

Steven Kordonowy

Curriculum Vitae

Santa Cruz, California

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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 **The Lie Algebra of XY-mixer Topologies and Warm Starting QAOA for Constrained Optimization**, *with Hannes Leipold*, In submission, arxiv link
- 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

- Feb 2025 **Poster: Monogamy of Entanglement Bounds and Improved Approximation Algorithms for Qudit Hamiltonians**, QIP 2025
- Jan 2024 **Poster: Approximation Algorithms for Quantum Max-d-Cut**, QIP 2024

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