

# Andrew (Qiushi) Mao

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- CONTACT** Harvard University  
School of Engineering and Applied Sciences  
33 Oxford St., Room 242  
Cambridge, MA 02138  
phone: (267) 456-2881  
email: [mao@seas.harvard.edu](mailto:mao@seas.harvard.edu)  
<http://www.andrewmao.net>
- RESEARCH GOALS** My main research interests are to understand and motivate the design of human/computer systems – mechanisms and organizations, built around people, that we observe all over the Internet. Human interaction on the Internet drives everything from content generation to open source software to collaborative problem solving, and my goals are to understand why it works and how to make it more efficient. My research includes analysis of online communities, distributed human computation, collaborative filtering, information aggregation, and crowdsourcing and peer production, using tools from machine learning, optimization, and game theory.
- EDUCATION** **Harvard University**, Cambridge, MA 2009 –  
  - Candidate for Ph.D. in Computer Science (Expected graduation: May 2015)
  - GPA: 3.88/4.0
  - Advisor: Yiling Chen*Relevant Coursework:* Machine Learning, Linear and Combinatorial Optimization, Game Theory, Social Computing, Matching and Dynamics, Algorithmic Game Theory, Probability, Microeconomics, Cryptography, Biologically-Inspired Multiagent Systems
- University of Pennsylvania**, Philadelphia, PA 2005 – 2009  
  - B.S.E in Computer Science Engineering, *summa cum laude*, May 2009
  - B.S. in Economics (Finance concentration), *summa cum laude*, May 2009
  - GPA: 3.89/4.0*Academic Honors*  
  - Dean’s List 2005-06, 2006-07, 2007-08, 2008-09
  - Tau Beta Pi Engineering Honor Society
  - Eta Kappa Nu EE/CS Honor Society
  - Beta Gamma Sigma Business Honor Society
- Charter School of Wilmington**, Wilmington DE 2001 – 2005  
  - Distinguished Diploma, June 2005
- REFEREED PUBLICATIONS** Micah Sherr, Andrew Mao, William R. Marczak, Wenchao Zhou, Boon Thau Loo, and Matt Blaze. **A3: An Extensible Platform for Application-Aware Anonymity**. In *17th Annual Network and Distributed System Security Symposium (NDSS 2010)*.
- WORKING PAPERS** Andrew Mao, Ariel D. Procaccia, and Yiling Chen. **Social Choice for Human Computation**. In submission to the *Twenty-Sixth Conference on Artificial Intelligence (AAAI-12)*.  
Thomas Pfeiffer, Xi Alice Gao, Andrew Mao, Yiling Chen, and David G. Rand. **Adaptive Information Polling and Aggregation**. In submission to the *Twenty-Sixth Conference on Artificial Intelligence (AAAI-12)*.

Micah Sherr, Harjot Gill, Taher Aquil Saeed, Andrew Mao, William R. Marczak, Wenchao Zhou, Boon Thau Loo, and Matt Blaze **The Design and Implementation of the A3 Application-Aware Anonymity Platform**. In submission to *The International Journal of Computer and Telecommunications Networking*.

TEACHING	<i>Teaching Fellow</i> - AM 221 (Advanced Optimization) at Harvard	Fall 2011
	<ul style="list-style-type: none"><li>• Explained advanced linear, integer, and combinatorial optimization concepts such as column generation, Dantzig-Wolfe decomposition, branch and cut, and network algorithms</li><li>• Instructed students on how to use the CPLEX solver library and AMPL modeling language</li></ul>	
	<i>Teaching Fellow</i> - AM 121 (Linear Optimization) at Harvard	Spring 2011
	<ul style="list-style-type: none"><li>• Taught a weekly recitation to students, complementing the main lecture of the class, and held weekly office hours</li><li>• Planned out the course content by writing section notes and assignments</li><li>• Graded weekly problem sets and several exams</li></ul>	
	<i>Teaching Assistant</i> - CIS 320 (Algorithms) at Penn	Spring 2008, Spring 2009
	<ul style="list-style-type: none"><li>• Assist class of 75 students to understand algorithms in computer science and theoretical proofs</li><li>• Graded biweekly homework problems and several examinations, and held weekly office hours</li></ul>	
PROFESSIONAL EXPERIENCE	<b>Goldman Sachs</b> , New York, NY	June 2008 – August 2008
	<i>Summer Analyst</i> - Equity Futures Strategies	
	<ul style="list-style-type: none"><li>• Calculated benchmarks for futures and FX-based synthetic indices</li><li>• Generated conditional yield curve trade ideas using treasury bond futures</li></ul>	
	<b>Goldman Sachs</b> , London, United Kingdom	June 2007 – August 2007
	<i>Summer Analyst</i> - Fixed Income, Pension and Insurance Strategies	
	<ul style="list-style-type: none"><li>• Tested the calibration of a multi-factor Monte Carlo asset pricing model</li><li>• Wrote backtesting scripts for fixed income portfolio performance and risk measurement</li><li>• Used yield curve models to generate time series for different interest rates</li></ul>	
AWARDS	Yahoo! Key Scientific Challenges Award	August 2011
	Harvard University Certificate of Distinction in Teaching	Spring 2011
OTHER ACTIVITIES	Dudley House Orchestra (Concertmaster Sept. 2009 – Dec. 2010)	Sept. 2009 –
PERSONAL	Avid skier, violinist, culinary fanatic, and gadget lover	