Xinqiao, Zhang

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EDUCATION

PhD Expected May 2023
Department of Electrical and Computer Engineering, University of California San Diego, San Diego, CA

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)* (finalized in March 2019)

PROJECTS

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 like add, sub, jump and so on
- Used test benches to do design verification

Static Timing Analysis, *EE670, San Diego State University* Spring 2018
- Programmed a script file for different time checks
- Computed time checks like setup, hold, input, output, recovery, removal and so forth

Power Consumption Based on MIPS Processor, *EE670, San Diego State University* Spring 2018
- Created a Unified Power Format (UPF) file and get power data for internal, switching, leakage and total

Porto Seguro's Safe Driver Prediction from Kaggle, *CS596 Machine Learning, San Diego State University*
- Programmed with Python Spring 2018
- Built and trained different neural network models
- Extracted with model ensemble and feature engineering methods

EXPERIENCE

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 LA1034 LogicPort to undergraduate students
- Developed teaching materials and graded projects and labs as per rubric
- Solved problems for diverse students' lab and created a summary resource
- Conducted course lectures, facilitated classroom discussion sessions and held weekly office hours

Instructional Student Assistants, *CompE 270, San Diego State University* Fall 2018
- Evaluated student papers or assignments as per rubric
- Proctored examinations and maintained/submitted student records (grades)

SKILLS

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

HONORS/AWARDS

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