

# Min “Max” Xu

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## Education

- **Carnegie Mellon University** Pittsburgh, PA  
Ph.D. Machine Learning (advisor: Prof. John Lafferty) *Aug. 2009 - Present*  
Relevant coursework: Machine Learning, Statistical Machine Learning, Convex Optimization, Graduate Algorithms, Multimedia Database and Data Mining, Advanced Statistical Theory, Computer Vision
- **University of California, Berkeley** Berkeley, CA  
B.S. Electrical Engineering and Computer Science (with High Honors) *Aug. 2005 - May. 2009*  
Relevant coursework: Probabilistic Graphical Models, Graduate Analysis, Natural Language Processing

## Research Experiences

- **University of Chicago** Chicago, IL  
Visiting Graduate Student (Statistics and CS Dept.) *Sept. 2013 - Present*
- **Carnegie Mellon University** Pittsburgh, PA  
Graduate Research Assistant (Statistical Machine Learning group) *Aug. 2009 - Present*
- **Microsoft Research Asia** Beijing, China  
Research Intern *July 2012 - Sept 2012*  
Internet Economics and Computational Advertising Group
- **University of California, Berkeley** Berkeley, CA  
Undergrad Research Assistant (Dependable Computing group) *Aug. 2008 - May 2009*

## Research Interests

Theory and application of high-dimensional statistical models. Nonparametric methods. Statistical problems in mechanism design.

## Work Experience

- **Eric and Wendy Schmidt Data Science for Social Good Fellowship** Chicago, IL  
Statistical Modeling for Mesa Arizona Public School System *June 2013 - Aug. 2013*

## Preprint

- Yuxue Qi, **Min Xu**, John Lafferty (2014). Learning High-Dimensional Concave Utility Functions for Discrete Choice Model.
- Nihar Shah, Edward Su, **Min Xu** (2013). Targeting Lost College Potential in High School Students: Case Study with Mesa Public School District.

## Publications

- **Min Xu**, Minhua Chen, John Lafferty (2014). Faithful Variable Screening in High-Dimensional Convex Regression. <http://arxiv.org/abs/1411.1805> To appear in the *Annals of Statistics*
- **Min Xu**, Tao Qin, Tie-Yan Liu (2013). Estimation Bias in Multi-armed Bandit Algorithms for Search Advertising. *Neural Information Processing Systems*, NIPS 2013.

- Khalid El-Arini, **Min Xu**, Carlos Guestrin, Emily Fox (2013). Representing Documents Through Their Readers. *Knowledge Discovery and Data Mining*, KDD 2013.
- **Min Xu**, John Lafferty (2012). Matrix Sparse Coding and Multivariate Regression for Grouped Data. *International Conference on Machine Learning* ICML 2012.
- Aarti Singh, Akshay Krishnamurthy, Sivaraman Balakrishnan, **Min Xu** (2012). Completion of High-rank Ultrametric Matrices using Selective Entries. *IEEE International Conference on Speech and Communications* SPCOM 2012.
- Akshay Krishnamurthy, Sivaraman Balakrishnan, **Min Xu**, Aarti Singh (2012). Efficient Active Algorithms for Hierarchical Clustering. *International Conference on Machine Learning*, ICML 2012.
- Sivaraman Balakrishnan, **Min Xu**, Akshay Krishnamurthy, Aarti Singh (2011). Noise Thresholds for Spectral Clustering. *Neural Information Processing Systems*, NIPS 2011.
- Shuheng Zhou, Phillip Rutimann, **Min Xu**, Peter Buhlmann (2010). High-dimensional Covariance Estimation Based on Gaussian Graphical Models. University of Michigan, Dept. of Statistics, Tech Report 512. Also in *Journal of Machine Learning Research*, JMLR 12(Oct):2975-3026, 2011.
- Han Liu, **Min Xu**, Haijie Gu, Anupam Gupta, John Lafferty, & Larry Wasserman (2010). Forest Density Estimation. *Conference on Learning Theory*, COLT 2010. Also in *Journal of Machine Learning Research*, JMLR 12(Mar):907-951, 2011.

## Teaching Experiences

- **Carnegie Mellon University**

10-702: *Statistical Machine Learning*. Teaching Assistant. Spring 2011.

10-704: *Information Processing and Learning*. Teaching Assistant. Spring 2012.

- **University of California, Berkeley**

CS61A: *Structure and Interpretation of Computer Programs*. Course Instructor. Summer 2009.

CS61A: *Structure and Interpretation of Computer Programs*. Teaching Assistant. Fall 2008, Spring 2009.

CS70: *Discrete Math for CS*. Teaching Assistant. Spring 2008.

CS61B: *Data Structures*. Teaching Assistant. Summer 2007.

## Awards

- Best TA Award, Machine Learning Department, CMU. (2013)
- NSF Graduate Fellowship, Honorable Mention (2010)
- Top Undergraduate Poster award - American Mathematical Society Joint Conference (2008)
- UC Berkeley Regents Scholarship (2005)

## Programming

- C, C++, MATLAB, R, Python, Java

## References

Prof. John Lafferty

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Prof. Larry Wasserman

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