
Laura Cui

Pasadena, CA 91125
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Education

- Ph.D.** Physics, *California Institute of Technology* SEPT 2023 - PRESENT
⊗ Advisors: John Preskill, Fernando Brandão
- B.S.** Physics and Mathematics, *Massachusetts Institute of Technology* SEPT 2019 - JUNE 2023
⊗ GPA: 4.9/5.0, Thesis: “Probing Local Many-Body Dynamics with Random Quantum Circuits”
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Undergraduate Research Experience

- MIT Center for Theoretical Physics** JAN 2022 - JAN 2024
Mentors: Aram Harrow, Daniel Ranard
- Caltech Institute for Quantum Information and Matter** JUNE 2021 - AUG 2021
Mentors: John Preskill, Alexander Dalzell, Hsin-Yuan (Robert) Huang
- MIT Research Laboratory of Electronics** JUNE 2020 - AUG 2020
Mentors: Dirk Englund, Carlos Errando Herranz
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Awards & Honors

- Sigma Pi Sigma Inductee** 2023
Invited for outstanding scholarship in physics at MIT
- NSF Graduate Research Fellowship Program Honorable Mention** 2023
Received one of 825 honorable mentions
- MIT Goldwater Scholarship Nomination** 2022
Selected as one of two nominees from the MIT School of Science
- Regeneron Science Talent Search Scholar** 2019
Awarded for work on near-threshold doubly heavy tetraquark states
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Research Talks & Seminars

- MIT Center for Theoretical Physics, Quantum Information Processing Seminar** JUNE 2023
“Random quantum circuits as a model for the classification of topological phases”
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Poster Presentations

- Quantum Information Processing Conference, Taipei, Taiwan** JAN 2024
“Decay of spurious contributions to the topological entanglement entropy”
- Small Satellite Conference, Utah State University, Logan, UT** AUG 2019
“Space-based Ionosonde Receiver and Visible Limb-viewing Airglow Sensor (SIRVLAS): A CubeSat Instrument Suite for Enhanced Ionospheric Charge Density Measurements”
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Workshops & Schools

Workshop on Random Quantum Circuits <i>QuSoft and Centrum Wiskunde & Informatica, Amsterdam, Netherlands</i>	NOV 2024
Cal-Bay Quantum School <i>Munich Center for Quantum Science and Technology, Garching, Germany</i>	JUNE 2024

Teaching Experience

California Institute of Technology

Teaching Assistant, <i>Ph 129b: Analytic Techniques in Mathematical Methods of Physics</i>	WINTER 2025
Teaching Assistant, <i>Ph 12: Waves, Quantum Physics, and Statistical Mechanics</i>	WINTER 2024 - FALL 2024

Massachusetts Institute of Technology

Undergraduate Teaching Assistant, <i>6.1200: Mathematics for Computer Science</i>	SPRING 2023
Lecturer and Head Grader, <i>18.S097: Proof-Writing Workshop</i>	WINTER 2021
Undergraduate Teaching Assistant, <i>8.02: Electricity and Magnetism</i>	FALL 2020

Other

Mentor, <i>MIT Physics Mentorship Program</i>	FALL 2021 - SPRING 2023
Residential Counselor, <i>MathROOTS @ MIT</i>	JUNE 2022 - JULY 2022
Teaching Assistant, <i>Art of Problem Solving Academy Gaithersburg</i>	NOV 2017 - JULY 2020

Additional Experience

Interuniversity Institute for Marine Sciences , <i>Research Assistant</i> Supervisor: Derya Akkaynak	JUNE 2023 - AUG 2023
J.P. Morgan Chase & Co. , <i>Quantitative Research Intern</i> Team: Rates Data Analytics	JAN 2020
University of Maryland Joint Quantum Institute , <i>Research Assistant</i> Mentors: Jacob M. Taylor, Daniel Carney	JUNE 2019 - AUG 2019
University of Maryland Center for Fundamental Physics , <i>Visitor</i> Mentor: Thomas D. Cohen	JUNE 2018 - AUG 2018
blair3sat , <i>Co-founder, Optical Mission Lead</i> With Ryan Tse, Patrick Kim, Sujay Swain, Benjamin Cohen, and Gautom Das	SEPT 2017 - JUNE 2019
Naval Research Laboratory , <i>Science and Engineering Apprenticeship Program</i> Affiliation: Space Science Division	JUNE 2017 - AUG 2017

Outreach and Community Service

Caltech CUWiP 2028 , Organizing Committee	PRESENT
Caltech FUTURE of Physics , Co-chair	SUMMER 2025
Caltech Gender Minorities and Women in PMA , Treasurer	FALL 2024 - PRESENT
Caltech PMA Graduate Student Advisory Board , Member	FALL 2023 - PRESENT
MIT Physics Values Committee , Undergraduate Representative	FALL 2021 - SPRING 2023
MIT Undergraduate Society for Women in Mathematics , President	SUMMER 2022 - SPRING 2023
MIT Undergraduate Womxn in Physics , Executive Board Member	SUMMER 2021 - SPRING 2023
MIT Society of Physics Students , Executive Board Member	SUMMER 2021 - SPRING 2023
MIT Educational Studies Program , Executive Board Member	FALL 2019 - FALL 2022
HMMT Education , Speaker	SPRING 2021 - FALL 2021