience

Build a 4x4 Matrix Multiplier Using Xilinx HLS Tools, Rice University, Houston 09/2022-10/2022

*Used the adder, multiplier, and Mux modules with the Matlab Simulink module provided by Xilinx (Model Compressor) to build a 4x4 matrix multiplier.

*Simulated the design and obtained the delay and resource usage results, and process the results of the matrix output through MATLAB

*Co-simulated the design on the FPGA (Via JTAG).

A TENS skin stimulator for testing a tactical feedback stuttering prosthetic in an MRI (Senior Design)

08/2021 – 06/2022

*Design and developed a device that can help stutter patients overcome stuttering through electrical stimulation with a team of three. It was designed and completed by me and two other students.

*Completed the schematic diagram of the whole project,

*Finished the design of the PCB board, with Kicad (the final design is a 3-layer PCB board), programming with Arduino to control the DS1803 digital potentiometer.

Automatic obstacle avoidance car based on STM32, University of Mississippi, Oxford 11/2021–12/2021

*Used the ultrasonic ranging sensor, STM32 development board, keyboard, and stepper motor.

*Based on the Keil5 development environment and were implemented by changing the value of the registers.

According to the course requirements, STM32 CUBE was not used.

*Collaborate with a group of four.

Digital IC Verification Engineer Intern, TONGXIN MICRO, Beijing

06/2021 – 08/2021

*Performed regression testing on the UVM test platform, tested functional coverage and wrote test documents.

* Verified the module design On the Xilinx Zynq-7000 FPGA and reported the problem to the superior.

*Wrote testbench based on System Verilog.

Publication

Jie Gao, Shaotong Li, Yiding Ma, & Zhao Zhang, (2021). *The Methods for High-Speed Low-Power Dynamic ADC Comparators Design* (English). The 2021 IEEE International Conference on Electronic Information Engineering and Computer Science (IEEE-EIECS 2021). Changchun, China. Accepted and in press.

Relevant Awards

Chancellor's Honor roll in 2022 Spring Semester	University of Mississippi	05/2022
Dean's Excellence Award in Engineering	University of Mississippi	04/2022
Dean's Honor Roll in 2021 Fall semester	University of Mississippi	12/2021