

ADITHYA BHASKARA

Boulder, CO

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References available upon request.

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[Google Scholar](#)

EDUCATION

• University of Colorado Boulder

B.S. Computer Science; B.A. Mathematics

Boulder, Colorado

August, 2022 - May, 2026 (Expected)

Major GPA: 4.000, Cumulative GPA: 3.991 (as of May. 2025) [Transcript](#).

Thesis Work: Tradeoffs Between Randomness, Robust Alternate Selection, and Other Desiderata for Sortition (Title TBD)
Advised by [Bailey Flanigan, Ph. D.](#) (MIT) and [Rafael Frongillo, Ph. D.](#)

Relevant Coursework: 8 Graduate Courses Including Linear and Integer Programming, Algebra 1, Theory of Computation, Design and Analysis of Algorithms, Advanced Algorithms, Algorithmic Economics, Advanced Convex Optimization, Measure-Theoretic Probability (In Progress), Complexity Theory (Audit)

RESEARCH EXPERIENCE

University of Colorado Boulder

Research interests include topics in (broadly) theoretical computer science, especially computational social choice theory, algorithmic economics, matrix multiplication, and (fine-grained) complexity theory.

Advised by [Bailey Flanigan, Ph. D.](#)

Undergraduate Researcher

August, 2025 - Present

- Studying the tradeoffs between randomness and other desiderata for sortition algorithms.
- Proving integrality gaps and other theoretical results for an associated convex optimization problem.
- Interested in how to select alternate panelists robust to agents' misreports of their features.
- Attended Social Choice: Theory and Computation, An Interdisciplinary Conference on Voting, Representation, and Districting

Advised by [Rafael Frongillo, Ph. D.](#)

May, 2023 - Present

- Seeking to understand and characterize the design spaces of liquidity provisioning and transaction fee protocols in prediction markets and decentralized exchanges.
- Captured liquidity provisioning as several automated market makers operating in parallel and resulting implications.
- Assisted Rafael Frongillo with reviewing two submissions to SODA'25 and Management Science (2023).
- Regular attendee and presenter in the algorithmic economics reading group.
- Attended EC'24, EC'25.

Advised by [Huck Bennett, Ph. D.](#)

February, 2025 - Present

- Sought to develop algorithms for special cases of the MATRIXMULTIPLICATIONVERIFICATION problem using Lee metric codes, rank metric codes, and other techniques from coding theory.
- Hoped to take advantage of the structure of the matrices to create better algorithms; project joint with [Noah Stephens-Davidowitz, Ph. D.](#) (Cornell).
- Surveying the fine-grained complexity of linear algebraic problems by studying fine-grained reductions.
- Attended STOC'25

PREPRINTS

1. Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygari. A general theory of liquidity provisioning for prediction markets. [arXiv preprint arXiv:2311.08725](https://arxiv.org/abs/2311.08725), 2025

TALKS

1. Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygari. A general theory of liquidity provisioning for automated market makers, 2024. Workshop on Blockchains and Decentralized Finance at the 25th ACM Conference on Economics and Computation (EC'24), [Recording](#).

HONORS AND AWARDS

- Endorsed by the University of Colorado Boulder as a candidate for the [Churchill Scholarship](#) September, 2025
- Admitted to [The Cornell, Maryland, Max Planck Pre-doctoral Research School in Computer Science](#) March, 2025
- Awarded a Boettcher Foundation Educational Enrichment Grant to Attend STOC'25 March, 2025
- Awarded the Marlene Massaro Pratto and David Pratto Scholarship in Mathematics June, 2024
- Awarded the [Western Digital We.care Scholarship](#) (Declined) May, 2022
- Awarded the [Boettcher Scholarship](#) (Undergraduate Merit-Based Full Ride) April, 2022
- University of Colorado Boulder [Engineering Honors](#) Student February, 2022
- Recognized as a [National Merit Finalist](#) February, 2022
- Awarded the Horace M. Hale Esteemed Scholarship January, 2022
- Awarded the Colorado School of Mines Medal of Achievement in Mathematics and Science May, 2021

SCHOLARLY SERVICE & ADDITIONAL RESEARCH ACTIVITY

- Engineering Honors Program Admissions Reviewer *University of Colorado Boulder, 2024, 2025*
 - Executive Committee Member *2024*
 - Nolnir Scholarship Admissions Reviewer *University of Colorado Boulder, 2023, 2024, 2025*
 - Boettcher Scholarship Recruitment & Alumni Ambassador *Boettcher Foundation, 2025*
 - Engineering Honors Program First-Year Seminar Recitation Leader *University of Colorado Boulder, 2024, 2025*
 - Semi-technical blog on topics in mathematics and theoretical computer science at
<https://officialadithya.github.io/blog/>

TEACHING EXPERIENCE

University of Colorado Boulder

- CSCI 3104: Algorithms, Spring 2024, Fall 2025. Course Assistant.
 - CSCI 3155: Principles of Programming Languages, Spring 2025. Course Assistant.
 - MATH 1300: Calculus I, Spring 2023. Learning Assistant.
 - Scribed course notes while taking MATH 2135: Linear Algebra for Mathematics Majors in Fall 2022.

Silver Creek High School

- Instructional Student Assistant (ISA) Program Director, Fall 2021-Spring 2022. Oversaw 7 ISAs.
 - College-Preparatory Physics, Spring, Fall 2021-Spring 2022. Instructional Student Assistant.
 - High School Algebra I, Fall 2020. Instructional Student Assistant.
 - High School Algebra II, Spring 2020. Instructional Student Assistant.

Innovation Center of St. Vrain Valley Schools

- Advanced Cybersecurity with Python Programming, Summer 2023. (Intensive 7-Hour/Day Weeklong Course). Instructor.
 - Fundamentals of Cybersecurity, Summers 2019-2022. (Intensive 7-Hour/Day Weeklong Course). Instructor.

REFERENCES

- [1] Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygari. A general theory of liquidity provisioning for automated market makers, 2024. Workshop on Blockchains and Decentralized Finance at the 25th ACM Conference on Economics and Computation (EC'24).
- [2] Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygari. A general theory of liquidity provisioning for prediction markets. *arXiv preprint arXiv:2311.08725*, 2025.