

Vishnu Iyer

<http://vishnuiyer.org>

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Education

University of Texas at Austin

August 2021 - present

PhD in Quantum Computing, advised by Scott Aaronson. NSF Fellow.

University of California at Berkeley

August 2016 - May 2020

B.S. in Electrical Engineering and Computer Science with Highest Honors (~ top 3%).

Experience

Invited Student Researcher, Simons Institute

Spring 2024

Summer Research Intern, Sandia National Labs Quantum Group

Summer 2023

Graduate Student Researcher (UT Austin)

August 2021 - present

Undergraduate Student Researcher (UC Berkeley)

August 2018 - August 2021

Papers ¹

13. *Efficient Quantum Hermite Transform* October 2025
Siddhartha Jain[†], **Vishnu Iyer**[†], Rolando Somma, Ning Bao, Stephen Jordan
[†]These authors contributed equally to this work.
12. *Efficient Learning of Bosonic Gaussian Unitary Channels* October 2025
Marco Fanizza, **Vishnu Iyer**, Junseo Lee, Antonio Anna Mele, Francesco Anna Mele
11. *Fermionic Insights into MBQC: Circle Graph States are Not Universal Resources* October 2025
Brent Harrison, **Vishnu Iyer**, Ojas Parekh, Kevin Thompson, Andrew Zhao
10. *Mildly-Interacting Fermionic Unitaries are Efficiently Learnable* QTML 2025
Vishnu Iyer
9. *Tolerant Testing of Stabilizer States with Mixed State Inputs* QTML 2025
Vishnu Iyer, Daniel Liang
8. *Agnostic Tomography of Stabilizer Product States* April 2024
Sabee Grewal, **Vishnu Iyer**, William Kretschmer, Daniel Liang
7. *Pseudoentanglement Ain't Cheap* TQC 2024
Sabee Grewal, **Vishnu Iyer**, William Kretschmer, Daniel Liang
6. *QMA with Hidden Variables and Non-Collapsing Measurements* FSTTCS 2025
Scott Aaronson, Sabee Grewal, **Vishnu Iyer**, Simon C. Marshall, Ronak Ramachandran
5. *On the Rational Degree of Boolean Functions with Applications* October 2023
Vishnu Iyer, Siddhartha Jain, Matt Kovacs-Deak, Vinayak Kumar, Luke Schaeffer, Daochen Wang, Michael Whitmeyer
4. *Efficient Learning of Quantum States Prepared With Few Non-Clifford Gates* QIP 2024
Sabee Grewal, **Vishnu Iyer**, William Kretschmer, Daniel Liang
3. *Improved Stabilizer Estimation via Bell Difference Sampling* QIP 2024, STOC 2024
Sabee Grewal, **Vishnu Iyer**, William Kretschmer, Daniel Liang

¹Authors listed in alphabetical order by last name for most of the listed papers, as is customary in theoretical computer science and quantum computing. All exceptions are apparent.

2. *Low-Stabilizer-Complexity Quantum States are not Pseudorandom* ITCS 2023
 Sabee Grewal, **Vishnu Iyer**, William Kretschmer, Daniel Liang
ITCS 2023 Best Student Paper Award
1. *Junta Distance Approximation with Sub-Exponential Queries* CCC 2021
Vishnu Iyer, Avishay Tal, Michael Whitmeyer

Awards and Honors

Google XPRIZE for Quantum Applications Semifinalist	<i>October 2025</i>
Horizon Quantum Hackathon Winner	<i>December 2023</i>
NSF Graduate Research Fellowship	<i>March 2023</i>
ITCS Best Student Paper Award	<i>January 2023</i>
University of Texas Chair's Strategic Fellowship	<i>April 2021</i>
UC Berkeley University Medal Semifinalist	<i>February 2020</i>
UC Berkeley Outstanding GSI Award	<i>March 2019</i>

Selected Talks

Invited

Improved Algorithms for Learning Bosonic and Fermionic Operators AIMS Workshop on Quantum Learning Theory.	<i>October 2025</i>
Efficient Quantum Hermite Transform IBM Quantum Research Seminar.	<i>September 2025</i>
Mildy-Interacting Fermionic Unitaries are Efficiently Learnable Quantum Software Lab Research Seminar.	<i>May 2025</i>

Contributed

Mildy-Interacting Fermionic Unitaries are Efficiently Learnable Quantum Techniques in Machine Learning 2025.	<i>November 2025</i>
Improved Stabilizer Estimation via Bell Difference Sampling Symposium on the Theory of Computing (STOC) 2024.	<i>June 2024</i>
Low-Stabilizer-Complexity Quantum States are not Pseudorandom Innovations in Theoretical Computer Science (ITCS) 2023. Best Student Paper Award.	<i>January 2023</i>

Junta Distance Approximation with Sub-Exponential Queries CCC 2021.

Teaching

Analysis of Boolean Functions , UT Austin	<i>Spring 2023</i>
Quantum Information Science , UT Austin	<i>Spring 2022</i>
Algorithms and CS Theory , UT Austin	<i>Fall 2021</i>
Algorithms and CS Theory , UC Berkeley	<i>Spring 2020</i>
Algorithms and CS Theory , UC Berkeley	<i>Fall 2019</i>
Discrete Mathematics and Probability Theory , UC Berkeley	<i>Summer 2019</i>
Algorithms and CS Theory , UC Berkeley	<i>Spring 2019</i>
Discrete Mathematics and Probability Theory , UC Berkeley	<i>Summer 2018</i>

Service and Leadership

Conference reviewing: QIP 2026, ITCS 2026, TQC 2025, FOCS 2025, QIP 2025, TQC 2024, STACS 2024, QIP 2024, TQC 2023, TQC 2022

Journal reviewing: SICOMP, PRX Quantum

Instructor, Texas Prison Education Initiative

Fall 2022, Fall 2024 - present

President, Eta Kappa Nu, Mu Chapter

May 2019 - December 2019

Department Relations, Eta Kappa Nu, Mu Chapter

May 2018 - May 2019

Co-Founder, Undergraduate Group for Theoretical CS

May 2018 - May 2020

Skills and Technical Experience

Programming Languages: Python (10+ years), Java (10+ years), C++ (10+ years), C (6 years), SQL (6 years)

Other Software: TensorFlow, Pytorch, IBM Qiskit, Mathematica, Matlab

Relevant Advanced Coursework: Machine Learning, Stochastic Processes, Optimization, Quantum Information Science (3 semesters), Complexity Theory, Advanced Algebra, Real and Complex Analysis, Quantum Mechanics (2 semesters), Electromagnetism and Optics, Distributed Computing