## **Feryal Erhun**

Professor, Operations & Technology Management
Co-director, Centre for Health Leadership and Enterprise
Academic co-Director, Wo+Men's Leadership Centre
Cambridge Judge Business School, University of Cambridge, CB21AG
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## RESEARCH INTERESTS

- Practice-based research in operations management, with applications in supply chain management and healthcare.
- Socially responsible operations management, with applications in nonprofits, healthcare, and sustainable supply chains.
- Behavioral operations management, with emphasis on role of different stakeholders in decision making.

Ph.D. in Manufacturing and Operations Management, Carnegie Mellon University, Pittsburgh, PA

#### TEACHING INTERESTS

- Healthcare Operations Management
- Supply Chain Management
- Operations Management for Services and Nonprofits

# EDUCATION 2002 Ph

1999 1997	M.S. in Industrial Administration, Carnegie Mellon University, Pittsburgh, PA M.S. in Industrial Engineering, Bilkent University, Ankara, Turkey	ey, i kusouigh, i ii
1995	B.S. in Industrial Engineering, Bilkent University, Ankara, Turkey	
WORK EXPERIENCE University of Cambridge, Cambridge, UK Professor of Operations and Technology Management, Cambridge Judge Business School  10/2018-present		
University of Cambridge, Cambridge, UK		10/2015-10/2018
Reader (Associate Professor), Cambridge Judge Business School		
Instructor, D	niversity, Stanford, CA Department of Medicine and Division of General Medical Disciplines Clinical Excellence Research Center (CERC)	09/2014-09/2015 09/2013-09/2015

## SmartOps, Pittsburgh, PA

Stanford University, Stanford, CA

03/2001-12/2001

09/2002-09/2013

Supply Chain Consultant

- Developed a total cost solution for a \$4 Billion grocery retailer in Pennsylvania and Ohio to improve the coordination within the departments, and decrease inventory, transportation and procurement costs
- Developed a model for a \$13 Billion heavy equipment manufacturer to identify the drivers of the "showroom inventory" to improve the customer fulfillment and decrease inventory at the dealer level

## IBM T.J. Watson Research Center, Yorktown Heights, NY

Assistant Professor of Management Science and Engineering

Summer 1999

Intern with the Cooperative Decision Support Group

• Studied the effects of sequential capacity procurement in supply chains

#### PUBLICATIONS<sup>1,2</sup>

## **Papers in Refereed Journals**

- 1. Stickels, C., ..., F. Erhun, 2022. Aortic stenosis post-COVID-19: A mathematical model on waiting lists and mortality. *BMJ Open.* **0**:e059309. doi:10.1136/bmjopen-2021-059309.
- 2. Betcheva, L., F. Erhun, H. Jiang, 2021. Supply Chain Thinking in Healthcare: Lessons and Outlooks. *M&SOM.* **23**(6):1333-1682.
- 3. Erhun, F., T. Kraft, S. Wijnsma, 2021. Sustainable Triple-A Supply Chains. *Production and Operations Management.* **30**(3):644-655.
- 4. Erhun, F., R.S. Kaplan, ..., A. Milstein, 2020. Are Cost Advantages from a Modern Indian Hospital Transferable to the US? *American Heart Journal*. 224:148-155. doi: 10.1016/j.ahj.2020.04.009.
- 5. Wagner, S.M., P.T. Grosse-Ruyken, F. Erhun, 2018. Determinants of Sourcing Flexibility and Its Impact on Performance. *International Journal of Production Economics*. **205**(C):329-341.
- 6. Erhun, F., E. Malcolm, M. Kalani, K. Brayton, C. Nguyen, S.M. Asch, T. Platchek, A. Milstein, 2016. Opportunities to Improve the Value of Outpatient Surgical Care. *The American Journal of Managed Care*. **22**(9):e329-335.
- 7. Erhun, F., B. Mistry, T. Platchek, A. Milstein, V.G. Narayanan, R.G. Kaplan, <sup>2</sup> 2015. Study Protocol: Time-Driven Activity Based Costing of Coronary Artery Bypass Grafting Across National Boundaries to Identify Improvement Opportunities. *BMJ Open.* **5**(8): doi:10.1136/bmjopen-2015-008765.
- 8. Bilginer, O.<sup>†</sup> and F. Erhun, 2015. Production and Sales Plans in Capacitated New Product Introductions under Competition. *Production and Operations Management.* **24**(1):42-53.
- 9. Karaer<sup>†</sup>, O. and F. Erhun. Quality and Entry Deterrence, 2015. *European Journal of Operational Research*. **240**(1):292-303.
- 10. Usta, M.<sup>†</sup>, F. Erhun, W. Hausman, 2014. Supply Licensing When the Manufacturer Strategically Commits to Invest in R&D. *Naval Research Logistics*. **61**(4):341-350.
- 11. Kalkanci, B.<sup>†</sup>, K-Y. Chen, and F. Erhun, 2014. Complexity as a Contract Design Factor: A Human-to-Human Experimental Study. *Production and Operations Management*. **23**(2):269-284.
- 12. Kraft, T.<sup>†</sup>, Y. Zheng, and F. Erhun, 2013. The NGO's Dilemma: How to Induce Firms to Remove a Potentially Hazardous Substance. *M&SOM (Special Issue on the Environment)*, **15**(4):649-669.
- 13. Kraft, T.<sup>†</sup>, F. Erhun, R. Carlson, and D. Rafinejad, 2013. Replacement Decisions for Potentially Hazardous Substances. *Production and Operations Management*, **22**(4):958-975.
- 14. Kayış, E.<sup>†</sup>, F. Erhun, and E.L. Plambeck, 2013. Delegation vs. Control of Component Procurement under Asymmetric Information and Simple Contracts. *M&SOM*, **15**(1):45-56.
- 15. Kempf, K.G., F. Erhun, E.F. Hertzler, T.R. Rosenberg, and C. Peng<sup>†</sup>, 2013. Optimizing Capital Investment Decisions at Intel Corporation. *Interfaces (The Franz Edelman Award for Achievement in OR/MS Award Special Issue)*, **43**(1):62-78.
- 16. Chung, Y.T.<sup>†</sup> and F. Erhun, 2013. Designing Supply Contracts for Perishable Goods with Two Periods of Shelf Life. *IIE Transactions*, **45**(1):53-67.
  - "Design Contracts for Life: Coordinating Platelet Supply Chains to Minimize Outdate Rate" Executive Summary Edited by S. Albin, *Industrial Engineer*, **45**(1):52-53, 2013.
- 17. Kalkanci, B.<sup>†</sup> and F. Erhun, 2012. Pricing Games and Impact of Private Demand Information in Decentralized Assembly Systems. *Operations Research*, **60**(5):1142-1156.
- 18. Peng, C.<sup>†</sup>, F. Erhun, E.F. Hertzler, and K.G. Kempf, 2012. Capacity Planning in the Semiconductor Industry: Dual-Mode Procurement with Options. *M&SOM*, **14**(2):170-185.
  - 2015 M&SOM Best Paper Award
- 19. Wagner, S.M., Grosse-Ruyken, P.T., and F. Erhun, 2012. The Link Between Supply Chain Fit and Financial Performance of the Firm. *Journal of Operations Management*, **30**(4):340-353.
  - Extended abstract published in 2010 Academy of Management Best-Papers Proceedings.

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 $<sup>^{1}</sup>$  The symbol  $^{\dagger}$  indicates that the co-author was a student when (part of the) research in the paper was conducted.

<sup>&</sup>lt;sup>2</sup> In medical journals, the levels of participation are highest for first and last authors. Last authors are qualified as "senior" author and therefore they make a substantial contribution to the manuscript.

- 20. Kraft, T.<sup>†</sup>, Y.T. Chung<sup>†</sup>, and F. Erhun, 2012. KEY Electronics Sourcing and Warehouse Analysis. *INFORMS Transactions on Education*, **12**(2):89-91.
- 21. Privett, N.<sup>†</sup> and F. Erhun, 2011. Efficient Funding: Auditing in the Nonprofit Sector. *M&SOM*, **13**(4):471-488.
- 22. Kalkanci, B.<sup>†</sup>, K-Y. Chen, and F. Erhun, 2011. Contract Complexity and Performance under Asymmetric Demand Information: An Experimental Evaluation. *Management Science*, **47**(4):689-704.
- 23. Fontaine, M.J., Y.T. Chung<sup>†</sup>, F. Erhun, and L.T. Goodnough,<sup>2</sup> 2010. Age of Blood as a Limitation for Transfusion: Potential impact on blood inventory and availability. *Transfusion*<sup>3</sup>, **50**(10):2233-2239.<sup>4</sup>
- 24. Fontaine, M.J., Y.T. Chung<sup>†</sup>, W.M. Rogers, H.D. Sussmann, P. Quach, S.A. Galel, L.T. Goodnough, and F. Erhun, <sup>2</sup> 2009. Improving Platelet Supply Chains through Collaborations between Blood Centers and Transfusion Services. *Transfusion*<sup>3</sup>, **49**(10):2040-2047.
- 25. Yazlali, O.<sup>†</sup> and F. Erhun, 2009. Dual-supply Inventory Problem with Capacity Limits on Order Sizes and Unrestricted Ordering Costs. *IIE Transactions*, **41**(8):716-729.
- 26. Erhun, F., P. Keskinocak, and S. Tayur, 2008. Dynamic Procurement, Quantity Discounts, and Supply Chain Efficiency. *Production and Operations Management*, **17**(5):1-8.
- 27. Erhun, F., P. Keskinocak, and S. Tayur, 2008. Dynamic Procurement in a Capacitated Supply Chain Facing Uncertain Demand. *IIE Transactions*, **40**(8):733-748.
  - "Dynamic Procurement Saves Money" Executive Summary Edited by C. Yano, *Industrial Engineer*, **40**(8):52-53, 2008.
- 28. Altintas, N., F. Erhun, and S. Tayur, 2008. Quantity Discounts under Demand Uncertainty. *Management Science*, **54**(4):777-792.
- 29. Yazlali, O.<sup>†</sup> and F. Erhun, 2007. Relating the Multiple Supply Problem to Quantity Flexibility Contracts. *Operations Research Letters*, **35**(6):767-772.
- 30. Erhun, F., P. Gonçalves, and J. Hopman, 2007. The Art of Managing New Product Transitions. *MIT Sloan Management Review*, **48**(3):73-80.
- 31. Erhun, F. and S. Tayur, 2003. Enterprise-Wide Optimization of Total Landed Cost at a Grocery Retailer, *Operations Research*, **51**(3):343-353.
- 32. Erhun, F., M.S. Akturk, and A. Turkcan, 2003. Interaction of Design and Operational Parameters in Periodic Review Kanban Systems, *International Journal of Production Research*, **41**(14):3315-3338.
- 33. Akturk, M.S. and F. Erhun, 1999. An Overview of Design and Operational Issues of Kanban Systems, *International Journal of Production Research*, **37**(17):3859-3881.

#### **Invited and Refereed Book Chapters**

- 1. Betcheva, L.<sup>†</sup>, F. Erhun, H. Jiang, 2020. "Healthcare supply chains," in *The Oxford Handbook of Supply Chain Management*. Edited by T. Choi, J.J. L, D. Rogers, M.J. Rungtusanatham, Oxford University Press, New York, NY.
- 2. Chung, Y.T.<sup>†</sup>, F. Erhun, and T. Kraft<sup>†</sup>, 2013. "Improving Stanford Blood Center's Platelet Supply Chain," in *The Supply Chain Management Casebook*. Edited by C. Munson, FT Press, Chapter 2 (Case 3), pp. 39-49.
- 3. Erhun, F., 2011. "Contract Complexity and Performance," in *TutORials in Operations Research*, 2011. Edited by J. Geunes, Institute for Operations Research and the Management Sciences (INFORMS), Chapter 8, pp. 129-147.
- 4. Erhun, F., P. Keskinocak, and S. Tayur, 2011. "Dynamic Procurement and Supply Chain Efficiency," in *Handbook on Innovative Schemes for Supply Chain Coordination under Uncertainty*. Edited by T-M. Choi and T.C.E. Cheng, Springer, pp. 219-234.

Feryal Erhun

<sup>&</sup>lt;sup>3</sup> *Transfusion* is the Journal of AABB (American Association of Blood Banks) and considered to be one of the top journals in this area. 2010 Impact Factor: 3.3 (in comparison Management Science's 2009 Impact Factor is 2.227 and Operations Research's 2010 Impact Factor is 1.995).

<sup>&</sup>lt;sup>4</sup> The poster of this study presented in the 51<sup>st</sup> American Society of Hematology (ASH) Annual Meeting has been included in the 2010 Highlights of ASH in Latin America.

- 5. Bilginer, O.<sup>†</sup> and F. Erhun, 2011. "Managing Product Introductions and Transitions," in *Wiley Encyclopedia of Operations Research and Management Science*. Edited by J.J. Cochran, L.A. Cox, Jr., P. Keskinocak, J.P. Kharoufeh, and J. Cole Smith, John Wiley & Sons.
- 6. Erhun, F., 2011. "Collaborative Procurement," in *Wiley Encyclopedia of Operations Research and Management Science*. Edited by J.J. Cochran, L.A. Cox, Jr., P. Keskinocak. J.P. Kharoufeh, and J. Cole Smith, John Wiley & Sons.
- 7. Erhun, F. and P. Keskinocak, 2011. "Collaborative Supply Chain Management," in *Planning Production and Inventories in the Extended Enterprise Vol. 1*. Edited by K. Kempf, P. Keskinocak, and R. Uzsoy, International Series in Operations Research and Management Science, Springer, Chapter 9, pp. 233-268.
- 8. Deleris, L.A. and F. Erhun, 2011. "Risk Management in a Supply Network: A Case Study Based on Engineering Risk Analysis Concepts," in *Planning Production and Inventories in the Extended Enterprise Vol. 2*. Edited by K. Kempf, P. Keskinocak, and R. Uzsoy, International Series in Operations Research and Management Science, Springer, Chapter 5, pp. 105-132.
- 9. Datta, S., B. Betts, M. Dinning, F. Erhun, T. Gibb, P. Keskinocak, H. Li, M. Li, and M. Samuels, 2004. "Adaptive Value Networks: Emerging Tools and Technology as Catalysts," in *Evolution of Supply Chain Management: Symbiosis of Adaptive Value Networks and ICT*. Edited by Y.S. Chang, H.C. Makatsoris, and H.D. Richards, Kluwer Academic Publishers, Chapter 1, pp. 3-67.

## **Refereed Conference Proceedings**

- 1. Usta, M.<sup>†</sup>, F. Erhun, and W. Hausman, "Buyer-Induced Supplier Collaboration with Commitment to Low Prices and Diversified Sourcing," in *2015 MSOM Proceedings*.
- 2. Usta, M.<sup>†</sup>, F. Erhun, and W. Hausman, "Supply Licensing When the Manufacturer Strategically Commits to Invest in R&D," in *2013 MSOM Proceedings*.
- 3. Kraft, T.<sup>†</sup>, Y. Zheng, F. Erhun, "The NGO's Dilemma: How to Influence Firms to Replace a Potentially Hazardous Substance," in *2012 MSOM Proceedings*.
- 4. Kalkanci, B.<sup>†</sup>, K-Y. Chen, and F. Erhun, "Complexity as a Contract Design Factor: An Experimental Evaluation," in *2011 MSOM Proceedings*.
- 5. Grosse-Ruyken, P.T., S.M. Wagner, and F. Erhun, "The Impact of Supply Chain Fit on Firm Performance," in 2010 Academy of Management Best-Papers Proceedings.
- 6. Chung, Y.T.<sup>†</sup> and F. Erhun, "Improving SBC's Platelet Supply Chain," in 2010 MSOM Proceedings.
- 7. Kraft, T.<sup>†</sup>, F. Erhun, R. Carlson, and D. Rafinejad, "Replacement Strategies for Potentially Hazardous Substances," in 2009 *MSOM Proceedings*.
- 8. Kayis, E.<sup>†</sup>, F. Erhun, and E. Plambeck, "Delegation vs. Control of Component Procurement," in 2008 *MSOM Proceedings*.
- 9. Kalkanci, B.<sup>†</sup> and F. Erhun, "Capacity Reservation Contracts Using Common Agency," in 2008 MSOM Proceedings.
- 10. Yazlali, O.<sup>†</sup> and F. Erhun, "Managing Demand Uncertainty with Dual Supply Option-Contracts," in 2006 MSOM Proceedings.
- 11. Deleris, L.A. and F. Erhun, "Risk Management in Supply Networks Using Monte-Carlo Simulation," in *Proceedings of the 2005 Winter Simulation Conference*. Edited by M.E. Kuhl, N.M. Steiger, F.B. Armstrong, and J.A. Joines.
- 12. Kayis, E.<sup>†</sup>, F. Erhun, and M. Wilkinson<sup>†</sup>, "New Product Licensing: Why do Companies License Their Intellectual Property," in 2005 *MSOM Proceedings*.

#### **Abstracts in Medical Journals**

- 1. Fontaine, M.J., Y.T. Chung<sup>†</sup>, F. Erhun, and L.T. Goodnough, 2009. Age of Blood as a Limitation for Transfusion: Potential impact on blood inventory and availability, *Blood (ASH Annual Meeting Abstracts*, New Orleans, LA), **114**(22):3142.
- 2. Sussmann, H., M.J. Fontaine, D. Geary, P. Quach, W. Mebane, S. Galel, and F. Erhun. 2008. Maximizing Platelet Inventory from a 6 days per Week Draw Schedule with 5-day Products Based on Supply Chain Approach, *Transfusion (American Association of Blood Banks Annual Meeting Abstracts*, Montreal, Canada), **48**(S:2):63A.

3. Rogers, W.M., Y.T. Chung<sup>†</sup>, H. Sussmann, F. Erhun, and M.J. Fontaine. 2007. Platelet Inventory Management: Optimizing Platelet Inventories Through Collaborations with Blood Center, Transfusion Service, and Supply Chain Experts, *Transfusion (Society for the Advancement of Blood Management Symposium Abstracts*, Hollywood, CA), **47**(11):11A-29A.

## **Papers Submitted for Publication**

- 1. Jansen, M., F. Erhun, N. Oraiopoulos, D. Ralph. 2019. Enabling Collaborative Response to IT Service Disruptions under Risk Aversion. Revise and Resubmit in Production and Operations Management.
- 2. Betcheva, L., F. Erhun, A. Feylessoufi, P. Gonçalves, H. Jiang, P. Kattuman, T. Pape, A. Pari, S. Scholtes, C. Tyrrell. 2020. Rapid COVID-19 Modeling Support for Regional Health Systems in England. Revise and Resubmit in M&SOM.
- 3. Betcheva, L., F. Erhun, N. Oraiopoulos. 2022. *Pharmaceutical-CRO Relationships: Are Strategic Partnerships the Way Forward?* Reject and Resubmit in Management Science.
- 4. Schorpp, G., F. Erhun, H. Lee, 2022. Multi-tiered Supply Chain Risk Management.

## **Working Papers**

1. Bilginer, O., F. Erhun, R. Farahani, 2017. Refurbished Product Introductions During Dual Product Rollovers.

## **Cases/Teaching Material**

- 1. Gaston Garcia, J.L., F. Erhun, 2022. Inditex: How to Become Larger When You are the Largest One. Cambridge Judge Business School, University of Cambridge.
- 2. Cox, B., F. Erhun, and S. Scholtes, 2017. Integrating Care Delivery: Operational Challenges and Success Factors. Cambridge Centre for Health Leadership & Enterprise Case, University of Cambridge.
- 3. Pinnock, C., F. Erhun, and S. Scholtes, 2017. Outcomes Measurement and Value Based Approaches at Cambridge University Hospitals. Cambridge Centre for Health Leadership & Enterprise Cases A, B, and C, University of Cambridge.
- 4. Chung, Y.T.<sup>†</sup>, F. Erhun, and T. Kraft<sup>†</sup>, 2012. Improving Stanford Blood Center's Platelet Supply Chain.
- 5. Kraft, T.<sup>†</sup>, Y.T. Chung<sup>†</sup>, and F. Erhun, 2011. KEY Electronics Sourcing and Warehouse Analysis.
- 6. Blum, K., R. Carlson, F. Erhun, and D. Rafinejad, 2008. Sustainable Production in the Chemical Industry: WACKER Sets a Good Example at its Burghausen Site.
- 7. Blum, K., R. Carlson, F. Erhun, and D. Rafinejad, 2008. Wacker Invests in Production of Solar Silicon.
- 8. Erhun, F., J. Hopman, H. Lee, M. Murphy-Hoye, and P. Rajwat<sup>†</sup>, 2004. Intel Corporation: Product Transitions and Demand Generation, Global Supply Chain Management Forum Case, Stanford University.
- 9. Erhun, F. and P. Keskinocak, 2003. Game Theory in Business. Introductory-level Overview Article.

#### **Other Publications**

- 1. Cox, B., F. Erhun, and S. Scholtes, 2016. Review of CPFT's Role in UnitingCare and the Impact of Terminating the UnitingCare Contract. Commissioned by Cambridgeshire and Peterborough NHS Foundation Trust.
  - o Featured in BBC's Inside Out East on March 20, 2017.
- 2. Wagner, S.M., F. Erhun, and P.T. Gross-Ruyken, 2009. Dressing for the Weather. *Industrial Engineer*, 41(2):29-33.
- 3. Erhun, F., 2005. Moving from Risks to Opportunities: A Process to Manage New Product Transitions, *The Supply Chain Connection, Newsletter of the Stanford Global Supply Chain Management Forum*, 11(4):6-8.
- 4. Erhun, F., 1995. A Methodology For Clustering and Group Formation in Cellular Manufacturing Systems, *Endustri Muhendisligi (Industrial Engineering)*, **6**(4):3-13. (in Turkish)

#### **Trade Secret**

• Erhun, F., P. Gonçalves, J. Hopman, and M. Murphy-Hoye, 2004. Product Transition Index, *Intel Trade Secret*, Disclosure number: 41979. Filed on: 11/11/04.

#### AWARDS AND FELLOWSHIPS

- 2015 *M&SOM* Best Paper Award for "Capacity Planning in the Semiconductor Industry: Dual-Mode Procurement with Options" by C. Peng, F. Erhun, E.F. Hertzler, and K.G. Kempf. *M&SOM*, **14**(2):170-185, 2012.
- Inducted as Edelman Laurate, 2012.
- Finalist, 2012 Edelman Award Competition for "Optimizing Capital Investment Decisions at Intel Corporation" submitted by K. Kempf, F. Erhun, E. Herztler, T. Rosenberg, and C. Peng on behalf of Intel Corporation
- INFORMS Moving Spirit Award for Fora, 2011
- First prize winner, 2010 INFORMS Case Competition for "KEY Electronics Sourcing and Warehouse Analysis"
- M&SOM Meritorious Service Award, 2006, 2010
- NSF CAREER Award (Moving from Risks to Opportunities: An Exploratory Study of Risk Management in Supply Chains), 2006-2011
- Frederick E. Terman Fellow, 2002-2003
- Gabilan Award, 2002-2003
- Doctoral Colloquium Participant, INFORMS Miami 2001
- Council of Logistics Management Scholar, 1998
- Doctoral Fellowship, William Larimer Mellon Foundation, 1997-2000
- TÜBİTAK (The Scientific and Technical Research Council of Turkey) NATO-A1 Scholar, 1997
- Fellowship for graduate study, Bilkent University, 1995-1997
- First prize winner, Student Paper Competition of YA/EM'95 (OR / IE'95)
- Fellowship for undergraduate study, Bilkent University, 1991-1995

#### RESEARCH GRANTS

University of Cambridge

• Cambridgeshire and Peterborough NHS Foundation Trust (CPFT), Review of CPFT's Role in UnitingCare and the Impact of Terminating the UnitingCare Contract, 2016, £30,000, co-PI Stefan Scholtes.

#### Stanford University

- Intel, Scenario Planning in a Dynamic Supply Chain Environment, 2011, \$96,000, co-PI Hau Lee.
- Intel, An Exploratory Study for Improving Intel's Supplier Selection Process to Maintain a Healthy Supplier Body, 2011, \$86,269.
- Intel, Supplier Capacity Management Strategies within the Capital Equipment Supply Chain, 2009-2010, \$80,310.
- Lillie Fund, Various joint projects with Faculty at Graduate School of Business, Stanford University, 2003-2010.
- Intel, Exploratory Study of Supplier Capacity Management Strategies within the Capital Equipment Supply Chain, 2007-2009, \$140,000.
- NSF CAREER Grant, Moving from Risks to Opportunities: An Exploratory Study of Risk Management in Supply Chains (CAREER-0547021), 2006-2011, \$400,000
- NSF Grant, Collaborative Research: Intra-and Inter-Enterprise Collaborative Procurement (DMI-0400345), 2004-2007, \$264,792, co-PI Pinar Keskinocak.
- Cisco Systems, Risk Management in Supply Networks, 2004-2005, \$10,000.
- Intel, Demand Generation Project, 2004-2005, \$45,000.
- Intel, Demand Generation Project, 2003-2004, \$40,000, co-PI Hau Lee.

- Stanford Office of Technology Licensing Research Incentive Award, Risk Analysis in Supply Chains, 2003-2004, \$24,716
- GM, Risk Management in Supply Chains, 2003-2004, \$50,000, co-PI James A. Primbs.
- Cisco Systems, Risk Management in Cisco's Supply Chain, 2003-2004, \$8,000.

#### TEACHING EXPERIENCE

#### **New Course Design**

University of Cambridge

- Operations Management EMBA core
- Advanced Topics in Operations Management MPhil Strategy, Management, and Operations (SMO) core
- Organising Healthcare MBA elective (with Stefan Scholtes and Malcolm Lowe-Lauri)
- Decision Analysis MoTI (with Nektarios (Aris) Oraiopoulos)

## Stanford University

- Internet-enabled Supply Chains (MS&E 263) MS elective
- Game Theoretic Models in Operations Management (MS&E 365) Ph.D. course
- Game Theory with Engineering Applications (MS&E 246) MS elective (with Ramesh Johari)

#### **Executive Education**

Academic Programme Director

- HNA-Cambridge 2017 COO Executive Training Programme
- Actelion/SELPH Cambridge Programme

#### Instructor

University of Cambridge

- Operations Management, EMBA core, University of Cambridge, since 2015.
- Advanced Topics in Operations Management, MPhil SMO core, University of Cambridge, since Lent 2016.
- Organising Healthcare, MBA elective, University of Cambridge, Easter 2016-2018.
- Decision Analysis, MoTI, University of Cambridge, Michaelmas 2015, 2016.
- Operations Management for Engineers (3E10), BS elective, University of Cambridge, since Michaelmas 2015.
- Operations Management for Engineers (3P4), BS core, University of Cambridge, since Michaelmas 2015.
- Modelling Risk (3E3), BS elective, University of Cambridge, Lent 2016-2021.
- Faculty Advisor: MoTI projects, MST projects, MBA Global Consulting project, EMBA individual project.

## Stanford University

- Senior Project (MS&E 108), BS core, Stanford University, Winter 2013.
  - o Advised Accenture Award Winner Team "SurfAir"
- Introduction to Operations Management (MS&E 260), MS elective, Stanford University, Fall 2009-2012.
- Supply Chain Logistics (MS&E 265), MS elective, Stanford University, Spring 2007, 2009.
- Game Theory with Engineering Applications (MS&E 246), MS elective, Winter 2006, 2008, 2010, 2012
- Internet-enabled Supply Chains (MS&E 263), MS elective, Stanford University, Winter 2004, 2005.
- Game Theoretic Models in Operations Management (MS&E 365), Ph.D. course, Stanford University, Spring 2003, Winter 2005, Spring 2007-2009, Winter 2010, Spring 2012.

- Manufacturing Systems Design (MS&E 264), MS elective, Stanford University, Fall 2002, 2003, 2004 (as MS&E 164/264), 2005, 2007, Spring 2007, Fall 2008.
- Production and Operations Management (70-371), BA core, Carnegie Mellon University, Summer 2000.

#### **Guest Lecturer**

University of Cambridge

• Industrial Engineering (3P5), BS core, University of Cambridge, 2015, 2016.

#### Stanford University

- Management of New Product Development (MS&E 266), MS elective, Stanford University, Winter 2004-2012.
- Supply Chain Management (MS&E 262), MS elective, Stanford University, Spring 2004-2015.
- Logistics (70-471), BA elective, Carnegie Mellon University, Spring 2002.
- Logistics (70-838), MBA elective, Carnegie Mellon University, Fall 2001.

#### INVITED TALKS

## 2021-2022 Academic Year

## What is is next for supply chains? A brief discussion on supply chain thinking

• Keynote Speech, EurOMA 2022, July 1-6, Berlin

# Pharmaceutical-Contract Research Organization Relationships: Are Strategic Partnerships the Way Forward?

- HEC, February 3, 2022
- INSEAD, February 2, 2022
- Tepper Business School, Carnegie Mellin University, December 17, 2021(e-seminar)

#### Rapid COVID-19 Modelling Support for Regional Health Systems in England

• Koc University, December 3, 2022 (e-seminar)

#### **Roundtable Discussion on Supply Chains**

 Cambridge Centre for Science and Policy, 27<sup>th</sup> Roundtable for Policy Leaders Fellows, November 19, 2021

#### 2020-2021 Academic Year

## **Supply Chain Thinking in Healthcare and an Application on COVID-19**

• CN SCM Distinguished Speaker Series, Wilfrid Laurier University, May 28, 2021 (e-seminar)

#### Rapid COVID-19 Modelling Support for Regional Health Systems in England

- Wharton, March 18, 2021 (e-seminar)
- CJBS/PHE International Seminar Series in COVID19 Planning, March 9, 2021(e-seminar)
- Department of Industrial Engineering, Middle East Technical University, January 8, 2021 (e-seminar)
- Zicklin School of Business, Baruch College, November 20, 2020 (e-seminar)

#### 2019-2020 Academic Year

## **Multi-Tiered Supply Chain Risk Management**

• Fourteenth Annual Workshop on Supply Chain and Logistic, Bilkent University, June 12, 2020 (eseminar)

## Valued-based Healthcare and Healthcare Supply Chains

• CMIH Seminar Series, Cambridge University, November 1, 2019

#### 2018-2019 Academic Year

## **Multi-Tiered Supply Chain Risk Management**

- UCL School of Management, June 5, 2019
- Cass Business School, November 20, 2018

## **Optimizing Capital Investment Decisions at Intel Corporation**

• Eindhoven University of Techology, Symposium on AI and Beyond AI in Industrial Engineering, July 4, 2019

## 2016-2017 Academic Year

## Lessons from Leading Health Systems: Bending Healthcare Costs for CABG with Improved Processes

• London Business School, November 24, 2016

## 2015-2015 Academic Year

## Lessons from Leading Health Systems: Bending Healthcare Costs for CABG with Improved Processes

• Koc University, Healthcare Operations Workshop, July 15, 2016

#### 2014-2015 Academic Year

## Maintaining Supplier Health in Capital and Development-Intensive Supply Chains

- Ozyegin University (Turkey), IEOM Seminar Series, July 22, 2015
- University of Cambridge, Judge Business School, February 23, 2015

## Doing More with Less: Triple-R Model for Ambulatory Surgery

- Kaiser Permanente (Oakland, CA), ENT Didactic Session, July 16, 2015
- Stanford Health Care (Stanford, CA), Perioperative Management Didactic Session, April 15, 2015

# Time-Driven Activity Based Costing of Coronary Artery Bypass Grafting in Three Exemplar Hospitals to Identify Improvement Opportunities

- Stanford University, Clinical Excellence Research Center, Research in Progress Seminar Series, March 17, 2015
- Santa Clara University, Leavey School of Business, Operations Management & Information Systems (OMIS) Seminar Series, January 16, 2015

## 2013-2014 Academic Year

#### Maintaining Supplier Health in Capital and Development-Intensive Supply Chains

• University of California - Irvine, The Paul Merage School of Business, Operations and Decision Technologies Seminar Series, June 13, 2014

#### 2012-2013 Academic Year

## **Complexity as a Contract Design Factor**

• Cornell University, The Johnson School Seminar Series, March 29, 2013

#### 2011-2012 Academic Year

## **Optimizing Capital Investment Decisions At Intel Corporation**

- Ozyegin University (Turkey), IEOM Seminar Series, May 30, 2012
- Sabanci University (Turkey), Industrial Engineering Seminar Series, May 23, 2012
- Stanford University, INFORMS Stanford Seminar Series, April 11, 2012

## Capacity Planning in the Semiconductor Industry: Dual-Mode Procurement with Options

- University of Michigan, Stephen M. Ross School of Business Seminar Series, February 3, 2012
- London Business School, December 15, 2011
- Northwestern University, Kellogg Seminar Series, December 5, 2011
- UCLA, Anderson School of Business Operations and Technology Management Seminar Series, October 21, 2011
- Duke University, Fugua School of Business Seminar Series, September 23, 2011

- The University of North Carolina at Chapel Hill, Kenan-Flagler Business School Seminar Series, September 22, 2011
- Indiana University, Kelley School of Business Seminar Series, September 9, 2011

## 2010-2011 Academic Year

## Complexity as a Contract Design Factor: An Experimental Evaluation

- UC Berkeley, IEOR Seminar Series, March 14, 2011
- New York University, Stern School of Business Seminar Series, March 2, 2011

#### Replacement Decisions for Potentially Hazardous Substances

• University of Oregon, Lundquist College of Business Seminar Series, December 3, 2010

# Contract Complexity and Performance under Asymmetric Demand Information: An Experimental Evaluation

• Southern Methodist University, Cox School of Business Seminar Series, October 29, 2010

## **Dynamic Dual-Source Capacity Expansion Problem with Backorders**

• University of Texas, Dallas, The School of Management Seminar Series, September 10, 2010

#### 2009-2010 Academic Year

## **Dual-Source Equipment Capacity Expansion with Backorder and Demand Forecast Updates**

- Intel Corporation, November 20, 2009
- Arizona State University, School of Computing, Informatics, and Decision Systems Engineering Seminar Series, November 19, 2009

#### 2008-2009 Academic Year

## Quantity Discounts: A Medley of Experimental and Theoretical Research

• Carnegie Mellon University, Tepper Business School Seminar Series, May 1, 2009

## 2006-2007 Academic Year

## **Delegation vs. Control of Component Procurement**

University of Washington, Olin School of Business, BCTIM/OMM Seminar Series, March 9, 2007

## The Art of the Possible In Risk Metrics

• Supply Chain Risk Leadership Council, London, U.K., February 22-23, 2007

## **Managing Demand Uncertainty with Dual Supply Contracts**

- London Business School, Management Science and Operations Seminar Series, February 27, 2007
- MIT, ORC Seminar Series, November 2, 2006

## Risk Management in Supply Chains: An Operations Management Perspective

- NPS, OR Seminar Series, July 19, 2006
- McKinsey & Company, February 3, 2006

## 2005-2006 Academic Year

## Managing Demand Uncertainty with Dual Supply Contracts

- University of Maryland, R.H. Smith School of Business Seminar Series, April 18, 2006
- Georgia Institute of Technology, Industrial and Systems Engineering, December 7, 2005
- Cornell University, The Johnson School Seminar Series, October 28, 2005
- Northwestern University, Kellogg Seminar Series, October 5, 2005

## 2004-2005 Academic Year

## Sequential Procurement in a Capacitated Supply Chain Facing Uncertain Demand

• Stanford University, STVP Brown Bag Seminar Series, March 1, 2005

#### 2003-2004 Academic Year

## Sequential Procurement in a Capacitated Supply Chain Facing Uncertain Demand

Stanford University, Graduate School of Business, OIT Seminar Series, May 26, 2004

• Purdue University, LEEAP Seminar Series, October 17, 2003

## **Inventory Control Policies under Stochastic Quantity Discounts**

• ENSGI-INPG, Laboratoire GILCO, Grenoble, France, June 25, 2004

#### 2002-2003 Academic Year

## Enterprise-Wide Optimization of Total Landed Cost at a Grocery Retailer

• University of California at Berkeley, IE/OR Department, April 14, 2002

## 2001-2002 Academic Year

## Sequential Procurement in a Capacitated Supply Chain Facing Uncertain Demand

- University of British Columbia, Canada
- The University of North Carolina at Chapel Hill, Kenan-Flagler Business School
- University of Texas at Austin, Mechanical Engineering
- Stanford University, Management Science & Engineering
- University of Southern California, Marshall School of Business
- Texas A&M University, Industrial Engineering
- London Business School, England

## Ph.D. STUDENTS ADVISED

University of Cambridge

- 1. Lidia Betcheva (expected graduation date January 2023)
- 2. Zidong Liu (co-advised with Professor Houyuan Jiang)

## Stanford University

- 3. Georg Schorpp (co-advised with Professor Hau Lee), August 2015.
- 4. Mericcan Usta (co-advised with Professor Warren Hausman), June 2015.
- 5. Daniel Greenia (co-advised with Professor Warren Hausman and Dr. Dariush Rafinejad), September 2012. (IBM Almaden Research Center)
- 6. Chen Peng (co-advised with Professor Hau Lee), Dual-Channel Sourcing and Selling Strategies in Operations Management, September 2011. (Google)
- 7. Timothy Kraft (co-advised with Professor Robert Carlson), Managing Potentially Hazardous Substances from the Firm and NGO Perspective, September 2011. (University of Virginia, Darden Business School)
- 8. Ozlem Bilginer, Operational Management of Product Introductions and Transitions, September 2011. (Amazon)
- 9. Yenho (Thomas) Chung, Supply Chain Contracts for Perishable Goods with a Fixed Shelf Life, March 2011. (LG CNS Entrue Consulting)
- 10. Natalie Privett, Operations Management in the Nonprofit Sector, August 2010. (New York University, Wagner Graduate School of Public Service)
- 11. Basak Kalkanci, Essays on Procurement Contracting under Private Demand Information, August 2010. (Postdoc, MIT)
- 12. Enis Kayis (co-advised with Professor Erica Plambeck), Essays on Procurement Contracting, September 2008. (first position: HP Labs; first academic position: Ozyegin University, Industrial Engineering, Istanbul, Turkey)
- 13. Ozgen Karaer (co-advised with Professor Hau Lee), Role of Information, Collaboration, and Competition in Supply Chains, April 2008. (first position: GAP Corporation; first academic position: Middle East Technical University (METU), Industrial Engineering, Ankara, Turkey)
- 14. Ozgur Yazlali, Managing Demand Risk via Supply Contracts: A Tactical Outlook for Operational Excellence, June 2006. (GAP Corporation)
- 15. Mark A. Wilkinson (co-advised with Professor Warren Hausman), Collaboration in Decentralized Supply Chains, June 2004. (Intel Corporation)

#### Ph.D. STUDENTS DISSERTATION COMMITTEES

#### Viva Committee

- 1. Antoine Feylessoufi, 2019. Population Games of Technology and Practice Adoption: How do behavioural biases and network structure mitigate the impact of economic incentives (Internal Examiner)
- 2. Sjors W.F. Jansen, 2019. Quantitative Models for Stochastic Project Planning (PhD Committee, TU/Eindhoven)
- 3. Mojtaba Mahdavi, 2018. Supply Chain Strategy: Further Development on how to Match Product Type with Supply (External Examiner, The University of Auckland, New Zeland)
- 4. Isabel Smith-Niño, 2018. Four essays on the impact of data analytics on hospital operations (External Examiner, London Business School)
- 5. Marc Jansen, 2017. Contract Design for Collaborative Response to Service Disruptions (Internal Examiner)
- 6. Jonas Oddur Jonasson, 2016. Data-driven Models of Healthcare Delivery Operations (External Examiner, London Business School)

## **Reading Committee**

- 1. Hugo Mora, Stochastic Models on Project-based Supply Chains and Pricing of Platform Products, 2012. (Nike)
- 2. Onur Uncu, Dynamic Time-to-market and Operational Decisions in High Technology Firms, 2007. (Associate, Fixed Income, Credit Suisse)
- 3. Murat Kaya, Essays in Supply Chain Contracting: Dual Channel Management with Service Competition and Quality Risk in Outsourcing, 2006. (Assistant Professor, Sabanci University, Turkey, School of Engineering)
- 4. Léa A. Deleris, Firm Failure Risk: Study of the Property-casualty Insurance Industry, 2006. (IBM T.J. Watson Research Center)
- 5. Holly Lutze, Mitigating Supply Chain Risk: Pooling, Contracting, and Supply Channel Selection, 2005. (Assistant Professor, University of Texas, Dallas, School of Management)
- 6. Gary Gaukler, RFID in Supply Chain Management, 2005. (Assistant Professor, Texas A&M)

#### **Oral Exam Committee**

[GSB: Graduate School of Business, MSE: Materials Science and Engineering, CIFE: Center for Integrated Facility Engineering]

- 1. Zeng Fan, 2011. Doped-ceria Interlayer for Solid Oxide Fuel Cells (MSE, Committee Chair).
- 2. Ozge Islegen, 2011. Capacity Management and Environmental Sustainability (GSB).
- 3. Karthik Manohar, 2011. Product Architecture Portfolio Decision Framework (Mechanical Engineering).
- 4. Yanchong (Karen) Zhang, 2011. Trust and Trustwortiness in Suppy Chain Management.
- 5. Yanruo Wang, 2010. Cost Allocation for Managerial Performance Measurement (GSB, Committee Chair).
- 6. Jonghoon Kim, 2007. Temporary Structure Planning Ontology (CIFE, Committee Chair).
- 7. Hyoduk Shin, 2007. Essays in Supply Chain Management (GSB, Committee Chair).
- 8. Taylan Yildiz, 2007. An Empirical Analysis of Learning and Channel Migration (GSB, Committee Chair).
- 9. Korhan Gürkan, 2005. Essays on Product Development and Market Structure (GSB).
- 10. Ali Kemal Parlakturk, 2005. Essays on Service and product Flexibility (GSB, Committee Chair).
- 11. Che-Lin Su, 2005. Equilibrium Problems with Equilibrium Constraints: Stationarities, Algorithms, and Applications.
- 12. Ting Shen, 2004. Make-to-order: Supply Chain Structure and Inventory Strategies.
- 13. Shiri Shneorson, 2004. Essays on Capacity and Pricing of Congestible Resources (GSB).
- 14. Cheryl Druehl, 2003. Price Competition Between an Internet Firm and a Bricks and Mortar Firm (GSB, Committee Chair).

- 15. Julia Miyaoka, 2003. Essay's on Forecast Updating in a Two-Stage Supply Chain.
- 16. Wei Wei, 2003. Capacity Management under Forecast Update in Decentralized Supply Chains.
- 17. Özlem Yüksel, 2003. Managing Supply Contracts and Inventory Risk in a Supply Chain.

## **SERVICE**

## Service at University of Cambridge

- Operations and Technology Management Subject Group Head (2019-2021, 2022-2023)
- Operations and Technology Management Subject Group PhD Representative (2017)
- Operations and Technology Management Subject Group SMO Representative (2017)
- EMBA Internal Examiner (2016-2020)

## **Service at Stanford University**

- MS&E 10<sup>th</sup> Year Anniversary Celebration Committee (2010)
- MS&E MS Admissions Committee (2007, 2011)
- MS&E Department Seminar Series: Founder and Organizer (2005)
- MS&E Ph.D. Admissions Committee (2003-2005)

## Service at Carnegie Mellon University

• Graduate Women Advisory Board, September 2000-May 2001

## **Conference Organization**

[DSI: Decision Sciences Institute]

- POMS International, Brighton UK 2019, Conference Co-chair
- POMS 2013, 2014 Organizing Committee, Purchasing and Supply Management Track Co-chair
- IIE International (Turkey) Conference 2013 Organizing Committee
- POMS 2012 Organizing Committee, Behavioral Operations Track Co-chair
- DSI 2012 Organizing Committee, Logistics and Distribution Track Co-chair
- INFORMS 2012 Organizing Committee, Invited Sessions Co-chair
- MSOM Supply Chain Special Interest Group Conference Co-organizer MSOM, Technion, Haifa, Israel, June 27, 2010.

## **Cluster and Session Organization**

## **Cluster chair:**

- Cluster chair, Undergraduate Operations Research Prize Cluster INFORMS, Phoenix, AZ, October 14-17, 2012.
- Cluster chair, Women in OR/MS Sponsored Cluster INFORMS, San Diego, CA, October 11-14, 2009.
- Cluster chair, Women in OR/MS Sponsored Cluster INFORMS, Washington, DC, October 12-15, 2008.
- Cluster chair, Junior Faculty Interest Group (JFIG) Sponsored Sessions, INFORMS, San Francisco, CA, November 13-16, 2005.

## Session chair: (last 7 years; full list available upon request)

- Session chair, "New Models of Health Care Delivery: Reengineering for Efficient, Effective Care" INFORMS Annual Meeting, San Francisco, California, November 9-12, 2014.
- Session chair, "Managing Health and Risk of Suppliers" INFORMS, Phoenix, AZ, October 14-17, 2012
- Session chair, "Inventory Management for Socially-Responsible Operations" POMS Annual Meeting, Chicago, Illinois, April 20-23, 2012.
- Session chair, "Behavioral Studies on Pricing, Forecasting and Competition in Supply Chains" POMS Annual Meeting, Chicago, Illinois, April 20-23, 2012. (co-chaired with Y. Wu)

- Tutorial, "Contract Complexity and Performance: A Brief Look at Theory and Behavior" INFORMS, Charlotte, NC, November 13-16, 2011.
- Session chair, "Undergraduate OR Prize" INFORMS, Charlotte, NC, November 13-16, 2011.
- Session chair, "Panel: Perspectives on Women and Men in the Profession" INFORMS, Austin, TX, November 7-10, 2011. (co-chaired with E. Regnier)
- Session chair, "Green Supply Chains" INFORMS, Austin, TX, November 7-10, 2011. (co-chaired with T. Kraft)
- Session chair, "WORMS Keynote Session by Margaret Brandeau: From Venn Diagrams to Public Health Policy: An OR Journey" INFORMS, San Diego, CA, October 11-14, 2009.
- Session chair, "Contracts and Incentives in Supply Chains" INFORMS, San Diego, CA, October 11-14, 2009.
- Session chair, "Capacity Management in Supply Chains" INFORMS, Washington, DC, October 12-15, 2008.
- Session chair, "Supply Chain Management of Perishable Items" INFORMS, Washington, DC, October 12-15, 2008.
- Session chair, "An Interactive Panel/Mentoring Session in Honor of Rick Rosenthal" INFORMS, Washington, DC, October 12-15, 2008.

## **Service in Professional Organizations**

- President, MSOM, 2021-2022
- Committee Member, Dantzig Dissertation Award, 2020, 2021
- Co-chair, M&SOM Student Paper Competition, 2019, 2020
- Academic Panel, M&SOM Practice-Based Research Paper Competition, 2017, 2019
- Academic Panel, POMS Applied Research Challenge, 2014, 2016, 2018
- Chair, INFORMS Undergraduate Operations Research Prize, 2012
- Committee Member, INFORMS Membership and Member Services Committee, 2012-2013
- Committee Member, INFORMS Undergraduate Operations Research Prize, 2011
- Panelist, NSF CMMI Manufacturing Enterprise Systems (MES), 2010
- President, INFORMS Women in OR/MS (WORMS), 2009-2010
- Vice President, INFORMS Women in OR/MS (WORMS), 2008-2009
- Judge, Nicholson Prize, INFORMS, 2005-2006, 2012-2013, 2016, 2018-2019
- Judge, MSOM Student Competition, INFORMS, 2006-2007
- Panelist, NSF DMI Manufacturing Enterprise Systems (MES), 2006
- President, INFORMS Junior Faculty Interest Group (JFIG), 2005-2007
- Treasurer, INFORMS Junior Faculty Interest Group (JFIG), 2003-2005

## **Editorial Boards**

- Manufacturing and Service Operations Management (from October 2022), Department Editor in the Department of Manufacturing and Supply Chain Management
- Management Science (since 2020), Area Editor in Operations Management and Healthcare Management
- Manufacturing and Service Operations Management (since 2018), Associate Editor
- Production and Operations Management, Senior Editor in Supply Chain Management (since 2012)
- Manufacturing and Service Operations Management, Guest Associate Editor for the M&SOM Practice-Based Research Paper Competition (since 2017)
- Manufacturing and Service Operations Management (since 2005)
- Production and Operations Management (since 2003)

#### Referee for Technical Journals

• <u>Frequent Referee</u>: IIE Transactions, Management Science, Marketing Science, Naval Research Logistics, Operations Research

• <u>Ad-hoc Referee</u>: Annals of Operations Research, Electronic Commerce Research Journal, European Journal of Operational Research (EJOR), Health Care Management Science, Interfaces, Journal of the Operational Research Society (JORS), Journal of Operations Management (JOM), Journal of Production Economics (IJPE)

## **PROFESSIONAL AFFILIATIONS**

- INFORMS
- POMS
- Institute of Industrial Engineers (IIE)
- Global Supply Chain Management Forum, Stanford University
- Member of the Supply Chain Risk Leadership Council (<a href="http://www.scrlc.com/">http://www.scrlc.com/</a>), 2006-2009