

## Andrew Nobel Publications

### Refereed Publications

A Recurrence theorem for dependent processes with applications to data compression, A.B. Nobel and A.D. Wyner, IEEE Transactions on Information Theory, vol. 38, pp. 1561-1564, 1992.

A note on uniform laws of averages for dependent processes, A.B. Nobel and A. Dembo, Statistics and Probability Letters, vol. 17, pp.169-172, 1993.

A counterexample concerning uniform ergodic theorems for a class of functions, A.B. Nobel, Statistics and Probability Letters, vol. 24, pp.165-168, 1995.

Termination and continuity of greedy growing for tree-structured vector quantizers, A.B. Nobel and R.A. Olshen, IEEE Transactions on Information Theory, vol. 42, no. 1, pp.191-205, 1996.

Consistency of data-driven histogram methods for density estimation and classification, G. Lugosi and A.B. Nobel, Annals of Statistics, vol. 24, no. 2, pp.687-706, 1996.

Vanishing distortion and shrinking cells, A.B. Nobel, IEEE Transactions on Information Theory, vol. 42, no. 4, pp.1303-1305, 1996.

Histogram regression estimation using data-dependent partitions, A.B. Nobel, Annals of Statistics, vol. 24, no. 3, pp.1084-1105, 1996.

Recursive partitioning to reduce distortion, A.B. Nobel, IEEE Transactions on Information Theory, vol. 43, no. 4, pp.1122-1133, 1997.

Density estimation from an individual numerical sequence, A.B. Nobel, G. Morvai and S. Kulkarni, IEEE Transactions on Information Theory, vol. 44, no. 2, pp.537-541, 1998.

On density estimation from an ergodic process, T.M. Adams and A.B. Nobel, Annals of Probability, vol. 26, no. 2, pp.794-804, 1998.

Limits to classification and regression estimation from ergodic processes, A.B. Nobel, Annals of Statistics, vol. 27, pp.262-273, 1999.

Adaptive model selection using empirical complexities, G. Lugosi and A.B. Nobel, Annals of Statistics, vol. 27, pp.1830-1864, 1999.

Regression estimation from an individual stable sequence, G. Morvai, S.R. Kulkarni, and A.B. Nobel, Statistics, vol. 33, pp.99-118, 1999.

Finitary reconstruction of a measure preserving transformation, T.M. Adams and A.B. Nobel, Israel Journal of Mathematics, vol. 126, pp.309-326, 2001.

Estimating a function from ergodic samples with additive noise, A.B. Nobel and T.M. Adams, *IEEE Transactions on Information Theory*, vol. 47, pp.2895-2902, 2001.

Analysis of a complexity based pruning method for classification trees, A.B. Nobel, *IEEE Transactions on Information Theory*, vol. 48, pp.2362-2368, 2002.

On optimal sequential prediction schemes for general processes, A.B. Nobel, *IEEE Transactions on Information Theory*, vol. 49, pp.83-98, 2003.

Indistinguishability of absolutely continuous and singular distributions, S.P. Lalley and A.B. Nobel, *Statistics and Probability Letters*, vol. 62, pp.145-154, 2003.

Repeated Observation of Breast Tumor Subtypes in Independent Gene Expression Data Sets, T. Sørli, R. Tibshirani, J. Parker, T. Hastie, J.S. Marron, A. Nobel, S. Deng, H. Johnsen, R. Pesich, S. Geisler, C.M. Perou, P.E. Lønning, P.O. Brown, A-L. Børresen-Dale and D. Botstein, *Proceedings of the US National Academy of Sciences*, vol. 100, pp.8418-8423, 2003.

Some statistical properties of memoryless individual sequences, A.B. Nobel, *IEEE Transactions on Information Theory*, vol. 50, pp.1497-1505, 2004.

Significance analysis of functional categories in gene expression studies: a structured permutation approach, W.T. Barry, A.B. Nobel and F.A. Wright, *Bioinformatics*, vol. 21, pp.1943-1949, 2005.

ChIPOTle: A user-friendly tool for the analysis of ChIP-chip data, M.J. Buck, A.B. Nobel and J.D. Lieb, *Genome Biology*, vol. 6, R97, 2005.

Hypothesis testing for families of dependent processes, A.B. Nobel, *Bernoulli*, vol. 12, pp.251-269, 2006.

The Molecular Portraits of Breast Tumors Are Conserved Across Microarray Platforms, Z. Hu, C. Fan, D.S. Oh, J.S. Marron, X. He, B.F. Qaqish, C. Livasy, L.A. Carey, E. Reynolds, L. Dressler, A. Nobel, J. Parker, M.G. Ewend, L.R. Sawyer, D. Xiang, J. Wu, Y. Liu, R. Nanda, M. Tretiakova, A.R. Orrico, D. Dreher, J.P. Palazzo, L. Perreard, E. Nelson, M. Mone, H. Hansen, M. Mullins, J.F. Quackenbush, O.I. Olopade, P.S. Bernard and C.M. Perou, *BMC Genomics*, 7:96, 2006.

Different gene expression-based predictors for breast cancer patients are concordant, C. Fan, D.S. Oh, L. Wessels, A. Nobel, L.J. van't Veer, and C.M. Perou, *The New England Journal of Medicine*, vol. 355, pp.560-569, 2006.

Denosing deterministic time series, S.P. Lalley and A.B. Nobel, *Dynamics of Partial Differential Equations*, vol. 3, pp.259-279, 2006.

Gene expression profiles do not consistently predict the clinical treatment response in locally advanced breast cancer, T. Sørli, C.M. Perou, C. Fan, S. Geisler, T. Aas, A. Nobel, G. Anker, L.A. Akslen, D. Botstein, A-L. Børresen-Dale, and P.E. Lønning, *Molecular Cancer Therapeutics*, vol. 5, pp.2914-2918, 2006.

A statistical framework for testing functional categories in microarray data, W.T. Barry, A.B. Nobel and F.A. Wright. To appear in *The Annals of Applied Statistics*.

Online prediction algorithms for aggregation of arbitrary estimators of a conditional mean, F. Bunea and A.B. Nobel. To appear in the *IEEE Transactions on Information Theory*

### **Papers Under Review or in Progress, and Technical Reports**

Finding large-average submatrices in high dimensional data, A. Shabalin, V.J. Weigman, C.M. Perou and A.B. Nobel. In progress.

A Bayesian method for assessing differential expression across multiple microarray studies, H. Tjelmeland, R. Scharpf, G. Parmigiani and A.B. Nobel. In progress.

Uniform convergence of VC classes under ergodic sampling, T.M. Adams and A.B. Nobel. In progress.

Merging gene expression studies via cross platform normalization, A. Shabalin, H. Tjelmeland, C. Fan, C.M. Perou and A.B. Nobel. Under review.

First order predictive sequences and induced transformations, A.B. Nobel, Technical Report #2367, Department of Statistics, UNC Chapel Hill, 1999.

### **Refereed Conference Papers**

Evaluating the performance of a simple inductive procedure in the presence of overfitting error, A.B. Nobel. In *Proceedings of the Fourth Annual Conference on Computational Learning Theory*, pp.267-274, Santa Cruz, CA, 1991.

Understanding Patterns of TCP Connection Usage with Statistical Clustering, F. Hernandez Campos, A.B. Nobel, F.D. Smith, K. Jeffay. To appear in the proceedings of the Thirteenth IEEE/ACM International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS), Atlanta, GA, September 2005.

Mining Approximate Frequent Itemsets from Noisy Data, J. Liu, S. Paulsen, W. Wang, A.B. Nobel and J. Prins (short paper). *Proceedings of the Fifth IEEE International Conference on Data Mining (ICDM)*, Houston, TX, November, 2005.

Mining approximate frequent itemsets in the presence of noise: Algorithms and analysis, J. Liu, S. Paulsen, X. Sun, W. Wang, A.B. Nobel and J. Prins. To appear in the *Proceedings of the 2006 SIAM Conference on Data Mining (SDM)*, Bethesda, MD, April 2006.

Significance and Recovery of Block Structures in Binary Matrices with Noise, X. Sun and A.B. Nobel, Proceedings of the 19th Annual Conference on Learning Theory (COLT), H.U. Simon and G. Lugosi eds., Springer, 2006.

### **Patent Applications**

A Method for Understanding the Use of TCP/IP Networks by Users, and Non-Parametric Generation of Synthetic Internet Traffic, F. Hernandez-Campos, K. Jeffay, F.D. Smith, A.B. Nobel. U.S. Patent pending, submitted March 2004.

### **Refereed Conference Posters**

Multivariate SVD Analyses For Network Anomaly Detection, J. Terrell, L. Zhang, K. Jeffay, A.B. Nobel, H. Shen, F.D. Smith, Z. Zhu, ACM SIGCOMM 2005 Poster Session, Philadelphia, PA, August 2005.

A Non-Parametric Approach to Generation and Validation of Synthetic Network Traffic, F. Hernandez-Campos, A.B. Nobel, F.D. Smith, K. Jeffay, IMA Workshop on Measurement, Modeling, and Analysis of the Internet, Minneapolis, MN, January 2004.

### **Conference Papers**

Histogram density estimation using data-dependent partitions, A.B. Nobel and G. Lugosi. In Proceedings of the 1994 Conference on Information Science and Systems, pp.775-780, Princeton University, Princeton, NJ, 1994.

Consistent estimation of a dynamical map, A.B. Nobel. In Nonlinear Dynamics and Statistics, pp.267-280, edited by A.I. Mees, Birkhauser, Boston, 2001.