

STEVEN J. SPEAR

WORK EXPERIENCE

- Founder** ***See to Solve Real Time Alert System, patent holder since 2019.***
- Principal** ***The High Velocity Edge, LLC.***
- From 8/15 Advisor to Senior leadership, *United States Navy*
- Advisor, Naval Sea Systems Command CO, Shipyard improvement effort.
 - Advisor, Chief of Naval Research: Standing up “Unmanned Task Force” to become “Disruptive Capabilities Office”
 - NAVSEA ‘LIFT’ team assessing problems of new technology integration on *USS Gerald Ford*.
 - Advisor, Chief of Naval Operations: Helped develop and deploy “high velocity learning” line of effort, one of four initiatives coming from transition team for ADM John Richardson.
 - Conducted workshops for various Navy commands (Navy Pacific Command, Navy Facilities, Navy Sea Systems Command) introducing key concepts.
 - Supported demonstration efforts to show high velocity learning in action including major ship overhaul in Norfolk Naval Shipyard.
 - Advised the Navy’s “Comprehensive Review of Surface Fleet Incidents,” 2017.
- 8/17-1/19 Advisor, *Advancing Therapeutics for Opportunities in Medicine* (“ATOM”), collaboration among DOE/Lawrence Livermore, Nat. Cancer Int., UCSF, GSK.
- Providing guidance on structure and dynamics for high-speed innovation.
- 2012-2014 Advisor, *US Army’s Rapid Equipping Force*, on operational and strategic issues, both internal to USA based HQ + with forward facing stakeholders overseas.
- From 7/06** **Senior Lecturer, *Massachusetts Institute of Technology, Cambridge, MA.***
- *Creating High Velocity Organizations*, MIT Sloan Exec. Education
 - *Graduate Special Subject, 2.S981* for MIT “2N” students, commissioned officers preparing to become ‘Engineering Duty Officers’ in the US Navy and Coast Guard.
 - Various custom programs including ANZ Bank, Army War College, and BP.
 - *Creating High Velocity Systems*, Core course for Leaders for Global Operations Program.
- From 7/05** **Senior Fellow, *Institute for Healthcare Improvement, Cambridge, MA.***
- Projects: eliminating readmissions from skilled nursing facilities, increasing capacity in specialty practices, ‘Open School’ web-based course, learning labs at national forum.
- 1/07 – 6/07** **Consultant, *MacArthur Foundation***, created and facilitated round table discussions and recommendation report about possibility for Foundation to support in healthcare services.
- 2007** **Faculty member, *Program for Chiefs of Clinical Services, Harvard School of Public Health.***
- 1/06 – 6/06** **Visiting Assistant Professor, *Massachusetts Institute of Technology, Cambridge, MA.***
- *Strategic Management*, Sloan School of Management MBA Program Spring 2006.
- 7/99 - 6/05** **Assistant Professor, *Harvard Business School, Tech. & Operations Mgt. Unit, Boston, MA.***
- *The Operating Manager* (MBA second-year elective)
 - *Building Competitive Advantage Through Operations* (Executive education).
- 2001-2005** Faculty member, *Harvard-Macy Institute Program for Leaders in Medical Education, Harvard Medical School.* Boston, MA.
- 7/93 - 8/94** **Visiting Researcher, *Intelligent Manufacturing Systems Consortium***
The University of Tokyo, Tokyo, Japan.
- 6/90 - 8/90** **Japan Society of New York, *International House of Japan Business Fellow,***
The Long Term Credit Bank of Japan, Tokyo, Japan.
- 12/88 - 2/90** **Research Analyst, *US Congress, Office of Tech. Assessment, Washington, DC.***
- 8/86 - 7/88** **Capital Markets Analyst, *Prudential-Bache Capital Funding, New York, NY.***

EDUCATION

- 1999 Doctor of Business Administration, *Harvard Business School*.
Dissertation: *The Toyota Production System: An Example of Managing Complex Social/Technical Systems*.
- 1993 M.S., Mechanical Engineering, *Massachusetts Institute of Technology*.
M.S., Management, *Massachusetts Institute of Technology*.
Thesis: *Frequency Domain Quantification of Manufacturing Process Flexibility*
- 1986 A.B., Economics, *Princeton University*.
Thesis: *Exchange Rate Determination between Japan and the United States*

AWARDS AND HONORS

- 2011 Philip Crosby Medal: American Society for Quality (ASQ)
- 2009 Shingo Prize for Excellence in Manufacturing: Research and Professional Publication Award *Chasing the Rabbit: How Market Leaders Outdistance the Competition.*
USA Books, National Business Book Prize “ “ “ “
- 2006 McKinsey Award *One of two best articles in Harvard Business Review, 2005.* “Fixing Healthcare from the Inside, Today.”
Shingo Prize for Excellence in Manufacturing: Research and Professional Publication Award “ “ “ “ “ “
- 2005 Shingo Prize for Excellence in Manufacturing: Research and Professional Publication Award. “Learning to Lead at Toyota”
- 2004 Shingo Prize for Excellence in Manufacturing: Research and Professional Publication Award. “The Essence of Just in Time...”
- 2002 Nominee for the William H. Newmann Award for outstanding paper based on a recent dissertation: Acad. of Mgt. Conference Ops. Mgt. Div., “Just-in-Time in Practice at Toyota”
- 2001 Best paper proceedings: Acad. Of Mgt. Conf., Healthcare Mgt. Div., “When Problem Solving Prevents Organizational Learning.”
- 2000 Shingo Prize for Excellence in Manufacturing: Research and Professional Publication Award. “Decoding the DNA of the Toyota Production System.”

FELLOWSHIPS AND GRANTS

- 1996-1999 National Research Council, Integrated Manufacturing Fellowship.
- 9/94 - 6/95 Stanford University, Future Professors of Manufacturing Program.
- 7/93 - 8/94 Monbusho (Japanese Ministry of Education, Science and Culture) Scholarship.
- 1991 - 1993 MIT: Leaders for Manufacturing Research Assistant, School of Engineering.
- Spring 1991 MIT: Research Assistant, Sloan School of Management.
- Fall 1990 MIT: Teaching Assistant, Sloan School of Management.
- Summer 1990 Japan Society of New York, International House of Japan: Business Research Fellow.

Books

Wiring the Winning Organization, with Gene Kim, 2023, ITRevolution.

The High Velocity Edge, 2010. (First edition released as *Chasing the Rabbit: How Market Leaders Outdistance the Competition and How Great Companies Can Catch Up and Win*, McGraw Hill, October 2008.)

Hacking for Defense: Creating an Innovation Doctrine for 21st Century Challenges, with Steve Blank and Peter Newell, forthcoming, Wiley.

Book forewords

Transforming Mental Health Care: Applying Performance Improvement Methods to Mental Health Care, Sunil Khushalani and Antonio Depaolo (authors), Steven Spear (foreword), 2021.

The Flow System: The evolution of agile and lean in an age of complexity, Turner Thurlow and Rivera (authors), Steven Spear (foreword), 2020.

Best Care at Lower Cost: The Path to Continuously Learning Health Care in America, Institute of Medicine of the National Academies, 2013 (reviewer).

“What Healthcare Can Learn from the World’s Greatest Organizations,” in *Engineering a Learning Healthcare System: A look at the future*, Institute of Medicine and National Acad. of Eng., 2011.

Moving Beyond Repair: Perfecting Health Care, Karen Wolk Feinstein PhD (Author and editor), PhD, Susan Elster (Editor), Colleen M. Vrbic (Editor), Steve Spear (Foreword) 2012.

Implementing TWI: Creating and Managing a Skills-Based Culture, by P. Graupp and RJ Wrona, (Foreword) (2010)

“Operational Excellence in Healthcare: Achieving Breakthrough Quality, Access and Affordability,” in *Business, Policy, and Practice Management in Orthopedics Lecture Series*, American Academy of Orthopedic Surgeons, with Kevin J. McGuire and Prem Ramkumar

THESIS AND DISSERTATION COMMITTEES

2004

- Tucker, Anita, “Organizational Learning from Operational Failures,” Harvard Business School, Doctor of Business Administration, 2004.

2006

- Marly, Kathryn, “Mitigating supply chain disruptions: essays on lean management, interactive complexity, and tight coupling,” Ohio State University, Ph.D., 2006.

2007

- Pancotto, Marcelo, “Underlying Dynamics of Organizational Learning from a Problem Solving Perspective: Quality Improvement Efforts and Problem Population Dynamics,” Harvard Business School, DBA, 2007.

2008

- Walsh, Daniel, MIT, “Lean transformation of a supply chain organization,” Leaders for Manufacturing Program, 2008.

2009

- Sosa, Miguel, “Implementing various lean methodologies and creating a business development plan at an ABB Greenfield site,” MIT Leaders for Global Operations, 2009.

2010

- Katyal, Abhishek, “Enterprise transformation & lean implementation in a globally dispersed organization,” MIT, Leaders for Global Operations, 2010.
- Marcaide, Iker, “Lean strategies for future body shop development and operation in the automotive industry,” MIT, Leaders for Global Operations, 2010.

2011

- Smith, Stephen, “Process management applications in biopharmaceutical drug production,” MIT Leaders for Global Operations, 2011.
- Donohue, Michael, “Application of queuing theory in bulk biotech manufacturing,” MIT Leaders for Global Operations, 2011.
- Méndez de la Luz, Diego, “Improving supply chain responsiveness for diesel engine remanufacturing,” MIT Leaders for Global Operations, 2011.
- Price, Devon, “Managing variability to improve quality, capacity and cost in the perioperative process at Massachusetts General Hospital,” MIT Leaders for Global Operations, 2011. (reader)

2012

- Chen, Jason L., “787 mid-body job precedence networks for improving production rate,” MIT Leaders for Global Operations, 2012.
- Bolgren, Daniel, “High reliability performance in Amgen Engineering,” MIT Leaders for Global Operations.

2013

- Stein, Jeffrey, “Tool selection and kitting: technical and organizational issues,” MIT LGO Program.
- Kasenga, Matthew, “Theoretical and practical ramifications of altering the amount of sorts required from an outbound dock,” MIT Leaders for Global Operations.

2014

- Sells, Marc; “Improving the Boeing 787 final assembly corrective action process,” MIT LGO.

2015

- Ebner, Ellen, “A Systems Approach to Procurement of Automated Technology” MIT LGO Program.
- Machinani, Suman, “Uncovering Opportunities for Cost Containment and Operational Improvements via Shared Practices between Device Manufacturer and Hospital,” MIT LGO Program.
- David Feliciano, “Designing an Implementation Plan for Total Productive Maintenance in Automated Production of Commercial Airplanes,” MIT Leaders for Global Operations.

2016

- Bucher, Ryan, “Application of Continuous Improvement Methodologies and Techniques in the Drug Design Cycle,” MIT Leaders for Global Operations.
- Hume, David, “Managing Expectations during Acquisition of Bespoke Automation Systems,” MIT LGO.
- Isik, Abdullah, “Understanding Motivation Factors and Employee Engagement in Public Sector Organizations,” MIT Systems Design and Management.
- Koltookian, John, “The Government Has a Method to Get Product to Soldiers Fast, Big Defense Needs to Catch Up,” MIT Systems Design and Management.
- Thomas, Kevin, “Analysis of a Diagnostics Firm’s Pre-Analytical Processes,” MIT LGO Program.

2017

- Small, Aaron, “Gamification as a Means of Improving Performance in Human Operator Processes,” MIT LGO Program.
- Sandford, Michael, “Application of 3D Printing in Medical Devices New Product Development,” MIT LGO.
- McMaughlin, Molly, “New Product Introduction at a Technology Company,” MIT LGO Program.
- Capps, Tyler, “Refurbishment Value Stream Optimization,” MIT LGO Program.
- Parry, David Michael, “Supply Chain Management for Low-Volume, High-Variation Manufacturing,” MIT Systems Design and Management Program.

2018

- Amiot, David, “Improving Parts Delivery through Data Aggregation, Analysis, and Consumption,” Boeing, MIT LGO Program.

2019

- Christen, Cory, “Breaking the Thermo-Mechanical Coupling of Thermoelectric Materials: Determining the Viability of a Thermoelectric Generator,” Draper, MIT Systems Design and Management Program
- Cryan, Trey, “Designing Internal Logistics Processes for a New Manufacturing Site,” Boeing, MIT LGO.
- Heslop, Janelle, “A Systematic Approach for Assessing Next Generation Technologies and Solutions in Biomanufacturing,” Amgen, MIT LGO Program.
- Mehta, Priyasha, “Deconstructing Complex Diseases: Identification of New Phenotypical Sub-clusters of Type 2 Diabetes Using Machine Learning,” MIT SDM Program.
- Pellegrini, Jake, “Reduction of Total Production Cost Through the Use of Safety Stock and Process Improvements,” Boeing, MIT LGO Program.
- Rapp, Travis, “Resilient Acquisition: Unlocking High-Velocity Learning with Model-Based Engineering to Deliver Capability to the Fleet Faster,” US Navy, MIT 2N SDM program.
- Xu, Eric, “A System Approach to Augment Clinical Decision-Making Using Machine Learning,” MIT SDM

2020

- Addy, Robert, “Cost of Complexity,” Nissan (LGO)
- Butala, Caitlin, “Connected Factory: Real Time Data Analysis for Manufacturing Efficiency,” Pratt and Whitney (LGO)
- Daigle, Lea, “Organizational Architecture Design and Assessment of Statistical Feasibility for FSDA Implementation in an Airplane Subassembly,” Boeing. (LGO)
- Danner, Kyle, “Utilizing Technology-Based Quality Gates to Improve Identification of Surface Quality Defects within the Body Assembly Shop at Nissan,” (LGO)
- Pushpanathan, Monisha, “Inferring Insulin Regimen from Clinical Notes Using Natural Language Processing,” MIT Systems Design and Management Program (SDM)

2021

- Rodriguez, Andrew, “Applying Lean Manufacturing Concepts to a High-Mix, Low-Volume Make to Order Environment,” Leaders for Global Operations
- Vigil, Shane, “Automating Flow of a Material Handling System,” Leaders for Global Operations
- Witt, Doug, “High Velocity Supply Chain: Redesigning a long lead-time , short shelf-life supply chain,” LGO

2022

- Allinson, Christian, “Enabling Proactive Quality in Commercial Airplanes using NLP”, MIT LGO program
- Higgins, Luke, “The Playbook - A Novel Approach to Identifying Opportunity for On Machine Measurement and Adaptive Machining Projects”, MIT LGO
- Miller, Jeff, “Application of an Agile Framework in Assessing and Aligning Digital Twin Use Cases Across Product Classes in a Large Organization”, MIT LGO
- Peleg, Tamir, “Amazon Robotics Sortable (ARS) High Velocity Fulfilment (HVF)”, MIT LGO

2023

- Pandolf, Jennifer, “Investigation of Model-Based Systems Engineering Integration Challenges and Improvements”, MIT LGO
- Stewart, Thomas, “Defining Core Manufacturing Capabilities at Raytheon Missiles & Defense”, MIT LGO
- Wilson, Kaya, “Automated Guided Vehicles for Material Flow in Fulfillment Centers”, MIT LGO

2024

- Ben Lehrman, “Techno-Economic Analysis of Line Haul and Switcher Locomotive Propulsion by Diesel, Battery, and Hydrogen Fuel Cell Technologies”, MIT LGO
- Abraham Gerzoghier, “An Environmental Impact Assessment of 3D Printed Medical Devices”, MIT LGO

2025

- Esteban Echavarria, MIT LGO
- Amna Magzoub, MIT LGO

OTHER PUBLICATIONS

Journals

- “Succeeding in Periods of Abrupt Change,” US Naval Institute *Proceedings*, with Trent Hone, March 2022.
- “History’s Lessons on Competitive Innovation,” *Sloan Management Review*, October 2020.
- “Fast discovery: The imperative for high velocity learning by everyone, about everything, all of the time,” The Health Foundation, January 2017.
- “Lessons from Kunduz: Prevent Disaster by Paying Attention to the Little Picture,” *Sloan Management Review*, May 18, 2016.
- “Beyond the Jargon: Architecture, Process, and Clinical Care.” *Spine*, McGuire, Kevin J., and S.J. Spear. (2015).
- “Reinventing Healthcare Delivery,” *The Health Foundation*, May 2012
- “Why Best Practices Haven’t Fixed Health Care,” *Harvard Business Review*, January 2011
- “Who Was Caring for Mary: Revisited,” with Frederick Southwick, *Academic Medicine* (December 2009).
- “Fixing Healthcare from the Inside: Teaching Residents to Heal Broken Delivery Processes As They Heal Sick Patients,” Research and Innovation in Medical Education, Invited Address, American Association of Medical Colleges Conference. *Academic Medicine*. 81(10) Suppl:S144-S149, (2006).
- “Using Real-Time Problem Solving to Eliminate Central Line Infections,” with Richard Shannon and other co-authors. *Joint Commission Journal on Quality and Patient Safety*. 32(9):479-487. (2006)
- “Operational Failures and Interruptions in Hospital Nursing,” with Anita L. Tucker, *Health Services Research*, 41 (3) 643-662. (2006).
- “Ambiguity and Workarounds as Contributors to Medical Error” with Mark Schmidhofer, *Annals of Internal Medicine*. Vol. 142. No. 8. pp. 627-630 (2005).
- “Medical Education as a Process Management Problem,” with Elizabeth Armstrong and Marie Mackey, *Academic Medicine*, Vol. 79. No. 8. 721-728. (2004)
- “Driving Improvement in Patient Care -- Lessons from Toyota.” *Journal of Nursing Administration*, Vol. 33 no. 11, pg 585-595, with Debra Thompson & Gail Wolf (2003).
- “The Essence of Just-in-Time: Embedding Diagnostic Tests in Work-Systems to Achieve Operational Excellence,” *Production Planning & Control*, Vol. 13, no. 8, pp. 754 - 767. (2002)
Shingo Research Prize Winner, 2004.
- “When Solving Problems Prevents Organizational Learning.” *J of Organizational Change Mgt*, Vol. 15, no. 2, w/ A Tucker and A Edmondson (*Best paper proceedings, Healthcare Div., Acad. of Mgt. Conf., 2001.*), (2002).
- “Decoding the DNA of the Toyota Production System.” *Harvard Business Review*, Vol. 77, No. 5, pg. 96, with H. Kent Bowen. 1999. *Shingo Research Prize Winner, 2000.*

Managerial and other journals

- “Innovation and Workforce Engagement in a High-Velocity World,” *Quality Magazine*, Oct. 2009
- “Learning from the Masters: By adopting complex processes from Toyota and Alcoa, hospitals can improve performance,” *Cerner Quarterly*, Vol. 2, No. 3. (2006)
- “Fixing Healthcare from the Inside, Today,” *Harvard Business Review*, Vol. 83, No. 9, p. 78. September 2005.
McKinsey Award and Shingo Research Prize Winner, 2006.
- “Learning to Lead at Toyota,” *Harvard Business Review*, Vol. 82, No. 5; p. 78. May 2004.
Shingo Research Prize Winner, 2005.
- “The Organization of the Future: Winning Through Operational Excellence.” *Imaging Spectrum Magazine*, Page 40-46, with Martin Stein, May 2003.

Video Courses

- Spear, S.J. (2012), "Making the leap: how high velocity organizations get ahead and stay ahead", in Van Mieghem, J.A. (ed.), *Operations Strategy, The Marketing & Management Collection*, Henry Stewart Talks Ltd, London (online at <http://hstalks.com/?t=MM1623496-Spear>)
- “Achieving Breakthrough Quality, Access, and Affordability,” Institute for Healthcare Improvement Open School.

Op Eds

- “MGH Needs Checkup for Possible ER Bottlenecks,” *The Boston Herald*, March 12, 2016
- “Fixing the T: Anticipate problems, then practice responses,” *The Boston Globe*, March 8, 2015.
- “Can’t picture the Boston 2024 Olympics? Maybe you need to experience it.” *BetaBoston.com*, May 20, 2015
- “Ready to win: What police, companies, and the rest of us can learn from the Patriots,” *The Conversation*, Feb 10 2015
- “How Bob McDonald can (really) fix the VA’s health care system,” *Fortune.com*, August 8, 2014
- “Don’t Be a Zombie Organization,” *The Huffington Post*, May 2013
- “General Motors: How to avoid more failed parts,” *USA Today*, July 27, 2014
- “A New Design for Healthcare Delivery,” with Donald Berwick, *Boston Globe*, Nov. 23, 2007.
- “The Health Factory,” *The New York Times*, Section A, Page 15, (Op Ed) August 29, 2005.

Book Manuscript Chapters

- “The Managerial Challenge of Scientific Advances and System Complexity.” (August 2007).
- “How Complex Systems Fail.” (April 2007).
- “How Complex Systems Succeed.” (July 2007).
- “From Chaos to Best in Class: How Avenue A Built a (Six) Billion Dollar Business on the Basis of Superlative Operations.” (July 2007).

Government reports

Electronic Bulls and Bears: Securities Markets and Information Technology. Congressional Office of Technology Assessment, Washington, D.C., OTA-CIT-469, NTIS Order # PB91-10653 (1990) [209], with Vary Coates, Charles Ward, and Dana Michelle Brennen.

Trading Around the Clock: Global Securities Markets and Information Technology. Congressional Office of Technology Assessment, Washington, D.C., OTA-BP-CIT-66, NTIS Order # PB90-254087 (1990) [113], with Vary Coates, Charles Ward, and Dana Michelle Brennen.

PARTIAL LIST OF PUBLIC PRESENTATIONS

Testimony

“The Healthcare Imperative: Lowering Costs and Improving Outcomes,” *Institute of Medicine*, Washington DC September 9, 2009

“Creating a Learning Healthcare System,” *Institute of Medicine*, Washington DC April 2008.

“Creating The Business Case For Quality Improvement And Quality Improvement Research,” *Institute of Medicine*, Forum On The Science Of Health Care Quality Improvement And Implementation. (October 15, 2007)

“Reengineering of health care,” *Medicare Payment Advisory Commission*, (MedPAC), Washington DC, September 7, 2006.

Media Appearances

“Greater Boston with Emily Rooney,” *WGBH TV*, April 2011.

“Morning Call,” *Bloomberg Business TV*, Dec. 11, 2008

“On the Money,” with Charlie Stein *Bloomberg Business Radio*, Dec. 11, 2008

“Detroit Shifts Gears Against Japanese”, *CBS Sunday Morning*, Jan. 14, 2007.

“On The Money,” with Charlie Stein and Howard Liberman, *Bloomberg Business Radio*, Oct. 6, 2006.

“Healthcare Borrows from Industry,” with Allan Coukell, *WBUR*, March 10, 2006.

“On The Money,” with Charlie Stein and Howard Liberman, *Bloomberg Business Radio*, Jan. 4, 2006.

“Greater Boston with Emily Rooney,” *WGBH Boston*, October 17, 2005.

Healthcare audiences

“Greatness is Possible,” Plenary address, Military Health Services annual conference, Jan 2011.

“Healthcare’s Lean Transformation: A Roadmap From Toyota,” R. Zach Thomas Keynote Address, *Rowland Hite Health Planning Seminar*, Charlotte, NC, May 2007.

Keynote address, *Greater New York Hospital Association*, Annual Meeting, NYC, NY, April 2007.

“Achieving Optimal Health Care Outcomes,” *Park Nicollet Clinician Learning Day*, Minneapolis, MN (Jan 2007)

“Achieving Quality through Patient Safety,” *FOJP 22nd Annual Conference*, NYC, NY (Nov. 2006).

Joyce Kaye Lecture, *American Society of Aesthetic Plastic Surgery*, National Conference, Orlando, FL (April 2006).

“Fixing Healthcare from the Inside, Today,” Learning Laboratory, *Institute for Healthcare Improvement* National Conference, Orlando, FL (December 2005).

“Creating High Reliability Healthcare Organizations,” Research and Innovation in Medical Education address, *Association of American Medical Colleges*, annual conference, Washington DC, (November 2005).

“Training Residents to Manage High-Reliability Healthcare Processes,” Plenary address, *International Association of Medical Science Educators*, Los Angeles, CA, (June 2005).

“Ambiguity and Workarounds as Contributors to Medical Error,” Plenary address, *Institute for Healthcare Improvement Impact Leadership Forum*, Orlando, FL, (October 2004).

“Perfecting Patient Care: Lessons from Manufacturing’s Leaders for the Healthcare Industry.” Keynote address, *Risk Management Foundation*, Cambridge, Mass., (November 2002).

“Achieving High Quality, Safety, and Low Cost: Lessons from Industrial Leaders for Healthcare.” Keynote address at Bridging the Quality Chasm: Leading the Patient Safety Mission conference, *Risk Management Foundation*, Newport, RI, (September 2002).

Industry audiences

“Chasing the Rabbit: How Market Leaders Outdistance the Competition,” Keynote address, *Association for Manufacturing Excellence annual conference*, Toronto, October 2008

“Competitive Advantage Through Operations,” Day Long Seminar, *Northwest High Performance Enterprise Consortium*, Portland, OR (November 2006).

“Competitive Advantage Through Operations: Lessons from Industry Leaders,” Plenary address, *Association for Manufacturing Excellence*, Boston, MA, (November 2005).

“Teaching TPS: A Tutorial for Business School Faculty,” seminar, *Production and Operations Management Society*, annual conference, Chicago, IL, (May 2005).

“Replicating the DNA of the Toyota Production System: Creating Learning, Adaptive Organizations.” Keynote address at *14th Annual Shingo Prize Conference*, Cincinnati, (April 2002).

“Replicating the DNA of the Toyota Production System,” *Greater Boston Manufacturing Partnership*, (February 2002).

“The Role of Managers in Toyota Production System Managed Organizations.” Keynote address. *Association for Manufacturing Excellence*, Annual Conference, Boston, Massachusetts, (Nov. 2000).

“The Essence of the Toyota Production System: Rules-in-Use for Designing and Improving Organizations,” *Shingo Prize Annual Conference*, Milwaukee, Wisconsin, (May 2000).

“The Role of an Alcoa Business Systems Manager,” *Alcoa Leadership Conference*, (March 2000).

Other

“Toward Greater Economic Competition,” Panel Discussion, *Harvard University Program on U.S.-Japan Relations*, May 2002.

“New Developments in Japanese Domestic Policy,” Panel Discussion, *Harvard University Program on U.S.-Japan Relations*, May 2001.

TEACHING MATERIALS

Modules for “THE OPERATING MANAGER” — HBS MBA second year elective.

Building Capabilities

Bayside Controls, Inc., HBS Teaching Note 5-604-068 (2004).

Building Capabilities: Mechanisms for and Impediments to Learning
HBS Teaching Note 604-082 (2004).

Jack Smith: Career Launch at Toyota, HBS Teaching Note 604-087 (2004).

Managing complex systems reliably, robustly, and responsively

Why Complex Systems Fail, HBS Teaching Note 5-604-083 (2004).

The DNA of the Toyota Production System, HBS Teaching Note 5-604-086 (2004).

Deaconess Glover Hospital, HBS Teaching Note 602-075 (Revised 2004).

Madison Avenue: Digital Media Services, HBS Teaching Note 604-088 (2004)

Other teaching and students notes

Designing Products and Processes: Aligning Problem Levels with Problem-Solving Team Forms, HBS Technical Note 605-039 (2005).

MySoftware, HBS Teaching Note 604-089 (2004).

Reflections on the United Electric case discussion: Persuasion, Induction, and Grounding in the Specifics. HBS Note 602-146 (2002).

Comments on the Second Toyota Paradox. HBS Note 602-035 (2001).

Process Improvement Template. HBS Note 601-186 (2001).

Teaching Note for First-Year, Tech. and Operations Management

Workplace Safety at Alcoa (B) TN. HBS Teaching Note 602-091 (2002).

Course overviews, etc.

Running and Growing the Small Company: Course Overview. HBS Note 602-077 (2001).

Running and Growing the Small Company: Project-Paper Writing Recommendations. HBS Note 602-022 (2001).

Running and Growing the Small Company: Project Guidelines. HBS Note 601-083 (1999).

Cases

Used in The Operating Manager

- Deaconess-Glover Hospital (A)*. HBS Case 601-022 (2001), with J Kenagy.
- Deaconess-Glover Hospital (B)*. HBS Case 601-023 (2001), with J Kenagy.
- Deaconess-Glover Hospital (C)*. HBS Case 602-028 (2001).
- Deaconess-Glover Hospital (D)*. HBS Case 601-025 (2001).
- Deaconess-Glover Hospital (E)*. HBS Case 601-026 (2001).
- Deaconess-Glover Hospital (F)*. HBS Case 601-027 (2001).
- Jack Smith: Career Launch at Toyota*. HBS Case 604-057 (2004).
- Jack Smith: Becoming a Toyota Manager (I)*. HBS Case 604-059 (2004).
- Jack Smith: Becoming a Toyota Manager (II)*. HBS Case 604-060 (2004).
- Madison Avenue: Digital Media Services (A)*. HBS Case 601-020 (2000), with J. Dann.
- Madison Avenue: Digital Media Services (B)*. HBS Case 601-021 (2001), with A Karshis.
- Madison Avenue: Digital Media Services (C)*. HBS Case 601-077 (2001), with A Karshis.
- MySoftware (B): Finding a New Direction*, HBS Case 602-038 (2003), with H. Kent Bowen and Nicole Tempest.
- MySoftware (C): Becoming ClickAction*, HBS Case 602-072 (2003), with N. Tempest.
- Quality Imaging Products (QIP)*. HBS Case 603-057 (2003), with JP Groberg.
- Spir-It, Inc. (A): Building the Business*. HBS Case 601-081 (2001).
- Spir-It, Inc. (B): Managing People*. HBS Case 601-091 (2001).

Other cases

- Connecticut Spring and Stamping Corp. (B)*. HBS Case 698-038 (1998), with H. Kent Bowen and Massimo Russo.
- Connecticut Spring and Stamping Corp. (C)*. HBS Case 698-039 (1998), with H. Kent Bowen and Massimo Russo.
- Making a Doctor*. HBS Case 602-027 (2002).
- Student Who Was Missing-in-Action, The*. HBS Case 601-182 (2001).
- Workplace Safety at Alcoa (B)*. HBS Case 600-068 (2000).

Unpublished working papers

“Better Care, for More People, at Less Cost: Bringing Lessons from Systems Management into Health Care,” Solicited concept paper for MacArthur Foundation’s New Ideas Process, with Donald Berwick, Carol Beasley, and Jane Roessner, (June 2007).

“The Right Way to Organize – Designed for Problem Solving,” with Willy Shih. (2005).

“Converting Sign-Out, Report, and Hand-offs into Transparent Experiments for the Purpose of Improving Patient Care and Resident Training,” 2005.

“Towards a Theory of Lean,” with Kathryn Marley and Peter Ward, (2005) – *presented at Academy of Management, 2007.*

“What is a Dynamic Capability? A case study in building process improvement capability,” (2004).

“Building Process Improvement Capacity: Structuring Problem Solving As Skill Building Exercises.” HBS working paper 02-006, (2003)

“Noise in Service Settings: Impact on productivity, quality, and learning,” with Bryce LaPierre (2003)

“Getting to Zero: Eliminating nosocomial infections by implementing lessons from manufacturing leaders,” HBS Working Paper Series, No. 02-068, (2003), with M Mackey (HBS), E Miller, R Muder, C Squire (VA), P Perreiah, V Pisowicz (PRHI), R Cochran, J Jernigan, D Cardo (CDC).

“Just-in-Time in Practice at Toyota: Rules-in-Use for Building Self-diagnostic, Adaptive Work-systems.” HBS Working Paper 02-043, (2002). (*Nominated for William H. Newmann dissertation award at 2002 Academy of Management Conference.*)

“Temporary standardization to manage multi-stage processes for rapid improvement,” Working paper, 02-074, (2003).