## **Curriculum Vitae**

## Steven D. Eppinger

General Motors Leaders for Global Operations Professor Professor of Management Science and Innovation Sloan School of Management Massachusetts Institute of Technology Room E62-468

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URL: <a href="https://mitsloan.mit.edu/faculty/directory/steven-eppinger">https://mitsloan.mit.edu/faculty/directory/steven-eppinger</a>
Citations: <a href="https://scholar.google.com/citations?user=ewwakRYAAAAJ">https://scholar.google.com/citations?user=ewwakRYAAAAJ</a>

## **Education**

Degree	School	Date
Sc.D. (Mechanical Engineering)	MIT	9/88
S.M. (Mechanical Engineering)	MIT	6/84
S.B. (Mechanical Engineering)	MIT	2/83

## **Principal Fields of Interest**

Product Development, Engineering Design, Technology Management, Project Management

## **History of MIT Appointments**

Rank	Start	End
Professor of Innovation (by joint appointment)	7/09	
Professor of Management Science	7/01	
Professor of Engineering Systems (by joint appointment)	7/99	6/16
Associate Professor of Management Science (with tenure)	7/96	6/01
Associate Professor of Management Science (without tenure)	7/93	6/96
Assistant Professor of Management Science	7/88	6/93

## **Consulting Activities**

## **Current and Ongoing Consulting Engagements**

Firm	Location	Since

## **Current Advisory Boards**

Location	Date(s)
Boston, MA	12/24
Cambridge, MA	10/24
Boston, MA	4/24
Andover, MA	7/04 – 4/22
	Boston, MA Cambridge, MA Boston, MA

## Completed Engagements

Firm	Location	Date(s)
PTC	Boston, MA	6/12 – 5/23
Omega Therapeutics	Cambridge, MA	11/22
Fusion for Energy	Barcelona	12/20 – 10/21

Lutron Electronics Co.	Coopersburg, PA	10/18 – 5/19
Ipsen Bioscience, Inc.	Cambridge, MA	10/17 – 1/19
Avatech	Park City, UT	9/13 – 6/18
Biogen	Cambridge, MA	12/14 – 4/16
Allen, Allen, Allen & Allen	Richmond, VA	6/14 – 2/16
BP Exploration and Production Co.	Houston, TX	11/12 – 8/14
Waters Corp.	Milford, MA	6/14
Nurun Inc.	Montreal, Canada	1/13 –7/13
Apple, Inc.	Cupertino, CA	8/11 – 4/12
BP BioFuels	Houston, TX	5/12
Cabot Corp.	Billerica, MA	4/12
·		12/11
ANSYS, Inc.	Canonsburg, PA	
VF Corp.	New York, NY	9/11
SolidWorks	Concord, MA	6/11
Plantronics, Inc.	Santa Cruz, CA	5/10 – 1/11
Becton Dickinson Medical-Surgical	Franklin Lakes, NJ	2/10 – 6/10
Ambient Devices, Inc.	Cambridge, MA	1/02 – 4/10
KLA-Tencor	Milpitas, CA	8/07
PTC	Needham, MA	1/04 – 7/07
iRobot, Inc.	Burlington, MA	9/06
ProChain Solutions, Inc.	San Diego, CA	2/06
Propulsor Technology, Inc.	Arlington, VA	9/05
Mitsubishi Electric Co.	Nagoya, Japan	7/05
Integral, Inc./Analysis Group	Cambridge, MA	10/91 - 6/05
Volvo Powertrain Inc.	Hagerstown, MD	5/05
NASA	Pasadena, CA	1/05
BP	Houston, TX	3/04
Medtronic, Inc.	Minneapolis, MN	1/04 - 3/04
Nokia Oy	Helsinki, Finland	10/03 – 10/06
ISI-Dentsu Inc.	Tokyo, Japan	11/03
Exostar, Inc.	Herndon, VA	11/03
Axiomatic Design Solutions, Inc.	Boston, MA	10/03
3dMaxMedia Inc.	Windermere, FL	11/99 – 6/02
Schlumberger Corp.	Cambridge, UK	12/01
Global One		11/99 – 1/00
	Reston, VA	
TEKES, Finland Technology Centre	Helsinki, Finland	6/99 – 1/00
Finnish Inst. of Tech Industries (FIMET)	Helsinki, Finland	8/93 – 1/00
Celsius Corp.	Stockholm, Sweden	6/99
Fiat Central Research	Torino, Italy	11/98 – 1/99
Andersen Consulting	St. Charles, IL	10/98
The Timken Co.	Canton, OH	11/97 – 2/98
Scania Trucks AB	Södertälje, Sweden	12/97
Kulicke & Soffa Industries, Inc.	Willow Grove, PA	5/97
Ford Motor Company	Dearborn, MI	7/93 – 4/97
IBASC	Princess Anne, MD	4/96 – 3/97
Product Genesis, Inc.	Cambridge, MA	10/96 – 12/96
International Business Machines Corp.	Palisades, NY	4/96
ABB Corporate Research	Vaasa, Finland	10/94 – 8/95
Benefon Oy	Salo, Finland	8/95
Saab Military Aircraft	Linköping, Sweden	8/95
Helkama Cable	Hanko, Finland	8/95
Xerox Corporation	Washington, DC	6/95
Nokia Mobile Phones	Salo, Finland	1/95
Ahlstrom Pyropower	Varkaus, Finland	10/94 – 1/95
Spectragraphics Corporation	San Diego, CA	7/94 – 1/95
apating corporation		1,00

Valmet Paper Machinery Corp.	Jyväskylä, Finland	8/93 - 10/94
ABB Industrial Systems Ltd.	Stevenage, England	6/94
ABB Asea Brown Boveri Ltd.	Zürich, Switzerland	9/93 - 11/93
Center for Concept Development	Princeton, NJ	6/92 - 1/93
Charles River Associates, Inc.	Boston, MA	5/92
Xerox Corporation	Webster, NY	5/91, 5/92
Eastman Kodak Co.	Rochester, NY	11/90, 7/91
Edward C. Levy Co.	Dearborn, MI	12/90 - 2/91
Top Sound, Inc.	Colorado Springs, CO	9/89
Premise, Inc.	Cambridge, MA	2/88 - 10/88
Federal Products Corp.	Providence, RI	6/84 - 4/85

# **MIT Executive Teaching**

Program/Sponsor	Location	Date(s)
Sloan Exec. Ed. Merck Group	MIT	9/24 —
Sloan Exec. Ed. Schneider Electric	MIT	11/23
Sloan Exec. Ed. Thomson Reuters	MIT	11/23
Sloan Exec. Ed. Endress+Hauser	MIT	1/23 —
MITxPRO Technical Project Management	online courses	4/22 ——
Sloan Exec. Ed. UL	MIT	9/22 ——
Sloan Exec. Ed. Mastering Design Thinking	online courses	3/18 ——
Sloan Exec. Ed. IPADE	MIT	4/17 ——
Sloan Exec. Ed. Advanced Mgmt. Pgm.	MIT	06/14
Sloan Exec. Ed. Systematic Innovation	MIT	11/13
Sloan Exec. Ed. Mahidol/SIBA Pgm	MIT	03/12
Sloan Exec. Ed. Complex Project Mgmt.	MIT and online	9/99 ——
Sloan Exec. Ed. Saudi Electricity	MIT	12/22 - 5/23
Sloan Exec. Ed. Banco Popular	MIT	11/22
Sloan Exec. Ed. NACS	MIT	11/22
Sloan Exec. Ed. AXA	MIT	4/22
Sloan Exec. Ed. Porsche	MIT	11/15, 2/22
Sloan Exec. Ed. Travelers	MIT	3/21
Sloan Exec. Ed. Fannie Mae	MIT	11/17 – 12/21
Sloan Exec. Ed. Danske Bank	MIT	11/20
Sloan Exec. Ed. Accenture Inovation	India	3/15 – 1/20
Sloan Exec. Ed. NACS	MIT	11/19, 11/22
Sloan Exec. Ed. Alfa Tech. Leaders	MIT and Mexico	10/15 – 6/19
Sloan Exec. Ed. CEMEX	MIT	11/17
Sloan Exec. Ed. Turk Telekom	MIT	4/17
Sloan Exec. Ed. Flex Ops. Mgmt.	MIT	5/16
Sloan Exec. Ed. Alstom Tech. Leaders	MIT and Switzerland	5/14 – 7/15
Sloan Exec. Ed. BP Operations Academy	MIT	6/12 – 7/14
MIT SDM Certificate Program	MIT	8/01 – 8/13
Sloan Exec. Ed. Product Development	MIT	6/97 – 10/12
Sloan Exec. Ed. BP Projects Academy	MIT	6/03 – 3/12
Sloan Exec. Ed. China Mobile Exec. Pgm	MIT	10/11, 9/12
Sloan Exec. Ed. ACMA Exec. Pgm	MIT and India	10/08 – 2/11
Sloan Exec. Ed. Boeing China Exec. Pgm	MIT	12/10
Sloan Exec. Ed. Air Liquide Exec. Pgm	MIT	10/10
Sloan Exec. Ed. Rusnano Exec. Pgm	MIT	4/10
Russian Oil and Gas Industry Pgm	Moscow	11/09, 10/10
Sloan Exec. Ed. Int'l. Mgmt Pgm	MIT	6/08, 6/09
Sloan Exec. Ed. Int'l Adv. Mgmt Pgm	MIT	6/06, 6/07
Sloan Exec. Ed. Mars University	MIT	4/06

Sloan Exec. Ed. Leading Innov. Enterp.	MIT	2/05, 3/06
MIT Project Mgmt. for Engineers Course	MIT	6/96 - 1/00
MIT India Executive Program	MIT	5/97, 5/98
MIT LFM Industry Leaders Course	MIT	11/95, 2/98
MIT Mgmt. of R&D Executive Program	MIT	6/95
MIT Summer Session Course	MIT	8/94
US Army Missile Command (MICOM)	MIT	5/94
Central/Eastern European Teachers Prog.	MIT	7/93
MIP/MIT Executive Program	MIT	6/91, 6/92

# **Other Executive Teaching**

Program/Sponsor	Location	Date(s)
Frontiers in Entrepreneurship	Cambridge, MA	6/06 —
Fusion for Energy (ITER Project)	global	1/21 - 9/21
US Army R&D Center	Natick, MA	12/16
Pratt&Whitney Customer Training Ctr.	Farmington, CT	10/13
Qualcomm, Inc.	San Diego, CA	12/08
FARO Technologies	Cambridge, MA	10/07
Intl. Assn. of Product Development	San Diego, CA	1/06
Nordic Management of Technology Prog.	Boston, MA	11/92 - 9/02
Royal Complutense Spanish Scholars Pgm	Harvard Univ.	7/99 - 7/02
Exec. Masters in International Logistics	Georgia Tech, Atlanta	11/01
ENDREA	Göteborg, Sweden	10/01
Bose Corporation	Framingham, MA	3/01
Stockholm School of Econ, Exec MBA	Cambridge, MA	3/01
United Technologies Advanced Studies Pr.	East Hartford, CT	10/00
Euroforum	Madrid, Spain	5/00
Instituto Internacional San Telmo	Sevilla, Spain	5/99
Management Roundtable	Waltham, MA	2/97 – 11/98
CERTI Foundation	Florianópolis, Brazil	9/98
Sonera, Tele Business School	Finland	12/96 – 5/98
Chalmers Advanced Management Pgm.	Boston, MA	3/98
IIR Finland	Helsinki, Finland	12/96, 12/97
Design Management Institute	Amsterdam, Netherlands	3/97
University of Michigan	Ann Arbor, MI	8/96, 3/97
International Equipment Company	Needham Heights, MA	4/96
Unilever General Management Course	Kingston-upon-Thames, England	3/96
China Educational Tours	Boston, MA	7/92
Estonian Management Institute	Tallinn, Estonia	1/91

# **MIT Activities**

Administrative Positions	Start	End
Co-Director, SDM and IDM Programs	4/10	6/22
Deputy Dean, Sloan School of Management	10/07	6/09
Interim Dean, Sloan School of Management	7/07	10/07
Deputy Dean, Sloan School of Management	7/04	6/07
Co-Director, LFM and SDM Programs	7/01	7/03
Co-Director, Center for Innovation in Product Development	6/00	1/02
Research Director, Ford-MIT Collaboration	5/98	9/01
Committees	Start	End
MIT Online and Professional Continuing Education Working Group	11/23	
Martin Trust Center Advisory Committee	9/19	

Sloan Executive Education Committee	9/18	
MIT Endicott House Board of Governors	9/16 7/07	—— 6/25
MIT Committee on Nominations	7/07 7/19	6/23
MIT Design Initiatives Committee	11/20	1/22
<u> </u>	9/18	6/20
Sloan Task Force on Digital Education Sloan Global Initiatives Committee	9/16	6/19
Committee on Outside Professional Activities	9/12	6/19
New Engineering Education Transformation Program Committee	6/16	6/17
Committee on MIT's Role in Reducing the Cost of Health Care	8/14	6/15
Corporation Joint Advisory Committee on Institute-Wide Affairs	7/12	6/15
Institute-wide Task Force on the Future of MIT Education	3/13	8/14
Entrepreneurship Minor Committee	7/12	6/14
Engineering Academic Programs Review Committee	1/14	5/14
Sloan Executive Personnel Committee	9/13	5/14
MIT-BP Research Program Committee	9/11	12/13
MIT Endicott House Review Committee (chair)	3/13	10/13
Sloan Fellows and EMBA Programs Committee	8/12	7/13
Sloan Undergraduate Education Task Force	10/12	5/13
MITx Steering Group	5/12	1/13
Ad Hoc Committee on Innovation and Entrepreneurship	11/11	6/12
ESD Organization Task Force	9/11	5/12
Sloan Executive Education Committee	9/09	6/10
Killian Award Selection Committee	9/09	6/10
MIT Task Force Working Group on Administrative Processes (co-chair)	2/09	6/10
MIT Committee on Conflicts of Interest in Research	9/08	6/10
Lemelson-MIT Sustainability Prize Screening Committee	10/08	6/09
MIT International Advisory Council	6/07	6/09
Sloan International Initiatives Committee (chair)	9/04	6/09
Sloan Executive Education Committee (chair)	9/04	6/09
Sloan Executive Personnel Committee	9/04	6/09
Sloan Space Committee	9/04	6/09
MIT Faculty Council	7/04	6/09
MIT Open CourseWare Director Search Committee (chair)	11/07	7/08
School of Engineering Strategic Planning Council	10/07	5/08
Sloan Undergraduate Program Committee	9/04	7/07
Sloan Doctoral Program Committee	9/04	7/07
School of Engineering Deans Search Committee	11/06	6/07
MIT Research Administration Council	9/05	6/07
MIT150 Sesquicentennial Planning Committee	11/06	1/07
Innovation and Entrepreneurship Program Design Committee	11/05	6/06
MIT Undergraduate Commons Task Force	7/04	8/06
MIT-BP Research Program Committee	9/04	12/05
MIT IT-SPARCC Council	9/04	9/05
Lemelson-MIT Prize Board	9/00	2/03
MIT Faculty Council	8/00	6/03
Sloan Undergraduate and Interdepartmental Program Committee	9/99	6/03
Sloan Masters Program Redesign Committee	3/02	12/02
Engineering Council (Extended)	7/00	6/02
Sloan Community Appreciation Awards Committee	5/00	5/02
Sloan Task Force on Educational Technology	9/99	3/02
MIT Committee on Undergraduate Policy (CUP)	9/98	8/01
Sloan Building Technology Sub-Committee	8/00	6/01
Sloan Undergraduate Minor Committee (Chair)	1/99	6/00
Lemelson-MIT Prize Screening Committee	10/97	4/00
Sloan Executive Education Committee	9/97	9/98

	LFM Knowledge Transfer Committee MIT Committee on the Writing Requirement Sloan Committee on Faculty Load Brooks Thesis Prize Committee Sloan Committee on Undergraduate Advisors	1/95 6/91 9/90 9/89 8/89	6/96 6/94 12/90 5/90 6/96
	Research and Teaching Programs System Design and Management Program Leaders for Global Operations Program Integrated Design and Management Program Singapore-MIT Alliance (Advanced Manufacturing Technology Program) Ford-MIT Collaboration Center for Innovation in Product Development Lean Aerospace Initiative International Center for Research on the Management of Technology International Motor Vehicle Program Laboratory for Manufacturing and Productivity	Start 6/94 9/88 9/15 7/99 5/98 6/96 6/96 9/90 8/91 9/88	6/23 7/02 9/01 6/02 1/99 6/98 6/93 5/93
1	Chairs General Motors Leaders for Global Operations Chair General Motors Leaders for Manufacturing Chair Nanyang Technological University Career Development Chair	<b>Start</b> 6/09 1/98 11/93	<b>End</b> 6/09 6/95
	INFORMS Omega Rho Distinguished Lecture Design Society, Fellow Technical University of Denmark H.C. Ørsted Distinguished Lecture MIT Teaching with Digital Technology Award Nomination INFORMS Technology, Innovation Management, and Entrepreneurship Distinguished Speaker Award PICMET Medal of Excellence Award Wickham Skinner Award for Best Paper Published in Production and Operations Management in 2013, 2nd place award World Economic Forum, Global Agenda Council on the Skills Gap POMS College of Product Innovation and Technology Management, Distinguished Fe University of Minnesota 5th Annual Allan D. Shocker Lecture ASME Xerox DTM Best Paper Award ASME Design Theory and Methodology Conference Best Paper Award Academy of Management, TIM Division Best Books List MIT Alumni/ae Award for Innovation and Excellence in Management Education MIT Graduate Student Council Teaching Award	ellow	Date 10/24 4/23 10/19 6/17 11/15 8/15 5/14 5/08 5/06 3/03 9/01 9/95 1/95 5/93 5/93
	Grants Swisscom Research Grant BP Research Grant Siemens Research Grant Nokia Oy Research Grant Parametric Technology Corp. Research Grant Singapore-MIT Alliance Research Grant Ford-MIT Collaboration Research Grant Center for Innovation in Product Development (CIPD) Research Grant National Science Foundation Engineering Research Center Grant (CIPD)	Start 2018 2013 2009 2007 2006 2000 1999 1999 1996	End 2021 2017 2014 2008 2007 2003 2001 2001

Lean Aircraft Initiative Research Grant		1999
Hewlett Packard Research Grant		1999
NASA New Millennium Program Research Grant	1996	1998
International Center for Research on the Management of Technology Grant	1991	1998
International Motor Vehicle Program Research Grant	1991	1993
Leaders for Manufacturing Curriculum Devel. Grant (Sloan Foundation)		1994
Digital Equipment Corporation Research Grant		1992
General Motors Research Grant		1991
National Science Foundation Technology Management Program Grant	1990	1992
Leaders for Manufacturing Research Grant	1989	1995
Leaders for Manufacturing Junior Faculty Grant	1988	1993

### **Professional Activities**

## Professional Memberships

American Society of Mechanical Engineers

Corporate Design Foundation

Design Management Institute

**Design Society** 

Institute for Operations Research and Management Science

Institute of Electrical and Electronic Engineers

Production and Operations Management Society

Society of Concurrent Product Development

World Economic Forum, Councils on the Global Agenda

## Recent Referee Activity

ASME Journal of Mechanical Design

Artificial Intelligence for Engineering Design, Analysis, and Manufacturing (AIEDAM)

California Management Review

CoDesign

Design Science

**Design Studies** 

IEEE Transactions on Engineering Management

INFORMS-TMS, Best Paper Award

International Conference on Engineering Design

International DESIGN Conference

International Design Structure Matrix Conference

International Journal of Design Creativity and Innovation

International Journal of Product Development

Journal of Engineering and Technology Management

Journal of Engineering Education

Journal of Engineering Design

Journal of Modern Project Management

Journal of Product Innovation Management

Journal of Systems Science and Systems Engineering

Management Science

Manufacturing and Service Operations Management

MIT Press

NordDesign Conference

Operations Research

Organization Science

**Production and Operations Management** 

**R&D Management** 

Research in Engineering Design

Sloan Management Review Systems Engineering

## Leadership Activities

PICMET Fellows Judging Panel (2021)

Designs, Editorial Board (2018-)

IEEE Transactions on Engineering Management, Editorial Review Board (2017-2020)

INFORMS Technology Management, Innovation, and Entrepreneurship (TIME) Section, Best Paper Award Selection Committee (2016)

Portland International Center for Management of Engineering & Technology (PICMET) Advisory Council (2015-2021)

Journal of Modern Project Management, Editorial Board and Academic Editor (2013–2020)

Journal of Product Innovation Management, Editorial Board (2013–2014)

International Journal of Design Creativity and Innovation, Editorial Advisory Board (2012-)

University of Cambridge, Judge Business School, Board of Electors to the Margaret Thatcher Professorship of Enterprise Studies (2011-2012)

Tufts University, Gordon Institute, Industrial Advisory Board (2011-2017)

Electronic Colloquium on Design Thinking Research, Scientific Board (2009-2015)

Design Society Special Interest Group on Structural Complexity, Co-Chair (2008-2011)

International Journal of Engineering Management and Economics Advisory Board (2007 -)

Design Society Advisory Board (2007 – 2019)

CoDesign Editorial Board (2002 –)

International Journal of Product Development Editorial Board (2002 -)

Society of Concurrent Product Development Advisory Board of Directors (2001 –)

International Design Structure Matrix Conference, Founder and Advisory Board (1999 -)

Design Management Institute Research Advisory Council, Scientific Committee (1999 -)

Design Studies Editorial Board (1997-2016)

Manufacturing and Service Operations Management Editorial Board (1997-2004)

ASME Design Theory and Methodology Committee (1990-2010)

ASME Design Theory and Methodology Conf. Paper Review Coordinator (1992, 1996, 2002)

Management Science Special Issue on Design and Development Associate Editor (1998-99)

International Conference on Engineering Design Program Committee (1997, 1999, 2001, 2003)

TIMS/ORSA Boston Joint National Meeting (Product Development Cluster Chair, 4/94)

## **Subjects Taught**

## Number, Title, Semester(s)

15.783J, Product Design and Development (S91, S92, S93, S94, S95, S96, S98, S99, S00, S01, S02, S03, S09, S10, S12, S13, S14, S15, S16, S17, S19, S20, S21, S22, S23, S24)

15.782, Product Design Methods (S21, S22, S23, S24)

15.735, Product Design - EMBA Elective (W15, W16, W17, W18, W19, W20)

15.S72, Introduction to Product Management (S15)

ESD.36J, System and Project Management (F02)

SMA6306, Product Design and Development (F00, F01)

15.760, Introduction to Operations Management (S89, S90, S91, S92, S93, S94)

15.970, Special Module on Technology and Management (S90, F90, F91, F92)

15.785, Design for Manufacturing (F88, F89)

## **Thesis Supervision**

#### **Doctoral Theses Supervised**

Alison Olechowski, June 2017.

"Essays on Decision-Making in Complex Engineering Systems Development"

Daniel Sturtevant, February 2013.

"System Design and the Cost of Architectural Complexity"

Anshuman Tripathy, February 2010.

"Work Distribution in Global Product Development Organizations"

Darian W. Unger, June 2003.

"Product Development Process Design: Improving Development Response to Market, Technical, and Regulatory Risks"

Jay Jootar, June 2002.

"A Risk Dynamics Model of Complex System Development"

Manuel E. Sosa R., June 2000.

"Analyzing the Effects of Product Architecture on Technical Communication in Product Development Organizations"

Maria Carrascosa, June 1999.

"Product Development Timing and Cost Analysis Using Information Flow Modeling"

Sharon Novak, June 1999.

"Sourcing By Design: Product Architecture and the Supply Chain"

Tyson Rodgers Browning, January 1999.

"Modeling and Analyzing Cost, Schedule, and Performance in Complex System Product Development"

Vikas Sharma, September 1996.

"A New Modeling Methodology Combining Engineering and Statistical Modeling Methods: A Semiconductor Manufacturing Application"

Viswanathan Krishnan, September 1993.

"Design Process Improvement: Sequencing and Overlapping Activities in Product Development"

Robert P. Smith, September 1992.

"Development and Verification of Engineering Design Iteration Models"

### Masters Theses Supervised

Brian Herrera, February 2024

"Cloud-Native Applications and Their Role in Supporting Agile Hardware Development"

Zoe Hinton, June 2023

"Enhanced Digital Capability through the use of Simulation in Footwear Product Creation"

Aidana Daulbayeva, June 2023 (reader)

"Behavioral Design for Emotional Intelligence: Leveraging Affective Computing in Medical Education for Improved Care for Substance Use Disorders"

Amit Galgali, May 2022

"Prototyping of Injection EVA Foam Footwear Midsoles"

Stephen Jeffrey Pickett, February 2022

"Applying the Design Structure Matrix to Streamline the Development Process: Lessons From Marine Renewable Development"

Daniel Reilly, June 2021

"Implementing Virtual Reality Based Digital Twins in Automotive Manufacturing"

Jonathan Marcus, June 2021

"Digital Strategy for Consumer Products"

Nithin Thekkupadam Narayanan, February 2021.

"Maximizing Value Creation in Agile Sprints"

Lisa Crofoot, May 2020.

"Management of Cross-Team Interfaces in Large-Scale Agile Development"

Ameneh Fadaie, May 2020.

"Exploration of Consumer Responses to Organic Food Pricing"

Javier Trevino Ruiz, May 2020.

"A Survey of Human-Centered Design Methodologies for a New Hybrid Approach in Product and Experience Innovation"

Siddharth Bajpai, February 2020.

"Planning Large-Scale Agile Development Using a Dependency Structure Mapping Model"

Andrea C. McClave, June 2019.

"User Experience Research for a Campus Food System"

Karen Cheng, June 2019.

"Sustainable Packaging Approaches Needed for Today's Emerging Waste Challenges"

Austin M. Page, February 2019. (reader)

"Technical Debt: The Cost of Doing Nothing"

Rajaram Srinivasan, February 2019.

"Analysis of DevOps in Complex Product-Service System Development"

Timothy Leonard Marguart, June 2018.

"Improving Design and Manufacturing Performance Through Advanced Visualization"

Amit Kumar Tomar, September 2017.

"Study of Scrum Framework Usage in Non-Software Systems"

Olawale A. Akinwale, February 2017.

"System Architecture Design of a Robust Heating System"

Tushar Garg, February 2017.

"Estimating Change Propagation Risk using TRLs and System Architecture"

Joseph Lessard, February 2017.

"Electronic Waste Recycling: Understanding the Ecosystem and Opportunities for Improvement"

Andrew J. Byron, June 2016.

"Qualification and Characterization of Metal Additive Manufacturing"

Nathan McMullin, June 2015.

"Value Creation through Intellectual Property Acquisition"

Rodolfo Reyes Luna, February 2015.

"Leveraging the Capacity of Human Capital in a Product Development Organization"

Jeremy M. Giese, June 2014

"Rugged Field Service Computing: A Product Development Case Study at Dell Inc."

Luis Armando López Avila, February 2014.

"Incorporating the Innovation Process in a Product Development Organization"

Anitha Balasubramaniam, February 2014.

"Financial Modeling of New Product Development Economics"

Andrew Oswald, June 2013.

"Understanding Technology Development Processes: Theory & Practice"

Toni J. Ferreira, June 2013.

"A Design Methodology for the User Interface of an Electromechanical Parts Database"

Joshua Przybylko, June 2013.

"The Applications of Autonomous Systems to Forestry Management"

Asif Iqbal, April 2013.

"A Study of Open Innovation and its Applications to product design"

Carlos Xavier Zamora Torres, February 2013.

"Engineering Work Breakdown and Assignment for Global Product Development"

Steven V. Bonelli and Adrian M. Gonzalez Guerra, September 2012.

"Application of the Design Structure Matrix (DSM) to the Real Estate Development Process using Modular Construction Methods"

Louis S. Grillon, June 2012.

"Creation and Sustainment of Manufacturing Technology Roadmaps"

Marcus Cullen Johnson, June 2012.

"Implementation of a Manufacturing Technology Roadmapping Initiative"

Kurtis McKenney, June 2012.

"Sustainable Approach to Achieving Energy Efficiency in Manufacturing Operations"

Jeremy Pitts, June 2010.

"R&D Project Selection: Best Practices for Suppliers"

Benjamin Bulloch and John Sullivan, September 2009 (reader).

"Application of the Design Structure Matrix (DSM) to the Real Estate Development Process"

Bradley W. Rogers, June 2009.

"Understanding, Modeling, and Improving the Development of Complex Products: Method and Study"

David Margetts, June 2008.

"Improving the Manufacturing Yield of Investment Cast Turbine Blades through Robust Design"

Sabrina Chang, June 2007.

"Allocation of Engineering Resources to Global Sites Based on Coordination Cost and Project Structure"

Krishnan Raghunathan, June 2006.

"Productivity Improvement in Downstream EPC Projects using Value Streams based Organization"

Ying Pan, June 2006.

"Challenges and Rewards of Mechanical Platforming Strategy within Wireless Handset Industry"

Yonas Nebiyeloul-Kifle, June 2005.

"Application of the Design Structure Matrix to Integrated Product Development Process"

Jason T. Chen, June 2003.

"A Process for Improving Early Life Failure Response"

Lee Y. Koa, June 2003.

"Lean Principles, Behaviors, and Implementation Strategies for Automotive Product Design and Development"

Mack R. Lund, June 2003.

"Predicting Manufacturing Performance of New Radar Subassembly Designs"

Lincoln J. Sise, June 2003.

"A Lean Transformation in Low Volume Space Manufacturing"

Alberto J. Cividanes, June 2002.

"Optimal Scheduling of Design Reviews in Product Development"

Christopher Lance Durham, June 2002.

"Technology Strategy and Business Development at a Semiconductor Equipment Company: A Process Definition and Case Study of a New Technology"

Debika Ingham, June 2002.

"Quality Control and Improvement in a Low-Cost, High-Clockspeed Manufacturing Environment"

Asoka Veeravagu, June 2002.

"Development of an Optimal Manufacturing Strategy for Low-Volume Specialty Vehicles"

Soo-Haeng Cho, June 2001.

"An Integrated Method for Managing Complex Engineering Projects Using the Design Structure Matrix and Advanced Simulation"

Quang Nguyen, June 2001.

"Optimizing Engineering Analysis Resource Allocation"

Douglas C. Hague, February, 2001.

"Description of a Turbofan Engine Product Development Process"

Matthew F. Bromberg, June 2000.

"Modeling Design Rework in a Product Development Process"

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Néstor Alejandro Macias Anaya, June 1999.

"Engineering Design Lead Time Drivers Model"

Carey W. Mar, June 1999.

"Process Improvement Applied to Product Development: An Approach to Control of Development Lead Time"

Ronald Pepin, February 1999.

"Application of Critical Chain to Staged Software Development"

Craig M. Rowles, February 1999.

"System Integration Analysis of a Large Commercial Aircraft Engine"

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"Product Development Process Capture and Display Using Web-Based Technologies"

Paul B Adamsen, Jr., August 1998.

"A Generalized Framework for Complex System Design and Management"

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Carlos Iñaki Gutierrez Fernandez, June 1998.

"Integration Analysis of Product Architecture to Support Effective Team Co-Location"

Stephen L. Kidd, June 1998.

"A Systematic Method for Valuing a Product Platform Strategy"

Peter L. Lancia, June 1998.

"A Methodology of Aligning Product Development Teams with Business Level Goals in a Changing Business Environment"

Randal D. Pinkett, June 1998.

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Heather Dawn Wasserlein, June 1998.

"Opportunities for Improving the Information Intensive Product Development Process"

Carroll E. Fulkerson, Jr., June 1997.

"Evolving Mature Product Platforms in Discontinuous markets: An Analysis of IBM's Mainframe Software Business"

Melanie Dever, June 1997.

"Rail Car Equipment and Logistics Design Strategy for a Lean Auto Manufacturer"

Jason S. Dell, September 1996.

"A Methodology for Product Architecture Decisions Based on Market Segmentation"

Rosaline K. Gulati, June 1996.

"The Coupling of Product Architecture and Organizational Structure Decisions"

Christopher D. McDaniel, June 1996.

"A Linear Systems Framework for Analyzing the Automotive Appearance Design Process"

Ennis Rimawi, June 1996.

"The Development and Introduction of Emerging Environmental Design Tools to Provide a Differentiating Capability For An Automotive Supplier"

Neha A. Shah, June 1996.

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J. Douglas Winter, June 1996.

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Pavel Zamudio-Ramirez, June 1996.

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Steven C. Goldt. June 1995.

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Lance Edward Haag, June 1995.

"Effective Use of Test Data for Quality Improvement and Cycle Time Reduction in Radio System Manufacturing"

Michael G. Manente, June 1995.

"The Evolution and Implementation of Electronic Prototyping Systems"

Murthy V.R.K.N. Nukala, June 1995.

"Generalized Models of Design Iteration Using Signal Flow Graphs"

Stephen V. Duca, June 1995. (reader)

"Power and Signal Distribution System Engineering Process for Automotive Electrical System Design"

Thomas E. Abell, June 1994.

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Eun Yung Cha and Celia M. Francis, June 1994. (reader)

"The Use of Industrial Design as a Source of Innovation in the Consumer Electronics Industry"

Brian G. Eagle, June 1994.

"An Evaluation of the Relationship of Automobile Door Distortions to Variations in Material Properties and Production Operating Parameters"

Daniel J. Hommes, June 1994.

"Transitioning a Maintenance Culture in a Plant"

Shawn P. Patterson, June 1994.

"Managing Variation During Preproduction Activities"

Thomas U. Pimmler, June 1994.

"A Development Methodology for Product Decomposition and Integration"

Christopher D. Reed, September 1993.

"Application of Machine Learning to Visual Inspection of I.C. Wire Bonds"

Paul J. Brody, June 1993.

"The Role of Industrial Design in the Product Development Process"

Douglas S. Cesiel, June 1993.

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Linda Chao, June 1993.

"Improving Quality and Time to Market in the VLSI Product Life Cycle"

Thomas Foody, June 1993.

"The Economics of New Product Development: A Development Team Perspective"

Amy J. Greenlief, June 1993.

"A Methodology for Prototyping"

Christopher D. Huber, June 1993.

"A Methodology for Manufacturing Process Signature Analysis"

Bonnie Kao, June 1993.

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Kent R. McCord, June 1993.

"Managing the Integration Problem in Concurrent Engineering"

Mark D. Morelli, June 1993.

"Evaluating Information Transfer in Product Development"

Sean M. Osborne, June 1993.

"Product Development Cycle Time Characterization Through Modeling of Process Iteration"

Beth Shaw, June 1993.

"Process Improvement Methodology – Defect Detection System Implementation"

Gregory J. Smith, June 1993.

"Managing Process Development Risk: Aluminum Ultrasonic Wire Bonding for Chip-on-Board Applications"

Gavin C. H. Zau, June 1993.

"Concept Generation for Product Design"

Stefan ter Haar, January 1993. (RWTH Aachen, Germany, Dipl.Ing. Thesis)

"Integration of Quality Function Deployment and the Design Structure Matrix"

Mano H. Chinnaswamy, June 1992.

"A Methodology for Manufacturing Process Improvement"

Eva M. H. Csizinszky, June 1992.

"Critical Success Factors That Drive Successful Problem Solving in an Automotive Manufacturing Environment"

David K. Lauzun, June 1992.

"Simultaneous Engineering for Manufacturing Process Development"

Stephanie A. Maggs, June 1992.

"A Methodology for Process Improvement: Optimization of a Coating Process"

Duane G. Pekar, June 1992.

"Modeling Design Time and Quality Tradeoffs in Automotive Component Design"

Stephen R. Raab, June 1992.

"Project Management for New Product Development"

Jonathan G. Sterrett, June 1992.

"Product Requirements Definition"

Van H. Pham, February 1992.

"Manufacturing Process Signature Analysis Using Feature Extraction and Classification"

Mary Ellen B. Gallahue, June 1991.

"A Methodology for Manufacturing Process Improvement: A Systems Approach"

David A. Gebala, June 1991.

"Improving Design Activities through Model-Based Analysis"

Eric F. Howlett, June 1991.

"Concept Selection for Product Design"

David A. Marshall, June 1991.

"Dynamic Benchmarking: A Comparative Study of Automotive Suppliers"

Michele W. Sequeira, June 1991.

"Use of the Design Structure Matrix in the Improvement of an Automobile Development Process"

Catherine L. Strakhov, June 1991. (reader)

"A Mathematical Modeling Technique for Improving Fast-Food Labor Scheduling"

Catherine M. Strosser, June 1991.

"Diagnosis of Production Shortfall in a Transfer Line by Means of Analytic and Simulation Methods"

Jörgen Bladh and Magnus Håkansson, February 1991. (reader)

"Capitalizing on Political Risk: Swedish Investments in Estonia"

David C. Allan, June 1990.

"Process-Sensitive Steady-State Part-Cost Computer Modeling of Job Shops"

Anthony S. Arrao, June 1990.

"Transfer of Product Manufacturing by Multinational Corporations: Two Case Studies"

Georgia F. Denktsis, June 1990.

"Part-Cost Computer Modeling of Job Shops as a Function of Manufacturing Parameters"

Wayne S. Firsty, June 1990.

"Implementing CIM for Improved Process Quality"

Harmon C. Fowler, June 1990.

"Bandwidth Performance of a Direct Drive Manipulator Under Joint Torque and Endpoint Force Control"

Brian R. Harris, June 1990.

"Using Innovative Computer Integrated Manufacturing Techniques to Streamline the Production Process"

Mark A. Lester, June 1990.

"Design Alternatives to Improve Consumer Appeal and Manufacturability of a Water-Filled Teether for Babies"

Carolyn A. Theodore, June 1990.

"Marketing Analysis of a Children's Product"

George Jaquette, June 1989.

"Production and Marketing Analysis of a Children's Product"

Dennis L. Marler, June 1989.

"The Post Japanese Model for Automotive Components Suppliers: Illustrated by Selected North American Case Studies"

Jeffrey B. Scroggin, June 1989.

"An Application of Quality Function Deployment to the Product Development Process"

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Amarnath Gopal, February 1992.

"Using Design Structure Matrices to Suggest a Strategy for the Delta Design Exercise"

Sarath Krishnaswamy, June 1991.

"The Effect of Workpiece Damping Characteristics on the Performance of a Direct Drive Manipulator under Endpoint Force Control"

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Deborah J. Bein, June 1990.

"Design Evaluation Spreadsheet for the Design of a Baby Teether"

J. Paul R. Grim, June 1990.

"Taguchi Parameter Design Study for the Optimization of the Injection Molding Process in the Manufacture of a 55-pin Electrical Connector"

Lori A. Hart, June 1990.

"Mechanical Design: Methodologies and Concept Generation"

Honor Jones, June 1990.

"A Redesign of TRW's Electrical Connector for Anti-Skid Braking Systems: Reducing the Cost of the Sealing System while Maintaining Features"

Mark D. Mitchke, June 1990.

"Quality Function Deployment: A Design Tool with a Competitive Advantage"

George A. Nunn, June 1990.

"Production Improvements in the Manufacture of a Teething Ring"

Stephanie C. Patterson, June 1990.

"Design Alternatives for a Cooling Teether for Babies"

Steven C. Betz, June 1989.

"Design and Manufacturing Alternatives for a Water-Filled Teething Ring for Babies"

David A. Costello, June 1989.

"Design for Automation of the Baby Teether"

Lisa C. Grossweiler, June 1989.

"Investigation of Ultrasonic Weld Quality in a Baby Teether"

Tanya Jegeris, June 1989.

"Product Redesign for Improved Manufacturability Through Alternative Fabrication Processes, Materials, and Fasteners"

Christine Le Viness, June 1989.

"Redesign of a Cart Holding Ultrasound Imaging Equipment"

#### Thesis Committees

Tabea Ramírez Hernández, PhD, November 2020.

"Uncertainty Management in Engineering Service Development" (at Technical University of Denmark)

Tim Wilschut, PhD, December 2018.

"System Specification and Design Structuring Methods for a Lock Product Platform" (at Eindhoven University of Technology, Netherlands)

Ali Farahanchi, PhD, June 2017.

"The Impact of Strategic Investment on Success of Capital-Intensive Ventures"

Christopher Berardi, PhD, June 2017.

"Intellectual Property and Architecture: How Architecture Influences Intellectual Property Lock-in"

Christopher L. Benson, PhD, June 2014.

"Cross-Domain Comparison of Quantitative Technology Improvement Using Patent Derived Characteristics"

William J. Palm, IV, Ph.D., September 2011.

"Understanding Success and Failure in Outsourced Product Development"

Sidharth Rupani, Ph.D., December 2010.

"Standardization of Product Development Processes in Multi-Project Organizations"

Pedzisayi Onias Makumbe, Ph.D., September 2008.

"Globally Distributed Product Development: Role of Complexity in the What, Where, and How"

Mridula Pore, Ph.D., December 2007.

"Pharmaceutical Tablet Compaction: Product and Process Design"

Qi Dong, Ph.D., June 2002.

"Predicting and Managing System Interactions at Early Phase of the Product Development Process"

Derrick Tate, Ph.D., February 1999.

"A Roadmap for Decomposition: Activities, Theories, and Tools for System Design"

Sean Willems, Ph.D., February 1999.

"Two Papers in Supply Chain Design: Supply Chain Configuration and Part Selection in Multigeneration Products"

Kontong Francis Pahng, Ph.D., June 1998.

"Modeling and Evaluation of Design Problems in a Network-Centric Environment"

Timothy W. Cunningham, Ph.D., February 1998.

"Chains of Function Delivery: A Role for Product Architecture in Concept Design"

Nancy Staudenmayer, Ph.D., June 1997.

"Managing Multiple Interdependencies in Large Scale Software Development Projects"

Andrew D. Christian, Ph.D., August 1995.

"Simulation of Information Flow in Design"

David N. Ford, Ph.D., August 1995.

"The Dynamics of Project Management: An Investigation of the Impacts of Project Process and Coordination on Performance"

Stefan H. Thomke, Ph.D., February 1995.

"The Economics of Experimentation in the Design of New Products and Processes"

John Idicula, M.E., December 1994.

"Planning for Concurrent Engineering"

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Also in several foreign language translations and special international editions.

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Also in Spanish, Russian and other foreign language translations.

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[with J. Drutchas]

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[with N. Narayanan and N. Joglekar]

"Enhancing Visibility in Agile Program Increment DSMs"

22nd International Dependency and Structure Modeling Conference, DSM 2020 Conference, October 2020.

[with S. Bajpai and N. Joglekar]

"Translating Agile Project Management into a Legacy Industry Context" IPDMC: Innovation and Product Development Management Conference, Antwerp, June 2020. [with T. Ramírez and M. Kreye]

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21st International Dependency and Structure Modeling Conference, DSM 2019, September 2019.
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"Design Sprint for Complex System Architecture Analysis" *ASME 2018 International Design Engineering Technical Conferences*, Quebec City, August 2018. [with K. Hölttä-Otto, V. Niutanen, T.R. Browning, H.M. Stowe, R. Lampinen, A. Rahardio]

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"A Survey of Technology Readiness Level Users" *INCOSE International Symposium,* July 2016. [with K. Tomaschek, A. Olechowski, and N. Joglekar]

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