PENG SUN

Fuqua School of Business
Box 90120, Duke University
One Tower View Rd
Durham, NC 27708

Tel.: (919) 660-7777
Fax: (919) 681-6246
Email: peng.sun@duke.edu
http://faculty.fuqua.duke.edu/~psun/bio/

Academic Position

Duke University: the Fuqua School of Business, Durham, NC
Associate Professor of Decision Sciences, 2008-   (tenured, 2010)
Assistant Professor of Decision Sciences, 2003-2008

Education

Ph.D., Operations Research Center, Massachusetts Institute of Technology, May 2003
Dissertation topic: *Constructing Learning Models from Data: The Dynamic Catalog Mailing Problem.*
Committee: Duncan Simester (chair), John Tsitsiklis and Robert Freund

B. Eng., Tsinghua University, Beijing, China, July 1998

Publication

P. Sun and R. M. Freund, (2004) "Computation of Minimum Volume Covering Ellipsoids," *Operations Research*, 52(5), pp. 690-706.

D.I. Simester, P. Sun and J.N. Tsitsiklis, (2006) "Dynamic Catalog Mailing Policies," *Management Science*, 52(5), pp. 683-696.

S. Mannor, D.I. Simester, P. Sun and J.N. Tsitsiklis, (2007) "Bias and Variance Approximation in Value Function Estimates," *Management Science*, 53(2), pp. 308-322.

X. Chen, M. Sim, D. Simchi-Levi and P. Sun, (2007) "Risk Aversion in Inventory Management," *Operations Research*, 55(5), pp. 828-842.

X. Chen, M. Sim, and P. Sun, "A Robust Optimization Perspective to Stochastic Models," (2007) *Operations Research*, 55(6), pp. 1058-1071.

X. Chen, M. Sim, P. Sun and J. Zhang, (2008) "A Linear Decision Based Approximation Approach to Stochastic Programming," *Operations Research*, 56(2), pp. 344-357.

D. Ahipasaoglu, P. Sun and M. Todd, (2008) "Linear Convergence of a Modified Frank-Wolfe Algorithm for Computing Minimum Volume Enclosing Ellipsoids," *Optimization Methods and Software*, 23(1), pp. 5-19,

P. Sun, L. Yang and F. De Vericourt, (2009) "Selfish Drug Allocation for Containing an International Influenza Pandemic," *Operations Research*, 57(6), pp. 1320-1332.

S. Wang, F. de Vericourt and P. Sun, (2009) "Decentralized Resource Allocation to Control an Epidemic: A Game Theoretic Approach," *Mathematical Biosciences,* 22(1), pp. 1-12.

D. Brown, J.E. Smith and P. Sun, (2010) "Information Relaxation and Duality in Stochastic Dynamic Programs," *Operations Research*, 58(4), pp. 785-801.

G. Lopomo, L. Marx and P. Sun, (2011) "Linear Programming for Mechanism Design: An Application to Bidder Collusion in First Price Auctions," *Review of Economic Design*, 15:177-211.

X. Chen and P. Sun, (2012) "Optimal Structural Policies for Ambiguity and Risk Averse Inventory and Pricing Models," *SIAM Journal on Control and Optimization,* 50(1), 133-146.

S. Alizamir, F. de Vericourt and P. Sun, (2013) "Diagnostic Accuracy under Congestion," *Management Science*, 59(1), 157-171.

L. Yang, F. de Vericourt and P. Sun, "Duopoly Competition in Waiting Time with Reference Effect," accepted for publication at *M&SOM*.

K. Johnson, D. Simchi-Levi and P. Sun, "Managing Scrip Systems," accepted for publication at *Operations Research*.

S. Alizamir, F. de Vericourt and P. Sun, "Efficient Feed-In-Tariff Policies For Renewable Energy Technologies," under review at *Operations Research*.

S. Alizamir, F. de Vericourt and P. Sun, "Dismissing Decision Tasks: The Optimality of the M-shaped Structure," working paper.

Grant

Co-PI, National Science Foundation #SES-0849349, "Applied Mechanism Design," 2009-2011. (PI: Leslie Marx, Co-PIs: A. Belloni, G. Lopomo, P. Sun.)

PhD Student Supervision

Liu Yang, "Application of Game Theory Analysis in Epidemiology and Service Management," Duke FSB, 2010. (co-advisor, first appointment: Tsinghua University, China.)

Saed Alizamir, "Essays on Optimal Control of Dynamic Systems with Learning," Duke FSB, 2013. (co-advisor, first appointment: Yale University)

Kai Wang, Duke FSB, expected 2014.

PhD Thesis Committee Member

Gavin Taylor, "Feature Selection for Value Function Approximation," 2011. (Duke Computer Science.)

Shouqiang Wang, "Essays on Individual Incentives and Private Information," 2011. (Duke Decision Science.)

Alvaro Mendoza, 2013. (Duke Decision Science.)

Zhankun Sun, expected 2014. (University of North Carolina, Operations Research.)

Bo Zhou, expected 2014. (Duke Marketing.)

Yiting Deng, expected 2015. (Duke Marketing.)

Professional Activities

Associate Editor, *Operations Research*, 2006 - .
Associate Editor, *Management Science*, 2012 - .
Referee, *Operations Research*, *Management Science*, *Econometrica*, *SIAM Journal on Optimization, Mathematics of Operations Research, Mathematical Programming, Journal of Machine Learning Research, Manufacturing & Service Operations Management, SIAM Journal on Control and Optimization, Journal of Optimization Theory and Application*, *Journal of Marketing Research, Computational Optimization and Applications*, *Decision Analysis, IEEE Transactions on Neural Network, IEEE Transactions on Automatic Control,* etc.
2011 *Management Science* Meritorious Service Award.
2013 *Operations Research* Meritorious Service Award.
Sponsored Sessions Chair, INFORMS Annual Meeting, Charlotte, 2011.
NSF Panelist, 2011.
Co-Chair, MSOM Sustainability SIG Conference, Insead, 2013.

Invited Seminar Presentations

Managing Scrip Systems
- University of Minnesota, February 2014
- Tsinghua MostlyOM Workshop, Tsinghua University, Beijing, May 2013
- London Business School, March 2013
- University College London, March 2013
- NYU Stern School of Business, New York, March 2012

Diagnostic Accuracy Under Congestion
- UNC, Chapel Hill, April 11, 2011
- University of Illinois, Urbana-Champaign, March 11, 2010

Information Relaxation and Duality in Stochastic Dynamic Programs
- University of Michigan, An Arbor, February 24, 2010
- University of British Columbia, Vancouver, Canada, January 18, 2010
- Columbia University, New York, November 24, 2009
- National Singapore University, Singapore, May 2008
- Tsinghua University, Beijing, China, May 2008

- NYU Stern School of Business, New York, November 2007

Dynamic Optimization for Direct Marketing Problem
- University of Western Ontario, Texas A&M University, University of Florida, University of Chicago, Duke University, Queens University and University of Iowa, January – February 2003
- University of North Carolina at Chapel Hill, November 2003

Teaching

Duke University: the Fuqua School of Business
  Strategic Modeling and Business Dynamics, MBA elective, 2011 - .
  Dynamic Programming and Optimal Control, PhD course, 2005, 2007, 2008, 2010, 2013, 2014.
  Decision Models, core course, Daytime MBA, and Weekend, Cross Continent, Duke-Goethe EMBA programs, 2003 – 2009.
  Global Academic Travel Experience (GATE), MBA elective, 2010, 2012.

Service

Decision Sciences Area Coordinator, Fuqua School of Business, Duke University, 2013-.
Curriculum Committee, Fuqua School of Business, Duke University, 2011-2013.
Honor Code Committee, Fuqua School of Business, Duke University, 2010-2011.
China Strategy Committee, Fuqua School of Business, Duke University, 2010-2011.
Dean's Advisory Committee, Fuqua School of Business, Duke University, 2008-2010.