Nayiri Krzysztofowicz

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nayiri-k.github.io

EDUCATION

University of California, Berkeley Aug 2020 - present
Ph.D. student in Electrical Engineering & Computer Science

University of Virginia Aug 2016 - May 2020
B.S. in Computer Engineering & Mathematics, GPA: 3.96/4.0

RESEARCH INTERESTS

Computer Architecture, Digital Circuit Design, Hardware Accelerators, Signal Processing, Machine Learning.

SKILLS

ECE	FPGA, Verilog, VHDL, Cadence, MSP430, NI Ultiboard *Courses* : Computer Architecture, VLSI Design, Computer Networks, Self-Powered IoT Systems, Embedded Systems (I & II), Signal Processing, Image Processing
CS	C, C++, Python, MATLAB, x86 Assembly, Bash, Visual Basic, Git *Courses* : Operating Systems, Machine Learning, Algorithms, Data Structures, Discrete Math
Math	*Courses* : Intro to Stochastic Processes, Numerical Methods, Complex Variables, Survey of Algebra, Basic Real Analysis, Probability, Linear Algebra, Ordinary Diff Eqns
Languages	English, Russian, French (fluent in all)

WORK EXPERIENCE

University of Virginia, Charlottesville, VA Dec 2016 - Jan 2019
Undergraduate Researcher
Developed a feedback loop from temperature sensor to clock that interpolates temperature data and serially outputs tuning bits to a clock, to create a temperature-stable on-chip clock.
Used PyCell and the Berkeley Analog Generator (BAG) to asses feasibility of auto-generating standard cell layouts with custom parameters.

HP, Corvallis, OR May 2019 - Aug 2019
Silicon Design Intern
Worked on circuit design team for HP print; team was responsible for all thermal inkjet printing circuits.
Created 48 transistor layouts for a minimum-area standard cell library (simple logic cells, latches, and flip-flops); reduced standard cells by an average 68% (ranged from 45-80%).
Writing Systems & Testbed Intern May 2018 - Aug 2018
Optimized user interface of an HP vision system written in Python using PyQt5 framework.
Wrote script (>1000 lines) in Visual Basic to execute printer commands from a user dialog-box during testing.
Managed shipment and setup of 40 prototype printers to test new HP ink cartridges.

NASA Langley Research Center, Hampton, VA May 2017 - Aug 2017
Cost Team Intern
Gathered data on >70 NASA missions to develop parametric cost model for the Science/Technology of missions; used NASA cost database to extract data and MATLAB to run analyses (regressions, machine learning algorithms).

PUBLICATIONS

A Self-Powered and LoRa-Based Fleet Tracker: Demonstrating Improved Reliability in the IoT
V. Lin, J. Dugan, N. Sheybani, N. Krzysztofowicz, M. Miller
IEEE SoutheastCon, March 2020

TEACHING EXPERIENCE

Computer Architecture (ECE 4435/6435), UVA — Spring 2020
Undergraduate Teaching Assistant (Instructor: Ronald Williams)

VLSI Design (ECE 4332/6332), UVA — Spring 2019
Undergraduate Teaching Assistant (Instructor: Mircea Stan)

Electronics (ECE 2660), UVA — Fall 2018
Undergraduate Teaching Assistant (Instructor: Ronald Williams)

Circuits (ECE 2630), UVA — Fall 2017, Spring 2018
Undergraduate Teaching Assistant (Instructor: Todd DeLong)

AWARDS & HONORS

Graduated with Highest Distinction — 2020

Best Senior Capstone, awarded to project team — 2020
A Solar-Powered Fleet Tracking System for Rural IoT Applications

James E. Miller Award, awarded to top 2 third-year UVA ECE students — 2019

Tau Beta Pi — 2018

Eta Kappa Nu — 2018

Intermediate Honors — 2018

Dean's List — 2016 - 2020

Rodman Scholar, top 5% of incoming UVA engineering students — 2016