Naina Balepur

Ph.D. Candidate

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Education

Ph.D. in Computer Science — Urbana, IL
University of Illinois Urbana-Champaign — 2020 - 2026

- *"Investigating the Role of Institutional Trust in Fair Algorithmic Decision-making"*
- Advised by Hari Sundaram

B.S. in Applied Mathematics & B.A. in Philosophy — Pittsburgh, PA
University of Pittsburgh — 2016 - 2020

- Minor in Computer Science

Instructional Experience

CS 173: Discrete Structures — University of Illinois Urbana-Champaign
Instructor of Record · 50 students — Summer 2025

- Co-instructed (online) with graduate student Hongxuan Chen
- Designed and delivered four 30-minute lectures every other week
- Produced and shared lecture notes for each of those lectures
- Guided students through four 45-minute group problem solving sessions every other week
- Designed weekly (eight) homework assignments, discussion problem sets, and exams
- Posted all assignments on our online learning platform (PrairieLearn) and handled the course website
- Released rubrics for each weekly exam
- Guided one TA through grading assignments, and managed in-class help from five undergraduate assistants
- Held one weekly office hour

CS 173: Discrete Structures — University of Illinois Urbana-Champaign
Instructor of Record · 800 students — Spring 2025

- Co-instructed with Professor Margaret Fleck
- Designed and delivered one 75-minute weekly lecture
- Produced and shared lecture notes for each of those lectures
- Released rubrics for biweekly exams
- Managed course staff and assisted students during one 75-minute weekly discussion section
- Ran weekly staff meetings: prepped 44 staff members on the weekly discussion problems, and lead 16 TA's through grading exams
- Held one weekly office hour

CS 173: Discrete Structures University of Illinois Urbana-Champaign

Instructor of Record · 500 students Fall 2024

- Co-instructed with Professor G.C. Evans
- Designed discussion problem sets, and wrote solutions and rubrics for each problem
- Released rubrics for biweekly exams
- Managed course staff and assisted students during two 75-minute weekly discussion sections
- Ran weekly staff meetings: prepped 32 staff members on the weekly discussion problems, and lead 10 TA's through grading exams
- Held one weekly office hour

CS 173: Discrete Structures University of Illinois Urbana-Champaign

Instructor of Record · 20 students Summer 2024

- Solo hybrid instructor
- Designed and delivered four 30-minute lectures every week
- Produced and shared lecture scribbles for each of those lectures
- Prepared and delivered weekly exam review sessions
- Guided in-person students through four 45-minute group problem solving sessions every other week
- Designed weekly (eight) homework assignments, discussion problem sets, and exams
- Posted all assignments on our online platform (PrairieLearn) and handled the course website
- Released rubrics for each weekly exam
- Guided one TA through grading assignments, and managed in-class help from two undergraduate assistants
- Held one weekly office hour

Teaching Assistance

CS 173: Discrete Structures University of Illinois Urbana-Champaign

Head TA FA25, SP24, FA23, SP23

- Designed rubrics for biweekly exams, and shared with students and staff
- Developed and ran a 75-minute weekly problem walkthrough session with help from CS Education Researchers
- Delegated additional tasks to TAs
- Graded exams
- Held one weekly office hour
- Assisted students in a weekly 75-minute group problem solving session

CS 173: Discrete Structures University of Illinois Urbana-Champaign

TA FA22, SU22, SP22, FA22, SU21, SP21

- Graded exams and discussion problems
- Held one weekly office hour
- Assisted students in a weekly 75-minute group problem solving session

CS 125: Intro to Computer Science University of Illinois Urbana-Champaign

TA Fall 2020

- Designed and ran a weekly quiz-prep session
- Held weekly office hours

Undergraduate Mathematics TA University of Pittsburgh

Prep for Business Calculus, College Algebra SP20, FA19, SP19, FA18

- Held weekly office hours and tutored in the Math Assistance Center
- Designed quiz review sessions and proctored quizzes

Publications & Preprints

1. Aditya Karan*, **Naina Balepur***, and Hari Sundaram. Oh the Prices You'll See: Designing a Fair Exchange System to Mitigate Personalized Pricing. *Proceedings of the 2025 ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT '25).*
2. **Naina Balepur** and Hari Sundaram. 2024. Intervening to Increase Community Trust for Fair Network Outcomes. In *ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT '24).*
3. Aditya Karan*, **Naina Balepur***, and Hari Sundaram. 2023. Your Browsing History May Cost You: A Framework for Discovering Differential Pricing in Non-Transparent Markets. In *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT '23).*
4. **Naina Balepur***, Andy Lee*, and Hari Sundaram. Friends with Costs and Benefits: Community Formation with Myopic, Boundedly-Rational Actors. *arXiv preprint* arXiv:2312.14293(2023).

* authors contributed equally to this work

Posters & Talks

Transforming Models from General to Contextual: A Case Study on Institutional Trust in the University of Illinois

Poster at IEEE GHTC October 2025

Intervening to Increase Community Trust for Fair Network Outcomes

Talk at ACM FAccT 24 June 2024

Your Browsing History May Cost You: A Framework for Discovering Differential Pricing in Non-Transparent Markets

Talk at ACM FAccT 23 June 2023

A Model for Altruistic Social Learning on Networks

Poster at CRA WP 23 April 2023

Development and Application of a Game Theoretic Model for Competition Among Bacterial Strains in a Spatial Domain

Poster at Pitt Math Fest April 2019

Development and Application of a Game Theoretic Model for Competition Among Bacterial Strains in a Spatial Domain

Poster at Undergraduate Research Symposium July 2018

Work Experience

US Army Construction Engineering Research Lab May–Aug 2023

Champaign, IL

- Worked as a research assistant at CERL under Joseph Gamez
- Created a code-base for a geological project to be accessible to a non-computing audience

Awards & Honors

- **Teacher Ranked as Excellent by Students**, UIUC — Summer 2025
- **Teacher Ranked as Excellent by Students**, UIUC — Summer 2024
- **Travel Award**, ACM FAccT — 2024
- **Lifetime Teaching Assistant Award**, UIUC — Spring 2024
- **Graduate Student Outstanding Ambassador Award**, UIUC — 2024
- **Conference Presentation Funding Award**, UIUC — 2024
- **NSF GRFP Honorable Mention** — 2022
- **Computer Science Excellence Fellowship**, UIUC — 2020-2021
- **Full Tuition Scholarship**, Pitt — 2016-2020

Leadership & Service

- **Program Committee**: ACM EAAMO 25
- **Reviewer**: ACM KDD 24, ACM WebConf 24, ACM WWW 22
- **Secretary**: CS Graduate Student Organization — Aug 22 - May 24, Aug 25 - Present
- **Technology Volunteer**: Urbana Free Library — Jan 2022 - Present
- **Vice President**: CS Graduate Student Organization — Aug 2024 - May 2025
- **Outreach Coordinator**: GradSWE — May 2022 - May 2025
- **Teaching Volunteer**: Graduate Academy for College Teaching — Aug 2024, 2025
- **Committee Member**: CS Graduate Study Committee — Oct 2021 - Aug 2022
- **Mentor**: GradSWE — Sept 2021 - Aug 2022