

Anakin Dey

Curriculum Vitæ

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Research Interests

Algebraic Combinatorics, Algebraic Complexity, Computational Algebra, Algebraic Geometry, Commutative Algebra

Education

Fall 2024 — **PhD Mathematics**, *The Ohio State University*
Spring 2030

Fall 2020 — **BSLAS Mathematics**, *University of Illinois Urbana-Champaign*
Spring 2024 Minor in Computer Science
Graduation with Highest Distinction

Publications

- 2025 **Debordering Closure Results in Determinantal and Pfaffian Ideals**
Anakin Dey and Zeyu Guo
Submitted
- 2025 **Classifying Primitive Solvable Permutation Groups of Rank 5 and 6**
Anakin Dey, Sam Ruggerio, Manav Vora, and Melkior Ornik
IEEE Cyber Awareness and Research Symposium, [arXiv](#)
- 2024 **Classifying Primitive Solvable Permutation Groups of Rank 5 and 6**
Anakin Dey, Kolton O'Neal, Duc Van Khanh Tran, Camron Upshur, and Yong Yang
Journal of Group Theory, [Degruyter](#)
- 2022 **Post-Disaster Repair Crew Assignment Optimization Using Minimum Latency**
Anakin Dey and Melkior Ornik
IEEE International Smart Cities Conference 2022, [IEEE](#)

Invited Talks

- 2024 **Classifying Primitive Groups using Computer Algebra and Change Making**
China-US Group Theory Summit 2024
- 2023 **Classifying Primitive Groups using Computer Algebra and Change Making**
UIUC Department of Mathematics Undergraduate Friday Seminars
- 2023 **Classifying Primitive Solvable Permutation Groups of Rank 5 and 6**
China Three Gorges University Algebra and Combinatorics Seminar
- 2022 **Post-Disaster Repair Crew Assignment Optimization Using Minimum Latency**
IEEE International Smart Cities Conference 2022

Research Experience

- Spring 2024* **Undergraduate Research Assistant**, [ICLUE](#)
Under Prof. Alexander Yong, University of Illinois Urbana-Champaign
- Summer 2023* **Undergraduate Research Assistant**, [REU in Algebra, Combinatorics, and Statistics](#)
Under Prof. Yong Yang, Texas State University
- Fall 2021 —* **Undergraduate Research Assistant**, [LEADCAT Lab](#)
Fall 2023 Under Prof. Melkior Ornik, University of Illinois Urbana-Champaign

Student Organizations

- Spring 2025 –* **Vice President**, *OSU* [MGSA](#)
Current Ohio State University Math Graduate Student Association
- Fall 2022 –* **Founder and President**, *ACM* [SIGma](#)
Spring 2024 Special Interest Group in Math and Algorithms
- Fall 2021 –* **Admin**, *ACM* [SIGPwny](#)
Spring 2024 Special Interest Group in Cybersecurity

Teaching Experience

- Fall 2025 –* **Graduate Teaching Associate**, The Ohio State University
Current ○ Math 1151 — Calculus I
 (*Fall 2025*)
- Spring 2021 –* **Undergraduate Course Assistant**, University of Illinois Urbana-Champaign
- Spring 2024* ○ CS 225H — Honors Data Structures
 (*Spring 2024*)
- CS 374 — Introduction to Algorithms and Models of Computation
 (*Spring 2022 — Fall 2022, Fall 2023*)
- CS 173 — Discrete Structures
 (*Spring 2021 — Spring 2024*)
- CS 475 — Models of Computation
 (*Spring 2023*)
- CS 125 — Introduction to Computer Science
 (*Spring 2021*)

Professional Experience

- Summer 2022* **Software Engineering Intern**, *CME Group*
- Summer 2021* **Software Engineering Intern**, *SitelQ*