October 2020

#### CURRICULUM VITAE

Name: Date of Birth: Citizenship:	Stephen C. Graves November 1951 U.S.	Department: Sloan School of Management Place of Birth: Pittsfield, MA Marital Status: Married	
<u>Education:</u> <u>Scho</u>	<u>ol</u>	Degree	<u>Date</u>
	•	A.B. M.B.A. M.S. Ph.D.	1973 1974 1976 1977

Title of Doctoral Thesis:	The Multiproduct Production Cycling Problem for	
	Stochastic Demand and Finite Production Capacity	

## Principal Fields of Interest: Operations Management, Applied Operations Research

## Name and Rank of Other SSM Faculty in Same Field:

Gabriel R. Bitran	Professor
Joann de Zegher	Assistant Professor
Steven D. Eppinger	Professor
Vivek Farias	Professor
Charles H. Fine	Professor
Daniel Freund	Assistant Professor
Negin Golrezaei	Assistant Professor
Jonas Jonasson	Assistant Professor
Retsef Levi	Professor
Georgia Perakis	Professor
Thomas Roemer	Senior Lecturer
Zeynep Ton	Professor of Practice
Nikolaos Trichakis	Associate Professor
Yanchong Karen Zheng	Associate Professor

### Non-M.I.T. Experience:

<u>Employer</u>	Position	<u>Date</u>
Educational Testing Service	Management Science Analyst	Summer 1972
Simonds Saw and Steel	Management Science Analyst	Summer 1973
University of Rochester	Research Assistant	Summer 1974
University of Rochester	Instructor	Summers 75-77
University of Rochester	Visiting Research Associate	Summers 79-80
Eastman Kodak	Management Science Analyst	Summers 80-81

Shanghai Institute of	Visiting Professor	July 82-Jan 83
Mechanical Engineering		
Optiant	Member of Advisory Board	2000 - 2009
Servigistics	Chief Scientist	2001 – 2004
JDA	Chief Science Advisor	2005 - 2011

### History of M.I.T. Appointments:

<u>Rank</u>	<u>Beginning</u>	<u>Ending</u>
Assistant Professor, Sloan School of Management	7/77	6/81
Associate Professor, Sloan School of Management	7/81	6/87
Professor, Sloan School of Management	7/87	
Leaders for Manufacturing Professor	7/88	6/93
Deputy Dean	9/90	8/93
Abraham J. Siegel Professor of Management	10/95	
Professor, Engineering Systems Division (joint)	7/99	6/15
Professor, Mechanical Engineering Department (joint)	7/05	
Interim Director, Engineering Systems Division	9/12	12/13

### Industrial Consulting Record:

### Firm and Dates

Bausch and Lomb, 1976; Shycon Associates, 1980 - 1986; GTE Research Laboratories, 1981 - 1982, 1984, 1986; Illinois Central Gulf Railroad, 1982; C.S. Draper Laboratory, 1982 - 1984; ROLM Corporation, 1984, 1993; Palladian Software, 1986; GM Research Laboratories, 1986 - 1997, 2003 - 2004; W.R. Grace, 1987, 1991; Millipore, 1988; WearGuard, 1988; Alcoa, 1993 - 1994; Amazon.Com, 2001; Invistics, 2002 - 2005; Servigistics, 2001 - 2003; JDA, 2003 - 2011; Honeywell, 2003; FormFactor 2006; McMaster-Carr 2007; Sears Holdings, 2015; New York City, 2017; State of Michigan, 2017; Oniqua 2018; PGATour 2019; State of Texas, 2020; Fair Fight Georgia, 2020.

## Institute Activities:

Staff Member of Operations Research Center, 1977 - present
Undergraduate Advisor, 1978 - present
Freshman Advisor, 1991- 1998, 2002 - 2005, 2008 - present
Member of Sloan Program Committees: 1978 – 2013 (SB); 1978-1980 (SM); 1985-1987, 1994 – 1998, 2005 - 2008 (PhD).
Chair of Sloan Undergraduate Education Committee, 2010 - 2013
Member of Committee on Academic Performance, 1984 - 1986
Member of Committee on Discipline, 1995 – 1997
Chair of Sloan Dean Search Committee, 1987
Member of Freshman Housing Committee, 1989

Acting CoDirector, Leaders for Manufacturing Program, 1989 -1990 Chair of Parking and Transportation Committee, 1989 -1995 Member of Parking and Transportation Committee, 2016 - 2021 CoDirector, Leaders for Manufacturing Program, 1994 - 2001 CoDirector, System Design and Management Program, 1999 - 2001 Chair of Task Force on ROTC, 1995 – 1996 Chair of Sloan Dean Search Committee, 1998 Chair of MIT Faculty, 2001 - 2003 Chair of Faculty Policy Committee, 2001 – 2003 Member of Task Force on Campus Security, 2001 Member, ad hoc committee on Access to and Disclosure of Scientific Information, 2002 Chair, review committee on Faculty Newsletter, 2002 Faculty Newsletter, Editorial Board, 2003 – 2009 Member of Faculty Advisory Committee for MIT Presidential Search, 2004 - 2005 Member of Committee on Undergraduate Admissions and Financial Aid, 2004 – 2006 Chair of Committee on Undergraduate Admissions and Financial Aid, 2007 – 2008 Member of ad hoc committee on MIT Disciplinary System, 2005 Member of ad hoc committee on MLK Visiting Professor Program, 2006 Member of Stellar faculty advisory committee, 2004 – 2010 Chair of Search Committee for Dean of Graduate Student Office, 2007 Chair of Dean for Graduate Education Search Advisory Committee, 2010 Chair of Committee on Graduate Policy, 2008 – 2011 Member of Commencement Committee, 2007 – 2011, 2018 – 2019 Member of Search Committee for Director of Student Financial Services, 2008- 2009 Chair of Search Committee for Director of Financial Aid, 2009 – 2010 Member of MIT150 Steering Committee, 2008 – 2011 Chair of ad hoc committee: Strategic Review of MIT Sloan's Undergraduate Programs, 2009 Member of Education Working Group of the MIT Planning Task Force, 2009 Member of NGS3 faculty advisory group, 2009-2011 Member of Independent Activities Period (IAP) Subcommittee of the FPC, 2012 Member of Committee on the Undergraduate Program, 2011 – 2013 Chair of Committee on the Undergraduate Program, 2013 - 2014 Co-chair of Task Force for Graduate Student Professional Development, 2012 – 2013 Member of ROTC Oversight Committee, 2012-2014 Member of Employee Assistance Program (EAP) Advisory Committee, 2015 - 2021 Member of ad hoc Group on the Future of Libraries, 2015 – 2016 Member of Committee on Campus Planning, 2016 – 2017 Chair of Committee on Campus Planning, 2017 - 2018 Member of Committee on Community Giving, 2016 – 2021 Member of ad hoc Committee of Graduate Housing, 2017 – 2019 Member of DAPER Advisory Board, 2017 – 2020 Graduate Officer, IDSS, 2017 – 2020 Graduate Officer, ORC, 2020 Member of Educational Effectiveness planning group, MIT Accreditation, 2018 – 2019 Member of Committee on Student Life, 2018 – 2020 Member of Search Committee for Athletic Director, 2019

Member of Graduate Housing transition team, 2019 - 2020

### Professional Activities:

Associate Editor - Operations Research, 1981-1986; Management Science, 1983-1986, 2001 -2003; Manufacturing & Service Operations Management, 1997 – 2008, 2015 - 2017 Department Editor - Management Science, 1987-1991 Area Editor - Operations Research, 2006 – 2008 Editor - Manufacturing & Service Operations Management, 2009 - 2014 Functional Area Editor - Interfaces, 1985-1986 Editor, Edelman Special Issue, Interfaces, 1989 - 2007 Member - INFORMS Member of Student Affairs Committee for ORSA, 1980-1983 Edelman Award Committee, 1988 – 2007; 2011 & 2012 (Chair) INFORMS (formerly TIMS/ORSA) Publication Committee, 1990-1998, 2006 - 2008 Vice President, Publications - INFORMS, 1994 – 1995 Member of INFORMS Board, 2020 – 2022 (president elect; president; past president)

## Awards:

Fellow of the Manufacturing and Service Operations Management Society Fellow of the Production and Operations Management Society INFORMS Fellow 1999 Billard Award for service at MIT 2012 MSOM Distinguished Service Award Zaragoza Logistics Center: Medal of Distinction (2013) INFORMS Case Competition, First Prize (2005) M&SOM Best Paper Award (2017) Member of National Academy of Engineering

### Subjects Taught:

- 15.062 Decision Models for Management
- 15.761 Operations Management
- 15.763 Practice of Operations Management
- 15.764 Theory of Operations Management
- 15.053 Introduction to Management Science
- 15.770J Transportation and Logistics Analysis
- 15.066J System Optimization and Analysis for Manufacturing
- 15.762 Operations Management: Models and Applications
- 15.762J Supply Chain Planning
- 15.763J Manufacturing Systems and Supply Chain Design
- 15.A03 Operations Research Can be Fun (freshmen seminar)
- EC.733J D Lab Supply Chains (15.772J)
- 15.762x Supply Chains for Manufacturing I (MITx)
- 15.763x Supply Chains for Manufacturing II (MITx)

## Publications:

# <u>Books</u>

- <u>Handbook in Operations Research and Management Science, Volume 4: Logistics of</u> <u>Production and Inventory</u>, edited by S. C. Graves, A. H. G. Rinnooy Kan and P. H. Zipkin, North-Holland, Amsterdam, 1993.
- <u>Handbook in Operations Research and Management Science, Volume 11: Supply Chain</u> <u>Management: Design, Coordination and Operation</u>, edited by A. G. De Kok and S. C. Graves, Elsevier, Amsterdam, 2003.

## Papers

- 3. Optimal Storage Assignment in Automatic Warehousing Systems, (with W.H. Hausman and L.B. Schwarz), *Management Science*, February 1976, Vol. 22, 629-638.
- 4. Single Cycle Continuous Review Policies for Arborescent Production/Inventory Systems, (with L.B. Schwarz), *Management Science*, January 1977, Vol. 23, 529-540.
- 5. Storage-Retrieval Interleaving in Automatic Warehousing Systems, (with W.H. Hausman and L.B. Schwarz), *Management Science*, May 1977, Vol. 23, 935-945.
- 6. A Note on 'Critical Ratio Scheduling: An Experimental Analysis', *Management Science*, August 1977, Vol. 23, 1358-1359.
- 7. On 'Production Runs for Multiple Products: The Two-Product Heuristic', (with R.W. Haessler), *Management Science*, July 1978, Vol. 24, 1194-1196.
- 8. Scheduling Policies for Automatic Warehousing Systems: Simulation Results, (with W.H. Hausman and L.B. Schwarz), *AllE Transactions*, September 1978, Vol. 10, 260-270.
- 9. A Note on the Deterministic Demand Multi-Product Single-Machine Lot Scheduling Problem, *Management Science*, March 1979, Vol. 25, 276-280.
- 10. A Methodology for Studying the Dynamics of Extended Logistics Systems, (with J. Keilson), Naval Research Logistics Quarterly, July 1979, Vol. 26, 169-197.
- 11. An n-Constraint Formulation of the (Time Dependent) Traveling Salesman Problem, (with K.R. Fox and B. Gavish), *Operations Research*, July-August 1980, Vol. 28, 1018-1021.
- 12. The Multi-Product Production Cycling Problem, *AllE Transactions*, September 1980, Vol. 12, 233-240.

- 13. A One-Product Production/Inventory Problem with Continuous Review Policy, (with B. Gavish), *Operations Research*, September-October 1980, Vol. 28, 1228-1236.
- 14. Production/Inventory Systems with a Stochastic Production Rate Under a Continuous Review Policy, (with B. Gavish), *Computers and Operations Research*, 1981, Vol. 8, 169-183.
- 15. Multistage Lot-Sizing: An Iterative Procedure, in TIMS Studies in Management Science, *Multi-Level Production/Inventory Systems: Theory and Practice*, edited by L.B. Schwarz, 1981, Vol. 16, 95-109.
- 16. The Compensation Method Applied to a One-Product Production Inventory Model, (with J. Keilson), *Mathematics of Operations Research*, May 1981, Vol. 6, 246-262.
- 17. A Review of Production Scheduling, *Operations Research*, July-August 1981, Vol. 29, 646-675.
- 18. Problem Formulations and Numerical Analysis in Integer Programming and Combinatorial Optimization, (with J.F. Shapiro), in *Mathematical Programming with Data Perturbations I*, edited by A.V. Fiacco, 1982, 131-148.
- 19. Using Lagrangean Techniques to Solve Hierarchical Production Planning Problems, *Management Science*, March 1982, Vol. 28, 260-275.
- 20. The Application of Queueing Theory to Continuous Perishable Inventory Systems, *Management Science*, April 1982, Vol. 28, 400-406.
- 21. A Multiple-Item Inventory Model with a Job Completion Criterion, *Management Science*, November 1982, Vol. 28, 1134-1137.
- 22. System Balance for Extended Logistic Systems, (with J. Keilson), *Operations Research*, March-April 1983, Vol. 31, 234-252.
- 23. An Integer Programming Procedure for Assembly System Design Problem, (with B. Lamar), *Operations Research*, May-June 1983, Vol. 31, 522-545.
- 24. Scheduling of Re-entrant Flow Shops, (with H.C. Meal, D. Stefek, and A.H. Zeghmi), *Journal of Operations Management*, August 1983, Vol. 3, 197-207.
- 25. A Simple Stochastic Model for Facility Planning in a Mental Health Care System, (with H.S. Leff, J. Natkins, and M. Senger), *Interfaces*, October 1983, Vol. 13, 101-110.
- 26. Deep-Draft Dredging of U.S. Coal Ports: A Cost-Benefit Analysis, (with M. Horwitch and E.H. Bowman), *Policy Sciences*, Vol. 17, 1984.
- 27. A Study of Production Smoothing in a Job Shop Environment, (with A.B. Cruickshanks and R.D. Drescher), *Management Science*, March 1984, Vol. 30, 368-380.

- 28. A Minimum Concave-Cost Dynamic Network Flow Problem with an Application to Lot-Sizing, (with J.B. Orlin), *Networks*, Vol. 15, 1985.
- 29. Description and Field Test of a Mental Health System Resource Allocation Model, (with H.S. Leff, J. Natkins, and J. Bryan), *Administration in Mental Health*, Fall 1985, Vol. 13, 43-68.
- 30. Continuous-Review Policies for a Multi-Echelon Inventory Problem with Stochastic Demand, (with M. DeBodt), *Management Science*, October 1985, Vol. 31, 1286-1299.
- 31. A Multi-Echelon Inventory Model for a Repairable Item with One-for-One Replenishment, *Management Science*, October 1985, Vol. 31, 1247-1256.
- 32. An LP Planning Model for a Mental Health Community Support System, (with H.S. Leff and M. Dada), *Management Science*, February 1986, Vol. 32, 139-155.
- 33. Overlapping Operations in Material Requirements Planning, (with M.M. Kostreva) *Journal of Operations Management*, Vol. 6, No. 3, May 1986, 283-294.
- 34. Two-Stage Production Planning in a Dynamic Environment, (with H.C. Meal, S. Dasu, Y. Qiu), in Lecture Notes in Economics and Mathematical Systems, *Multi-Stage Production Planning and Inventory Control*, edited by S. Axsater, Ch. Schneeweiss, and E. Silver, Springer-Verlag, Berlin, 1986, Vol. 266, 9-43.
- 35. A Tactical Planning Model for a Job Shop, *Operations Research*, July-August 1986, Vol. 34, 522-533.
- 36. Equipment Selection and Task Assignment for Multiproduct Assembly System Design, (with C.A. Holmes Redfield) *International Journal of Flexible Manufacturing Systems*, 1988, Vol. 1, No. 1, pp. 31-50.
- 37. Safety Stocks in Manufacturing Systems, *Journal of Manufacturing and Operations Management,* 1988, Vol. 1, No. 1, pp. 67-101.
- 38. Determining the Spares and Staffing Level for a Repair Depot, *Journal of Manufacturing and Operations Management*, 1988, Vol. 1, No. 2, pp. 227-241.
- 39. A Composite Algorithm for the Concave-Cost Network Flow Problem, (with A. Balakrishnan) *Networks*, Vol. 19, 1989, pp. 175-202.
- 40. A Tactical Planning Model for Manufacturing Subcomponents of Mainframe Computers, (with C. Fine), *Journal of Manufacturing and Operations Management*, 1989, Vol. 2, No. 1, pp. 4-34.
- 41. A Model for the Configuration of Incoming WATS Lines, (with R. H. Blake and P. C. Santos), *Queueing Systems*, 1990, Vol. 7, No. 1, pp. 3-21.

- 42. Principles on the Benefits of Manufacturing Process Flexibility, (with W. C. Jordan), Management Science, April 1995, Vol. 41, No. 4, pp. 577 - 594.
- 43. A Multi-Echelon Inventory Model with Fixed Replenishment Intervals, *Management Science*, January 1996, Vol. 42, No. 1, pp. 1-18.
- 44. Cyclic Scheduling in a Stochastic Environment, (with H. Zhang), *Operations Research*, November-December 1997, Vol. 45, No. 6, pp. 894-903.
- A Dynamic Model for Requirements Planning with Application to Supply Chain Optimization, (with D. B. Kletter and W. B. Hetzel) *Operations Research*, May-June 1998, Vol. 46, Supp. No. 3, pp. S35-S49.
- 46. OMAC: A System for Operations Modeling and Analysis, (with K. N. McKay and D. B. Kletter), *Annals of OR*, Vol. 72, 1997, pp. 241-264.
- 47. Reducing Flow Time in Aircraft Manufacturing, (with Jackson Chao), *Production and Operations Management*, Spring 1998, Vol. 7, No. 1, pp. 38-52.
- 48. A Single-Item Inventory Model for a Non-Stationary Demand Process, *Manufacturing & Service Operations Management*, 1999, Vol. 1, No. 1, pp. 50-61.
- 49. Optimizing Strategic Safety Stock Placement in Supply Chains, (with S. P. Willems), Manufacturing & Service Operations Management, 2000, Vol. 2, No. 1, pp. 68 – 83.
- 50. Manufacturing Planning and Control, in <u>Handbook of Applied Optimization</u>, edited by P. Pardalos and M. Resende, Oxford University Press, New York, 2002, pp. 728 746.
- 51. Technology Portfolio Management: Optimizing Interdependent Projects over Multiple Time Periods, (with M. Dickinson and A. Thornton), *IEEE Transactions on Engineering Management*, Vol. 48, No. 4, November 2001, pp. 518-527.
- 52. Creating an Inventory Hedge for Markov-Modulated Poisson Demand: Application and Model, (with H. S. Abhyankar), *Manufacturing & Service Operations Management*, Fall 2001, Vol. 3, No. 4, pp. 306 320.
- 53. Process Flexibility in Supply Chains, (with B. T. Tomlin), *Management Science*, July 2003, Volume 49, Number 7, pp. 907 919.
- 54. Supply Chain Design: Safety Stock Placement and Supply Chain Configuration, (with S. Willems), Chapter 3 in <u>Handbook in Operations Research and Management Science,</u> <u>Volume 11: Supply Chain Management: Design, Coordination and Operation</u>, edited by A. G. De Kok and S. C. Graves, Elsevier, Amsterdam, 2003, pp. 95 - 132.

- 55. Optimizing the Supply-Chain Configuration for New Products, (with S. Willems), *Management Science*, August 2005, Vol. 51, No. 8, pp. 1165 – 1180.
- 56. Logistics Network Design with Supplier Consolidation Hubs and Multiple Shipment Options, (with M.L.F. Cheong, R. Bhatnagar), *Journal of Industrial and Management Optimization*, Volume 3, Number 1, February 2007, pp. 51–69.
- 57. A Single-Product Inventory Model for Multiple Demand Classes, (with H. Arslan, T. Roemer) *Management Science*, September 2007, Vol. 53, No. 9, pp. 1486 – 1500.
- Flexibility Principles, Chapter 3 in <u>Building Intuition: Insights from Basic Operations</u> <u>Management Models and Principles</u>, edited by D. Chhajed and T. J. Lowe, Springer Science+Business Media, LLC, New York, 2008, pp. 33 – 49.
- 59. Little's Law, (with J. D. C. Little), Chapter 5 in <u>Building Intuition: Insights from Basic</u> <u>Operations Management Models and Principles</u>, edited by D. Chhajed and T. J. Lowe, Springer Science+Business Media, LLC, New York, 2008, pp. 81 – 100.
- Strategic Inventory Placement in Supply Chains: Non-Stationary Demand, (with S. Willems) Manufacturing & Service Operations Management, Spring 2008, Vol. 10, No. 2, pp. 278 – 287.
- 61. The Benefits of Re-Evaluating Real-Time Order Fulfillment Decisions, (with P. Xu and R. Allgor), *Manufacturing & Service Operations Management*, Spring 2009, Vol. 11, No. 2, pp 340-355.
- 62. Strategic Safety Stocks in Supply Chains with Evolving Forecasts, (with Tor Schoenmeyr) *Manufacturing & Service Operations Management,* Fall 2009, Vol. 11, No. 4, pp 657-673.
- Optimal Planning Quantities for Product Transition, (with Hongmin Li and Donald Rosenfield), *Production and Operations Management*, March-April 2010, Vol. 19, No. 2, pp 142 – 155.
- 64. Uncertainty and Production Planning, in <u>Production and Inventories in the Extended Enterprise</u>, edited by Karl G. Kempf, Pinar Keskinocak, and Reha Uzsoy, *International Series in Operations Research & Management Science* Volume 151, Springer US, 2011, pp 83 101.
- 65. Setting Planned Lead Times for a Make-To-Order Production System under Master Schedule Smoothing, (with C. C. Teo and R. Bhatnagar), *IIE Transaction*, 2011, Vol. 43, No. 6, pp. 399-414.
- 66. How to Catch a Tiger: Understanding Putting Performance on the PGA Tour, (with Douglas Fearing and Jason Acimovic), *Journal of Quantitative Analysis in Sports*, 2011, Vol. 7: Issue 1, Article 5. DOI: 10.2202/1559-0410.1268.

- 67. Pricing Decisions during Inter-generational Product Transitions, (with Hongmin Li) *Production and Operations Management*, January-February 2012, Vol. 21, No. 1, pp 14-28.
- 68. Remanufacturing and Energy Savings, (with T. Gutowski, S. Sahni, and A. Boustani), Environmental Science & Technology, 2011, Vol. 45, pp. 4540-4547.
- 69. An Application of Master Schedule Smoothing and Planned Lead Time Control, (with C. C. Teo and R. Bhatnagar), *Production and Operations Management*, March-April 2012, Vol. 21, No. 2, pp 211 223.
- Ship-Pack Optimization in a Two-Echelon Distribution System, (with Naijun Wen and Justin Ren), *European Journal of Operational Research*, August 2012, Vol. 220, Issue 3, pp. 777-785.
- 71. Optimal Capacity Conversion for Product Transitions under High Service Requirements, (with Hongmin Li and Woonghee Tim Huh), *Manufacturing & Service Operations Management*, Winter 2014, Vol. 16, No. 1, pp. 46-60.
- 72. A Forecast-driven Tactical Planning Model for a Serial Manufacturing Systems, (with Pallav Chhaochhria) *International Journal of Production Research*, December 2013, 51:23-24, pp. 6860-6879.
- Water Desalination Supply Chain Modeling and Optimization: The Case of Saudi Arabia, (with Malak T. Al-Nory) *IDA Journal of Desalination and Water Reuse*, Vol. 5, No. 2 (2013) pp 64 - 74.
- 74. Supply Chain Design for the Global Expansion of Manufacturing Capacity in Emerging Markets, (with Stefan Weiler, Dayán Páez, Jung-Hoon Chun, Gisela Lanza), *CIRP Journal of Manufacturing Science and Technology*, Vol. 4, No. 3 (265-280), 2011.
- 75. A Network Flow Approach for Tactical Resource Planning in Outpatient Clinics, (with Thu Ba T. Nguyen, Appa Iyer Sivakumar), *Health Care Management Science*, Vol. 18, No. 2 (2015): pp.124-136.
- 76. Desalination Supply Chain Decision Analysis and Optimization, (with Malak T. Al-Nory, Alexander Brodsky, Burçin Bozkaya), *Desalination* Vol. 347 (2014), pp. 144-157.
- 77. Making Better Fulfillment Decisions on the Fly in and Online Retail Environment, (with J. Acimovic), *Manufacturing & Service Operations Management*, Winter 2015, Vol. 17, No. 1, pp 34-51.
- Setting Optimal Production Lot Sizes and Planned Lead Times in a Job Shop System, (with Rong Yuan), *International Journal of Production Research*, (2016), Vol. 54, Issue 20, pp 6105 - 6120. DOI: 10.1080/00207543.2015.1073859.

- 79. OM Forum Practice-Based Research in Operations Management: What It Is, Why Do It, Related Challenges, and How to Overcome Them, (with Jeremie Gallien and Alan Scheller-Wolf) *Manufacturing & Service Operations Management*, Winter 2016, Vol. 18, No. 1, pp 5 -14. <u>http://dx.doi.org/10.1287/msom.2015.0566</u>
- Strategic Safety Stock Placement in Supply Chains with Capacity Constraints (with Tor Schoenmeyr) *Manufacturing & Service Operations Management*, Summer 2016, Vol. 18, No. 3, pp 445 - 460. <u>http://dx.doi.org/10.1287/msom.2016.0577</u>.
- Inventory Management in a Consumer Electronics Closed-Loop Supply Chain, (with Andre Calmon), Manufacturing & Service Operations Management, Fall 2017, Vol. 19, No. 4, pp 568 585. <u>https://doi.org/10.1287/msom.2017.0622</u>
- Scheduling Rules to Achieve Lead-time Targets in Outpatient Appointment Systems, (with Thu Ba T. Nguyen, Appa Iyer Sivakumar), *Health Care Management Science*, December 2017, Vol. 20, No. 4, pp 578-589. <u>http://dx.doi.org/10.1007/s10729-016-9374-2</u>.
- No Magic Bullet: A Theory-based Meta-analysis of Markov Transition Probabilities in Studies of Service Systems for Persons with Serious Mental Illness, (with H. Stephen Leff, Clifton Chow) *Psychiatric Services* (2017), Vol. 68, No. 3, pp 278-287, <u>http://dx.doi.org/10.1176/appi.ps.201500523</u>.
- 84. Mitigating Spillover in Online Retailing via Replenishment, (with J. Acimovic), Manufacturing & Service Operations Management, Summer 2017, Vol. 19, No. 3 pp. 419-436. <u>https://doi.org/10.1287/msom.2016.0614</u>. Available at <u>https://ssrn.com/abstract=2459097</u>.
- 85. Stowage Decisions in Multi-zone Storage Systems, (with Rong Yuan and Tolga Cezik), International Journal of Production Research (2018) Vol. 56, No. 1-2, pp 333-343. <u>https://doi.org/10.1080/00207543.2017.1398428</u> Available at SSRN: <u>https://ssrn.com/abstract=2990432</u>
- 86. Performance Evaluation of Material Separation in a Material Recovery Facility using a Network Flow Model, (with Karine Ip, Mariapaola Testa, Anne Raymond and Timothy Gutowski), *Resources, Conservation and Recycling* 131 (2018): 192-205
- 87. Capacity Planning with Demand Uncertainty for Outpatient Clinics, (with Thu Ba T. Nguyen, Appa Iyer Sivakumar), *European Journal of Operational Research* 267, no. 1 (2018): 338-348.
- Velocity-based Storage Assignment in Semi-automated Storage Systems, (with Rong Yuan and Tolga Cezik), *Production and Operations Management* (2019), Vol. 28, No. 2, Feb. 2019, pp. 354 – 373. <u>https://doi.org/10.1111/poms.12925</u> Available at: SSRN: <u>https://ssrn.com/abstract=2889354</u>.

- Integrated Planning for Design and Production in Two-Stage Recycling Operations, (with Jiyoun C. Chang, Randolph E. Kirchain and Elsa A. Olivetti.) *European Journal of Operational Research*, Vol. 273, no. 2 (2019): 535-547. <u>https://doi.org/10.1016/j.ejor.2018.08.022</u>
- 90. Item Aggregation and Column Generation for Online-Retail Inventory Placement, (with Annie. I. Chen) *Manufacturing & Service Operations Management*. Forthcoming <u>https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3464278</u> or <u>https://dx.doi.org/10.2139/ssrn.3464278</u>
- 91. Warranty Matching in a Consumer Electronics Closed-Loop Supply Chain, (with Andre P. Calmon and Stef Lemmens). *Manufacturing & Service Operations Management*. Forthcoming. <u>https://ssrn.com/abstract=3357683</u> or <u>https://dx.doi.org/10.2139/ssrn.3357683</u>
- 92. Reflections on the Evolution of Operations Management, *Management Science*, Forthcoming. <u>https://ssrn.com/abstract=3636391</u> or <u>https://dx.doi.org/10.2139/ssrn.3636391</u>

## **Proceedings**

- 1. A Mathematical Programming Procedure for Equipment Selection and System Evaluation in Programmable Assembly, (with D.E. Whitney), *Proceedings of the 18th IEEE Conference on Decision and Control,* Fort Lauderdale, Florida, December 1979, 531-536.
- 2. Extensions to a Tactical Planning Model for a Job Shop, *Proceedings of the 27th IEEE Conference on Decision and Control*, Austin, Texas, December 1988, pp. 1850-1855.
- 3. Using Simulated Annealing to Select Least-Cost Assembly Sequences, (with J. M. Milner and D. E. Whitney), *Proceedings of IEEE Conference on Robotics and Automation*, May 1994.
- Spatial Yield Modeling for Semiconductor Wafers, (with A. I. Mirza, G. O' Donoghue, and A. W. Drake), Proceedings of IEEE/SEMI Advanced Semiconductor Manufacturing Conference, November 1995
- 5. Strategic Safety Stock Placement in Supply Chains, (with S. Willems) *Proceedings of the 1996 MSOM Conference*, Dartmouth College, Hanover NH, June 1996, pp. 299 - 304.
- 6. Optimizing Monsanto's Supply Chain under Uncertain Demand, (with C. Gutierrez, M. Pulwer, H. Sidhu and G. Weihs), *Annual Conference Proceedings Council of Logistics Management*, Orlando FL, October 1996, pp. 501-516.
- 7. Optimizing the Supply-Chain Configuration for New Products, (with S. P. Willems), *Proceedings of the 2000 MSOM Conference*, Ann Arbor, MI, 2000, 8 pp.

- 8. Tactical Shipping and Scheduling at Polaroid with Dual Lead-Times, (with Kermit Threatte), *Proceedings of the 2002 SMA Conference*, Singapore, 2002, 8 pp.
- 9. A Base Stock Inventory Model for a Remanufacturable Product, *Proceedings of the 2003 SMA Conference*, Singapore, 2003, 7 pp.
- 10. Optimizing Safety Stock Placement in General Network Supply Chains, (with K. Lesnaia), *Proceedings of the 2004 SMA Conference*, Singapore, 2004, 7 pp.
- 11. Traditional Inventory Models in an E-Retailing Setting: A Two-Stage Serial System with Space Constraints, (with R. Allgor and P. Xu), *Proceedings of 2004 SMA Conference*, Singapore, 2004, 6 pp.
- Logistics Network Design with Differentiated Delivery Lead-Time: Benefits and Insights, (with M.L.F. Cheong, and R. Bhatnagar), *Proceedings of 2005 SMA Conference*, Singapore, 20 pp.
- 13. An Extension to the Tactical Planning Model for a Job Shop: Continuous-Time Control, (with C. C. Teo, and R. Bhatnagar), *Proceedings of 2005 SMA Conference*, Singapore, 8 pp.
- 14. The Complexity of Safety Stock Placement in General-Network Supply Chains, (with K. Lesnaia, and I. Vasilescu), *Proceedings of the 2005 SMA Conference*, Singapore, 5 pp.
- 15. The Benefits of Re-Evaluating Real Time Fulfillment Decisions, (with P. Xu and R. Allgor), *Proceedings of 2005 SMA Conference*, Singapore, 7 pp.
- 16. Performance Analysis of Order Fulfillment for Low Demand Items in E-tailing, (with P. Chhaochhria), *Proceedings of 2007 SMA Conference*, Singapore, 5 pp.
- 17. Capacity Planning in a General Supply Chain with Multiple Contract Types, (with X. Huang), *Proceedings of 2007 SMA Conference*, Singapore, 6 pp.
- Reusing Personal Computer Devices Good or Bad for the Environment?, (with S. Sahni, A. Boustani and T. Gutowski) IEEE/International Symposium on Sustainable Systems and Technology, Washington D.C, 2010
- 19. Appliance Remanufacturing and Life Cycle Energy and Economic Savings, (with S. Sahni, A. Boustani and T. Gutowski) IEEE/International Symposium on Sustainable Systems and Technology, Washington D.C, 2010.
- 20. Water Desalination Supply Chain Modeling and Optimization, (with Malak T. Al-Nory), Data Engineering Workshops (ICDEW), 2013 IEEE 29th International Conference, April 2013.

Working Papers and Technical Reports

- W1. The Travelling Salesman Problem and Related Problems, (with B. Gavish), Operations Research Center, M.I.T., Working Paper No. 078-78, July 1978, revised and retitled, March 1981.
- W2. A Research Agenda for Models to Plan and Schedule Manufacturing Systems, (with C. Abraham, B. Dietrich, W. Maxwell, and C. Yano), Sloan School of Management, M.I.T., Working Paper No. 1689-85, revised July 1985.
- W3. Principles on the Benefits of Manufacturing Process Flexibility, (with W. C. Jordan), Sloan School of Management, M.I.T. Working Paper No. 3296-91-MSA, May 1991 (GM Research Laboratories Research Publication GMR-7310).
- W4. An Analytic Approach for Demonstrating the Benefits of Limited Flexibility, (with W. C. Jordan), Sloan School of Management, M.I.T. Working Paper No. 3297-91-MSA, May 1991 (GM Research Laboratories Research Publication GMR-7341).
- W5. <u>Creating an Inventory Hedge for Markov-Modulated Poisson Demand: Application and</u> <u>Model</u>, (with H. S. Abhyankar), January 2000, long version. (short version published in M&SOM.
- W6. <u>Optimizing Strategic Safety Stock Placement in Supply Chains</u>, (with S. Willems), August 1998, long version. (short version published in M&SOM).
- W7. <u>Strategic Inventory Placement in Supply Chains: Nonstationary Demand</u>, (with S. Willems), August 2002 working paper (substantially revised version published in M&SOM).
- W8. <u>A Constant-Inventory Tactical Planning Model for a Job Shop</u>, (with J. S. Hollywood), working paper, January 2001, revised March 2004, January 2006, 36 pp.
- W9. <u>A Dual-Channel Vendor-Buyer System with Minimum Purchase Commitment</u>, with (Y. Wang and R. Bhatnagar), working paper, June 2008, 33 pp.
- W10. <u>Capacity Planning in a General Supply Chain with Multiple Contract Types Single Period</u> <u>Model</u>, (with Xin Huang), June 2008, revised September 2008, 41 pp
- W11. Ship-pack Optimization in a Two-echelon Distribution System with Product Obsolescence, (with Elnaz Karimi and Z. Justin Ren). *Available at SSRN 3242756* (2018).
- W12. Coordination of Multi-Echelon Supply Chains Using the Guaranteed Service Framework, (with Tor Schoenmeyr). *Available at SSRN 3243806* (2018, revised 2019).
- W13. How to Think about Planned Lead Times. Available at SSRN 3485059 (2019).

## Teaching Cases

- 1. Steel Works, Inc, prepared by David Kletter, 1996
- 2. Meditech Surgical, prepared by Bryan Gilpin, 1995.
- 3. Apollo Paper Company, prepared by Charles DeWitt, 1995.
- 4. Use of a Queuing Model to Design a Lean System, prepared by Jamie Flinchbaugh, 2002
- 5. The Challenge at Instron, prepared by Dan Wheeler, 2000.
- 6. H. C. Starck, Inc., prepared by Thomas J. Carroll, 2000.
- 7. Ford Pan-European Durable Containers, prepared by Carmelo Anthony Palumbo, 2002.
- 8. Reebok NFL Replica Jerseys: A Case for Postponement, prepared by John C. W. Parsons, 2005.
- 9. American Axle and Manufacturing: Determining the Optimal Number of Bar Lengths for Axle Shaft Production, prepared by Heath Holtz, 2005.
- 10. Production Planning for Chemical Manufacturing, prepared by Shardul Phadnis, 2007.

## Invited Presentations (Partial List up to 1992):

- 1. "Improved Scheduling for Automatic Warehousing Systems: Simulation Tests," (with W.H. Hausman and L.B. Schwarz), Joint ORSA/TIMS National Meeting, New York, New York, May 1978.
- 2. "Logistic Failure vs. Mission Failure in Reliability Specifications," (with J. Keilson), Department of Defense Acquisition Research Symposium, Hershey, Pennsylvania, June 1978.
- 3. "A Methodology for Studying the Dynamics of Extended Logistics Systems," (with J. Keilson), Conference on Multi-Echelon Inventory Systems, George Washington University, November 1978.
- 4. "Multistage Lot-Sizing: An Iterative Procedure," Joint ORSA/TIMS Meeting, New Orleans, May 1979 (Also Purdue, April 1979).
- 5. "The Introduction of Feedback into a Hierarchical Production Planning System," TIMS XXIV International Meeting, Honolulu, June 1979.

- 6. "Production Scheduling: Theory and Practice," TIMS XXIV International Meeting, Honolulu, June 1979.
- 7. "System Balance for Extended Logistics Systems," (with J. Keilson), Conference on Multi-Echelon Inventory Systems, Philadelphia, Pennsylvania, November 1979.
- 8. "Base Stock Systems for Multistage Planning," Conference on Multi-Echelon Inventory Systems, Chapel Hill, North Carolina, June 1980.
- 9. "Optimization-Based Approaches to Vehicle Routing Problems," (with T.L. Magnanti), Joint ORSA/TIMS National Meeting, Colorado Springs, Colorado, November 1980.
- 10. "A Mathematical Programming Heuristic for Manufacturing System Design and Evaluation," (with B.W. Lamar) CORS/TIMS/ORSA National Meeting, Toronto, May 1981.
- 11. "The Dynamics of a Multiechelon Inventory System for a Repairable Item," (with J. Keilson), ORSA/TIMS National Meeting, Houston, October 1981.
- 12. "A Study of Production Smoothing in a Job Shop," (with A.B. Cruickshanks and R.D. Drescher), TIMS/ORSA National Meeting, Detroit, April 1982.
- 13. "Scheduling of Re-entrant Flow Shops," (with H.C. Meal, D. Stefek, A.H. Zeghmi), TIMS/ORSA National Meeting, Chicago, May 1983.
- 14. "An LP Planning Model for a Mental Health Community Support System," (with M. Dada and H.S. Leff), ORSA/TIMS National Meeting, Orlando, November 1983.
- 15. "Operational Analysis of a Job Shop," TIMS/ORSA National Meeting, San Francisco, May 1984.
- 16. "Two-Stage Production Planning in a Dynamic Environment," (with H.C. Meal), ORSA/TIMS National Meeting, Dallas, November 1984.
- 17. "Determining the Spares and Staffing Levels for a Repair Depot," TIMS/ORSA National Meeting, Boston, May 1985.
- 18. "Developing and Use of a Production Flow Plan," ORSA/TIMS National Meeting, Atlanta, November 1985.
- 19. "Safety Stocks in Manufacturing Systems," ORSA/TIMS National Meeting, Miami, October 1986.
- 20. "Equipment Selection and Task Assignment for Multiproduct Assembly System Design," (with C.A. Holmes), ORSA/TIMS National Meeting, St. Louis, October 1987.
- 21. "A Multiechelon Inventory Model for Fixed Reorder Intervals," TIMS/ORSA National Meeting, Washington, DC, April 1988.

- 22. "Production Planning in a Dynamic Environment," ORSA/TIMS National Meeting, Denver, October 1988. (Also, Yale, November 1988, Carnegie-Mellon, April 1989.)
- 23. "Cyclic Schedules in Stochastic Environments," CORS/TIMS/ORSA National Meeting, Vancouver, Canada, May 1989.
- 24. "Production Planning over a Multiplant Operation," ORSA/TIMS National Meeting, Philadelphia, October 1990.
- 25. "Principles on the Benefits of Manufacturing Flexibility," (with W. C. Jordan), TIMS/ORSA National Meeting, Nashville, May 1991. (Also, University of Minnesota, February 1991, Ohio State, November 1991).
- 26. "Some Thoughts on Inventory Modeling and Diagnostics," UCLA Conference in Honor of El Buffa, Los Angeles, November 1991.
- 27. "Reducing Flow Time in Aircraft Manufacturing," (with Jackson Chao), ORSA/TIMS National Meeting, San Francisco, October 1992.

## Thesis Supervision (Partial List):

R. Blake, Allocation of Items under Fixed Capacity, S.M., June 1978 (reader).

M. Pendrock, A Hierarchical Approach to Integrated Production and Distribution Planning, S.M. June 1978 (reader).

A. Dutra, The Impact of Multiple Objectives on Strategic Decision Making: A Case Analysis of the *Sloan Management Review*, S.M., June 1979.

N. Zarin, A Mathematical Model of the Deinstitutionalization of the Cambridge-Somerville Mental Health Region, S.M., June 1979.

M. Cross, Business Planning for Small Manufacturing Companies, S.M., June 1980.

B. Lamar, Optimal Machine Selection and Task Assignment in an Assembly System Design Problem, S.M., September 1980.

M. Ibrahim, Modeling and Analysis of Automated Manufacturing Systems with Focus on Equivalence and Computational Complexity, S.M., May 1981.

M. Neel, A Contract Engineering Model, A Work Force Management Tool, S.M., April 1981.

T. Quinlan, Management Information and Control Systems for Hospital Supplies: A Case Study, S.M., June 1981.

A.B. Cruickshanks and R.D. Drescher, A Case Study of Production Smoothing in a Job Shop Environment, Joint S.M., February 1982.

D. Stefek, A Periodic Production Scheduling Problem, S.M., June 1982.

C. Olson, A Prototype System for Hierarchical Production Planning, S.M., June 1983.

D. Choing, The Role of Buffer Stocks in a Re-Entrant Flow Shop, S.M., June 1983.

R. Gould, Quantitative Tools for the Optimization of Selling Efforts in Metropolitan Cable Television Systems, S.M., February 1984.

P.C. Santos, An Optimization Model for the Configuration of Incoming WATS Lines, S.M., June 1984.

A.H. Zeghmi, Inventory Buffers for a Production Line with Controllable Production Rates, Ph.D., September 1985.

C.A. Holmes, Equipment Selection and Task Assignment for Multiproduct Assembly System Design, S.M., January 1987.

S.H. Parrish, Extensions to a Model for Tactical Planning in a Job Shop Environment, S.M., June 1987.

S. Mihara, A Tactical Planning Model for a Job Shop with Unreliable Work Stations and Capacity Constraints, S.M., January 1988.

J. Wagner, Stochastic Programming with Recourse Applied to Groundwater Quality Management, Ph.D., June 1988.

G. Sy-Quia, A Study of Production Loading in a Job Shop, S.M., June 1988.

L. Dickey, Where Should Safety Stock be Held to Minimize Costs and Maximize Flexibility? S.M., May 1989.

G. Amblard, Rationale for the Use of Subassemblies in Production Systems: A Comparative Look at Sequential and Arborescent Systems, S.M., May 1989.

C. Cooprider, Equipment Selection and Assembly System Design Under Multiple Cost Scenarios, S.M., June 1989.

E. Reifschneider, Scheduling Jobs in a Multi-Station Plant, B.S., June 1989.

S. Pappu, A Dual-Ascent Algorithm for Finding the Optimal Testing Strategy, S.M., June 1989.

H. Zhang, Cyclic Scheduling in a Stochastic Environment, Ph. D., May 1990.

C. Fu, An Investigation of the Development of Product Design Specifications: A Conceptual Development and a Case Study, S.M., June 1990.

R. Munroe, A Framework for Product Development Based on Quality Function Deployment, Traditional Decision-Making Theory, and Design Practice, S.M., June 1990.

R. M. Coleman, The Effects of Design, Manufacturing Processes, and Operations Management on the Assembly of Aircraft Composite Structure, S.M., June 1991.

C. Papouras, Lead Time and Inventory Reduction in Batch Chemical Manufacturing, S.M., June 1991.

T. Taylor, Evaluating and Selecting Manufacturing Flexibility, S.M., June 1991.

K. Elsesser, The Validation of a Simulation Model for the Allocation of Mental Health Services, S.M., June 1991.

J. Chao, Analysis of Variance Impact on Manufacturing Flow Time, S.M., June 1991.

B. Koetje, Improving Cycle Times in Batch Chemical Operations, S.M., June 1991.

C. Athaide, Capacity Allocation and Safety Stocks in Manufacturing Systems, Ph. D., June 1992.

M. Burke, Optimizing Product Life Cycles in the U. S. Auto Industry, S.M., June 1992.

C. Dennison, Electric Shock Risks in an Electric Vehicle, S.M., June 1992.

D. Hager, Applying Continuous-Flow Manufacturing Principles to a Low-Volume Electronics Manufacturer, S.M., June 1992.

L. Hsu, The Design of an Assembly Line with Stochastic Task Times, S.M., June 1992.

C. Jutte, Lead Time Reduction for Multiple Step Batch Chemical Processes, S.M., June 1992.

T. Mock, Reducing Process Variability in Chemical Batch Manufacturing, S.M., June 1992.

S. Pappu, Production Planning with Due-Date Constraints, Ph. D., June 1992.

L. Spiridigliozzi, Precision Laser Micromachining of Ceramics, S.M., June 1992.

K. D. Bartelson, Analysis and Redesign of the Production System Structure for 757 and 737 Aircraft Doors, S.M., June 1993.

M. J. Blatz, Designing Measurement Systems in a Manufacturing Environment, S.M., June 1993.

M. Chrzanowski, Development of a Manufacturing & Business Planning Tool to Aid in Forward Planning, S.M., June 1993.

W. B. Hetzel, Cycle Time Reduction and Strategic Inventory Placement Across a Multistage Process, S.M., June 1993.

J. A. Rennert, Measuring Customer-Driven Manufacturing Process Improvement in a Multidivisional Corporation, S.M., June 1993.

D. J. Seitelman, Scheduling Employees of a Manufacturing Facility, S.M., June 1993.

S. K. Jacobsmeyer, Implementing Flow Time Reduction Using Process Mapping and Innovation, S.M., June 1994.

D. B. Kletter, Determining Production Lot Sizes and Safety Stocks for an Automobile Stamping Plant, S.M., June 1994.

J. Ku, Microprocessor Manufacturing Throughput Time Variability, S.M., June 1994.

L. R. Oliver, Process and Productivity Improvements through Bottleneck Reduction and Design of Experiments, S.M., June 1994.

B. K. Parks, Cost and Lead Time Reduction in the Manufacture of Injection Molding Tools, S.M., June 1994.

M. A. Raftery, Using the Seven-Step Method to Reduce Defects in a Polymer Sheet Making Process, S.M., June 1994.

K. Y. Tan, Minimizing the Impact of Model Changeover at a Medium-Mix High-Volume Cellular-Telephone Production Line, S.M., June 1994.

C. M. Dewitt; A Holistic Approach to Automotive Powder Coating, S.M., June 1995.

K. L. Homsi, Information Flow and Demand Forecasting Issues in a Complex Supply Chain, S.M., June 1995.

P. Gallagher, Molding Process Development for Fuel Cell Components, S.M., May 1995.

A. E. Koszarek, Module Based Configuration Definition to Enable Design Re-Use and Manufacturing System Simplification in the Commercial Aircraft Industry, S.M., June 1995.

A. I. Mirza, Spatial Yield Modeling for Semiconductor Wafers, S.M., May, 1995.

T. R. Wadewitz, Analysis of Investments in Process Control Tools: Laser Scanners Used For On-Line Inspection in a Polyester Sheet Production Process, S.M., June, 1995.

M. I. Zeni, Five Axis Machining of Stamping Dies, S.M., May 1995.

Roberta Bailey, A Data-Driven Approach to Improving Capacity Utilization of Semiconductor Test Equipment, S.M., June 1996.

James Beuerle, A Study of Electrostatically Applied Powder Paint in the Automotive Industry, S.M., June 1996.

Michael Carnette, Implementing Internal Supply Chain Improvements, S.M., June 1996.

Barrett Crane, Cycle Time and Cost Reduction in a Low Volume Manufacturing Environment, S.M., May 1996

Audrey Dima, Improving the Recovery Process of Circuit Boards in a One-Time-Use Camera, S.M., June 1996

Mark MacLean, Implementing Lean Manufacturing in an Automobile Plant Pilot Project, S.M., June 1996

Cristian Gutierrez, Development and Application of a Linear Programming Model to Optimize Production and Distribution of a Manufacturing Company, S.M., February 1996

Sumer Johal, A Simulation-Based Study of the Cost and Performance Trade-Offs in a Semiconductor IC Manufacturing Facility, S.M., May 1996

Sean Willems, Strategic Safety Stock Placement in Integrated Production/Distribution Systems, S.M., May 1996

Rebecca D'Amato, Allocating Housing Resources for a Psychiatric Program, S.M., June 1996

David B. Kletter, Planning and Control of an Unreliable Machine in a Multi-Item Production-Inventory System, Ph.D., June 1996

Jeffrey Alcalde, The Design and Implementation of a Synchronous Manufacturing System In a Job-Shop Environment, S.M., June 1997.

Liana Alvarez, Design and Implementation of Cellular Manufacturing in a Job Shop Environment, S.M., June 1997.

Daniel Crocker, Analysis of Global Manufacturing Strategies for High Volume High Technology Products, S.M., June 1997.

Jennifer Felch, Supply Chain Modeling for Inventory Analysis, S.M., June 1997.

Joetta L. George, Applying the Theory of Constraints in a High Volume Manufacturing System to Increase Throughput and Performance, S.M., June 1997.

Steven Harman, Implementation of Lean Manufacturing and One-Piece Flow at Allied Signal Aerospace, S.M., June 1997.

Thomas Jacob, Root Cause Analysis of Low On-Time Delivery Performance at a Computer Manufacturing Plant, S.M., June 1997.

Michael Miller, Business System Improvements Through Recognition of Process Variability, S.M., June 1997.

Brian E. Black, Utilizing the Principles and Implications of the Base Stock Model to Improve Supply Chain Performance, S.M., June 1998.

Douglas Bohn, Computer Modeling of a Continuous Manufacturing Process, S.M., June 1998.

R. Lawrence Coughlin, III, Optimization and Measurement of a World-Wide Supply Chain, S.M., June 1998.

Judson Graham, Application of Theory of Constraints and Process Control Theory to Multi-Stage Manufacturing Systems, S.M., June 1998.

Brian Hintzman, Capacity Analysis for Multi-Product, Parallel-Site Aluminum Ingot Production, S.M., June 1998.

Brent Johnson, The Soft Side of the Toyota Production Systems is The Hard Side, S.M., June 1998.

Brian Klippel, A Design Methodology for Automotive Component Manufacturing Systems, S.M., June 1998.

David Medrow, Cost Modeling of a Manufacturing Process, S.M., June 1998.

Nicholas Purzer, Managing the Supply, Release, and Machining of Material Within an Aerospace Component Shop, S.M., June 1998.

John D. Ruark, Implementing Reusable Solvers: An Object-Oriented Framework for Operations Research Algorithms, Ph.D., June 1998.

Sean P. Willems, Two Papers in Supply Chain Design: Supply Chain Configuration and Part Selection in Multigeneration Products, Ph.D., February 1999.

Michael Dickinson, Technology Portfolio Management: Optimizing Interdependent Projects Over Multiple Time Periods, S.M., June 1999.

Thomas Furey, Decision Elements in the Design of a Consumer Electronics Assembly Plant, S.M., June 1999.

Mark Graban, An Inventory Planning Methodology for a Semiconductor Manufacturer with Significant Sources of Variability, S.M., June 1999.

Louis Herena, Application of Manufacturing Tools to the DNA Sequencing Process, S.M., June 1999.

C. Gregory Kandare, Production/Inventory Policies for a Parallel Machine Manufacturing System, S.M., June 1999.

John Kang, Applying Six Sigma to Tenneco Automotive Manufacturing, S.M., June 1999.

Michael Kimber, Definition and Implementation of a Visual Inventory Management System, S.M., June 1999.

Adam King, A Method of Comparing the Costs of Platform and Unique Product Design, S.M., June 1999.

Nestor Macias, Engineering Design Leadtime Drivers Analysis, S.M., June 1999.

Michael Milby, Methodology for Sizing Finished Goods Inventories for a Vinyl Siding Extrusion Plant, S.M., June 1999.

Leslie Rudolph, Development of a Decision Framework and a Knowledge Management System for Make/Buy Determinations in Manufacturing, S.M., June 1999.

Thor Sewell, Understanding and Controlling Risk in Product Development, Specifically in New Technology Procurement, at an Automatic Test Equipment Manufacturer, S.M., June 1999.

Hemant Taneja, A Tactical Planning Model for a Semiconductor Wafer Fabrication Facility, S.M., June 1999.

Hari S. Abhyankar, Inventory Control for High Technology Capital Equipment Firms, Ph.D. February 2000.

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Thomas J. Carroll, Using Postponement to Move from Job-Shop to a Mixed MRP/Job Shop Environment S.M., June 2000.

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James Ryan Horn, Design and Operational Enhancements for a Batch Process Driven Supply Chain, S.M., June 2000.

Mitchell A. Malone, Analysis of a High-End Memory Supply Chain? Dram Vendors to Final Assembly, S.M., June 2000.

Scott M. Pagendarm, The Use of Strategic Inventory and Packaging Postponement to Address Daily Demand Variability and Seasonal Demand Patterns in a Demand Flow Environment, S.M., June 2000.

Olapeju A. Popoola, Development of a Methodology for the Rapid Implementation of a Sustainable Lean Manufacturing System, S.M., June 2000.

Brian T. Tomlin, Supply Chain Design: Capacity, Flexibility and Wholesale Price Strategies, Ph.D., February 2000.

Brian A. Urkiel, The Analysis and Optimization of the Alcoa Mill Products Supply Chain for European Customers, S.M., June 2000.

James A. Wolters, II, Optimizing the Assembly Sequence of an Aerospace Manufacturing Process, S.M., June 2000.

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Jonathan E. Howe, Minimizing the Risk Qualification Test Wafers Have On The Manufacturing Readiness of a New Microprocessor Fabrication Site Through Data Driven Processes, S.M., June 2001.

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Kermit Threatte, Tactical Shipping and Scheduling at Polaroid with Dual Lead Times, S.M., June 2001.

Andrea L. Vlasak, Integration of Third Party Logistics Providers within the Distribution Network, S.M., June 2001.

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Esther W. Wong Reducing Demand Variability By Improving Information and Material Flows, S.M., June 2001.

Qian Wu A Supply Chain Strategy for Digital Camera Products, S.M., June 2001.

Gregory S. Chalker, The Use of Modeling and Critical Operations Data To Optimize Plant Performance, S.M., May 2002.

Dan Grotsky, A New Framework for Making Sourcing Decisions Regarding Low-Volume, High-Complexity Products, S.M., June 2002.

Emanuele F. Gillio, Lean Principles Applied to a Supply Chain with Demand Uncertainty, S.M., June 2002.

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Robert L. Scholtz III, Strategies for Manufacturing Low Volume Semiconductor Products in a High Volume Manufacturing Environment, S.M., June 2002.

Eric Jan, Supply Chain Performance Improvement Through Forecasting, S.M., June 2002.

Sheila J. Bragg, Analysis of Sorting Techniques in Customer Fulfillment Centers, S.M., June 2003.

M. Carla Eustache, Integrating Cost Consciousness into a High Quality Manufacturing Environment, S.M., June 2003.

Eric D. Green, Optimization of Photochemical Production Using Lean Manufacturing Philosophies, S.M., June 2003.

Mark Kamal, Management of Regional Local Content Regulations at Dell Computer Corporation, S.M., June 2003.

Don J. Lee, End-of-Life Supply Chain Strategy for High-Performance Servers, S.M., June 2003.

Scott A. Rosenberg, Managing a Data Analysis Production Line: An Example from the Whitehead/MIT Center for Genomic Research, S.M., June 2003.

Eric A. White, Lean Enterprise Distribution Tactics with Customer Supply Chain Integration, S.M., June 2003.

Mark Hagan, Process for Evaluating Options for Materials Management Outsourcing, S.M., June 2004.

Stephen G. King, Using Value Stream Mapping to Improve Forging Processes, S.M., June 2004.

Michael A. Zeppieri, Predictive Capacity Planning Modeling with Tactical and Strategic Application, S.M., June 2004.

Haitao Liu, The Development and Implementation of a Production Information Collection and Reporting System, S.M., June 2004.

William Kwong, Reducing Variability in Equipment Availability at Intel using Systems Optimization, S.M., June 2004.

Padmaja S. Vanka, Line Coordination in a Rapid Change, High Volume Environment, S.M., June 2004.

Ekaterina Lesnaia, Optimizing Safety Stock Placement in General Network Supply Chains, Ph.D., September 2004.

John C.W. Parsons, Using a Newsvendor Model for Demand Planning of NFL Replica Jerseys, M. Eng., June 2004.

Jeffrey D. Johnson, Managing Variability in the Semiconductor Supply Chain, S.M., February 2005.

Jason Walker Connally, Introducing Pull Methodologies in a Semiconductor Fab, S.M., June 2005.

G. Thomas Heaps-Nelson, Analyzing and Improving Throughput of Automated Storage and Retrieval Systems in Personal Computer Manufacturing, S.M., June 2005.

Heath M. Holtz, Re-sourcing Manufacturing Processes in Metal Forming Operations, S.M., June 2005.

Carlos Mazariegos, Bath Sizing Strategy and Production Load Leveling in a Multi-Step Chemical Manufacturing Process, S.M., June 2005.

Kevin McKenney, Development and Application of Management Tools within a High-Mix, Low-Volume Lean Aerospace Manufacturing Environment, S.M., June 2005.

John M. Palmer, Level Loading and Cross Docking in a Global Logistics Network, S.M., June 2005.

Mira K. Sahney, Building Operational Excellence in a Multi-Node Supply Chain, S.M., June 2005.

Ronak R. Shah, A Systems Approach to the Evaluation of Radio Frequency Identification (RFID) in the Defense Industry, S.M., June 2005.

Roy C. Wildeman, Jr., An Application of Lean Principles within a Semiconductor Manufacturing Environment, S.M., June 2005.

Claudia Wu, Total Supply Chain Cost Model, S.M., June 2005.

Ping Josephine Xu, Order Fulfillment in Online Retailing: What Goes Where, Ph.D., September 2005.

Cheong Lee Fong, Michelle, New Models in Logistics Network Design and Implications for 3PL Companies, Ph.D., NTU, August 2005.

Teo Chee Chong, A Tactical Planning Model for Make-To-Order Environment under Demand Uncertainty, Ph.D., NTU, May 2006.

Craig B. Abler, Material Evaluation and Selection Processes to Enable Design for Manufacture, S.M., May 2006.

Yue (Cathy) Chang, Getting Ahead in Sourcing Through Benchmarking and System Dynamics Analysis: An Aerospace Industry Perspective, S.M., June 2006.

Rebecca Cassler Fearing, Managing Preventative Maintenance Activities at Intel Corporation, S.M., June 2006.

Matthew J. Hasik, Developing a Framework to Evaluate the Existence of a Complexity Threshold, S.M., June 2006.

Sean Holly, Lean Manufacturing in a Semiconductor Environment: Use of Variation Analysis to Focus Continuous Improvement Efforts, S.M., June 2006.

Brooke Kahl, Developing and Implementing Standard Logistics Solutions for Eastman Kodak Company's Inbound Supply Chain, S.M., June 2006.

Sandeep Khattar, An Approach to Sourcing Optimization at a High Volume Soft Drink Manufacturer, S.M., June 2006.

D Ramaswamy, The Role of Lean Manufacturing Principles and Strategic Alternatives in Achieving Business Goals, S.M., June 2006.

Todd Robinson, Cost Modeling in the Integrated Supply Chain Strategic Decision Process, S.M., June 2006.

Howard H. Shen, A Radio Frequency Identification (RFID) Evaluation Strategy for Customer Fulfillment Centers, S.M., June 2006.

Dimitrios Andritsos and Anthony Craig, Vendor Managed Inventory vs. Order Based Fulfillment in a Specialty Chemical Company, joint M.Eng., June 2006.

Chien Yung Tan, Inventory Management of Steel Plates at an Oil Rig Construction Company, M.Eng., September 2006.

Chin Jiat Tan, Workload Analysis and Scheduling Policies for a Document Processing Centre, M.Eng., September 2006.

Ni Yang, Optimization of Service Parts Planning for InFocus, M.Eng., September 2006.

Pallav Chhaochhria, Inventory Planning for Low Demand Items in Online Retailing, S.M., May 2007.

Kevin M. Myers, Building Flexibility in the Volatile Aftermarket Parts Supply Chains of the Defense Aerospace Industry, S.M., June 2007.

Cassian Naughton, Costs of Complexity in Hewlett-Packard's Inkjet Printer Business, S.M., June 2007.

Kurt Campbell, A Core Competency Model for Aligning Information Technology with Business Objectives, S.M., June 2007.

Nima Subramanian, Lean Manufacturing in a Semiconductor Environment: Production Leveling, S.M., June 2007.

Matthew J. Ward, Fab Cycle Time Improvement through Inventory Control: A Wafer Starts Approach, S.M., May 2007.

Curtis J Underwood and Jacob R Wood, Applying an Analytical Framework to Production Process Improvement, Joint S.M., June 2007.

Shardul S. Phadnis, Inventory Segmentation and Production Planning for Chemical Manufacturing, M.Eng., June 2007.

J. Sean Walkenhorst, Quantifying the Value of Reduced Lead Time and Increased Delivery Frequency, M.Eng., June 2007.

Si Ming Thomas Khor, The Study of Inventory Management of Raw Materials for a Pharmaceutical Company, M.Eng., September 2007.

Yixiong Kok, The Production Planning and Inventory Management of Intermediate Products for a Pharmaceutical Company, M.Eng., September 2007.

Sumit Gupta, The Production Planning and Inventory Management of Finished Goods for a Pharmaceutical Company, M.Eng., September 2007.

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