Mina Nahvi

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Education

2018-Present	*Ph.D. in Mathematics*, University of Illinois Urbana-Champaign, IL, US
2021-2023	*M.S. in Teaching of Mathematics*, University of Illinois Urbana-Champaign, IL, US
2015-2017	*M.S. in Mathematics*, Sharif University of Technology, Tehran, Iran
2010-2015	*B.S. in Mechanical Engineering*, Iran University of Science and Technology, Tehran, Iran

Honors & Awards

2023 Spring	Campus Award for Excellence in Undergraduate Teaching, University of Illinois Urbana-Champaign, IL, US
2023 Spring	LAS Award for Excellence in Undergraduate Teaching for Graduate Teaching Assistants, University of Illinois Urbana-Champaign, IL, US
2021 July	Department of Mathematics Impact Award, University of Illinois Urbana-Champaign, IL, US
2015	Ranked 4th in Mathematics Nationwide Higher Education Entrance Exam, Iran
2015	Ranked 1st in Computer Science Nationwide Higher Education Entrance Exam, Iran

Teaching

University of Illinois Urbana-Champaign, IL, US

2023 Fall	*Instructor of Record*, Responsible for all aspects of the course, Ideas in Geometry, MATH 119
2023 Summer	*Instructor*, SIM Camp, on Counting and Graph Theory for Camp Epsilon (middle school) and Delta (high school)
2023 Spring	*Teaching Assistant*, Merit Program*, Fundamental Mathematics, MATH 347
2022 Fall	*Teaching Assistant*, Merit Program*, Fundamental Mathematics, MATH 347, Included in the List of Teachers Ranked as Excellent by Their Students
2022 Summer	*Instructor of Record*, Responsible for all aspects of the course, Calculus I, MATH 220, Included in the List of Teachers Ranked as Excellent by Their Students
2022 Spring	*Teaching Assistant*, Merit Program*, Fundamental Mathematics, MATH 347, Included in the List of Teachers Ranked as Excellent by Their Students with the Distinction *Outstanding*
2021 Spring	*Teaching Assistant*, Merit Program*, Preparation for Calculus, MATH 115, Included in the List of Teachers Ranked as Excellent by Their Students
2020 Fall	*Teaching Assistant*, Merit Program*, Calculus III, MATH 241, Included in the List of Teachers Ranked as Excellent by Their Students
2020 Spring	*Teaching Assistant*, Merit Program*, Calculus I, MATH 220, Included in the List of Teachers Ranked as Excellent by Their Students with the Distinction *Outstanding*
2019 Fall	*Teaching Assistant*, Merit Program*, Calculus I, MATH 220, Included in the List of Teachers Ranked as Excellent by Their Students
2019 Spring	*Teaching Assistant*, Calculus I, MATH 220, Included in the List of Teachers Ranked as Excellent by Their Students
2018 Fall	*Teaching Assistant*, Calculus I, MATH 221

2016 Spring   *Teaching Assistant*, Linear Algebra

Iran University of Science and Technology, Tehran, Iran

2013 Fall   *Teaching Assistant*, Computer Programming

Research Interests

Combinatorics
Graph Theory

Publications

Math Research

2023   Trees with at least $6\ell + 11$ vertices are ℓ-reconstructible, AV. Kostochka, M. Nahvi, D. West, D. Zirlin, arXiv: 2307.10035.

2023   Saturation numbers for Berge cliques, S. English, J. Kritschgau, M. Nahvi, E, Sprangel, arXiv: 2301.02973.

2022   The gapped k-deck problem, R. Golm, M. Nahvi, R. Gabrys, O. Milenkovic, *To Appear in 2022 IEEE International Symposium on Information Theory (ISIT)*, arXiv:2201-12671.

2021   Acyclic graphs with at least $2\ell+1$ vertices are ℓ-recognizable, AV. Kostochka, M. Nahvi, D. West, D. Zirlin, *Journal of Graph Theory*.

2021   On the 3-reconstructibility of trees and rooted trees, AV. Kostochka, M. Nahvi, D. West, D. Zirlin, *To Appear in Pure and Applied Mathematics Quarterly*.

2021   On sizes of 1-cross intersecting set pair systems, AV. Kostochka, G. McCourt, M. Nahvi, *Siberian Mathematical Journal*, 62(5), 842-849.

2021   3-regular graphs are 2-reconstructible, AV. Kostochka, M. Nahvi, D. West, D. Zirlin, *European Journal of Combinatorics*, 91, 103216.

2020   Degree lists and connectedness are 3-reconstructible for graphs with at least seven vertices, AV. Kostochka, M. Nahvi, D. West, D. Zirlin, *Graphs and Combinatorics*, 36(3), 491-501.

2020   Some criteria for a signed graph to have full rank, S. Akbari, A. Ghafari, K. Kazemian, M. Nahvi, *Discrete Mathematics*, 343 (8), 111910.

2020   Mixed paths and cycles determined by their spectrum, S. Akbari, A. Ghafari, M. Nahvi, MA. Nematollahi, *Linear Algebra and its Applications*, 586, 325-346.

2020   Nordhaus–Gaddum and other bounds for the chromatic edge-stability number, S. Akbari, S. Klavžar, N. Movarraei, M. Nahvi, *European Journal of Combinatorics*, 84, 103042.

2017   Graphs with integer matching polynomial zeros, S. Akbari, P. Csíkvári, A. Ghafari, SK. Ghezelahmad, M. Nahvi, *Discrete Applied Mathematics*, 224, 1-8.

Community Outreach

2022   Looking within and reaching Out: outreach, friendship, and community in the University of Illinois Urbana-Champaign AWM student chapter, G. Jaffe, M. Nahvi, *Fifty Years of Women in Mathematics*, Springer, Cham, 959-962.

Research Assistantships

2022 Fall	Research Assistant
2021 Fall	Research Assistant, NSF Research Grant 2008125
2021 Spring	Research Assistant, Arnold O. Beckman Campus Research Board Award RB20003 of the University of Illinois Urbana-Champaign, IL, US

Talks and Posters

Math Research

2023 May	*AWM Summer Workshop, University of Illinois Urbana-Champaign, IL, US*, The graph reconstruction problem
2022 July	*AWM Graduate Student Poster Session, SIAM Annual Meeting, Pittsburgh, PA, US*, Acyclic graphs with at least $2\ell + 1$ vertices are ℓ-recognizable
2022 March	*AWM Graduate Colloquium, University of Illinois Urbana-Champaign, IL, US*, The graph reconstruction problem
2021 May	*Graph Theory and Combinatorics Seminar, University of Illinois Urbana-Champaign, Virtual*, On sizes of 1-cross intersecting set pair systems
2021 April	*Graduate Student Combinatorics Conference, Virtual*, Acyclic graphs with at least $2\ell + 1$ vertices are ℓ-recognizable
2020 February	*AWM Mini-Symposium, University of Illinois Urbana-Champaign, IL, US*, On graph reconstruction from smaller subgraphs
2019 September	*AMS Central Sectional Meeting, University of Wisconsin-Madison, WI, US*, On graph reconstruction from smaller subgraphs
2019 April	*Graduate Student Combinatorics Conference, Drexel University and University of Pennsylvania, PA, US*, Graphs with integer matching polynomial roots
2017 September	*Colourings, Independence and Domination(CID), Piechowice, Poland*, Some criteria for a signed graph to have full rank
2017 May	*International IPM Combinatorics and Computing Conference (IPMCCC 2017), Tehran, Iran*, On rank of signed graphs
2017 February	*9th Conference on Graph Theory and Algebraic Combinatorics (GTACC9), Tehran, Iran*, On rank of signed graphs

Teaching

2023 March	*AWM Teaching and Diversity Seminar, University of Illinois Urbana-Champaign, IL, US*, Front and back of mathematics: Allowing students to make math their own

Service

University of Illinois Urbana-Champaign, IL, US

2023 Fall	*Precalculus Tutor*, Education Justice Program, College in Prison, Danville, IL, US
2023 Summer	*Precalculus Reading Group Facilitator*, Education Justice Program, College in Prison, Danville, IL, US
2023 Summer	*Assistant Producer*, Math Videos Production Team, Department of Mathematics
2022-2023	*Social Chair*, Graduate Student Chapter of the Association for Women in Mathematics
2020-2021	*Member*, Climate, Equity and Inclusion Committee, Department of Mathematics
2020-2021	*President*, Graduate Student Chapter of the Association for Women in Mathematics

2020 Fall	*Outreach Organizer*, Graduate Student Chapter of the Association for Women in Mathematics, Sonia Math Day: Voting Theory
2019-2020	*Social Chair*, Graduate Student Chapter of the Association for Women in Mathematics
2019 Fall	*Outreach Volunteer*, Graduate Student Chapter of the Association for Women in Mathematics, Sonia Math Day: Proof and Consequences, Workshop: Hat Color Puzzles
2019 Fall	*Outreach Volunteer*, Graduate Student Chapter of the Association for Women in Mathematics, GEMS: Math and Culture, Workshop: Poetry and Combinatorics
2019 Spring	*Outreach Volunteer*, Graduate Student Chapter of the Association for Women in Mathematics, Sonia Math Day: Adventures in Algebra, Workshop: Braid Groups
2019 Spring	*Outreach Volunteer*, Graduate Student Chapter of the Association for Women in Mathematics, GEMS: Math and Nature, Workshop: Snow and Symmetry
2018 Fall	*Outreach Volunteer*, Graduate Student Chapter of the Association for Women in Mathematics, Sonia Math Day: Walks Through Mathematics, Workshop: Math Paths

Mentoring and Advising

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN, IL, US

2023 Spring	*Merit Mentor* to a first-time Merit teaching assistant, Merit Program*, Department of Mathematics
2023 Spring	*Merit Professional Mentor* to three freshmen, Merit Mentoring and Professional Network (MPN), Department of Mathematics
2022 Spring	*Merit Mentor* to a first-time Merit teaching assistant, Merit Program*, Department of Mathematics
2022 Fall	*Merit Professional Mentor* to two freshmen, Merit Mentoring and Professional Network (MPN), Department of Mathematics
2022 Spring	*Graduate Student Team Leader*, Burning Graphs Research Project, Illinois Geometry Lab (IGL), Department of Mathematics
2022 Spring	*Research Mentor* to a freshman with no previous research experience, Undergraduate Research Apprenticeship Program (URAP), The Graduate College
2022 Spring	Graduate College Mentoring Certificate
2021 Summer	*Academic Advisor*, Mathematics Undergraduate Office, Department of Mathematics
2020-2021	*Co-Founder and Mentor*, Graduate Student Mentoring Program, Department of Mathematics
2020 Fall	*Merit Mentor* to two first-time Merit teaching assistants, Merit Program*, Department of Mathematics

References

Scott Ahlgren
Alexandr V. Kostochka
Jennifer McNeilly
Bruce Reznick
Douglas B. West

*The Merit Program emphasizes active learning and collaboration to facilitate the development of academic peer groups for students from underrepresented groups in STEM.