

# Qi Annabelle Feng

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## Education

*May 2006* Ph.D. in Operations Management, School of Management,  
The University of Texas at Dallas.  
*July 1999* B.Eng. in Industrial Management Engineering, School of Management,  
B.Eng. in Computer and Applications, School of Electronics & Information,  
Shanghai Jiao Tong University.

## Employment

*Aug.2014-* *John and Donna Krenicki Chair in Operations Management*  
*Area Head of Operations Management*  
*Area Ph.D. Advisor of Operations Management*  
*Krannert School of Management,*  
*Purdue University, West Lafayette, IN 47907.*

*Jun.2012-Aug. 2014* *Associate Professor, Operations Management*  
*Area Head of Operations Management*  
*Area Ph.D. Advisor of Operations Management*  
*Associate Director, DCMME & GSCMI Centers*  
*Krannert School of Management,*  
*Purdue University, West Lafayette, IN 47907.*

*Aug.2006-Jun.2012* *Assistant Professor*  
*Information, Risk and Operations Management, McCombs School of Business*  
*The University of Texas at Austin, Austin, TX 78712.*  
Tenure granted on December 16, 2011, effective on September 1, 2012

*May.2005-Aug.2005* *Research Associate in Supply Chain Management*  
*Hewlett-Packard Laboratories, Palo Alto, CA 94304.*

- Workforce Optimization for Application Service Operations.
- Implementation of Funnel Analysis Tool for workforce demand forecast.
- Implementation of Dynamic Workforce Planning Tool.

*Jun.2004-Aug.2004* *Research Intern in Supply Chain Management,*  
*Hewlett-Packard Laboratories, Palo Alto, CA 94304.*

- Product Proliferation Management for Imaging and Printing Group.
- Implementation of Revenue Coverage Optimization Tool.

*Nov.1998-Jul.2001* *Business Consultant,*  
*Arthur Andersen (Shanghai) Business Consulting, China.*

## **Honors and Awards**

- 2015 Meritorious Service Award for *Manufacturing & Service Operations Management*.
- 2014 Meritorious Service Award for *Manufacturing & Service Operations Management*.
- 2014 Purdue University Faculty Scholar
- 2012-2014 Distinguished Teacher of Master's Course, Krannert School of Management (Fall Module 1)
- 2013 Faculty Service Award, Krannert School of Management
- 2013 Meritorious Service Award for Management Science
- 2013 Meritorious Service Award for Manufacturing & Service Operations Management.
- 2012 POMS Wickham Skinner Early-Career Research Accompaniment Award.
- 2011 Meritorious Service Award for Management Science.
- 2011 Honorable Mention, OCSAMSE Best Paper Award.
- 2011, 2012 Department Nominee for the CBA Foundation Research Excellence Award for Assistant Professors.
- 2009 Franz Edelman Award.
- 2009 INFORMS Junior Faculty Paper Competition, 1st prize.
- 2009 Service for Students with Disability (SSD) Appreciation Award, UT Austin.
- 2005 Hewlett-Packard Award for Excellent Contribution.

## **Professional Service**

- Department editor of Stochastic Models for *Production and Operations Management*.
- Referee for *Operations Research, Mathematics of Operations Research, Management Science, Manufacturing & Service Operations Management, Operations Research Letter, Naval Research Logistics, IIE Transactions, European Journal of Operational Research, Journal of Operations Research Society, Journal of Operations Management, IEEE Transactions on Engineering Management, IMA Journal of Management Mathematics, Decision Support Systems, International Journal of Modeling and Simulation, Journal of Population Economics*.
- VP of Communication for POMS College of Supply Chain Management, 2013.
- Editorial board for POMS Chronicle, 2013-2014
- General Program Chair for 2015 POMS Annual Conference
- Invited session chairs for INFORMS 2005-2010, 2013 and POMS 2006-2009. Track chair for POMS Annual Conference 2011, 2013.
- Judge for 2011, 2012, 2013 MSOM Student Paper Competition.
- Judge for 2012 POMS Emerging Economies Doctoral Student Award.

## **Research Interests**

Procurement and inventory management. Design and manufacturing outsourcing. Supply contract negotiations. Product proliferation management. Workforce requirement forecast and optimization. Role of population in economic growth.

## Publications

- P21** B. T. Erciyes, Q. Feng, W. Chen. 2015. Dual sourcing under random supply capacities: The role of the slow supplier. *Production and Operations Management*. Forthcoming.
- P20** W. Chen, Q. Feng, S. Seshadri. Inventory-based dynamic pricing with costly price adjustment. 2015 *Production and Operations Management*. 24(4) 732-749.
- P19** A. Bensoussan, Q. Feng, S. P. Sethi. 2015. Integrating equipment investment strategy with maintenance operations under uncertain failures. *Annals of Operations Research*.
- P18** Q. Feng, G. Lai, L. X. Lu. 2015. Dynamic bargaining in a supply chain with asymmetric demand information. *Management Science*. 61(2) 301-315.
- P17** Q. Feng, S. Lou, D. Zhang. 2014. Dynamic inventory-pricing control under backorder: demand estimation and policy optimization. *Manufacturing & Service Operations Management*. 16(1) 149-160.
- P16** Q. Feng, L. X. Lu. 2013. The Role of Contract Negotiation and Industry Structure in Production Outsourcing. *Production and Operations Management*. 22(5) 1299-1319.
- P15** Q. Feng, L. X. Lu. 2013. Supply chain contracting under competition: bilateral bargaining vs. Stackelberg. *Production and Operations Management*. 22(3)661-675.
- P14** C. Santos, T. Gonzalez, H. Li, K.-Y. Chen, D. Beyer, S. Biligi, Q. Feng, R. Kumar, S. Jain, R. Ramanujan, A. Zhang. 2013. HP Enterprise Services uses optimization for resource planning. *Interfaces*. 43(2) 152-169.
- P13** W. Chen, Q. Feng, S. Seshadri. 2013. Sourcing from suppliers with random yield for price-dependent demand. *Annals of Operations Research*. 208(1) 557-579.
- P12** Q. Feng, L. X. Lu. 2012. The strategic perils of low-cost outsourcing. *Management Science*. 58(6)1196-1210.
- P11** Q. Feng, R. Shi. 2012. Sourcing from multiple suppliers for price-dependent demands. *Production and Operations Management*. 21(3) 547-563.
- P10** M. Cakanyildirim, Q. Feng, X. Gan, S. P. Sethi. 2012. Contracting and coordination under asymmetric production cost information. *Production and Operations Management*. 21(2)345-260.
- P9** Q. Feng. 2010. Integrating dynamic pricing and replenishment decisions under supply capacity uncertainty. *Management Science*. 56(12) 2154-2172.
- P8** A. Bensoussan, Q. Feng, S. P. Sethi. 2010. Achieving a long-term service target with short-term demand signals: a newsvendor framework. *Manufacturing & Service Operations Management*. 13(1) 73-88.
- P7** J. Ward, B. Zhang, S. Jain, C. Fry, T. Olavson, H. Mishal, J. Amaral, D. Beyer, A. Brecht, B. Cargille, R. Chadinha, K. Chou, G. DeNyse, Q. Feng, C. Padovani, S. Raj, K. Sunderbruch, R. Tarjan, K. Venkatraman, J. Woods, J. Zhou. 2010. HP transforms product portfolio management with operations research. *Interfaces*. 40(1) 17-32. (2009 Edelman Award)
- P6** A. Bensoussan, M. Cakanyildirim, Q. Feng, S. P. Sethi. 2009. Optimal ordering policies for stochastic inventory problems with observed information delays. *Production and Operations Management*. 18(5) 546-559.

- P5** Q. Feng, V. S. Mookerjee, S. P. Sethi. 2008. Application Development Using Fault Data. *Production and Operations Management*. **17**(2) 162-174.
- P4** K. J. Arrow, A. Bensoussan, Q. Feng, S. P. Sethi. 2007. Optimal savings and the value of population. *Proceedings of National Academy of Science*. **104**(47) 18421-18426.
- P3** Q. Feng, S. P. Sethi, H. Yan, H. Zhang. 2006. Are base-stock policies optimal in inventory problems with multiple delivery modes? *Operations Research*. **54**(4) 801-807.
- P2** Q. Feng, V. S. Mookerjee, S. P. Sethi. 2005. Optimal policies for sizing and timing of software maintenance projects. *European Journal of Operational Research*. **173** 1047-1066.
- P1** Q. Feng, G. Gallego, S. P. Sethi, H. Yan, H. Zhang. 2005. A periodic review inventory model with three procurement modes and forecast updates. *Journal of Optimization Theory & Applications*. **124** (1) 137-155.

### Book Chapters

- B1** Q. Feng, L. X. Lu. 2011. Outsourcing design to Asia: ODM practices. *Managing Supply Chains on the Silk Road: Strategy, Performance and Risk*, edited by C. Haksoz, S. Seshadri, A. V. Iyer.
- B2** Q. Feng, S. P. Sethi. 2010. Flexible supply contracts with price risk-sharing. *Handbook on Innovative Quick Response Programs in Logistics and Supply Chain Management*, edited by T.C. Edwin Cheng, Tsan-Ming Choi. Springer.
- B3** K. J. Arrow, A. Bensoussan, Q. Feng, S. P. Sethi. 2010. The genuine saving criterion and the value of population in an economy with endogenous population changes. *Optimal Control of Age-structured Populations in Economy, Demography, and the Environment*. (Taylor & Francis Series "Environmental Economics") Monograph edited by R. Boucekine, N. Hritonenko, Y. Yatsenko. Routledge, Taylor & Francis, UK.

### Technical Reports

- T1** B. Zhang, J. Ward, Q. Feng. 2005. A simultaneous maximum flow algorithm with vertex balancing. *HP Labs Technical Report*. HPL-2005-121.
- T2** B. Zhang, J. Ward, Q. Feng. 2005. A simultaneous maximum flow algorithm for the selection model. *HP Labs Technical Report*. HPL-2005-91.
- T3** B. Zhang, J. Ward, Q. Feng. 2004. Simultaneous parametric maximum-flow algorithm for finding the complete chain of solutions. 2004. *HP Labs Technical Report*. HPL-2004-189.

### Submitted Papers

- S1** Q. Feng, L. X. Lu. Design outsourcing in a differentiated product market: the role of bargaining and scope economies. 1st Round Revision for *Manufacturing & Service Operations Management*.
- S2** Q. Feng, J. G. Shanthikumar. Revenue Management with Bargaining. 2nd Round Review with *Operations Research*.
- S3** Q. Feng, J. G. Shanthikumar. Demand and Supply Functions in Inventory Models. 4th Round Review with *Operations Research*.

**S4** G. Berenguer, Q. Feng, J. G. Shanthikumar. The Effects of Subsidies on Increasing Consumption through For-Profit and Not-For-Profit Newsvendors. 1st Round Revision with *Production and Operations Management*.

**S5** Q. Feng, S. Luo, J. G. Shanthikumar. Integrating Dynamic Pricing with Inventory Decisions under Lost Sales. 1st Round Review with *Operations Research*.

### **Conference Presentations**

- Sourcing from multiple suppliers with dependent random capacity. (Invited) INFORMS Conference, San Philadelphia, PA, November, 2015.
- How should retailer share information with the supplier? (Invited) INFORMS Conference, San Philadelphia, PA, November, 2015.
- Sourcing from multiple suppliers with dependent random capacity. (Invited) Mostly OM Conference, Tsinghua University, China, June, 2015.
- Advanced analytics in operations management. (Invited) POMS Conference, Washington DC, May, 2015.
- Demand and supply functions in inventory models. (Invited) INFORMS Conference, San Francisco, CA, November, 2014.
- Bargaining versus posted price. (Invited) Mostly OM Conference, Beijing, China, June, 2014.
- Bargaining versus posted price in sequential selling process. (Invited) POMS Conference, Atlanta, GA, May, 2014.
- Dynamic bargaining under asymmetric information. (Invited) POMS Conference, Atlanta, GA, May, 2014.
- Dynamic bargaining under asymmetric information. (Invited) INFORMS Conference, Minneapolis, MN, October, 2013.
- Teaching Innovation in Global Supply Chain Management Program (Invited) POMS College in Supply Chain Mini Conference, Denver, CL, May 2013.
- Dynamic bargaining in a supply chain with asymmetric demand information (Invited) POMS Conference, Denver, CL, May 2013.
- Supply chain contracting under competition (Invited) POMS Conference, Denver, CL, May 2013.
- Supply chain contracting under competition (Invited) INFORMS Conference, Phoenix, AZ, November 2012.
- Bargaining under asymmetric demand information. (Invited) INFORMS Conference, Phoenix, AZ, November 2012.
- Supply chain contracting under competition: bilateral bargaining vs. Stackelberg. (Invited) INFORMS Conference, Charlotte, NC, November 2011.
- Dual sourcing from unreliable suppliers: the role of the slow supplier. (Invited) POMS Conference, Reno, NV, May 2011.

- Is outsourcing a win-win game? (Invited) POMS Conference, Reno, NV, May 2011.
- Countervailing incentives under asymmetric production cost information. (Invited) INFORMS Annual Meeting, Austin, TX, November 2010.
- Dual sourcing from unreliable suppliers: the trade-off among lead time, reliability and cost. (Invited) INFORMS Annual Meeting, San Diego, CA, October 2009.
- Design outsourcing in a differentiated product market. (Invited) INFORMS Annual Meeting, San Diego, CA, October 2009.
- Sourcing from multiple suppliers for price-dependent demands. (Invited) POMS Conference, Orlando, FL, May 2009.
- Sourcing from multiple suppliers for price-dependent demands. (Invited) INFORMS Annual Meeting, Washington DC, October 2008.
- Impact of process uncertainty in a two-stage production system. MSOM Conference, Maryland, MD, June 2008.
- Coordinating replenishment and pricing decisions under uncertain supply capacity. (Invited) POMS Conference, San Diego, CA, May 2008.
- Successive demand updating and inventory ordering after observations of sales and lost sales. (Invited) INFORMS Annual Meeting, Seattle, WA, November 2007.
- Optimal inventory policy under observed information delays. (Invited) POMS Conference, Dallas, TX, May 2007.
- Evaluating long-term service performance in two-stage newsvendor models. DSI Conference, San Antonio, TX, November 2006.
- Inventory control with observed dynamic delays. INFORMS Conference, Pittsburgh, PA, November 2006.
- Evaluating long-term service performance in two-stage newsvendor models. (Invited) International Conference of Management Sciences: Optimization Models & Applications, Dallas, TX, May 2006.
- Genuine savings and the value of population. (Invited) International Conference of Management Sciences: Optimization Models & Applications, Dallas, TX, May 2006.
- Ordering flexibility and price risk-sharing. (Invited) POMS Conference, Boston, MA, May 2006.
- A two-stage newsboy problem with a long-term service target. INFORMS Conference, San Francisco, CA, October 2005.
- Optimal policies of software maintenance projects. (Invited) INFORMS Conference, San Francisco, CA, October 2005.
- A two-stage newsboy problem with a service constraint. (Invited) POMS Conference, Chicago, IL, May 2005.
- Flexible procurement contract with price risk sharing. DSI Conference, Boston, MA, November 2004.
- Procurement strategy under price risk sharing contract. INFORMS Conference, Denver, CO, October 2004.

- Application development using modifiable off-the-shelf software. (Invited) International Conference on Electronic Commerce Research, Dallas, TX, June 2004.
- Optimal policies for sizing and timing of software maintenance projects. INFORMS Conference, Atlanta, GA, October 2003.

### **Invited Talks**

Texas A&M University, University of Illinois at Urbana-Champaign, University of Cincinnati, University of Washington at St. Louis, University of Rochester, University of Alberta, University of Oregon, Southern Methodist University, University of Texas at Austin, University of Texas at San Antonio, University of Southern California, University of Utah, University of North Carolina at Chapel Hill, Purdue University, Tsinghua University, Shanghai Jiao Tong University, Shanghai University of Finance and Economics, Duke University, Texas A&M, University of Florida.

### **Grants**

- October 2013: Purdue University, via OVPR, 12-13 Incentive Grants, Category II, Encouraging & Stimulating Purdue's Emerging Research, #206553. Sponsor Award. Co-PI (Joint with J. G. Shanthikumar) \$93,266.
- September 2012: DeVos Research Award, Krannert School of Management, Purdue University. \$25,000.
- November 2010: RCG Project Grant A-PK34, Hong Kong Research Grants Council, Co-PI (Joint with X. Gan). \$15,000.
- May 2008: HP Collaboration Fund 2008, Hewlett-Packard Laboratories, PI. \$17,500.

### **Patent**

- United States 7958037: Method and Apparatus for Product Selection (Co-inventors: Julie Ward Drew, Bin Zhang) Published in June 2011.
- United States 8533016: System and Method for Selecting a Portfolio (Co-inventors: Julie Ward Drew, Bin Zhang) Published in September 2013.
- United States 8639551: Method and System for Workforce Related Resource Planning (Co-inventors: Cipriano Santos and Dirk Beyer). Published in January 2014.

### **Teaching**

*Jun. 2012-* Purdue University.

- MBA Elective: Strategic Sourcing and Procurement
  - Fall 2012: MGMT 590 (Enrollment 48) Instructor 4.2/5.0, Course 4.1/5.0
  - Fall 2013: MGMT 565 (Enrollment 57) Instructor 4.8/5.0, Course 4.5/5.0
  - Fall 2013: MGMT 565 (Enrollment 25) Instructor 4.8/5.0, Course 4.8/5.0
  - Fall 2014: MGMT 565 (Enrollment 57) Instructor 4.7/5.0, Course 4.4/5.0
  - Fall 2014: MGMT 565 (Enrollment 36) Instructor 4.8/5.0, Course 4.7/5.0
  - Fall 2015: MGMT 565 (Enrollment 39) Instructor 4.1/5.0, Course 4.1/5.0

- Fall 2015: MGMT 565 (Enrollment 37) Instructor 4.6/5.0, Course 4.7/5.0
- MBA Elective: Global Supply Chain Management
  - Fall 2012: MGMT 590 (Enrollment 35) Instructor 4.7/5.0, Course 4.6/5.0
- MBA Elective: Management of Operating Systems
  - Fall 2012: MGMT 661 (Enrollment 18) Instructor 4.9/5.0, Course 4.8/5.0
  - Fall 2013: MGMT 661 (Enrollment 16) Instructor 4.8/5.0, Course 4.3/5.0
  - Fall 2014: MGMT 661 (Enrollment 18) Instructor 4.7/5.0, Course 4.4/5.0
  - Fall 2015: MGMT 661 (Enrollment 6) Instructor 4.3/5.0, Course 4.9/5.0
- EMBA Elective: Supply Chain Management
  - Fall 2014: MGMT 690 (Enrollment 5) Instructor 4.67/5.0, Course 4.33/5.0
- Ph.D. Course: Workshop in OM
  - Fall 2012: MGMT 690 (Enrollment 4) Instructor 5.0/5.0, Course 5.0/5.0

*May. 2006-Aug. 2006* The University of Texas at Austin.

- Undergraduate core course: Operations Management
  - Fall 2011: OM335 04150 (Enrollment 53) Teaching Evaluation 4.3/5.0
  - Fall 2011: OM335 04155 (Enrollment 53) Teaching Evaluation 4.6/5.0
  - Fall 2010: OM335 04140 (Enrollment 46) Teaching Evaluation 4.4/5.0
  - Fall 2010: OM335 04145 (Enrollment 45) Teaching Evaluation 4.4/5.0
  - Fall 2009: OM335H 04050 (Enrollment 39) Teaching Evaluation 4.2/5.0
  - Fall 2008: OM335 04100 (Enrollment 45) Teaching Evaluation 4.2/5.0
  - Fall 2008: OM335H 04120 (Enrollment 33) Teaching Evaluation 3.9/5.0
  - Spring 2008: OM335 03900 (Enrollment 50) Teaching Evaluation 4.1/5.0
  - Spring 2008: OM335 03905 (Enrollment 49) Teaching Evaluation 4.0/5.0
  - Fall 2006: OM335 03915 (Enrollment 27) Teaching Evaluation 4.1/5.0
  - Fall 2006: OM335 03920 (Enrollment 27) Teaching Evaluation 4.4/5.0
- Undergraduate elective: Supply Chain Modeling and Optimization
  - Fall 2011: OM337-2 04175 (Enrollment 40) Teaching Evaluation 4.5/5.0
  - Fall 2010: OM337-2 04160 (Enrollment 38) Teaching Evaluation 4.4/5.0
  - Fall 2009: OM337-2 04055 (Enrollment 36) Teaching Evaluation 4.7/5.0
  - Fall 2008: OM337-2 04130 (Enrollment 21) Teaching Evaluation 4.6/5.0
  - Spring 2008: OM337-2 03930 (Enrollment 34) Teaching Evaluation 4.0/5.0
- Ph.D. elective: Optimization II.
  - Fall 2009: OM380 04100 (Enrollment 10) Teaching Evaluation 4.9/5.0

*Aug. 2005-Aug. 2006* The University of Texas at Dallas.

- Undergraduate core course: Operations and Production Management
  - Fall 2005: (Enrollment 63) Teaching Evaluation 4.0/5.0
  - Summer 2006: (Enrollment 48) Teaching Evaluation 4.3/5.0

## **Advising**



- Ph.D. dissertation committees served:
  - Liwen Chen: OM student graduated in spring 2010, dissertation title “Issues in Operations Management and Marketing Interface Research: Competition, Product Line Design, and Channel Coordination.” Now an assistant professor at Hong Kong City University.
  - Burcu Tan: OM student graduated in fall 2010, dissertation title “Risk Mitigation Strategies for Project Management, Platform Development and Supply Chain Design.” Now an assistant professor at Tulane University.
  - Gang Li: OM student to be graduated in summer 2011. Dissertation title “Optimization-based Decision Support for Service Operations Management.” Now an assistant professor at Bentley University.
  - Haoying Sun: OM student graduated in fall 2011. “Exploring the Impact of Consumer Heterogeneity and Information Asymmetry upon Operating Policies.” Now an assistant professor at Texas A&M University.
  - Jing Zan: IEOR student graduated in spring 2012. Dissertation title “Staffing Large Service Systems under Arrival-Rate Uncertainty.”
  - Wen Chen: OM student, graduated in summer 2013. Dissertation title “Optimal Inventory and Pricing Decisions for Supply Chain Management.” Now an assistant professor at Providence College.
- Master student independent study supervised:
  - Srikanth Radhakrishna. Spring 2013. “Indian Ice-cream Supply Chain.” (3 credit hours)
  - Jeonghyun Kwak. Spring 2013. “Supply Chain Management at KG Yellow Cap Corporation.” (1 credit hour)
  - Yanbin Shi, Bin Gao, Qitong Zhang. Fall 2013. “Operations Research.” (3 credit hours)
  - Xiaofan Li, Kairui Jia, Juechen Xia. Fall 2015. “Operations Research.” (3 credit hours)
- Undergraduate student independent study supervised:
  - Abhinav Kumar: Spring 2009. “Survey on Product Design Outsourcing in Electronics Manufacturing Service Industry.”