

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), Javascript (intermediate), CUDA (intermediate). Git, Python scientific/data vis stack (scipy [contributor], numpy, matplotlib, ...). Web development with Django (and Django REST), React+Redux, AngularJS.	
Skills	Agile development, Simulations, Data Analysis, Statistics, Data Visualization, Linux, HPC (slurm), Distributed Computing, VTK, Jekyll.	
Research & Experience	Voltaiq , Berkeley, CA <i>Software Engineer</i>	Oct 2019 – Present
	<ul style="list-style-type: none"> Developed and deployed bespoke, modern, and production-quality data analysis and visualization tools to provide quantitative insight into battery performance for some of the world's largest battery manufacturers using Django (with Django REST Framework), Plotly.js, and React. 	
	Computational Physics Laboratory , Tampere University, Finland <i>Postdoctoral Researcher</i> Advisor: Lasse Laurson	Jan 2019 – Aug 2019
	<ul style="list-style-type: none"> Simulated nanoscale magnetic materials on the CSC's Taito-GPU supercluster using a combination of open source software and in-house code (Go, CUDA, and Python). Numerical calculations of domain wall motion were compared to an analytic model [6]. 	
	Department of Physics , University of California, Davis <i>Graduate Student Researcher</i> Advisor: Kai Liu	2012 – 2018
	<ul style="list-style-type: none"> Developed PyFORC, a suite of open source tools for analyzing and visualizing magnetic measurements using the First-Order Reversal-Curves (FORC) technique (Python). Streamlined the Liu group's material analysis pipeline by developing tarmac, a Python library for quickly visualizing Markov-chain monte carlo (MCMC) samples. This library makes it simple to identify correlations between parameters in a statistical model and evaluate convergence during fitting. 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 crucial laboratory equipment. 	
	Physics Division , Lawrence Berkeley National Laboratory, Berkeley, CA <i>Junior Specialist</i> , ATLAS Experiment Principal Investigator: Maurice Garcia-Sciveres	2011 – 2012
	<ul style="list-style-type: none"> Developed system control software for an integrated circuit tester (C++ with Qt GUI; version control with SVN), allowing for automated testing of hundreds of chips 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 [12]. 	
	Physics Department , Saint Mary's College of California, Moraga <i>Research Assistant</i> , ALFALFA Collaboration Advisor: Ron Olowin	2010 – 2011
Teaching	<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. 	
	<i>Teaching Assistant</i> , Dept. of Physics, University of California, Davis <i>Student Tutor and Live-In Mentor</i> , Physics Dept., St. Mary's College of California	2012 – 2016 2010 – 2011

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