

EDUCATION

University of California, Davis

Ph.D. in Computer Science, Supervisor: David Doty

– GPA: 3.95/4.0

Davis, CA

2017 –Current

Sharif University of Technology

M.Sc. in Computer Engineering, Supervisor: H. Zarrabi-Zadeh

– GPA: 18.78/20 – equivalent to 4.0/4.0, ranked 3rd in class

– Thesis: “Online algorithms for fair allocation of goods”

Tehran, Iran

2015–2017

Sharif University of Technology

B.Sc. in Computer Science

– GPA: 15.35/20 – equivalent to 3.35/4.0, ranked 7th in class

Tehran, Iran

2010–2015

PUBLICATIONS

Author names are sorted in alphabetical order.

1. A Time and Space Optimal Stable Population Protocol Solving Exact Majority. David Doty, [Mahsa Eftekhari](#), Leszek Gąsieniec, Eric Severson, Grzegorz Stachowiak, and Przemysław Uznański.
 - Appears In the 62nd Annual of IEEE Symposium on Foundations of Computer Science (**FOCS 2021**)
 - Brief announcement: In the 40th ACM Symposium on Principles of Distributed Computing (**PODC 2021**)
2. A survey of size counting in population protocols. David Doty, [Mahsa Eftekhari](#). Theoretical Computer Science Journal (**TCS 2021**)
3. Message complexity of population protocols. Talley Amir, James Aspnes, David Doty, [Mahsa Eftekhari](#), and Eric Severson. In the 34th International Symposium on Distributed Computing (**DISC 2020**)
4. Efficient size estimation and impossibility of termination in uniform dense population protocols. David Doty, [Mahsa Eftekhari](#). In the 38th ACM Symposium on Principles of Distributed Computing (**PODC 2019**)
5. Brief announcement: Exact size counting in uniform population protocols in nearly logarithmic time. David Doty, [Mahsa Eftekhari](#), Othon Michail, Paul G. Spirakis, and Michail Theofilatos. In the 32nd International Symposium on Distributed Computing (**DISC 2018**)

EXPERIENCE

Google

Software Engineering Intern at Google

Summer 2019

- Expanding Google’s knowledge Graph
- I Worked with Data Commons team: implement data cleaning and verification pipeline to address the messy datasets for Google Knowledge Graph. While an intern, I analyzed different types of missing data points in time series available in the knowledge graph. I also designed and implemented A stand alone module that provided the team with interfaces that fill the missing values of the data series (to enrich their API calls).

University of California, Davis

Research Assistant

2017 - Current

- Distributed computing algorithms
- I designed, implemented, and analyzed population protocols for problems such as: exact majority, exact and approximate population size counting, and dynamic size counting

Sharif University of Technology

Research Assistant

2015 - 2017

- Online algorithms for fair allocation of goods
- I designed and analyzed a new online allocation algorithm. I also proved a lower bound on the competitive ratio of any proposed algorithms for the problem.

SCHOLARSHIPS AND AWARDS

- UC Davis GGCS Richard Walters scholarship recipient Summer 2021
- GHC scholarship recipient Summer 2020
- CRA-W scholarship recipient Spring 2019
- UC Davis graduate fellowship recipient Fall 2017
- Ranked 15th, National Scientific Olympiad in Computer Engineering. Summer 2015
- Ranked 3rd, National Graduate Entrance Exam in CS. (amongst more than 5000 students) Spring 2015
- Ranked 15th, National Graduate Entrance Exam in Computer Engineering, Software Engineering, Algorithms and Computations. (amongst more than 18000 students) Spring 2015

MENTORING EXPERIENCE

- Mentored a transfer student via MANRRS program Fall 2021
(Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) Mentorship Program)
- Mentor for GSoC Winter 2022
(Graduate Students of Color (GSoC) Mentorship Program)

SERVICE/PROFESSIONAL INVOLVEMENT

Conference reviewer

- International Symposium on Distributed Computing (DISC) 2020
- International Conference on DNA Computing and Molecular Programming (DNA) 2019
- Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2019
- Mathematical Foundations of Computer Science (MFCS) 2019

Journal referee

- Journal of Computer and System Sciences (JCSS) 2021
- Journal of Natural Computing (NACO) 2021

Invited talks

- CS theory seminar at Purdue University Fall 2021
Computation in population protocols with a focus on the majority problem

TEACHING EXPERIENCE

Responsibilities: Leading discussion classes, designing homeworks, maintaining auto-grading homeworks, leading interactive Java programming labs, and holding office hours.

UNDERGRADUATE COURSES

University of California, Davis

- **Head Teaching Assistant** Fall 2021
Theory of Computation (ECS 120)
- **Teaching Assistant** Winter'18, Spring 18, 20, 21
Theory of Computation (ECS 120)

Sharif University of Technology

- **Teaching Assistant** Spring 2014,15
Advanced Programming (Java)
- **Teaching Assistant** Spring 2015
Principles of Computer System

GRADUATE COURSES

- **Teaching Assistant** at University of California, Davis
Winter'19
Theory of Computation (ECS 220)
- **Teaching Assistant** at Sharif University of
Technology Spring 2017
Approximation Algorithms
- **Teaching Assistant** at Sharif University of
Technology Fall 2016
Computational Geometry