

James Saslow

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Education

San Jose State University Masters of Science in Quantum Technology	Expected Graduation Date: May 2025
<ul style="list-style-type: none">Coursework: Quantum Information Science, Intro to Quantum ComputingAwards: Quantum Technology NSF Research Traineeship at Colorado School of MinesCo-founder of the Society of Quantum Engineers chapter at SJSU	
San Jose State University Bachelor of Science in Physics	August 2018 - December 2022
<ul style="list-style-type: none">Upper Division Major GPA: 4.0Coursework: Quantum Mechanics, Computational Physics, Partial Differential EquationsAwards: Summa Cum Laude, Recruited into the Society of Physics Students	

Work Experience

San Jose State University Physics Department <i>Teaching Associate (Part-time)</i>	August 2023 – Dec 2023
<ul style="list-style-type: none">Instructed a university-level introductory physics lab section, graded problem sets, and fostered collaborative, team-based learning for students.	
Griffiss Institute & AFRL Internship Program <i>Quantum Algorithms Research Intern at Air Force Research Lab</i>	June 2023 – Aug 2023
<ul style="list-style-type: none">Developed quantum algorithms in Qiskit simulators aimed at solving QUBO problems via amplitude amplification schemesPerformed benchmarking on IBMQ by conducting a fidelity analysis of amplitude amplification on heavy-hexagonal superconducting devices	
San Jose State University Physics Department <i>Quantum Foundations Researcher</i>	December 2021 – Present
<ul style="list-style-type: none">Performed simulations of spontaneous parametric down-conversion and entangled photon generation via an action-based analysisEngaged in Python programming, Runge-Kutta techniques for solving nonlinear differential equations, and data visualization	
The Leadership Alliance, Brown University <i>Soft Matter Research Intern</i>	June 2020 – August 2020
<ul style="list-style-type: none">Performed professional research on soft matter physics & virology after the start of the COVID-19 epidemicSolved nonlinear differential equations to obtain the structure and function of a spherical colloidal membrane viral assemblyPresented research to the Virtual Leadership Alliance Virtual SymposiumAwarded the Leadership Alliance Professional Development Badge in recognition of James' research	

Relevant Projects (Personal Website: jamessaslow.com)

Quantum Circuit Simulator EE 225 Quantum Computing Project	September 2023 – Present
<ul style="list-style-type: none">Programmed a gate-based quantum circuit simulator in Python through matrix methods onlyUtilized professional coding conventions and developed data visualization functions to display probabilities, Bloch Sphere visualization, and amplitude space representations of discrete wavefunctions.	
Variational Quantum Eigensolver Tutorial Phys 161 Quantum Information Science Project	October 2023 - November 2023
<ul style="list-style-type: none">Wrote a Python tutorial in a Jupyter Notebook explaining the implementation of the Variational Quantum Eigensolver, solving for the ground state of an H2 molecule.	

Technical Skills

- Software:** Python, Mathematica, Qiskit, Quantum many-body simulations, DWave API, numerically solving PDE's
- Language:** English (Native), Spanish (Professional Working Proficiency)