Maryam Aliakbarpour

Massachusetts Institute of Technology
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Research Interests

- Statistical Learning Theory
- Property Testing of Distributions
- Differential Privacy
- Sub-linear Algorithms

Education

- **Massachusetts Institute of Technology (MIT)** — Cambridge, USA
  Ph.D. Candidate in Computer Science — Sept. 2015 - Present
  Advisor: Prof. Ronitt Rubinfeld

- **Massachusetts Institute of Technology (MIT)** — Cambridge, USA
  M.S. in Electrical Engineering and Computer Science — Sept. 2013 - Sept. 2015
  Thesis: Learning and Testing Junta Distributions over Hypercubes
  Advisor: Prof. Ronitt Rubinfeld

- **Sharif University of Technology** — Tehran, Iran
  B.S. in Computer Engineering - Software — Sept. 2009 - Jun. 2013

Honors and Awards

- **Neekeyfar Award**, Office of Graduate Education, Massachusetts Institute of Technology, 2013
- **Ranked 2nd** in Cumulative GPA among students in Computer Engineering Department, class of 2009, Sharif University of Technology
- **Silver Medal** in Iranian National Olympiad in Informatics, 2008

Work Experience

- Summer internship at **Google** Sunnyvale, CA, USA, 2017.
- Summer internship at **EPFL** (Ecole Polytechnique Federale de Lausanne), Lausanne, Switzerland, 2012.

Teaching Experiences

- **Teaching Assistant**, Massachusetts Institute of Technology:
  - Introduction to Algorithms — Fall 2017
  - Design and Analysis of Algorithms — Spring 2016, Fall 2016
- **Teaching Assistant**, Sharif University of Technology:
  - For six times in Algorithms, Discrete Mathematics, Scientific and Technical Presentation.

Invited Talks

- Northeastern University — October 2018
- IBM Thomas J. Watson Research Center — December 2016

Leadership Roles and Activities

- **Member of Resources for Easing Friction and Stress (REFS)** — 2016 - 2019
  Department of Electrical Engineering and Computer Science, MIT, Cambridge, MA, USA
  REFS is a group of EECS graduate students trained as peer mediators by Conflict Management at MIT. Our role is to support the graduate community and serve as the first point of contact in dealing with stress and conflict.

◇ **Member of Sidney Pacific Executive Council (SPEC)** 2015 - 2016
Sidney Pacific Graduate Community, MIT, Cambridge, MA, USA
I was the *Chair of the Halls* in Sidney Pacific, my graduate dormitory, with over 600 residents. My role was to coordinate hall councilors of each floor. Moreover, I organized several events for the health and wellness of the residents.

Skills

◇ Programming Languages: C++, Java, Go,

◇ Web Technologies: Django, HTML.

◇ Analysis Tools: Matlab, Sage.

Publications

◇ *Testing Properties of Multiple Distributions with Few Samples*
M. Aliakbarpour, Sandeep Silwal
To appear in **ITCS 2020**

◇ *Private Testing of Distributions via Sample Permutations*
M. Aliakbarpour, I. Diakonikolas, D. Kane, R. Rubinfeld
To appear in **NeurIPS 2019**

◇ *Towards Testing Monotonicity of Distributions Over General Posets*
M. Aliakbarpour, T. Gouleakis, J. Peebles, R. Rubinfeld, A. Yodpinyanee
32nd Annual Conference on Learning Theory, **COLT 2019**

◇ *Testing Mixtures of Distributions*
M. Aliakbarpour, R. Kumar, R. Rubinfeld
32nd Annual Conference on Learning Theory, **COLT 2019**

◇ *Differentially Private Identity and Equivalence Testing of Discrete Distributions*
M. Aliakbarpour, I. Diakonikolas, R. Rubinfeld
35th International Conference on Machine Learning, **ICML 2018**, pp. 169–178

◇ *Sublinear-Time Algorithms for Counting Star Subgraphs via Edge Sampling*
M. Aliakbarpour, A. S. Biswas, T. Gouleakis, J. Peebles, R. Rubinfeld, A. Yodpinyanee
Algorithmica 2018, pp. 668–697

◇ *I've Seen "Enough": Incrementally Improving Visualizations to Support Rapid Decision Making*
S. Rahman, **M. Aliakbarpour**, H. Kong, E. Blais, K. Karahalios, A. G. Parameswaran, R. Rubinfeld
43rd International Conference on Very Large Data Bases, **VLDB 2017**, pp. 1262–1273

◇ *Learning and Testing Junta Distributions*
M. Aliakbarpour, E. Blais, R. Rubinfeld
29th Annual Conference on Learning Theory, **COLT 2016**, pp. 19–46

◇ *Join of Two Graphs has a Nowhere-zero* 3*-flow*
S. Akbari, **M. Aliakbarpour**, N. Ghanbari, E. Nategh, H. Shahmohamad
Czechoslovak Mathematical Journal 2014, pp. 433–446

◇ *Minimum flow number of complete multipartite graphs*
S. Akbari, **M. Aliakbarpour**, N. Ghanbari, E. Nategh, H. Shahmohamad
Bulletin of the Institute of Combinatorics and its Applications 2012, pp. 57–64