

Nevo Magnezi

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Education

- Dec 2018 **B.S. in Electrical Engineering with Honors**, *University of Maryland*,
College Park, MD, Specialization in Microelectronics.
- May 2018 **Inducted IEEE-Eta Kappa Nu**, *Gamma Xi*, *University of Maryland*.
- May 2016 **Science, Technology, and Society Scholar**, *University of Maryland*.
- Sept 2014 **Presidential Scholarship Recipient**, *University of Maryland*.

Experience

- Oct 2018 **Electrical Design Engineer**, *CoolCAD Electronics LLC*, College Park, MD.
–Present
- Model silicon carbide power MOSFETs
 - Design and simulate SiC CMOS circuits for high temperature and high radiation environments
 - Test and characterize fabricated devices
- Aug 2017 **Undergraduate Research Assistant**, *Integrated Biomorphic Information Systems Lab*,
–Aug 2018 *University of Maryland*.
- Programmed off-the-shelf nano drone to autonomously locate source of odor using gas and vision sensors
 - Expanded Python library to log variables real-time and allow mid-flight calculations
 - Developed new firmware to allow drone to read from gas sensor
- Jan 2018 **Mixed Signal VLSI Capstone Team Lead**, *University of Maryland*.
–May 2018
- Designed a near tape-out ready CMOS sensor to detect luminescence for biomedical applications
 - Designed, analyzed, and performed layout of 13-bit ADC components: DAC and ramp generator
 - Simulated design components separately and together to test functionality
- June 2017 **Undergraduate Research Fellow**, *SUNFEST REU program*, *University of Pennsylvania*.
–Aug 2017
- Implemented a deflection-routed Butterfly Fat Tree network-on-chip using Verilog & Python
 - Created a Python interface to thoroughly simulate and test network under a wide variety of traffic conditions
 - Worked to make Verilog code synthesizable for implementation on FPGA
- June 2016 **Hardware Engineering Co-op**, *Viavi Solutions*, Germantown, MD.
–Dec 2016
- Assisted in product development of dual-port 100G/s handheld fiber-optic network tester
 - Conducted design, verification, and testing (DVT) of PCBA prototypes
 - Created a Python script to automatically cycle through device battery levels to test average use

Programming & Software

SPICE	Advanced	<i>Writing & modifying netlists, using analysis tools, schematic capture</i>
Verilog	Advanced	<i>Implemented clocked packet-switched network, simple processor using iverilog</i>
Python	Advanced	<i>numpy/scipy/numba, multi-threading, error-handling, OO programming</i>
C	Proficient	<i>gcc and gdb, code encapsulation, FreeRTOS</i>
CIDER	Proficient	<i>Simulated semiconductor devices with distinct physical characteristics</i>
Virtuoso	Proficient	<i>Spectre, layout and schematic tools</i>

Publications

D. Park, Y. Xiao, N. Magnezi, and A. DeHon, "Case for fast FPGA compilation using partial reconfiguration," in *2018 28th International Conference on Field Programmable Logic and Applications (FPL)*, Aug 2018, pp. 235–238.

A. Castro, N. Magnezi, A. Quinto, and P. Abshire, "Odor source localization on a nano quadcopter," *IEEE Biomedical Circuits and Systems Conference (BIOCAS)*, October 2018.