Xinqiao, Zhang

San Diego CA 92037 (858)-625-1627
joe.x.zhang10@gmail.com
https://xinqiaozhang.github.io

EDUCATION

PhD Expected May 2023
Department of Electrical and Computer Engineering, University of California San Diego, La Jolla, CA
Supervisor: Prof. Farinaz Koushanfar and 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), Shenyang, Liaoning, 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.

[2]. M. Samragh, S. Hussain, X. Zhang, K. Huang, & F. Koushanfar (2021). On the Application of Binary Neural Networks in Oblivious Inference. In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (pp. 4630-4639).

[3]. D. Ma, X. Zhang, et al. "DEVoT: Dynamic Delay Modeling of Functional Units under Voltage and Temperature Variations." *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (2021)*.

PROJECTS

TrojAI project by IARPA. *UCSD and other 16 teams. Prof. Farinaz Koushanfar* Expected Apr. 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)- *-ECE226 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* May 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 2020
- 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	C
Design Compiler	Verilog/System Verilog	Cadence
Bilingual- English / Mandarin	MATLAB	

HONORS/AWARDS

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