

YANG YANJUN

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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 - present

Singapore

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

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 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

Tongji University

Jun, 2020 - July, 2020

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

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 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 the 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

INTERESTS

Literature and languages, music, football