

Education	University of California, Davis Ph. D. Physics: Dec 2018 M. S. Physics: Dec 2013	2012 – 2018
	Saint Mary's College of California, Moraga B. S. Physics, Minor: Mathematics, <i>summa cum laude</i> (GPA: 3.873)	2007 – 2011
Computing	Python (proficient), C++ (intermediate), Go (intermediate), Bash (intermediate), CUDA (intermediate), Git (proficient)	
Skills	Simulations, Data Analysis, Statistics, Data Visualization, Linux, Python Data & Visualization Ecosystem (numpy, scipy, pandas, dask, matplotlib, ...), HPC, Distributed Computing, VTK, Jekyll.	
Research & Experience	Computational Physics Laboratory, Tampere University, Finland <i>Postdoctoral Researcher</i>	Jan 2019 – Present
	<ul style="list-style-type: none"> Simulated nanoscale magnetic materials using a combination of open source software and in-house code (Go, CUDA, and Python) on GPU cluster. Numerical calculations of domain wall motion were compared to an analytic model [5]. 	
	Department of Physics, University of California, Davis <i>Graduate Student Researcher</i>	2012 – 2018
	<ul style="list-style-type: none"> Fabricated and characterized a wide range of nanoscale magnetic materials, including nanoparticles, thin films, single crystals, and patterned nanostructures using a variety of cutting-edge techniques. Programmed data acquisition and instrument control software for laboratory equipment, including sputter-deposition power supplies and multimeters. Developed PyFORC, a suite of open source tools for analyzing and visualizing magnetic measurements using the First-Order Reversal-Curves (FORC) technique (Python). Time required to go from raw data to publication quality plot was reduced by a factor of ~ 10 compared to previous software. 	
	Physics Division, Lawrence Berkeley National Laboratory, Berkeley, CA <i>Junior Specialist, ATLAS Experiment</i>	2011 – 2012
	<ul style="list-style-type: none"> Tested prototype next-generation hardware developed for tracking the trajectories of charged particles at the Large Hadron Collider. Developed system control GUI and backend for an integrated circuit tester (C++ and Qt; version control with SVN). These tools allowed for automated testing of hundreds of chips (entire wafers) at a time, greatly increasing throughput. Chips which passed tests were installed as part of the Insertable B-Layer system at the LHC in 2014, enabling continued studies of the Higgs boson. 	
	Physics Department, Saint Mary's College of California, Moraga <i>Research Assistant, ALFALFA Collaboration</i> Advisor: Ron Olowin	2010 – 2011
	<ul style="list-style-type: none"> Classified galactic and extragalactic astronomical observations as part of the Arecibo Legacy Fast-ALFA (ALFALFA) project, an international collaboration of astronomers based at the Arecibo Radio Observatory in Puerto Rico. 	
Teaching	<i>Teaching Assistant, Dept. of Physics, University of California, Davis</i>	2012 – 2016
	<i>Student Tutor and Live-In Mentor, Physics Dept., St. Mary's College of California</i>	2010 – 2011

Publications, selected conferences, and laboratory skills are listed on the extended CV [on my website](#).