Xinqiao, Zhang

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EDUCATION

PhD Expected May 2023
Department of Electrical and Computer Engineering, University of California San Diego, La Jolla, CA
Co-advisor: Prof. Farinaz Koushanfar. Advisor: Prof. Ke Huang.

MSEE Dec. 2019
Department of Electrical and Computer Engineering, San Diego State University, San Diego, CA GPA 3.55/4.0
Thesis title: IC Aging Prediction based on Machine Learning. Thesis advisor: Ke Huang

BSEE May 2017
Department of Control Engineering, Northeastern University (CN), Qinhuangdao, Hebei, China
Outstanding Student Leaders

PUBLICATION

[1]. K. Huang, X. Zhang, and N. Karimi, "Real-time prediction for IC aging based on machine learning," *IEEE Transactions on Instrumentation and Measurement (TIM),* vol. 68, no. 12, pp. 4756-4764, 2019.

PROJECTS

TrojAI project*, UCSD and other 16 teams. Prof. Farinaz Koushanfar* Expected April 2022
- Detection on adversarial training models and accelerate the detecting process.
- Main contributor. Got 2nd out of 16 teams in round 3 competition.

Optimization and Acceleration of Deep Learning on Various Hardware Platforms (Final project)-
-ECE226B Prof. Farinaz Koushanfar May 2020
- Parameter pruning and tensor decomposition with Python Keras framework
- Used various deep learning libraries and performed input pre-processing techniques.

Leakage Power Minimization (ECO), *ECE260B, University of California San Diego* Feb 2020
- Used Primetime to perform gate sizing and Vt-swapping optimizations

IC Aging Prediction Based on Machine Learning, *Master's thesis, San Diego State University* Jan 2019
- Designed a specific recurrent neural network for prediction
- Identified an approach that outperforms existing methods in terms of aging prediction accuracy

MIPS Processor Design, *EE670, Digital ASIC Design, San Diego State University* Spring 2018
- Designed a simple Digital MIPS processor using System-Verilog
- Built and debugged five modules and ten more submodules
- Operated basic functions and used test benches to do design verification

EXPERIENCE

Tutor, *ECE111 - Advanced Digital Design Proj, UCSD, Prof. Farinaz Koushanfar.* Fall 2018
- Answered questions during office hours every week, graded homework and projects.

Teaching Associate, *CompE470L, Experience and Application of FPGA, San Diego State University* Fall 2018
- Provided both individual and group academic support like debugging Verilog, instructing oscilloscopes and LogicPort

Instructional Student Assistants, *CompE 270, San Diego State University* Fall 2018
- Evaluated student papers or assignments as per rubric

SKILLS

Python	Tcl	MATLAB
Design Compiler	Verilog/System Verilog	Cadence
Bilingual- English / Mandarin	C	

HONORS/AWARDS

- Honorable Mention of Mathematical Contest in Modeling Oct 2016
- Major award of 11th Siemens Industrial Automation Design Competition Aug 2016