Dorna Abdolazimi

206-751-5689 | dorna.abdolazimi@gmail.com | **LinkedIn:** linkedin.com/in/ds-abd/ | **Website:** dorna-abdolazimi.github.io

Education

University of Washington — Seattle, WA
Ph.D. Computer Science & Engineering (GPA: 3.95) — *September 2019 - Expected September 2024*

Sharif University of Technology — Tehran, Iran
B.S. Double Major: Computer Engineering, Mathematics (GPA: 18.25/20) — *September 2014 - August 2019*

Research Interests

- Approximation Algorithms
- Markov Chains
- Spectral Graph Theory

Publications

[1] Dorna Abdolazimi, Kasper Lindberg, and Shayan Oveis Gharan. On optimization and counting of non-broken bases of matroids. In *RANDOM*, 2023.

[2] Dorna Abdolazimi and Shayan Oveis Gharan. An improved trickle-down theorem for partite complexes. In *CCC*, 2023.

[3] Dorna Abdolazimi, Anna R. Karlin, Nathan Klein, and Shayan Oveis Gharan. Matroid partition property and the secretary problem. In *ITCS*, 2023.

[4] Dorna Abdolazimi, Kuikui Liu, and Shayan Oveis Gharan. A matrix trickle-down theorem on simplicial complexes and applications to sampling colorings. In *FOCS*, 2021.

Preprints

Dorna Abdolazimi and Shayan Oveis Gharan. Complete log concavity of coverage-like functions. *arXiv preprint arXiv:2303.03741*, 2023.

Internships

Research Intern (*July - September 2018*) | *School of Computer and Communication Sciences - EPFL*
Worked on streaming algorithms for maximizing monotone submodular functions and demonstrated that no static-threshold generalization of the state-of-the-art algorithm improves upon its approximation factor.

Awards and Honors

- Selected to give **Rising Stars** Talk at the TCS for All Spotlight workshop, 2023.
- Recipient of the grant for undergraduate studies from the Iranian National Elites Foundation for **Outstanding Academic Success**, 2014 - 2015.
- **Ranked 73** in Iranian National Exam for University Entrance among **more than 200,000 participants**, 2014.

Invited Talks

Matroid Partition Property and the Secretary Problem
ITCS Conference, MIT, Cambridge, MA, January 2022
Matrix Trickle Down Theorem and Applications to Partite Complexes
Summer School on New Tools for Optimal Mixing of Markov Chains: Spectral Independence and Entropy Decay, UC Santa Barbara, Santa Barbara, CA, August 2022
A Matrix Trickle-Down Theorem on Simplicial Complexes and Applications to Sampling Colorings
FOCS Conference, Virtual, February 2022
Univeristy of Washington CSE Theory Seminar, Seattle, WA, June 2021

Teaching Assistance

University of Washington
Modern Spectral Graph Theory, Winter 2022
Randomized Algorithms and Probabilistic Analysis, Winter 2021
Design and Analysis of Algorithms, Fall 2019, Fall 2022
Sharif University of Technology
Artificial Intelligence, Spring 2018
Engineering Probability and Statistics, Fall 2017
Theory of Machines and Languages, Spring 2017, Fall 2017
Discrete Mathematics, Spring 2017
Data Structures and Algorithms, Spring 2017

Service

External Review For:
SODA 2021, ICALP 2022, SODA 2023

Technical Skills

Programming Languages: Python (proficient), Java (comfortable), C++ (basic)