

# Soroush Ebadian

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## EDUCATION

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

## PREPRINT UNDER SUBMISSION

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- W1. **Soroush Ebadian**, Gregory Kehne, Evi Micha, Ariel D. Procaccia, and Nisarg Shah, “[Is Sortition Both Representative and Fair?](#),” *Under Submission*.

## PEER-REVIEWED CONFERENCE PUBLICATIONS

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- C5. **Soroush Ebadian**, Anson Kahng, Dominik Peters, and Nisarg Shah, “[Optimized Distortion and Proportional Fairness in Voting](#),” in the *Proceedings of the 23rd ACM Conference on Economics and Computation (EC’22)*, 2022.
- C4. **Soroush Ebadian**, Rupert Freeman, and Nisarg Shah, “[Efficient Resource Allocation with Secretive Agents](#),” in the *Proceedings of the 31st International Joint Conference on Artificial Intelligence (IJCAI’22)*, 2022.
- C3. **Soroush Ebadian**, Dominik Peters, and Nisarg Shah, “[How to Fairly Allocate Easy and Difficult Chores](#),” in the *Proceedings of the 21st International Conference on Autonomous Agents and MultiAgent Systems (AAMAS’22)*, 2022.
- C2. **Soroush Ebadian** and Xin Huang, “[Fast Algorithm for  \$k\$ -Truss Discovery on Public-Private Graphs](#),” in the *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI’19)*, 2019.
- C1. **Soroush Ebadian** and Hamid Zarrabi-Zadeh, “[A Simple Randomized Algorithm for All Nearest Neighbors](#),” in the *Proceedings of the 31st Canadian Conference on Computational Geometry (CCCG’19)*, 2019. Invited to the special issue of the journal of Computational Geometry.

## UNDERGRADUATE RESEARCH EXPERIENCE

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- **Research Intern, [IST Austria](#)** Summer 2019  
Worked on a concurrent program verification language under the supervision of [Prof. Thomas A. Henzinger](#).
  - **Boogie Verifier (by [Microsoft Research](#))**: Implemented a new transition relation computation in the CIVL language and verifier. CIVL is an extension to the [BOOGIE](#) verifier developed by the [RiSE group](#). [[GitHub](#)]
- **Research Assistant, [Sharif University of Technology](#)** 2019 – 2020  
Worked on the nearest neighbor search problem under the supervision of [Prof. Hamid Zarrabi-Zadeh](#).
- **Research Intern, [Hong Kong Baptist University](#)** 2018 – 2019  
Worked on algorithms for mining dense subgraphs in large-scale graphs under the supervision of [Prof. Xin Huang](#).

## HONORS AND AWARDS

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- **Computer Science 50th Anniversary Graduate Scholarship**, DCS, University of Toronto. 2021
- **Gold medal** in the 24<sup>th</sup> Iranian National Olympiad in Informatics (INOI). 2014
- **2<sup>nd</sup> place** in the **ACM-ICPC West Asia Regional Contest**, Tehran, Iran. 2015

- **Hong Kong PhD Fellowship Scheme** from Hong Kong RGC and Hong Kong Baptist University 2020  
Awarded approximately US\$246,000 for four years of PhD studies (Declined)
- **4<sup>th</sup> place** in the Iranian National Scientific Olympiad in Computer Science and Engineering. 2019
- Grant for undergraduate studies from the Iranian National Elites Foundation. 2014 – 2020  
For outstanding academic success.
- Research Scholarship from the Austrian Agency for International Cooperation in Education and Research (OeAD-GmbH). Summer 2019

## TEACHING EXPERIENCE

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- **Teaching Assistant**, CS Department, University of Toronto
  - CSC373 Algorithm Design, Analysis and Complexity Fall 2021, Summer 2022
  - CSC2556 Algorithms for Collective Decision Making Winter 2022
  - CSC263 Data Structures and Analysis Summer 2021
  - CSC303 Social and Economics Networks Winter 2021
- **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 National Olympiad in Informatics (INOI).

## WORKING EXPERIENCE

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- **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

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- **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 **3<sup>rd</sup> 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.