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Philip M. Kaminsky

University of California, Berkeley
Industrial Engineering and Operations Research
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&
Amazon
philipka@amazon.com

Research Interests

- Transportation Marketplace Design and Operations
- Modeling and Analysis of Production Control and Scheduling Systems
- Design and Analysis of Algorithms
- Analysis of Integrated Logistics Models
- Logistics Collaboration

Education

NORTHWESTERN UNIVERSITY, EVANSTON, IL
Ph.D. (1997) Industrial Engineering and Management Sciences
Dissertation: *Probabilistic Analysis and Effective Algorithms for Large Scale Machine Scheduling Problems*
Advisor: David Simchi-Levi

NORTHWESTERN UNIVERSITY, EVANSTON, IL
M.S. (1995), Industrial Engineering and Management Sciences
Concentration: Production and Economics; *Minors:* Stochastic Processes, Optimization

COLUMBIA UNIVERSITY, NEW YORK, NY
B.S. (1989), Chemical Engineering

Academic Experience

UNIVERSITY OF CALIFORNIA, BERKELEY CA 1997-PRESENT
Earl J. Isaac Professor Emeritus in the Science and Analysis of Decision Making
2022-present
Professor Emeritus 2022-present Industrial Engineering and Operations Research
Earl J. Isaac Professor in the Science and Analysis of Decision Making 2018-2022
Executive Associate Dean 2017-2019 College of Engineering
Sastry Chair for Leadership and Innovation 2019-2020
Associate Dean for Academic Planning & Dev. 2017 College of Engineering
Department Chair 2011-2017 Industrial Engineering and Operations Research
Chancellor's Professor 2013-2022 Industrial Engineering and Operations Research
Professor 2010-2022 Industrial Engineering and Operations Research
Associate Professor 2003-2010 Industrial Engineering and Operations Research
Assistant Professor 1997-2003 Industrial Engineering and Operations Research

NORTHWESTERN UNIVERSITY, EVANSTON IL SUMMER 1995
Instructor

Industrial Experience

AMAZON.COM, BELLEVUE, WA 2019-PRESENT
Senior Principal Research Scientist, Marketplace Science Lead 2021-present
Principal Research Scientist, Marketplace Science Lead 2019-2021

MERCK & COMPANY, RAHWAY, NJ 1989-1993
Process Supervisor, Production Supervisor

Honors

- 2020 Project Production Institute Technical Achievement Award
- 2017 Pierskalla Award Finalist (with co-authors)
- 2015 Keynote Speaker, Institute of Industrial Engineers Annual Conference, Anaheim
- 2014 Northwestern IEMS Distinguished Alumnus Award
- 2012 Best Poster Award, CELDi conference (with students)
- Operations Research Meritorious Service
- National Science Foundation CAREER Award Winner
- McGraw-Hill Outstanding First Edition of the Year - 2000
- 2000 Institute of Industrial Engineers Outstanding Publication Award
- 2000 Institute of Industrial Engineers Joint Publishers Book of the Year Award
- 1996 MSOM Student Paper Contest Honorable Mention
- Northwestern University Walter P. Murphy Fellowship Recipient

Publications

Kaminsky, P. and D. Simchi-Levi. 1998. A New Computerized Beer Game: A Tool for Teaching the Value of Integrated Supply Chain Management. *in Supply Chain and Technology Management*. Hau Lee and Shu Ming Ng, eds., The Production and Operations Management Society, pp. 216-225.

Kaminsky, P. and D. Simchi-Levi. 1999. Probabilistic Analysis and Practical Algorithms for the Flow Shop Weighted Completion Time Problem. *Operations Research* **46**, pp. 872-882

Simchi-Levi, D., P. Kaminsky, and E. Simchi-Levi. 2000. DESIGNING AND MANAGING THE SUPPLY CHAIN *Richard D. Irwin, Inc.: Homewood, IL and Boston*.

Simchi-Levi, D., P. Kaminsky, and E. Simchi-Levi. 2003. DESIGNING AND MANAGING THE SUPPLY CHAIN, SECOND EDITION *Richard D. Irwin, Inc.: Homewood, IL and Boston*.

Simchi-Levi, D., P. Kaminsky, and E. Simchi-Levi. 2008. DESIGNING AND MANAGING THE SUPPLY CHAIN, THIRD EDITION *McGraw-Hill: Boston*.

Kaminsky, P. and J. Swaminathan. 2001. Utilizing Forecast Band Refinement for Capacitated Production Planning. *Manufacturing & Service Operations Management* **3**, pp.68-81.

Kaminsky P. and D. Simchi-Levi. 2001. Asymptotic Analysis of an On-Line Algorithm for the Single Machine Completion Time Problem With Release Dates. *Operations Research Letters* **29**, pp 141-148.

Kaminsky P. and D. Simchi-Levi. 2001. The Asymptotic Optimality of the SPT Rule for the Flow Shop Mean Completion Time Problem. *Operations Research* **49** pp. 293-304.

Kaminsky, P. 2003. The Effectiveness of the Longest Delivery Time Rule for the Flow Shop Delivery Time Problem. *Naval Research Logistics* **50**(3) pp. 257-272

Kaminsky, P. and D. Simchi-Levi. 2003. Production and Distribution Lot Sizing in a Two-Stage Supply Chain. *IIE Transactions* **35**(11) pp. 1065-1075

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Kaminsky, P. and D. Hochbaum. 2004. Due Date Quotation Models and Algorithms. *Handbook on Scheduling Algorithms, Methods, and Models*, Joseph Y. Leung (ed.), Chapman Hall/CRC, pp. 20.1-20.22

Kaminsky, P. and J. Swaminathan. 2004. Effective Heuristics For Capacitated Production Planning with Multi-Period Production and Demand With Forecast Band Refinement. *Manufacturing & Service Operations Management* **6** pp. 184-194.

Bulbul, K, P. Kaminsky, and C. Yano. 2004. Flow Shop Scheduling with Earliness, Tardiness and Intermediate Inventory Holding Costs. *Naval Research Logistics* **51** pp. 407-445.

Simchi-Levi, D., P. Kaminsky, and E. Simchi-Levi. 2004. MANAGING THE SUPPLY CHAIN: THE DEFINITIVE GUIDE FOR THE BUSINESS PROFESSIONAL *McGraw-Hill Trade: New York*.

Ahn, H. and P. Kaminsky. 2005. Production and Distribution Policy in a Two Stage Stochastic Push-Pull Supply Chain. *IIE Transactions***37**, pp. 609-621.

Newman, A., C. Yano, and P. Kaminsky. 2005. Third Party Logistics Planning with Routing and Inventory Costs. In *Supply Chain Optimization* (J. Geunes and P. Pardalos, eds.), Kluwer Academic Publishers.

Bulbul, K, P. Kaminsky, and C. Yano. 2007. Preemption in Single Machine Earliness/Tardiness Scheduling. *Journal of Scheduling* **10**, pp.271-292.

Ahn, H, M. Gumus, and P. Kaminsky. 2007. Pricing and Manufacturing Decisions When Demand is a Function of Prices in Multiple Periods. *Operations Research* **55** pp. 1039-1057.

Kaminsky, P. and Z-H Lee. 2008. Asymptotically Optimal Algorithms for Reliable Due Date Scheduling. *Journal of Scheduling* **11** pp.187-204.

Kaminsky, P. and O. Kaya. 2008. Inventory Positioning, Scheduling, and Lead Time Quotation in Supply Chains. *International Journal of Production Economics* **114**, pp. 276-293.

Kaminsky, P. and O. Kaya. 2008. Scheduling and Due-Date Quotation in a MTO Supply Chain. *Naval Research Logistics*, **55**, pp. 444-458.

Tommelein, I.D, G. Ballard, and P. Kaminsky. 2008. Supply Chain Management for Lean Project Delivery. in *Handbook of Construction Supply Chain Management*, Ch. 6, pp. 6-1 to 6-22

Ahn, H, M. Gümüş, P. Kaminsky. 2009. Inventory, Discounts, and the Timing Effect. *Manufacturing & Service Operations Management*, **11**, pp. 613-629.

Kaminsky, P. and O. Kaya. 2009. Combined Make-to-Order/Make-to-Stock Supply Chains. *IIE Transactions* **41**, pp. 103-119.

Guo, X, P. Kaminsky, P. Tomecek, and M. Yuen. 2011. Optimal Spot Market Inventory Strategies in the Presence of Cost and Price Risk. *Mathematical Methods of Operations Research*, **73**, pp. 109-137.

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- H.C. Hwang, H-S. Ahn, and P. Kaminsky. 2013. Basis Paths and a Polynomial Algorithm for the Multi-Stage Production-Capacitated Lot-Sizing Problem. *Operations Research* **61**(2), pp 469-482.
- Bulbul, K and P. Kaminsky. 2013. An Linear Programming-Based General Method for Job Shop Scheduling. *Journal of Scheduling* **16**(2), pp. 161-183
- Janjevic, M., P. Kaminsky, and A. Ballé Ndiaye. 2013. Downscaling the consolidation of goods - state of the art and transferability of micro-consolidation initiatives, *European Transport* **54**(4), pp. 1 - 23
- P. Kaminsky and M. Yuen. 2014. Production Capacity Investment with Data Updates. *IIET Transactions* **46**, pp. 664-682.
- Kaminsky, P., and Y. Wang. 2015. Analytical Models for Biopharmaceutical Operations and Supply Chain Management: A Survey of Research Literature. *Pharmaceutical Bioprocessing* **3**(1), pp. 61-73
- Gumus, M, P Kaminsky, and S. Mathur. 2016. Impact of Product Substitution and Retail Capacity on Price Promotions: Theory and Evidence. *International Journal of Production Economics* **54**(7), 2108-2135
- H.C. Hwang, H-S. Ahn, and P. Kaminsky. 2016. Algorithms for the Two-Stage Production-Capacitated Lot-Sizing Problem. *Journal of Global Optimization.* **65**(4), 777-799.
- H-S. Ahn, S. Jasin, P. Kaminsky, and Y. Wang. 2017. Certainty Equivalent Planning for Multi-Product Batch Differentiation: Analysis and Bounds. *Operations Research* **66** (1), pp. 58-76.
- Sen, A., A. Atamturk and P. Kaminsky. 2017. A Conic Integer Programming Approach to Constrained Assortment Optimization under the Mixed Multinomial Logit Model. *Operations Research* Vol. **66**(4), pp. 994-1000.
- P. Kaminsky and S. Liu. 2017. A Two-Step Gradient Estimation Approach to for Setting Supply Chain Operating Parameters. *Computers and Operations Research* **92**, pp. 98-110.
- P. Kaminsky and Y. Yang. 2018. Multi-period Process Flexibility with Inventory. *Flexible Services and Manufacturing Journal* **31** pp. 833-893
- M. Zhou, Y. Fukouka, Y. Mintz, K. Goldberg, P. Kaminsky, E. Flowers, and A. Aswani. 2018. Evaluating Machine Learning Based Automated Personalized Daily Step Goals Delivered through a Mobile Phone App: a Randomized Controlled Trial. *JMIR Mhealth Uhealth* **6**(1):e28.
- A. Aswani, P. Kaminsky, Y. Mintz, E. Flowers, and Y. Fukuoka. 2019. Behavioral Modeling in Weight Loss Interventions. *European Journal of Operations Research* **272**(3) pp. 1058-1072
- Y. Mintz, A. Aswani, P. Kaminsky, E. Flowers, and Y. Fukuoka. 2020. Non-stationary bandits with habituation and recovery dynamics. *Operations Research* **68**(5), pp. 1286-1624.

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S. Ding and P. Kaminsky. 2019. Centralized and Decentralized Warehouse Logistics Collaboration. *Manufacturing & Service Operations Management* (22(4), pp. 812-831).

A. Jabbari, I.D. Tommelein, and P. Kaminsky. 2020. Workload Leveling Based On Work Space Zoning for Takt Planning. *Automation in Construction* 118 (October 2020).

A. Jabbari and P. Kaminsky. 2021. Online scheduling to minimize total weighted (modified) earliness and tardiness. *Journal of Scheduling* 24, pp 431-446.

B. Bebitoglu, A. Sen, and P. Kaminsky. 2022. Multi-Location Assortment Optimization Under Capacity Constraints. Submitted for publication.

Y. Mintz, A. Aswani, P. Kaminsky, E. Flowers, and Y. Fukuoka. 2021. Behavioral Analytics for Myopic Agents. Submitted for publication.

I. Adler, D. Bu, and P. Kaminsky. 2021. Production Lot Sizing with Immediately Observable Random Production Rate. *Submitted for publication*.

Articles

Johnson, R, and P. Kaminsky. 2008. Biopharmaceutical Operations: Developing the Science. *PharmaFocus*, issue 9.

Kaminsky, P., J. Liu, and J. Olsen-Claire 2012. Survey: Optimizing Global Biopharmaceutical Operations through Risk Mitigation and Management. BioPharm International, December 2012. Also appeared in the PharmaTech February Outsourcing Supplement

Jabbari, A, and P. Kaminsky. Blockchain and Supply Chain Management. *MHI-CICMHE White Paper Series*, January 2018, available at <http://www.mhi.org/downloads/learning/cicmhe/blockchain-and-supply-chain-management.pdf>.

Kaminsky, P. The future of engineering education. *Berkeley Engineer, Fall 2017*, available at: <https://engineering.berkeley.edu/magazine/fall-2017/future-engineering-education>

Jabbari, A., and P. Kaminsky. Research Digest: Preliminary Investigations into Capital Projects Supply Chain Management. *Journal of Project Production Management, Volume 2, Summer 2017*.

Proceedings

Chan, A., P. Kaminsky, A. Muriel, and D. Simchi-Levi. 1996. New Results for Flowshop and Parallel Machine Scheduling Problems. *Proceedings of the 1996 MSOM Conference Proceedings, Hanover, New Hampshire*, pp. 213-218.

Lee, Z-H, and P. Kaminsky. 2003. On-Line Algorithms for Due Date Quotation with Lateness Penalties. *Proceedings of the 2003 NSF Design, Service, and Manufacturing Grantees and Research Conference* pp. 3056-3069.

Kaminsky, P, H-S Ahn, and O. Alper. 2005. Models and Algorithms for Integrated Multi-Stage Production/Distribution Problems. *Proceedings of the 2005 NSF Design, Service, and Manufacturing Research Conference*

Kaminsky, P. and O. Kaya. 2005. Career: Scheduling of Large Scale Systems: Probabilistic Analysis and Practical Algorithms for Due Date Quotation. *Proceedings of the 2005 NSF Design, Service, and Manufacturing Research Conference*.

Kaminsky, P. and O. Kaya. 2005. Centralized Versus Decentralized Scheduling and Due Date Quotation in a Make-to-Order Supply Chain. *Proceedings of the 2005 MSOM Conference*.

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Kaminsky, P and H-S Ahn. 2006. Models and Algorithms for Integrated Multi-Stage Production/Distribution Systems: Third Party Logistics. *Proceedings of the 2006 NSF Design, Service, and Manufacturing Research Conference.*

Ahn, H-S., O. Alper, and P. Kaminsky. 2006. Effective Distribution Policies Utilizing Logistics Contracting. *Proceedings of the 2006 MSOM Conference.*

Hamzeh, F., I. D. Tommelein, G. Ballard, and P. Kaminsky. P. 2007. Logistics Centers to Support Project-based Production in the Construction Industry. *in Pasquire, C.L. and Tzortzopoulos, P. (editors)(2007). Proceedings of the 15th Annual Conference of the International Group for Lean Construction (IGLC 15), 18-20 July 2007, East Lansing, MI.*

Gumus, M, P. Kaminsky, E. Tiemroth, and M. Ayik. 2008. A Multi-stage Decomposition Heuristic for the Container Stowage Problem. *Proceedings of the 2008 MSOM Conference.*

Papavasiliou, A, P. Kaminsky, I. Sidhu and S. S. Oren. 2009. Renewable Energy Supply for Electric Vehicle Operations in California. *Proceedings of the 32nd IAEE International Conference, San Francisco, CA, June 2009.*

P. Kaminsky and M. Yuen. 2011. Production Capacity Investment With Trial Result Updates. *Proceedings of the 2011 MSOM Conference.*

Hwang, H-C, H-S Ahn and P Kaminsky. 2011. A polynomial time algorithm for the multi-stage lot-sizing problem with production capacities. *Proceedings of the 2nd International Workshop on Lot Sizing 2011 Istanbul, Turkey.*

Hwang, H-C, H-S Ahn and P Kaminsky. 2012. A Single Phase Dynamic Program with Independent Production Decision for Production-Capacitated Two- and Multi-Stage Lot-Sizing Problems. *Proceedings of the 3rd International Workshop on Lot Sizing 2012 Rotterdam, the Netherlands.*

M. Zhou, Y. Mintz, Y. Fukuoka, K. Goldberg, E. Flowers, P. Kaminsky, A. Castillejo, and A. Aswani (2018), Personalizing mobile fitness apps using reinforcement learning. *Proceedings of the ACM Workshop on Theory-Informed User Modeling for Tailoring and Personalizing Interfaces (HUMANIZE).* To appear.

Books

Simchi-Levi, Kaminsky, and Simchi-Levi. 2000, 2003, 2008, 2022. DESIGNING AND MANAGING THE SUPPLY CHAIN *Richard D. Irwin, Inc.: Homewood, IL and Boston.* Winner of the 2000 IIE Outstanding Publication Award and the Joint Publishers Book of the Year Award, as well as the 2000 McGraw-Hill Outstanding First Edition award. The second, third, and fourth editions each added over 100 pages of new topics and concepts.

Simchi-Levi, Kaminsky, and Simchi-Levi. 2004. MANAGING THE SUPPLY CHAIN: THE DEFINITIVE GUIDE FOR THE BUSINESS PROFESSIONAL *McGraw-Hill Trade: New York.* Introduces the business professional to important supply chain management concepts.

Sebastian, Kaminsky, and Muller, eds. 2014. QUANTITATIVE APPROACHES IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT: PROCEEDINGS OF THE 8TH WORKSHOP ON LOGISTICS AND SUPPLY CHAIN MANAGEMENT, BERKELEY, CALIFORNIA, OCTOBER 3-4, 2013. *Lecture Notes in Logistics: Springer: Cham, Switzerland.*

**Software
Developed****A DECISION SUPPORT SYSTEM FOR PRODUCTION SCHEDULING**

System includes a database, schedule generator, and user interface module. Developed with D. Simchi-Levi.

THE COMPUTERIZED BEER GAME

Developed as a course software tool to demonstrate the value of information in the supply chain. Developed with D. Simchi-Levi.

THE RISK POOL GAME

Developed as a course software tool to demonstrate the value of risk pooling in inventory systems. Developed in Microsoft Visual Basic. Developed with D. Simchi-Levi.

**Courses
Taught**

- IEOR180 - Senior Project
- IEOR153 - Facility Design and Location
- IEOR153 - Supply Chain Management
- IEOR250 - Introduction to Production Planning and Logistics Models
- IEOR251 - Logistics and Facility Design
- IEOR199 - Designing and Managing the Supply Chain
- IEOR290 - Advanced Logistics Modeling
- IEOR298 - Supply Chain Management Seminar
- IEMS C26 - Engineering Economics (at Northwestern University)
- Executive Education - Strategies for Supply Chain Management

**Professional
Activities**

- Director, Initiative for Research in Biopharmaceutical Operations (2010-2017)
- Site Director, Center for Excellence in Logistics and Distribution (2011-2017)
- Member, Institute for Operations Research and the Management Sciences (INFORMS)
- Member, Institute of Industrial Engineers
- Member, College Industry Council on Material Handling Education, 2014-2017.
- External Reviewer, University of Florida ISE, 2011; University of Arizona ISE, 2014; Purdue University IE, 2014; UIUC ISE, 2015; Georgia Tech IsYE, 2018.
- Secretary, MSOM Subdivision of INFORMS, 2002-2003.
- Program Chair, 2014 INFORMS conference
- Advisory Board Member: Pharma Focus Asia; Editorial Board Member: Pharmaceutical Bioprocessing
- Focused Issue Editor for Scheduling and Logistics, *IISE Transactions*, 2017 - 2022
- Current or Former Associate Editor: *IIE Transactions*, *Naval Research Logistics*, *Management Science*, *IEEE Transactions on Automation Science and Engineering*, *Operations Research Letters*, *Operations Research*
- Senior Editor: *Productions and Operations Management*
- Referee: *Operations Research*, *Transportation Science*, *IIE Transactions*, *Naval Research Logistics*, *European Journal of Operational Research*, *Discrete Applied Mathematics*, *Operations Research Letters*, *National Science Foundation*, *The Internet Encyclopedia*, *Journal of Manufacturing Systems*, *Journal of Infrastructure Systems*, *M&SOM*, *International Journal of Production Economics*, *Production & Operations Management*, *Operations Research*
- National Science Foundation Proposal Review Panel: 2007, 2009, 2010, 2012, 2015
- Department of Energy SolarMat2 Proposal Review Panel: 2014

- Topic Editor, Wiley Encyclopedia of Operations Research
- Member, 1998, 1999, 2003, 2016 Nicholson Prize Committees
- Member, 2013,2014 Pierskalla Prize Committee
- Chair, 2003 Junior Faculty Interest Group Paper Competition; Member, 2006, 2007, 2009, 2011, 2012, 2013, 2014,2015 JFIG Paper Committees
- Chair, 2004 MSOM Student Paper Competition
- Member, 2002 INFORMS Doctoral Colloquium Organizing Committee
- Session Organizer: 2003 Informs Conference, 2004 Informs Conference, 2005 Informs Conference, 2006 Informs Conference
- Reviewer for 2007, 2008, 2009, 2010, 2011, 2012 MSOM Conference
- Reviewer for 2012, 2013, 2014,2015 IIE Conference
- Chair, 2008 Kuhn Award Committee (Best paper award for the NRL Journal)
- Member, Project Production Systems Laboratory
- Program Chair, 2014 INFORMS Conference
- President, Associate of Chairs of OR Departments, 2014-2015
- Committee Chair, Management Science Journal Review Committee, 2017
- Member, INFORMS Professional Recognition Committee, 2017-2018
- Judge, 2016, 2017 INFORMS Minority Issues Forum Poster

Funding

- Project Production Institute (2018-2019), Project Supply Chain Management (role: PI), \$60K, (2016-2017), \$10K
- Toyota Material Handling (2017-2018),The Impact of Emerging Logistics Paradigms on Material Handling System Functional Requirements \$75,429 (role: PI)
- MHI (2017) Collaborative Logistics \$12,000.
- MHI (2017) Blockchain and Supply Chain \$5000
- Project Production Institute (2016-2017), Project Supply Chain Management (role: PI), \$20K
- National Science Foundation (2014-2016) CMMI-1450963 EAGER: Quantitative Modeling of Behavioral Change for Personalized Weight Loss Interventions \$300,000 (role: co-PI, PI Anil Aswani)
- IO Center (2013 -2015) "Establishing Collaboration between IO Center in Trondheim, Norway, and P2SL at UC Berkeley" \$163,851 (role: co-PI)
- US Department of Energy (2013-2015) "Biomanufacturing to Market Pilot Program" \$450,000 (role: PI)
- National Science Foundation (2013-2015) IIP-1331997 "I/UCRC FRP: Collaborative Research: The Physical Internet for a Sustainable Logistics Future" \$38,990 (role: PI)
- CELDi CDP Award (2012-2013) "Retrospective Optimization for Supply Chain Operations" \$58,311
- National Science Foundation + Industry (2011-2015) IIP-1057994 "Berkeley Research Site Focusing on Biopharmaceutical Operations" \$282,103 from NSF + \$450,000 from industry (roles: PI, Director).

- Gift from BioMarin (2009) to support research in biopharmaceutical operations. \$25,000
- Gift from Bayer (2009) to support the establishment of a center focusing on Biopharmaceutical Operations. \$5000
- Gift from Genetech (2008) to support “Supply Chain Optimization Using High Speed Simulation” \$50,000
- UC Discovery Opportunity Grant (2008) “2008 UC Berkeley Center for Biopharmaceutical Operations Workshop” \$7000 (role: PI).
- OpenLink Fund in the Coleman Fung Risk Management Research Center (2008) “Integrated Approaches for Managing Risks in Energy Markets” \$63,917 (jointly with X. Guo).
- National Science Foundation (2004-2006) “Foundations for Bioproduction” \$150,000 (Co-PI)
- National Science Foundation (2002-2008) DMI-0200439 “Models and Algorithms for Integrated Multi-Stage Production/Distribution Systems” \$424,257 (Role: PI)
- National Science Foundation (2001-2007) DMI-0092854 “CAREER: Scheduling of Large Scale Systems” \$375,000 (Role: PI).
- Fair, Isaac and Company (2000-2002) “Decision and Risk Analysis” \$40,000 (Role: joint with C. Yano)
- Northwestern University, subcontract from National Science Foundation (1998-2000) “Development and Analysis of Robust and Efficient Algorithms for Large-Scale Production Systems” \$34,757 (Role: subcontract).
- National Science Foundation (1999) DMI-9912058 “Workshop: Collaboration and Standardization in Supply Chain Management; Berkeley, California, October 25-26, 1999” \$22,131 (Role: Co-PI, with D. Hochbaum and J. Swaminathan).

Service

- Faculty Director, UC Berkeley Center for Entrepreneurship and Technology (later Sutardja Center, until 2017)
- 2001/2002 IEOR Faculty Search Committee Chair
- 2003/2004 IEOR Faculty Search Committee Chair
- Graduate Admissions Committee, 2001 - 2005
- Head Graduate Advisor, Fall 2003 - 2008
- Undergraduate Advisor, Fall 1997 to Spring 2003
- Industrial Engineering Department Coordinator : University of California Industrial Liaison Program
- Member, Management of Technology Administration Committee, College of Engineering, UC Berkeley, 2003-2011
- Member, Committee on Instructional Technology and Distance Learning, College of Engineering, UC Berkeley, 2000-2012
- Member, College of Engineering Graduate Study Committee, UC Berkeley, 2003-2010; Chair, 2006-2010;
- Member, Committee on Summer Undergraduate Program in Engineering Research, College of Engineering, UC Berkeley, 2000-2003
- Co-organizer, Fundamentals of Bioproduction Conference, Berkeley, CA 2006.
- Departmental Member, National Research Council Ranking Preparation Committee
- Chair, 2007-2009 Departmental Graduate Curriculum Revision Committee

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- Member, UC Berkeley Committee on Courses of Instruction, 2008-2014.
 - Member, UC Berkeley Graduate Council, 2014-2017
 - GC Representative, Coordinating Council on Graduate Affairs (2016)
 - GC Representative, Academic Senate Advisory Committee to SIS, 2016-2018
 - Member, Administrative Committee of the Graduate Council, 2015-2017
 - COCI Representative on the UC Berkeley Coordination Committee 2010-2011.
 - Senate Representative on Student Information Systems Executive Steering Committee, 2013-2014
 - Member, UC Berkeley Online Graduate Degree Working Group, 2010.
 - Member, UC Berkeley Senate Working Grouping on University Extension Degrees. 2011.
 - Member, UC Berkeley COE MEng Task Force 2010-2011
 - Lecturer, UC Berkeley CET - Tsinghua Program (2010, 2011)
 - Judge, Big Ideas Competition, 2012
 - Proposal Reviewer, Peder Sather Center, 2013,2014
 - Proposal Reviewer, France Berkeley Fund Proposals, 2011, 2014
 - Member, University Partnership Program Advisory Committee, 2015-
 - Faculty Co-director, MET Program, 2016-2019
 - Chair, Coe Data Science Task Force, 2018
 - Chair, COE Data Science Major Impact Task Force, 2018-2019
 - Member, UC Berkeley Enrollment Working Group, 2018
 - Member, Golden Bear Orientation Steering Committee, 2018-
 - Chair, MET Faculty Director Search Committee, 2018-2019
 - Chair, COE Admissions Committee, 2017-2019
 - Member, COE Grad/Undergrad Study Committee, 2017-2019
 - Member, Graduate Academic Misconduct Policy Task Force, 2019
 - Member, 2022 Faculty Search Committee
- Graduate Students**
- Arman Jabbari. Completed 2020
 - Heejung Kim. Completed 2020. Area: Capacity Planning.
 - Tugce Gurek. Completed 2020 Area: Healthcare Operations
 - Yang Wang. Completed 2017 Area: Supply Chain Management
 - Dan Bu. Completed 2015 Area: Biopharmaceutical Operations
 - Stewart Liu. Completed 2017 Area: Supply Chain Optimization
 - Shiman Diung. Completed 2017. Logistics and freight consolidation.
 - Ming Yuen Doctoral Dissertation Title: *Inventory and Capacity Planning with Data Updates*. Completed Spring 2013.
 - Osman Engin Alper (Jointly advised with w/H.Ahn) Doctoral Dissertation Title: *Third Party Logistics Contracts*. Completed Summer 2010. Currently at NVidia
 - Onur Kaya. Doctoral Dissertation Title: *Supply Chain Due Date Quotation*. Completed Fall 2006. Currently on the faculty of Koc University in Istanbul.

- Zu-Hsu Lee. Doctoral Dissertation Title: *Algorithms for Due Date Quotation*. Completed Spring 2002. Currently on the faculty of Marist University.
- Kerem Bulbul (jointly advised w/C. Yano) Doctoral Dissertation Title: *Just in Time Scheduling in the Supply Chain*. Completed August, 2002. Currently on the faculty of Sabanci University in Istanbul.
- Mehmet Gumus (jointly advised w/H. Ahn) Doctoral Dissertation Title: *Joint Pricing/Production Models*. Completed Spring 2007. Currently on the faculty of McGill University in Montreal.
- **Committee Member:** Farook Hamzeh, Simge Kucukyavuz, Yuwei Li, David Busing, Hyun Jeong Choo, Muruvvet Celikbas, Sejung Park, Jung-Hyun Kim, Anne Goodchild, Thais Alves, Yangeng Ouyang, John Bowman, Maria Mayorga, Qi Zhu, Elham Yavari, Lenrick Johnston, Joon Ho Lee, Nakul Sathaye, Elham Yavari, Vishnu Narayanan, Jing Yang, Nikolaos Geroliminis, Haibo Zeng, Adebjiji Adesina, Yonatan Mintz, Han Cheng, Min Zhao, Andres Escobar, Wei Qi, Birce Tezel, Chen Nan Liao, Amber Richter, Long He, Avinash Bhardwaj, Kai-chuan Yang, Evan Davidson, Aditya Medury, Anthony Papavasilou, Tianhu Deng, Kevin Li, Adam Frandson, Shen Liu, Ying Cao, Rebecca Sarto Basso, Erik Bertelli .

Seminars

- University of Iowa, June 1995
- University of Illinois, June 1996
- Iowa State University, December 1996
- Northwestern University, January 1997
- University of Michigan, February 1997
- Cornell University, February 1997
- Massachusetts Institute of Technology, February 1997
- Georgia Institute of Technology, February 1997
- University of Chicago, February 1997
- Stanford University, February 1997
- Duke University, February 1997
- Washington University in St. Louis, March 1997
- University of British Columbia, March 1997
- INFORMS Conferences:
 - Fall 1996 - Atlanta, GA
 - Spring 1997 - San Diego, CA
 - Fall 1997 - Dallas, TX
 - Spring 1998 - Montreal, Quebec, Canada
 - Fall 1998 - Seattle, WA
 - Fall 1999 - Philadelphia, PA
 - Spring 2000 - Salt Lake City, UT
 - Fall 2000 - San Antonio, TX
 - Fall 2001 - Miami, FL
 - Fall 2002 - San Jose, CA
 - Fall 2003 - Atlanta, GA
 - Fall 2004 - Denver, CO
 - Fall 2005 - San Francisco, CA

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- Fall 2006 - Pittsburgh, PA
 - Fall 2007 - Seattle, WA
 - Fall 2009 - San Diego, CA
 - Fall 2010 - Austin, Texas
 - Fall 2011 - Charlotte, NC
 - Fall 2012 - Phoenix, AZ "Perfusion Production Planning"
 - Fall 2013 - Minneapolis, MN "Perfusion Supply Chain Planning", Hybrid Gradient Search for Optimizing Biopharmaceutical Supply Chain Decision-Making
 - Fall 2014 - San Francisco, CA "Multi-retailer Inventory Problem with Batch Production", "Production Planning Models for Biopharmaceutical Perfusion Production"
 - Fall 2015 – Philadelphia, PA Centralized and Decentralized Warehouse Logistics Collaboration, Certainty Equivalent Planning for Multi-product Batch Differentiation, Constructing Behavioral Models for Personalized Weight Loss Interventions using Integer Programming, Process Flexibility with Inventory
 - Fall 2016 – Nashville, TN. Capacity Expansion Under Demand Uncertainty With Uncertain Probabilities; A Decision Analytics Approach For Clinical Intervention Design; Centralized And Decentralized Warehouse Logistics With Stochastic Demand Collaboration; Outsourcing Strategy For Intermediate Production Steps; Two-step Gradient Search For Optimizing Biopharmaceutical Supply Chain Decision-making
 - Fall 2017 – Houston, TX. Capacity Expansion Under Demand Uncertainty With Uncertain Probabilities; A Decision Analytics Approach For Clinical Intervention Design; Centralized And Decentralized Warehouse Logistics With Stochastic Demand Collaboration; Outsourcing Strategy For Intermediate Production Steps; Two-step Gradient Search For Optimizing Biopharmaceutical Supply Chain Decision-making; A State Dependent Inventory Policy for Multi Period Multi Stage Systems
 - Fall 2018 – Phoenix, AZ. Precision Healthcare Using Non-stationary Bandits; Capacity Planning with Probabilistic Outcome Ambiguity; Multi-location Assortment Optimization Under Capacity Constraints; Behavioral Intervention Design using Precision Analytics; The Inventory vs. Timeliness Tradeoff in Project Delivery; Towards a Collaborative Supply Chain: A Quantitative Approach to Shared Facility Design and Operations; Efficient Approaches for Data-driven Appointment Scheduling
 - Fall 2019 – Seattle, WA. Personalizing Treatments with non-stationary bandits; The Role of Robustness in Inventory vs. Timeliness Trade-off in Project Delivery
 - Fall 2020 – Virtual. Effective Proactive Policies For The Stochastic Resource-Constrained Project Scheduling Problem With Inventory Considerations; A Data-Driven, State-dependent Inventory Policy For Multi-Period Multi-Stage Systems; Data-Driven Appointment Scheduling
 - Fall 2021 – Anaheim, CA. Mitigating spot market premiums; Designing Carrier-initiated Matching In A Freight Marketplace; Capacity Portfolio Optimization in a Freight Marketplace
- Spring 2002 POMS Conference, San Francisco, CA
 - May 2003 - Stanford University, Palo Alto, CA
 - Summer 2003 Euro/Informs - Istanbul, Turkey *Continued on next page...*

- August 2002 - Workshop on Operations Research for Global Logistics, Pretoria, South Africa
- April 2004 - Oberwolfach Workshop - Mathematics and Supply Chain Management -
- July 2005 - IFORS International, Honolulu, HI
- June 2005 - MSOM Conference, Evanston, IL
- April 2006 - University of North Carolina
- June 2006 - MSOM Conference, Atlanta, GA
- July 2006 - P2SL Conference, Washington DC
- December 2007 - SPS Conference, San Francisco, CA
- June 2008 MSOM Conference, College Park, Maryland
- August 2008 IBC Conference, Long Beach, CA
- December 2008 – RWTH Aachen, Aachen, Germany
- June 2009 – Biotech Supply Chain Academy, South San Francisco, CA
- October 2009 BACLOG, Berkeley, CA
- June 2011 MSOM Conference, Ann Arbor, Michigan
- September 2011 Biopharmaceutical Manufacturing and Development Summit, San Diego, CA
- October 2011 BACLOG, Berkeley, CA
- February 2012 Biopharmaceutical Development and Production Week, San Diego, CA
- February 2012 CELDi Conference, Atlanta, Georgia
- April 2012 – Georgia Tech, Atlanta, GA "Production Capacity Investment with Data Updates"
- April 2012 POMS Conference, Chicago, IL "Production Capacity Investment with Data Updates"
- May 2012 – IIE Conference, Orlando, FL "Production Capacity Investment with Data Updates"
- June 2012 – CUHK, Hong Kong "Production Capacity Investment with Data Updates"
- June 2012 – BioProduction Group Webinar "Identifying and Mitigating Risk in Biopharmaceutical Supply Chains"
- August 2012 – Conference of the IFIP Working Group on Advanced Analytics, Aachen, Germany "Retrospective Optimization for Supply Chain Risk Mitigation"
- November 2012 – CELDi Conference, Dallas, TX (Project Update Posters)
- February 2013 – Biopharmaceutical Production and Development Week, Huntington Beach, CA "The Challenges of Integrating CMOs into Your Supply Chain"
- April 2013 – CELDi Conference, Atlanta, GA "Retrospective Optimization for Supply Chain Risk Mitigation"
- May 2013 – ISERC Conference, San Juan, Puerto Rico "Retrospective Optimization and Stochastic Approximation for Supply Chain Policy Optimization"

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- September 2013 – IO Conference, Trondheim, Norway "Managing Risk in Supply Chains"
- November 2013 – CELDi Conference, Chicago, IL (Project Update Posters)
- February 2014 – Biopharmaceutical Production and Development Week, San Diego, CA "Risk Management, Inventory Management, and Planning in Biopharmaceutical Supply Chains"
- March 2014 – Flexible Facilities Conference, Berkeley, CA "Beyond the Facility: Creating Flexible and Adaptive Supply Chains"
- May 2014 – IPIC 2014, Quebec, Canada "Horizontal Collaborative Logistics"
- June 2014 – ISERC Conference, Montreal, Canada "Solving Supply Chain Retrospective Optimization Models"
- March, 2015 – Arizona State University, Phoenix, AZ "Batch Filling, Inventory Management, and Perfusion Production Planning: Models Motivated by Biopharmaceutical Manufacturing"
- April, 2015 – CELDi Conference, Dallas, TX (Project Update Posters)
- May, 2015 – ISERC Conference, Nashville, TX (+ invited panelist) "Batch Filling, Inventory Management, and Perfusion Production Planning: Models Motivated by Biopharmaceutical Manufacturing"
- July, 2015 – IPIC 2015, Paris "Dynamic, Collaborative, Market-Driven Horizontal Logistics"
- June, 2015 – MHTI, Madison, Wisconsin "Supply Chain Management Concepts for Industrial Engineers"
- September, 2015 – SAP Supply Chain Forum, Palo Alto, CA "Supply Chain Risk Mitigation: Visibility, Variability, Commonality"
- October 2015, BACLOG 2015, Berkeley, CA "Centralized and Decentralized Warehouse Logistics Collaboration"
- December 2015, Project Production Institute Annual Symposium, SF, CA "Supply Chain Management: What's Now, What's Next, and Capital Project Delivery"
- March 2016, Amazon Research, Seattle, WA "Centralized and Decentralized Warehouse Collaboration"
- April 2016, University of South Florida Kimbler Lecture "Centralized Centralized and Decentralized Warehouse Collaboration"
- April 2016, Clemson University, Clemson, SC "Centralized Centralized and Decentralized Warehouse Collaboration"
- May 2016, IIE Conference, Anaheim, CA Keynote
- May 2016 ISERC Conference, Anaheim, CA (+ invited panelist) "Certainty Equivalent Models for Biopharmaceutical Production Planning"
- April 2017, Texas A&M University, College Station, TX. "Centralized and Decentralized Warehouse Logistics Collaboration"
- October 2017, Northeastern University Engineering Leadership Lecture
- November 2017, Project Production Institute Annual Symposium, SF, CA "Managing Supply Networks – Concepts and Definitions"
- December 2017, University of Michigan Industrial and Operations Engineering "Warehouse Logistics"
- October 2018, IMA, Minneapolis, Minnesota "Behaviorial Analytics"

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- November 2018, Virginia Tech ISE, "Warehouse Logistics"
- May 2019, POMS Conference, Washington DC, "The Role of Robustness in Inventory vs Timeliness Tradeoff in Project Delivery"
- October 2020, October 2022, U Michigan, guest lecture "Supply Chain Risk Management"
- June 2022, Chicago, IL + virtual, INFORMS Revenue Management and Pricing Conference, Plenary Session: "Pricing at Amazon" (w/Tara Mardan)