

## BLAKELEY B. MCSHANE

### Contact Information:

Kellogg School of Management  
Northwestern University  
2001 Sheridan Rd  
Evanston, IL 60208

Office: 847-491-3522  
Fax: 847-491-2498  
Email: b-mcshane@kellogg.northwestern.edu

### Academic Employment:

Kellogg School of Management, Northwestern University	2010 – Present
<i>Assistant Professor</i>	2011 – Present
<i>Assistant Professor and Donald P. Jacobs Scholar</i>	2010 – 2011

### Education:

The Wharton School, University of Pennsylvania <i>Ph.D. in Statistics</i> Thesis: Machine Learning Methods With Time Series Dependence Advisor & Committee: Abraham Wyner, Eric Bradlow, Shane Jensen and Abba Krieger	May 2010
The Wharton School, University of Pennsylvania <i>M.A. in Statistics</i> Thesis: Hierarchical Bayesian Modeling of Hitting Performance in Baseball Co-Advisors: Shane Jensen and Abraham Wyner	May 2010
Oriel College, University of Oxford Studies in Philosophy	October 2004 – June 2005
The College of Arts and Sciences, University of Pennsylvania <i>M.A. in Mathematics</i> Thesis: Mathematical Methods in Pricing Rainbow Options Advisor: Jonathan Block	May 2003
The College of Arts and Sciences, University of Pennsylvania <i>B.A. in Mathematics</i>	May 2003
The Wharton School, University of Pennsylvania <i>B.S. in Economics, Concentrations in Finance and Statistics</i>	May 2003

### Publications:

Kiser, R., Asher, M., and McShane, B.B. (2008), "Let's Not Make a Deal: An Empirical Study of Decision Making in Unsuccessful Settlement Negotiations." *Journal of Empirical Legal Studies*, Vol. 5, No. 3, 551-591.

McShane, B.B., Adrian, M., Bradlow, E.T., and Fader, P.S. (2008), "Count Models Based on Weibull Interarrival Times." *Journal of Business and Economic Statistics*, Vol. 26, No. 3, 369-378.

Jensen, S.T., McShane, B.B., and Wyner, A.J. (2009), "Hierarchical Bayesian Modeling of Hitting Performance in Baseball." *Bayesian Analysis*, Vol. 4, No. 4, 631-652. (with three discussions)

Jensen, S.T., McShane, B.B., and Wyner, A.J. (2009), "Rejoinder: Hierarchical Bayesian Modeling of Hitting Performance in Baseball." *Bayesian Analysis*, Vol. 4, No. 4, 669-674.

McShane, B.B. (2009), "Exploring a New Method for Classification with Local Time Dependence." *Transactions of the Deming Conference on Applied Statistics*.

Piette, J., Braunstein A., McShane, B.B., and Jensen, S.T. (2010), "A Point-Mass Mixture Random Effects Model

for Pitching Metrics.” *Journal of Quantitative Analysis in Sports*, Vol. 6: Iss. 3, Article 8.

McShane, B.B., Galante, R.J., Jensen, S.T., Naidoo, N, Pack, A.I., and Wyner, A.J. (2010), “Characterization of the Bout Durations of Sleep and Wakefulness.” *Journal of Neuroscience Methods*, Vol. 193, No. 2, 321-333.

McShane, B.B. and Wyner, A.J. (2011), “A Statistical Analysis of Multiple Temperature Proxies: Are Reconstructions of Surface Temperatures Over the Last 1000 Years Reliable?” *Annals of Applied Statistics*, Vol. 5, No. 1, 5-44. (with thirteen discussions)

McShane, B.B. and Wyner, A.J. (2011), “Rejoinder: A Statistical Analysis of Multiple Temperature Proxies: Are Reconstructions of Surface Temperatures Over the Last 1000 Years Reliable?” *Annals of Applied Statistics*, Vol. 5, No. 1, 99-123.

McShane, B.B., Braunstein A., Piette, J., and Jensen, S.T. (2011), “A Bayesian Variable Selection Approach to Major League Baseball Hitting Metrics.” *Journal of Quantitative Analysis in Sports*, Vol. 7: Iss. 4, Article 2.

McShane, B.B., Galante, R.J., Biber, M.P., Jensen, S.T., Wyner, A.J., and Pack, A.I. (2012), “Assessing REM Sleep in Mice Using Video Data.” *Sleep*, Vol. 35, Iss. 3, 433-442.

Gal, D.G. and McShane, B.B. (forthcoming), “Can Fighting Small Battles Help Win the War? Evidence from Consumer Debt Management.” *Journal of Marketing Research*.

Naidoo, N., Ferber M., Galante, R.J., McShane, B.B., Hu, J.H., Zimmerman, J., Maislin, G., Cater, J., Worley, P., and Pack, A.I. (forthcoming), “Role of Homer Proteins in the Maintenance of Sleep-Wake States.” *PLoS ONE*.

McShane, B.B., Watson, O.P., and Baker, T. (forthcoming), “Predicting Securities Fraud Settlements and Amounts: A Hierarchical Bayesian Model of Federal Securities Class Action Lawsuits.” *Journal of Empirical Legal Studies*.

#### **Submitted Papers:**

McShane, B.B., Bradlow, E.T., and Berger, J., “Multivariate Visual Diffusion for Social Groups.” Submitted to the *Journal of Marketing Research*.

McShane, B.B., Jensen, S.T., Wyner, A.J., and Pack, A.I., “Modeling Time Series Dependence for Scoring Sleep in Mice.” Submitted to the *Journal of the American Statistical Association*.

#### **Papers in Progress:**

McShane, B.B. “More Evidence Contrary to the Statistical View of Boosting.”

Wyner, A.J. and McShane, B.B., “Propensity Score Estimation with Machine Learning Methods: What are the Risks of Overfitting?”

#### **Papers Presented:**

“Too Good to be True: The Limits of Creative Solutions to Data Problems.” Presented March 2012 with Ulf Bockenholt at the Kellogg School of Management, Northwestern University, Evanston, IL.

“The Reliability of Millennial Multi-proxy Temperature Reconstructions.” Presented October 2011 at the Wharton School, University of Pennsylvania, Philadelphia, PA.

“The Reliability of Millennial Multi-proxy Temperature Reconstructions.” Presented October 2011 at the Workshop on Mathematics in the Geosciences (National Science Foundation), Northwestern University, Evanston, IL.

“Hierarchical Bayesian Modeling of Hitting Performance in Baseball.” Presented August 2011 with Shane Jensen at the Joint Statistical Meetings, Miami Beach, FL.

“The Reliability of Millennial Multi-proxy Temperature Reconstructions.” Presented July 2011 at the International Environmetrics Society’s 2011 Meeting, La Crosse, WI.

“The Reliability of Millennial Multi-proxy Temperature Reconstructions.” Presented June 2011 at the Interface Symposium 2011: Statistical, Machine Learning, and Visualization Algorithms, Raleigh, NC.

“Are Reconstructions of Surface Temperatures Over the Last 1000 Years Reliable?” Presented May 2011 with Abraham Wyner at the Midwest Biopharmaceutical Statistics Workshop, Muncie, IN.

“Classification/Choice Modeling with Time Series.” Presented November 2010 at the INFORMS 2010 Annual Meeting, Austin, TX.

“A Statistical Analysis of Multiple Temperature Proxies: Are Reconstructions of Surface Temperatures Over the Last 1000 Years Reliable?” Presented March 2010 with Abraham Wyner at The Wharton School, University of Pennsylvania, Department of Statistics, Philadelphia, PA.

“Multivariate Visual Diffusion for Social Groups.” Presented February 2010 at the Graduate School of Business, Stanford University, Palo Alto, CA.

“Statistical Learning Methods for Modeling Sleep in Mice.” Presented December 2009 at the Deming Conference on Applied Statistics, Atlantic City, NJ.

“Multivariate Visual Diffusion for Social Groups.” Presented November 2009 at the Carey Business School, Johns Hopkins University, Baltimore, MD.

“Multivariate Visual Diffusion for Social Groups.” Presented October 2009 at the Leonard N. Stern School of Business, New York University, New York, NY.

“Multivariate Visual Diffusion for Social Groups.” Presented October 2009 at the Kellogg School of Management, Northwestern University, Evanston, IL.

“Multivariate Visual Diffusion for Social Groups.” Presented October 2009 at the Tuck School of Business, Dartmouth College, Hanover, NH.

“Evaluating Baseball Metrics Using a Point-Mass Mixture Random Effects Model.” Presented September 2009 at the New England Symposium on Statistics in Sports, Boston, MA.

“Multivariate Visual Diffusion for Social Groups.” Presented September 2009 at the School of Business Administration, University of Miami, Miami, FL.

“Multivariate Visual Diffusion for Social Groups.” Presented September 2009 at the Olin Business School, Washington University in St. Louis, St. Louis, MO.

“Multivariate Visual Diffusion for Social Groups.” Presented September 2009 at The Wharton School, University of Pennsylvania, Department of Marketing, Philadelphia, PA.

“Social Identity and Multivariate Visual Diffusion.” Presented June 2009 at the INFORMS Marketing Science Conference 2009, Ann Arbor, MI.

“New Metrics for Summarizing Sleep Bout Durations in Mice.” Presented May 2009 at the Center for Sleep and Respiratory Neurobiology Research Retreat, Philadelphia, PA.

“Machine Learning Methods With Time Dependent Data.” Presented May 2009 at The Wharton School, University of Pennsylvania, Department of Statistics, Philadelphia, PA.

“Are Reconstructions of Surface Temperatures Over the Last 1000 Years Reliable?” Presented February 2009 at the Information Theory and Applications Workshop, San Diego, CA.

“A Multivariate Diffusion Model for Social Groups: How Social Identity Influences When and What People Buy.” Presented October 2008 at the INFORMS 2008 Annual Meeting, Washington, D.C.

“Statistical Prediction of Sleep in Mice Based on Video Data.” Presented May 2008 at the Center for Sleep and Respiratory Neurobiology Research Retreat, Philadelphia, PA.

**Teaching:**

Marketing 450: Research Methods in Marketing Winter 2011, Spring 2011  
MBA course designed to provide a fundamental understanding of marketing research methods employed by well-managed firms. The course focuses on problem formulation, research design, questionnaire construction, sampling, data collection and data analysis (e.g., regression, cross-tabulation, cluster analysis, factor analysis, perceptual maps, and conjoint analysis) to yield the most valuable information.

Statistics 541: Advanced Statistical Methods Spring 2007  
*Teaching Assistant* (to Professor Andreas Buja)  
First-year doctoral course designed to teach computational methods including the bootstrap, bagging, cross-validation, CART, non-parametric function estimation, and other techniques.

Statistics 111: Introductory Statistics Fall 2006, Spring 2006  
*Teaching Assistant* (to Professors Shane Jensen and Abraham Wyner)  
Undergraduate course covering probability, confidence intervals, hypothesis tests, and linear regression.

Statistics 611/612: MBA Mathematics Review Summer 2006  
*Teaching Assistant* (to Professor Abraham Wyner)  
Review course for incoming MBA students covering algebra, differential calculus, and integral calculus.

**Professional Employment:**

Invite Media, Philadelphia, PA Fall 2007 – Fall 2008  
*Vice President of Statistics*

- Built an ad-serving engine to perform targeted banner advertising using click-through and social network data.
- Created a yield manager which prices CPC and CPA campaigns in CPM terms thereby enabling the managers of these campaigns to bid on ad exchanges.
- Advised the executive team on issues at the intersection of strategy and technology.

D. E. Shaw & Company, New York, NY Summer 2007  
*Quantitative Analyst*

- Developed a suite of software tools to perform Markov Chain Monte Carlo methods for posterior sampling and integration, Bayesian regression, principal components analysis, and various re-sampling techniques.
- Began developing a risk model for the firm’s convertible bond strategy to assess the risk approximate price of bonds in the portfolio which traded infrequently using data from frequently-traded bonds and corresponding equity prices.

George Weiss Associates, New York, NY Summer 2003 – Fall 2004  
*Quantitative Strategies Analyst* Summer 2002

- Designed and implemented a quantitative model which traded equities in the financial sector profitably (Sharpe Ratio of 1.97) and held responsibility for managing the daily trade list.
- Invented a methodology to account for geopolitical risk in the fund’s portfolios, both as a tool to assess when such factors affected our portfolios and to hedge out such risk.
- Designed historical backtests to assess the profitability of various rule-based trading criteria.
- Created a program to be run daily to alert traders of aberrant stock movements over the preceding weeks.
- Conducted a review of various models already in use by the firm.

McKinsey & Company, New York, NY Summer 2001

*Business Analyst*

- Staffed in the pharmaceutical industry on a project team responsible for the strategic positioning of a new drug.
- Assisted in creation of a metrics dashboard, senior management's primary tool for measuring the drug's success.
- Conducted a comprehensive review of the client's top competition and briefed senior McKinsey personnel in preparation for meetings with the client's management team.

**Grants:**

NIH/SBIR Training Grant for Sleep Research, July 2006 – July 2010.

Baker Retailing Initiative Research Grant, 2009.

**Honors:**

W. Edwards Deming Graduate Student Scholar, 2009

Thouron Award (full academic scholarship to study in the United Kingdom)

Phi Beta Kappa

Benjamin Franklin Scholar

Joseph Wharton Scholar

Dean's List 1998-1999, 1999-2000, 2000-2001, 2001-2002, 2002-2003

William D. Gordon Award (given to graduating Wharton undergraduate with highest GPA)

B.S. in Economics Awarded *Summa Cum Laude*

B.A. in Mathematics Awarded *Summa Cum Laude* and with Distinction

Beta Gamma Sigma

Golden Key Society

**Affiliations:**

American Marketing Association

Institute for Mathematical Statistics

American Statistical Association

**Reviewer:**

Journal of the American Statistical Association

American Statistician

Journal of Marketing Research

Marketing Science

PLoS ONE

Journal of Quantitative Analysis in Sports