

SEPEHR HAJEBI

Curriculum Vitæ (January 21, 2024)

CONTACT

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EDUCATION

2020 – present

PhD in Mathematics (anticipate graduating in Spring 2024)
Combinatorics and Optimization, University of Waterloo
Thesis: Dichotomy theorems for treewidth and induced subgraphs
Advisor: Sophie Spirkl

2012 – 2019

BSc and MSc in Mathematics
Isfahan University of Technology, Isfahan, Iran

AWARDS

7. **Sinclair Graduate Scholarship** (1900+ ε CAD)
Combinatorics and Optimization, University of Waterloo (2023)
6. **Outstanding TA Award**
Combinatorics and Optimization, University of Waterloo (2022)
5. **Visitor to South Korea (KMS, KIAS, NIMS)**
Invited and funded by The Embassy of South Korea in Iran (2016)
4. **Korean Mathematical Society Contest for University Students**
Seoul, South Korea – Third Prize (2016)
3. **International Mathematics Competition for University Students**
Blagoevgrad, Bulgaria – Third Prize (2015 and 2016)
2. **Iranian Math Society Competition for University Students**
Second and Third Prize (2015 and 2016)
1. **Elite Student Award**
Isfahan University of Technology (2016 and 2018)

TALKS

Upcoming

7. **Treewidth, Erdős-Posá and induced subgraphs** [virtual]
New York Combinatorics Seminar (Feb 23, 2024)

Past

6. **Several Gyárfás-Sumner-type results for treewidth**
Graphs and Matroids Seminar, University of Waterloo (Nov 23, 2023)
5. **Hitting all maximum stable sets in P_5 -free graphs**
Graphs and Matroids Seminar, University of Waterloo (Feb 6, 2023)
4. **Forests in even-hole-free graphs of large treewidth**
Barbados Graph Theory Workshop, Bellairs Research Institute, Barbados
(Dec 12, 2022)
3. **Holes, hubs, and bounded treewidth** [virtual]
IBS Virtual Discrete Math Colloquium, Daejeon, South Korea (July 7, 2022)
2. **Bounded treewidth in hereditary graph classes**
Graphs and Matroids Seminar, University of Waterloo (July 5, 2022)

1. **Bounded treewidth in hereditary graph classes**

Seymour is 70, ENS de Lyon, France (June 22, 2022)

MENTORSHIP

University of
Waterloo

2. **Directed Reading Program (DRP)**

Women in Math (WiM) committee (Fall 2023)

Project: Introduction to graph minor theory

Mentees: Xinyue Fan and Lyncy Li

1. **Undergraduate Research Assistant Program (URA)**

Department of Combinatorics and Optimization (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, Fall 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, Winter 2023, Fall 2023, Winter 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

International Mathematics Research Notices

Journal of Combinatorial Theory, Series B

European Journal of Combinatorics

Journal of Graph Theory

Electronic Journal of Combinatorics

European Conference on Combinatorics, Graph Theory and Applications

Workshop on Graphs