

Shervin Sahba

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Hi! I'm a [Physics PhD student](#) at the University of Washington. A member of the Applied Math Department's [Kutz Research Group](#), I focus broadly on data-driven discovery in physical systems. Within this context, I study the flow of light. That is, I use analysis, computational physics, and machine learning for photonics research. My work at UW extends to teaching and volunteering in establishing instructional, community, and mentorship programs. I am interested in opportunities in data science, software development, and theoretical or computational physics.

Outside of a professional context, I am an avid runner, climber, lifter, chess player, game developer, and musician. Friends and colleagues would describe me as outgoing and optimistic.

Education

University of Washington

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

San Francisco State University

MS Physics Student (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.

Honors (continued)	<p>COSE Student Project Showcase Winner, 1st place in physical sciences, SFSU, 2016. ARCS Northern California Scholar, 2015-2016. Received Professional Certification in Information System, UC Berkeley Extension, 2013. Graduated Cum Laude, University of Rhode Island, 2009. American Invitational Mathematics Examination, Invited contestant, 2005.</p>
Volunteering & Organizations	<p>Software Carpentry Instructor, 2019.</p> <p>Career Development Organization for Physicists at UW Conference organizer, President, 2017-2019.</p> <p>DRiP (Directed Reading in Physics) Organizer and instructor, 2018-2019.</p> <p>Physics Graduate Student Committee Event committee member, 2018-2019.</p> <p>UW Physics Peer Mentor Program Peer mentor, 2018-2019.</p> <p>OSA, The Optical Society SFSU Student Chapter President, 2016-2017. Member, 2017-2019.</p> <p>SIAM, Society for Industrial & Applied Mathematics Member, 2016-2019.</p>
Programming Tools	<p>Python, MATLAB, Mathematica, UNIX Shell, Jupyter Lab, Sublime, Git, GitHub Familiarity with Octave, Scheme, C, C++, C#, Q#.</p>
Computing Skills	<p><i>scientific</i>: Tensorflow, Keras, Sklearn, Mathematica, MATLAB, meep, Lumerical, L^AT_EX <i>graphics</i>: Blender, Photoshop, Krita, GIMP, Godot, Windows, Excel, MS Office <i>systems</i>: Linux (Manjaro, Arch, Debian, CentOS, Ubuntu), Windows <i>productivity</i>: Slack, Discord, Excel, MS Office, Google Suite, Drive, Dropbox <i>other</i>: WordPress, Godot</p>
Spoken Languages	<p>English (native) Persian (native) Spanish (intermediate)</p>
Teaching Experience	<p>Dept. Physics, University of Washington Teaching Assistant, 2017 - 2018</p> <ul style="list-style-type: none"> 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 sec) PHYS122 Physics w/ Calc. Electromagnetism Tutorial (2 sec) PHYS123 Physics w/ Calc. Waves & Optics Tutorial PHYS121z Physics w/ Calc. Mechanics Lab (2 sec) PHYS224 Thermodynamics PHYS324 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)
Online AP Phys B Review Course
Online SAT Prep (3 sections)