

Princeton University
Department of Electrical and Computer Engineering

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Engineering Quad, Room J301
41 Olden St
Princeton, NJ 08544

Nationality: USA

Education

Princeton University

Aug. 2020 - Present

Ph.D., Electrical and Computer Engineering
Advisor: Prof. David Wentzlaff

Duke University

May 2020

B.S.E., Electrical and Computer Engineering
B.S., Computer Science
Magna Cum Laude – Graduated with ECE Distinction
Advisor: Prof. Krishnendu Chakrabarty

Research

Research Interests: Computer Architecture, Heterogeneous Computing, Reconfigurable Computing

Princeton Parallel Group

Jan. 2021 - Present

Chakrabarty Lab

Aug. 2018 - May 2020

VLSI testing for deep learning hardware and Carbon Nanotube FETs
Undergrad Thesis Title: Variation-Aware Delay Fault Testing for CNTFET Circuits – Automating Path Generation Pre-processing.

TU Dortmund Department of High Voltage Technology

May 2018 - Aug. 2018

Advisor: Prof. Frank Jenau
High voltage cable technologies and measurement systems
Supported by DAAD RISE Germany Scholarship

Publications

1. S. Banerjee, A. Chaudhuri, **A. Ning**, and K. Chakrabarty. Variation-aware delay fault testing for carbon-nanotube fet circuits. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 29(2):409–422, 2021

Select Projects

DECADES Project

DARPA funded collaboration between Princeton and Columbia. Part of chip tape out and chip testing team. More at decades.cs.princeton.edu

CIFER Project

Collaboration between Princeton and Cornell. Part of chip testing team.

Teaching

Princeton

Graduate teaching assistant - grading, office hours, recitations

ECE/COS 475/575: Computer Architecture

Spring 2022

Prof. David Wentzloff

Duke

Undergraduate teaching assistant - grading, office hours, lab instruction

ECE 110: Fundamentals of ECE

Fall 2018, Spring 2018, 2019, 2020

Prof. Stacy Tantum

ECE 230: Microelectronic Devices and Circuits

Fall 2018

Prof. Aaron Franklin

ECE 350: Digital Systems

Fall 2019, Spring 2019, 2020

Prof. Rabih Younes, Prof. John Board

Professional Experience

Microsoft

May 2020 - Aug. 2020

Software Engineering Intern – Redmond, WA (Remote)

Azure hardware acceleration. Project implemented in C/C++

Burns & McDonnell

May 2019 - Aug. 2019

Electrical Engineering Summer Analyst – Chicago, IL

Substation design (physical and wiring diagrams) contracts for ComEd and LGE-KU

Service

Princeton Graduate Student Government

Jan. 2021 - Present

Electrical and Computer Engineering Assembly Representative

Duke IEEE – Student Branch

Aug. 2016 - May 2020

Vice President (2017) and President (2018-2020)

Tau Beta Pi – NC Gamma

May 2019 - May 2020

Treasurer

Engineering World Health – Tanzania

May. 2017 - Aug. 2017

Volunteer Biomedical Technician in Arusha's St. Elizabeth Hospital

Honors

Gordon Y. S. Wu Fellowship

Aug. 2020

Full tuition and stipend support for four years to selected incoming graduate students in Princeton's SEAS.

National Science Foundation – Graduate Research Fellowship

Aug. 2020

Tuition and stipend support for three years for graduate students studying STEM fields.

Otto Meier Jr. Tau Beta Pi Award

May 2020

Given annually to the graduating Tau Beta Pi member who symbolizes best the distinguished scholarship

Chief Student Marshal

May 2019

Selected as one out of four from the entire junior class to serve as Chief Commencement Marshal in Spring 2019 and later selected again to be Chief Convocation Marshal in Fall 2019.

IEEE Eta Kappa Nu

Mar. 2019

Electrical engineering honor society. Inducted into Delta Gamma chapter

Tau Beta Pi

Jan. 2019

Engineering honor society. Inducted into NC Gamma chapter

DAAD RISE Germany Scholarship

May 2018

Fully funded research internship in Germany. Matched with TU Dortmund Institute of High Voltage Technology.

Bingle Family Scholarship

Sept. 2017

Financial aid scholarship endowed by the Michael J. Bingle and the Bingle Family of the Pratt Board of Visitors.

Skills

Languages: Fluent in English, Mandarin Chinese, proficient in German, Spanish, Swahili

Hardware: Analog and Digital Design, Arduino, FPGA, IoT, Microcontrollers

Software: AutoCAD, C/C++, Java, MATLAB, Mentor Graphics Pyxis, MIPS, Python, SPICE, SQL, Verilog

Last updated: February 23, 2022