

Soroush Ebadian

website: ebadian.org
email: soroush@cs.toronto.edu
mobile: +1 (647) 937-3617

EDUCATION

- **Ph.D. in Computer Science** Sep. 2020 – Aug. 2024 (Expected)
University of Toronto, Toronto, Canada GPA: 4+/4
Advisor: [Prof. Nisarg Shah](#)
- **B.Sc. in Computer Engineering** Sep. 2015 – Aug. 2020
Sharif University of Technology, Tehran, Iran GPA: 18.68/20
Thesis: *A Simple Randomized Algorithm for All Nearest Neighbors*

PEER-REVIEWED CONFERENCE PUBLICATIONS

- C8. **Soroush Ebadian**, Aris Filos-Ratsikas, Mohammad Latifian, Nisarg Shah, “[Explainable and Efficient Randomized Voting Rules](#),” in *Proc. of 37th Annual Conference on Neural Information Processing Systems (NeurIPS’23)*, 2023. Forthcoming.
- C7. **Soroush Ebadian**, Mohammad Latifian, Nisarg Shah, “[The Distortion of Approval Voting with Runoff](#),” in *Proc. of 22nd International Conference on Autonomous Agents and MultiAgent Systems (AAMAS’23)*, pp. 1752–1760, 2023.
- C6. **Soroush Ebadian**, Gregory Kehne, Evi Micha, Ariel D. Procaccia, and Nisarg Shah, “[Is Sortition Both Representative and Fair?](#),” in *Proc. of 36th Annual Conference on Neural Information Processing Systems (NeurIPS’22)*, pp. 3431–3443, 2022.
- C5. **Soroush Ebadian**, Anson Kahng, Dominik Peters, and Nisarg Shah, “[Optimized Distortion and Proportional Fairness in Voting](#),” in *Proc. of 23rd ACM Conference on Economics and Computation (EC’22)*, pp. 563–600, 2022.
- C4. **Soroush Ebadian**, Rupert Freeman, and Nisarg Shah, “[Efficient Resource Allocation with Secretive Agents](#),” in *Proc. of 31st International Joint Conference on Artificial Intelligence (IJCAI’22)*, pp. 272–278, 2022.
- C3. **Soroush Ebadian**, Dominik Peters, and Nisarg Shah, “[How to Fairly Allocate Easy and Difficult Chores](#),” in *Proc. of 21st International Conference on Autonomous Agents and MultiAgent Systems (AAMAS’22)*, pp. 372–380, 2022.
- C2. **Soroush Ebadian** and Xin Huang, “[Fast Algorithm for \$k\$ -Truss Discovery on Public-Private Graphs](#),” in *Proc. of 28th International Joint Conference on Artificial Intelligence (IJCAI’19)*, pp. 2258–2264, 2019.
- C1. **Soroush Ebadian** and Hamid Zarrabi-Zadeh, “[A Simple Randomized Algorithm for All Nearest Neighbors](#),” in *Proc. of 31st Canadian Conference on Computational Geometry (CCCG’19)*, pp. 94–98, 2019. Invited to the special issue of the journal of Computational Geometry.

PREPRINT UNDER REVIEW

- W2. **Soroush Ebadian** and Evi Micha, “[Boosting Sortition via Proportional Representation](#)”, 2023.
- W1. **Soroush Ebadian**, Aris Filos-Ratsikas, Mohammad Latifian, Nisarg Shah, “Computational Aspects of Distortion”, 2023.

HONORS AND AWARDS

- **Gold medal** in the 24th Iranian National Olympiad in Informatics (INOI). 2014
- **Ontario Graduate Scholarship** (\$15000) 2023 – 2024
Ontario Govt. and University of Toronto

- **Alfred B. Lehman Graduate Scholarship in Computer Science** (\$5000) 2023
Dept. of Computer Science, University of Toronto
- **Computer Science 50th Anniversary Graduate Scholarship** (\$2000) 2021
Dept. of Computer Science, University of Toronto
- **2nd place** in the **ACM-ICPC** West Asia Regional Contest, Tehran, Iran. 2015
- **Hong Kong PhD Fellowship Scheme** (Declined) 2020
Hong Kong RGC and Hong Kong Baptist University, US\$246,000 for four years of PhD studies
- **4th place** in the Iranian National Scientific Olympiad in Computer Science and Engineering 2019
- Research Scholarship from the Austrian Agency for International Cooperation in Education and Research (OeAD-GmbH). Summer 2019

PROFESSIONAL SERVICE

- **PC Member:** AAAI 2024, AIES 2023, AAAI 2023
- **Reviewer (Journal):** SIAM Journal on Discrete Mathematics, Journal of Mathematical Social Sciences
- **Reviewer (Conference):** SODA 2024, SAGT 2021

RESEARCH EXPERIENCE

- **Visiting Graduate Researcher, [Harvard University](#)** Fall 2023
Worked on problems in the area of computational social choice. Host: [Ariel Procaccia](#).
- **Research Intern, [IST Austria](#)** Summer 2019
Worked on a concurrent program verification language. Host: [Thomas A. Henzinger](#).
- **Research Assistant, [Sharif University of Technology](#)** 2019 – 2020
Worked on the nearest neighbor search problem. Host: [Hamid Zarrabi-Zadeh](#).
- **Research Intern, [Hong Kong Baptist University](#)** 2018 – 2019
Worked on algorithms for mining dense subgraphs in large-scale graphs. Host: [Xin Huang](#).

TEACHING EXPERIENCE

- **Teaching Assistant, CS Department, University of Toronto**
 - CSC2412 Algorithms for Private Data Analysis Winter 2023
 - CSC373 Algorithm Design, Analysis and Complexity Fall 2021, Summer 2022, Fall 2023
 - CSC304 Algorithmic Game Theory and Mechanism Design Fall 2022
 - CSC2556 Algorithms for Collective Decision Making Winter 2022
 - CSC263 Data Structures and Analysis Summer 2021
 - CSC303 Social and Economics Networks Winter 2021, Winter 2023
- **Teaching Assistant, CE Department, Sharif University of Technology**
 - Design and Analysis of Algorithms Fall 2017, 2018, 2019
 - Discrete Structures Spring 2019
 - Algorithmic Game Theory Spring 2019
 - System Analysis and Design Fall 2018, Spring 2019
 - Data Structures and Algorithms Spring 2016
- **Instructor, INOI Summer Camp** 2016, 2017, and 2020
Taught advanced topics in Algorithms, Data Structures, and Algorithmic Graph Theory to students preparing for IOI.
- **Lecturer, Allameh Helli High-School** 2015 – 2016, Fall 2019
Taught Algorithms and Data Structures to students preparing for the Iranian National Olympiad in Informatics (INOI).

WORK EXPERIENCE

- **Product Manager, CafeBazaar** Dec. 2019 – Sep. 2020
 - **Sotoon (CafeBazaar Cloud)**: Led six cloud infrastructure services in three teams providing storage, database, and big data management services to tech companies with tens of millions of users such as CafeBazaar and Divar.
- **Product Manager, CafeBazaar** Jan. 2017 – Dec. 2018
 - **Divar**: Released a multi-device buyer-seller chat on three platforms for Divar online classified ads with 16M users.
 - **Rivers**: Released the beta version of a team collaboration app, leading a team of size 20 in Delhi and Tehran.
- **Software Engineer, CafeBazaar** Apr. 2015 – Jan. 2017
 - **iOS Software Engineer**: Developed a buyer-seller messaging feature on iOS client of Divar with 2M iOS users.
 - **Back-end Engineer**: Scaled back-end infrastructure accepting 100M impressions per day from 25M.

OTHER ACTIVITIES

- **Task Preparation System for IOI 2017** [[Technical Report](#), [GitHub](#)] 2016 – 2017
Developed a system for preparing IOI tasks by Scientific Committee. Used at IOI 2017 and 2019.
- **Member of the Scientific Committee** of National Programming Contests
Designed programming contests and authored problems with an algorithmic theme.
 - West Asia ACM ICPC Regional Contest 2018 – 2019
 - Iran's IOI Team Selection Exams 2016 – 2019
 - INOI Summer Camp Programming Exams 2015 – 2017
- **Executive Director** of the **3rd Winter Seminar Series (WSS)** at Sharif University of Tech. Fall 2017
A four-day event including 28 talks and 7 workshops in computer science and engineering with near 400 participants.
 - Raised \$25,000 funding through sponsorship. Led 50 volunteer staffs in about 15 teams.