

Amin Sayedi

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RESEARCH ◇ Algorithmic Game Theory and Mechanism Design

INTERESTS ◇ Randomized and Approximation Algorithms

◇ Combinatorial Optimization

◇ Combinatorics and Graph Theory

EDUCATION ◇ **Carnegie Mellon University**, Pittsburgh, PA. August 2007 - Present

Ph.D. Candidate in Algorithms, Combinatorics and Optimization (ACO), Tepper School of Business
Advisor: Prof. R. Ravi; Co-advisor: Prof. I. Hafalir; GPA: 4.0/4.0

Relevant Coursework: Game Theory, Foundations of Electronic Marketplaces, Microeconomics, Networks and Matchings, Graph Theory, Discrete Mathematics, Linear Programming, Advanced Linear Programming, Integer Programming, Advanced Integer Programming, Convex Polytopes

◇ **Sharif University of Technology**, Tehran, IRAN. September 2003 - April 2007

B.S. in Computer Engineering

Thesis: *Scheduling to Minimize Gaps and Power Consumption*

Advisor: Prof. M. Ghodsi

WORK ◇ **Microsoft Research**, Cambridge, MA, Aug 2009

EXPERIENCE Short-term visitor invited by Dr. J. Chayes

◇ **Yahoo! Research**, Santa Clara, CA, Feb 2009 - May 2009

Worked as a research intern on sponsored search auctions in the Microeconomics and Social Systems Group under the supervision of Dr. D. Pennock

◇ **Institute for Theoretical Physics and Mathematics**, Tehran, Iran. Sep 2005 - Sep 2007

Worked as a part-time researcher under the supervision of Dr. M. Hajiaghayi and Prof. M. Ghodsi

HONORS AND ◇ **Egon Balas Award**, Best Summer Paper, Tepper School of Business, 2009

AWARDS ◇ **William L. Mellon Fellowship**, Tepper School of Business, 2007

◇ **2nd Team** in ACM-ICPC Regional Contest, Tehran, 2005

◇ **Silver Medal** in Central European Olympiad in Informatics (CEOI), Germany, 2003

◇ **Gold Medal** in Iranian National Olympiad in Informatics, Tehran, Iran, Aug 2002

◇ **First Rank** in Khwarizmi Youths' Festival for the project "Graph Algorithms", Tehran, Iran, Dec 2002

WORKING ◇ **Auctions with Budget-Constrained Bidders**, I. Hafalir, R. Ravi, A. Sayedi. Part of the results
PAPERS appeared in *the Fifth Workshop on Ad Auctions*, July 2009, Stanford, CA.

◇ **Expressive Auctions for Externalities in Online Advertising**, A. Ghosh, A. Sayedi. Part of the results appeared in *the Fifth Workshop on Ad Auctions*, July 2009, Stanford, CA.

PUBLICATIONS ◇ **Mechanism Design for Complexity-constrained Bidders**, R. Kumar, M. Mahdian, A. Sayedi. *The fifth Workshop on Internet and Network Economics: WINE'09*, to appear.

◇ **Minimizing Movement**, E. Demaine, M. Hajiaghayi, H. Mahini, A. Sayedi, S. Oveisgharan, M. Zadimoghaddam. In *Proceedings of the 18th Annual ACM-SIAM Symposium on Discrete Algorithms: SoDA'07*. Journal version in *ACM Transaction on Algorithms: ACM TALG* 5(3), 2009.

- ◇ **Scheduling to Minimize Gaps and Power Consumption**, E. Demaine, M. Ghodsi, M. Hajiaghayi, A. Sayedi, M. Zadimoghaddam. In *Proceedings of the 19th Annual ACM Symposium on Parallel Algorithms and Architectures: SPAA'07*, pages 46-54, 2007.
- ◇ **Spanning Trees with Minimum Weighted Degrees**, M. Ghodsi, H. Mahini, K. Mirjalali, S. Oveisgharan, A. Sayedi, M. Zadimoghaddam. In *Information Processing Letters*, Vol. 104(3), pages 113-116, 2007.
- PATENTS ◇ **Expressive Bidding in Online Advertising Auctions**, with Preston McAfee and Arpita Ghosh, U.S. patent filed, 2009.
- ◇ **Mechanisms for Expressive Online Advertising**, with Arpita Ghosh, U.S. patent filed, 2009.
- SELECTED TALKS ◇ **Auctions with Budget Constrained Bidders**
Google, New York City, Jan 2009
Yahoo! Research, Santa Clara, Feb 2009
Stanford University Theory Talk, Mar 2009
Ad Auctions Workshop, Stanford, Jul 2009
- ◇ **Expressive Auctions for Externalities in Online Advertising**
Ad Auctions Workshop, Stanford, Jul 2009
- ◇ **Minimizing Movement**
INFORMS annual meeting, Washington DC, Oct 2008
- TEACHING EXPERIENCE ◇ **Guest Lecturer** on Expressive Auctions for Externalities; Course “Foundations of Electronic Marketplaces” by Prof. Tuomas Sandholm, Fall 2009
- ◇ **Teaching Assistant**
“Game Theory” by Prof. Isa Hafalir, Fall 2009
“Graph Theory” by Prof. R. Ravi, Fall 2008
“Networks and Matchings” by Prof. Gerard Cornuejols, Fall 2008
- PROFESSIONAL ACTIVITIES ◇ **Research Assistant**, Tepper School of Business, 2009
Research on budget constraints in multi-unit auctions, Advisors: Prof. R. Ravi and Prof. I. Hafalir
- ◇ **Reviewer**
SIAM Journal on Optimization (SIOPT), Journal of Networks (JNW), IEEE Symposium on Foundations of Computer Science (FOCS), ACM Conference on Electronic Commerce (EC), Workshop on Internet and Network Economics (WINE), International Workshop on Parameterized and Exact Computation (IWPEC)
- SKILLS ◇ Programming Languages: Proficient in C, C++, Pascal; Familiar with Java, Matlab, MySQL, HTML.
- ◇ Operating Systems: Linux, Microsoft Windows
- ◇ Typesetting: L^AT_EX, Microsoft Word