

# Anakin Dey

## Curriculum Vitæ

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### Research Interests

Algebraic Combinatorics, Algebraic Geometry and Commutative Algebra, Computational Algebra, Algebraic and Fine-Grained Complexity, Algebraic Methods in Combinatorics, Combinatorial Optimization

### Education

Fall 2024 — **PhD Mathematics**, Ohio State University

Spring 2030

Fall 2020 — **BSLAS Mathematics**, University of Illinois Urbana-Champaign

Spring 2024 Minor in Computer Science

GPA: 3.92 / 4.00, Graduation with Highest Distinction

Deans List: Fall 2020, Fall 2021, Spring 2023, Fall 2023

### Publications

2023 **Optimizing a Model-Agnostic Measure of Graph Counterdeceptiveness via Reattachment**

Anakin Dey, Sam Ruggiero, and Melkior Ornik

Submitted, [arXiv:2311.15093](https://arxiv.org/abs/2311.15093)

2023 **Classifying Primitive Solvable Permutation Groups of Rank 5 and 6**

Anakin Dey, Kolton O'Neal, Duc Van Khanh Tran, Camron Upshur, and Yong Yang

Accepted Journal of Group Theory, [arXiv:2308.13043](https://arxiv.org/abs/2308.13043)

2022 **Post-Disaster Repair Crew Assignment Optimization Using Minimum Latency**

Anakin Dey and Melkior Ornik

IEEE International Smart Cities Conference 2022, [arXiv:2206.00597](https://arxiv.org/abs/2206.00597)

### 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

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## 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 —  
Fall 2023* **Undergraduate Research Assistant**, [LEADCAT Lab](#)  
Under Prof. Melkior Ornik, University of Illinois Urbana-Champaign

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## Student Organizations

- Founder and President**, [ACM SIGma](#)  
Special Interest Group in Math and Algorithms
- Admin**, [ACM SIGPwny](#)  
Special Interest Group in Cybersecurity

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## Teaching Experience

- Spring 2021 —  
Spring 2024* **Undergraduate Course Assistant**, University of Illinois Urbana-Champaign
- CS 225H — Honors Data Structures  
*Spring 2024* Course Assistant
  - CS 374 — Introduction to Algorithms and Models of Computation  
*Spring 2022 — Fall 2022* Course Assistant  
*Fall 2023* Course Assistant
  - CS 173 — Discrete Structures  
*Spring 2021 — Spring 2022* Course Assistant  
*Fall 2022 — Spring 2024* Head Course Assistant
  - CS 475 — Models of Computation  
*Spring 2023* Course Assistant
  - CS 125 — Introduction to Computer Science  
*Spring 2021* Course Assistant

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## Professional Experience

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