

Hui Zou

Curriculum Vitae

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CONTACT INFORMATION

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APPOINTMENT

September 2005–present, Assistant Professor of Statistics, University of Minnesota.

EDUCATION

Stanford University, Statistics, Ph.D. 2005.

Iowa State University, Statistics, M.S. 2001.

University of Science and Technology of China, Physics, B.S. 1997; M.S. 1999.

TEACHING

2008 Spring, Stat8932: Topic course on Elements of Statistical Learning (10 students)

2008 Spring, Stat5102: Theory of Statistics (II) (60 students)

2007 Fall, Stat5101: Theory of Statistics (I) (64 students)

2007 Spring, Stat5102: Theory of Statistics (II) (63 students)

2006 Fall, Stat5101: Theory of Statistics (I) (62 students)

2006 Spring, Stat4102: Theory of Statistics (II) (24 students)

2005 Fall, Stat4101: Theory of Statistics (I) (37 students)

DEPARTMENTAL SERVICES

2008–2009: PhD student admission committee

2007–2008: PhD student admission committee

2005–2007: computing committee

2005–2006: MS program curriculum review committee

STUDENT ADVISING

Member of PhD oral exam committee of Xiaoqiao Wei, Statistics, 2008 August.

Member of PhD oral exam committee of Fanhuan Zhou, Mathematics, 2008 June.

Member of PhD oral exam committee of Tonya Hansen, Applied Economics, 2008 May.

Member of PhD oral exam committee of Jonghoon Joo, Statistics, 2008 January.

Member of PhD oral exam committee of Seongho Wu, Statistics, 2007 September.

Member of PhD oral exam committee of Alicia Johnson, Statistics, 2007 March.

Undergraduate senior paper advisor of Nigro III, Joseph Anthony, Statistics, 2007 May.

Undergraduate senior paper advisor of Zi Yu Guan, Mathematics, 2006 May.

HONORS & AWARDS

- McKnight Land-Grant Professorship 2008-2010.
- Principal Investigator of NSF grant DMS-0706733 (\$118,491) from 06/01/2007 to 05/31/2010.
- **The New Hot Paper in Mathematics, March 2008** identified by *Essential Science Indicators*: Zou, H. (2006), The Adaptive Lasso and its Oracle Properties, *Journal of the American Statistical Association*, 101(476), 1418-1429.

An online interview:

<http://sciencewatch.com/dr/nhp/2008/08marnhp/08marnhpZou/>

- **The Fast Breaking Paper in Mathematics, October 2006** identified by *Essential Science Indicators*: Zou, H. and Hastie, T. (2005) Regularization and Variable Selection via the Elastic Net. *Journal of the Royal Statistical Society, Series B.* 67, 301-320.

An online interview:

http://www.esi-topics.com/fbp/2006/october06-Zou_Hastie.html

- Excellent TA Award, Department of Statistics, Stanford University, 2005.

JOURNAL PUBLICATIONS

1. Zou, H., Zhu, J. and Hastie, T. (2008). New Multicategory Boosting Algorithms Based on Multicategory Fisher Consistent Losses. Accepted by *Annals of Applied Statistics*.
2. Zou, H. (2008). Discussion of “Sure independence screening for ultra-high dimensional feature space” By Fan and Lv (2008), *Journal of Royal Statistical Society B*, to appear.
3. Zou, H. and Zhang, H.H. (2008). On the Adaptive Elastic-Net with A Diverging Number of Parameters. Accepted by *The Annals of Statistics*.
4. Zou, H. and Yuan, M. (2008). Regularized Simultaneous Model Selection in Multiple Quantiles Regression. *Computational Statistics and Data Analysis*, 52, 5296-5304.
5. Zou, H., Yuan, M. (2008). Composite Quantile Regression and The Oracle Model Selection Theory. *The Annals of Statistics*, 36(3), 1108-1126.
6. Wu, S., Zou, H. and Yuan, M. (2008). Structured variable selection in support vector machines. *Electronic Journal of Statistics*, Vol. 2, 103-117.
7. Wang, L., Zhu, J. and Zou, H (2008). Hybrid Huberized Support Vector Machines for Microarray Classification and Gene Selection. *Bioinformatics*, 24(3) 412-419.
8. Zou, H. (2008). A Note on Path-based Variable Selection in The Penalized Proportional Hazards Model. *Biometrika*, 95, 241-247.
9. Zou, H., Li, R. (2008). Rejoinder: One-step Sparse Estimates in the Nonconcave Penalized Likelihood Models. *The Annals of Statistics*, 36(4), 1561-1566.
10. Zou, H., Li, R. (2008). One-step Sparse Estimates in the Nonconcave Penalized Likelihood Models (with discussion). *The Annals of Statistics*, 36(4), 1509-1533.
11. Zou, H. and Yuan, M. (2008). The F_∞ -norm Support Vector Machine. *Statistica Sinica*, 18(1), 379-398.
12. Zou, H., Hastie, T. and Tibshirani, R. (2007). On the Degrees of Freedom of the Lasso. *The Annals of Statistics*, 35(5) 2173-2192.
13. Zou, H. (2006) The Adaptive Lasso and its Oracle Properties. *Journal of the American Statistical Association*, 101(476), 1418-1429.
14. Zou, H., Hastie, T. and Tibshirani, R. (2006). Sparse Principal Component Analysis. *Journal of Computational and Graphical Statistics*, 15(2), 265-286.
15. Wang L. Zhu, J. and Zou, H. (2006). The Doubly Regularized Support Vector Machine. *Statistica Sinica*, 16(2), 589-616.

16. Daniels, M., Zhou, Z. and Zou, H. (2006). Conditionally Specified Space-Time Models for Multivariate Processes. *Journal of Computational and Graphical Statistics*, 15(1), 157-177.
17. Zou, H. and Hastie, T. (2005) Regularization and Variable Selection via the Elastic Net. *Journal of the Royal Statistical Society, Series B.* 67(2), 301-320.
18. Zou, H. and Yang, Y. (2004) Combining Time Series Models for Forecasting. *International Journal of Forecasting*, 20(1), 69-84.

TECHNICAL REPORTS & SUBMISSIONS

1. Kai, B., Li, R. and Zou, H. (2008). Local CQR Smoothing: An Efficient and Safe Alternative to Local Polynomial Regression.
2. Yuan, M. and Zou, H. (2008). Efficient Global Approximation of Nonlinear ℓ_1 Regularization Paths and Its Applications.
3. Yuan, M., Joseph, R. and Zou, H. (2007). Structured Variable Selection and Estimation.
4. Zhu, J. Zou, H., Rosset, S. and Hastie, T. (2006). Multiclass AdaBoost.

REFEREED CONFERENCES PAPERS

1. Zou, H. (2007). An Improved 1-norm Support Vector Machine for Simultaneous Classification and Variable Selection. *Eleventh International Conference on Artificial Intelligence and Statistics*.
2. Zou, H., Zhu, J., Rosset, S. and Hastie, T. (2006). Automatic Bias Correction Methods in Semi-Supervised Learning. *Contemporary Mathematics*, 443, 165-175.
3. Rosset, S., Zhu, J., Zou, H. and Hastie, T. (2005). A Method for Inferring Label Sampling Mechanisms in Semi-Supervised Learning. *Advances In Neural Information Processing Systems*, 17.

REFEREED INVITED BOOK CHAPTERS

1. Zhu, J. and Zou, H. (2007). Variable Selection For The Linear Support Vector Machine, in *Trends in Neural Computation*, published by Springer, ISBN: 978-3-540-36121-3.
2. Zou, H. and Hastie, T. (2007). Model Building and Feature Selection with Genomic Data, in *Computational Methods of Feature Selection*, published by Chapman & Hall/CRC (Taylor & Francis Group), ISBN: 1-58488-878-4.

CONFERENCE COMMITTEE

- Organizer of an invited session titled “Recent Advances in Statistical Learning: Modern Regularization Methods and Semi-supervised Learning” in JSM2007, Salt Lake City.
- Member of the program committee of Eleventh International Conference on Artificial Intelligence and Statistics, 2007.

REFEREE WORK

I have reviewed over 80 papers for many major statistical journals including (in alphabetical order) *Annals of Statistics*, *Annals of Applied Statistics*, *Biometrika*, *Biometrics*, *Bioinformatics*, *Biostatistics*, *Computational Statistics and Data Analysis*, *Electronic Journal of Statistics*, *Journal of the American Statistical Association*, *Journal of the Royal Statistical Society, Series B*, *Journal of Machine Learning Research*, *Journal of Computational and Graphical Statistics*, *Journal of Multivariate Analysis*, *Journal of Statistical Planning and Inference*, *Statistica Sinica*, *Scandinavian Journal of Statistics*, *Technometrics*.

I have also reviewed papers for applied math journals and IEEE journals such as *Applied and Computational Harmonic Analysis*, *IEEE Transactions on Signal Processing*, *IEEE Transactions on neural Networks*, *SIAM Review*.

INVITED CONFERENCE PRESENTATIONS

2007 August, Joint Statistical Meeting 2007, Salt Lake City.

2006 June, AMS-NSF-SIAM Snowbird Machine Learning Conference.

2005 August, Joint Statistical Meeting 2005, Minneapolis.

2004 April, Statistics Industrial Affiliates Annual Conference, Stanford University.

INVITED SEMINAR TALKS

2007 December, Department of Statistics, University of California, Berkeley.

2007 April, Department of Statistics, The Pennsylvania State University.

2006 May, Department of Statistics, Stanford University.

2005 December, Department of Biostatistics, University of Minnesota.

2005 February, Department of Statistics, North Carolina State University.

2005 February, Department of Statistics, University of Florida.

2005 February, School of Statistics, University of Minnesota.

2005 February, Department of Statistics, University of Pennsylvania.

2005 February, Department of Statistics, University of California-Davis.

2005 February, Statistics Program, Georgia Institute of Technology.

2005 February, Department of Statistics, University of Michigan.

2005 January, Department of Statistics, University of Wisconsin-Madison.

2005 January, Department of Statistics, Iowa State University.

2005 January, Department of Statistics, Ohio State University.

PROFESSIONAL MEMBERSHIPS

Institute of Mathematical Statistics

American Statistical Association