# Shervin Sahba

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*resume updated 2019-07-10*

Hi! I'm a Physics PhD student at the University of Washington in the Kutz Research Group working on data-driven discovery in physical systems, often for photonics research. My work at UW extends to teaching undergraduate courses and volunteering to build instructional, community, and mentorship programs. I am interested in opportunities in data science, software development, and theoretical or computational physics.

Links: ResearchGate — LinkedIn — GoogleScholar

Outside of a professional context, I enjoy climbing, lifting, bicycling, chess, game dev, writing music, and Linux.

## 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.

## Community & Affiliations

**Software Carpentry**
Instructor, 2019.

**Career Development Organization for Physicists at UW**
Conference organizer, President, 2017-2019.

**DRiP (Directed Reading in Physics) Program**
Program organizer and instructor, 2018-2019.

**Physics Graduate Student Committee**
Event committee member, 2018-2019.

**UW Physics Peer Mentor Program**
Peer mentor, 2018-2019.

**OSA, The Optical Society**
SFSU Student Chapter President, 2016-2017. Member, 2017-2019.

## Programming Languages

Top-tier: Python, Julia, MATLAB, Shell, Mathematica, Git
Mid-tier: C, C++, C#, Scheme, SQL.

## Computer Skills

*ML:* Tensorflow, Keras, PyTorch, Scikit
*physics:* Lumerical, meep, mpb
*graphics*: Blender, Photoshop, Krita, GIMP
*systems*: Linux (Manjaro, Arch, Debian, Ubuntu, ...), Windows
*productivity*: LaTeX, Slack, Discord, Jupyter, Github, Sublime, Office, Google Suite
*web*: Jekyll, WordPress
*game dev*: Godot, Unity

## Languages

English, Persian, Spanish

## Teaching Experience

**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
PHYS423 Solid State Physics
PHYS427 Quantum Computing & Information

## Teaching Experience (continued)

**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)