

Ashwin Padaki

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EDUCATION

University of Pennsylvania

Ph.D in Computer and Information Science

Advised by Sanjeev Khanna and Erik Waingarten.

Philadelphia, PA

2024 – 2029 (anticipated)

Columbia University

B.A. in Computer Science, Mathematics

GPA: 4.06/4

Selected CS Coursework: Advanced Algorithms, Computational Complexity, Computational Learning Theory, Convex Optimization, Cryptography, Differential Privacy, Quantum Computing

Selected Math Coursework: Algebraic Geometry, Algebraic Number Theory, Analysis, Probability Theory

New York, NY

2020 – 2024

SELECTED RESEARCH EXPERIENCE

Algorithms Research (graduate)

University of Pennsylvania

- Developing algorithms and proving lower bounds for geometric problems in the streaming model.

Aug 2024 – present

Philadelphia, PA

Computational Complexity Research (undergraduate)

DIMACS REU (Rutgers University)

- Proved hardness of approximation results for a clustering problem known as k -diameter.

May 2023 – Apr 2024

Piscataway, NJ

PUBLICATIONS

(authors ordered alphabetically by last name)

- Karthik C. S., Henry Fleischmann, Kyrylo Karlov, **Ashwin Padaki**, Styopa Zharkov. **Inapproximability of Maximum Diameter Clustering for Few Clusters**. Preprint. 2024
- Josh Alman, Yunfeng Guan, **Ashwin Padaki**. **Smaller Low-Depth Circuits for Kronecker Powers**. *Proceedings of the 2023 Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*. 2023

SELECTED WORK EXPERIENCE

Teaching Assistant

Columbia University

- Cryptography (Fall 2023), Computational Complexity (Spring 2023), Real Analysis (Fall 2022).

Sep 2022 – Dec 2023

New York, NY

Quantitative Trader Intern

Optiver

- Developed, backtested, and implemented high-frequency trading strategies for stock options.

Jun 2022 – Aug 2022

Chicago, IL

SERVICE

Mentor

Columbia Undergraduate Learning Seminar in Theoretical Computer Science

- Organized and taught a seminar on Boolean function analysis for undergraduate students.

Sep 2023 – Dec 2023

New York, NY

ACHIEVEMENTS

National Science Foundation (NSF) Graduate Research Fellow

2024

Phi Beta Kappa Inductee

2024

Putnam Mathematical Competition, Top 500 Scorer

2022