

# 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 LogicPort to undergraduate students LA1034
- 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

<u>C</u>	<u>Verilog/System Verilog</u>	<u>Primetime</u>
<u>Design Compiler</u>	<u>Python</u>	<u>VCS</u>
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