# Soroush Ebadian

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

## Education

- **Ph.D. in Computer Science**                                                     Sep. 2020 – Present
  University of Toronto, Toronto, Canada                                                   CGPA: 4+/4
  Advisor: Prof. Nisarg Shah

- **B.Sc. in Computer Engineering**                                              Sep. 2015 – Aug. 2020
  Sharif University of Technology, Tehran, Iran                                       CGPA: 18.68/20
  Thesis: *A Simple Randomized Algorithm for All Nearest Neighbors*

## Publications

C5. **Soroush Ebadian**, Anson Kahng, Dominik Peters, and Nisarg Shah, "Optimized Distortion and Proportional Fairness in Voting," in *Proceedings of the 23rd ACM Conference on Economics and Computation* (**EC'22**), 2022.

C4. **Soroush Ebadian**, Rupert Freemen, and Nisarg Shah, "Efficient Resource Allocation with Secretive Agents," in *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 *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 *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 *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

- **Research Intern,** IST Austria                                                       Summer 2019
  Worked on a concurrent program verfication 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 language and verifier developed by RiSE group.

- **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 of Prof. Xin Huang.

## Honors and Awards

- **Computer Science 50th Anniversary Graduate Scholarship**, DCS, University of Toronto.        2021
- **Gold medal** in the 24th Iranian National Olympiad in Informatics (INOI).                    2014
- **2nd 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

- **Teaching Assistant,** CS Department, University of Toronto
    - CSC2556 Algorithms for Collective Decision Making  Winter 2022
    - CSC373 Algorithm Design, Analysis and Complexity  Summer 2022, Fall 2021
    - 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

- **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 Scientific Committee** of 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)**  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 more than 15 teams.