

CURRICULUM VITAE

July 2009

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Professional History

- 4/03 – *Stanford University*
Paul E. Holden Professor of Management Science, Graduate School of Business
Senior Fellow by Courtesy, Freeman-Spogli Institute for International Studies
Spence Faculty Fellow, 2005-06
Winnick Family Faculty Fellow, 2009-10
- 7/02 – 3/03 *Stanford University*
Professor, Graduate School of Business
- 2/97 – 6/02 *Massachusetts Institute of Technology*
The Digital Equipment Corporation Leaders for Manufacturing Professor,
Sloan School of Management
- 7/01 – 6/02 *University of Canterbury, New Zealand*
Visiting Erskine Fellow, Department of Management
- 7/94 – 1/97 *Massachusetts Institute of Technology*
Professor, Sloan School of Management
- 8/94 – 7/95 *University of Cambridge*
Visiting Fellow, Statistical Laboratory
- 7/93 – 6/94 *Massachusetts Institute of Technology*
Associate Professor with Tenure, Sloan School of Management
- 7/91 – 6/93 *Massachusetts Institute of Technology*
Associate Professor, Sloan School of Management
- 1/88 – 6/91 *Massachusetts Institute of Technology*
Assistant Professor, Sloan School of Management
- 4/86 – 6/86 *Stanford University*
Teaching Fellow
- 4/85 – 12/87 *Stanford University*
Teaching and Research Assistant
- 1/83 – 5/83 *Massachusetts Institute of Technology*

Teaching Assistant
5/81 – 12/82 *W.R. Grace and Co.*
Senior Operations Research Analyst
6/79 – 5/81 *Bell Telephone Laboratories*
Member of Technical Staff

Education

Stanford University

Ph.D. in Operations Research, January 1988
Thesis Title: Asymptotically Optimal Scheduling of a
Two-Station Multiclass Queueing Network
Thesis Advisor: J. Michael Harrison
M.S. in Statistics, June 1985
M.S. in Operations Research, August 1980

Cornell University

B.S. in Operations Research and Industrial Engineering, May 1979

University Activities

Stanford

Ph.D. Program Liaison for OIT Group, 2006-

M.I.T.

Area Head of Management Science Area, 2000-2001.
Executive Personnel Committee, 2000-2001.
Co-organizer, Operations Management Summer Camp, 1999.
Core Redesign Committee, Sloan School, 1998-99.
Doctoral Program Committee, Sloan School, 1997-99.
Masters Program Committee, Sloan School, 1988-89, 1991-92.
Staff Member of Operations Research Center, 1988-01.
Chair, Faculty Recruiting Committee, 1995-96.
Reader of Ph.D. Applications, Sloan School, 1989-99.
Reader of Ph.D. Applications, Operations Research Center, 1988-98.
Edgerton Award Selection Committee, 1995-96.

Industrial Consulting

Thomson Hybrides et Microondes, France, March 1989 - December 1990.
Intel Corporation, April, 1993.
Anonymous brain cancer patient, July - August, 1999.

Neoptis, Inc., Advisory Board, 2000-2001.
Risk Management Solutions, 2003.

Research Grants

IBM/University Manufacturing Systems Research Grant, 1988-1990, \$137,500
(with S.C. Graves.)
IBM/University Manufacturing Systems Research Grant, 1990-1991, \$82,035.
Leaders for Manufacturing Junior Faculty Grant, 1988-89, \$15,000.
Leaders for Manufacturing Research Grant, 1989-90, \$30,000.
Leaders for Manufacturing Junior Faculty Grant, 1989-90, \$15,000.
National Science Foundation Presidential Young Investigator Award, 1990-94, \$125,00 plus
\$187,500 potential in matching funds.
Leaders for Manufacturing Research Grant, 1990-91, \$35,000.
Leaders for Manufacturing Research Grant, 1990-91, \$40,000 (with R. Welsch).
Leaders for Manufacturing Junior Faculty Grant, 1990-91, \$16,000.
Texas Instruments Research Grant, 1990-1991, \$30,000.
Texas Instruments Research Grant, 1991-1992, \$15,900.
Leaders for Manufacturing Liaison Research Grant, 1991-92, \$43,650.
Leaders for Manufacturing Junior Faculty Grant, 1991-92, \$18,000.
Leaders for Manufacturing Liaison Research Grant, 1992-93, \$67,100.
Leaders for Manufacturing Junior Faculty Grant, 1992-93, \$18,000.
Leaders for Manufacturing Liaison Research Grant, 1993-94, \$66,047.
American Foundation for AIDS Research, 1993-94, \$59,641.
Leaders for Manufacturing Liaison Research Grant, 1994-95, \$63,600.
Engineering and Physical Sciences Research Council Award (UK), 1994-95, 14,500 pounds.
Leaders for Manufacturing Research Grant, 1996, \$30,000.
Genzyme Tissue Repair, 1996-97, \$10,000.
Program on the Pharmaceutical Industry, MIT, 1996-97, \$65,000.
Singapore - MIT Alliance, 2000-2002, \$312,500.
IBM Faculty Partnership Award, 2000-2001, \$40,000.
MIT eBusiness Center Vision Research Fund, 2000-2001, \$50,000.
Fogarty International Center, NIH, 2002, \$22,000.
Secretary's Council on Public Health Preparedness, U.S. Department of Health and
Human Services, 2003, \$120,000.
Lawrence Livermore National Laboratory, 2004-05, \$60,000.

Subjects Taught

15.760 Introduction to Operations Management, Spring 1988-93, 1996-00, Summer 1998-01.
15.764 Stochastic Models of Manufacturing, Spring 1989.
15.062 Decision Support Systems, III, Spring 1990.
15.764 Theory of Operations Management, Spring 1991-94, 96-00.
15.072J Queues: Theory and Applications, Spring 1991-93, 97-98; Fall 1995, 1998.
15.060 Data, Models and Decisions, Fall 1993.
15.098 Special Seminar in Applied Probability, 1990-1998.
15.968 Manufacturing Systems I, Fall 2000.
OIT262 Operations, Winter 2003-2007, Spring 2008-2009.
OIT664 Stochastic Networks, Spring 2004, 2006, 2008.
OIT659 Operations Models in Homeland Security, Spring 2007, Fall 2008.

Ph.D. Thesis Supervision

Jihong Ou, Operations Research Center, MIT, "Dynamic Scheduling of Queueing Networks," 1991.
Philippe B. Chevalier, Operations Research Center, MIT, "Two Topics in Multistage Manufacturing Systems," 1992.
Michael H. Veatch, Operations Research Center, MIT, "Queueing Control Problems for Production/Inventory Systems," 1992.
Rodrigo Rubio Maqueo, Operations Research Center, MIT, "Dynamic-Stochastic Vehicle Routing and Inventory Problem," 1995.
David M. Markowitz, Operations Research Center, MIT, "A Unified Approach to Single Machine Scheduling: Heavy Traffic Analysis of Dynamic Cyclic Policies," 1996.
Stefanos A. Zenios, Operations Research Center, MIT, "Health Care Applications of Optimal Control Theory," 1996.
L. Beril Toktay, Operations Research Center, MIT, "Two Topics in Supply Chain Management," 1998.
Rebecca M. D'Amato, Operations Research Center, MIT, "Management of Antiretroviral Therapy for HIV Infection: Modeling When to Change Therapy," 1998.
Jeremie Gallien, Operations Research Center, MIT, "Optimization-Based Auctions and Stochastic Assembly Replenishment for Industrial Procurement," 2000.
Rene Caldentey, Sloan School of Management, MIT, "A Make-to-Stock Queue in the Supply Chain and eBusiness Settings," 2001.
Joseph T. Wu, Operations Research Center, MIT, "Optimization of Influenza Vaccine Strain Selection," 2003.
Damian R. Beil, Operations Research Center, MIT, "Two Topics in Online Auctions," 2003.

Yuval Nov, Graduate School of Business, Stanford University, “Modeling and Analysis of Protein Design Under Resource Constraints,” 2004.

Yifan Liu, Institute for Computational and Mathematical Engineering, Stanford University, “Mathematical Models in Homeland Security,” 2006.

Manas Baveja, Institute for Computational and Mathematical Engineering, Stanford University, “Biometric Analysis of the US-VISIT Program,” 2007.

Michael P. Atkinson, Institute for Computational and Mathematical Engineering, Stanford University, “Mathematical Models in Homeland Security and Counterterrorism,” 2007.

Master’s Thesis Supervision

Robert Luck, Sloan School of Management, “Managing Queues: A Case Study,” 1989.

Michael Kierszenbaum, Operations Research Center, “The Impact of Delays on Quality Control,” 1990 (co-advised with Charles Fine).

James W. Lawton, Leaders for Manufacturing Program, “Workload Regulating Wafer Release in a GaAs Fab Environment,” 1990.

Linda Jill Lemire, Operations Research Center, “Due-Date Setting and Pricing in a $M/M/1$ First-Come First-Served Queue,” 1990.

Mark D. Longtin, Operations Research Center, “Sequential Screening in Semiconductor Manufacturing: Exploiting Spatial Dependence,” 1992.

Stephen Bylcew, Leaders for Manufacturing Program, “A Pull System Approach for a Steel Plant,” 1992.

Jeff Hamlin, Leaders for Manufacturing Program, “A Strategic Approach to Assessing Needs and Engineering Cost/Performance Tradeoffs for Internally Developed High Performance Assembly Machines,” 1994.

Beatrice Munz, Leaders for Manufacturing Program, “Cost Analysis of Product Recovery Process in Single-Use Camera Life Cycle,” 1995.

Vijay Mihra, Leaders for Manufacturing Program, “Development of a Seamlessly Integrated Factory Planning Software Tool to Evaluate and Optimize Surface Mount Manufacturing Lines,” 1995.

Jeremy M. Bowman, Operations Research Center, “Analysis and Optimization of a Biotechnology Service Operation,” 1997.

Anne Paige DiCenso, Leaders for Manufacturing Program, “Cost Effect of Uniquely Designed Component Choices over the Product Life of a Workstation,” 1997.

Paul Gifford, Leaders for Manufacturing Program, “Analysis of Control Mechanisms in a Re-entrant Manufacturing System,” 1997.

Scott D. Howarth, Leaders for Manufacturing Program, “Development Cycle Time Reduction for Customized Helicopter Wiring Systems,” 1997.

Stephen H. Muir, Leaders for Manufacturing Program, "Semiconductor Fabrication Capacity Gains Through Optimal Allocation of Product Loadings and Equipment Sharing Across Process Technologies," 1997.

Thomas Besson, Department of Materials Science, "Simulation Modeling as a Tool for Assessing the Impact of Inventory Control and Scheduling Policies in the Manufacturing of Specialty Steel," 1998.

Todd Cooper, Leaders for Manufacturing Program, "Methodology and Justification for Building Operational Consistency in a High Volume Manufacturing Facility," 1998.

Elisabetta Cortesi, Leaders for Manufacturing Program, "Analysis and Reduction of Variability in Scanning Electron Microscopy Measurements of Critical Dimensions," 1998.

Paul D. DeCosta, Leaders for Manufacturing Program, "An Analysis of Revenue and Product Planning for Automatic Test Equipment Manufacturers," 1998.

Michael Farrell, Leaders for Manufacturing Program, "Economic Modeling of a Hyaluronic Acid Supply Chain to Help Evaluate Plan and Improve Manufacturing Strategy," 1998.

John F. Fiske, Leaders for Manufacturing Program, "Planning for the Future: The Reengineering of a Computer Assembly Plant," 1998.

Dean Harper, Leaders for Manufacturing Program, "Logistics and Inventory Management for Supporting the Customer Service Function," 1998.

Maria Jose Alvarez, Leaders for Manufacturing Program, "Evaluation of the Accessory Business: Focus on the Electromechanical Grips," 1999.

Shafali Rastogi, Leaders for Manufacturing Program, "Increased Experiment Velocity in a Production Environment," 1999.

Ning Zhou, Leaders for Manufacturing Program, "Improving Line Yield at Fab 17," 2000.

Timothy B. Frederick, Leaders for Manufacturing Program, "Developing Strategies for System Assembly, Flexible Labor, and Inventory in the Electronic Manufacturing Services Industry," 2000.

Teo Chee Chong, Ong Choon Keong and Yeo Lip Pin, Singapore MIT Alliance, "A Study of Semiconductor Back-end Manufacturing: Special Focus on Scheduling Techniques," 2001.

Published Papers and Technical Reports

1. 1988a. Empirical Evaluation of a Queueing Network Model for Semiconductor Wafer Fabrication, *Operations Research* **36**, 202-215, (with H. Chen, J.M. Harrison, A. Mandelbaum, and A. van Ackere).
2. 1988b. Scheduling Semiconductor Wafer Fabrication, *IEEE Transactions of Semiconductor Manufacturing* **1**,115-130.

3. 1989a. Capacity Allocation in Generalized Jackson Networks, *Operations Research Letters* **8**, 143-146.
4. 1989b. Scheduling Networks of Queues: Heavy Traffic Analysis of a Simple Open Network, *Queueing Systems* **5**, 265-280, (with J. M. Harrison).
5. 1990a. Optimal Control of a Two-Station Brownian Network, *Mathematics of Operations Research* **15**, 2, 215-242.
6. 1990b. Scheduling Networks of Queues: Heavy Traffic Analysis of a Two-Station Closed Network, *Operations Research* **38**, 1052-1064, (with J.M. Harrison).
7. 1990c. Scheduling Networks of Queues: Heavy Traffic Analysis of a Two-Station Network With Controllable Inputs, *Operations Research* **38**, 1065-1078.
8. 1991a. Brownian Networks With Discretionary Routing, *Operations Research* **39**, 322-340.
9. 1991b. Due-Date Setting and Priority Sequencing in a Multiclass M/G/1 Queue, *Management Science* **37**, 834-850.
10. 1991c. The Impact of Processing Time Knowledge on Dynamic Job Shop Scheduling, *Management Science* **37**, 1002-1014, (with J. Ou).
11. 1992a. On the Relationship Between Yield and Cycle Time in Semiconductor Wafer Fabrication, *IEEE Transactions on Semiconductor Manufacturing* **5**, 156-158.
12. 1992b. Performance Bounds for Scheduling Queueing Networks, *Annals of Applied Probability* **2**, 460-480, (with J. Ou).
13. 1992c. A Broader View of the Job Shop Scheduling Problem, *Management Science* **38**, 1018-1033, (with P. B. Chevalier).
14. 1992d. Scheduling Networks of Queues: Heavy Traffic Analysis of a Multistation Network With Controllable Inputs, *Operations Research* **40**, S312-S334.
15. 1992e. Dynamic Scheduling of a Multiclass Make-to-Stock Queue, *Operations Research* **40**, 724-735.
16. 1992f. On the Improvement from Scheduling a Two-Station Queueing Network in Heavy Traffic, *Operations Research Letters* **11**, 225-232, (with J. Ou).
17. 1992g. A Product Design Problem in Semiconductor Manufacturing, *Operations Research* **40**, 986-998, (with F. Avram).
18. 1992h. Monotone Control of Queueing Networks, *Queueing Systems* **12**, 391-408, (with M. H. Veatch).

19. 1993a. Scheduling Networks of Queues: Heavy Traffic Analysis of a Multistation Closed Network, *Operations Research* **41**, 743-758, (with P. B. Chevalier).
20. 1994a. Optimal Control of a Two-Station Tandem Production/Inventory System, *Operations Research* **42**, 337-350, (with M. H. Veatch).
21. 1994b. Scheduling Networks of Queues: Heavy Traffic Analysis of a Bi-Criteria Problem, Chapter 7 of *Stochastic Modeling and Analysis of Manufacturing Systems*, Ed. David D. Yao, Springer-Verlag, New York.
22. 1995a. Dynamic Scheduling of a Production/Inventory System with By-Products and Random Yield, *Management Science*, **41**, 1000-1017, (with J. Ou).
23. 1996a. Sequential Screening in Semiconductor Manufacturing, I: Exploiting Spatial Dependence, *Operations Research* **44**, 173-195, (with M. D. Longtin and R. E. Welsch).
24. 1996b. Sequential Screening in Semiconductor Manufacturing, II: Exploiting Lot-to-Lot Variability, *Operations Research* **44**, 196-205, (with J. Ou).
25. 1996c. Setting Base Stock Levels Using Product-form Queueing Networks, *Management Science* **42**, 259-268, (with R. Rubio).
26. 1996d. Pooled Testing for HIV Screening: Capturing the Dilution Effect, *Operations Research* **44**, 543-569, (with S. A. Zenios).
27. 1996e. Scheduling a Make-to-Stock Queue: Index Policies and Hedging Points, *Operations Research* **44**, 634-647, (with M. H. Veatch).
28. 1996f. Heavy Traffic Analysis of a Transportation Network Model, *Journal of Applied Probability* **33**, 870-885, (with W. B. Peterson).
29. 1997a. Dynamic Multidrug Therapies for HIV: A Control-Theoretic Approach, *Journal of Theoretical Biology* **185**, 15-29, (with S. A. Zenios and M. A. Nowak).
30. 1997b. Inspection for Circuit Board Assembly, *Management Science* **43**, 1198-1213, (with P. B. Chevalier).
31. 1998a. Mathematical Analysis of Antiretroviral Therapy Aimed at HIV-1 Eradication or Maintenance of Low Viral Loads, *Journal of Theoretical Biology* **192**, 81-98, (with R. M. D'Amato and A. S. Perelson).
32. 1998b. Pooled Testing for HIV Seroprevalence Estimation: Exploiting the Dilution Effect, *Statistics in Medicine* **17**, 1447-1467, (with S. A. Zenios).
33. 1998c. Dynamic Scheduling of a Two-Class Queue with Setups, *Operations Research* **46**, 532-547, (with M. I. Reiman).

34. 1998d. A Dynamic Stochastic Stock Cutting Problem, *Operations Research* **46**, 690-701, (with E. V. Krichagina, R. Rubio and M. I. Taksar).
35. 1998e. Management of Antiretroviral Therapy for HIV Infection: Modelling When to Change Therapy, *Antiviral Therapy* **3**, 147-158, (with R. M. D'Amato and R. A. D'Aquila).
36. 1999a. Evidence-based Organ Allocation, *American Journal of Medicine* **107**, 52-61, (with S. A. Zenios and G. B. Chertow).
37. 1999b. Heavy Traffic Analysis of Polling Systems in Tandem, *Operations Research* **47**, 524-534, (with M. I. Reiman).
38. 1999c. Heavy Traffic Analysis of the Dynamic Stochastic Inventory-Routing Problem, *Transportation Research* **33**, 361-380, (with R. Rubio and M. I. Reiman).
39. 2000a. The Stochastic Economic Lot Scheduling Problem: Heavy Traffic Analysis of Dynamic Cyclic Policies, *Operations Research* **48**, 136-154, (with D. M. Markowitz and M. I. Reiman).
40. 2000b. Dynamic Allocation of Kidneys to Candidates on the Transplant Waiting List, *Operations Research* **48**, 549-569, (with S. A. Zenios).
41. 2000c. Dynamic Optimization of a Linear-Quadratic Model with Incomplete Repair and Volume-Dependent Sensitivity and Repopulation, *International Journal of Radiation Oncology, Biology and Physics* **47**, 1073-1083, (with J. E. Cohen and J. T. Wu).
42. 2000d. Management of Antiretroviral Therapy for HIV Infection: Analyzing When to Change Therapy, *Management Science* **46**, 1200-1213, (with R. M. D'Amato and R. A. D'Aquila).
43. 2000e. Inventory Management of Remanufacturable Products, *Management Science* **46**, 1412-1426, (with L. B. Toktay and S. A. Zenios).
44. 2001a. Heavy Traffic Analysis of Dynamic Cyclic Policies: A Unified Treatment of the Single Machine Scheduling Problem, *Operations Research* **49**, 246-270, (with D. M. Markowitz).
45. 2001b. Estimation of Replicative Senescence via a Population Dynamics Model of Cells in Culture, *Experimental Gerontology* **36**, 79-88, (with J. T. Wu).
46. 2001c. Modeling and Analysis of a Virus that Replicates Selectively in Tumor Cells, *Bulletin of Mathematical Biology* **63**, 731-768, (with J. T. Wu, H. M. Byrne and D. H. Kirn).
47. 2001d. Analysis of a Forecasting-Production-Inventory System with Stationary Demand, *Management Science* **47**, 1268-1281, (with L. B. Toktay).

48. 2001e. A Simple and Effective Component Procurement Policy for Stochastic Assembly Systems, *Queueing Systems* **38**, 221-248, (with J. Gallien).
49. 2001f. Analysis and Comparison of Multimodal Cancer Treatments, *IMA Journal of Applied Mathematics in Medicine and Biology* **18**, 343-376, (with D. R. Beil).
50. 2002a. Sequencing Surgery, Radiotherapy and Chemotherapy: Insights From a Mathematical Analysis, *Breast Cancer Research and Treatment* **74**, 279-286, (with D. R. Beil).
51. 2002b. Emergency Response to a Smallpox Attack: The Case for Mass Vaccination, *Proceedings of the National Academy of Sciences* **99**, 10935-10940, (with E. H. Kaplan and D. L. Craft).
52. 2002c. A Mathematical Model of the the Impact of Novel Treatments on the $A\beta$ Burden in the Alzheimer's Brain, CSF and Plasma, *Bulletin of Mathematical Biology* **64**, 1011-1031, (with D. L. Craft and D. J. Selkoe).
53. 2002d. A Mathematical Model of the Impact of Infused Cytotoxic Agents on Brain Tumors: Implications for Detection, Design and Delivery, *Cell Proliferation* **35**, 343-361, (with J. T. Wu, A. G. Ianculescu and R. K. Puri).
54. 2002e. Hepatic Arterial Infusion of a Replication-selective Oncolytic Adenovirus (dl1520): Phase II Viral, Immunologic, and Clinical Endpoints, *Cancer Research* **62**, 6070-6079 (with T. Reid, E. Galanis, J. Abbruzzese, D. Sze, J. Andrews, B. Randlev, C. Heise, M. Uprichard, M. Hatfield, L. Rome, J. Rubin and D. Kirn).
55. 2003a. Smallpox Eradication in West and Central Africa: Surveillance-Containment or Herd Immunity?, *Epidemiology* **14**, 90-92, (with E. H. Kaplan).
56. 2003b. Emergency Response to an Anthrax Attack, *Proceedings of the National Academy of Sciences* **100**, 4346-4351 (with E. H. Kaplan and D. L. Craft).
57. 2003c. Analysis of a Decentralized Production-Inventory System, *Manufacturing & Services Operations Management* **5**, 1-17 (with R. Caldentey).
58. 2003d. Validation and Analysis of a Mathematical Model of a Replication-competent Oncolytic Virus for Cancer Treatment: Implications for Virus Design and Delivery, *Cancer Research* **63**, 1317-1324 (with J. T. Wu and D. H. Kirn).
59. 2003e. Optimal Scheduling of Radiotherapy and Angiogenic Inhibitors, *Bulletin of Mathematical Biology* **65**, 407-424 (with A. Ergun and K. Camphausen).
60. 2003f. Smallpox Bioterror Response (a Letter), *Science* **300**, 1503-1505 (with E. H. Kaplan).

61. 2003g. Detecting a Bioterror Attack by Screening Blood Donors: A Best-case Analysis, *Emerging Infectious Diseases* **9**, 909-914 (with E. H. Kaplan, C. A. Patton and W. P. FitzGerald).
62. 2003h. Analyzing Bioterror Response Logistics: The Case of Smallpox, *Mathematical Biosciences* **185**, 33-72 (with E. H. Kaplan and D. L. Craft).
63. 2003i. An Inverse-optimization-based Auction Mechanism to Support a Multi-attribute RFQ Process, *Management Science* **49**, 1529-1545 (with D. R. Beil).
64. 2004a. Analysis of a Three-way Race Between Tumor Growth, a Replication-competent Virus and an Immune Response, *Bulletin of Mathematical Biology* **66**, 605-625 (with J. T. Wu and D. H. Kirn).
65. 2004b. Decision Making for Bioterror Preparedness: Examples from Smallpox Vaccination Policy, Chapter 20 in *Handbook of OR/MS Applications in Health Care*, Eds., F. Sainfort, M. Brandeau and W. Pierskalla, Kluwer Publishers (with E. H. Kaplan).
66. 2004c. The Impact of Novel Treatments on A β Burden in Alzheimer's Disease: Insights from a Mathematical Model, Chapter 32 in *Handbook of OR/MS Applications in Health Care*, Eds., F. Sainfort, M. Brandeau and W. Pierskalla, Kluwer Publishers (with D. L. Craft and D. J. Selkoe).
67. 2005a. Evaluation of a HEPA/Vaccine Plan for Indoor Remediation After an Airborne Anthrax Attack, *Emerging Infectious Diseases* **11**, 69-76 (with Y. Liu and T. J. Leighton).
68. 2005b. Modeling and Analysis of Protein Design Under Resource Constraints, *Journal of Computational Biology* **12**, 247-282 (with Y. Nov).
69. 2005c. A Smart Market for Industrial Procurement with Capacity Constraints, *Management Science* **51**, 76-91 (with J. Gallien).
70. 2005d. Using Fingerprint Image Quality to Improve the Identification Performance of the U.S. Visitor and Immigrant Status Indicator Technology Program, *Proceedings of the National Academy of Sciences* **102**, 7772-7775 (with M. Baveja).
71. 2005e. Analyzing Bioterror Response Logistics: The Case of Anthrax, *Management Science* **51**, 679-694 (with D. L. Craft and A. H. Wilkins).
72. 2005f. Analyzing a Bioterror Attack on the Food Supply: The Case of Botulinum Toxin in Milk, *Proceedings of the National Academy of Sciences* **102**, 9984-9989 (with Y. Liu).
73. 2005g. Optimization of Influenza Vaccine Selection, *Operations Research* **53**, 456-476 (with J. T. Wu and A. S. Perelson).

74. 2005h. Evaluation of Public Health Interventions for Anthrax: a Report to the Secretary's Council on Public Health Preparedness, *Biosecurity and Bioterrorism* **3**, 348-356 (with D. L. Craft).
75. 2006a. Preventing Catastrophic Chemical Attacks, *Issues in Science & Technology* **23**, 1, 31-33.
76. 2006b. Preventing the Importation of Illicit Nuclear Materials in Shipping Containers, *Risk Analysis* **26**, 1377-1393 (with A. H. Wilkins, M. Baveja and S. E. Flynn).
77. 2006c. Revenue Management of a Make-to-Stock Queue, *Operations Research* **54**, 859-875 (with R. Caldentey).
78. 2007a. Analyzing the Control of Mosquito-borne Diseases by a Dominant Lethal Genetic System, *Proceedings of the National Academy of Sciences* **104**, 9540-9545 (with M. P. Atkinson, Z. Su, N. Alphey, L. S. Alphey, P. G. Coleman).
79. 2007b. The Last Line of Defense: Designing Radiation Detection-Interdiction Systems to Protect Cities From a Nuclear Attack, *IEEE Transactions on Nuclear Science* **54**, 654-669 (with M. P. Atkinson).
80. 2007c. The Optimal Spatiotemporal Deployment of Radiation Portal Monitors Can Improve Nuclear Detection at Overseas Ports, *Science & Global Security* **15**, 211-233 (with Y. Liu, Z. Cao and S. E. Flynn).
81. 2008a. A Queueing Analysis to Determine How Many Additional Beds Are Needed for the Detention and Removal of Illegal Aliens, *Management Science* **54**, 1-15 (with Y. Liu).
82. 2008b. Spatial Queueing Analysis of an Interdiction System to Protect Cities From a Nuclear Attack, *Operations Research* **56**, 247-254 (with M. P. Atkinson).
83. 2008c. Quantifying the Routes of Transmission for Pandemic Influenza, *Bulletin of Mathematical Biology* **70**, 820-867 (with M. P. Atkinson).
84. 2008d. Optimal Stopping Analysis of a Radiation Detection System to Protect Cities From a Nuclear Terrorist Attack, *Risk Analysis* **28**, 353-371 (with M. P. Atkinson and Z. Cao).
85. 2008e. Mathematically Assessing the Consequences of Food Terrorism Scenarios, *Journal of Food Science* **73**, M346-M353 (with Y. Liu).
86. 2009a. A Pooling Analysis of Two Simultaneous Online Auctions, *Manufacturing & Services Operations Management* **11**, 33-51 (with D. R. Beil).
87. 2009b. Analyzing the Homeland Security of the U.S.-Mexico Border, *Risk Analysis* **29**, 699-713 (with A. Motskin and Y. Liu).

88. 2009c. Space Debris: Assessing Risk and Responsibility, *Advances in Space Research* **43**, 1372-1390 (with A. M. Bradley).
89. 2009d. Assessing Infection Control Measures for Pandemic Influenza, *Risk Analysis* **29**, 949-962 (with M. P. Atkinson).
90. 2009e. Homeland Security: From Mathematical Models to Policy Implementation, to appear in *Operations Research*.
91. 2009f. An Effective Two-Finger, Two-Stage Biometric Strategy for the US-VISIT Program, to appear in *Operations Research* (with M. Baveja).
92. 2009g. A Dynamic Model for Post-Traumatic Stress Disorder Among U.S. Troops in Operation Iraqi Freedom, to appear in *Management Science* (with M. P. Atkinson and A. Guetz).
93. 2009h. Asymptotic Biometric Analysis for Large Gallery Sizes, submitted for publication (with M. Baveja and H. Yuan).

Non-refereed Publications and Op-Eds

1. 1998. Mathematical Control of Antiviral Therapy. *The Physician's Research Notebook* **3**, 12-14.
2. 1999. Mathematical Modeling of Brain Cancer to Identify Promising Combination Treatments. On <http://www.virtualtrials.com/btreport.cfm>.
3. 2003a. In the Large and in the Small(pox). *OR/MS Today*, April, 71-72 (with E. H. Kaplan).
4. 2003b. Unready for Anthrax, Op-Ed, *Washington Post*, July 28, pg A21 (with E. H. Kaplan).
5. 2003c. The Citizen as First Responder. Cato Institute, August 12, Washington, D.C., (with E. H. Kaplan and W. J. Bicknell).
6. 2004. Testimony for a joint hearing, The House Select Committee on Homeland Security Subcommittee on Infrastructure and Border Security and the Subcommittee on Intelligence and Counterterrorism, "Disrupting Terrorist Travel: Safeguarding America's Borders Through Information Sharing." September 30.
7. 2005a. Got Toxic Milk?, Op-Ed, *New York Times*, May 30, pg A19.
8. 2005b. Think Inside the Box, Op-Ed, *New York Times*, November 29, pg A31.

9. 2006a. Testimony for a hearing on Port Security by the CA State Assembly Select Committee on Ports, June 21.
10. 2006b. Face Facts, Op-Ed, *New York Times*, October 25, pg A19.
11. 2007. Biological and Chemical Safety Nets, Op-Ed, *Wall Street Journal*, February 27, pg A17.
12. 2008. Neither Snow, Nor Rain, Nor Anthrax, ..., Op-Ed, *New York Times*, October 12, pg A25.
13. 2009a. Counting the Walking Wounded, Op-Ed, *New York Times*, January 26, pg A23.
14. 2009b. A Threat in Every Port, Op-Ed, *New York Times*, June 15, pg A21.

Conferences and Lectures

- “Scheduling Semiconductor Wafer Fabrication.”
Special Interest Conference on Queueing Networks and Their Applications, ORSA Technical Section/TIMS College on Applied Probability, New Brunswick, NJ, 1/87.
- “Asymptotically Optimal Scheduling of Two-Station Multiclass Closed Queueing Networks.” ORSA/TIMS Conference, New Orleans, LA, 5/87.
- “Asymptotically Optimal Scheduling of Two-Station Multiclass Queueing Networks.” ORSA/TIMS Conference, St. Louis, MO, 10/87.
- “Scheduling Flexible Manufacturing Systems via Brownian Approximations of Queueing Network Flow Control Problems.” Applied Sciences Seminar, Harvard University, 3/88.
Operations Research Center Seminar, Massachusetts Institute of Technology, 3/88.
- “Two Design Problems for Queueing Networks with General Distributions.” ORSA/TIMS Conference, Washington, D.C., 4/88.
- “Scheduling Networks of Queues: Heavy Traffic Analysis of a Simple Open Network.” ORSA/TIMS Conference, Denver, CO, 10/88.
- “Heavy Traffic Analysis of Queueing Network Scheduling Problems.” Applied Mathematics Seminar, Brown University, Providence, RI, 11/88.
- “Scheduling Networks of Queues: Heavy Traffic Analysis of a Multistation Network With Controllable Inputs.” ORSA/TIMS Conference, Vancouver, B. C., Canada, 5/89.
- “Scheduling Semiconductor Wafer Fabrication.” Thomson Hybrides et Microondes, Orsay Cedex, France, 9/89.

- “A Broader View of the Job Shop Scheduling Problem.”
 Symposium, Operations Research and Productivity in Manufacturing, Columbia University, New York City, NY 10/89.
 Operations Management Seminar, MIT, 11/89.
 University of Canterbury, New Zealand, 12/90.
 University of Wellington, New Zealand, 12/90.
 University of Hong Kong, 12/91.
- “Due-Date Setting and Priority Sequencing in a Multiclass $M/G/1$ Queue.”
 ORSA/TIMS Conference, New York City, 10/89.
- “Due-Date Setting and Priority Sequencing in a Two-Station Queueing Network.”
 ORSA/TIMS Conference, New York City, NY 10/89.
- “Reducing the Variance of Sojourn Times in Multiclass Queueing Systems.”
 SIAM/ORSA Applied Probability Conference, New Orleans, LA, 3/90.
- “A Product Design Problem in Semiconductor Manufacturing.”
 SIAM/ORSA Applied Probability Conference, New Orleans, La., 3/90.
 MIT Operations Management Meeting, MIT, 7/90.
- “Scheduling Networks of Queues: Heavy Traffic Analysis of a Multistation Closed Network.” ORSA/TIMS Conference, Las Vegas, NE, 5/90.
- “Performance Bounds for Scheduling Queueing Networks.”
 ORSA/TIMS Conference, Philadelphia, PA, 10/90.
- “The Impact of Processing Time Knowledge on Dynamic Job Shop Scheduling.”
 ORSA/TIMS Conference, Philadelphia, PA, 10/90.
- “Dynamic Scheduling of a Multiclass Make-to-Stock Queue.”
 ORSA/TIMS Conference, Philadelphia, PA, 10/90.
- “Scheduling Queueing Networks in Heavy Traffic.”
 Bellcore, Morristown, NJ, 11/90.
 GTE Laboratories, Waltham, MA, 11/90.
- “Dynamic Scheduling of a Production/Inventory System with By-Products and Random Yield.” ORSA Applied Probability Conference, Monterey, CA, 1/91.
- “Scheduling and Control of Production/Inventory Systems.”
 MIT Operations Management Seminar, 4/91.
 Graduate School of Business, Stanford University, 5/91.
- “Optimal Control of a Multistage Production/Inventory System.”
 Multi-Echelon Inventory Systems Conference, Berkeley, CA, 6/91.

- “Dynamic Scheduling of a Random Production/Inventory System.”
ORSA/TIMS Conference, Anaheim, CA, 11/91.
- “Optimal Production Control of a Tandem Make-to-Stock Queueing System.”
ORSA/TIMS Conference, Anaheim, CA, 11/91.
- “Optimal Inspection Allocation in Networks of Queues.”
ORSA/TIMS Conference, Anaheim, CA, 11/91.
- “Sequential Screening in Semiconductor Manufacturing: Exploiting Lot-to-Lot Variability and Spatial Dependence.” MIT Operations Management Seminar, 12/91.
Graduate School of Business, Columbia University, 12/91.
Graduate School of Industrial Administration, Carnegie Mellon University, 12/91.
Decision Systems Laboratory, Texas Instruments, Inc., Dallas TX 1/92.
Sematech, Austin TX, 1/92.
Operations Management Conference, Stanford University, 6/92.
Advanced Semiconductor Manufacturing Conference and Workshop, Cambridge, MA, 9/92.
Industrial and Operations Engineering Department, University of Michigan, Ann Arbor, MI, 10/92.
- “A Dynamic Stochastic Stock-Cutting Problem.”
ORSA/TIMS Conference, Orlando, FLA, 4/92.
- “Final Testing Strategies in Semiconductor Manufacturing.”
ORSA/TIMS Conference, Orlando, FLA, 4/92.
- “Singular Control Problems Arising from Scheduling Queueing Networks in Heavy Traffic.” Research Workshop on “Convergence and the Skorohod Problem in Optimal Control,” Center for Nonlinear Analysis, Carnegie Mellon University, 10/92.
- “Scheduling a Make-to-Stock Queue: Index Policies and Other Heuristics.”
ORSA/TIMS Conference, San Francisco, CA, 11/92.
- “Sequential Screening in Semiconductor Manufacturing: Exploiting Spatial Dependence.”
ORSA/TIMS Conference, Chicago, IL, 5/93.
- “Scheduling Networks of Queues in Heavy Traffic.”
Workshop on Discrete Event Systems, Manufacturing Systems and Communication Networks, Institute of Mathematics and its Applications, Minneapolis, MN, 5/93.
- “Dynamic Scheduling of a Two-Class Queue With Setups.”
ORSA/TIMS/SIAM Applied Probability Conference, Paris, 6/93.
MIT Operations Management Conference, 7/93.
Workshop on Stochastic Networks, Institute of Mathematics and its Applications, Minneapolis, MN, 3/94.

- “Scheduling Networks of Queues: A New Approach to Factory Scheduling.”
Invited Workshop, POMS Conference, Boston, MA, 10/93.
- “Heavy Traffic Analysis of the Stochastic Two-Product Economic Lot Scheduling Problem.” ORSA/TIMS Conference, Phoenix, AR, 10/93.
- “Heavy Traffic Analysis of Queueing Systems with Setups.”
INRIA, Valbonne, France, 10/94.
Statistical Laboratory, U. of Cambridge, England, 11/94.
Netherlands National Queueing Conference, Amsterdam, 4/95.
Mathematics and Statistics Department, University of Newcastle-Upon-Tyne, England, 5/95.
Fuqua School of Business, Duke University, 4/96.
Faculty of Management, University of Toronto, 10/96.
- “Heavy Traffic Analysis of Polling Systems in Tandem.”
Applied Probability Workshop, U. of Cambridge, England, 12/94.
- “Control of Queueing Networks and Stochastic Compartmental Models.”
Zoology Department, Oxford University, England, 3/95.
- “Inventory Management of Recycled Products.”
School of Management, University of Rotterdam, Netherlands, 4/95.
- “Dynamic Multidrug Therapies for HIV.”
Harvard Medical School, Boston, MA, 10/95.
Stanford Medical School, Stanford, CA, 1/96.
Sloan School of Management, MIT, Cambridge, MA, 4/96.
INFORMS Conference, Atlanta, GA, 11/96 (Invited Tutorial).
- “Heavy Traffic Analysis of the Dynamic Stochastic Inventory-Routing Problem.”
INFORMS Conference, New Orleans, LA, 10/95.
- “Mathematical Considerations of Antiviral Therapy.”
Physician’s Research Network, New York, NY, 5/97.
Biostatistics Department, Harvard University, Boston, MA, 8/97.
Industrial and Operations Engineering Department, U. of Michigan, Ann Arbor, MI, 9/97.
IBM Watson Research Center, Yorktown Heights, NY 5/98.
- “Dynamic Optimization of a Linear-quadratic Model with Imperfect Repair and Volume-dependent Sensitivity and Repopulation.” INFORMS Conference, Montreal, Canada, 5/98.
- “Management of Antiretroviral Therapy for HIV Infection: Modeling When to Change Therapy.” University of Colorado Health Sciences Center HIV Opinion Leader Investigators Meeting, Barcelona, Spain, 7/98.

- “Mathematical Modeling of a Replication-competent Adenovirus for p53-deficient Tumors: Insights into Design and Delivery.” Onyx Pharmaceutical Company, Richmond, CA, 8/98.
- “Two Mathematical Models for Cancer Therapy.”
 Industrial and Operations Engineering Department, U. of Michigan, Ann Arbor, MI, 9/98.
 Sloan School of Management, MIT, Cambridge, MA, 10/98.
 Industrial Engineering Department, Northwestern University, Evanston, IL, 10/98.
 Graduate School of Business, Stanford University, Stanford, CA, 11/98.
 Wharton School of Business, University of Pennsylvania, Philadelphia, PA, 12/98.
- “Some Mathematical Models of Cancer Treatment.”
 Graduate School of Industrial Administration, Carnegie Mellon University, Pittsburgh, PA, 11/99.
 Operations Research Center, MIT, Cambridge, MA, 12/99.
 Department of Mathematics, Williams College, Williamstown, MA, 4/00.
 Department of Manufacturing Engineering, Boston University, Boston, MA, 4/00.
 Tutorial Talk, INFORMS Conference, San Antonio, 11/00.
 Graduate School of Business, Stanford University, Stanford, CA, 11/00.
 INSEAD, Fontainebleau, France, 1/01.
 Applied Mathematics Seminar, University of Auckland, New Zealand, 10/01.
 Plenary talk, Operations Research Society of New Zealand, Christchurch, NZ, 12/01.
- “Smart B2B Auctions.”
 emarkets Spring 2000 Meeting, MIT Media Laboratory, Cambridge, MA, 4/00.
- “Modeling and Analysis of Some e-Business Operations Problems.”
 IBM T. J. Watson Research Center, Yorktown Heights, NY, 8/00.
 Stanford Workshop on Incentives and Coordination in Operations, Stanford University, Stanford, CA, 9/00.
- “An Auction Mechanism to Support an eRFQ Process.”
 Supply Chain Roundtable, MIT, Cambridge, MA, 4/01.
 eBusiness Center, MIT, Cambridge, MA, 5/01.
 Management Department, Waikato University, Hamilton, New Zealand, 10/01.
 Management Department, University of Auckland, New Zealand, 10/01.
 INFORMS Conference, Miami, FL, 11/01.
- “Revenue Management of a Make-to-Stock Queue.”
 INFORMS Revenue Management Conference, Columbia University, New York, NY, 6/01.
- “A Mathematical Model of the Impact of Novel Treatments in Alzheimer’s Disease.”
 Victoria University, Wellington, New Zealand, 11/01.
 Elan Pharmaceuticals, South San Francisco, CA, 10/02.

“Bioterror Response Logistics.”

Consultation Meeting on Smallpox, NIH, Bethesda, MD, 5/02.
Los Alamos National Laboratory, Los Alamos, NM, 8/02.
IMA Workshop on Bioterror Logistics, Minneapolis, MN, 9/02.
Center for International Security and Cooperation, Stanford University, Stanford, CA, 10/02.
Industrial Engineering and Operations Research Department, University of California, Berkeley, CA, 10/02.
Operations, Information and Technology Department, Stanford University, Stanford, CA, 10/02.
Biostatistics Workshop, Medical School, Stanford University, Stanford, CA, 10/02.
Tutorial talk, INFORMS Conference, San Jose, CA, 11/02.
Lawrence Livermore National Laboratory, Lawrence, CA, 2/03.
Risk Management Solutions, Fremont, CA, 2/03.
Lifelong Learning Series, Graduate School of Business, Stanford University, Stanford, CA, 2/03.
Advisory Council Meeting, Graduate School of Business, Stanford University, Stanford, CA, 5/03.
Management Board Meeting, Graduate School of Business, Stanford University, Stanford, CA, 9/03.
Student Recognition Dinner, Graduate School of Business, Stanford University, Stanford, CA, 9/03.
Trustee Meeting, Graduate School of Business, Stanford University, Stanford, CA, 9/03.

“Emergency Response to an Anthrax Attack.”

Health and Human Services Department, US Government, Washington, D.C., 6/03.
U.S. Capitol Building, Washington, D.C., 6/03.
Bioearth Summit, Boston, MA, 6/03.
Secretary’s Council on Public Health Preparedness, Health and Human Services Department, Bethesda, MD, 9/03.
Anthrax Vaccine Research Program Meeting, Centers for Disease Control and Prevention, Atlanta, GA, 10/03.
Center for Health Policy, Stanford Medical School, Stanford, CA, 5/04.

“The Future of Science: Bioterrorism.” (An interview with Charlie Rose)

Healthcare CEO Summit, Pebble Beach, CA, 7/03.

“Preventing the Importation of Illicit Nuclear Materials in Shipping Containers.”

Lawrence Livermore National Laboratory, Livermore, CA, 10/03.
INFORMS National Meeting, Atlanta, GA, 10/03.

Department of Homeland Security, Washington, D.C., 10/03.
Transportation Security Agency, Pentagon City, VA, 10/03.
White House, Washington, D.C., 10/03.
RAE Systems, Sunnyvale, CA, 11/03.
US Bureau of Customs and Border Protection, Washington, D.C., 4/04.
Center for Naval Operations, Pentagon, Pentagon City, VA, 4/04.
National Nuclear Security Agency, Washington, D.C., 7/09.

“Operations Management and Homeland Security.”

M&SOM Fellows Talk, INFORMS National Meeting, Atlanta, GA, 10/03.
Management Science & Engineering Department, Stanford University, Stanford, CA, 11/03.
Plenary Talk, INFORMS Practice Conference, Palm Springs, CA, 4/05.

“Evaluation of a HEPA/Vaccine Plan for Indoor Remediation After an Airborne Anthrax Attack”

Center for Strategic and International Studies, Washington, D.C., 4/04.
Los Alamos National Laboratory, Los Alamos, NM, 8/04.
INFORMS National Meeting, Denver, CO, 10/04.

“Homeland Security: Insights from Mathematical Models”

Spring Retreat, Hoover Institution, Stanford University, Stanford, CA, 5/04.

“Analyzing a Bioterror Attack on the Food Supply: The Case of Botulinum Toxin in Milk”

Los Alamos National Laboratory, Los Alamos, NM, 9/04.
Center for Strategic and International Studies, Washington, D.C., 9/04.
INFORMS National Meeting, Denver, CO, 10/04.

“Using Fingerprint Image Quality to Improve the Identification Performance of the US-VISIT Program”

White House, Washington, D.C., 10/04.
Department of Homeland Security, Washington, D.C., 10/04.
House Select Committee on Homeland Security, Washington, D.C., 10/04.
US-VISIT Program Interagency Working Group, National Institute of Standards and Technology, Gaithersburg, MD, 6/05.
Governmental Accountability Office, Washington, D.C., 6/05.

“Homeland Security and Operations Research”

Operations Research Center, MIT, Cambridge, MA, 10/04

Graduate School of Business, Columbia University, New York, NY, 10/04.

Department of Operations Research and Industrial Engineering, University of California, Berkeley, 11/05.

Alliance for Innovation in Manufacturing, Stanford University, Stanford, CA, 10/05.

“A Queuing Analysis to Determine How Many Additional Beds Are Needed for the Detention and Removal of Illegal Aliens”

Detention and Removal Operations Office, Department of Homeland Security, Washington, D.C., 6/05.

Governmental Accountability Office, Washington, D.C., 6/05.

“Bioterrorism: From Mathematical Models to Policy Implementation”

Stanford Institute for Economic Policy Research Economic Summit, Stanford University, Stanford, CA, 3/06.

“Quantifying the Routes of Transmission and Assessing Nonpharmaceutical Interventions for Pandemic Influenza”

Sloan Foundation Workshop on Nonpharmaceutical Interventions for Pandemic Influenza, New York, NY, 6/06.

Center for Strategic and International Studies, Washington, D.C., 6/06.

White House, Washington, D.C., 6/06.

Management Science and Engineering Department, Stanford University, Stanford, CA, 10/06.

Freeman Spogli Institute for International Studies, Stanford University, Stanford, CA, 11/06.

INFORMS National Meeting, Pittsburgh, PA, 11/06.

“Homeland Security: From Mathematical Models to Policy Implementation”

Wharton School, University of Pennsylvania, Philadelphia, PA, 9/06.

Tutorial speaker, INFORMS National Meeting, Seattle, WA, 11/07.

Philips McCord Morse Lecture, INFORMS National Meeting, Washington, DC, 10/08.

Biostatistics Workshop, Stanford University, Stanford, CA, 1/09.

Stanford Institute for Economic Policy Research, Stanford University, Stanford, CA, 1/09.

Plenary Speaker, M&SOM Annual Conference, Cambridge, MA, 07/09.

Defense Science Research Council/DARPA Summer Conference, Santa Cruz, CA, 07/09.

“Mitigating the Consequences of Three Catastrophic Health Care Scenarios: From Mathematical Models to Implementation”
Plenary Speaker, Operations Research in Health Care Meeting, MIT, Cambridge, MA, 5/07.

“Analyzing the Homeland Security of the U.S.-Mexico Border”
Center for Strategic and International Studies, Washington, D.C., 5/07.

Professional Activities

Memberships and Honors

Member, National Academy of Engineering, 2009
Advisory Committee, Quadrennial Review of the U.S. Department of Homeland Security, 2009
Homeland Security Advisory Group, Barack Obama’s 2008 Presidential Election Campaign (Chair of the Chemical Plant Security Group)
Lanchester Prize, 2008
INFORMS President’s Award, 2007
Philip McCord Morse Lectureship, 2007.
M&SOM Fellow Selection Committee, 2007.
INFORMS Expository Writing Award, 2005.
Fellow, INFORMS, 2005.
Fellow, Manufacturing and Services Operations Management Society, 2003
Von Neumann Prize Committee, 2003-05 (Chair, 2005)
Koopman Prize, 2002
INFORMS Nomination Committee, 2002
Chair, Applied Probability Section Prize Committee, 2001
Applied Probability Section Prize Committee, 2000-02
Chair, Applied Probability Special Interest Group, INFORMS, 1996-98
Vice-Chair, Applied Probability Special Interest Group, INFORMS, 1995-96
Lanchester Prize Committee, 1994
The Erlang Prize for Young Applied Probabilists, 1993
Presidential Young Investigator Award, National Science Foundation, 1990
Council Member, Applied Probability Special Interest Group, ORSA, 1990-92
Second prize, George E. Nicholson Student Paper Competition, 1988
IBM Graduate Predoctoral Fellowship Award, 1986-87
Treasurer of Stanford University Student Chapter of ORSA, 1986-87
The Tau Beta Pi Association
The Institute of Electrical and Electronic Engineers
The Institute of Industrial Engineers
The Institute for Management Sciences

Operations Research Society of America
Society of Industrial and Applied Mathematics

Referee for

American Journal of Epidemiology
Annals of Applied Probability
Annals of Operations Research
Biosecurity and Bioterrorism
European Journal of Operations Research
George E. Nicholson Student Paper Competition, 1989
IEEE Journal of Robotics and Automation
IEEE Transactions on Automatic Control
IEEE Transactions on Information Theory
IEEE Transactions on Semiconductor Manufacturing
IIE Transactions
Israeli Science Foundation
Journal of AIDS and Human Retrovirology
Journal of Manufacturing Systems
Journal of the Royal Society Interface
Journal of Theoretical Biology
Management Science
Mathematical Biosciences
Mathematics of Operations Research
National Science Foundation
Operations Research
Operations Research Letters
Optimal Control, Applications and Methods
Proceedings for the IMA
Public Library of Science: Medicine
Queueing Systems
Risk Analysis
SIAM Journal of Control and Optimization
SIAM Journal on Applied Mathematics
Stochastic Models
Theoretical Population Biology

Associate Editor for

Annals of Applied Probability, 1992-1995
Management Science (Applied Stochastic Models), 1990-1995
Operations Research (Manufacturing, Production and Scheduling), 1991-1995

Area Editor for

Operations Research (Manufacturing Operations), 1996-2000

Member of Editorial Board for

Physician's Research Network Notebook, 1997-1998

Senior Editor for

Manufacturing and Service Operations Management (MSOM), 1998-2004

Editor-in-Chief for

Operations Research, 2000-2005