

Saeed Odak

Ottawa, ON, Canada ◇ saeedodak@gmail.com ◇ <https://cglab.ca/~odak> ◇ +1 (343) 463 3223

EDUCATION

Ph.D. in Computer Science

Expected to graduate on December 2024, GPA: A⁺

Jan. 2021 – Present

University of Ottawa, Ottawa, Canada

B.Sc. in Mathematics (Double Major)

GPA: 18.35/20.00

Sept. 2014 – Aug. 2019

K. N. Toosi University of Technology, Tehran, Iran

B.Sc. in Electrical Engineering – Telecommunication

GPA: 17.21/20.00

Sept. 2014 – Aug. 2019

K. N. Toosi University of Technology, Tehran, Iran

High School Diploma in Math and Physics Discipline

National Organization for Development of Exceptional Talents (NODET)

Sep. 2010 – Aug. 2014

Gorgan, Iran

RESEARCH EXPERIENCE

Research Assistant

◇ Algorithms, Graphs, and Geometry Lab (AGGLAB), Carleton University, Canada

Jan. 2021 – Present

- Conducted research on **Algorithmic and Structural Graph Theory, Proximity Data Structures, Graph Drawing, Computational Geometry, and Hardness Results.**

◇ LaBRI, University of Bordeaux, France

Sept. – Nov. 2023

- Engaged in research on topics: **Geometric Approximation Algorithms and Robot Motion Planning.**

◇ K. N. Toosi University of Technology, Iran

2019

- **B.Sc. Thesis: Routing and Wavelength Assignment (RWA) in Optical Networks** — Supervisor: Lotfollah Beygi

RESEARCH INTEREST

◇ Computational Geometry

◇ Combinatorics & Structural Graph Theory

◇ Algorithms Design

◇ Data Structures

HONORS AND AWARDS

◇ **PhD Mobility Program in France (MDF) Research Scholarship** • *University of Bordeaux*

Fall 2023

◇ **International Doctorate Scholarship** • *University of Ottawa*

2021 – Present

◇ **Bronze Medal** in International Mathematics Competition (IMC) • *Blagoevgrad, Bulgaria*

2018

◇ **Silver Medal** in Iranian Mathematics Competition • *Behshahr, Iran*

2018

◇ **Bronze Medal** in Iranian Mathematics Competition • *Shahr-e Kord, Iran*

2017

◇ **7th place** in ACM-ICPC Asia Tehran Regional Contest • *Team Contest @ Sharif University*

2018

◇ **9th place** in ACM-ICPC Asia Tehran Regional Contest • *Team Contest @ Sharif University*

2017

◇ **29th place** in IEEE-Xtreme 15.0 International Programming Contest • *Team Contest Online*

2021

◇ **27th place** in IEEE-Xtreme 12.0 International Programming Contest • *Team Contest Online*

2018

◇ **Ranked 2nd** among all BSc students of Mathematics • *K. N. Toosi University of Technology*

2019

◇ **Ranked 7th** in National Entrance Exam for M.Sc in Computer Science • *Tehran, Iran*

2019

STUDENT SUPERVISION

Marc Vicuna (Masters)
Thesis Title: *Efficient Computation of Interesting Paths*

Summer 2022 - Winter 2024
School of Computer Science, Carleton University

TEACHING EXPERIENCE

Carleton University • Contract Instructor Jan. – Apr. 2023
*Prepared an entire teaching material for the first year course **Discrete Mathematics** with 141 students.*

University of Ottawa • Teaching Assistant Jan. 2021 – Present
Courses: Design and Analysis of Algorithms, Data Structures and Algorithms, Discrete Structures, Introduction to Computing I & II, and Introduction to Formal Languages.

K. N. Toosi University of Technology • Teaching Assistant 2016 – 2019
Courses: Algorithm Design, Data Structures, Calculus I and Calculus II.

K. N. Toosi University of Technology • Volunteer Teaching 2016 – 2019
Coaching K. N. Toosi University of Technology ICPC Team

PAPER REVIEWS

Conferences: ISAAC 2022, CCCG 2022, CCCG 2023, WADS 2023, SWAT 2024, CALDAM 2024

Journals: Computational Geometry: Theory and Applications, Computing in Geometry and Topology

WORKSHOPS AND SUMMER SCHOOLS

Summer School in Convex and Discrete Geometry 2023
Erdős Center - Alfréd Rényi Institute of Mathematics Budapest, Hungary

Tenth and Eleventh Annual Workshop on Geometry and Graphs 2023, 2024
Bellairs Research Institute Holetown, Barbados

Summer School in Geometry and Topology in a Discrete Setting 2022
Berlin Mathematical School Berlin, Germany

Workshop in Graph Product Structure Theory (21w5235) 2021
The Banff International Research Station for Mathematical Innovation and Discovery (BIRS) Banff, Canada

Workshop in Data Science and Combinatorial Algorithms 2019
KNTU, Department of Computer Science and Statistics Tehran, Iran

Summer School in Mathematics 2018
Institute for Advanced Studies in Basic Sciences Zanjan, Iran

REFERENCES

Michiel Smid
Professor, Carleton University
Email: michiel@scs.carleton.ca
Web address: <https://people.scs.carleton.ca/~michiel/>

Pat Morin
Professor, Carleton University
Email: morin@scs.carleton.ca
Web address: <https://cglab.ca/~morin/>

Prosenjit Bose
Full Professor, Carleton University
Email: jit@scs.carleton.ca
Web address: <https://jitbose.ca>

Anil Maheshwari
Professor, Carleton University
Email: anil@scs.carleton.ca
Web address: <https://people.scs.carleton.ca/~maheshwa/>

Vida Dujmović
Full Professor, University of Ottawa
Email: vida.dujmovic@uottawa.ca
Web address: <http://cglab.ca/~vida/>

Jean-Lou De Carufel
Professor, University of Ottawa
Email: jdecaruf@uottawa.ca
Web address: <https://cglab.ca/~jdecaruf/>

- [1] Greg Aloupis, Ahmad Biniaz, Prosenjit Bose, Jean-Lou De Carufel, David Eppstein, Anil Maheshwari, Saeed Odak, Michiel Smid, Csaba D. Tóth, and Pavel Valtr. **Noncrossing Longest Paths and Cycles**. In Stefan Felsner and Karsten Klein, editors, *32nd International Symposium on Graph Drawing and Network Visualization, GD 2024, September 18-20, 2024, Vienna, Austria*, volume 320 of *LIPIcs*, pages 36:1–36:17. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2024.
- [2] Michael A. Bekos, Prosenjit Bose, Aaron Büngener, Vida Dujmovic, Michael Hoffmann, Michael Kaufmann, Pat Morin, Saeed Odak, and Alexandra Weinberger. **On k -Planar Graphs Without Short Cycles**. In Stefan Felsner and Karsten Klein, editors, *32nd International Symposium on Graph Drawing and Network Visualization, GD 2024, September 18-20, 2024, Vienna, Austria*, volume 320 of *LIPIcs*, pages 27:1–27:17. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2024.
- [3] Ahmad Biniaz, Prosenjit Bose, Jean-Lou De Carufel, Anil Maheshwari, Babak Miraftab, Saeed Odak, Michiel Smid, Shakhar Smorodinsky, and Yelena Yuditsky. **On Separating Path and Tree Systems in Graphs**. *Submitted to Discrete Mathematics & Theoretical Computer Science*, CoRR, abs/2312.14295, 2023.
- [4] Ahmad Biniaz, Chaeyoon Chung, Jean-Lou De Carufel, John Iacono, Anil Maheshwari, Saeed Odak, Michiel Smid, and Csaba D. Tóth. **Tight Bounds on the Number of Closest Pairs in Vertical Slabs**. *Submitted to International Symposium on Theoretical Aspects of Computer Science (STACS 2025)*.
- [5] Ahmad Biniaz, Anil Maheshwari, Joseph S. B. Mitchell, Saeed Odak, Valentin Polishchuk, and Thomas Shermer. **Continuous Boundary Guarding**. *Submitted to International Symposium on Computational Geometry (SoCG 2025)*.
- [6] Nicolas Bonichon, Cyril Gavoille, Nicolas Hanusse, and Saeed Odak. **Euclidean Freeze Tag Problem**. *The Canadian Conference on Computational Geometry (CCCG)*, 2024.
- [7] Prosenjit Bose, Vida Dujmovic, Hussein Houdrouge, Pat Morin, and Saeed Odak. **Connected Dominating Sets in Triangulations**. *Submitted to SIAM Journal on Computing (SICOMP)*, CoRR, abs/2312.03399.
- [8] Prosenjit Bose, Pat Morin, and Saeed Odak. **An Optimal Algorithm for Product Structure in Planar Graphs**. In Artur Czumaj and Qin Xin, editors, *18th Scandinavian Symposium and Workshops on Algorithm Theory, SWAT 2022, June 27-29, 2022, Tórshavn, Faroe Islands*, volume 227 of *LIPIcs*, pages 19:1–19:14. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2022.
- [9] Kevin Buchin, Antonia Kalb, Anil Maheshwari, Saeed Odak, Michiel Smid, Carolin Rehs, and Sampson Wong. **Computing Oriented Spanners and their Dilation**. *Submitted to International Symposium on Computational Geometry (SoCG 2025)*, CoRR, abs/2412.08165.
- [10] Jean-Lou De Carufel, Anil Maheshwari, Saeed Odak, Bodhayan Roy, Michiel Smid, and Marc Vicuna. **Hardness Results on Interesting Paths in Directed Acyclic Graphs**. *To appear soon*, 2024.
- [11] Vida Dujmović, Pat Morin, and Saeed Odak. **Odd Colourings of Graph Products**. *CoRR*, abs/2202.12882, 2022.