NICHOLAS SICA

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Education

Drexel University	**Philadelphia, PA**
Ph.D. Student, Electrical Engineering	*September 2021 – Current*
Drexel VLSI and Architecture Lab, Advisor Dr. Baris Taskin	

Drexel University	**Philadelphia, PA**
B.S., Computer Engineering; Major GPA: 3.82, Cum. GPA: 3.77	*September 2016 – June 2021*

Employment Experience

Susquehanna International Group	**September 2019 – April 2020**
FPGA Co-op	*Bala Cynwyd, Pennsylvania*

- Architected and evaluated new design features and built test benches in VHDL
- Iterated upon in-house regression tests in C# and Python

ARRIS International	**September 2018 – April 2019**
Computer Engineering Co-op	*Horsham, Pennsylvania*

- Incorporated customer specifications into circuit design

G3 Technologies	**September 2017 – April 2018**
Computer Engineering Co-op	*Mt. Airy, Maryland*

- Soldered and fine-tuned IF Amplifiers to be within a certain range of decibel gain
- Spearheaded the implementation of a phase coherency testing platform in Python

Undergraduate Research Experience

Drexel Distributed, Intelligent, Scalable Computing Lab	**September 2019 – April 2020**
Undergraduate Researcher	*Philadelphia, PA*

- Designed and tested a cache with different replacement policies, approximate multiplier, and memory controlled in Verilog

Drexel VLSI and Architecture Lab	**April 2019 – June 2021**
Undergraduate Researcher	*Philadelphia, PA*

- Investigated the different aspects of a processor and unique instruction set architectures
- Researched and built a pipelined RISC V CPU in Verilog

Publications

1. R. Kuttappa, L. Filippini, N. Sica and B. Taskin, "Scalable Resonant Power Clock Generation for Adiabatic Logic Design," 2021 IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2021, pp. 338-342, doi: 10.1109/ISVLSI51109.2021.00068.

Academic Honors and Awards

George Hill, Jr. Endowed Fellowship: 2021-2024
Magna Cum Laude: 2021
Dean's List Distinction: 2016-2021
A. J. Drexel Scholarship: 2016-2021
Drexel Grant: 2016-2021

Relevant Coursework

Introduction to Quantum Computing, Compiler Design, High Performance Computer Architecture, VLSI Design I, Custom VLSI Design, Digital Systems Projects Embedded Design, Signals and Systems, Electric Circuits

Technical Skills

Languages: C/C++, VHDL, SystemVerilog, Python, C#.NET, MATLAB, Java, HTML, CSS, JavaScript
Software: Vivado, Virtuoso, Unity, AutoCAD, Creo Parametric, Visual Studio
Hardware: Arch Linux, Ubuntu, Windows 7-10
Operating Systems: FPGA, Arduino Uno, Raspberry Pi