Haojie Ye

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EDUCATION

University of Michigan — Ann Arbor, Michigan — Sept. 2017 - Present
Computer Engineering — GPA 3.92/4.00
Course Highlights: Computer Architecture, Computer Vision, Machine Learning, Web Systems

Shanghai Jiao Tong University — Shanghai, China — Sept. 2015 - Aug. 2017
UM-SJTU Joint Institute — GPA 3.64/4.00

RESEARCH EXPERIENCE

Slingshot, CADRE Lab [1] — Sept. 2018 - Present

CADRE Lab is a computer engineering lab in U of M. My research in CADRE Lab focuses on the FPGA reconfigurability and the potential of FPGA to assist CPU in improving the processor's performance.

- Simulate several PC tasks such as document processing on Intel Arria 10 via Quartus II
- Implement a partial reconfigurable area to reduce the suspending time when FPGA is switching through different tasks
- Research through the connection between FPGA and PC to maintain the data coherency

Optical Stimulation and Recording Control System, Yoon's Lab [2] — Apr. 2018 - Present

Yoon's Lab in ECE Department specializes in the in-vivo biomedical experiments with U of M medical school. I was in charge of the development of a new hardware support via Opal Kelly FPGA.

- Develop a true dual port SDRAM memory on FPGA to handle both stimulation and recording signals from in-vivo
- Design a handy graphic user interface (GUI) of the control system for neuroscientists to use [3]
- Construct and maintain Yoon's Lab GitHub page. Ask questions from product customers

Two-way Superscalar, Out of order R10K style architecture, University of Michigan — Feb. 2018 - Apr. 2018

- Design and simulate an out-of-order processor with advanced features in System Verilog
- Design and debug modules that realize the two-way superscalar parallel algorithm
- Research and build tournament branch predictor, unified load store queue, pre-fetching instruction cache, etc.

HONORS AND AWARDS

- James B. Angell Scholar (2018)
- Outstanding Research Award for undergraduate (2018)
- Dean's List (2017, 2018)

TECHNICAL SKILLS

Programming Environments: Windows, Linux

Programming Languages: C, C++, python, System Verilog, Verilog HDL, MATLAB, HTML, CSS, JavaScript

[1]: https://cadre.eecs.umich.edu/

[2]: http://yoon.eecs.umich.edu/

[3]: https://github.com/Linestro