

James E. Paine

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- Education **Massachusetts Institute of Technology** Cambridge, MA
Ph.D. in Management Science in the System Dynamics group.
GPA (ongoing): 4.9/5.0
- Wake Forest University, School of Business** Winston Salem, NC
Master of Business Administration, May 2014, Graduated with Distinction,
GPA 3.98/4.00. Dual concentration in Business Analytics and Marketing.
Obtained ASQ Six Sigma Black Belt, elected Treasurer of the School of
Business Student Government, Leadership Award
- Georgia Institute of Technology** Atlanta, GA
Master of Science in Mechanical Engineering, May 2012, GPA: 3.90/4.00.
Completed degree while working full time for GE-Hitachi Nuclear Energy.
- University of Florida** Gainesville, FL
Bachelor of Science in Chemical Engineering, May 2009, Cum Laude, GPA
3.87/4.00. Minor in Operations and Business Management.
- Awards MIT Connect Arts Community and Computing Challenge – First Runners Up
(2019), MBA Leadership Award (2014), Outstanding Business Analytics
Graduate (2014), Outstanding Marketing Graduate (2014), GE Award to
Inventors (2009)
- Certifications Microsoft Office Specialist Excel 2016 Expert, License G564-0793 (2017),
ASQ Certified Six Sigma Black Belt, License 15421 (2014), General Electric
Lean Six Sigma Green Belt and Lean Manufacturing certifications (2009).
- Professional Behavioral Operations Management Summer Institute (2019), General Electric
Development Edison Engineering Leadership Development Program (2011), General Electric
Foundations of Leadership training at the John F. Welch Leadership Center
(2010), General Electric Advanced Courses in Engineering (2010)

Research Experience **MIT Sloan School of Management** Cambridge, MA
Advisors: John Sterman and Hazhir Rahmandad
Focusing on Behavioral Operations Management, specifically modeling systems in which upstream decision making with imperfect information has long-term consequences, often beyond the attention span of the original decision maker. Examples include an extended view of product life-cycle management that stretches from initial concept to final product disposition. (August 2018-Present)

GE-Hitachi & Global Nuclear Fuels (GNF) Wilmington, NC
Bulk Isotope Generation Process Engineer. Developed new procedures for the production of specific irradiated isotope parent/daughter pairs in light water reactors for medical applications resulting in three US and European patent applications. Solely responsible for the development of material and research within the process lab. (May – August 2008)

Teaching Experience **MIT Sloan School of Management** Cambridge, MA
System Dynamics: Systems Thinking and Modeling for a Complex World, Course Developer and Instructor
Created and taught an MIT Independent Activities Period session that provides an overview of System Dynamics, a methodology and modeling system for identifying and designing solutions for complex socio-technical problems, via presentations and hands-on simulations. This session and acts as a preview of the more in-depth coverage available in courses offered at MIT Sloan. (January 2020)

MIT Sloan School of Management Cambridge, MA
15.768: Management of Service Operations, Teaching Assistant
Under the supervision of Dr. Zeynep Ton. Managed course announcements, grading, and participation of a course with 150+ students. Recorded student comments during case-based discussions for later assessment. Graded homework and project responses both at an individual and team level. Addressed individual students' questions and needs. (Spring and Fall 2019)

Inmar – Intelligent Commerce Networks Winston Salem, NC
Lean Six Sigma, Course Developer and Instructor
Taught, improved upon, and supported a Lean Six Sigma Yellow Belt certification class and developed a trial Lean Six Sigma Green Belt certification course that focused on both internal company and wider community participants (May 2013-June 2015).

Teaching Experience (<i>cont'd.</i>)	<p>University of Florida Gainesville, FL</p> <p>ECH3264: Elementary Transport Phenomenon, Teaching Assistant</p> <p>Under the supervision of Dr. Jennifer S. Curtis and Dr. Aravind Asthagiri.</p> <p>Managed the implementation of Fluent, Inc FlowLab 1.2.14, an academic fluid modeling program, in a classroom setting. Created and implemented improvements to the templates of FlowLab and associated homework assignments. Provided academic and technical assistance and graded the submissions of a class of 20+ students. (August 2007-May 2009)</p>
Presentations	<p>Paine, J. (July 2020). <i>Taming the Bull - Algorithmic Intervention to Mitigate Inventory and Ordering Amplification in Multi-Echelon Supply Chains</i>. Presentation of 2nd Year MIT Thesis Paper at the 2020 International System Dynamics Society Conference.</p> <p>Keith, D., Paine, J. (June 2019). <i>The Perniciousness of Scale</i>. Presentation of working paper at the 2019 Industry Studies Association Annual Conference, Nashville, TN.</p> <p>Keith, D., Taylor, L., Paine, J. (May 2019). <i>Organizational Poverty in Poverty Organizations</i>. Presentation of working paper at the 2019 Industry Studies Association Annual Conference, Nashville, TN.</p> <p>Paine, J. (May 2019). <i>Taming the Bull - Mitigation of Inventory and Ordering Amplification in Multi-Echelon Supply Chains via Interpretable Machine Learning</i>. Presentation of research presented at The 38th System Dynamics PhD Colloquium, Worcester Polytechnic Institute, Worcester, MA.</p> <p>Taylor, L and Paine, J (2019). <i>Organizational Poverty in Poverty Organizations</i>. Presentation of research presented at the System Dynamics Seminar Series, MIT Sloan School of Management, Cambridge, MA.</p> <p>Paine, J. (2018). <i>What keeps nonprofits from investing in capacity?</i> Presentation of research presented at The 37th System Dynamics PhD Colloquium, MIT Sloan School of Management, Cambridge, MA.</p> <p>Paine, J., Vare, M., Wirtter, D. (2013). <i>Green Recalls – White Paper</i> written for Inmar Intelligent Commerce Networks, forming the basis for a presentation at the 2013 Inmar Analytics Forum in Winston-Salem, NC given by Doug Witter and Mark Vare</p>

Publications Paine, J. (September 2020). *Taming the Bull - Algorithmic Intervention to Mitigate Inventory and Ordering Amplification in Multi-Echelon Supply Chains*. Forthcoming submission for MIT SM in Management

Keith, D., Taylor, L., Paine, J. (2019). *Organizational Poverty in Non-Profit Organizations: Why Do Non-Profits Persistently Underinvest in Organizational Capabilities?* Under Review at Organization Science

Paine, J., in-progress provisional patent, HanesBrands Proprietary Information, “Method to Iteratively Derive Optimal Minimum Number of Assortments from a Larger Population of Sized Garments.” Applied April 2017

Paine, J. et al. “Column geometry to maximize elution efficiencies for molybdenum-99.” Canadian Patent Office CA2735612, European Patent Office EP2375421, United States PTO US9240253. Jan 19, 2016

Paine, J. Unpublished provisional patent, GE and GNF Proprietary Information, “Elution Mechanisms for Irradiated Molybdenum-99 for the Production of Medical-Grade Technetium”. Applied Jan 2010

Selected	Simulation and Analytics			
Coursework	15.879	Simulation Models in Social & Behavioral Sciences	MIT Sloan	A+
	15.S15	Topics in Computational Social Science	MIT Sloan	P*
	15.071	The Analytics Edge	MIT ORC	A+
	15.871	Introduction to System Dynamics	MIT Sloan	A
	15.872	System Dynamics II	MIT Sloan	A
	6.S191	Introduction to Deep Learning	MIT EECS	P
	MGT5170	Strategy Games	Wake Forest	A-
	ME6441	Dynamics of Mechanical Systems	Georgia Tech	B
	Operations Management			
	15.764	The Theory of Operations Management	MIT Sloan	A
	15.768	Management of Service Operations	MIT Sloan	Teaching Assistant
	15.341	Individuals, Groups, and Organizations	MIT Sloan	P*
	15.774	Analytics of Operations Management	MIT Sloan	A
	6.255	Optimization Methods	MIT ORC	B
	MKT5790	Pricing and Revenue Management	Wake Forest	A
	OPS5496	Six Sigma Practicum	Wake Forest	A-
	OPS5510	Advanced Business Analytics	Wake Forest	A
	OPS1451	Operations Management	Wake Forest	A

Selected	Mathematics			
Coursework (<i>cont'd.</i>)	MATH6701	Mathematical Methods of Applied Sciences	Georgia Tech	A
	ME6201	Principles of Continuum Mechanics	Georgia Tech	A
	MAP2302	Honors Differential Equations	University of Florida	A
	Statistics and Probability			
	OPS5510	Advanced Business Analytics	Wake Forest	A
	OPS5498	Advanced Six Sigma	Wake Forest	A
	MGT1551	Quantitative Methods	Wake Forest	A
	MGT5220	Forecasting	Wake Forest	A
	STA3032	Engineering Statistics	University of Florida	A
	Economics and Econometrics			
	ECON2020A	Microeconomic Theory	Harvard Kennedy School	A-
	MGT2660	Managerial Economics	Wake Forest	A
	MGT2661	Macroeconomics	Wake Forest	A
	14.000	Introduction to Advanced Economics	MIT Dept of Economics	P
	ECH4604	Process Economics and Optimization	University of Florida	A

**Courses marked with an '*' were affected by MIT's response to the COVID-19 in Spring 2020. All grades were adjusted to reflect Pass/Fail only. Based on the assignment grades received in these courses, I would have received an A or A+ in all classes completed in the Spring of 2020 under the standard grading scheme.*

Professional Experience **HanesBrands, Inc.** Winston-Salem, NC

Assistant Marketing Manager . Responsible for the product lifecycle management of the Playtex 18 Hour brand and Maidenform brands across channels of distribution, including online channels, valued in excess of \$105 million per year. Improved existing processes and consumer offerings via data driven methods. Created multiple reporting tools for monitoring service issue styles, performing inventory analytics, projected brand margin, and annual OPC estimations. Developed long-term SKU rationalization, pricing models, and multinational cross-category promotions (June 2015-September 2017)

Inmar – Intelligent Commerce Networks Winston Salem, NC

Continuous Improvement Manager. Led continuous improvement projects resulting more than \$220,000 of direct and indirect value under one year. Drove the cross-functional implementation of a Quality Management System while simultaneously ensuring long-term legal compliance in multiple industries. Performed a detailed economic and environmental analysis on implementing green initiatives designed to address gaps in the competitive landscape of the recall industry (May 2013-June 2015).

Professional Experience (cont'd.) **GE-Hitachi Nuclear Energy** Wilmington, NC
Edison Engineering Development Program. Completed a leadership development rotational program incorporating varied technical and managerial experiences. Directly managed the fiscal requirements of nine technology development programs in cooperation with varied GE and Japanese affiliates. Developed software for the categorization of Items Relied on for Safety for a nuclear production facility. Created and executed a training system for over 800 employees in order to allow our site to pass a full Nuclear Regulatory Commission (NRC) recertification. Automated the transition to a new compliance platform, saving approximately 6 months of lead time. (June 2009-July 2011).

Activities and Societies Production and Operations Management Society (POMS), member (2020), Industry Studies Association, member (2019), System Dynamics Society, member (2018), Institute for Operations Research and the Management Sciences (INFORMS), member (2017), Beta Gamma Sigma – Honor Society for the Study of Business, member (2014), The American Society for Quality (ASQ), member (2013), The American Society of Mechanical Engineers (ASTME), member (2011), The Order of the Engineer, member (2009), Tau Beta Pi – The Engineering Honor Society, member (2009), the American Nuclear Society (ANS), member 2007, The American Institute of Chemical Engineers (AIChE), member (2006), Phi Sigma Pi – National Co-Ed Honor Fraternity, Risk Management Board member (2006). Volunteered for Big Brothers and Big Sisters of Forsyth County (2012-2017).

Interest include sailing, running, hiking, computer hardware, and reading.

References available upon request