ELLIOTT NORMAN WEISS

Oliver Wight Professor of Business Administration The Darden School, University of Virginia Charlottesville, Virginia 22906-6550 Office: (434). 924-4815 Fax: (434) 243-5020 E-Mail: weiss@virginia.edu; Web: www.elliottweiss.com

EDUCATION

Ph.D., Operations Research, The Wharton School, University of Pennsylvania, 1980.M.S., Operations Research, University of Pennsylvania, 1978.M.B.A., Management Science, The Wharton School, University of Pennsylvania, 1976.B.A., Mathematics, B.S., Economics, University of Pennsylvania, 1975.

PROFESSIONAL EXPERIENCE

Oliver Wight Professor of Business Administration 2013 - present Ethyl Corporation Professor of Business Administration, 2010 – 2013. Isidore Horween Research Professor, July 2001 – June 2009. Associate Dean of MBA Education, July 2001 – June 2004. Professor, The Darden School, University of Virginia, 1999- present. Fellow, Teaching + Technology Initiative, University of Virginia, 1997 - 1998. Visiting Professor, OPIM Department, The Wharton School, Fall 1994. Visiting Professor, The University of Melbourne, GSM, Melbourne, Australia, Fall 1993. Associate Professor, The Darden School, University of Virginia, 1987-1999. Assistant Professor, Johnson Graduate School of Management, Cornell University, 1980-1987. Instructor, Department of Decision Sciences, The Wharton School, 1979-1980. Senior Fellow, Leonard Davis Institute of Health Economics, The Wharton School, 1979-1980. Instructor, School of Business, Philadelphia College of Textiles and Science, 1977-1979. Instructor, Villanova University, 1976-1977. Research Assistant, Financial Research Center, University of Pennsylvania, 1976-1977. General Manager, University of Pennsylvania Student Agencies, 1974-1975.

DARDEN SCHOOL EXECUTIVE PROGRAM EXPERIENCE

Management Development Program Management Essentials for Developing Leaders* Meetings Professional International (Certificate in Meeting Management)* Leading a Lean Transformation (RCF Associates) Leadership Partners in Healthcare Management RockTenn General Management College* NAMIC Growing Great Managers* Global Business Travelers Association*

DARDEN SCHOOL EXECUTIVE PROGRAM EXPERIENCE (continued)

Indian Institute of Planning and Management* Advanced Leadership Course* (Genworth Financial) Experienced Manager Course* (Genworth Financial) Manufacturing Executive Program* Contemporary Management Issues and Practices (NAVAIR) Developing Managerial Excellence; Emerging Leaders Program (UTC and AES) Managing Individual and Organizational Change* (Capital One Financial) Management Program in Australia* Business Resource Management (NACO) Managing Service Operations Goodyear Tire and Rubber Credit Union Executives Society Creating and Sustaining the High Performance Organization Service Excellence **Corning Manufacturing Excellence** (* = Faculty Leader)

CONSULTING PROJECTS

Schindler Elevator US – Lean Workshop for Senior Managers Leading a Lean Transformation (RCF Associates) University of Virginia: Medical Center, UFIRST Program and Physicians Group Mikro Systems **CIGNA** Insurance Louisiana State Department of Education Adidas, Inc., Herzogenaurach, Germany PLANETS, Professional Landcare Network, Herndon, VA Allison Partners, Charlottesville, VA AES, Arlington, VA Alloy Polymers, Richmond, VA Ernst & Young, New Zealand Anser, Inc., Arlington, VA IBM Australia, Sydney, Australia AMF Australia, Sydney, Australia The First Tennessee Bank, Memphis, TN S. D. Warren Paper Company, Mobile, AL Naval Air Engineering Center, Lakehurst, NJ University of Virginia Health Services Foundation, Charlottesville, VA Philip Morris, USA, Richmond, VA St. Joseph's Health Centre, Toronto, Ontario, Canada Bankers Trust Company, New York, NY Tompkins Community Hospital, Ithaca, NY Southern Tier Health Management Corp., Elmira Heights, NY The Graduate Hospital, Philadelphia, PA

COURSES TAUGHT

The Darden School, University of Virginia

First-Year Operations: The introductory course in operations management required of all students. Topics covered include the role of the operations manager, managing capital investments, workforce planning, operations performance analysis, inventory management and scheduling. (Residential, EMBA and GEMBA formats)

Entrepreneurship and Innovation – **Darden Worldwide Course Israel:** A global course covering the eco-system in Israel that leads to leadership in entrepreneurship and innovation for the State of Israel. The course covers how innovation and entrepreneurship are fostered by a variety of startups, investors, policymakers, and society; how Israel's unique positioning, people, and history influence such business activities; why Israel is the "Start-Up Nation."

Mathematical Models in Production and Inventory Systems: A doctoral seminar that covers the area of inventory management and production scheduling. Various inventory control systems are introduced and their appropriateness for a variety of conditions discussed.

Management of Service Operations: A second year MBA elective exploring the specific tasks faced by managers in various types of service organizations. Particular attention is paid to developing understanding of the close links among the operations, human resource, and marketing functions in service businesses and their implications for organizational structure and implementation of strategy.

Management of Manufacturing Operations (also titled: Manufacturing Planning and Control): A second year MBA elective that concentrates on the management of manufacturing operations. We survey the very latest thinking from around world on how manufacturing companies are seeking to achieve a combination of low cost and customization, "mass production in lots of one." The course concentrates on the specific analytical techniques companies are finding useful in the implementation of these ideas.

General Management and Operations Consulting/Effectiveness: A Darden elective that addresses topics and subjects likely to be experienced by MBAs seeking positions or internships in general management career development programs or consulting firms with a strong interest in good Operations analysis/management skills. The topics covered in the elective are likely to be encountered by a rising MBA student in his/her summer internship or by a recently graduated student in his/her first few years out of school.

Kaizen-in-Action: A one week immersion course where students and faculty immerse themselves in a factory and take part in kaizen events. This course is designed to provide training in kaizen tools and enables students to work on real projects on the factory floor. In addition to US locations, the course has been run in Japan, China, Brazil, The Czech Republic, India, Singapore and Copenhagen. **Managing Global Processes:** A cross-disciplinary course in Darden's GEMBA program that covers introductory topics in basic operations management, supply chain management and accounting from a global perspective.

Emerging Topics in Technology and Operations: A course that offers students the ability to gain direct exposure to the world of practical affairs by engaging practicing managers with expertise in technology and operations management. It exposes students to a range of emerging issues and topics and has been organized around five topic areas to enable in-depth discussions: Innovation Management for Technology Businesses, Sustainability, Globalization and Operations, Technology-Enabled Business Models, and Operations and the Service Economy.

The Johnson School, Cornell University

Quantitative Methods for Management: An introductory core course in probability and statistics for MBA students.

Production and Operations Management: An MBA-level course that introduced major economic decision problems of production and operations management. Topics included linear programming, PERT/CPM, aggregate production planning, and workforce scheduling.

Research Methods in Operations Management: A Ph.D. seminar that surveys a variety of research areas in operations management. Methodologies covered included mathematical programming, stochastic modeling, and simulation modeling. Applications areas varied according to student interests.

Production Management: An advanced elective for MBA students that covered topics such as MRP planning, production/inventory control systems, and process analysis using case studies.

Management Science: An elective for MBA students that dealt with a variety of model-building techniques, including linear programming, queueing theory, simulation, and dynamic programming. Case studies used extensively. Both the usefulness and limitations of quantitative models discussed.

Advanced Seminar in Operations Management: A Ph.D. seminar in operations and production management that covers the most recent techniques and results in the field. Both published articles and current working papers discussed, with a special focus on further research directions.

The Wharton School, University of Pennsylvania

Operations Management: A first year MBA required core course covering the topics of process analysis, coordination, and quality.

Management Decision Analysis: An advanced quantitative methods course at the MBA level involving resource allocation, decision analysis, and simulation.

Graduate School of Management, University of Melbourne

Operations Management: A second year MBA course covering topics of production planning and the management of service operations.

PUBLISHED BOOKS

The Lean Anthology: A Practical Primer in Continuous Improvement, with Rebecca Goldberg, CRC Press, Taylor & Francis Group, New York, 2015.

BOOK CHAPTERS

"Lean Tools for Service Business Model Innovation in Healthcare," **Service Business Innovation in Healthcare and Hospital Management, Models Strategies and Too**ls, Edited by Mario A. Pfannstiel and Christoph Rasche, Springer International Publishing, 2017.

PUBLISHED PAPERS

Robust Services: People or Processes? With Rebecca Goldberg, *Business Horizons*, Volume 62, Issue 4, 2019.

Queue Management: Elimination, Expectation, and Enhancement (with Chad Tucker) *Business Horizons* Volume 61, Issue 5, 2018.

Line, Line, Everywhere a Line: Cross-Cultural Considerations for Waiting-Line Managers (with Graham Gillam, Kyle Simmons and Donald Stevenson), *Business Horizons* Vol. 57, #4, 2014.

Structural Supply Chain Collaboration Among Grocery Manufacturers (with Tim Laseter), in Supply Chain Analysis: A Handbook on the Interaction of Information, System and Optimization Series: International Series in Operations Research & Management Science, Vol. 119 Tang, Christopher S.; Teo, Chung-Piaw; Wei, Kwok-Kee (Eds.) 2008

The Right Mix for a Pricing Fix, (with Tim Laseter), *Strategy* + *Business*, Volume 39, Summer 2005.

Everything I Know About General Management I Learned Playing with Legos, OR/MS Today, February 2003.

Guidelines for Implementing Predictive Maintenance within a Traditional Maintenance Environment, (with Kathleen McKone), *Production and Operations Management*. Summer 2002, Vol. 11, #2, pp. 109-124.

Total Productive Maintenance (with Kathleen E. McKone), in *Innovations in Competitive Manufacturing*, edited by Paul M. Swamidass, Kluwer Academic Publishers, Boston, 2000.

PUBLISHED PAPERS (Continued)

An Autonomous Maintenance Approach to Cycle Time Reduction: Guidelines for Improvement, (with Kathleen E. McKone), *International Journal of Operations and Quantitative Management* Volume 6, Number 3, September 2000, pp. 187-201.

Analysis of Investments in Autonomous Maintenance Activities, (with Kathleen McKone), *IIE Transactions on Operations Engineering*. Vol. 32, No. 9, 2000, 849-859.

Total Productive Maintenance (with Kathleen E. McKone), *Encyclopedia of Production and Manufacturing Management*, Kluwer Academic Publishing, MA, USA, 2000.

TPM Planned and Autonomous Maintenance: Bridging the Gap Between Practice and Research, (with Kathleen E. McKone), *Production and Operations Management*, Vol. 7, No. 4, Winter 1998, 335-351.

A Comparison of Rules for Allocating Setup Reduction in a Capacitated Environment, (with John P. Leschke), *Production and Operations Management*, Vol. 6., No. 4, Winter, 1997, pp. 329-340.

The Multi-Item Setup-Reduction Investment-Allocation Problem with Continuous Investment-Cost Functions, (with John Leschke), *Management Science*, Vol. 43 No. 6, June 1997, pp. 890-894.

Designing Conferences to Improve Participant Satisfaction: A Numerical Investigation, (with Scott E. Sampson), *Journal of the Operational Research Society*, Vol. 47, No. 2, Feb. 1996, pp. 297-314.

Increasing Service Levels in Conference and Educational Scheduling: A Heuristic Approach, (with Scott E. Sampson), *Management Science*, Vol. 41, No.11, November 1995, pp. 1816-1825.

JIT Savings - Myth or Reality, (with Jitendra Chhikara), *Business Horizons*, Vol. 38, No. 3, May-June 1995, pp. 73-78.

Class Scheduling to Maximize Participant Satisfaction, (with Scott E. Sampson and James R. Freeland), *Interfaces*, Vol. 25, No. 3, May-June 1995, pp. 30-41

Resource Constrained Project Scheduling Using Randomized Local Search Heuristics, (with Scott E. Sampson), *Naval Research Logistics*, Vol. 40, 1993, pp. 666-675.

Guidelines for Setup Reduction Programs to Achieve Zero-Inventory, (with James Freeland and John Leschke), *The Journal of Operations Management*, Vol. 9, No.1, January 1990, pp. 85-100.

Lot-Sizing is Dead: Long Live Lot-Sizing, *Production and Inventory Management*, Vol. 31, No. 1, First Quarter 1990, pp. 76-79.

Models for Determining Estimated Start Times and Case Ordering in Hospital Operating Rooms, *IIE Transactions*, Vol. 22, No. 2, June 1990, pp. 143-150.

PUBLISHED PAPERS (Continued)

Fly Now or Fly Later? The Delayed Consumption Problem, *European Journal of Operations Research*, Vol. 48, No. 1, September 1990, pp. 128-135.

Efficient Solutions to a Linear Programming Model for Production Scheduling with Capacity Constraints and No Initial Stock, (with J.O. McClain and L.J. Thomas), *IIE Transactions*, Vol. 21, No. 2, June 1989, pp. 144-152.

An Optimization Based Heuristic for Scheduling Parallel Project Networks with Constrained Renewable Resources, *IIE Transactions*, Vol. 20, No. 2, June 1988, pp. 137-143.

Using the Analytical Hierarchy Process in a Dynamic Environment, *Mathematical Modeling*, Vol. 9, No. 3-5, 1987, pp. 211-216.

Administrative Days in Acute Care Facilities: A Queueing Analytic Approach, (with J.O. McClain), *Operations Research*, Vol. 35, No. 1, January/February 1987, pp. 35-44.

AHP Design Issues for Large Scale Systems, (with V. Rao), *Decision Sciences*, Vol. 18, No. 1, Winter 1987, pp. 43-61.

On Resource Allocation Problems with Interval Scale Coefficients, (with V. Rao), *Journal of the Operational Research Society*, Vol. 37, No. 6, June 1986, pp. 631-635.

Integrative Approach for Production Scheduling and Capacity Determination, (with L.J. Thomas), North-Holland, 1986, pp. 207-229, *TIMS Studies in the Management Sciences: Production Management Methods and Studies*.

Comment on "Aggregate Safety Stock Levels and Component Part Commonality", (with J. McClain, W. Maxwell, J. Muckstadt and L.J. Thomas), *Management Science*, Vol. 30, No. 6, June 1984, pp. 772-773.

Estimation and Validation of Semi-Markovian Patient Flow Models, (with J.C. Hershey and M.A. Cohen), *Operations Research*, Vol. 30, No. 6, November/December 1982, pp. 1082-1104.

On MRP Lot Sizing, (with J. McClain, W. Maxwell, J. Muckstadt, and L.J. Thomas), *Management Science*, Vol. 28, No. 5, May 1982, pp. 582-584.

A Stochastic Service Network Model with Application to Hospital Facilities, (with J.C. Hershey and M.A. Cohen), *Operations Research*, Vol. 29, No. 1, January/February 1981, pp. 1-22. (See also Erratum, *Operations Research*, Vol. 31, No. 3, May/June 1983, pp. 601-602.)

Analysis of Capacity Decisions for Progressive Patient Care Hospital Facilities, (with M.A. Cohen, and J.C. Hershey), *Health Services Research*, Vol. 15, No. 2, Summer 1980, pp. 145-160.

CASES AND TECHNICAL NOTES

A Brief Note on Hoshin Kanri: Strategy Deployment (UVA-OM-1710) Quicny Lake Clinic (UVA-OM-1699) A3 Thinking for Weight Loss (UVA-OM-1696) The Virginia Journal of International Law (B) (UVA-OM-1693) Carlos Zuleta and Lean (UVA-OM-1690) Using Catapults to Teach Concepts in Operations and Leadership (UVA-OM-1689) Learning Team Muda Audit (UVA-OM-1688) Standard Work in Developing Leaders: Rebecca Banquette Coach (UVA-OM-1687) Spyros Pharmaceutics: The Booklet Label Decision (UVA-OM-1683) Spyros Pharmaceutics: Production Quality Control (UVA-OM-1682) The Curious Case of the Disputed Rabbits: A Visual Case. (UVA-OM-1675) OYO Hotels USA: Coming to America (UVA-OM-1641) The Virginia Journal of International Law. Case Number (UVA-OM-1640). GidaExpress: Grocery Delivery in Turkey (UVA-OM-1635) What Exactly Is Lean? (UVA-OM-1631) The Curious Case of the Disputed Rabbits. (UVA-OM-1618) Change Management at the UVA Health System's Body Imaging Division. (UVA-OM-1609) Robust Services: People or Processes? (UVA-OM-1607) Little's Law: Does Anyone Know Which Time It Is? (UVA-OM-1606) The IndiGo Story, 2018: "On Time, Hassle Free"? (UVA-OM-1605) Leading with an Enterprise Perspective: The 9 Cs Model. (UVA-OM-1601) Fisher Manufacturing Company (A). (UVA-OM-1598) Improving the Body Imaging Division at the UVA Health System. (UVA-OM-1597) Schindler Elevator Corporation. (UVA-OM-1593) Cardinal Foods: Sweet Sourcing (UVA-OM-1591) Sakara Life (UVA-OM-1585) Shanghai Disneyland: Authentically Disney and Distinctly Chinese (UVA-OM-1568) Queue Management: Elimination, Expectation and Enhancement (UVA-OM-1581) The Beer Game Simulation and TN Southwest Airlines: Where's the Luv? (UVA-OM-1571) Staffing at the Strategic Consulting Group - The "S" Word (UVA-OM-1564) Behavioral Economics and the Service Organization (UVA-OM-1548) Bonnie Strong at Inditex (UVA-OM-1558) Anna Pessah at Summit Funding (A) (UVA-OM-1569) Anna Pessah at Summit Funding (B) ((UVA-OM-1583) (with video supplement) Patrick Bugas (UVA-OM-1559) Ian Desmond's Dilemma (A) (UVA-OM-1574) Ian Desmond's Dilemma (B) (UVA-OM-1575) Ian Desmond's Dilemma (C) (UVA-OM-1578) Ian Desmond's Dilemma (D) (UVA-OM-1577) Lean as a Universal Model for Excellence: It's Not Just a Manufacturing Tool! (UVA-OM-1562) Advance Auto Parts 2005: Business at a Crossroads (UVA-OM-1546) The Walt Disney Company: Mickey Mouse Visits Shanghai (UVA-OM-1545)

Kaizen in Translation: Suggestion Systems Across Cultures (UVA-OM-1544) A (Very) Brief Note on Some Quality Tools (UVA-OM-1543) A Note on A3 Thinking (UVA-OM-1542) Visualizing Process Behavior (UVA-OM-1541) Final Exercises at the Darden School (UVA-OM-1538) Maria's Ristorante (UVA-OM-1536) Evaluating Financial and Operational Performance in the Airline Industry (UVA-OM-1535) WestRock (A): Product Performance in Anytown, USA (UVA-OM-1527) WestRock (B): Sustainable Volume at the Small Mill (UVA-OM-1528) WestRock (C): Shuffling the Deck in Everyregion, USA(UVA-OM-1529) WestRock (D): Collaborative Sales (UVA-OM-1530) Tirumala Tirupati: Wait a Moment (UVA-OM-1533) Supply Chain Management at Beautiful Bags (UVA-OM-1522) A Pediatric Emergency Room at Lynchburg General Hospital (UVA-OM-1523) Picante Mexican Grill: A New Delhi Experience (UVA-OM-1520) Belle, Inc. (UVA-OM-1513) Monticello Motor Club (UVA-OM-1511) Zappos, Inc. and the Warehouse Decision (UVA-OM-Draft) Great Valley Root (UVA-OM-1509) CityBook Services, Ltd. (UVA-OM-1508) Pal's Sudden Service: The Right Recipe (UVA-OM-1506) The IndiGo Story: "On Time, Hassle Free" (UVA-OM-1505) DAZZ Manufacturing Company (UVA-OM-1503) Evaluating Financial and Operational Performance in the Retail Apparel Industry (SPREADSHEET) (UVA-OM-1502X) Evaluating Financial and Operational Performance in the Retail Apparel Industry (UVA-OM-1502) Lean Thinking: Better Living through Setup Reduction (UVA-OM-1501) Darden Business Publishing Gets Lean (C) (UVA-OM-1499) Darden Business Publishing Gets Lean (B) (UVA-OM-1498) Darden Business Publishing Gets Lean (A) (UVA-OM-1497) Postponement and Pooling: Problems (UVA-OM-1496) Ops Intuition (Interactive Calculator for Operations Frameworks) Process Capability: Practice Problems: (UVA-OM-1492) Adam Burke: Message in a Bottle (UVA-OM-1491) Continuous Review Inventory Systems: Practice Problems (UVA-OM-1489) Periodic Review Inventory Systems: Practice Problems (UVA-OM-1488) Managing Inventory: Intuition Generating Problems (UVA-OM-1487) Factory #539: China Star Technology Electronics Ltd. (B) (UVA-OM-1474) Factory #539: China Star Technology Electronics Ltd. (A) (UVA-OM-1473) Wal-Mart China: Tian Tian Pingjia (UVA-OM-1472) The Use of Takt Time and Operator Loading Charts (UVA-OM-1471) Galen Pharmeceutics (UVA-OM-1446)

Avila, Inc. (UVA-OM-1440) Chandpur Enterprises Limited, Paper Division (UVA-OM-1438) The "Living Lean" Series: Brad and Gina and Baby Make Three (UVA-OM-1486) Carolyn and Jacob Get to School Late (UVA-OM-1483) Bob's A-maize-ing Popcorn (UVA-OM-1467) Belinda, Bags and Batches (UVA-OM-1466) Chloe Manages the Family "Business" (UVA-OM-1465) Jackson and Wyatt Learn to Share (UVA-OM-1464) Peter Goes Shopping (UVA-OM-1462) Theron Hunter's Coffee Shop (UVA-OM-1455) Dylan and Amelia Have a Cuppa (UVA-OM-1450) Donna Johnson and the Bottlenecks (UVA-OM-1449) David and the Case of the Hoarded House (UVA-OM-1448) Tracy Manages His Blood Sugar (UVA-OM-1443) Lunch with Guinevere (UVA-OM-1436) Brian's Lunch Dilemma (UVA-OM-1435) Missy's Car Maintenance (UVA-OM-1434) Zeke's Tree (UVA-OM-1433) Rebecca's Morning Ritual (UVA-OM-1427) Erika Diebert, In Through the Out Door (UVA-OM-1426) Todd Pearson's Balancing Act (UVA-OM-1425) Process Engineering and Fabrication, Inc. (UVA-OM-1418) Looking for Muda (UVA-OM-1409) Czech Mate: Jake and Dan's Marvelous Adventure (UVA-OM-1390) Toops Wholesale (UVA-OM-1356) Gene Cattie Enterprises (UVA-OM-1359) Discopress (UVA-OM-1357) Thermaware, Inc. (UVA-OM-1338) Paulie's Pastries (UVA-OM-1337) Nomad Oil Corporation (UVA-OM-1336) Sophia Denis and the Six Sigma Pilot at Roosevelt Space Center (UVA-OM-1329) Tutorials in Operations Management (Multimedia) Pat's Coffee Shoppe Pat's Wheel Shoppe Pat – The Hospital Clerk Pat's Pizza Shoppe Pat's Motel A Glossary of "Lean" Terms (UVA-OM-1334) The Toyota Production System: "The Scent of the Cornered Ferret" (UVA-OM-1333) Kristin Simmer (UVA-OM-1330) Starbucks Corp.: Clouds in Your Coffee (UVA-OM-1328) Progressive Insurance Concierge Program (UVA-OM-1327)

The Starbucks Five Ways of Being: A Self-Evaluation Instrument (UVA-OM-1326) Dell Computer: Back to the Future (UVA-OM-1325) Da Click's "Throw-Back" Jerseys (UVA-OM-1322) By Air or By Sea? (UVA-OM-1314) Yo Wear, Inc. (UVA-OM-1313) Don't...No DO Drink the Water! (UVA-OM-1312) Abby Hamilton (UVA-OM-1263) Beef-Noodle Casserole (UVA-OM-1262) Reynaldo Roche (A) – (D) (UVA-OM-1258, -1259, -1260, -1261) I Can, You Can, We All Can Kanban (UVA-OM-1257) Frameworks for General Management and Operations Consulting (UVA-OM-1242) The Toyota Production System: A Self-Evaluation Instrument (UVA-OM-1221) Michael "Mac" Ling (UVA-OM-1208) It's a Dirty Job... (UVA-OM-1207) Six Sigma: F(X) Cascade (UVA-OM-1206) Anna Coo (UVA-OM-1205) Poly Polymers Corporation (UVA-OM-1203) Shiv Gupta (UVA-OM-1201) Lee Phillips (UVA-OM-1200) Paul Stewart (UVA-OM-1199) Dear Mr. Weiss (UVA-OM-1198) Dear Holland America (UVA-OM-1197) Lean Thinking at JKA Manufacturing Company (UVA-OM-1193) Herb Kelleher and the Four P's Toward High Performance (UVA-OM-1173M) Dear Elliott (UVA-OM-1172) Dear Herb (UVA-OM-1170) Marlene's Marvelous Adventure: JetBlue Airways (UVA-OM-1153) Marlene's Marvelous Adventure: Southwest Airlines (UVA-OM-1152) The JetBlue Story (UVA-OM-1151) Southwest Airlines: Singin' the (Jet) Blues (UVA-OM-1150) A Brief Note on the Theory of Constraints (UVA-OM-1105) Rockeford, Inc. (UVA-OM-1102) Problem Set: Inventory Rate and Time (UVA-OM-1077) Salinas Oil Corporation (A) UVA-OM-1075 Hi-Performance Wash Systems Inventory Control (UVA-OM-1066) Note on Waiting-Line Service Processes: Calculations and Analysis (UVA-OM-1063) Candlestick Electronics (UVA-OM-1024) Capacity of Asynchronous Single-Piece Flow Lines: A Quiz (UVA-OM-1023) The Darden SPC Calculator (UVA-OM-1016) Southwest Airlines: Keeping that Lovin' Feeling After Herb Kelleher (UVA-OM-1015) The Operations Course at The Darden School (UVA-OM-0920) Customer Module: Developing Distinctive Operating Capabilities (UVA-OM-0919) Capabilities Module: Analyzing Operating Processes (UVA-OM-0918)

YBE and Co. (UVA-OM-0917) Ivy Industries (UVA-OM-0913) Inventory Flow Problems (UVA-OM-0904) Instructional Note – The Management of Queues (UVA-OM-0903) OEE: Overall Equipment Effectiveness (UVA-OM-0902) Tom Jenkins Statistical Simulation (UVA-OM-0897) ISZ Manufacturing Company (UVA-OM-0894) Ply-Mould Corporation (UVA-OM-0893) Mobil Oil Corporation: European Aviation Lubricants Logistics (UVA-OM-0886) Mobil Oil: Supply Variability at Beaumont Refinery (UVA-OM-0873) The Topple Maintenance Game (UVA-OM-0871) Ein Hashofet Electrical Accessories (UVA-OM-0870) Aysh Fire Products, Inc. (A) (UVA-OM-0869) Lorex Pharmaceuticals (B) (UVA-OM-0868) Little's Law (UVA-OM-0867) Kibbutz Ein Hashofet (A) (UVA-ENT-0001) Kibbutz Ein Hashofet (B) (UVA-ENT-0002) Israel: A Brief Note (UVA-G-0527) Hadrian Inc. (UVA-OM-0837) Beau Ties Ltd. Of Vermont (UVA-OM-0836) H. R. Anna Company (UVA-OM-0834) Process Performance Measures (UVA-OM-0833) Great Northern Bunk Beds (UVA-OM-0818) Mancala's Pizza (UVA-OM-0817) Tom Jenkins (UVA-OM-0801) Frederick Savings Bank (UVA-OM-0800) Airflow Aircraft, Inc. (UVA-OM-0799) The Spastic Society of Victoria (UVA-OM-0798) Journey to Excellence: Ritz-Carlton Hotel, Sydney, Australia (UVA-OM-0797) Gazogle, Experiential Exercise (UVA-OM-0887) Plastique, Inc. (UVA-OM-0794) Robb & Moody (UVA-OM-0792) Mindy Coopman and Shouldice Hospital (UVA-OM-0790) The Thawed Hungarian Catfish (UVA-OM-0785) O'Sullivan, Luray: ILVS Project for Ford Wixom (UVA-OM-0758) Harrison Electronics, Inc. (UVA-OM-0744) Southwest Airlines (UVA-OM-0743) First Commercial Bank (A) (UVA-OM-0742) AMF Bowling Centres (Australia), Inc (UVA-OM-0732) Merchant's Tire & Auto Centers (UVA-OM-0731) Pizza Hut Moscow (UVA-OM-0719) A Brief Introduction to Taguchi Methods (UVA-OM-0718) University of Virginia Medical Center - Stockless Inventory Management (UVA- OM-0715)

Virginia Ambulatory Surgery Center (UVA-OM-0712) ITT Defense: Electro-Optical Products Division (UVA-OM-0709) Cadillac and the 1990 Malcolm Baldrige Award (UVA-OM-0707) The U.S. Senate Productivity Award for Virginia - The Southwest Virginia Enterprise Application (UVA-OM-0701) The U.S. Senate Productivity Award for Virginia - Wiley-Wilson Application (UVA-OM-0700) The U.S. Senate Productivity Award for Virginia - 1990 Application (UVA-OM-0699) How to Manage Inventory Expenses: Module Introduction - First Year Operations (UVA-OM-0693) Taguchi and Quality (UVA-OM-0692) Carol L. Carroll (B) (UVA-OM-0691) Carol L. Carroll (A) (UVA-OM-0690) Landsave, Incorporated (UVA-OM-0684) Bernard Recreational Products (B) (UVA-OM-0683) Tycos Instruments Co. (UVA-OM-0678) Kustom Electronics (UVA-OM-0673) Baker Electronics (UVA-OM-0663) St. Joseph's Health Centre, Toronto, Canada (UVA-OM-0662) Silko-Scalese Manufacturing (UVA-OM-0661) Pearson Yachts Corporation (UVA-OM-0658) Bernard Recreational Products, Incorporated (UVA-OM-0654) The McIlhenny Company (UVA-OM-0653) Variability, WIP, and Capacity in a Flow Line (UVA-OM-0651) Carters Trust Bond-Payment Service (UVA-OM-0650) HRY Manufacturing Company (B) (UVA-OM-0644) HRY Manufacturing Company (A) (UVA-OM-0643)

MANUSCRIPTS AND PRESENTATIONS

Pragmatic Lean: University of Richmond Robins School, UVA UFirst Group, UVA Department of Family Medicine, UVA Human Resources Group, UVA School of Medicine, UVA Department of Facilities Management, Darden Corporate Advisory Board, 2015 – 2017.

Supply Chain Management: Reactive Capacity, APICS Great Lakes Region, February, 2015.

Living Lean, UVA Department of Family Medicine, November 2014

Darden Business Publishing Gets Lean, University of Virginia Medical School, February 2014.

The Management Classroom Kaizen (with Rebecca Goldberg), Darden Working Paper.

Living Lean, University of Virginia Physician's Group, July 2014.

Make to Order vs, Make to Stock, APICS Great Lake Region, February, 2014.

The Secret of (Logistics) Success: Challenging Assumptions, presentation to the Defense Logistics Agency, Williamsburg, VA, October 2, 2013.

A Discussion of Alternative Curricula Designs for Global Topics in Business Education, Strategic Forums, Andre and Katherine Merage Foundation, Tel Aviv Israel, June 2007.

The Effect of the Internet on Student Life, Hechinger Institute, Columbia University, October 2001.

Valuing E-Business Companies, presentation to Virginia National Bank, February 2000, (discussion leader with Paul Farris and Ed Burton).

Experiential Games in Operations Management, Production and Operations Management Society, March 1999.

Analysis of Operational Decisions in Support of Time-Based Manufacturing, INFORMS, Tel Aviv Israel, 1998.

Virtual-Factory Tours Illustrating the Product Process Matrix, 1998 Technological Innovations in Business Education Conference, jointly sponsored by the McIntire School and Price Waterhouse.

A Time-Based Approach to Maintenance, (with Kathleen E. McKone), DSI National Conference, November 1995.

TPM: Bridging the Gap Between Practice and Research, (invited speaker with Kathleen E. McKone), INFORMS National Conference, New Orleans, LA, October, 1995.)

MANUSCRIPTS AND PRESENTATIONS (Continued)

Designing Conferences to Improve Participant Satisfaction: A Numerical Investigation, (with Scott E. Sampson), DSI National Conference, Honolulu, Hawaii, November 1994.

Teaching Service Operations, invited speaker, TIMS/ORSA Joint National Conference, Boston, May 1994.

Increasing Participant Satisfaction in Conference and Educational Scheduling, invited paper, University of Florida Scheduling Conference, Gainesville, FL, April 1994.

Case-Teaching Workshop, Technical University of Budapest, Budapest, Hungary, February 1994.

Case-Writing Workshop, Technical University of Budapest, Budapest, Hungary, January 1994.

The Uncapacitated Setup-Reduction Investment-Allocation Problem with Continuous Investment-Cost Functions, (with John Leschke), presented at DSI national meeting, Miami, November 1991.

Resource Constrained Project Scheduling Using Randomized Local Search Heuristics, (with Scott E. Sampson), presented at TIMS/ORSA national meeting, Anaheim, November 1991.

Solving Difficult Scheduling Problems Through "Educated" Simulated Annealing, (with Scott E. Sampson), presented at TIMS/ORSA joint national meeting, Nashville, May 1991. Evaluating Safety Capacity, Cycle Stock and Safety Stock Tradeoffs in Manufacturing Processes, (with John P. Leschke), presented at DSI national meeting, San Diego, November 1990.

A Methodology for Evaluating Heuristic Techniques, (with Matthew Liberatore and Robert Nydick), presented at TIMS/ORSA joint national meeting, New York, October 1989.

Dynamic Programming and the Analytic Hierarchy Process, (with Robert Carraway), presented at TIMS/ORSA joint national meeting, Vancouver, Canada, May 1989.

Determination of Optimal Safety Time in a Stochastic Service System with Priority Customers, (with Phil Pfeifer), presented at TIMS/ORSA joint national meeting, Washington, D.C., May 1988.

Guidelines for Setup Reduction Programs to Achieve Zero-Inventory, (with James Freeland and John Leschke), presented at DSI Annual Meeting, Las Vegas, Nevada, November 1988. Heuristics for Scheduling Parallel Project Networks with Constrained Resources, presented at TIMS/ORSA joint national meeting, New Orleans, May 1987.

Some Measurement Issues for Models of Consumer Choice, (with V. Rao), Johnson Graduate School of Management Working Paper.

Personal Computer Models for the Analysis of Surgical Facility Utilization, presented at TIMS/ORSA joint national meeting, Los Angeles, April 1986.

MANUSCRIPTS AND PRESENTATIONS (Continued)

Determination of Optimal Hospital Operating Room Policies: A One-Machine Scheduling Problem, presented at TIMS/ORSA joint national meeting, Atlanta, November 1985.

Optimization Based Heuristics for Multiple Project, Multiple Resource, Constrained Scheduling, presented at TIMS/ORSA joint national meeting, Boston, May 1985.

Queueing Models for Alternate Level Care Patients in Acute Care Facilities, presented at IFORS '84, the 10th IFORS Triennial Conference in Operational Research, Washington, August 1984.

A Queueing Analysis of Administrative Days in Acute Care Facilities, presented at TIMS/ORSA joint national meeting, San Francisco, May 1984.

Considerations in Using the Analytical Hierarchy Process in Resource Allocation, presented at TIMS/ORSA joint national meeting, San Francisco, May 1984.

Incorporating Marketing Considerations in Capacity Planning and Detailed Production Scheduling, presented at TIMS/ORSA joint national meeting, Orlando, November 1983.

Backup Patients in Acute Care Hospitals: A Queueing Analytic Approach, presented at EURO VI, Sixth European Congress on Operations Research, Vienna, Austria, July 1983.

Capacity Constrained Jackson Networks, Results and Approximations, (with M.A. Cohen), Working Paper 82-08, Graduate School of Business and Public Administration, Cornell University, presented at TIMS/ORSA joint national meeting, Chicago, April 1983.

The Allocation of a Heterogeneous Sales Force in an Industrial Setting, (with D. Gautschi), Working Paper, Graduate School of Business and Public Administration, Cornell University, presented at TIMS/ORSA joint national meeting, Detroit, November 1982.

Factors Affecting Patient Use of Second Opinions for Elective Surgery, (with B.W. Herdman), Graduate School of Business and Public Administration, Cornell University, Working Paper 81-01, presented at TIMS/ORSA joint national meeting, Houston, April 1982.

Vertical Integration of Care for Cancer Patients: A Markovian Model for Cancer Care Planning, Graduate School of Business and Public Administration, Cornell University, presented at TIMS/ORSA joint national meeting, Toronto, May 1981.

Estimation of a Semi-Markov Model of Obstetric Patient Flows, (with J.C. Hershey and M.A. Cohen), Working Paper 81-08, Graduate School of Business and Public Administration, Cornell University.

A Winning Strategy for the Wheel of Fortune Betting Game, presented at TIMS/ORSA joint national meeting, Colorado Springs, November 1980.

MANUSCRIPTS AND PRESENTATIONS (Continued)

A Stochastic Service Network Model with Application to Hospital Facilities, presented at TIMS/ORSA joint national meeting, Washington, May 1980.

The Application of Markovian Models for Progressive Patient Care Facilities, presented at TIMS/ORSA joint national meeting, Milwaukee, October 1979.

A Semi-Markovian Simulation Model for Progressive Patient Care Facilities, presented at TIMS/ORSA joint national meeting, Milwaukee, October 1979.

NON-REFEREED PUBLICATIONS

Washington Post Case-in-Point Series:

Why Southwest Airlines' competitive advantage might be saying 'no', January 12, 2018 How Zara turned 'chic cheap' into a global fashion revolution, June 11, 2017 Hits and misses in a bid for big-league money, May 7, 2017 Can Mickey make it big in Shanghai? Feb. 28 2016 On wait times, taking a queue from world's most visited Hindu temple, October 16, 2015 Adapting to workers pays off, January 9, 2015 The secret sauce in Pal's Sudden Service's success" Streamlining, November 16, 2014 Helping workers deliver for customers, September 19, 2014 Innovation helps Lynchburg General Hospital serve emergency patients better, September 5, 2014 No-frills IndiGo airlines stays focused on its low-cost, on-time mission, May 30, 2014 Working toward 'continuous improvement' in a services setting, July 12, 2013 Deciding what had to be done to save a Chinese factory, Jun 26, 2013 Inventory management 101: A case study of a couple's lunch habits, August 4, 2012 Avoiding martial-arts moves 'by pulling the Andon cord', May 13, 2012 How process improvement principles can save time in your day, February 4, 2012

Procedures for the Analysis of Surgical Facility Utilization, *Hospital Management Systems Society* of the American Hospital Association, Clearinghouse, Publication #2352, Inventory #OR53.

When in Doubt, Go For It!, *The Deltasig*, February 1980, text of speech presented to Eta Xi Chapter of Delta Sigma Pi at the Philadelphia College of Textiles and Science.

"The Changing Faces of Operations Management," CGSM Enterprise, Vol. 1, No. 2, Fall 1984.

Ph.D. Thesis: Semi-Markov Models of Patient Flows for Progressive Patient Care Capacity Planning, University of Pennsylvania, 1980.

Master's Thesis: Energy Efficient Algorithm for Summer School Scheduling at the University of Pennsylvania, 1976

RESEARCH INTERESTS

Pragmatic Approaches to Lean How to Spend Your Free Time: Uses of Released Capacity Analysis of Operational Decisions in Support of Time-Based Manufacturing A Buffer-Push/Market Pull Framework for Supply Chain Management When Does the Short Term Become the Long Term? Total Productive Maintenance Mass Customization - Make to Stock vs. Make to Order Production/Inventory Planning Systems Scheduling Models for Service Systems

PROFESSIONAL SERVICE ACTIVITIES

Member, MSOM Service Management SIG Best Paper Award Committee, 2014 – 2017.

Member, Virginia Senate Productivity and Quality Award, 1998 - 2001

Quality and Productivity Track Chair, DSI National Conference, San Diego, November 1997

Member, Virginia Senate Productivity Award Board, 1989-1992.

Chair, ORSA Nicholson Prize Committee, 1984.

ORSA Student Affairs Committee, 1982-1984.

Area Editor: Production and Operations Management (through 2002)

Referee: Management Science, Operations Research, Operations Research Letters, IIE Transactions, Decision Sciences, Socio-Economic Planning Sciences, Mathematical Modeling, European Journal of Operations Research, Journal of Operations Management.

Reviewer, Decision Sciences Institute Annual Meeting.

Reviewer, National Sciences Foundation.

ADMINISTRATIVE ACTIVITIES

University of Virginia:

Co-Founder and Co-Leader (with Sean Jackson, CIO of the Medical Center) of VaLU – Virginia Lean Unlimited, an informal group that disucsses "Lean" issues at the University of Virginia, 2014

The Darden School:

Member, Task Force on GEMBA International Residency Design, 2019. Term Leader, GEMBA China, 2013 – 2017 Coursehead, Managing Global Processes (GEMBA) 2012 – 2016. Member, C. Stewart Sheppard Award Committee, 2015. Member, Genovese Scholarship Committee. 2015 – 2017. Member, EMBA/GEMBA Review Committee, 2015. Member, Ad Hoc Committee on Issues regarding Women in the Classroom, 2015.

ADMINISTRATIVE ACTIVITIES (Continued)

Member of the Ad Hoc Committee on Issues regarding Women in the Classroom, 2016. Member, Executive Education Committee, 2014 – 2016. Member, MBA Program Committee, 2013 – 2014, 2015-2018 Area Coordinator, Technology and Operations Management, 2012 – 2018 Member, MBA Advisory Committee, 2013 – 2014. Member, Peer Review Committee 2013 – 2019. Member, DSA Prize for Club Excellence Committee, 2011 - 2014. Advisor, General Management and Operations Club 2002- present. Advisor, Darden Jewish Students Association 2002 -present. Chair, Ad Hoc Darden Trustees Executive Education Review Committee, 2011. Global Executive MBA Planning Team, 2010 - 2016. Section Faculty Coordinator, 2005 – 2007. First Year Operations Course Head, 2006 – 2018. MBA for Executives Admissions Committee, 2006 – 2010. MBA for Executives Planning Team, 2006 – 2014. Academic Standards Committee, 1993 – 997; 2007 – 2010; interim Chair, 2008 – 2009. Executive Education Policy Committee, 2005 – 2011; Chair 2007 – 2011. Darden Merit Scholarship Selection Committee, 2004-2007. Associate Dean for MBA Education, 2001 – 2004. Section Faculty Leader, 1998 - 2001. Faculty Office Coordinator, 1995 – 2002. Chair, Academic Support Policy Committee, 1994 - 1998. Faculty Leader, MMP Executive Program, 1990 - 2000. Doctoral Program Committee, 1988-2000. Operations Area Coordinator, Doctoral Program, 1989-2000. Staff Evaluation Committee Task Force, 1996-97. Company Tour Coordinator, First Year MBA program, 1992, 1994-1997, 2006 – 2014. Curriculum Revision Task Force, 1994. First-Year Operations, Course Head, 1990-1997; 1998-2000, 2005-2014. Faculty Coordinator, Pre-Registration Program, 1989-1990. Research and Course Development Committee, 1989-1994. MBA Policy Committee, 1989-1990. Co-coordinator, Faculty Research Dinner, 1989-1991. Facilities Committee, 1989-1990. Admissions Committee, 1988-1989. Faculty Leader, Management Program in Australia, 1992-1994. Darden Childcare Center Task Force 1993-1994. Dean's Search Committee, 1992-1993. Gender Issues Committee, 1992-1993.

AWARDS AND HONORS

Wells Fargo Distinguished Case Writer, Darden School, May 2020
Case Writing Award – John Molson International Case Competition, 2019
Dean's Award for Excellence, DBP Course Materials Production, 2015-2018, Darden. (May 2019).
Wachovia Award for Excellence in case Writing – Impactful Case, 2012.
Best Teaching Case, Decision Sciences Institute, 2010.
Wachovia Award for Excellence in Teaching Materials: Innovative Case, 2005.
Wachovia Award for Excellence - Innovative Case Writing, 1999.
Best in Conference Award for Virtual Factory Tours Illustrating the Product-Process Matrix, 1998 Technological Innovations in Business Education Conference, jointly sponsored by the McIntire School and Price Waterhouse
Wachovia Award for Excellence - Research, September 1997.
Awarded The Shingo Prize for Manufacturing Excellence, Professional Researcher Category, 1990.
Honorable Mention, DSI Dissertation Competition, 1981.
Delaware Valley TIMS/ORSA Student Paper Competition -- Awarded Second Prize, 1980.

Delta Sigma Pi National Business Society, awarded Honorary membership.

Phi Beta Kappa, Beta Gamma Sigma, Pi Mu Epsilon.

Herbert S. Steuer Award for outstanding member of the junior class of the Wharton School, 1974. City of Philadelphia Mayor's Scholarship, 1971-1975.

COMMUNITY SERVICE ACTIVITIES

Board Member, Brody Jewish Center (Hillel), University of Virginia, 2014 – 2016.

Instructor, Darden Prisoner Rehabilitation Program, 2013 – present.

Blue Ribbon Commission on School Funding, City of Charlottesville, 2013 – 2014.

Managing Trustee of Endowment Funds, Congregation Beth Israel Charlottesville, VA 2010 – present.

Trustee (Chair, Finance Committee), Congregation Beth Israel, Charlottesville, VA, 2005 – 2011. Coach, YMCA Youth Basketball, 1999 - 2008.

Board Member, Union of American Hebrew Congregations, Mid-Atlantic Council, 1996 - 2000.

Treasurer, Congregation Beth Israel, Charlottesville, VA 1996 - 1998.

- Member, Quest Advisory Task Force, Charlottesville Public School Board, 1996 -1997
- Member, Parent's Advisory Board, Quest Program, Charlottesville Public Schools 1995-2001, 2005 2006.
- T-Ball and Little League Baseball Coach, 1991- 1997.
- Immediate Past President, Temple Beth Israel, Charlottesville, VA, 1993 -1998 (member of building and long-range planning committees)

President, Temple Beth Israel, Charlottesville, VA, 1991-1993.

Vice-President, Temple Beth Israel, Charlottesville, VA, 1989-1991.

- Board Member, Temple Beth Israel, Charlottesville, VA (member of fund raising and adult education committees), 1987-1989.
- Board Member, Ithaca Childcare Center, 1985-1987.
- Board Member, Temple Beth-El, Ithaca, NY, 1984-1987; Treasurer, 1982-1984.