

# 周元燊院士講座講者資料

**BIN YU ( 郝 彬 )**

## **Education**

- B.S.in Mathematics, Peking University, 1984
- M.S. in Statistics, University of California at Berkeley, 1987
- Ph.D. in Statistics, University of California at Berkeley, 1990

## **Positions Held**

- Assistant Professor of Statistics, University of Wisconsin at Madison, 1990-1993
- Postdoctoral Fellow, Mathematical Science Research Institute at Berkeley Fall 1991
- Visiting Assistant Professor of Statistics, Yale University, Spring 1993
- Assistant Professor of Statistics, UC Berkeley, 1993-1997
- Associate Professor of Statistics, UC Berkeley, 1997-2001
- Member of Technical Staff, Bell Labs, Lucent Technologies, 1998-2000
- Professor of Statistics, UC Berkeley, 2001-
- Professor of Electrical Engineering & Computer Science, UC Berkeley, 2006-
- Chair, Department of Statistics, UC Berkeley, 2009-12

## **Honors/Awards**

- Institute of Mathematical Statistics (IMS) Fellow, 1999
- Medallion Lecturer, IMS, 1999
- IEEE Fellow, 2001
- American Statistical Association (ASA) Fellow, 2005
- Chancellor's Professor, UC Berkeley, 2006 -
- Guggenheim Fellow, 2006
- AAAS Fellow, 2009
- Invited Talk, International Congress of Industrial and Applied Mathematics, 2011
- Tukey Memorial Lecturer, The 8th World Congress of Probability and Statistics, 2012
- President-Elect, Institute of Mathematical Statistics (IMS), 2012-13
- Inaugural Pao-Lu Hsu Award, International Chinese Statistical Association (ICSA), 2012
- Fellow, American Academy of Arts and Sciences, 2013
- President, IMS, 2013-2014
- Member, National Academy of Sciences, 2014

## **Professional Services**

- Action Editor, Journal of Machine Learning Research, 2001-
- Associate Editor, Journal of the American Statistical Association, 2006-2008
- Associate Editor, Technometrics, 2007-2010
- Associate Editor, Statistica Sinica, 1996-2001, 2005-2011
- Associate Editor, Annals of Statistics, 1998-2006
- Co-Guest Editor, Special Issue of Statistica Sinica on Bioinformatics, 2001
- Co-Guest Editor, Special Issue of IEEE Trans. Signal Proc. on Machine Learning, 2004
- Board Member, IEEE Information Theory Society (two terms)
- Council Member, Institute of Mathematical Statistics (two terms)
- Member, National Advisory Board, SAMSI, 2008-2010
- Co-chair, National Advisory Board, SAMSI, 2010-2012
- Chair, Scientific Committee, Center for Statistical Science, PKU, 2011-2014
- Member, Board of Mathematical Sciences and Applications, NAS, 2010-2013
- Member, Scientific Advisory Board, IPAM, 2011-2014
- Member, Governing Board, ICERM, 2012-2015

## Publications

1. S. Wu and B. Yu (2016). [Local identifiability of  \$l\_1\$ -minimization dictionary learning: a sufficient and almost necessary condition](#). *Submitted*.
2. R. E. Kass, B. S. Caffo, M. Davidian, X. Meng, B. Yu, Nancy Reid\* (2016). [Ten simple rules for effective statistical practice](#). *PLoS Comput. Biol.*, 12(6): e1004961.  
*doi:10.1371/journal.pcbi.1004961*
3. Siqi Wu, Antony Joseph, Ann S. Hammonds, Susan E. Celniker, Bin Yu\*, and Erwin Frise\* (2016). [Stability-driven nonnegative matrix factorization to interpret spatial gene expression and build local gene networks \(with support information\)](#). *PNAS*, pp. 4290 - 4295.
4. A. Bloniarz, C. Wu, B. Yu, A. Talwalkar (2016). [Supervised neighborhoods for distributed nonparametric regression](#). *Proc. of AISTATS, Barcelona, Spain*.
5. B. Yu (2015). [Data wisdom for data science](#). *Operational Database Management Systems (ODBMS.ORG)*.
6. A. Bloniarz, H. Liu, C. Zhang, J. Sekhon, and B. Yu\* (2015). [Lasso adjustments of treatment effect estimates in randomized experiments](#). *PNAS (accepted)*
7. P. Ma, M. W. Mahoney and B. Yu (2015). [A Statistical Perspective on Algorithmic Leveraging](#). *Journal of Machine Learning Research*, 16, (2015), 861-911.
8. T. Moon, Y. Wang, Y. Liu, and B. Yu (2015). [Evaluation of a MISR-based high-resolution aerosol retrieval method using AERONET DRAGON campaign data](#). *IEEE Transactions on Geoscience and Remote Sensing*, 53, 4328-4339.
9. B. Yu (2014). [Let us own data science. video IMS Bulletin](#) *Institute of Mathematical Statistics (IMS) Presidential Address, ASC-IMS Joint Conference, Sydney, July, 2014.*

10. G. Schiebinger, M. J. Wainwright and B. Yu (2014). [The geometry of kernelized spectral clustering](#). *Annals of Statistics*, 43, 819-846.
11. L. Miratrix, J. Jia, B. Yu, B. Gawalt, L. El Ghaoui, L. Barnesmoore, S. Clavier (2014). [Concise comparative summaries \(CCS\) of large text corpora with a human experiment](#). *Ann. Applied Statist.*, 8, 499-529.
12. Y. Benjamini and B. Yu (2014). [The shuttle estimator for explainable variance in fMRI experiments](#). *Annals of Applied Statistics*, 7, 2007-2033.
13. D. Bean, P. Bickel, N. El Karoui and B. Yu (2014). [Optimal M-estimation in high-dimensional regression](#). *Proceedings of National Academy of Sciences*, 110, 1456314568.
14. N. El Karoui, D. Bean, P. Bickel, C. Lim, and B. Yu (2014). [On robust regression with high-dimensional predictors](#). *Proceedings of National Academy of Sciences*, 110, 1455714562.
15. P. Ma, M. W. Mahoney, B. Yu (2014). [A Statistical Perspective on Algorithmic Leveraging](#). *Proc. of International Conference on Machine Learning (ICML)* (This conference paper contains some of preliminary results of the journal submission *Ma et al. (2015)*)
16. A. Bloniarz, A. Talwalkar, J. Terhorst, M. Jordan, D. Patterson, B. Yu and Y. Song (2014). [Changepoint Analysis for Efficient Variant Calling](#). *Proc. of RECOMB 2014 (to appear)*.
17. Tao Shi (2013), [A conversation with Professor Bin Yu](#) *International Chinese Statistical Association (ICSA) Bulletin*, Vol 25, Issue 2, pp 85-98. ([Selected Parts in Statblogs](#))
18. S. Balakrishnan, M. Wainwright, and B. Yu (2013). [Statistical guarantees for the EM algorithm: from population to sample-based analysis](#). *Annals of Statistics* (to appear).
19. A. Joseph and B. Yu (2013). [The impact of regularization on spectral clustering](#). *Annals of Statistics*, (in revision).
20. C. Lim and B. Yu (2013). [Estimation Stability with Cross Validation \(ESCV\)](#) *Journal of Computational and Graphical Statistics* (to appear).
21. A. S. Hammonds, C. A. Bristow, W. W. Fisher, R. Weizmann, S. Wu, V. Hartenstein, M. Kellis, B. Yu, E. Frise, and S. E. Celniker (2013). [Spatial expression of transcription factors in Drosophila embryonic organ development](#). *Genome Biology*, 14(12), R140.
22. H. Liu and B. Yu (2013). [Asymptotic properties of Lasso+mLS and Lasso+Ridge in sparse high-dimensional linear regression](#). *Electron. J. Statist.*, 7, 312-3169.
23. J. Mairal and B. Yu (2013). [Supervised Feature Selection in Graphs with Path Coding Penalties and Network Flows](#). *Journal of Machine Learning Research*, 14, 2449-2485.
24. Y. Wang, X. Jiang, B. Yu, M. Jiang (2013). [A Hierarchical Bayesian Approach for Aerosol Retrieval Using MISR Data](#). *J. American Statistical Association*, 108, 483-493.
25. Y. He, J. Jia and B. Yu (2013). [Reversible MCMC on Markov equivalence classes of sparse directed acyclic graphs](#). *Annals of Statistics*, 41(4), 1742-1779.

26. B. Yu (2013). [Stability](#). *Bernoulli*, 19 (4), 1484-1500. (Invited paper for the Special Issue commemorating the 300th anniversary of the publication of Jakob Bernoulli's *Ars Conjectandi* in 1712)
27. J. Mairal and B. Yu (2013). Discussion on Grouping Strategies and Thresholding for High Dimensional Linear Models *Journal of Statistical Planning and Inference*, 143, 1451-1453.
28. C. Uhler, G. Raskutti, and P. Buhlmann and B. Yu (2012). [Geometry of faithfulness assumption in causal inference](#). *Annals of Statistics*, 41, 436-463.
29. L. Miratrix, J. Sehkun, and B. Yu (2012). [Adjusting Treatment Effect Estimates by Post-Stratification in Randomized Experiments](#). *Journal of Royal Statistical Society, Series B*, 75 (part 2), 369-396.
30. J. Jia, K. Rohe and B. Yu (2012) [The Lasso under Poisson-like Heteroscedecity](#). *Statistica Sinica*, 23, 99-118.
31. S. Negahban, P. Ravikumar, M. Wainwright, and B. Yu (2012) [A unified framework for high-dimensional analysis of M-estimators with decomposable regularizers](#). *Statistical Science*, 27, 538-557.
32. G. Raskutti, M. Wainwright, and B. Yu (2012) [Minimax-optimal rates for sparse additive models over kernel classes via convex programming](#). *J. Machine Learning Research*, 13, 389-427.
33. J. Mairal and B. Yu (2012). [Complexity analysis of the Lasso regularization path](#). *Proc. of International Conference on Machine Learning (ICML)* .
34. Yanfeng Gu, Shizhe Wang, Tao Shi, Yinghui Lu, Eugene E. Clothiaux, and Bin Yu (2012). [Multiple-kernel learning-based unmixing algorithm for estimation of cloud fractions with MODIS and CLOUDSAT data](#). *Proc. of IEEE International Geoscience and Remote Sensing Symposium (IGRSS)*.
35. S. Nishimoto, A. T. Vu, T. Naselaris, Y. Benjamini, B. Yu, J. L. Gallant (2011). [Reconstructing visual experiences from brain activity evoked by natural movies](#). *Current Biology*, 21(19), 1641-1646. [related videos](#)
36. P. Ravikumar, M. Wainwright, G. Raskutti, B. Yu (2011). [High-dimensional covariance estimation by minimizing  \$l\_1\$ -penalized log-determinant divergence](#). *Electronic Journal of Statistics*, 5, 935-980.
37. G. Raskutti, M. Wainwright, B. Yu (2011). [Minimax rates of estimation for high-dimensional linear regression over  \$l\_q\$ -balls](#). *IEEE Trans. Inform. Th.*, 57(10), 6976-6994.
38. K. Rohe, S. Chatterjee, and B. Yu (2011). [Spectral clustering and the high-dimensional Stochastic Block Model](#). *Annals of Statistics*, 39 (4), 1878-1915
39. V. Q. Vu, P. Ravikumar, T. Naselaris, K. N. Kay, J. L. Gallant, B. Yu\* (2011). [Encoding and decoding V1 fMRI responses to natural images with sparse nonparametric models](#). *Annals of Applied Statistics*, 5, 1150-1182. (\*First senior author as last author in biology tradition)

40. S. N. Pakzad, G. Rocha, and B. Yu (2011). *Distributed modal identification by regularized autoregressive models*. *International Journal of Systems Science*, 42, 1473-1489.
41. J. Yousafzai, P. Sollich, Z. Cvetkovic, and B. Yu (2011). [Combined Features and Kernel Design for Robust Phoneme Classification Using Support Vector Machines](#). *IEEE Trans. Audio, Speech and Language Processing* (to appear). 64.
42. X. Dai, J. Jia, B. Yu, El Ghaoui (2011) [SBA-term: Sparse Bilingual Association for terms](#). *Proc. International Conference on Semantic Computing*.
43. B. Yu (2011). [Asymptotics and Coding Theory: One of the  \$n - 1\$  Dimensions of Terry](#). In *Selected Works of Terry Speed* (ed. S. Duoit), pp. 33-36, Springer.
44. B. Yu (2010). [Remembering Leo](#). *Annals of Applied Statistics*, 4(4), 1657-1659.
45. J. Jia, Y. Benjamini, C. Lim, G. Raskutti, B. Yu (2010). [Comment on "Envelope models for parsimonious and efficient multivariate linear regression" by R. D. Cook, B. Li, and F. Chiaromonte](#). *Statistica Sinica*, 20, 961-967.
46. G. Raskutti, M. Wainwright, and B. Yu (2010) [Restricted Eigenvalue Properties for Correlated Gaussian Designs](#). *Journal of Machine Learning Research*, 11, 2241-2259.
47. J. Jia and B. Yu (2010). [On model selection consistency of elastic net when  \$p \gg n\$](#) . *Statistica Sinica*, 10, 595-611.
48. P. Bühlmann and B. Yu (2010). [Boosting](#). *Wiley Interdisciplinary Reviews: Computational Statistics*, 2, 69-74.
49. L. Huang, J. Jia, B. Yu, B. Chun, P. Maniatis, M. Naik (2010). [Predicting Execution Time of Computer Programs Using Sparse Polynomial Regression](#). *Proc. NIPS 2010*.
50. Y. Han, F. Wu, J. Jia, Y. Zhuang and B. Yu (2010). [Multi-task Sparse Discriminant Analysis \(MtSDA\) with Overlapping Categories](#). *Proc. of The 24th AAAI Conference on Artificial Intelligence*, July 11-15, Atlanta, GA.
51. B. Gawalt, J. Jia, L. Miratrix, L. El Ghaoui, B. Yu, and S. Clavier (2010). [Discovering Word Associations in News Media via Feature Selection and Sparse Classification](#). *Proc. 11th ACM SIGMM International Conference on Multimedia Information Retrieval (MIR)*.
52. E. Anderes, B. Yu, V. Jovanovic, C. Moroney, M. Garay, A. Braverman, E. Clothiaux (2009) [Maximum Likelihood Estimation of Cloud Height from Multi-Angle Satellite Imagery](#). *Annals of Applied Statistics*, 3, 902-921
53. T. Shi, M. Belkin, and B. Yu, (2009) [Data Spectroscopy: Eigenspace of Convolution Operator and Clustering](#) *Annals of Statistics*, 37 (6B), 3960-3984.
54. Vincent Q. Vu, Bin Yu, Robert E. Kass (2009) [Information In The Non-Stationary Case](#) *Neural computation* 21, 688-703.
55. N. Meinshausen and B. Yu (2009). [Lasso-type recovery of sparse representations for high-dimensional data](#). *Annals of Statistics* 37, 246-270.

56. P. Zhao, G. Rocha, and B. Yu (2009). [The composite absolute penalties family for grouped and hierarchical variable selection](#) *Annals of Statistics* 37, 3468-3497. (An earlier version 'appeared as Grouped and hierarchical model selection through composite absolute penalties' by P. Zhao, G. Rocha and B. Yu, Department of Statistics, UC Berkeley, Tech. Rep 703.)
57. S. Negahban, P. Ravikumar, M. Wainwright, and B. Yu (2009). [A unified framework for high-dimensional analysis of  \$\ell\_1\$ -estimators with decomposable regularizers](#) *Proc. NIPS*, 2009. (This conference paper contains preliminary results of the journal submission Negahban et al. 2012).
58. G. Raskutti, M. Wainwright, B. Yu (2009) [High-dimensional regression under  \$\ell\_q\$ -ball sparsity: Optimal rates of convergence.](#) *Proc. of Allerton Conference on Communication, Control, and Computing*. (This conference paper contains some of preliminary results of the journal submission Ravikumar et al. 2011).
59. G. Raskutti, M. Wainwright, and B. Yu (2009) [Lower bounds on minimax rates for nonparametric regression with additive sparsity and smoothness.](#) *Proc. NIPS*, 2009. (This conference paper contains some of preliminary results of the journal submission Ravikumar et al. 2011).
60. T. Shi, B. Yu, E. Clothiaux, and A. Braverman (2008). [Daytime Arctic Cloud Detection based on Multi-angle Satellite Data with Case Studies.](#) *Journal of American Statistical Association*. 103( 482), 584-593.
61. Peter Buhlmann and Bin Yu (2008) Invited discussion on "Evidence contrary to the statistical view of boosting (D. Mease and A. Wyner)". [\(paper with discussion\)](#) *Journal of Machine Learning Research* 9, 187-194.
62. P. Ravikumar, V. Vu, B. Yu, T. Naselaris, K. Kay, J. Gallant (2008). [Nonparametric sparse hierarchical models describe V1 fMRI responses to natural images](#) *In Advances in Neural Information Processing Systems (NIPS) 21*, (2008). (This conference paper contains some preliminary results of journal paper Vu et al. (2011) on encoding models, but also contains an encoding model that is not in Vu et al. (2011). It does not contain decoding results.)
63. P. Ravikumar, G. Raskutti, M. Wainwright, B. Yu (2008) [Model selection in Gaussian graphical models: high-dimensional consistency of  \$\ell\_1\$ -regularized MLE.](#) *In Advances in Neural Information Processing Systems (NIPS) 21*, (2008).
64. T. Shi, M. Belkin, and B. Yu (2008). [Data spectroscopy: learning mixture models using eigenspaces of convolution operators.](#) *Proc. of ICML 2008*.
65. M. Ager, Z. Cvetkovic, P. Pollich, and B. Yu (2008). [Towards Robust Phoneme Classification Augmentation of PLP Models with Acoustic Waveforms.](#) *Proceedings of EUSIPCO*.
66. J. Yousafzai, Z. Cvetkovi c, P. Pollich, and B. Yu (2008). [Combined PLP-Acoustic Waveform Classification for Robust Phoneme Recognition using Support Vector Machines.](#) *Proceedings of EUSIPCO*.

67. N. Meinshausen, G. Rocha, and B. Yu (2007). [A tale of three cousins: Lasso, L2Boosting, and Danzig](#) *Annals of Statistics* (invited discussion on Candès and Tao's Danzig Selector paper)
68. V. Vu, B. Yu, and R. Kass (2007). [Coverage Adjusted Entropy Estimation](#). *Statistics and Medicine*, 26(21), 4039-4060.
69. B. Yu (2007). [Embracing Statistical Challenges in the Information Technology Age](#) *Technometrics* (special issue on statistics and information technologies). vol. 49 (3), 237-248.
70. X. Jiang, Y. Liu, B. Yu and M. Jiang (2007). [Comparison of MISR aerosol optical thickness with AERONET measurements in Beijing metropolitan area](#). *Remote Sensing of Environment* (Special Issue on Multi-angle Imaging SpectroRadiometer), vol. 107, pp. 45-53.
71. T. Shi, E. E. Clothiaux, B. Yu, A. J. Braverman, and G. N. Groff (2007). [Detection of Daytime Arctic Clouds using MISR and MODIS Data](#). *Remote Sensing of Environment* (Special Issue on Multi-angle Imaging SpectroRadiometer), vol. 107, pp. 172-184.
72. Peng Zhao and Bin Yu (2006). [On Model Selection Consistency of Lasso](#). *J. Machine Learning Research*, 7 (nov), 2541-2567.
73. B. Yu (2006). [Comments on: Monitoring networked applications with incremental quantile estimation by Chambers et al.](#) *Statist. Sci.*, 21, 483-485.
74. B. Yu (2006). [Comments on: Regularization in Statistics, by P. J. Bickel and B. Li](#). *Test*, vol. 15 (2), pages 314-316.
75. P. Buhlmann and B. Yu (2006). [Sparse Boosting](#) *Journal of Machine Learning Research* (7 (June), 1001-1024). This is a shortened and more focused version of Buhlmann and Yu "Boosting, Model Selection, Lasso and Nonnegative Garotte" given below.
76. J. Gao, H. Suzuki, and B. Yu (2006). [Approximation Lasso Methods for Language Modeling](#). *Proceedings of the 21st International Conference on Computational Linguistics and 44th Annual Meeting of the ACL*, pp. 225-232, Sydney.
77. T. Shi and B. Yu (2005). [Binning in Gaussian Kernel Regularization](#). *Statistica Sinica* (special issue on machine learning), 16, 541-567.
78. G. Liang, N. Taft, and B. Yu (2005). [A fast lightweight approach to origin-destination IP traffic estimation using partial measurements](#). *Tech Report 687, Statistics Department, UCB* (accepted for Special Issue of IEEE-IT and ACM Networks on data networks, Jan. 2006)
79. Tong Zhang and B. Yu (2005). [Boosting with early stopping: convergence and consistency](#). *The Annals of Statistics*. Vol. 33, 1538-1579.
80. Castro, M. Coates, G. Liang, R. Nowak, and B. Yu (2005) [Network tomography: recent developments](#). *Statistical Science*, 19, 499-517.

81. C. D. Giurcaneanu and B. Yu (2005). [Efficient algorithms for discrete universal denoising for channels with memory](#). *Proceedings of International Symposium on Information Theory, Australia*. (Also as Tech. Report 686, Statistics Department, UCB (Proc. ISIT, Sept. 2005))
82. P. Zhao and B. Yu (2004). [Stagewise Lasso \(old title: Boosted Lasso\)](#) *Journal of Machine Learning Research*, 8, 2701-2726. (An earlier version appeared as Tech. Report #678, Statistics Department, UC Berkeley (December, 2004; revised in April, 2005))
83. D. J. Diner et al (2004). [PARAGON: A Systematic, Integrated Approach to Aerosol Observation and Modeling](#). *American Meteorological Society*, Oct., 1491-1501.
84. P. Buhlmann and B. Yu (2004). [Discussion on three boosting papers by Jiang, Lugosi and Vayatis, and Zhang](#) *Annals of Statistics*. 32 (1): 96-101.
85. R. Jorsten and B. Yu (2004). [Compressing genomic and proteomic array images for statistical analyses](#). Invited chapter in a book on *Genomic signal processing and statistics*, edited by E. R. Dougherty, I. Shmulevich, J. Chen, and Z. J. Wang, pp. 341 - 366.
86. G. Liang, B. Yu, and N. Taft (2004). [Maximum entropy models: convergence rates and application in dynamic system monitoring](#). *International Symposium on Information Theory, Chicago*.
87. R. Castro, M. Coates, G. Liang, R. Nowak, and B. Yu (2003). [Internet Tomography: Recent Developments](#) *Statistical Science*. Vol. 19(3), 499-517.
88. G. Liang and B. Yu (2003). [Maximum Pseudo Likelihood Estimation in Network Tomography](#). *IEEE Trans. on Signal Processing (Special Issue on Data Networks)*. 51(8), 2043-2053
89. Rebecka Jorsten and Bin Yu (2003). [Simultaneous Gene Clustering and Subset Selection for Classification via MDL](#). *Bioinformatics*. 19(9): 1100-1109.
90. Peter Buhlmann and Bin Yu (2003). [Boosting with the L2 Loss: Regression and Classification](#). *J. Amer. Statist. Assoc.* 98, 324-340.
91. R. Jorsten, W. Wang, B. Yu, and K. Ramchandran (2003). [Microarray image compression: SLOCO and the effects of information loss](#). *Signal Processing Journal (Special Issue on Genomic Signal Processing)*. 83, 859-869.
92. G. Liang and B. Yu (2003). [Pseudo Likelihood Estimation in Network Tomography](#). *Proceedings of of Infocom, San Francisco*.
93. Peter Buhlmann and Bin Yu (2002). [Analyzing Bagging](#). *Annals of Statistics* vol. 30, 927-961.
94. R. Jorsten, M. Hansen, and B. Yu (2002). Adaptive Minimum Description Length (MDL) criteria with applications to microarray data. In *Advances in Minimum Description Length: Theory and Applications*, edited by P. Grunwald, I.J. Myung and M.A. Pitt. The MIT Press, pp. 295-321.



95. Mark Hansen and Bin Yu (2002). [Minimum Description Length Model Selection Criteria for Generalized Linear Models.](#) *Science and Statistics: Festschrift for Terry Speed*, IMS Lecture Notes -- Monograph Series, Vol. 40.
96. Rebecka Jornsten, and Bin Yu (2002). [Multiterminal Estimation: Extensions and a Geometric interpretation.](#) *Proceedings of International Symposium on Information Theory (ISIT)*, June, 2002.
97. Gerald Schuller, Bin Yu, Dawei Huang, and Bern Edler (2002). [Perceptual Audio Coding using Pre- and Post- Filters and Lossless Compression.](#) *IEEE Trans. Speech and Audio Processing*. Vol. 10 (6), 379-390
98. Mark Coates, Alfred Hero, Robert Nowak, and Bin Yu (2002). [Internet Tomography.](#) *Signal Processing Magazine*. vol. 19, No. 3 (May issue), 47-65.
99. M. Hansen and B. Yu (2001). [Model selection and the principle of Minimum Description Length.](#) *Journal of American Statistical Association*. 96, 746-774.
100. Jin Cao, Drew Davis, Scott Vander Wiel and Bin Yu (2000). [[PDF](#)] [Time-varying network tomography: router link data.](#) *J. Amer. Statist. Assoc.* vol. 95, 1063-1075.
101. Peter Buhlmann and Bin Yu (2000a). [Discussion. Additive logistic regression: a statistical view of boosting, by Friedman, J., Hastie, T. and Tibshirani, R.](#) *Annals of Statistics*. Vol. 28, 377-386
102. Mark Hansen and Bin Yu (2000). [Wavelet thresholding via MDL for natural images.](#) *IEEE Trans. Inform. Theory (Special Issue on Information Theoretic Imaging)*. vol. 46, 1778-1788.
103. Jorma Rissanen and Bin Yu (2000). [Coding and compression: a happy union of theory and practice.](#) *J. Amer. Statist. Assoc. (Year 2000 Commemorative Vignette on Engineering and Physical Sciences)*. vol. 95, 986-988.
104. Lei Li and Bin Yu (2000). [Iterated logarithm expansions of the pathwise code lengths for exponential families.](#) *IEEE Trans. Inform. Theory*. vol. 46, 2683-2689.
105. G. Chang, B. Yu and M. Vetterli (2000). [Adaptive wavelet thresholding for image denoising and compression.](#) *IEEE Trans. Image Processing*, vol. 9, 1532-1546.
106. G. Chang, B. Yu and M. Vetterli (2000). [Spatially adaptive wavelet thresholding based on context modeling for image denoising.](#) *IEEE Trans. Image Processing*, vol. 9, 1522-1531.
107. G. Chang, B. Yu and M. Vetterli (2000). [Wavelet thresholding for multiple noisy image copies.](#) *IEEE Trans. Image Processing*, vol. 9, 1631-1635.
108. Y. Yoo, A. Ortega, and B. Yu (1999). [Image subband coding using context-based classification and adaptive quantization.](#) *IEEE Trans. Image Processing*, vol. 8, 1702-1215.
109. B. Yu, M. Ostland, P. Gong and R. Pu (1999). *Penalized discriminant analysis of in situ hyperspectral data for conifer species recognition.* *IEEE Trans. Geoscience and Remote Sensing*, in press.

110. A. Barron, J. Rissanen, and B. Yu (1998). *The Minimum Description Length principle in coding and modeling. (Special Commemorative Issue: Information Theory: 1948-1998) IEEE. Trans. Inform. Th., 44, 2743-2760. Reprinted in Information 50 Years of Discovery, Theory: S. Verdu and S. McLaughlin (eds), IEEE Press , 1999.*
111. B. Yu and P. Mykland (1998). *Looking at Markov samplers through cusum path plots: a simple diagnostic idea. Statistics and Computing , 8, 275-286.*
112. P. Gong, R. Pu and B. Yu (1998) *Conifer species recognition: effects of data transformation and band width (in Chinese) Journal of Remote Sensing, 2(3), 211-217.*
113. G. Chang, B. Yu and M. Vetterli (1998). [Spatially adaptive wavelet thresholding for image denoising.](#) *Proceedings of IEEE International Conference on Image Processing, October, Chicago.*
114. S. G. Chang, B. Yu, and M. Vetterli (1998). [Image denoising via lossy compression and wavelet thresholding.](#) *Proceedings of International Conference on Image Processing. Santa Barbara, California, vol. 1, pp. 604-607.*
115. M. Ostland and B. Yu (1997). [Exploring quasi Monte Carlo for marginal density approximation.](#) *Statistics and Computing, 7, 217-228.*
116. P. Gong, R. Pu, and B. Yu (1997). *Conifer species recognition with in Situ hyperspectral data. Remote Sensing of Environment, 62, 189-200.*
117. B. Yu and T. P. Speed (1997). [Information and the clone mapping of chromosomes.](#) *Ann. Statist. 25, 169-185.*
118. D. Nelson, T. Speed, and B. Yu (1997). *The limits of random fingerprinting. Genomics, 40, 1-12.*
119. B. Yu (1997). [Assouad, Fano, and Le Cam.](#) *Festschrift for Lucien Le Cam . D. Pollard, E. Torgersen, and G. Yang (eds), pp. 423-435, Springer-Verlag.*
120. B. Yu (1996). *Lower bounds on expected redundancy for nonparametric classes. IEEE Trans. on Information Theory, 42, 272-275.*
121. Y. Yoo, A. Ortega, and B. Yu (1996). *Adaptive quantization of image subbands with efficient overhead rate selection. In Proceedings of IEEE International Conference on Image Processing, Lausanne, Switzerland.*
122. B. Yu (1996). [A Statistical analysis of adaptive scalar quantization based on quantized past data.](#) *In Proceedings of International Symposium on Information Theory and its Applications (ISITA96), Victoria, Canada.*
123. B. Yu (1995). *Comment: Extracting more diagnostic information from a single run using cusum path plot. Statist. Sci., 10, 54-58.*

124. J. Rissanen and B. Yu (1995). MDL learning. In *Learning and Geometry: Computational Approaches, Progress in Computer Science and Applied Logic, 14*, David Kueker and Carl Smith (eds), Birkhäuser, Boston, pp. 3-19.
125. P. Mykland, L. Tierney, and B. Yu (1995). Regeneration in Markov Chain samplers. *J. Amer. Statist. Assoc.*, 90, 233-241.
126. B. Yu (1994a). Rates of convergence for empirical processes of stationary mixing sequences. *Ann. Probab.* 22, 94-116.
127. M. Arcones and B. Yu (1994). Central limit theorems for empirical and U-processes of stationary mixing sequences. *J. Theor. Probab.* 7, 47-71.
128. B. Yu (1994). Lower bound on the expected redundancy for classes of continuous Markov sources. In *Statistical Decision Theory and Related Topics V*, S. S. Gupta and J. O. Berger (eds), 453-466.
129. M. Arcones and B. Yu (1994). Limit theorems for empirical processes under dependence. In *Proceedings in Chaos expansions, multiple Wiener integrals and their applications*. 205-221.
130. A. R. Barron, Y. Yang and B. Yu (1994). Asymptotically optimal function estimation by minimum complexity criteria. In *Proceedings of 1994 International Symposium on Information Theory*, pp. 38, Trondheim, Norway.
131. B. Yu and T. Speed (1993). A rate of convergence result for a universal D-semifaithful code. *IEEE Trans. on Information Theory* 39, 8813-820.
132. B. Yu (1993). Density estimation in the  $L^\infty$  norm for dependent data with applications to the Gibbs sampler. *Ann. Statist.* 21, 711-735.
133. T. Speed and B. Yu (1993). Model selection and prediction: normal regression. *J. Inst. Statist. Math.* 45, 35-54.
134. J. Rissanen, T. Speed and B. Yu (1992). Density estimation by stochastic complexity. *IEEE Trans. on Information Theory*, 38, 315-323.
135. B. Yu and T. Speed (1992) Data compression and histograms. *Probability Theory and Related Fields*, 92, 195-229.