

Hello! I'm a Physics PhD student at the University of Washington in the [Kutz Research Group](#) working on data-driven discovery of physics, focusing on photonics research. My work at UW extends to teaching undergraduate courses and volunteering to build instructional, community, and mentorship programs. Outside of a professional context, I enjoy climbing, lifting, cycling, chess, game development, writing music, and everything Linux. I am interested in opportunities in applied mathematics research, data science, computational physics, and software development.

education

University of Washington

PhD Physics Student (Advisor: Nathan Kutz)
MS Physics, 2018.

Coursera

Advanced Machine Learning Specialization (ongoing)

San Francisco State University

MS Physics (Advisor: Weining Man), Distinguished Achievement Award.

UC Berkeley Extension

Certification in Information Systems, 2013. Received with 4.0 Distinction.

University of Rhode Island

BA Psychology, 2009.
BS Supply Chain & Logistical Management, 2009.
BS Entrepreneurial Management, 2009. Magna Cum Laude.

research & publications

MS Thesis: "Experimental Measures on Anisotropic Photonic Structures
and Computational Tuning of Photonic Systems"

Sellers, S., Man, W., Sahba, S., & Florescu, M., Nature Communications (Feb. 2017)
"Local Self-Uniformity in Photonic Networks." doi:10.1038/ncomms14439

presentations

ARCS NCC Symposium, Poster, "Hyperuniform Disordered Photonic Structures," 2016.
ARCS NCC SFSU Review, Powerpoint, "Photonic Crystals and Modern Applications," 2015.

honors

First Year Graduate Teaching Award, University of Washington, 2019.
Physics Department Fellowship, University of Washington, 2017.
Distinguished Achievement Award, San Francisco State University, 2017.
ARCS Northern California Scholar, 2016-2017.
Blue Waters Petascale Institute, Selected participant, UIUC, 2016.
COSE Student Project Showcase Winner, 1st place in physical sciences, SFSU, 2016.
ARCS Northern California Scholar, 2015-2016.
Magna Cum Laude, University of Rhode Island, 2009.
American Invitational Mathematics Examination, Invited contestant, 2005.

languages

English, Persian, Spanish

programming languages

my top tier: Python, Julia, MATLAB, Shell, Mathematica, Git
familiarity: C, C++, C#, Scheme, SQL

computer & tech skills

machine learning: Tensorflow, Keras, PyTorch, Scikit
physics: Lumerical, meep, mpb
graphics: Blender, Photoshop, Krita
systems: Linux (Manjaro, Arch, Debian, Ubuntu, ...), Windows
productivity: \LaTeX , Slack, Discord, Jupyter, Github, Sublime, Office, Google Suite
web: Jekyll, WordPress
game dev: Godot
hardware: I can build a machine.

community & achievements

Software Carpentry

Instructor, 2019-

Making programming and data tools accessible to a wide audience!
I've led tutorials in Linux, Python, R, and Git in live-coding workshops. It's fun!

UW Physics Slam

Host and organizer, 2019-

Hosted UW's first annual physics slam! Six scientists turned into slammers to bring the public cutting edge research in a fun format, raising over \$1500 for diversity in physics.

DRiP (Directed Reading in Physics)

Program organizer and research guru, 2018-

In 2019 we birthed a reading program for UW physics undergrads to be mentored by graduate students to foster community, develop their scientific literacy, and learn cool physics.

Career Development Organization for Physicists at UW

Conference organizer, President, 2017-

Our team of five grad-students ran a conference bridging the gap between industry scientists and Physics PhD's. We handle all event management, marketing, logistics, fundraising, and programming.

Physics Graduate Student Committee

Event committee member, 2017-

Hosted the Friday Fling departmental socials for the UW Physics Department.

UW Physics Peer Mentor Program

Peer mentor, 2018-2019

Introduced two new PhD's to UW, taking the time to make their first-year experience welcome.

OSA, The Optical Society

SFSU Student Chapter President, 2016-2017. Member, 2017-2019.

Arranged traveling lecturer series of talks, inviting faculty from abroad to visit SFSU.

teaching **Dept. Physics, University of Washington**

Teaching Assistant, 2017 - 2019

PHYS115 General Physics Mechanics
PHYS116 General Physics Electromagnetism
PHYS117 General Physics Mechanics Lab
PHYS118 General Physics Electromagnetism Lab (2 sections)
PHYS121 Physics w/ Calc. Mechanics Tutorial (4 sections)
PHYS122 Physics w/ Calc. Electromagnetism Tutorial (2 sections)
PHYS123 Physics w/ Calc. Waves & Optics Tutorial
PHYS121z Physics w/ Calc. Mechanics Lab (2 sections)
PHYS224 Thermodynamics
PHYS324 Quantum Mechanics (4 sections)
PHYS325 Quantum Mechanics (3 sections)
PHYS423 Solid State Physics
PHYS427 Quantum Computing & Information

Dept. Physics & Astronomy, San Francisco State University

Teaching Assistant, 2015

PHYS360 Electricity and Magnetism
PHYS457 Principles of Electronics

Elite Educational Institute

Mathematics & Physics Instructor, 2014-2017

Private Tutoring: SAT, SAT II, Precalculus, AP Calculus, AP Physics.

Courses: Geometry, Precalculus (2 sections), SAT Prep (10 sections)

Edge U Tutoring (link to archived site)

Founder & Private Tutor, 2013-2015

Private Tutoring: SAT, ACT, AP Calculus, AP Physics, AP Biology

Revolution Prep

SAT Instructor & Private Tutor, 2010-2013

Courses: SAT Prep (19 sections), AP Phys B Review Course, Online SAT Prep (3 sections)