

Curriculum Vitae

Wolfgang S. Jank

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Current Position:

Associate Professor
Director, Center for Complexity in Business
Department of Decision, Operations & Information Technology
Robert H. Smith School of Business
University of Maryland

Address & Contacts:

4322 Van Munching Hall, College Park, MD 20742
Office: 301 405 1118
Email: wjank@rhsmith.umd.edu
Web: www.smith.umd.edu/faculty/wjank

Affiliations:

Associate Fellow, Centre Interuniversitaire de Recherche en Economique
Quantitative (CIREQ), U Montreal, McGill & Concordia University
eSocialLab, Desautels Faculty of Management, McGill University
Center of Electronic Markets and Enterprises, Smith School, U Maryland
Center for Excellence in Service, Smith School, U Maryland
Center for Complexity in Business, Smith School, U Maryland
Statistics Consortium, U Maryland
Applied Mathematics & Scientific Computation Program, U Maryland

Biography:

Wolfgang Jank is Associate Professor in the Department of Decisions, Operations & Information Technologies, and Director, Center for Complexity in Business, Smith School of Business, University of Maryland. He is interested in using ideas from statistics and data mining to solve problems in electronic commerce, marketing, information systems, and operations management.

Dr. Jank's research has been published in the statistics, data mining, marketing, information systems and operations management literature. He has authored over seventy refereed articles, book chapters and conference papers, authored and edited two books, and presented his work at national and international meetings.

Dr. Jank received his Master's degree in Mathematics from the Technical University of Aachen (Germany) and his PhD in Statistics from the University of Florida. After moving to the University of Maryland, he co-initiated a new research area on *Statistical Methods in eCommerce* and a workshop series on the same name. He has received the *Best Information Systems Publication* award in 2008.

Dr. Jank teaches courses at the undergraduate, graduate and executive levels in the areas of statistics, data mining and quantitative marketing. He has received numerous awards including the top 15% teaching award for MBA core classes.

Prof. Jank has been involved in a variety of consulting projects and he is on the advisory board for several companies.

1 Research Interests

I use modern statistical methods and data mining to study dynamics and competitive strategies in online marketplaces. I am particularly interested in understanding competition between auctions and auction-participants. My research has introduced the notion of auction dynamics, novel methods to estimate dynamics via functional data analysis, and innovative modeling & forecasting approaches via functional differential equation models. Some of my ongoing work focuses on the effect of networks and trust signals in auctions, and novel approaches from complexity to understand agent-interactions in online marketplaces. I am also interested in alternate online marketplaces, such as online prediction markets (or virtual stock markets) and use modern functional data models to provide early & dynamic forecasts of box office success. I have also developed spatio-temporal choice models to derive geo-targeting strategies, and optimal pricing and promotions across geographically correlated households. Along the same lines, I have recently started to explore new synergies in the context of pricing, optimization, and data mining.

2 Education

- 1996-2001 **Doctor of Philosophy in Statistics**
Department of Statistics, University of Florida, Gainesville
- 1990-1996 **Bachelor & Masters in Mathematics**
Department of Mathematics, Technical University of Aachen, Germany
- 1994 **European Community Fellow**
Ecole Nationale Supérieure Agronomique, Université de Montpellier, France
- 1992 **European Community Fellow**
Department of Mathematics, University of York, United Kingdom

3 Academic Experience

- 2007-present **Associate Professor**
Robert H. Smith School of Business, University of Maryland, College Park
- 2001-2007 **Assistant Professor**
Robert H. Smith School of Business, University of Maryland, College Park

4 Visiting Positions

- 2009 Otto-Beilsheim School of Management (WHU)
- 2008 Chair for eCommerce, Department of Marketing, University of Frankfurt/Main
- 2008 Department of Statistics, Vienna Business School

5 Publications

5.1 Books

1. Jank W (2011) “Business Analytics for Managers,” Springer (projected publication in August 2011)
2. Jank W and Shmueli G (2008) “Statistical Methods in eCommerce Research,” John Wiley & Sons, ISBN 978-0-470-12012-5.
3. Jank W and Shmueli G (2010) “Modeling Online Auctions,” John Wiley & Sons, ISBN 978-0-470-47565-2.

5.2 Peer-Reviewed Journal Papers

4. Slamka, C, Jank W and Skiera, B “Second-Generation Prediction Markets for Information Aggregation: A Comparison of Payoff Mechanisms.” Forthcoming at the *Journal of Forecasting*.
5. Dass M, Jank W and Shmueli G “Maximizing Bidder Surplus in Simultaneous Online Art Auctions via Dynamic Forecasting.” Forthcoming at the *International Journal of Forecasting*.
6. Jank W and Zhang S “An Automated and Data-Driven Bidding Strategy for Online Auctions.” Forthcoming at the *INFORMS Journal of Computing*.
7. Jank W, Shmueli G, and Zhang S (2010) “A Flexible Model for Price Dynamics in Online Auctions.” *Journal of the Royal Statistical Society - Series C*, **59** (5), p. 781-804.
8. Jank W and Yahav I (2010) “E-Loyalty Networks in Online Auctions.” *Annals of Applied Statistics*, **4** (1), p. 151–178.
9. Foutz N and Jank W (2010) “Pre-Release Demand Forecasting for Motion Pictures Using Functional Shape Analysis of Virtual Stock Markets.” *Marketing Science*, **29** (3), p. 568–579.
10. Zhang S, Jank W and Shmueli G (2010) “Real-Time Forecasting of Online Auctions via Functional K-Nearest Neighbors.” *International Journal of Forecasting*, **26** (4), p. 666–683.
11. Heath J, Fu M and Jank W (2009) “New Global Optimization Algorithms for Model-Based Clustering.” *Computational Statistics and Data Analysis*, **53** (12), p. 3999–4017.
12. Jank W, Shmueli G, Dass M, Yahav, I and Zhang S (2008) “Statistical Challenges in eCommerce: Modeling Dynamic and Networked Data.” *INFORMS Tutorials in Operations Research*, 2008 edition, p. 31–54.
13. Wang S, Jank W, Shmueli G and Smith P (2008) “Modeling Price Dynamics in eBay Auctions Using Principal Differential Analysis.” *Journal of the American Statistical Association*, **103** (483), p. 1100–1118.
14. Haruy E, Popkowski Leszczyc P, Carare O, Cox J, Greenleaf E, Jank W, Jap S, Park Y-H, and Rothkopf M (2008) “Competition between Auctions.” *Marketing Letters*, **19** (3-4), p. 431–448.
15. Bapna R, Jank W and Shmueli G (2008) “Price Formation and its Dynamics in Online Auctions.” *Decision Support Systems*, **44** (3), p. 641–656.

16. Bapna R, Jank W and Shmueli G (2008) "Consumer Surplus in Online Auctions." *Information Systems Research*, **19** (4), December Issue. **Awarded Best Information Systems Publication of 2008.**
17. Reithinger F, Jank W, Tutz G and Shmueli G (2008) "Smoothing Sparse and Unevenly Sampled Curves using Semiparametric Mixed Models: An Application to Online Auctions." *Journal of the Royal Statistical Society - Series C*, **57** (2) p. 127–148.
18. Wang S, Jank W and Shmueli G (2008) "Explaining and Forecasting Online Auction Prices and their Dynamics using Functional Data Analysis." *Journal of Business and Economic Statistics*, **26** (2), p. 144–160.
19. Shmueli G, Jank W and Hyde V (2008) "Transformations for Semi-Continuous Data." *Computational Statistics and Data Analysis*, **52** (8), p. 4000–4020.
20. Tu Y, Ball M and Jank W (2008) "Estimating Flight Departure Delay Distributions A Statistical Approach with Long-Term Trend and Short-Term Pattern." *Journal of the American Statistical Association*, **103** (481), p. 112–125.
21. Foutz N and Jank W (2007) "The Wisdom of Crowds: Pre-release Forecasting via Functional Shape Analysis of the Online Virtual Stock Market." *Marketing Science Institute Reports*, [07-114].
22. Shmueli G, Russo R and Jank W (2007) "The BARRISTA: A model for Bid Arrivals in Online Auctions." *The Annals of Applied Statistics*, **1** (2), 412–441.
23. Jank W and Shmueli G (2007) "Modeling Concurrency of Events in Online Auctions via Spatio-Temporal Semiparametric Models." *Journal of the Royal Statistical Society - Series C*, **56** (1), p.1–27. **Third-most accessed paper of the Journal of the Royal Statistical Society Series C in 2007.**
24. Hyde V, Jank W and Shmueli G (2006) "Investigating Concurrency in Online Auctions through Visualization." *The American Statistician*, **60** (3), p. 241–250.
25. Jank W and Shmueli G (2006) "A Special Issue on Statistical Challenges and Opportunities in Electronic Commerce Research." *Statistical Science*, **21** (2), p. 113–115.
26. Jank W and Shmueli G (2006) "Functional Data Analysis in Electronic Commerce Research." *Statistical Science*, **21** (2), p. 155–166.
27. Jank W and Kannan PK (2006) "Dynamic E-Targeting using Learning Spatial Choice Models." *Journal of Interactive Marketing*, **20** (3–4), p. 30–42.
28. Jank W (2006) "Ascent EM for Fast and Global Model-Based Clustering: An Application to Curve-Clustering of Online Auctions." *Computational Statistics and Data Analysis*, **51** (2), p. 747–761 .
29. Jank W (2006) "Implementing and Diagnosing the Stochastic Approximation EM algorithm." *Journal of Computational and Graphical Statistics*, **15** (4), p. 1–27.
30. Jank W (2006) "Efficient Simulated Maximum Likelihood with an Application to Online Retailing." *Statistics and Computing*, **16** (2), p. 111–124.
31. Shmueli G, Jank W, Aris A, Plaisant C and Shneiderman B (2006) "Exploring Auction Databases through Interactive Visualization." *Decision Support Systems*, **42** (3), p. 1521–1538.
32. Jank W and Kannan PK (2005) "Understanding geographical markets of online firms using spatial models of customer choice." *Marketing Science*, **24** (4), p. 623–634.

33. Shmueli G and Jank W (2005) "Visualizing Online Auctions." *Journal of Computational and Graphical Statistics*, **14** (2), p. 299 - 319.
34. Caffo BS, Jank W and Jones GL (2005) "Ascent-Based Monte Carlo EM." *Journal of the Royal Statistical Society - Series B*, **67** (2), p. 235–252.
35. Jank W, Golden B and Zantek P (2005) "Old World vs. New World: Evolution of Nobel Price Shares." *INFOR*, **43** (1), March Issue.
36. Jank W (2004) "Quasi-Monte Carlo Sampling to Improve the Efficiency of Monte Carlo EM." *Computational Statistics and Data Analysis*, **48** (4), p.685–701.
37. Jank W and Booth JG (2003) "Efficiency of Monte Carlo EM and Simulated Maximum Likelihood in Two-Stage Hierarchical models." *Journal of Computational and Graphical Statistics*, **12** (1), p.214–229.
38. Perkins DF, Luster T and Jank W (2002) "Protective factors that decrease the likelihood of purging for physically abused females." *Journal of Adolescent Research*, **17** (4), p.377–400.
39. Booth JG, Hobert JP and Jank W (2001) "A survey of Monte Carlo algorithms for maximizing the likelihood of a two-stage hierarchical model." *Statistical Modelling*, **1** (4), p.333–349.

5.3 Peer-Reviewed Book Chapters

40. Jank W and Shmueli G (2010) "Forecasting Online Auctions using Dynamic Models." In Soares and Ghani (Eds.) *Data Mining for Business Applications*, IOS Press, ISBN 978-1-60750-632-4.
41. Shmueli G, Russo R, Jank W and Shyamalkumar N (2010) "Models For Bid Arrivals and Bidder Arrivals in Online Auctions." In Balakrishnan (Ed.) *Methods and Applications of Statistics in Business, Finance, and Management Science*, John Wiley & Sons, Newark, NJ.
42. Foutz N and Jank W (2010) "Mining Functional Data in Prediction Markets." In Balakrishnan (Ed.) *Methods and Applications of Statistics in Business, Finance, and Management Science*, John Wiley & Sons, Newark, NJ.
43. Dass M, Jank W and Shmueli G (2010) "Dynamic Price Forecasting In Simultaneous Online Art Auctions." In Casillas and Martinez-Lopez (Eds.) *Marketing Intelligent Systems using Soft Computing*, Springer, NY.
44. Shmueli G and Jank W (2008) "Modeling the Dynamics of Online Auctions: A Modern Statistical Approach." In Kauffman and Tallon (Eds.) *Economics, Information Systems, and Electronic Commerce: Empirical Research*, M.E. Sharpe Publishers, Armonk, NY.
45. Jank W and Kannan PK (2008) "Dynamic Spatial Models in Online Markets." In Jank and Shmueli (Eds.) *Statistical Methods in eCommerce Research*, Wiley & Sons, p. 341–362.
46. Jank W, Shmueli G & Wang, S (2008) "Differential Equation Trees to Model Price Dynamics in Online Auctions." In Jank and Shmueli (Eds.) *Statistical Methods in eCommerce Research*, Wiley & Sons, p. 363–382.
47. Hyde V, Jank W, & Shmueli G (2008) "A Family of Growth Models for Representing the Price Process in Online Auctions." In Jank and Shmueli (Eds.) *Statistical Methods in eCommerce Research*, Wiley & Sons, p. 291–324.

48. Jank W and Shmueli G (2008) “Studying Heterogeneity of Price Evolution in eBay Auctions via Functional Clustering.” In Adomavicius and Gupta (Eds.) *Handbook of Information Systems Series: Business Computing*, Elsevier.
49. Jank W, Shmueli G, Plaisant C, and Shneiderman B (2007) “Visualizing Functional Data with an Application to eBay Online Auctions.” In Chen, Haerdle and Unwin (Eds.) *Handbook on Computational Statistics on Data Visualization*, Springer Verlag, Heidelberg.
50. Jank W (2006) “The EM algorithm, Its Stochastic Implementation and Global Optimization: Some Challenges and Opportunities for OR.” In Alt, Fu, and Golden (Eds.) *Topics in Modeling, Optimization, and Decision Technologies: Honoring Saul Gass’ Contributions to Operations Research*, Springer Verlag, NY, p.367–392.
51. Jank W (2004) “Fast and Efficient Model-Based Clustering with the Ascent-EM Algorithm.” In Golden, Raghavan and Wasil (Eds.) *The Next Wave in Computing, Optimization and Decision Technologies*, Springer Verlag, NY, p.201–212.

5.4 Peer-Reviewed Conference Papers & Proceedings

52. Ozpolat, K, Gao, G, Jank, W and Viswanathan S (2010) “The Value of Online Trust Seals and Some Operational Suggestions to Make Best use of Trust Seals in E-commerce” *Production and Operations Management (POMS) 2010 - Operations in Emerging Economies*, May 7- May 10, 2010, Vancouver, Canada.
53. Elmaghraby, W, Jank, W Karaesmen, I, and Zhang S (2009) “Sales Force Behavior, Pricing Information and Pricing Decisions.” *4th Workshop on Empirical Research in Operations Management*, Wharton, November 12–13, 2009.
54. Karaesmen, I, Elmaghraby, W, Jank, W and Zhang S (2009) “Sales Person Behavior: An Exploratory Analysis of Pricing Decisions” *INFORMS MSOM Conference*, MIT, June 28–30, 2009
55. Karaesmen, I, Elmaghraby, W, Jank, W and Zhang S (2009) “Sales Person Behavior: An Exploratory Analysis of Pricing Decisions” *INFORMS Revenue Management and Pricing Conference*, Kellogg School of Management, June 22–23, 2009.
56. Elmaghraby, W, Jank, W Karaesmen, I, and Zhang S (2009) “Mining Sales Person Behavior for Estimation and Pricing Optimization” *Production and Operations Management (POMS) 2009 - Global Challenges and Opportunities*, May 1 - May 4, 2009, Orlando, Florida.
57. Slamka, C, Jank W and Skiera, B (2008) “Prediction Markets for Long-Term and Non-Occurring Outcome Forecasting: A Comparison of Payoff Mechanisms.” *WeB 2008, The Seventh Workshop on e-Business*, December 13, 2008, Paris, France.
58. Jank W, Foutz N and James G (2008) “Early and Dynamic Forecasting of New Product Demand Using Functional Models and Online Prediction Markets.” *The Fourth Symposium on Statistical Challenges in Electronic Commerce Research*, NYU, New York, NY, May 18–19, 2008.
59. Yahav I and Jank W (2008) “On the Existence of E-Loyalty Networks in eBay Auctions and Their Structure.” *The Fourth Symposium on Statistical Challenges in Electronic Commerce Research*, NYU, New York, NY, May 18–19, 2008.
60. Zhang S and Jank W (2008) “An Automated and Data-Driven Bidding Strategy for Online Auctions.” *The Fourth Symposium on Statistical Challenges in Electronic Commerce Research*, NYU, New York, NY, May 18–19, 2008.

61. Lin M and Jank W (2008) "Bidder Migration and Its Price Effects on Online Auctions." *The 14th Americas Conference on Information Systems (AMCIS)*, Toronto, Ontario, August 14-17 August.
62. Jank W and Foutz N (2008) "Pre-release Forecasting Using Online Virtual Stock Markets." In a special session on *Marketing and Financial Performance* at the *2008 Marketing Science Conference*, June 12–14, 2008, Vancouver, CA.
63. Jank W and Foutz N (2007) "The Wisdom of Crowds: Pre-release Forecasting of Box-Office Revenue via Functional Shape Analysis of the Online Virtual Stock Market." *2007 Conference on Information Systems and Technology (CIST)*, November 3-4, 2007, Seattle, WA (in conjunction with INFORMS 2007).
64. Jank W and Foutz N (2007) "Using Virtual Stock Exchanges to Forecast Box-Office Revenue via Functional Shape Analysis." *Second Workshop on Prediction Markets*, June 12, 2007, San Diego, California (in conjunction with *ACM Conference on Electronic Commerce*).
65. Jank W and Foutz N (2007) "Functional Shape Analysis for Forecasting Box-Office Revenue via Virtual Stock Exchanges." *Fourth Marketing Dynamics Conference*, August 22-24, 2007, University of Groningen, The Netherlands.
66. Hyde V, Jank W and Shmueli G (2007) "A Family of Growth Models for Representing the Price Evolution in Online Auctions." *Ninth International Conference on Electronic Commerce (ICEC 07)*, August 19–22, 2007, University of Minnesota, Minneapolis, MN.
67. Bailey J, Jank W, Lin M, Lucas H, and Viswanathan S (2007) "Estimating Online Sales Distribution: the Short End of the Long Tail." *Third Symposium on Statistical Challenges in eCommerce Research (SCECR 07)*, May 19–20, 2007, University of Connecticut.
68. Lin M and Jank W (2007) "Bidder Migration in Online Auctions." *Third Symposium on Statistical Challenges in eCommerce Research (SCECR 07)*, May 19–20, 2007, University of Connecticut.
69. Dass M, Jank W, Reddy S, Shmueli G and Wang S (2007) "Dynamic Price Forecasts in Online Indian Art Auctions." *Third Symposium on Statistical Challenges in eCommerce Research (SCECR 07)*, May 19–20, 2007, University of Connecticut.
70. Hyde V, Jank W and Shmueli G (2007) "A Family of Growth Models for Representing the Price Evolution in Online Auctions." *Third Symposium on Statistical Challenges in eCommerce Research (SCECR 07)*, May 19–20, 2007, University of Connecticut.
71. Buono P, Plaisant C, Simeone A, Aris A, Shneiderman B, Shmueli G and Jank W (2007) "Similarity-Based Forecasting with Simultaneous Previews: A River Plot Interface for Time Series Forecasting." *11th International Conference on Information Visualisation*, July 2007, Zürich, Switzerland.
72. Koppius O, Mithas S, Jank W, Shmueli G and Jones J (2006) "Bidding Dynamics in B2B Reverse Auctions." *International Symposium of Information Systems*, December 16–18, 2006, Indian School of Business, Hyderabad.
73. Jank W, Shmueli G and Wang S (2006) "Forecasting Online Auctions using Dynamic Models." *KDD 2006 Workshop on Theory and Practice of Temporal Data Mining*, August 20, 2006, Philadelphia, Pennsylvania.
74. Jank W, Shmueli G and Wang S (2006) "Forecasting Online Auctions using Dynamic Models." *KDD 2006 Workshop on Data Mining for Business Applications*, August 20, 2006, Philadelphia, Pennsylvania.

75. Jank W, Shmueli G and Wang S (2006) “Dynamic, Real-time Forecasting of Online Auction via Functional Models.” *Twelfth ACM SIGKDD International Conference On Knowledge Discovery and Data Mining (KDD2006)*, August 20–23, 2006, Philadelphia, Pennsylvania.
76. Jank W and Kannan PK (2005) “Dynamic Scoring of Customers using Learning Spatial Choice Models.” *2005 International Workshop on Customer Relationship Management: Data Mining Meets Marketing*, November 18–19, 2005, New York University, New York, NY.
77. Aris A, Shneiderman B, Plaisant C, Shmueli G and Jank W (2005) “Representing Unevenly-Spaced Time Series Data for Visualization and Interactive Exploration.” *International Conference on Human-Computer Interaction (INTERACT)*, 12–16 September 2005, Rome, Italy.
78. Jank W (2004) “Dynamics of Online Auctions.” *Seventh International Conference on Modeling, Computation and Optimization in Information Systems and Management Sciences (MCO)*, July 1–3, 2004, Metz, France.

5.5 Unreviewed Conference Papers

79. Jank, W, Rand, W and Trusov, M (2010) “Functional Data Analysis and Agent-Based Modeling” *Joint Statistical Meetings*, July 31–August 5, Vancouver, Canada.
80. Jank, W, Rand, W and Guo, W (2010) “Using Agent-Based Models and Functional Data Analysis to Understand Auction Behavior” *Marketing Science*, June 17-19, Cologne, Germany.
81. Karaesmen, I, Elmaghraby, W, Jank, W and Zhang S (2009) “Mining Sales Person Decisions in Pricing” *2009 INFORMS Annual Meeting*, San Diego, CA, October 11-14, 2009.
82. Jank W, Foutz N and James G (2008) “Forecasting with Functional Data in Ecommerce.” *2008 Joint Statistical Meetings*, August 3–7, 2008, Denver, CO.
83. Heath J, Fu M and Jank W (2008) “Global Optimization with Model Reference Adaptive Search and Expectation-Maximization.” *2008 Joint Statistical Meetings*, August 3–7, 2008, Denver, CO.
84. Yahav I and Jank W (2008) “On the Existence of E-Loyalty Networks in eBay Auctions and Their Structure.” *The 9th INFORMS Telecommunications Conference*, R.H. Smith School of Business, College Park, MD, March 27–29, 2008.
85. Heath J, Fu M and Jank W (2007) “Global Optimization and Landscape Analysis for Clustering.” *2007 INFORMS Annual Meeting*, Seattle, WA, November 4–7, 2007.
86. Foutz N and Jank W (2007) “The Wisdom of Crowds: Using Online Virtual Stock Market to Predict Innovation Success.” *2007 INFORMS Marketing Science Conference*, June 28–30, Singapore.
87. Dass M, Jank W, Reddy S, Shmueli G and Wang S (2007) “Dynamic Price Forecasts in Online Auctions: An Application to Indian Art Auctions of Heterogeneous Products.” *2007 INFORMS Marketing Science Conference*, June 28–30, Singapore.
88. Varadhan R, Caffo B and Jank W (2007) “Improving the Efficiency of the Monte-Carlo EM Algorithm Using Squared Iterative Methods” *2007 Joint Statistical Meetings*, July 29-August 2, Salt Lake City, Utah.

89. Shmueli G, Jank W and Bapna R (2005) "Sampling eCommerce Data from the Web: Methodological and practical Issues." In the *2005 Proceedings of the American Statistical Association*, August 6-11, 2005, Minneapolis, Minnesota.
90. Jank W (2005) "Stochastic Variants of EM: Monte Carlo, Quasi-Monte Carlo and More." In the *2005 Proceedings of the American Statistical Association*, August 6-11, 2005, Minneapolis, Minnesota.

5.6 Manuscripts under Review at Journals & Conferences

91. Anderson, D., Price, C., Golden, B., Harrington, M., Jank, W. and Wasil, E. "Examining the Discharge Practices of Surgeons at a Large Medical Center." Under review at *Health Care Management Science*.
92. Ozpolat, K., Gao, G, Jank, W. and Viswanathan, S. "The Value of Trust Seals in Online Commerce: An Empirical Investigation." Under review at *Information Systems Research*.
93. Di, Chongzhi, Crainiceanu, C. M. and Jank, W. "Multilevel Sparse Functional Principal Component Analysis." Under review at the *Computational Statistics and Data Analysis*.
94. Elmaghraby, W, Jank, W Karaesmen, I, and Zhang S "B2B Pricing, Information and Sales Person Decisions." Under review at *Management Science*.
95. Jank W, James G and Foutz N "Functional Forecasting of Demand Decay Rates using Online Virtual Stock Markets." Under review at the *Annals of Applied Statistics*.
96. Heath J, Fu M and Jank W "Globally Optimal Solutions for Gaussian Mixture Models: A Convergence Proof of Model Reference Adaptive Search." Under review at the *Communications in Statistics: Theory & Methods*; (First Round).

5.7 Technical Reports and Other Manuscripts

97. Bailey J, Gao G, Jank W, Lin M, Lucas H, and Viswanathan S (2008) "The Long Tail is Longer than You Think: The Surprisingly Large Extent of Online Sales by Small Volume Sellers." Available at SSRN: <http://ssrn.com/abstract=1132723>
98. Wang S, Jank W, Shmueli G and Smith P (2007) "Modeling Price Dynamics in eBay Auctions Using Principal Differential Analysis." *Economics of Networks Abstracts*, Working Paper Series, 4 (32): June 8, 2007.
99. Reindorp M, Jank W and Rashid L (2005) "The Right Auction At the Right Price." Technical Report, Robert H. Smith School Research Paper No. RHS-06-009. Available at SSRN: <http://ssrn.com/abstract=904626>
100. Jank W and Shmueli G (2005) "Profiling Price Dynamics in Online Auctions Using Curve Clustering." Technical Report, Robert H. Smith School Research Paper No. RHS-06-004. Available at SSRN: <http://ssrn.com/abstract=902893>
101. Shmueli G, Russo R and Jank W (2004) "Modeling Bid Arrivals in Online Auctions." Technical Report, Robert H. Smith School Research Paper No. RHS-06-001. Available at SSRN: <http://ssrn.com/abstract=902868>
102. Jank W (2004) "Ascent EM for Efficient Curve-Clustering in Large Online Auction Databases." Technical Report, Robert H. Smith School Research Paper No. RHS-06-008. Available at SSRN: <http://ssrn.com/abstract=902908>

6 Awards and Grants

2010 *Top 15% Teaching Award Recipient* (Category 1): Category 1 awards go to the Top 15% of full-time faculty.

2009 *Best Information Systems Publication of 2008*. The Senior Scholars Best Publications Committee of 2008 selected the paper *Consumer Surplus in Online Auctions*, published in *Information Systems Research*, as one of the five best Information Systems papers published in 2008.

2008 *Faculty Research Banner* nomination for research on *Consumer Surplus in Online Auction*. Nominated faculty have achieved significant accomplishments in their field of study, and are featured on banners to be showcased around the University of Maryland campus by the opening of the 2008-9 academic year.

Legg-Mason Teaching Innovation Award finalist. The Legg-Mason Award in Teaching Innovation is awarded to recognize innovation in classroom instruction that will have a lasting impact on the university.

2007 *Travel Award* by the Smith BIE Awards Committee, University of Maryland, to travel to the International Symposium on Business and Industrial Statistics, Azores, Portugal, and to the Marketing Dynamics Conference, Groningen, The Netherlands, both August 2007; awarded \$2,000.

2006 *Top 15% Teaching Award Recipient* (Category 1 & 3): Category 1 awards go to the Top 15% of full-time faculty. Category 3 awards go to the top 15% of faculty teaching in the MBA core and/or other courses with more than 65 students.

Travel Award by the Smith BIE Awards Committee, University of Maryland, to travel to the Compstat 2006 Satellite Workshop on Data and Information Visualization, Berlin, August 2006; awarded \$1,200.

2005 *NSF Award* for the inaugural workshop *Interdisciplinary Symposium on Statistical Challenges and Opportunities in Electronic Commerce Research*; Award by the National Science Foundation, Division of Information and Intelligent Systems (IIS); awarded \$30,000

2004 *Teaching and Technology Enhancement Award* by the Smith Technology Integration Initiative (STI), University of Maryland, for the proposal *Information Visualization for the Classroom*; awarded \$8,000. This project was conducted with MBA alumni Diswa Malu and presented to several MBA classes in the Spring 2005. Results of this projects are summarized at <http://www.devsmith.umd.edu/dit/infovis/index.html>

2003 *Teaching and Technology Enhancement Award* by the Smith Technology Integration Initiative (STI), University of Maryland, for the proposal *Learning Online Auctions using Modern Technology: Incorporating eBay and SAS Enterprise Miner into the classroom*; awarded \$8,000. As a result of this project, several MBA classes use projects (and data) related to online auctions. Also, the software *SAS Enterprise Miner* is now a permanent element of the MBA elective class BUDT 733 and adopted by Smith IT to run on the Smith Portal (portal.rhsmith.umd.edu).

Research Award by the Center of Electronic Markets and Enterprises (CEME), University of Maryland, for the proposal *Statistical Analysis of Online Markets: Exploring and Characterizing Lucrative Markets*; awarded \$8,000

Summer Research Award by the University of Maryland's General Research Board (UMD-GRB) for the proposal *Analyzing spatially referenced data from large databases*; awarded \$8,750

Research Award by the Netcentricity Research Laboratory, University of Maryland, for the proposal *Investigating Online Auctions*; awarded \$2,000

Research Award by the Center of Electronic Markets and Enterprises (CEME), University of Maryland, for hardware support on research related to open source and online auctions projects; awarded \$3,500.

Young Researcher Travel Award by the Institute of Mathematical Statistics for travel to the Sixth North American New Researchers Conference, University of California, Davis; awarded \$500

2000 *Graduate Student Travel Award* by the University of Florida for travel to the Euroworkshop on Statistical Modelling (Mixed Models) at Schloß Höhenried, Germany; awarded \$250

Young Researcher Travel Award by the European Community for travel to the Euroworkshop on Statistical Modelling (Mixed Models) at Schloß Höhenried, Germany; awarded \$450

1994 *Exchange Student Fellowship* by the European Community for 6 month study at the University of Montpellier, France, under the ERASMUS program; awarded \$1,500

1992 *Exchange Student Fellowship* by the European Community for 4 month study at the University of York, UK, under the ERASMUS program; awarded \$1,200

7 Conferences and Conference-Sessions Organized

7.1 Conferences

2011 Program Committee member of the *International Conference on Electronic Commerce (ICEC 11)*, 2-5th August 2011, Liverpool, UK.

2010 Program Chair of the ASA's Section on Statistics and Marketing, *Joint Statistical Meetings (JSM)*, Vancouver, British Columbia, Canada, August 2010.

2009 Program Committee member of the Industrial/Government track for the *15th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2009)*, Paris, France, June 28-July 1, 2009.

Program Committee member of the Knowledge Discovery (KD) and Business Intelligence (BI) track for the *14th Portuguese Conference on Artificial Intelligence (EPIA 2009)*, Aveiro, Portugal, October 12-15, 2009.

2008 Program Chair of the ASA's Section on Statistical Computing, *Joint Statistical Meetings (JSM)*, Denver, CO, August 2008.

Program Committee member of the *International Symposium on Business and Industrial Statistics (ISBIS-2008)*, Prague, Czech Republic, July 2008.

Program Committee member of the Industrial/Government track for the *14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2008)*, Las Vegas, NV, August 24-27, 2008.

2007 Program Committee member of the *BI'07 Business Intelligence Workshop*, to be held in conjunction with the Portuguese Conference on Artificial Intelligence conference (EPIA), Guimaraes, Portugal, December 2007

Program Committee member of the PAKDD 2007's *Workshop on Data Mining for Business*, Nanjing, China, May 2007.

2005 co-Organizer/ co-Founder of the *First Interdisciplinary Symposium on Statistical Challenges and Opportunities in Electronic Commerce Research*, University of Maryland, College Park, MD, May 22–23, 2005

7.2 Conference-Sessions

2008 Organized Invited Session on *Data Mining in Telecommunication* at the *INFORMS Telecom Conference*, Smith School of Business, College Park, MD, March 2008.

Organized Invited Session on *Data Mining and Applications* at the *INFORMS Annual Meeting*, Washington, DC, October 12–15, 2008.

Organized Invited Session on *Electronic Commerce* at the *International Symposium on Business and Industrial Statistics (ISBIS-2008)*, Prague, Czech Republic, July 2008.

2007 Organized Invited Session on *Data Mining, Statistics and eCommerce* at the *INFORMS Annual Meeting*, Seattle, WA, November 4–7, 2007.

Organized Invited Session on *Statistics in Electronic Commerce Research* at the *International Symposium on Business and Industrial Statistics*, Azores, Portugal, August 18–20, 2007. (Held in conjunction with the 56th Session of the *International Statistical Institute (ISI)*).

2006 Organized Invited Session on *Data Mining Applications in eCommerce* at the *INFORMS Annual Meeting*, Pittsburgh, PA, November 5–8, 2006.

2005 Organized Invited Session on *Statistical Methods in Electronic Commerce Research* at the *Joint Statistical Meetings*, Minneapolis, MN, August 7–11, 2005.

Organized Invited Session on *Statistical Methods for Network Data* at the *9th INFORMS Computing Conference*, Annapolis, MD, January 5–7, 2005.

7.3 Conference-Panels

2006 Organized Invited Panel on *Computational Statistics and its Challenges in eCommerce* at the *2nd Statistical Challenges in E-Commerce Research Symposium*, Carlson School of Management, University of Minnesota, Minneapolis, MN, May 22–23, 2006.

8 Presentations and Tutorials

8.1 Invited Industry Presentations

2009 Thought Leadership presentation and discussion on “Increasing the Accuracy of Forecasting Outcomes,” hosted by the RH Smith School of Business.

2008 Roundtable discussion at the Embassy of Austria on “eCommerce, Prediction Markets and Data Mining: How Technology impacts Business Decision Making,” hosted by the Office of Science & Technology (OST) and ASciNA (Austrian Scientists and Scholars in North America)

8.2 Invited Tutorials

2008 *INFORMS 2008 Annual Meeting*, Washington, DC, October 12–15, 2008; Tutorial on *Statistics and eCommerce*.

8.3 Invited Panels

2008 Panel on *Marketing Science and the Google Online Marketing Challenge* at the INFORMS 2008 Annual Meeting, Washington, DC, October 12–15, 2008.

Panel on *What Data Mining Isn't* at the 2008 Frontiers in Service Conference Washington, DC, October 2–5, 2008.

2006 Panel on *Computational Statistics and its Challenges in eCommerce* at the 2nd Statistical Challenges in E-Commerce Research Symposium, Carlson School of Management, University of Minnesota, Minneapolis, MN, May 2006.

8.4 Invited Department Presentations

2010 Department of Information Systems & Decision Sciences, University of South Florida, Tampa, FL, February 2010; Presentation on *Forecasting Innovation Success via Shapes of Prediction Markets*

2009 Department of Measurement, Statistics & Evaluation, University of Maryland, College Park, MD, November 2009; Presentation on *Forecasting Innovation Success via Shapes of Prediction Markets*

Information, Risk, & Operations Management Department, McCombs School of Business, The University of Texas at Austin, Austin, TX, October 2009; Presentation on *Forecasting Innovation Success via Shapes of Prediction Markets*

Department of Statistics, Columbia University, New York, NY, October 2009; Presentation on *Forecasting Innovation Success via Shapes of Prediction Markets*

Department of Information Systems, W. P. Carey School of Business, Arizona State University, Tempe, AZ, January 2009; Presentation on *Functional Forecasting of Demand Decay Rates using Online Virtual Stock Markets*

2008 Department of Electronic Commerce, School of Business and Economics, Goethe-University, Frankfurt/Main, Germany, December 2008; Presentation on *Functional Shape Analysis to Forecast Box-Office Decay using Virtual Stock Exchanges*

Department for Statistics and Mathematics, Wirtschaftsuniversität Wien, Austria, December 2008; Presentation on *Functional Shape Analysis to Forecast Box-Office Decay using Virtual Stock Exchanges*

Department for Innovation, New Media and Marketing, Christian-Albrechts-University, Kiel, Germany, November 2008; Presentation on *Functional Shape Analysis to Forecast Box-Office Decay using Virtual Stock Exchanges*

Department of Statistics, The George Washington University, Washington, DC, February 2008; Presentation on *Functional Shape Analysis to Forecast Box-Office Revenue using data from Virtual Stock Exchanges*

2007 Department of Decision Sciences, INSEAD, Fontainebleau, France, October 2007; Presentation on *Using Functional Shape Analysis to Forecast Box-Office Revenue via Virtual Stock Exchanges*

Department of Electronic Commerce, University of Frankfurt, Germany, October 2007; Presentation on *Competition between Online Auctions: Why what happens in the neighbor auction also matters.*

- Department of Information Systems and Operations Management, University of Florida, Gainesville, FL, October 2007; Presentation on *Functional Shape Analysis to Forecast Box-Office Revenue using Virtual Stock Exchanges*
- Desautels Faculty of Management, McGill University, Montréal, Canada, October 2007; Presentations on *Functional Shape Analysis to Forecast Box-Office Revenue using Virtual Stock Exchanges* and on *Functional Data Analysis: An Introduction*
- Department of Biostatistics, Johns Hopkins University, Baltimore, MD, September 2007; Presentation on *Functional Shape Analysis to Forecast Box-Office Revenue using data from Virtual Stock Exchanges*
- Institute for Economics and Social Sciences, University of Bonn, Germany, January 2007; Presentation on *Dynamic Forecasting in Online Auctions using Functional Data Analysis*
- 2006 Special Lecture, Department of Agricultural and Resource Economics, University of Maryland, College Park, MD, December 2006; Presentation on *The EM algorithm and its Stochastic Implementations*
- Washington Area Econometrics Workshop, Department of Economics, University of Maryland, College Park, MD, October 2006; Presentation on *Concurrency of Online Auctions using Spatio-Temporal Semiparametric Models*
- Department of Statistics, University of California at Davis, CA, October 2006; Presentation on *Modeling concurrency of events in online auctions via spatio-temporal semiparametric models.*
- Department of Information and Operations Management, Marshall School of Business, University of Southern California, CA, October 2006; Presentation on *Modeling concurrency of events in online auctions via spatio-temporal semiparametric models.*
- Washington Statistical Society, Washington, DC, April 2006; Presentation on *Stochastic Variants of EM: Monte Carlo, Quasi-Monte Carlo and More*
- Center For Advanced Research, PricewaterhouseCoopers LLP, San Jose, CA, February 2006; Presentation on *Modeling concurrency of events in online auctions via spatio-temporal semiparametric models*
- Department of Psychology & Management, McGill University, Montréal, Canada, February 2006; Presentation on *Statistical Challenges in eCommerce Research: Dynamic Price Forecasting in Online Auctions using Functional Models*
- 2005 Department of Mathematics, University of Maryland, College Park, MD, October 2005; Presentation on *Stochastic Variants of EM: Monte Carlo, Quasi-Monte Carlo and More*
- Department of Statistics, Cornell University, Ithaca, NY, September 2005; Presentation on *Functional Data Analysis in E-Commerce: Opportunities, Challenges and a special look at eBays Online Auctions*
- Department of Mathematics, Rheinisch-Westfälische Technische Hochschule Aachen, Aachen, Germany, July 2005; Presentation on *Functional Data Analysis in E-Commerce: Opportunities, Challenges and a special look at eBays Online Auctions*
- Department of Statistics, Ludwig-Maximilians-Universität München, Munich, Germany, July 2005; Presentation on *Functional Data Analysis in E-Commerce: Opportunities, Challenges and a special look at eBays Online Auctions*
- AT&T Research Labs, Florham Park, NJ, February 2005; Presentation on *Online Auctions on eBay: A Statistical Exploration of Price Formation Dynamics via Functional Data Analysis and Interactive Visualization*

- 2004 Department of Management, ERASMUS University, Rotterdam, The Netherlands, December 2004; Presentation on *Dynamic Models for Online Auctions*
- Statistics Consortium, University of Maryland, College Park, MD, November 2004; Presentation on *Dynamic Models for Online Auctions*
- 2002 Department of Decision and Information Technologies, University of Maryland, College Park, MD, May 2002; Presentation on *A Quasi-Monte Carlo EM Algorithm*
- Department of Statistics, University of Kentucky, Lexington, KY, April 2002; Presentation on *Efficiency of Monte Carlo EM and Simulated Maximum Likelihood in Two-Stage Hierarchical Models*
- Department of Mathematics, University of Maryland, College Park, MD, February 2002; Presentation on *Efficiency of Monte Carlo EM and Simulated Maximum Likelihood in Two-Stage Hierarchical Models*
- 2001 Department of Decision and Information Technologies, University of Maryland, College Park, MD, January 2001; Presentation on *Efficiency of Monte Carlo EM and Simulated Maximum Likelihood*
- Department of Statistics, University of Florida, Gainesville, FL, May 2001; Presentation on *Efficiency of Monte Carlo EM and Simulated Maximum Likelihood*

8.5 Invited Conference Presentations

- 2010 Workshop on Current Research in Information Systems and Operations Management, Gainesville, FL, March 5th-6th, 2010; Presentation on *Forecasting Success of Innovative Products via Shape Modeling*.
- 2009 2009 Quality & Productivity Research Conference, IBM T. J. Watson Research Ctr., Yorktown Heights, NY, June 3-5, 2009; Presentation on *On the Existence of E-loyalty Networks in Ebay Auctions and Their Structure*.
- 2008 INFORMS 2008 Annual Meeting, Washington, DC, October 12–15, 2008; Presentation on *Automated and Data-driven Bidding Strategy for Online Auctions*.
- INFORMS 2008 Annual Meeting, Washington, DC, October 12–15, 2008; Presentation on *Automated Bidding and the Cost of Information*.
- Joint Statistical Meetings (JSM), Denver, CO, August 2008; Presentation on *Forecasting with Functional Data: Movies, Markets, and Mining*.
- 2007 INFORMS 2007 Annual Meeting, Seattle, WA, November 4–7, 2007; Presentation on *Forecasting Box-Office Revenue via Virtual Stock Exchanges using Functional Shape Analysis*.
- INFORMS 2007 Annual Meeting, Seattle, WA, November 4–7, 2007; Presentation on *Concurrency of Online Auctions*.
- INFORMS 2007 Annual Meeting, Seattle, WA, November 4–7, 2007; Presentation on *Statistical Challenges in eCommerce Research*.
- International Symposium on Business and Industrial Statistics, Azores, Portugal, August 18–20, 2007; *Forecasting Box-Office Revenue via Virtual Stock Exchanges using Functional Shape Analysis*.
- Seventh Triennial Invitational Choice Symposium 2007, Wharton School, University of Pennsylvania, June 13–17, 2007; *Competition between Auctions: Some Thoughts and Ideas by a Statistician*.

- 2006 INFORMS 2006 Annual Meeting, Pittsburgh, PA, November 2006; Presentation on *Predicting Price in Concurrent Online Auctions*.
- INFORMS 2006 Annual Meeting, Pittsburgh, PA, November 2006; Presentation on *Dynamic Price Forecasts in Online Auction Using Functional Models*.
- Compstat 2006 Satellite Workshop on Data and Information Visualization 2006, Berlin, Germany, August 2006, Presentation on *Visualizing Functional Data with an Application to eBays Online Auctions*.
- KDD2006 Workshop on Theory and Practice of Temporal Data Mining, Philadelphia, PA, August 2006; Presentation on *Forecasting Online Auctions using Dynamic Models*.
- Statistics at the Frontiers of Science Workshop, Banff, CA, June 2006, Presentation on *Application of Functional Data Analysis to Electronic Commerce Research: A few Ideas and Challenges for Statistics*.
- 2005 Joint Statistical Meetings (JSM), Minneapolis, MN, August 2005; Presentation on *Stochastic Variants of EM: Monte Carlo, Quasi-Monte Carlo and More*.
- Ninth INFORMS Computing Society Conference (ICS), Annapolis, Maryland, January 2005; Presentation on *Fast Model-Based Clustering using Ascent-EM*
- 2004 INFORMS 2004 Annual Meeting, Denver, Colorado, October 2004; Presentation on *Dynamic Models for Online Auctions*.
- 2003 Sixth New Researchers Conference (NRC), University of California at Davis, July 2003; Presentation on *Ascent Monte Carlo EM*.
- 2000 Euroworkshop on Statistical Modelling (Mixed Models), Schloß Höhenried, Germany, September 2000; Presentation on *Efficiency of Monte Carlo EM and Simulated Maximum Likelihood*.

8.6 Contributed Conference Presentations

- 2008 Fourth Symposium on Statistical Challenges in Electronic Commerce Research, NYU, New York, May 18–19, 2008; Presentation on *Forecasting Demand Decay via Functional Models of Prediction Markets*.
- 2007 Conference on Information Systems and Technology (CIST), held in conjunction with INFORMS, Seattle, WA, November 3–4, 2007; Presentation on *The Wisdom of Crowds: Pre-release Forecasting of Box-Office Revenue via Functional Shape Analysis of the Online Virtual Stock Market*.
- Marketing Dynamics Conference 2007, University of Groningen, The Netherlands, August 22–24, 2007; Presentation on *Forecasting Box-Office Revenue via Virtual Stock Exchanges using Functional Shape Analysis*.
- Second Workshop on Prediction Markets, held in conjunction with ACM Conference on Electronic Commerce (EC'07), San Diego, CA, June 12, 2007; Presentation on *Forecasting Box-Office Revenue via Virtual Stock Exchanges using Functional Shape Analysis*.
- 2006 KDD2006 Workshop on Data Mining for Business Applications, Philadelphia, PA, August 2006; Presentation on *Forecasting Online Auctions using Dynamic Models*.
- Twelfth ACM SIGKDD International Conference On Knowledge Discovery and Data Mining (KDD2006), Philadelphia, PA, August 2006; Poster on *Dynamic, Real-time Forecasting of Online Auctions via Functional Models*.

- 38th Symposium on the interface of statistics, computing science, and applications (Interface), Pasadena, CA, May 2006; Presentation on *Concurrency in Online Auctions using Spatio-Temporal Semiparametric Models*.
- 2005 2005 International Workshop on Customer Relationship Management: Data Mining Meets Marketing, New York University, New York, NY, November 2005; Presentation on *Dynamic Scoring of Customers using Learning Spatial Choice Models*.
- European Meeting of Statisticians (EMS), Oslo, Norway, July 2005; Presentation on *Online Auctions on eBay: A Statistical Exploration of Price Formation Dynamics via Functional Data Analysis*.
- 37th Symposium on the interface of statistics, computing science, and applications (Interface), St. Louis, Missouri, June 2005; Presentation on *Online Auctions on eBay: A Statistical Exploration of Price Formation Dynamics via Functional Data Analysis*.
- 2004 Second Workshop on Monte Carlo Methods, Harvard University, Boston, MA, August 2004; Presentation on *Ascent Monte Carlo EM*.
- Joint Statistical Meetings (JSM), Toronto, Canada, August 2004; Presentation on *Dynamic Profiling of Online Auctions*.
- Fifth International Conference on Modelling, Computation and Optimization (MCO) in Information Systems and Management Sciences, Metz, France, July 2004; Presentation on *Dynamic Modelling of Online Auctions*.
- Eleventh Annual Spring Research Conference (SRC) on Statistics in Industry and Technology, National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, May 2004; Presentation on *Dynamic Profiling of Online Auctions using Curve Clustering*.
- 1999 Joint Statistical Meetings (JSM), Baltimore, Maryland, August 1999; Presentation on *Efficiency Comparisons of Monte Carlo Estimation Techniques for Generalized Linear Mixed Models*.
- 1996 German Classification Society (GFK), Freiburg, Germany, August 1996; Presentation on *Optimal and Stationary Partitions generated by the K-Means Algorithm*.

9 Media Coverage

- 2010 Citation by the Washington Post related to work on online professor rankings.
- 2008 Interview by Reuters, the New York Times and Wired.Com on Consumer Surplus in Online Auctions.
- 2006 Interview by the Minneapolis Startribune on Online Auction Research.
- 2005 Interview by the German Press Agency (DPA) on Online Auction Research, featured in several German print and online media.
- Television interview by German Television (WDR) on Online Auction Research, featured in evening news hour.

10 Students Supervised

10.1 Dissertations Chaired

10.1.1 Former PhD Students

- 2009 *Shu Zhang* Quantitative Modeler at Sentrana Inc., Washington, DC. (Dissertation Chair).

2007 *Shanshan Wang* Senior Statistician at DemandTec Inc., San Carlos, CA. (Dissertation Co-Chair, jointly with Prof. Paul Smith, Department of Mathematics, University of Maryland).

Valerie Hyde JMP Systems Engineer at SAS, New York, NY. (Dissertation Co-Chair, jointly with Prof. Galit Shmueli, Department of Decision & Information Technology, University of Maryland).

Jeffrey Heath Assistant Professor at Centre College, Danville, KY. (Dissertation Co-Chair, jointly with Prof. Michael Fu, Department of Decision & Information Technology, University of Maryland).

2006 *Yufeng Tu* Assistant Professor at TUI University, Cypress, CA. (Dissertation Co-Chair, jointly with Prof. Michael Ball, Department of Decision & Information Technology, University of Maryland).

10.1.2 Current PhD Students

2009- *Wei Guo*, PhD student in the Applied Math and Scientific Computation program, University of Maryland; research on agent-based models in online markets.

10.2 Research Advisor

2007- *Inbal Yahav* (Doctoral student in the Department of Decision & Information Technology, Robert H. Smith School of Business, University of Maryland); Research Advisor (independent research project).

2007 *Daniel Malter* (Doctoral student in the Department of Management & Organization; Robert H. Smith School of Business, University of Maryland); Research Advisor (independent research project).

2006 *Mingfeng Lin* (Doctoral student in the Department of Decision & Information Technology, Robert H. Smith School of Business, University of Maryland); Research Advisor (independent research project).

2005 *Guojing Tang* (Doctoral student in the Statistics program, Department of Mathematics, University of Maryland); Research Advisor (independent research project).

2004 *Matthew Reindorp* (Doctoral student in the Department of Decision & Information Technology, Robert H. Smith School of Business, University of Maryland); Research Co-Advisor (independent research project); (jointly with Prof. Louiqa Rashid, D&IT).

10.3 Dissertation Committee

2010 *Ali Pilehvar* (Doctoral student in the Department of Decisions, Operations & Information Technology, Robert H. Smith School of Business, University of Maryland); PhD Committee member; Chair: Prof. Wedad Elmaghraby, DO&IT.

Prem Swaroop (Doctoral student in the Department of Decisions, Operations & Information Technology, Robert H. Smith School of Business, University of Maryland); PhD Committee member; Chair: Prof. Mike Ball, DO&IT.

2009 *Carter Price* (Doctoral student in the Applied Math and Scientific Computation program, University of Maryland); PhD Committee member; Chair: Prof. Bruce Golden, D&IT.

Dan Liao (Doctoral student in the Joint Program for Survey Methodology, University of Maryland); PhD Committee member; Chair: Prof. Richard Valliant, JPSM.

Mohamed Nagem (Doctoral student in the Applied Math & Scientific Computation program, University of Maryland); PhD Committee member; Chair: Prof. Ben Kedem, Statistics.

Thomas Lotze (Doctoral student in the Applied Math and Scientific Computation program, University of Maryland); PhD Committee member; Chair: Prof. Galit Shmueli, D&IT.

2008 *Samvit Prakash* (Doctoral student in the Applied Math & Scientific Computation program, University of Maryland); PhD Committee member; Chair: Prof. Dilip Madan, Finance.

2007 *Ming Zhong* (Doctoral student in the Department of Decision & Information Technology, Robert H. Smith School of Business, University of Maryland); PhD Committee member; Chair: Prof. Mike Ball, D&IT.

2006 *Min Min* (Doctoral student in the Statistics program, Department of Mathematics, University of Maryland); PhD Committee member; Chair: Prof. Paul Smith, Department of Mathematics.

Kok-Hua Loh (Doctoral student in the Department of Decision & Information Technology, Robert H. Smith School of Business, University of Maryland); PhD Committee member; Chair: Prof. Bruce Golden, D&IT.

2005 *Haiming Guo* (Doctoral student in the Statistics program, Department of Mathematics, University of Maryland); PhD Committee member; Chair: Prof. Ben Kedem, Department of Mathematics.

Yan Li (Doctoral student in the Joint Program of Survey Methodology, University of Maryland); PhD Committee member; Chair: Prof. Partha Lahiri, Joint Program of Survey Methodology.

Xia Wang (Doctoral student in the Applied Math and Scientific Computation program, University of Maryland); PhD Committee member; Chair: Prof. Bruce Golden, D&IT.

2004 *Ricardo Smith-Ramirez* (Doctoral student in the Department of Agriculture and Research Economics, University of Maryland); PhD Committee member; Chair: Prof. Erik Lichtenberg, Department of Agriculture and Research Economics.

10.4 Masters Committee

2005 *Lakshmi Urimi* (Masters student in the Applied Math & Scientific Computation program, University of Maryland); Masters Committee member; Chair: Prof. Dennis Healy, Department of Mathematics.

10.5 Master's and MBA Students Supervised

2008 *Muthita Songchitruksa*, MBA 2008; Graduate advisor.

2008 *Mindy Remerowski*, MBA 2008; Graduate advisor.

2007 *Sean Perschy*, MBA 2007; Graduate advisor.

2006 *Eunjin Choi*, MBA 2006; Graduate advisor.

2005 *Nilufer Savas*, MBA 2005; Graduate advisor.

2004 *Jim Anderson*, MBA 2004; Research advisor.

2004 *Angela Wu Yang*, MBA 2005; Graduate advisor.

2004 *Bankole Osimokun*, MBA 2006; Research advisor.

2003 *Diswa Malu*, MBA 2004; Research advisor

2002 *Maria Eugenia Landesman*, MBA 2003; Graduate advisor.

10.6 Undergraduate Students Supervised

2009 Hao Jiang, Research Advisor (online marketing and analytics research project).

2004 *Muhammad Ali Butt*, Research Advisor (independent research project).

2003 *Mahendra Ramani*, Research Advisor (independent research project).

11 Courses Taught

I teach courses at the undergraduate, graduate (MBA & PhD), and executive education levels for the college of business (BMGT). I also teach off-load courses for the Applied Math and Scientific Computation (AMSC) program. The maximum teaching rating rating is 5.00.

11.1 BMGT Courses

11.1.1 Most recent 4 years

Year	Term	Course Number, Location ¹ , Title/ Short Description	Numb. Students	Avg. Rating ²
2010	Fall	BUSI 630 GS04 , CP, <i>Data, Models and Decisions</i> 3 credit hours, accelerated MBA Core, evenings/week-ends	48	3.42
	Summer	BUSI 788E BA01 , BA/Europe, <i>Doing Business in the EU</i> 4 credit hours, MBA Elective Class	15	–
	Spring	BMGT 458I , CP, <i>Market Intelligence</i> 3 credit hours, Undergraduate Elective Class	17	4.83
	Spring	BUDT758F , DC, <i>Market Analytics</i> 2 credit hours, MBA Elective Class	15	4.49
	Spring	BMGT 881 , CP, <i>Applied Regression Analysis</i> 3 credit hours, PhD Seminar	12	4.34
2009	Spring	BMGT 458I , CP, <i>Marketing Intelligence</i> 3 credit hours, Undergraduate Fellows Class	9	4.56
	Spring	BUMK758F, BUDT758F , SG, <i>Online Marketing Analytics</i> 2 credit hours, MBA Elective Class	11	4.55
	Spring	BMGT 881 , CP, <i>Applied Regression Analysis</i> 3 credit hours, PhD Seminar	10	4.45
	Spring	EMBA630 ZH11 , Online, <i>Data, Models and Decision</i> 2 credit hours, executive MBA Core Class, GSBA Zürich	12	NA
2008	Summer	BUSI 798E , CP/Europe, <i>Competing on Analytics in Europe</i> 4 credit hours, MBA Elective Class	34	4.94
	Spring	BUSI 630 GS01 , SG, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	79	4.66
	Spring	BMGT 808X , CP, <i>Applied Regression Analysis</i> 3 credit hours, PhD Seminar	14	5.00
	Spring	EMBA630 ZH09 , Online, <i>Data, Models and Decision</i> 2 credit hours, executive MBA Core Class, GSBA Zürich	56	NA
2007	Fall	EMBA627 EV01 , CP, <i>Data Analysis and Decision Modeling</i> 4 credit hours, executive MBA Core Class, evenings/week-ends	41	NA
	Fall	EMBA630 ZH05 , Online, <i>Data, Models and Decision</i> 2 credit hours, executive MBA Core Class, GSBA Zürich	33	NA
	Spring	BUSI 630 GS01 , SG, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	53	4.67
	Spring	EMBA758K TU01 , Tunisia/Africa, <i>Data Mining</i> 3 credit hours, executive MBA Elective Class, MSB Tunis	24	4.07
	Spring	BMGT 808X , CP, <i>Applied Regression Analysis</i> 3 credit hours, PhD Seminar	9	4.33
	Spring	EMBA 798 ALP Rotation 3 , CP, <i>Action Learning Project</i> 0 credit hours, executive MBA advisor	3	NA

¹ CP = College Park; GS = Shady Grove Campus; DC = Washington, DC, Campus; BA = Baltimore Campus; Online; Europe; Africa ² Maximum rating equals 5

11.1.2 Prior years

Year	Term	Course Number, Location, Title/ Short Description	Numb. Students	Avg. Rating
2006	Fall	EMBA 798 ALP Rotation 2 , CP, <i>Action Learning Project</i> 0 credit hours, executive MBA advisor	3	NA
	Spring	BUSI 630 GS01 , SG, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	58	4.62
	Spring	BUSI 630 DC03 , DC, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	52	4.71
	Spring	BMGT 808X , CP, <i>Applied Regression Analysis</i> 3 credit hours, PhD Seminar	6	4.54
2005	Spring	BUSI 630 GS01 , SG, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	59	4.36
	Spring	BUSI 630 DC01 , DC, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	60	3.99
	Spring	BUSI 630 DC02 , DC, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	61	4.55
2004	Fall	BMGT 808X , CP, <i>Applied Regression Analysis</i> 3 credit hours, PhD Seminar	14	3.98
	Spring	BUSI 630 DC03 , DC, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	56	4.23
	Spring	BUSI 630 GS01 , SG <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	58	4.10
	Spring	BUDT 733 , CP, <i>Data Analysis for Decision Makers</i> 3 credit hours, MBA Elective Class	29	4.36
2002	Fall	BMGT 630 Track 3 , CP, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	50	4.09
	Fall	BMGT 630 Track 4 , CP, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	48	3.99
	Spring	BMGT 630 GS01 , SG, <i>Data, Models and Decision</i> 4 credit hours, MBA Core Class	43	4.24
2001	Fall	BMGT 231 0201 , CP, <i>Statistical Models for Business</i> 3 credit hours, Undergrad Core Class	49	4.37
	Fall	BMGT 430 0101 , CP, <i>Lin. Stat. Models in Business</i> 3 credit hours, Undergrad Elective Class	37	4.24

	Average Yearly Ratings									
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Avg.Rating	4.31	4.11	–	4.17	4.30	4.62	4.36	4.87	4.52	4.55
–Undergrad	4.31	–	–	–	–	–	–	–	4.56	4.83
–MBA	–	4.11	–	4.23	4.30	4.67	4.37	4.80	4.55	4.49
–PhD	–	–	–	3.98	–	4.54	4.33	5.00	4.45	4.34

11.2 AMSC Courses

In addition to my regular course load, I teach off-load courses in the *Applied Math and Scientific Computation* (AMSC) program at the University of Maryland. The goal of AMSC is to promote training in interdisciplinary research via *Research Interaction Teams* (RIT's). RIT's provide a research framework involving graduate and undergraduate students, postdoctoral fellows, and

faculty, and they ease the transition from basic course work towards work on independent research.

Year	Course Name/ Short Description
2007	AMSC 689/BMGT 808L <i>Research Interaction Team</i> “Pricing Optimization and Data Mining” 3 credit hours, 12 students (no teaching evaluations)
2005	AMSC 689 <i>Research Interaction Team</i> “Exploring Online Auctions using Functional Data Analysis II” 3 credit hours, 4 students (no teaching evaluations)
2004	AMSC 689 <i>Research Interaction Team</i> “Exploring Online Auctions using Functional Data Analysis I” 3 credit hours, 7 students (no teaching evaluations)

12 Courses Developed

I have newly developed from scratch three different courses: two service classes for the college of business and another off-load research class for the Applied Math and Scientific Computation program. In addition, I have also significantly enhanced and modified several other existing classes.

- **Informatics:** *The explosion of data and analytical tools* (Executive mini-MBA class). Available data has been growing exponential with the advent of the microchip. It pervades all facets of life from transactions at the retail store to web-surfing behaviors of individuals, to HR data on employees, to data about your car sent via On-Star to a central network. Some companies have harnessed the power of data and analytics to transform business processes, customize decisions for each individual, make recommendations to customers based on their peers, and drive significant operating leverage in their models. This course will introduce frameworks to organize thinking regarding the vast datasets available and provide hands-on opportunities to understand core tools for transformation data to information and valuable knowledge.
- **BUSI 788E/ 798E** *Doing Business in the EU and Competing on Analytics in Europe* (MBA Electives). Both course are global studies courses and get delivered in part in the US and in part in Europe. Students travel across Europe, visit companies and factories, talk with executives and managers from a wide variety of industries and visit government and administrative institutions. Courses have a specific focus, for instance on analytics, healthcare or governance.
- **BUDT 758F/ BUMK 758F** *Market Analytics* (MBA Elective). This course teaches students to make business decisions using data mining. Students learn basic data mining tools and apply them to business problems. The course features a combination of data-driven projects and case discussion. Special emphasis is online marketing and its relationship to data-analytics. One dominant component is the design of an online marketing campaign for a real business using real money, and the use of data-analytics to monitor and evaluate the campaign.
- **BMGT 458i** *Market Intelligence* (Undergraduate Elective). This course is designed specifically for the new undergraduate fellows program on “Quantitative Marketing.” Quantitative marketing is an approach to marketing that relies on computer based models and statistical, econometric and data mining methods to understand and analyze why, which, when and how much products and services are being bought by consumers and firms. This course teaches students to make marketing decisions using data mining. A

special token is the online marketing component in which students design real online marketing campaigns for real businesses using real money, and use data-analytics to monitor and evaluate their campaigns.

- **EMBA 758** *Data Mining* (executive MBA Elective). This is 5-day data mining elective course developed for executive programs. Its main features are that it is extremely hands-on, has many in-class projects, uses real data, and solves real business problems. The students also get exposed to state-of-the-art data mining software and techniques.
- **BMGT 881** *Applied Regression Analysis* (PhD Seminar). This is a novel course at the Smith School and at the University of Maryland. It is novel in terms of its focus and approach. In contrast to existing statistics classes, this course has a strong application flavor. It conveys statistical concepts via a combination of traditional lecturing and the creation of a research environment. Students read & discuss scholarly articles, and they work on real-world data-driven research problems which often lead to publishable papers. Students also learn how to communicate data-driven research effectively and use state-of-the-art statistical software and modern modeling techniques.
- **BMGT 808L/AMSC 689** *Pricing Optimization and Data Mining* (PhD Seminar). This is another novel course at the Smith School and at the University of Maryland. It is novel in its content and also in its delivery. Its delivery is unique because it is co-taught by 3 instructors with 3 different backgrounds and expertises. The combination of 3 different instructor backgrounds allows students to see “the big picture” across 3 typically rather unconnected areas of research: economics, optimization and data mining. This course is an experiential course and can be taken as a model for cross-disciplinary teaching.
- **AMSC 689** *Research Interaction Team* on “Exploring Online Auctions using Functional Data Analysis” (PhD and Master’s Research Class). This is a course for the Applied Math and Scientific Computation program (AMSC) developed together with Galit Shmueli. The target of this course are graduate and undergraduate students from across campus. The focus is on performing hands-on statistical research on data-driven question from electronic commerce and the delivery of scholarly papers at semester-end.

13 Service

13.1 Internal Service

13.1.1 Department Service

- *Chair of the department Lecturer Search in Business Statistics, 2010.*
- *Chair of the department Strategy Committee, 2007, 2008.*
- *Organizer of the D&IT-Marketing Luncheons, 2005, 2006, 2007, 2008.*
- *Member of the Lecturer Search Committee in Business Statistics, 2009.*
- *Member of the Computing Needs Committee, 2009.*
- *Member of the Department Name Search Committee, 2007.*
- *Member of the Faculty Search Committee in Information Systems, 2007, 2008, 2009, 2010.*
- *Member of the Faculty Search Committee in Statistics, 2005, 2006.*
- *Member of the Seminar Committee, 2005.*
- *Member of the PhD Review Committee in Information Systems, 2005, 2006.*
- *Scribe at faculty meetings, 2006, 2007*

13.1.2 College Service

- *Director Center for Complexity in Business, 2009, 2010.*
- *Member of the Smith Master's Committee for Admissions, Probation, Termination, and Grade Appeals, 2009, 2010.*
- *Member of the Smith Tenure & Promotion Committee, 2007.*
- *Faculty Champion of the Computational Marketing Fellows Program, 2006, 2007, 2008.*
- *Faculty advisor for the Executive MBA Action Learning Project, 2006, 2007.*
- *Member of the Smith Intellectual Committee, 2004.*
- *Member of the Smith Technology Integration Initiative Committee, 2003, 2004, 2005, 2006, 2007, 2008.*
- *Judge at the MBA Case Competition, 2003, 2004, 2005, 2006, 2007*
- *Judge at the Smith Technology Challenge, 2007.*
- *Judge at the MBA Part Time Innovation Competition, 2004.*
- *Marshall at the Smith Winter Graduation, 2001, 2005.*

13.1.3 University Service

- *Member of the Statistics Consortium, 2002-present.*
The Statistics Consortium brings together academic programs and resources relating to statistical theory and application at the University of Maryland.
- *Member of the Applied Math & Scientific Computation (AMSC) program, 2002-present.*
AMSC is sponsored by the Department of Mathematics, the Center for Scientific Computation and Mathematical Modeling (CSCAMM), and the Institute for Physical Science and Technology (IPST), and is affiliated with fourteen participating departments and institutes at the University of Maryland. The goal of AMSC is to promote training in interdisciplinary research.
- *Marshall at the University Winter Graduation, 2001, 2005*
- *Faculty advisor of the University of Maryland Tennis Club, 2004-present.*
- *Faculty advisor of the University of Maryland Ski Club, 2010-present.*

13.2 External Service

13.2.1 Committees

- *Program Chair* for the ASA's Section on Statistics and Marketing, Joint Statistical Meetings (JSM) 2010; for the ASA's Section on Statistical Computing, Joint Statistical Meetings (JSM) 2008.
- *Program Committee* for the *15th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2009)*, for the *14th Portuguese Conference on Artificial Intelligence (EPIA 2009)*, for the *International Symposium on Business and Industrial Statistics (ISBIS-2008)*, for the *14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2008)*, for the *PAKDD 2007 Workshop on Data Mining for Business*, for the *EPIA 2007 BI'07 Business Intelligence Workshop*
- *Examination Committee* Monash University, Research Graduate School.

13.2.2 Editorial Activities

- *Editor*
 - Statistical Science (Guest Editor, Special Issue, May 2006);
- *Associate Editor*
 - Management Science (Guest AE, 2008-2009);
 - Journal of the American Statistical Association (2008-2009);
 - Journal of Computational and Graphical Statistics (2009–);
 - International Conference on Information Systems (ICIS 2010);
- *Editorial Board Member*
 - Marketing Science (2009–);
 - Information Systems Research (Special Issue on Digital Systems and Competition);
- *Book Editor* for Wiley (“Statistical Methods for eCommerce”)
- *Series Advisor* for Wiley's Statistics in Practice book series.

13.2.3 Referee Activities

- *Ad-hoc referee* for several journals in statistics, data mining and business:
Journal of the American Statistical Association, Journal of the Royal Statistical Society, Annals of Statistics, Annals of Applied Statistics, Computational Statistics and Data Analysis, Journal of Computational and Graphical Statistics, Journal of Statistical Computation and Simulation, Psychometrika, Biometrika, Biometrics, Journal of Statistical Planning and Inference, Statistical Science, Statistics and Computing, International Journal of Forecasting, Applied Stochastic Models in Business and Industry, Artificial Intelligence in Medicine, Transactions on Pattern Analysis and Machine Intelligence, Transactions on Knowledge and Data Engineering, Journal of Computational and Applied Mathematics, European Journal of Operational Research, Proceedings of the Ninth INFORMS Computing Society Conference, International Transactions in Operational Research, Production and Operations Management, Management Science, Decision Support Systems, Decision Analysis, Marketing Science, Journal of Marketing, Journal of Marketing Research, MIS Quarterly, Information Systems Research, IBM Systems Journal, Electronic Commerce Research and Applications, Journal of Applied Economics.
- *Book-reviewer* for:
John Wiley & Sons; Springer.
- *Proposal-reviewer* for:
The Social Sciences and Humanities Research Council of Canada; the Natural Sciences and Engineering Research Council of Canada.

14 Professional Associations

ASA, The American Statistical Association

IMS, The Institute of Mathematical Statistics

ENBIS, The European Network for Business and Industrial Statistics

ACM, The Association of Computing Machinery

INFORMS, The Institute for Operations Research and Management Science

15 Corporate Consulting & Advising

- Advisory Board Member:
PricewaterhouseCoopers, Center for Advanced Research (CAR), 2005-present.
My-Currency.Com, 2007-present.
Bullshouse.com, 2010-present.
- USA:
Kellogg Brown Root; PricewaterhouseCoopers; Argosy OmniMedia Inc.; D&R International Ltd; zata3; Averro, LLC; MTV/Viacom; Analytical Strategies Group, LLC; Sentrana Inc.; Arbitron Inc.
- Europe:
AXA Versicherung; Central Versicherung; Step Unternehmensberatung; applord GmbH