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 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*

Preprint Under Submission

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

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**), 2022. Forthcoming.

C4. **Soroush Ebadian**, Rupert Freemen, and Nisarg Shah, "Efficient Resource Allocation with Secretive Agents," *in Proc. of 31st International Joint Conference on Artificial Intelligence* (**IJCAI'22**), 2022. Forthcoming.

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**.

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 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

- **Computer Science 50th Anniversary Graduate Scholarship**, DCS, University of Toronto. 2021
- **Gold medal** in the 24$^{\text{th}}$ Iranian National Olympiad in Informatics (INOI). 2014
- **2$^{\text{nd}}$ 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)
- **4th 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
  - 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 Iranian 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 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.