YANJUN YANG

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EDUCATION

Tongji University Sept, 2017 - July, 2021
BEng. in Electronic Science and Technology *Shanghai, China*

· Core units taken: Design and Analysis of Digital Integrated Circuits, Computer Architecture, Principles for Design of Integrated Circuit Chips, Embedded Systems

Nanyang Technological University Aug, 2021 - present
MSc (Electronics) *Singapore*

· Core units taken: Digital Integrated Circuit Design, Electromagnetic Compability Design, Genetic Algorithms and Machine Learning, Advanced Wafer Processing, Integrated Circuit Packaging

The University of Edinburgh Sept, 2022 - present
PhD Student, IMNS *Edinburgh, Scotland*

· Supervisor: Alex Serb, Themis Prodromakis
· Research theme: High-level design of a symbolic AI system based on Douglas Hofstadter.

RESEARCH EXPERIENCE

ReMap: a Mitchell-based logarithmic conversion circuit Aug, 2021 - July, 2022
Nanyang Technological University *MSc Dissertation Project*

· Researched on algorithm optimizations of a Mitchell-based binary logarithmic approximation method
· Implemented and evaluated corresponding integrated circuits

Design of a hierarchical memory management mechanism Aug, 2021 - Jan, 2022
Tongji University *Part-time Internship*

· In charge of a hierarchical SRAM-flash interface design with page replacement algorithm
· Applying the design on an automobile-orientated Cortex-M3 MCU

CoNM: Core of Normal Microarchitecture Mar, 2021 - Jun, 2021
Tongji University *Graduation Design*

· Designed an original 50MHz RV32I CPU core with a four-stage pipeline and static prediction mechanism using Verilog
· Transplanted the core onto PYNQ-Z1 FPGA for successful verification

Digital Integrated Circuits Curriculum Design Jun, 2020 - July, 2020
Tongji University *Curriculum Design*

· Designed and analyzed a 32-bit quick adder embedded with three different structures using Cadence
· Produced an analysis report on hierarchy, implementation, verification and simulation results

A Single-layer Wideband Microwave Absorber with Reactive Screen, A Novel Design of Microwave Absorber for Reduction of Radar Cross Section Dec, 2019 - May, 2020
Tongji University *Second Author*

· In charge of HFSS antenna simulation and analyses of experimental data
· Published two academic papers accepted by IEEE AP-S/URSI 2020 as the second author

CURRENT PROJECTS

Transplanting a core design to CHISEL Oct, 2021 - present
Self-learning

- Learning CHISEL and transplanting previous CoNM project
- Evaluating potential addition of ISA modules

HONOURS AND AWARDS

Tongji University 1st Semester, 2017
Advanced Summer Internship Individual

- Awarded for the great performance during summer internship

Tongji University 1st Semester, 2019
Outstanding Student Cadre

- Awarded for the outstanding work as minister of the Rights and Welfare Department in Students' Union

PROFESSIONAL SKILLS

Programming Languages

- Proficient in Verilog, VHDL
- Competent in C++, C
- Developing skills in CHISEL, Python

Professional Software

- Skilled in Synopsys, ModelSim, MATLAB
- Good command of Vivado, Cadence
- Good knowledge of HFSS, ISE, Keil

Languages
Native in Chinese, proficient in English

- IELTS 8.0/9.0, equivalent to CEFR level C1
- Elementary reading of French

INTERESTS

Literature and languages, music