SEPEHR HAJEBI – CV

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CONTACT

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APPOINTMENTS

- September 2024 present: Postdoctoral Scholar Combinatorics and Optimization, University of Waterloo
- September 2024 present (pending amid visa delays): Junior faculty (Instructor) Department of Mathematics, Princeton University

EDUCATION

- September 2020 August 2024: PhD in Mathematics Combinatorics and Optimization, University of Waterloo
 - Thesis: Foreshadowing the Grid Theorem for Induced Subgraphs
 - Advisor: Sophie Spirkl
- September 2012 August 2019: BSc and MSc in Mathematics Isfahan University of Technology

AWARDS

- 5. Graduate Research Excellence Award (2025) Faculty of Mathematics, University of Waterloo
- 4. Sinclair Graduate Scholarship (Fall 2023 and Spring 2024) Combinatorics and Optimization, University of Waterloo
- 3. Outstanding TA Award (2022) Combinatorics and Optimization, University of Waterloo
- 2. Math competitions:
 - Korean Mathematical Society Contest, Third Prize (2016)
 - Invited and funded by the South Korean Embassy in Iran
 - International Mathematics Competition, Third Prizes (2015 and 2016)
 - Iranian Mathematical Society Competition, Second (2015) and Third (2016) Prizes
- 1. Elite Student Recognition (2016 and 2018) Isfahan University of Technology

TALKS

- 12. "Underview" of excluded induced subgraphs for bounded pathwidth Barbados Graph Theory Workshop, Bellairs Research Institute (2025)
- 11. The pathwidth theorem for induced subgraphs IBS discrete math seminar, Daejeon, South Korea (2025)
- 10. The pathwidth theorem for induced subgraphs Graphs and Matroids Seminar, University of Waterloo (2024)
- 9. Anticomplete sets of large treewidth BIRS Workshop on "New Perspectives in Colouring and Structure" (2024)
- 8. Survey on induced subgraphs of graphs with large treewidth Barbados Graph Theory Workshop, Bellairs Research Institute (2024)
- 7. Treewidth, Erdős-Pósa and induced subgraphs [virtual] New York Combinatorics Seminar (2024)
- 6. Several Gyárfás-Sumner-type results for treewidth Graphs and Matroids Seminar, University of Waterloo (2023)
- 5. Hitting all maximum stable sets in P₅-free graphs Graphs and Matroids Seminar, University of Waterloo (2023)
- 4. Forests in even-hole-free graphs of large treewidth Barbados Graph Theory Workshop, Bellairs Research Institute (2022)
- 3. Holes, hubs, and bounded treewidth [virtual] IBS Discrete Math Seminar (2022)
- 2. Bounded treewidth in hereditary graph classes Graphs and Matroids Seminar, University of Waterloo (2022)
- Bounded treewidth in hereditary graph classes Seymour was 70 two years ago, ENS de Lyon, France (2022)

MENTORSHIP

- University of Waterloo:
 - 2. Directed Reading Program (DRP)
 - Spring 2024 project: Non-constructive methods in combinatorics Mentees: Anna Henderson and Gioia De Leonardis
 - Fall 2023 project: Introduction to graph minor theory Mentees: Xinyue Fan and Lyncy Li
 - 1. Undergraduate Research Assistant Program (URA)
 - Spring 2023 project: Maximum transitive set in H-free tournaments Mentee: Yun Xing

TEACHING

- TA at University of Waterloo:
 - 10. CO342 Graph theory (Spring 2023)
 - 9. MATH138 Calculus II for honors of mathematics (Winter 2023)
 - 8. MATH600 Mathematical software (Fall 2022)
 - 7. CO456 Game theory (Fall 2022 and 2023)
 - 6. CO380 Mathematical discovery and invention (Spring 2022)
 - 5. MATH239 Introduction to combinatorics (Winter 2022)
 - 4. CO255 Advanced optimization (Winter 2022)
 - 3. CO250 Introduction to optimization (Fall 2021 and 2023, Winter 2023 and 2024, Spring 2024)
 - 2. CO450/650 Graph theory (graduate) (Fall 2021)
 - 1. CO351 Network-flow theory (Spring 2021)
- TA at Isfahan University of Technology:
 - 6. Computational complexity (graduate) (2019)
 - 5. Elements of matrices and linear algebra (2018)
 - 4. Applied linear algebra (for engineering) (2018)
 - 3. Graph theory (2016)
 - 2. Graph theory (graduate) (2014, 2017)
 - 1. Elements of combinatorics (2014, 2016, 2017)

SERVICE

- Refereeing for journals and conference proceedings:
 - 8. International Mathematics Research Notices
 - 7. Journal of Combinatorial Theory, Series B
 - 6. European Journal of Combinatorics
 - 5. Journal of Graph Theory
 - 4. Electronic Journal of Combinatorics
 - 3. ACM-SIAM Symposium on Discrete Algorithms (SODA)
 - 2. European Conference on Combinatorics, Graph Theory and Applications
 - 1. Workshop on Graphs