

Zhili Tian

Department of Management and Decision Sciences
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Academic Appointments

- Assistant Professor of Decision Sciences 08/2017-Present
College of Business, Coastal Carolina University
- Assistant Professor of Decision Sciences 08/2013-07/2017
College of Business, Florida International University
- Assistant Professor of Operations Management 08/2011-07/2013
College of Business and Economics, Towson University

Education

Washington University in St. Louis, St. Louis, MO

Ph.D. in Operations Management, September 2011

Dissertation Title: Study of Product Line Complexity, Supply Chain Coordination, and Phase III New Drug Development

UCLA Anderson School of Management, Los Angeles, CA

M.S. in Management, September 2006

Massachusetts Institute of Technology, Cambridge, MA

M.S. in Transportation, September 2002

Research Interests

- Product development with learning of quality
- Health care quality improvement through mining adverse events
- Optimal investment in production capacity with learning
- Service operations management
- Root causes of drug shortages through mining manufacturer-self-report shortages
- R&D and marketing
- Product line complexity management
- Supply Chain Integration and complexity management
- Healthcare Supply chain management
- Revenue management with learning of hotel booking pattern

Teaching Interests

- Business Statistics
- Business Analytics
- Decision Analysis
- Data Mining
- Quality Management
- Operations Management
- Supply Chain Management

Programming Skills

Proficient in using SQL, R, SAS, STATA, Python, Matlab, IBM ILOG, AMPL

Major Teaching Responsibilities

- Operations Management (undergraduate course, Towson University, Florida International Univ. (FIU), Coastal Carolina University (CCU))
- Supply Chain Management (undergraduate course, Towson University)
- Healthcare Operations Management (MBA course, FIU)
- Quality Assessment and Outcome in Healthcare (MBA course, FIU)

- Quantitative Method in Business (undergraduate course, FIU)
- Business Statistics (undergraduate course, FIU)
- Decision Analysis (undergraduate course, Coastal Carolina Univ. (CCU))
- Healthcare Quality Management (MBA course, CBAD 672, CCU)
- Predictive Analytics in Healthcare (MBA course, CBAD 798, CCU)

Publications

- Liu, K., Liu, C., Xiang, X., and **Tian, Z.** Testing facility location and dynamic capacity planning for pandemics with demand uncertainty (*Accepted by EJOR Nov. 16, 2021*)
- **Z. Tian**, H. Gurnani and Y. Xu. Collaboration in Development of New Drug (accepted by *POM Journal, 2021 and Published Online in January 2021.*)
- **Z. Tian**, W.B, Powell, W. Han. Adaptive Learning of Drug Quality and Optimization of Patient Recruitment for Clinical Trials with Dropouts. *Manufacturing and Service Operations Management*, published online in advance in March 2021.
- **Z. Tian**, Y. Tang, P. Kouvelis. Managing Soft Orders in Supply Chains: Roles of Penalties and Rationing Rules. *Decision Sciences*, April 2019, **50**(2), 340-373.
- P. Kouvelis, J. Milner, **Z. Tian** (2017). Clinical Trials and New Drug Development: Optimal Investment Policies and Application. *Manufacturing and Service Operations Management*, Vol. 19, No. 3, 437-452.
- **Z. Tian**. Optimization of logistics network of a multinational firm under uncertainty. *International Journal of Revenue Management*, Vol. 9, No. 4, 2016.
- **Z. Tian**, P. Kouvelis, and C. L. Munson (2015). Understanding and Management of Product Line Complexity: Applying sensitivity analysis to a large-scale MILP model to price and schedule new customer orders. *IIE Transaction*. **47**, 1-22.
- R. K. and **Tian, Z.** (2009). Buffer Location and Sizing to Optimize Cost and Quality in Semi Continuous Manufacturing Processes: Methodology and Application. *IIE Transactions*. (2009) **41**, 1– 14.
- **Tian, Z.**, Yang, H., and Lam, W. (1997). Transit Assignment Under Crowded Conditions. *Journal of Advanced Transportation*. **31**(1).
- Kawakami, S. and **Tian, Z.** (1996). A Equilibrium Model of Motorists' Parking Choice Behavior and Parking Demand in Central Area. *Studies in Regional Science*. **26** (2), 53-66.

Invited Presentation and Organizer and Session Chair at INFORMS and POMS conferences

- Product development, technology management, and process innovation in healthcare at POMS annual meeting in 2021 (invited presenter)
- Product development, technology management, and process innovation in healthcare at INFORMS annual meeting in 2020 (Chair and invited presenter)
- Product development, technology management, and process innovation in healthcare at POMS annual meeting in 2019 (Chair and invited presenter)
- Product Development and Process Innovation at POMS annual meeting in 2018 (Chair and invited presenter)
- Product and Process Innovation in Healthcare and Energy Industries at INFORMS annual meeting in 2018 (Chair and invited presenter)
- Product and Manufacturing Process Development and Innovation in Healthcare at INFORMS annual meeting in 2017 (Chair and invited presenter)
- Understanding Product Line Complexity through Stochastic Lot Sizing Analysis, POMS 2015 (Chair and invited presenter)
- Optimal Investment in Late Stage New Drug Development, POMS 2015 (Chair and invited presenter)

- ❑ Product Development and Process Development in Pharmaceutical Industry, INFORMS 2014 (Organizer, Chair, and invited presenter)
- ❑ Product Development and Generic Drug Shortage in the Pharmaceutical Industry, Capacity planning and Logistics Management, POMS 2014 (Organizer, Chair, and invited presenter)
- ❑ Capacity Planning, Product Layout, and Production Scheduling under Uncertainty, POMS 2013 (Organizer, Chair, and invited presenter)
- ❑ Joint Optimization of Investment in Phase II and III New Drug Development, and Investment to Accelerate the Adoption of New Medical Devices, POMS 2012
- ❑ Optimal Investment in Product Support and New Product Development in Pharmaceutical Industry, and Joint Optimization of Investment in Phase II and III New Drug Development, INFORMS 2011
- ❑ Award Winning Presentation: IIE Transaction 2011 Best Applied Paper Prize in Scheduling and Logistics: Buffer Location and Sizing to Optimize Cost and Quality in Semi-Continuous Manufacturing Processes: Methodology and Application
- ❑ Optimal investment in new product development in pharmaceutical industry, INFORMS 2010
- ❑ Invited session of Editor's Favorite papers at INFORMS 2010: Buffer Location and Sizing to Optimize Cost and Quality in Semi-Continuous Manufacturing Processes: Methodology and Application

Manuscripts under Review and Revision

- ❑ Z. **Tian**, G. Hazen, H. Li. Optimal investment and the value of interim analyses in late stage new drug development with learning of drug's efficacy (3rd round review by *Manufacturing and Service Operations Management*)
- ❑ Z. **Tian**, R. Siebert. Dynamic Mergers Effects on R&D Investments and Drug Development across Research Phases in the Pharmaceutical Industry (under 2nd-round review by *POMS Journal*)
- ❑ Z. **Tian**, R. Siebert. Dynamic Effects of Licensing and Knowledge Transfer Across Research Phases: Evidence from the Pharmaceutical Industry (under review by *Strategic Management Journal*)
- ❑ Z. **Tian**, G. Hazen, H. Li. Optimal investment and the value of interim analyses in late stage new drug development with learning of drug's efficacy (under review by *Management Science*)

Manuscripts in Process for Submission

- ❑ Z. **Tian**, P. Clark and H. Li. Applying adoption theory for patient enrollment prediction and clinical trials management (will be submitted to *Decision Sciences*)
- ❑ Z. **Tian**, Sonnier, G. Optimal Investment in Marketing Communication of Current Drug and Development of New Drug for a Financially Constrained Firm (target journal: *Marketing Science*)
- ❑ Z. **Tian**, Hazen, G. Optimization of Clinical Trial Test Center Opening with Learning of Center Enrollment (target journal: *MSOM*)
- ❑ Z. **Tian**, Powell, W. Modeling Dynamic Test Center Opening and Closing for Clinical Trial with Resource Constraints (target journal: *Operations Research*)
- ❑ Z. **Tian**, Naik, P. Market Size Inference for New Product Introductions (target journal: *Journal of Marketing Research*)
- ❑ Z. **Tian**, Naik, P. Modeling Adoption and Advertising, Marketing, and Sales Budgets for New Prescription Drugs (target journal: *Management Science*)
- ❑ Z. **Tian**, Oliver, R., and Li, H. Infectious Disease Spread and Intervention Effectiveness (target journal: *Nature or Science*)
- ❑ Z. **Tian**, Oliver, R., and Li, H. A Learning Model for Infectious Disease Case Prediction (target journal: *Management Science*)
- ❑ Z. **Tian**, Y. Qian. Optimal Resource Allocation between Marketing Communication and Development of New Drug Product (target journal: *Management Science*)

Other Professional Experience

- ❑ **Albert A. Webb Associates, Riverside, CA** Engineer 09/03-07/04
- ❑ **Edwards and Kelcey, Inc., West Chester, PA** Engineer 02/03-08/03
- ❑ **ALK Technologies, Inc., Princeton, NJ**
 - Transportation Network Analyst 04/96-06/98
 - Transportation Software Engineer 06/98-09/00

Awards

- ❑ Colonel Lindsey V. Vereen endowed business professorship in 2019, College of Business Administration, Coastal Carolina University
- ❑ IIE Transaction 2011 Best Applied Paper Prize in Scheduling and Logistics for paper “Buffer Location and Sizing to Optimize Cost and Quality in Semi-Continuous Manufacturing Processes: Methodology and Application”
- ❑ Fellowship, Olin Business School, Washington University in St. Louis, 2007-2011
- ❑ Fellowship, UCLA Anderson School of Management, 2004-2006
- ❑ Fellowship, MIT, 2000-2001

Editorial Service

- ❑ Production and Operations Management Journal, Reviewer, 2012-present
- ❑ Manufacturing and Service Operations Management, Reviewer, 2012-present
- ❑ Decision Sciences, Reviewer, 2012-present
- ❑ Operations Research, Reviewer, 2012-present
- ❑ Journal of Economics & Management Strategy, Reviewer, 2020-present
- ❑ IMA Journal of Management Mathematics, Reviewer, 2012-present
- ❑ International Journal of Revenue Management, Reviewer, 2017-present
- ❑ ASCE Journal of Transportation Engineering Reviewer, 2012-present

Service

- ❑ University, School, and Department
 - Member, Dept. Curriculum Committee, Dept. Assessment Committee (Towson Univ, CCU)
 - Member, College Faculty Policy Committee (CCU)
 - Member, College MBA Advisory Committee (CCU)
 - Member, MDS Assessment committee (CCU)
- ❑ Community
 - Clemson COVID-19 Challenge: Supervise students conducting data analysis and presenting final results to address issues in healthcare delivery, public policy, social factors, and the economy identified in the community

Professional Membership

- ❑ The Institute for Operations Research and Management Science (INFORMS)
- ❑ The Production and Operations Management Society (POMS)
- ❑ The Association for Healthcare Resource & Materials Management (AHRMM)
- ❑ Decision Science Institute (DSI)
- ❑ Association of University Programs in Health Administration (AUPHA)