

YANJUN YANG

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EDUCATION

Tongji University

BEng. in Electronic Science and Technology

Sept, 2017 - July, 2021

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

MSc (Electronics)

Aug, 2021 - Aug, 2022

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

PhD Candidate, IMNS

Sept, 2022 - present

Edinburgh, Scotland

- Supervisors: Alex Serb, Themis Prodromakis
- Research theme: Cognitive processing system design based on memristor associative memory.

RESEARCH EXPERIENCE

ReMap: a Mitchell-based logarithmic conversion circuit

Nanyang Technological University

Aug, 2021 - July, 2022

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

Tongji University

Aug, 2021 - Jan, 2022

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

Tongji University

Mar, 2021 - Jun, 2021

Graduation Design

- Designed a four-stage 50MHz RV32I CPU core with a static branch prediction in Verilog
- Transplanted the core onto PYNQ-Z1 FPGA for a successful verification

A Single-layer Wideband Microwave Absorber with Reactive Screen, A Novel Design of Microwave Absorber for Reduction of Radar Cross Section

Tongji University

Dec, 2019 - May, 2020

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 PROJECT

ASOCat

The University of Edinburgh

Sept, 2022 - present

PhD Sub-project

- Building a Copycat-based cognitive model compatible for an associative memory chip.
- Designing and implementing its software/hardware interface

HONOURS AND AWARDS

Tongji University

Advanced Summer Internship Individual

1st Semester, 2017

- Awarded for the great performance during summer internship

Tongji University

Outstanding Student Cadre

1st Semester, 2019

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

PROFESSIONAL SKILLS

Familiar with both ASIC and FPGA design workflows.

Programming Languages

- Proficient in Verilog
- Competent in C++, C, VHDL
- 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 proficiency of French

INTERESTS

Had thought of becoming a writer et polyglotte.

A Jay Chou and Aska Yang fan.

Very interested yet rather ignorant in classical music, operas and cocktails.