Guanyu Qian

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EDUCATION

University of California, Los Angeles (UCLA)
Master of Science in ***Electrical & Computer Engineering*** **| GPA 3.79/4.0** 2022 - 2024

- **Related courses:** Advanced Analog and Digital IC design, VLSI System, Machine learning and large-scale data mining, Human-AI Interface, MEMS Design, Embedded System, Neural Network, Power Electronic

University of California, Davis (UC Dais)
Bachelor of Arts and Science in **Applied Physics** and **Economics | GPA 3.72/4.0** 2018 - 2022

- **Related courses:** Electronic Circuits, Device Physics, Electromagnetic, Quantum, Thermal, and Solid-State Physics. Micro & Macroeconomics, Statistics, Analysis of Econ Data, Econometrics

SKILLS & PROFICIENCIES

Programming Skills: Python, C++, C, HTML, JavaScript, Verilog, Synopsys RTL synthesis
Professional Software: Cadence Virtuoso, OrCAD, Modelsim, COMSOL, LTSPICE, PADS, MATLAB, STATA
Languages: Chinese (Native), English (Proficient), Japanese (Elementary)

RESEARCH EXPERIENCES

Power Electronics and Energy Control (PEEC) Laboratory | UCLA
Graduate Research Assistant 11/2023 - Present

- Involved in an innovative research project focusing on Dynamic Voltage Scaling (DVS) within the context of data center power supply, addressing critical challenges in high-performance computing energy efficiency.
- Actively developing and testing DVS strategies to enhance operational performance in data centers, utilizing advanced simulation and analytical tools.

Muon Lifetime & Cosmic Background Radiation Detection | UC Davis Advisor: J. Anthony Tyson
Distinguished undergraduate student in advanced physics Lab course 04/2022 - 06/2022

- Examined muon mean lifetime using a system containing plastic scintillators and photomultiplier tubes while creating logic circuits for counting muons.
- Investigated cosmic microwave background radiation by building an RF system containing a radiometer with an LNA, mixers, and passive filters targeting signal at 19G Hz.
- Analyzed collected data, simulated fitting curve of muon decay function, and extrapolated cosmic background temperature using scientific data analysis techniques.

INTERNSHIP EXPERIENCES

Smart Shine Beijing, China
Research Intern at Terminal Module Department 07/2021 - 09/2021

- AR Smart Glasses Project R&D: Acquired proficiency in PADS software for circuit design on PCBs; performed tests on power-up timing, power supply ripple, and MIPI signal integrity using oscilloscopes; validated performance indicators of primary and secondary camera ports and display screen.
- 5G Millimeter Wave Research: Co-authored a comprehensive literature review from WCNC and ACC conference papers, engaged in scholarly discussions with team members, and projected future development trajectories and potential enhancements for millimeter wave technology, published in the Journal of Physics: Conference Series (ISSN: 1742-6588).

Xiaomi Beijing, China
Project Manager Intern 08/2020 - 09/2020

- Reviewed new treaties issued by government and service providers in various countries to maintain all new product and system sold was up to standard.
- Coordinated with various departments to update provisions not aligned with new treaties

PROJECT EXPERIENCES

FPGA Wiring and Switching Channel Optimization | UCLA 04/2023 - 06/2023

- Undertook research to enhance wiring channels in Field Programmable Gate Arrays (FPGAs) using 14nm FinFet technology, resulting in a 10-20% decrease in delay times for segment lengths 1-3.
- Developed and simulated two distinct switch blocks for different signal segment lengths, integrating design with key metrics such as Power-Delay Product to evaluate performance.
- Implemented project specifications into logic block output designs in a research setting, ensuring transistor size adherence and devising effective strategies to accommodate device mismatch factors.

High-Performance Differential Amplifier Design | UCLA 10/2022 - 10/2022

- Employed Virtuoso tools for high-performance amplifier design, strictly adhering to design specifications.
- Configured a two-staged OTA with a gain of 8 with a differential output swing of 1.8 V, maintaining gain error within 1%.
- Improved circuit performance, achieving a large signal settling time of only 40 nanoseconds with a 0.5% error while guaranteeing low power consumption.