

# Curriculum Vitae of Zhen James Xiang

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## Education

Ph.D. Candidate Department of Electrical Engineering, <i>Advisor: Prof. Peter J. Ramadge</i>	Princeton University, United States	2009-present
M.A. Department of Electrical Engineering, <i>Advisor: Prof. Peter J. Ramadge</i>	Princeton University, United States	2007-2009
B.E. Department of Electrical Engineering, <i>Graduated with honors. GPA rank: 1/164.</i>	Tsinghua University, China	2003-2007

## Awards and Honors

- Best Student Paper Honorable Mention Award, NIPS (2011).
- Charlotte Elizabeth Procter Fellowship, Honorific Fellowship of Princeton University (2011-2012).
- Qualcomm Innovation Fellowship Finalist (2011).
- Second Place, Princeton University's Art of Science Competition (2011), out of 150+ submissions.
- Francis Robin Upton Fellowship, Princeton University (2007-2011).
- Distinguished Graduate Award of Beijing City (2007).
- Distinguished Graduate of Tsinghua University (2007).
- Received an Outstanding Fellowship (Offered to top 2%) every undergraduate academic year, Tsinghua University (2003-2007).
- Gold Medal, International Mathematics Olympiad (IMO), Tokyo, Japan. Ranked 12<sup>th</sup> among 457 participants from 84 countries (2003).
- Gold Medal, China Mathematics Olympiad. Ranked 4<sup>th</sup> among 100+ participants (2003).

## Publications

- (*Working paper*) Zhen James Xiang and Peter J. Ramadge, "Screening Tests for Lasso Problems".

- Zhen James Xiang and Peter J. Ramadge, “Fast Lasso Screening Tests Based on Correlations,” accepted by IEEE ICASSP, Kyoto, March 2012.
- Zhen James Xiang, Hao Xu and Peter J. Ramadge, “Learning Sparse Representations of High Dimensional Data on Large Scale Dictionaries,” NIPS, Granada, December 2011.  
**Selected for oral presentation (7% of accepted papers).**  
**Received best student paper honorable mention award.**
- Zhen James Xiang and Peter J. Ramadge, “Edge Preserving Image Regularization Based on Morphological Wavelets and Dyadic Trees,” accepted by IEEE Transaction on Image Processing.
- Zhen James Xiang, Zhuo Zhang, Pingmei Xu and Peter J. Ramadge, “Learning a Wavelet Tree for Multichannel Image Denoising,” IEEE ICIP, Brussels, September 2011.
- Zhen James Xiang and Peter J. Ramadge, “Morphological Wavelet Transform with Adaptive Dyadic Structures,” IEEE ICIP, Hong Kong, September 2010.
- Zhen James Xiang and Peter J. Ramadge, “Morphological Wavelets and the Complexity of Dyadic Trees,” IEEE ICASSP, Dallas, March 2010.
- Zhen James Xiang, Yongxin Taylor Xi, Uri Hasson and Peter J. Ramadge, “Boosting with Spatial Regularization,” NIPS, Vancouver, December 2009.  
**Selected for spotlight presentation (33% of accepted papers).**
- Zhen James Xiang and Peter J. Ramadge, “Sparse Boosting,” ICASSP, Taipei, April 2009.
- Yongxin Taylor Xi, Zhen James Xiang, Peter J. Ramadge and Robert Schapire, “Speed and Sparsity of Regularized Boosting,” AISTATS 2009, Clearwater, April 2009.

## Research Appointments

- Research Assistant (2007-Present)  
Department of Electrical Engineering, Princeton University,  
*Advisor: Prof. Peter J. Ramadge.*
- Summer Research Intern (2010)  
Department of Media Analytics, NEC Labs America, Inc., Cupertino, California,  
*Advisor: Dr. Kai Yu.*

## Teaching Appointments

- Teaching Assistant (2011 Spring)  
ELE 480: fMRI Decoding: Reading Minds Using Brain Scans.  
*A new interdisciplinary class on applying machine learning to neuroimaging data.*  
*Instructors:*  
*Prof. Peter J. Ramadge, Department of Electrical Engineering, Princeton University;*  
*Prof. Kenneth Norman, Department of Psychology, Princeton University.*
- Teaching Assistant (2010 Fall)  
ELE 488: Image Processing  
*Instructor: Prof. Bede Liu, Department of Electrical Engineering, Princeton University.*

- Teaching Assistant (2009 Fall)  
ELE 488: Image Processing  
*Instructor: Prof. Bede Liu, Department of Electrical Engineering, Princeton University.*
- Teaching Assistant (2008 Fall)  
ELE 301: Signal and Systems  
*Instructor: Prof. Bede Liu, Department of Electrical Engineering, Princeton University.*

## Graduate School Classes

PSY 258,	Fundamentals of Neuroscience (Prof. Michael Graziano),	A+
COS 424,	Interacting with Data (Prof. Léon Bottou),	A
COS 511,	Theoretical Machine Learning (Prof. Robert Schapire),	A+
MAT 314,	Introduction to Real Analysis (Prof. Michael Usher),	A+
ELE 465,	Switching and Sequential Systems (Prof. Sun-yuan Kung),	A+
ELE 486,	Digital Communication and Networks (Prof. Sergio Verdu),	A+
ELE 521,	Linear System Theory (Prof. Peter J. Ramadge),	A+
ELE 525,	Random Processes (Prof. Hisashi Kobayashi),	A+
ELE 530,	Theory of Detection and Estimation (Prof. Donald Brown),	A
ORF 522,	Linear Optimization (Prof. Alexander d'Aspremont),	AUD
APC 520,	Math Analysis of Massive Data (Prof. Amit Singer),	AUD
COS 598D,	Boosting: Foundations and Algorithms (Prof. Robert Schapire).	P

## References

- **Prof. Peter J. Ramadge**  
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- **Prof. Robert Schapire**  
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Princeton, NJ 08540
- **Prof. Kenneth Norman**  
[knorman@princeton.edu](mailto:knorman@princeton.edu)  
Department of Psychology, 3-N-18 Green Hall,  
Princeton, NJ 08540
- **Prof. Bede Liu**  
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