

MELISSA R. BOWERS

PERSONAL DATA:

Office Address: Business Analytics & Statistics Department
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Haslam College of Business
The University of Tennessee
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Citizenship: U.S.

EDUCATION:

Clemson University, Clemson, South Carolina: **Ph.D.** in Management Science, August, 1989.

University of Georgia, Athens, Georgia: **B.S.** in Biochemistry, Summa Cum Laude, First Honor Graduate-Valedictorian, June, 1982.

ACADEMIC EXPERIENCE:

University of Tennessee College of Business, January 1989 to present. Beaman Professor of Business and Associate Professor, Department of Business Analytics and Statistics.

Clemson University, Department of Mathematical Sciences, January 1985 to December 1988. Teaching Assistant and Research Assistant.

University of Georgia, Management Science Department, September 1983 to June 1984. Teaching Assistant.

INDUSTRY EXPERIENCE:

Delta Air Lines, Atlanta, Ga:

August –December 2015. Capstone project advisor for a team of Master’s in Business Analytics students engaged in developing a descriptive model and a predictive model to help Delta Air Lines better understand and mitigate delays caused by connecting flight attendants. The predictive model was designed to predict specific flights most at risk of a delay caused by connecting flight attendants.

Catalist, LLC, Washington, D.C.:

August-December, 2014. Capstone project advisor for a team of Master's in Business Analytics students engaged in developing a geospatial model to optimize political canvassing within a given geography. The model combines both demographic and geographic information to create individual level measures of canvassability. The project provides Catalist clients a microtargeting model to optimize canvassing efficiency for future campaign and advocacy work.

Hanesbrands Inc., Winston Salem, North Carolina:

January-May, 2014. Capstone project advisor for a team of Master's in Business Analytics students engaged in an analysis to increase the effectiveness of its global supply chain by improving the utilization of shipping containers.

January-April, 2013 and August –December 2013 Capstone project advisor for a team of Master's in Business Analytics students in a project to incorporate the part-worth utilities resulting from a conjoint analysis into the design of an Excel-based market simulator to model share of preference for the apparel giant.

United States Air Force, May 2007-March 2013. *Process Improvement for Services*, Melissa R. Bowers and Mandyam Srinivasan, co-principal investigators/project managers. M. Bowers, K. Gilbert, M. Srinivasan, and B. Bichescu. Work focused on facilitating process improvement efforts associated with the Air Force High Velocity Maintenance Initiative; developing optimization models to schedule the transition from Program Depot Maintenance to High Velocity Maintenance; analyzing maintenance data; developing operations and supply chain simulations; developing MRO enterprise simulation; business scenario planning models; back shop scheduling models; developing Visual Project Management techniques and tools; supply chain analysis and mapping; the role of leadership in sustaining change.

UT Hospital, Knoxville, Tennessee, April 2010- July 2015. Scheduling doctors in a Neonatal Intensive Care Unit to improve overall physician schedule preference.

Cherry Point Naval Air Base, Cherry Point, North Carolina, August 2006. Helped facilitate implementation of lean principles to decrease lateness, improve flow, and decrease turnaround time in the back shops.

UT Hospital, Knoxville, Tennessee, August 2002- April 2003. Project to improve performance of an automated, real-time inventory management system; follow-on project to optimize number and flow of sterile trays.

Boeing, Oak Ridge, Tennessee, 2001. Analysis of Scheduling and Work Flow in a Job Shop Environment.

Milliken, led a team of two graduate students as part of Milliken's *1999 Summer Challenge- pursuit of Excellence Program*. Production Planning and Scheduling in the Air Bag Industry, American Bag, Stearns, KY.

Oxford Industries, Atlanta, Georgia, December 1993 to December 1997. Development of a production planning system; Designed optimization model to minimize changeover times for embroidery of custom golf apparel and increase embroidery capacity, 1998 and following.

Tanner Companies, Inc., Rutherfordton, North Carolina, May 1991 to August 1994. Development and implementation of a production planning and scheduling system.

The Aluminum Company of America (ALCOA), Alcoa, Tennessee, July 1990 to September 1991. Development and implementation of an ingot planning model.

Phillips Fibers Corporation, Seneca, South Carolina, August 1986 to August 1987. Development, installation, and maintenance of a microcomputer-based information system for the materials testing laboratory.

PRINCIPAL RESEARCH INTERESTS:

Production Planning and Scheduling; Operations Management; Lean Manufacturing; Lean Maintenance, Repair, and Overhaul; Theory of Constraints; Generalized Scheduling Models; Discrete Optimization; Supply Chain Management.

FUNDED RESEARCH AND CONTRACTS:

"Process Improvement for Services," United States Air Force, extension through March 2013, *Melissa R. Bowers and Mandyam Srinivasan*, co-principal investigators/project managers. M. Bowers, K. Gilbert, M. Srinivasan, and B. Bichescu. \$586,000 approved Project Management Plan(PMP).* Facilitating process improvement efforts through back shop scheduling models, Visual Project Management techniques; supply chain analysis and mapping; the role of leadership in sustaining change. *IDIQ extension involves rollover between years.

"Process Improvement for Services," United States Air Force, extension through September 2011, *Melissa R. Bowers and Mandyam Srinivasan*, co-principal investigators/project managers. M. Bowers, K. Gilbert, M. Srinivasan, and B. Bichescu. \$529,000, approved Project Management Plan(PMP).* Facilitating process improvement efforts associated with the Air Force High Velocity Maintenance Initiative; developing optimization models to schedule the transition from Program Depot Maintenance to High Velocity Maintenance; developing MRO Enterprise

simulation, business scenario planning models, back shop scheduling models; and Visual Project Management techniques. *IDIQ extension involves rollover between years.

“*Process Improvement for Services*,” United States Air Force, May 2007-September 2010, *Melissa R. Bowers*, principal investigator/project manager. M. Bowers, K. Gilbert, M. Srinivasan, and B. Bichescu. \$1.7M, approved Project Management Plan(PMP).* Facilitating process improvement efforts associated with the Air Force High Velocity Maintenance Initiative; developing optimization models to schedule the transition from Program Depot Maintenance to High Velocity Maintenance; analyzing maintenance data; developing operations and supply chain simulations; developing MRO enterprise simulation; business scenario planning models. *IDIQ extension involves rollover between years.

“*Lean Principles in the MRO (Maintenance, Repair and Overhaul) World*,” Srinivasan, Gilbert, Bowers, and Parr, \$50,000, August 2003 – 2005 , funded by the University of Tennessee College of Business.

“*Development of a Hierarchical Production Planning and Scheduling System*,” principal investigator, Oxford Industries, \$193,575, December 1993 to December 1997.

“*Hierarchical Production Planning and Scheduling in the Apparel Industry*,” principal investigator, Defense Logistics Agency and Clemson Apparel Research Center, \$108,099, May 1991 through August 1994.

“*Development of Tools for Planning Ingot Production*,” co-principal investigator with Lori Kaplan, Aluminum Company of America (ALCOA), \$25,627, July 1990 through September 1991.

PEER-REVIEWED ACADEMIC JOURNAL PUBLICATIONS:

- A. Bowers, M. R. Bowers, N. Bryan, P. Letizia, S. Murphy, “Forming Student Teams to Incorporate Soft Skills and Commonality of Schedule,” *Inform's Journal on Applied Analytics*, Accepted April 2022, forthcoming.
- M. R. Bowers, B. C Bichescu, N. Bryan, G. C., Polak, K.Gilbert, & D. Keene, “The maintenance conversion scheduling problem: Models and insights.” *Naval Research Logistics (NRL)*, 2022, 1–18. <https://doi.org/10.1002/nav.22059>
- M.R. Bowers, K. Gilbert, C. Noon, “Innovative Collaboration Between Industry and Academics: Meeting Industry’s Future Talent Requirements.” *Inform's Journal on Applied Analytics*, Volume 49, Issue 6, November-December 2019, pp. 397-406. Accepted May 2019.

M.R. Bowers, J.D. Camm, and G. Chakraborty, "The Evolution of Analytics and Implications for Industry and Academic Programs," *Informs Journal on Applied Analytics*, Volume 48, Issue 6, November-December 2018, pp. 487-499.

M.R. Bowers, J. Reggie Hall, and M.M. Srinivasan, "Organizational Culture and Leadership Style: The Missing Combination for Selecting the Right Leader for Effective Crisis Management," *Business Horizons*, Volume 60, 2017, pp.551-563..

NOTE: *Business Horizons* Editor, Dan Li, Kelley School of Business, selected the article above to appear in a special collection on crisis management.

M.R. Bowers, C. Noon, W. Wu, and K. Bass, "Neonatal Physician Scheduling at the University of Tennessee Medical Center," *Interfaces*, Volume 46, Issue 2, March-April 2016, pp. 168-182.

NOTE: The article above, "Neonatal Physician Scheduling at the University of Tennessee Medical Center," was chosen to appear in *Editor's Cut* "Healthcare in the Age of Analytics," a public access, ongoing living collection of INFORMS. The 2016 healthcare Editor's Cut content was hand-picked by volume editor Eric Johnson. As described by INFORMS Production Editor, Kara Tucker, Editor's Cut volumes showcase the breadth and depth of INFORMS published content in a sort of "best of the best" collection.

C. Edirisinghe, M.R. Bowers, and A. Agarwal, "Generalized Pickup and Delivery Problem with Dynamic Time Windows," *International Journal of Operational Research*, Issue 1, Volume 8, 2010, pp. 85-109.

I. Manuj, John T. Mentzer, and M.R. Bowers, "Improving the Rigor of Discrete-Event Simulation in Logistics and Supply Chain Research," *International Journal of Physical Distribution and Logistics Management*, Issue 3, Volume 39, 2009, pp. 172-201.

M.R. Bowers, and A. Agarwal, "Fewer Equipment Changeovers in the Embroidery Process at Oxford Industries," *Interfaces* – Vol. 37, No.6, November-December 2007, pp.526-538.

M.R. Bowers, "Building a More Responsive Supply Chain at Rocky Top Apparel," *Journal of Applied Case Research*, January 2005, Volume 6, No. 1, pp.47-66.

M.R. Bowers and R. Cathey, "C-Tech, Inc.: The Development of a Management Information System," *Journal of Applied Case Research*, Vol. 1 No. 1, 1997.

- M.R. Bowers, K. Groom, and R. Morris, "A Practical Application of a Multi-project Scheduling Heuristic," *Production and Inventory Management Journal*, Vol. 37, No. 4, 1996.
- M.R. Bowers, C. E. Noon, and B. Thomas, "A Parallel Implementation of the TSSP+1 Decomposition for the Capacity-constrained Vehicle Routing Problem," *Computers and OR*, Vol. 23, No. 7, 1996.
- M.R. Bowers and A. Agarwal, "Lower In-process Inventories and Better On-time Performance at Tanner Companies, Inc.," *Interfaces*, Vol. 25, No.4, 1995.
- M.R. Bowers, L.A. Kaplan, and T. L. Hooker, "A Two-Phase Model for Planning the Production of Aluminum Ingot," *European Journal of Operational Research*, Vol. 81, 1995.
- M.R. Bowers, K. Groom, and W.M. Ng, "Cluster Analysis to Minimize Sequence Dependent Changeover Times," *Mathematical and Computer Modeling*, Vol. 21, No. 11, 1995.
- M.R. Bowers and A. Agarwal, "Hierarchical Production Planning: Scheduling in the Apparel Industry," *International Journal of Clothing Science and Technology*, Vol. 5 No. 3/4, 1993.
- M.R. Bowers and J.P. Jarvis, "A Hierarchical Production Planning and Scheduling Model," *Decision Sciences*, Vol. 23 No. 1, 1992.

PUBLICATIONS IN FINANCIAL TIMES 50 (FT 50) JOURNALS:

- J.D. Camm, M.R. Bowers, and T.H. Davenport, "The Recession's Impact on Analytics and Data Science," *MIT Sloan Management Review*, Online: June 16, 2020.

NOTE: *MIT Sloan Management Review* named the article 'Most popular article in 2020 on AI, Data and Machine Learning.'

- M.R. Bowers, A. G. Petrie, and M. C. Holcomb, "Unleashing the Potential of Supply Chain Analytics," *MIT Sloan Management Review*, August 23, 2017, Fall 2017, Volume 59, Issue 1.
- M.R. Bowers, K.C. Gilbert, and M. Shrimplin, "Comments on 'Making Supply Meet Demand'," *Harvard Business Review*, Letters to the Editor, September-October, 1994.

PROFESSIONAL BOOKS:

Lean Maintenance, Repair, and Overhaul, McGraw-Hill, May 2014, M. Srinivasan, M. R. Bowers, and K. Gilbert. ISBN: 0-07-178994-4.

Note: This manuscript is the first book written and published to introduce the Theory of Constraints and Lean Manufacturing to the low volume, highly variable Maintenance, Repair, and Overhaul industry.

WORKING PAPERS:

K. Gilbert and M.R. Bowers, "The Curse of Lead Time." In preparation for submission to *Manufacturing and Service Operations Management*.

J.D. Camm, B. Martin, and M. R. Bowers, "It It's Not Prescriptive, It's Just Fun and Interesting Facts." In preparation for submission to *MIT Sloan Management Review*.

Y. Liu, V. Hoang, W. Zheng, M. R. Bowers, "Effects of Analytics Academic Programs on Local Analytics Job Markets." In preparation for submission to *Information Systems Research*.

PROFESSIONAL PUBLICATIONS:

M. Bowers, J. Camm, T. Cryan, L. Kallman, T. Lewis, I. Lustig, J. Malone, C. Naphade, "Analytics Career Pathways Task Force White Paper Report," *INFORMS*, January 8, 2021. <https://info.informs.org/analytics-career-pathways>

Melissa Bowers and Ramayya Krishnan, "Now Trending: STEM MBA: What is a CIP Code and what does it have to do with a resurgence of analytics in business school curricula?" *ORMS Today*, Vol. 47, No. 4, August 2020.

Melissa Bowers, "Analyzed to Succeed," *BizEd*, AACSB International, July/August 2019, pp. 56-57.

Melissa Bowers, "Delivering A Cutting-edge Business Analytics Program to Build Data Leaders," *Analytics Insight*, February 2019, pp. 42-45.

C. Fay, M.R. Bowers, M. Srinivasan, "First-Class Airline Catering at the World's Busiest Hub," *APICS Magazine*, the professional publication of the **American Production and Inventory Control Society**, April-June 2018, pp.26-29.

M. Bowers and K. Gilbert, "University of Tennessee's MSBA program designed to fill analytics talent gap in the corporate world," *ORMS Today*, Vol. 44, No. 6, December 2017, pp. 16-18.

Melissa Bowers, "MAPD maps out the future of analytics education," *OR/MS Today*, Vol. 44, No. 4, August 2017, pp. 30-35.

M.R. Bowers and G. Adams, "Turbo TOC: The Thrust Behind Delta's Maintenance Success," *APICS Magazine*, the professional publication of the **American Production and Inventory Control Society**, February 2008, pp.28-31.

M.R. Bowers, K.C. Gilbert, A.G. Miller, and M. Srinivasan, "Lean's New Look," *APICS Magazine*, the professional publication of the **American Production and Inventory Control Society**, September 2007, pp. 30-33.

M.R. Bowers and A. Agarwal, "Hierarchical Production Planning and Scheduling In the Apparel Industry," *Apparel Research Notes*, Vol. 12 No. 2, 1993.

REFEREED PROCEEDINGS:

Manuj, M.R. Bowers, and John T. Mentzer, "Improving the Rigor of Discrete-Event Simulation in Logistics and Supply Chain Research," *Proceedings of the Educator's Conference of the Council of Supply Chain Management Professionals*, Philadelphia, PA, October 21-24, 2007.

M.R. Bowers, and A. Agarwal, "Hierarchical Production Planning and Scheduling In the Apparel Industry," *Proceedings of the Fourth Annual Academic Apparel Research Conference*, 1993.

M.R. Bowers, "Hierarchical Production Planning and Scheduling In the Apparel Industry," *Proceedings of the Third Annual Academic Apparel Research Conference - Implementing Advanced Technology*, 1992.

PROCEEDINGS:

M. Bowers and G. Adams, "The Thrust Behind Delta's Maintenance Success," *Proceedings of the 2010 University of Tennessee MARCON, Maintenance and Reliability Conference*, February 17, 2010, Knoxville, TN.

OTHER PROFESSIONAL PUBLICATIONS:

TEXTBOOKS:

M.R. Bowers, and S. Manrodt, *Introductory Cases in Management Information Systems*, Harcourt Brace and Company, Fort Worth, TX, 1993.

PROGRAM AWARDS – Director, MS Business Analytics program, 2014- 2022

2018 INFORMS UPS George D. Smith Prize awarded to the Haslam College of Business Masters in Business Analytics (MSBA) Program; as Director of the MSBA program, led the application process as well as the presentation component of the competition. The Smith Prize is awarded annually to an academic program for effective and innovative preparation of students to be good practitioners of operations research, management science, or analytics.

Finalist, INFORMS George D. Smith Prize, 2017

Semifinalist, INFORMS George D. Smith Prize, 2016

Program Presence in Rankings, appeared in rankings below one or more times, 2013 and after:

Information Week : Big Data Analytics Master's Degrees: Top 20 Programs

Find-MBA.com: Top 10 Business Schools for Business Analytics and Big Data

The Financial Engineering Times: Best Master's of Business Analytics Programs

Value Colleges: Top 50 Best Value Big Data Graduate Programs

Better Buys: Top Big Data and Analytics Masters Programs

Predictive Analytics Today: Top 27 Data Science Schools

Analytics Insight Magazine: Top Ten Most Prominent Analytics & Data Science Institutes

OTHER SCHOLARLY AND CREATIVE ACTIVITY:

Developed Short Course for Executive Education in Lean Maintenance, Repair, and Overhaul

One of three primary faculty members contributing to the design, implementation, and ongoing delivery of the Haslam College of Business Graduate and Executive Education's short course in Lean Maintenance, Repair, and Overhaul (MRO); Developed a hands-on experiential simulation of a truck MRO facility with low volume and highly variable demand; One of two faculty involved in the development and primary faculty for the maintenance and continued improvement of this experiential simulation which serves as a cornerstone of the Lean MRO short course; **course delivery: June 2004-present.**

INVITED PRESENTATIONS:

Y. Liu, V. Hoang, W. Zheng, M. R. Bowers, "Effects of Analytics Academic Programs on Local Analytics Job Markets." **2020 INFORMS Workshop on Data Science, Virtual INFORMS Annual Meeting, November 7, 2020.**

- M. Bowers, "Maintaining a Relevant Curriculum in the Fast-paced Evolving Analytics Space," **Virtual INFORMS Annual Meeting, November 10, 2020.**
- M. Bowers, "The Maintenance Conversion Scheduling Problem: MCSP," **The University of Tennessee Center for Transportation Seminar Series, May 2020.**
- J. Camm and M. Bowers, "What is the Difference in Analytics and Data Science?," **Southeast Decision Sciences Institute, February 14, 2020, Charleston, SC.**
- M. Bowers, "The Master of Science Program in Business Analytics – the University of Tennessee Haslam College of Business," **POMS Annual Meeting, Washington, DC, May 2019.**
- M. Bowers, M. Galbreth, B. Noreen, and M. Beatty, "The Master of Science Program in Business Analytics - the University of Tennessee Haslam College of Business," **INFORMS George D. Smith Prize Competition Reprise, INFORMS Annual Analytics Meeting, November 6, 2018 Phoenix, AZ.**
- M. Bowers and T. Harrison, "The State of Analytics Education," **INFORMS Spring Analytics Meeting, April 18, 2018 Baltimore, Maryland.**
- M. Bowers, C. E. Noon, B. Noreen, and V. Bhatari, "The Master of Science Program in Business Analytics - the University of Tennessee Haslam College of Business," **INFORMS George D. Smith Prize Competition, INFORMS Spring Analytics Meeting, April 16, 2018 Baltimore, Maryland.**
- M. Bowers and J. Camm "The Analytics Marketplace," **Meeting of Analytics Program Directors, INFORMS Spring Analytics Meeting, April 15, 2018 Baltimore, Maryland.**
- M. Bowers, "A Market Driven Curriculum in Business Analytics," **INFORMS Annual meeting, fall, Houston, Texas, November 12, 2017.**
- M. Gorman, J. Camm, P. Dewan, G. Wegryn, M. Bowers, "Collaborations in OR Practice," **Invited Panel, INFORMS Annual meeting, Houston, Texas, November 12, 2017.**
- M. Bowers, J. Camm, "What Academics Are Doing to Address the Shortage of Analytics and Data Science Talent," **INFORMS Roundtable Invited Talk, INFORMS Annual meeting, Houston, Texas, November 12, 2017.**
- M. Bowers, M. Holcomb, and A. Petrie, "Faster Results from Supply Chain Analytics," **Invited Webinar, MIT Sloan Management Review, June 14, 2017.**

- M. Bowers, M. Holcomb, and A. Petrie, "Building Your Supply Chain Analytics Group: Integrating Analytics and Supply Chain Talent," **2017 University of Tennessee Haslam College of Business Supply Chain Forum**, Scott Ryan, Hanesbrands, Inc. and Baptiste Lebreton, Eastman Chemical, panelists, April 12, 2017.
- M Bowers, C E Noon, and B Noreen, "The Master of Science Program in Business Analytics - the University of Tennessee Haslam College of Business," **INFORMS George D. Smith Prize Competition, INFORMS Spring Analytics Meeting**, April 1, 2017 Las Vegas, Nevada.
- M Bowers, "The Analytics Master's Program Marketplace," **Meeting of Analytics Program Directors, INFORMS Spring Analytics Meeting**, April 1, 2017 Las Vegas, Nevada.
- M Bowers, "The Structure of the Capstone/Practicum Experience in MS Programs in Analytics," **Meeting of Analytics Program Directors, INFORMS Spring Analytics Meeting**, April 1, 2017 Las Vegas, Nevada.
- M. Bowers, C. Noon, W. Wu, K. Bass, "Neonatal Scheduling at the University of Tennessee Medical Center," **ETSU Seminar Series**, Johnson City, TN, February 17, 2017.
- C. Noon, M. Bowers, W. Wu, K. Bass, "Neonatal Scheduling at the University of Tennessee Medical Center," **2016 INFORMS Annual Conference**, Nashville, TN, November 13-16, 2016.
- M. Bowers, M. Holcomb, and A. Petrie, "Supply Chain Analytics," **2016 University of Tennessee Haslam College of Business Supply Chain Forum**, Gary Kinney, P&G facilitator, November 8-10, 2016, Knoxville, TN.
- G. Chakraborty, H. Zolbanin, M. Bowers, J. Camm, "How Does Industry Define Analytics as Revealed via Text Mining of Job Postings," **2015 INFORMS Analytics Conference**, Huntington Beach, CA, April 12-14, 2015.
- M. Bowers and M. Srinivasan, "Business Analytics for the Supply Chain," **2014 University of Tennessee College of Business Supply Chain Forum**, April 15-17, 2014, Knoxville, TN.
- M. Bowers, G. Adams, and C. Faye, "The Thrust Behind Delta's Maintenance Success," **2010 University of Tennessee MARCON, Maintenance and Reliability Conference**, February 17, 2010, Knoxville, TN.
- M.R. Bowers and C. Faye, "Turbo TOC: The Thrust Behind Delta's Maintenance Success," **American Production and Inventory Control Society, Invited Webinar**, February, 2008.

- M.R. Bowers and A. Agarwal, "Hierarchical Production Planning and Scheduling in the Apparel Industry," **Fourth Annual Academic Apparel Research Conference**, Raleigh, North Carolina, February 1993.
- M.R. Bowers and A. Agarwal, "Hierarchical Production Planning and Scheduling in the Apparel Industry," **Third Annual Academic Apparel Research Conference - Implementing Advanced Technology**, Atlanta, Georgia, February 1992.
- M.R. Bowers, "Hierarchical Production Planning and Scheduling in the Apparel Industry," **Invited Poster Session for Annual Contractor's Briefing for the Defense Logistics Agency and Clemson Apparel Research Center**, Pendleton, South Carolina, October 1991.
- M.R. Bowers and J.P. Jarvis, "Hierarchical Production Planning and Scheduling in the Apparel Industry," **Academic Apparel Research Conference on Advanced Apparel Manufacturing and Technology Demonstration**, Clemson, South Carolina, February 1991.
- M.R. Bowers, "Hierarchical Production Planning and Scheduling in the Apparel Industry," **Academic Apparel Research Conference on Advanced Apparel Manufacturing and Technology Demonstration**, Philadelphia, Pennsylvania, February 1990.

SPEAKER:

- M.R. Bowers, "Women's Issues in the Workplace," **Invited Talk, Women in Business Analytics at Tennessee**, fall 2016.

CONTRIBUTED PRESENTATIONS AND POSTER SESSIONS:

- M. Bowers, B. Bichescu, A. Agarwal, K. Gilbert, D. Keene, "Scheduling the Transition of the C-130 Aircraft fleet to a new Maintenance Process," **INFORMS Annual Meeting**, Philadelphia, PA, November 1-4, 2015.
- M. Bowers, C. Noon, K. Bass, W. Wu, "An Optimization Model For Physician Scheduling That Incorporates Fairness And Preference," **Decision Sciences Institute Annual Meeting**, Baltimore MD, November 16-19, 2013.
- S. Zhang, M. Srinivasan, and M. Bowers, "A Simple, Practical Prioritization Scheme to Minimize Cycle Time and Maximize Throughput of All Jobs in a Job Shop Environment with Multiple Job Types," Poster Session, **2012 INFORMS Business Analytics Conference**, Huntington Beach, CA, April 15-17, 2012.

- C. Noon, M. Bowers, and Wu, W., "An Optimization Model for Physician Scheduling that Incorporates Fairness and Preference, **2011 INFORMS Healthcare Conference**, Montreal, Canada, June 19-22, 2011.
- B. Bichescu, M. R. Bowers, and R. Zaretski, "On the Use of Propensity Scoring to Detect Abnormal Performance," **2009 INFORMS Annual Meeting** held in Washington, D.C., October 11-14, 2009.
- B. Bichescu, M. R. Bowers, K. Gilbert, and M. Srinivasan, "Scheduling the Transition to Lean Depot Maintenance: Opportunities and Challenges," **2008 INFORMS Annual Meeting** held in Washington, D.C., October 12 – 15, 2008.
- I. Manuj, M.R. Bowers, and John T. Mentzer, "Improving the Rigor of Discrete-Event Simulation in Logistics and Supply Chain Research," presented at the **Educator's Conference of the Council of Supply Chain Management Professionals**, Philadelphia, PA, October 21-24, 2007.
- M.R. Bowers, "Visualization in Production Scheduling at Oxford Industries," presented at **University of Tennessee Statistics Colloquium Series**, November 2003.
- M.R. Bowers, "Visualization in Production Scheduling at Oxford Industries," presented at **INFORMS National Meeting**, Atlanta, Georgia, October, 2003.
- M.R. Bowers, K. Groom, and R. Morris, "Short-term Scheduling in the Apparel Industry," **INFORMS National Meeting**, New Orleans, Louisiana, October 1995.
- A. Agarwal, M.R. Bowers, and N.C.P. Edirisinghe, "Vehicle Routing with Dynamic Time Windows," **TIMS/ORSA Joint National Meeting**, Boston, Massachusetts, May 1994.
- M.R. Bowers, C.E. Noon, and B. Thomas, "Parallel Optimization Approaches for Vehicle Routing Problems," **TIMS/ORSA Joint National Meeting**, Boston, Massachusetts, May 1994.
- M.R. Bowers and A. Agarwal, "Hierarchical Production Planning and Scheduling in the Apparel Industry," **TIMS/ORSA Joint National Meeting**, Chicago, Illinois, May 1993.
- M.R. Bowers and G. Zhang, "Product Grouping to Minimize Sequence Dependent Setup Times," **TIMS/ORSA Joint National Meeting**, Nashville, Tennessee, May 1991.
- M.R. Bowers and J.P. Jarvis, "A Hierarchical Model for Production Planning and Scheduling," **ORSA/TIMS Joint National Meeting**, New York, New York, May 1990.

MASTER OF BUSINESS ANALYTICS DEGREE PROGRAM

Member, Initial MSBA Program Design Committee, 2009-2010

MSBA Teaching Faculty, 2010-current

MSBA Director, June 2014- 2022

DOCTORAL ADVISOR FOR:

Ben Thomas (completed December 1995), "Parallel Approaches for Vehicle Routing Problems," Ph.D. Management Science; co-director.

Shuping Zhang (completed August 2013), "A Simple, Practical Prioritization Scheme for a Job Shop Processing Multiple Job Types," Ph.D. in Management Science, co-director.

DOCTORAL COMMITTEE MEMBER FOR:

Mina Longavi, "Joint Optimization of Allocation and Release Policy Decisions for Surgical Block Time Under Uncertainty." August 2015, Ph.D. in Management Science.

Nana V. Bryan, "Real-time Order Tracking in a Supply System with Multiple Transportation Stages," August 2013, Ph. D. in Management Science.

Xiaofeng Zhang, "Approximation of the G/G/s Queueing Model," (August 2007) Ph.D. in Management Science.

Ila Rastogi Manuj (August 2007), "A Computer-based Simulation Investigation of Environment-Strategy Fit for Risk Management in Global Supply Chains," Ph.D. in Logistics.

Hui Sun, (December 2005), "Manufacturing System and Supply Chain Analyses Related to Product Complexity and Sequenced Parts Delivery," Ph.D. in Industrial Engineering.

Olga Yee, (December 2005), "Design, Analysis, and Applications of Failure Amplification Experiments," Ph.D. in Statistics.

Vuttichai Chatpattananan, (May 2004), "An ARIMA Supply Chain Model with a Generalized Ordering Policy," Ph.D. in Management Science.

Susan Golicic (May 2003), "An Examination of Interorganizational Relationship Magnitude and Its Role in Determining Relationship Value," Ph.D. in Logistics.

Anurag Agarwal (December 1999), "Vehicle Routing with Dynamic Time Windows," Ph.D. Management Science.

Thalia Hooker (December 1998), "Optimality of Team Rankings in the Sports Arena," Ph.D. Management Science.

Mahender Singh (December 1998), "Analysis of the State Dependent Polling Model," Ph.D. Management Science.

Doug Sanders (August 1996), "A Process Oriented Approach to Repairable Systems," Ph.D. Management Science.

Robin Lovgren (August 1996), "Mixed Model Assembly Line Scheduling," Ph.D. Management Science.

Vanditha Mukund (May 1995), "A Decomposition Approach to the Traveling Salesman Problem with Time Windows," Ph.D. Management Science.

Rekha Pillai (December 1992), "The Traveling Salesman Subset-Tour Problem with One Additional Constraint," Ph.D. Management Science.

MASTER'S THESIS COMMITTEE MEMBER FOR:

Malcolm Shrimplin (completed December 1997), "An Electronic Kanban System for Production and Distribution Scheduling in the Soft Drink Industry," committee member, M.S. Management Science.

**ADVISOR, AEROSPACE AND DEFENSE MBA ACTION RESEARCH PROJECT/
ORGANIZATIONAL ACTION PROJECT:**

Alex Madkins, "Vendor Lock Alleviation through Parts Manufacturing Authority (PMA)," December 2022.

Zak Alasry, "Streamlining the Certification Process for PAC-3 Suppliers," Aerospace and Defense MBA, December 2021.

Ron Carver, "Acquisitions Management Supply Office Study," Aerospace and Defense MBA, December 2021

Scott Swartz, "Advance Thermal Spray Center Stand-Up," Aerospace and Defense MBA, December 2020.

Brett Mitchell, "Configuration Management of Thermal Processing Equipment Certification," Aerospace and Defense MBA, December 2020.

- Megan Koval, "Contracting Velocity," Aerospace and Defense MBA, December 2019.
- Katie Stark, "Optimizing Business Processes Through Lean and TOC," Aerospace and Defense MBA, December 2019.
- Kyle Franklin, "Programmed Depot Maintenance (PDM) Over & Above Cost Reduction," Aerospace and Defense MBA, December 2018.
- Anthony Hunt, "Decreasing the Lead Time for the F108 Jet Engine Forward Stator," Aerospace and Defense MBA, December 2018.
- Jeff VanZandt, "Implementing a Drum-Buffer-Rope System in the 552nd Machining Operation at Tinker Air Force Base," Aerospace and Defense MBA, December 2018.
- Jennifer Tribble, "Capacity Growth Through Constraint-based Management and Process Improvements for the C-130 Corrosion Control Process," Aerospace and Defense MBA, December 2017.
- Jennifer Bieberbach, "Agile Software Development, Lifecycle Development, and the Cost of Software Quality," Aerospace and Defense MBA, December 2017.
- James Kelly, "Reduce Parts Delivery Times at Warner Robins Air Logistics Complex," Aerospace and Defense MBA, December 2016.
- Joshua Campbell, " 'Begin with the End in Mind:' Standardizing Performance in Gate 0 for the WR-ALC," Aerospace and Defense MBA, December 2016.
- Jonathan Tucker, "Decreasing Cost Overruns in the C-17 Maintenance Squadron," Aerospace and Defense MBA, December 2015. *Winner 2015 ADMBA Outstanding OAP Project
- Walter Gary Crawford, "Kitting within the 402nd Electronics Maintenance Group," Aerospace and Defense MBA, December 2015.
- Chad Curl, "Decreasing Flow Time and WIP and Increasing Throughput on the TF-33 Engine Line in Propulsion Maintenance," Aerospace and Defense MBA, December 2014.
- Lona Blackburn, "Increasing Throughput of the Constant Speed Drive Shop in the Commodities Maintenance Group," Aerospace and Defense MBA, December 2014.
- Justin Hassen, "Designing and Implementing A Direct Material Rehabilitation Program," Aerospace and Defense MBA, December 2013.

- Justin Hottle, "Decreasing Flow Time and Increasing Throughput in Engine Blade and Gear Box Repair," Aerospace and Defense MBA, December 2013.
- Dana Burge, "A More Effective Management System for Managing Ground Support Equipment," Aerospace and Defense MBA, December 2013.
- Connie Davis, "B-52 Depot Maintenance – Roadmap for Continuous Improvement," Aerospace and Defense MBA, December 2012.
- Mike Mowles, "B-52 Structural Component Flow Day Reduction," Aerospace and Defense MBA, December 2012.
- James Routh, "Developing and Implementing System Metrics for Delta Cargo Operations," Aerospace MBA, December 2011.
- Chris Faye, "Process Redesign for Delta Cargo, Atlanta," Aerospace MBA, December 2011.
- Melanie Hartzog, "Process Improvements to Decrease Depot flow Days for the C-130 PDM Maintenance Line at WR-ALC," Aerospace MBA, December 2010.
- James Yashenko, "The transition of the 562nd Aircraft Maintenance Group to a Consolidated Tooling Program," Aerospace MBA, December 2010.
- David Foskey, "Sheet Metal Flight Process Improvement at Warner Robins Air Logistic Center," Aerospace MBA, December 2009.
- Rebecca Siers, "Inventory Strategy at GKN Aerospace," Aerospace MBA, December 2010.
- Janet Maddox, "Developing an Integrated Master Planning and Scheduling System at Hanscom Air Force Base," Aerospace MBA, December 2008.
- Dan Nash, "Developing & Implementing Processes for Continuous Improvement in Operations at Goodrich Intelligence, Surveillance, and Reconnaissance," Aerospace MBA, December 2008.
- Dede Stone, "Building an In-house Lean Consulting Base at Warner Robins Air Logistics Center," Aerospace MBA, December 2007.
- Kimberly Dockery, "Building a Lean Model Test Cell at Warner Robins Air Logistics Center," Aerospace MBA, December 2007.
- Kevin Warnock, "Lean Implementation in the Metal Bond Composite Repair Area at Warner Robins Air Force Base," Aerospace MBA, December 2006.

Gary Adams, "Reducing Turntimes for the Maintenance, Repair and Overhaul of the CF34 Engine Line at Delta Airlines," Aerospace MBA, November 2005.

Sharon Hebert, "Lean Improvements for Reusable Empty Containers at Tinker Air Force Base," Aerospace MBA, November 2005.

Stephanie Austin, "Creating the Unplanned Process," Aerospace MBA, November 2004.

Charlotte Corcoran, "Shop Flow Day (SFD) Analysis at Tinker Air Force Base," Aerospace MBA, November 2004.

HONORS AND AWARDS:

Master's in Business Analytics, Faculty Outstanding Commitment to Students Award, 2020

University of Tennessee Center for Transportation Research Fellow, 2019-2020

***INFORMS Journal on Applied Analytics* Outstanding Reviewer, 2019**

Allen H. Keally Excellence in Teaching Award, University of Tennessee Haslam College of Business, 2016

Richard Sanders Outstanding Leadership in Executive Education Award, University of Tennessee Center for Executive Education, Haslam College of Business, University of Tennessee, 2015

Master's in Business Analytics, Faculty Outstanding Commitment to Students Award, 2014

Richard Sanders Outstanding Leadership in Executive Education Award, University of Tennessee Center for Executive Education, University of Tennessee College of Business, 2012

Beaman Professor of Business, 2012-present

Business Analytics Scholar, University of Tennessee College of Business, Department of Statistics, Operations, and Management Science, 2010-2012

Outstanding MBA First Year Faculty Award, University of Tennessee College of Business, 2011

McKamey Scholar, University of Tennessee College of Business, 2009-2011

Reagan Faculty Scholar, University of Tennessee College of Business, 2001-2002

Outstanding MBA First Year Faculty Award, University of Tennessee College of Business, 2000

John B. Ross Outstanding Teacher Award, University of Tennessee College of Business, 1999

Gamma Beta Sigma National Business Honor Society

Phi Beta Kappa National Honor Society

Phi Kappa Phi National Honor Society

Golden Key National Honor Society

PROFESSIONAL LEADERSHIP ROLES:

INFORMS – The Institute for Operations Research and Management Science

Vice President of Education, INFORMS, 2019-2022.

INFORMS Meeting of Analytics Program Directors, 2020, Denver, CO
(cancelled), **Member, Organizing Committee**

INFORMS Career Pathways Committee, 2020

INFORMS Meeting of Analytics Program Directors, 2019, Seattle, WA,
Member, Organizing Committee

INFORMS Meeting of Analytics Program Directors, 2018, Baltimore, Maryland,
Member, Organizing Committee

INFORMS Meeting of Analytics Program Directors, 2017, Las Vegas,
Nevada, **Chairman of the Organizing Committee** for this **Inaugural
Event**

University Analytics Program Committee, Chairman, January 2017-December
2018.

INFORMS Strategic Planning Committee, 2015-2016

INFORMS 2016 Annual Meeting Committee, 2014-2016
Co-Chairman, Poster Sessions

University Analytics Program Committee, 2012-December 2016
Information Subcommittee, **Chairman**, 2013-2016
Industry Subcommittee, **member**, 2013-2018

Teaching Analytics – Case Committee, 2014-2015

PROFESSIONAL ASSOCIATIONS AND SERVICE:

Member, INFORMS, The Institute for Operations Research and Management Science

Member, The Decision Sciences Institute

Member, Production and Operations Management Society

Judge, inaugural College of Operational Excellence's best paper competition, Production and Operations Management Society, 2020

Have Served As Journal Referee for: *INFORMS Journal on Applied Analytics/Interfaces, Institute of Industrial Engineers, European Journal of Operational Research, Journal of Operations Management, Computers and Operations Research, Industrial and Computer Engineering, and Journal of Scheduling.*

Have Served As Reviewer for: POM-Manufacturing Track for Annual Meeting of the Decision Sciences Institute.

COLLEGE/UNIVERSITY SERVICE:

Advisory Board Member, Sports Science Committee, University of Tennessee Athletics Department, August, 2019 - current

Director, Master's in Business Analytics Program, 2014-2022

Master's in Business Analytics Committee, Chairman, 2014-2022

Member, MBA Program Committee, 2000-present

MBA Mania, Business Analytics Faculty Participant, Fall 2013, Fall 2014, Fall 2019

Member, Business Analytics and Statistics Faculty Search Committee, 2018-2019

Member, Executive Education Committee on Benchmarking, 2017-2018

Member, Business Analytics and Statistics Department Head, Search Committee, 2017-2018

Member, Haslam College of Business Awards Committee, August 2013-May 2016.

Member. Business Analytics and Statistics Undergraduate Committee, 2014-2015

Member, Search Committee for Haslam Chair in Supply Chain Analytics, 2013-2015

Member, Business Analytics and Statistics Faculty Search Committee, 2014-2015
Member, ADMBA Curriculum Revision Committee, 2014-2015
Member, Business Analytics and Statistics Department Head, Search Committee, 2014
Member, Director of Graduate Programs, CBA Search Committee, 2013
Director of Master's Program in Management Science, 2005-2010
Coordinator Management Science Seminar Series, 2009-2010
Member, MBA Curriculum Revision Task Force/Committee, 2000-2001, 2006-2007, 2008-2010
Member, College of Business Associate Dean for Executive Education Search Committee, 2010
Member Department of Marketing and Logistics Search Committee, 2007-2008 and 2008-2009
Administrator, Management Science Ph. D. Comprehensive Exams in Production Planning and Scheduling, 2009
Management Science Program Committee 1989-2009
Administrator, Management Science Master's Comprehensive Exams in Stochastic Processes, 2003-2008
Administrator, Management Science Ph.D. Qualifying Exams in Stochastic Processes, 2005-2008
MBA Red Carpet Faculty Participant, 2007
Attended Eli Goldratt's *Viable Vision Conference*, March 13, 2007, Pasadena, CA.
Chairman, SOMS Faculty Search Committee, 2005-2006
Faculty Panelist for MBA Career Fair, Fall 2006
Coordinated the effort of Management Science Group to design a 5 year BS Math/MS Management Science degree: designed catalog showcase, Recruiting presentations to Math 241 students, Spring 2006
Coordinator of Revised Master's Degree in Management Science, 2005
SACS coordinator, Master of Management Science, 2005
Coordinator AACSB Learning Outcomes, Master of Science in Management Science, 2005
Member of MRO (Maintenance, Repair, and Overhaul) Research team to develop a short course in "Lean MRO," for the CBA Center for Executive Education, 2003-2004.
University of Tennessee Midcycle Review Committee for Industrial Engineering Department, 2004
Search Committee, Statistics, Operations, and Management Science Department Head, 2004
Faculty Advisor to "180", a student group which promotes Unification of Campus Ministries, 2004
Aerospace Admissions Committee, 2004
Search Committee, MBA Director, 2003
Faculty Participant in College Scholars Invitational, Fall 2003
Graduate Council, 2000-2003
Member, 5 Year Cumulative Review Committee for Department of Logistics

Credentials Committee of the Graduate Council, 2000-2003
 Faculty Member, Governor's School for Manufacturing, 1998-2003
 Special Academic Review Board of the Graduate Council, Summer 2002
 CBA Fall Picnic Committee, 2001-2003
 Search Committee, Dean, College of Business, 2001
 Academic Advisor, Management Science M.S. Program, 1997-2001.
 Coordinator, Management Science Seminar Series, 1990-2001
 University of Tennessee Review Committee for Industrial Engineering Department,
 2000
 Faculty Senate, 1997-2000.
 Faculty Senate, Athletic and Library Subcommittees, 1997-2000.
 Search Committee, Associate Dean of MBA Program, 1999
 Chairman, Management Science Program, 1995-1997.
 MBA/M.S. Industrial Engineering Dual Degree Program Committee, 1995-1997.
 Industrial Engineering Faculty Search Committee, 1997.
 Stokely Undergraduate Curriculum Task Force, 1996-1997
 College of Business Administration Ph.D. Coordinating Committee, 1996-1997
 Academic Advisor, Management Science Ph.D. Program, 1994-1997.
 Coordinator, Management Science Ph.D. Comprehensive Examinations, 1992-1994
 Undergraduate Operations Management Advisor
 Management Science Faculty Search Committee, 1989, 1990, 1992

HASLAM GRADUATE & EXECUTIVE EDUCATION FACULTY EXPERIENCE:

Full-time MBA program faculty
 Aerospace and Defense MBA program faculty
 Professional MBA Program faculty
 Center for Executive Education faculty:
 Lean Maintenance, Repair, and Overhaul short course
 Supply Chain Certification short course

COURSES TAUGHT:

MSBA, Elective course, Supply Chain Analytics
 MSBA, Business Analytics Core Curriculum: Decision Optimization, Decision Support
 Systems for Business Analytics - Using VBA
 Prescriptive Modeling, Business Analytics course for MBA
 Operations and Optimization Content for Aerospace and Defense MBA
 Operations and Business Analytics Content for Professional MBA
 MBA Core Curriculum, Descriptive and Prescriptive Modeling
 MBA Operations Management Hub Course
 MBA Core Curriculum in Operations Management
 MBA Core Curriculum in Operations Strategy

MBA Core Curriculum in Desktop Modeling
MBA Core Curriculum in Process Design
Operations Management (Second Year MBA Course)
Production and Operations Management (undergraduate)
Stochastic Models in Management Science (graduate)
Computational Mathematical Programming (graduate)
Inventory Management and Production Planning and scheduling (graduate)
Management Information Systems (undergraduate and MBA levels)

COMMUNITY ACTIVITIES:

Past Member, East Tennessee Children's Hospital Family Advisory Council, 2008-2010
Knoxville Area Volunteer Ministries
Habitat for Humanity
East Tennessee Children's Hospital, Fantasy of Trees Volunteer, Area Coordinator, 2006
Farragut Schools Parent Volunteer
Concord Hills Swim Team Volunteer, 1999-2012; President, 2005, 2008-2011
Volunteer Youth Leader, Concord United Methodist Church
Volunteer, Hurricane Katrina Relief, Methodist Ministries
Member, Concord United Methodist Church