

Azarakhsh Malekian

Contact Information

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Research Interest

- Algorithmic Game Theory, Algorithmic Mechanism Design
 - Combinatorial Optimization
 - Approximation Algorithms, Randomized Algorithms
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Education

- **Ph.D.** in *Computer Science*, Jan. 2005-present, University of Maryland, College Park, MD, GPA : 3.9/4.00, Advisor: Samir Khuller.
- **M.Sc.** in *Computer Science*; 2003-2005, University of Maryland, College Park, MD, GPA: 3.9/4.00. Scholarly Paper: *Improved Algorithms for Data Migration*

Related Graduate Course Work:

Advanced Algorithms, Approximation Algorithms, Computational Geometry, Algorithms in Networking, Computation Complexity, Parallel Processing, Advanced Microeconomics

- **B.Sc.** in Computer Engineering (Software); 1998-2002 Sharif University of Technology, Tehran, Iran, GPA:17.3/20.00 Thesis: *A parallel web crawler design*
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Awards and Honors

- Dean's Fellowship Award, University of Maryland, 2007-2008.
 - University of Maryland Graduate School Fellowship, 2003- 2005.
 - Ranked 1st in the National Scientific Olympiad, 2002, IRAN.
 - Ranked 1st in the National Graduate School Entrance Exam in Software Engineering, 2002, IRAN.
 - National Bronze Medal in the Informatics Olympiad among High School Students, 1997, IRAN.
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Publications and Working Papers

1. Saeed Alaei, Azarakhsh Malekian: *An analysis of Troubled Assets Reverse Auction*, In preparation, 2008.
 2. Saeed Alaei, Azarakhsh Malekian: *Maximizing Sequence-Submodular Functions and its Application to Online Advertising*, In preparation, 2008.
 3. Saeed Alaei, Azarakhsh Malekian: *Strategic Bidding in Ebay Repeated Auction*, In preparation, 2008.
 4. Saeed Alaei, Azarakhsh Malekian, Ravi Kumar, Erik Vee: *Combinatorial Solutions for Representative Allocation in Guaranteed Delivery*, In preparation, 2008.
 5. Saeed Alaei, Esteban Arcaute, Samir Khuller, Wenjing Ma, Azarakhsh Malekian and John A. Tomlin, *Online Allocation of Display Advertisements subject to Advanced Sales Contracts*, Submitted, 2008.
 6. Saeed Alaei, Azarakhsh Malekian, Aravind Srinivasan: *On Random Sampling Auctions for Digital Goods*, Submitted, 2008.
 7. Azarakhsh Malekian, Chi Chao Chang, Ravi Kumar, Grant Wang: *Query Rewrites for Keyword-based Advertising*, Electronic Commerce(EC), Chicago, July 2008.
 8. Amol Deshpande, Samir Khuller, Azarakhsh Malekian, Mohammad Toossi: *Energy Efficient Monitoring in Sensor Networks*, Latin American Theoretical Informatics(LATIN), Brazil, April 2008.
Invited to Special Issue of Algorithmica from LATIN.
 9. Samir Khuller, Azarakhsh Malekian, Julian Mestre: *To Fill or not to Fill: The Gas Station Problem*, European Symp. on Algorithms (ESA), Israel, October 2007.
Extended Version is Submitted to Transaction on Algorithms.
 10. Samir Khuller, Yoo Ah Kim, Azarakhsh Malekian: *Improved Algorithms for Data Migration*, Workshop on Approximation Algorithms (APPROX), Spain, August 2006.
 11. Mohammad Mahdian, Azarakhsh Malekian: *Improved Algorithms for Stochastic and Priority Facility Location*, In preparation.
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Patents

- *Optimizing Query Rewrites for Keyword-based Advertising*, Chi Chao Chang, Ravi Kumar, Azarakhsh Malekian, Grant Wang, Patent filed.
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Invited Talks

- "Maximizing Sequence-Submodular Functions", INFORMS 2008, Washington D.C.
 - "The Gas Station Problem", INFORMS 2006, Pittsburgh.
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Research Experience

- Intern, Summer 2008
Yahoo! Inc, Applied Research, Santa Clara, CA
Research on representative allocation in guaranteed delivery, Results appeared in [4], [5].
Supervisors: Ravi Kumar and Erik Vee.

- Intern; Summer 2007
Yahoo! Inc., Applied Research, Santa Clara, CA
Research on optimizing query rewrites for keyword-based advertising Results appeared in [7]
 - Research Assistant; 2003 - present
University of Maryland, College Park.
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Related Teaching Experience

- Teaching Assistant, University of Maryland:
Design and Analysis of Algorithms, Algorithms, Discrete Mathematics, Programming Languages Concepts, Introduction to Numerical Analysis.
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Relevant Activities

- Co-organizer: 20th Maryland Theoretical Computer Science Day, October 2008.
 - Capital Area of Theory Organizer, Dept. of CS, UMD; 2006- Present.
 - Referee of research articles for various conferences and journals, including STOC 2009, SODA (2008, 2007, 2006), STACS 2008, Approx 2006, Algorithmica.
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References

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