Steven Kordonowy

Curriculum Vitae

Santa Cruz, California
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stevenkordonowy.github.io

Education

2022–present **Doctor of Philosophy**, *University of California - Santa Cruz*, CA, Computer Science
Advised by Dr. Alex Kolla
Quantum computing, theoretical computer science

2019–2022 **Masters of Science**, *University of Colorado - Boulder*, CO, Computer Science

2010–2014 **Bachelor of Science**, *University of Denver*, CO, Mathematics
Minors: Computer Science, Physics, Psychology

2012 **Study Abroad**, *Universidad de Buenos Aires*, Argentina

Papers

2025 **Realization of a Quantum Streaming Algorithm on Long-lived Trapped-ion Qubits**, *with JPMC and Quantinuum*, arxiv link

2025 **The Lie Algebra of XY-mixer Topologies and Warm Starting QAOA for Constrained Optimization**, *with Hannes Leipold*, arxiv link, (Conditional Acceptance at npj Quantum Information)

2024 **Monogamy of Entanglement Bounds and Improved Approximation Algorithms for Qudit Hamiltonians**, *with Zackary Jorquera, Alexandra Kolla, Juspreet Singh Sandhu, Stuart Wayland*, In submission, arxiv link

2023 **Approximation Algorithms for Quantum Max-d-Cut**, *with Charlie Carlson, Zack Jorquera, Alex Kolla*, arxiv link

2023 **A quantum advantage over classical for local max cut**, *with Charlie Carlson, Zack Jorquera, Alex Kolla*, arxiv link

Presentations and Posters

November 2025 **Poster: The Lie Algebra of XY-mixer Topologies and Warm Starting QAOA for Constrained Optimization**, QTML

March 2025 **Talk: The Lie Algebra of XY-mixer Topologies and Warm Starting QAOA for Constrained Optimization with Hannes Leiplod**, APS

Feb 2025 **Poster: Monogamy of Entanglement Bounds and Improved Approximation Algorithms for Qudit Hamiltonians**, QIP

Jan 2024 **Poster: Approximation Algorithms for Quantum Max-d-Cut**, QIP

Professional Experience

2024, 2025 **Research Intern**, *JP Morgan*, New York City, NY

2024, 2025 **Research Intern**, *Fujitsu Research of America*, Santa Clara, CA

2016–2019 **Software Engineer**, *Nasdaq, Inc*, Lakewood, CO

2014–2016 **Software Engineer**, *IntelliData, Inc.*, Greenwood Village, CO

Teaching Experience

2022 **Quantum Computing (Instructor)**, *University of Colorado*

2020, 2022 **Discrete Structures (Instructor)**, *University of Colorado*

2020 - 2023 **Quantum Computing (TA)**, *UCSC, University of Colorado*

2023, 2024 **Discrete Structures (TA)**, *UCSC*

2021 - 2024 **Algorithms (TA)**, *UCSC, University of Colorado*

2020 **Linear Programming (TA)**, *University of Colorado*

2019 **Computer Systems (TA)**, *University of Colorado*

Awards

2023 **Outstanding TA Award for the Department of Computer Science and Engineering**, *University of California Santa Cruz*

2014 **Herbert J. Greenberg Award for Outstanding Achievements in Mathematics**, *University of Denver*

2013 **Outstanding Mathematics Junior**, *University of Denver*

2012 **Outstanding Mathematics Sophomore**, *University of Denver*

Volunteer

2015–2018 **Tech Wizards**, *4H*, Sun Valley Youth Center, Denver, CO

Skills and Technologies

Programming languages: Java, Python
Quantum computing packages: qiskit, pennylane
Common software engineering practices such as git, docker, kubernetes, and command line tools
Unix and Windows