

P. Richard Hahn

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Education

DUKE UNIVERSITY
Ph.D. Candidate, Department of Statistical Science
Expected March 2011

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY
M.Sc. Mathematics with Operations Research and Statistics Option, 2007.
Thesis: *Exploiting Symmetry to Improve the Performance of Branch-and-Bound for Finding Maximum Independent Sets*, advisor Brian Borchers.

COLUMBIA UNIVERSITY
B.A. Economics-Philosophy, 2005.

Research Interests

Latent variable modeling, high dimensional regression, prediction, manifold regularization, statistical computing.

Employment

Research Assistant, *Fall 2010*
Duke University Mathematical Biology Program
Funded by an NSF training grant I have turned my methodological research towards problems in molecular ecology and systems biology.

Research Assistant, *Fall 2009 - Spring 2010*
Duke University Department of Statistics
With Professor Sayan Mukherjee I research nonlinear Bayesian dimension reduction for prediction and inference in high dimensional settings, with bioinformatics and systems biology as motivating applications.

Statistical consultant, *Dec 2009 - present*
Deloitte Consulting
Working with a team led by Mumtaz Ahmed, I assist in the exploratory analysis of proprietary financial database records, chiefly multivariate dynamic time series.

Teaching Assistant, *Fall 2007 - Spring 2009*
Duke University Department of Statistics
Courses: Probability and Statistics for Engineers, Statistical Inference, Generalized Linear Models, Linear Models

Research Intern, *Summer 2008*

Yahoo! Research

Working with Deepak Agarwal, I investigated the use of covariate dependent Dirichlet process mixtures of regressions for recommender system engines.

Selected Coursework

Quantitative Marketing	Data Structures
Spatial Statistics	Time Series
Linear Programming	Nonlinear Optimization
Combinatorial Optimization	Theory of Computing
Objective Bayes	Behavioral Decision Theory

Papers

Hahn, P. Richard, Kristian Lum and Carl Mela (2010). A Semiparametric Model for Assessing Cognitive Hierarchy Theories of Beauty Contest Games. Submitted for publication.

<http://ftp.stat.duke.edu/WorkingPapers/10-04.html>

Hahn, P. Richard, Carlos Carvalho and Sayan Mukherjee (2010). Predictor-dependent shrinkage for linear regression via partial factor modeling. Submitted for publication.

<http://ftp.stat.duke.edu/WorkingPapers/10-14.html>.

Hahn, P. Richard, James Scott and Carlos Carvalho (2010). Sparse Factor Models for Exploratory Analysis of Multivariate Binary Data. Submitted for publication.

<http://ftp.stat.duke.edu/WorkingPapers/09-22.html>

Hahn, P. Richard and Lane Burgette (2010). Nonlinear conditional quantile estimation using a substitution likelihood. To be submitted.

Burgette, Lane and P. Richard Hahn (2010). Symmetric Bayesian Multinomial Probit Models . To be submitted.

Presentations

Hahn, P. Richard and Sayan Mukherjee. A Manifold Learning Approach to Time Series Alignment Using Gaussian Processes. To be presented at Borrowing Strength, Theory Powering Applications: A conference in honor of Larry Brown's 70th Birthday, Wharton School of the University of Pennsylvania, December 2010.

Hahn, P. Richard. Sparse partial factor regression. Selected talk, presented at 2010 ISBA World Meeting, Benidorm, Spain, June 2010.

Hahn, P. Richard, Kristian Lum and Carl Mela. A Semiparametric Model for Assessing Cognitive Hierarchy Theories of Beauty Contest Games. Presented at Seminar on Bayesian Inference in Econometrics and Statistics, University of Texas, Austin, McCombs School of Business, May 2010.

Hahn, P. Richard. Coherence, Risk Consistency and Cross-validation. Invited talk, Colorado School of Mines Department of Mathematics and Computer Science. April 2010.

Katseff, Shira, P. Richard Hahn, and Susanne Gahl (2009). Syntactic priming can drive syntactic change. Poster presented at the 22nd annual CUNY Conference on Human Sentence Processing, University of California at Davis, March, 2009.

References

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