

TAO LI

Associate Professor
Director of MS Program in Business Analytics
Department of Information Systems and Analytics
Leavey School of Business, Santa Clara University
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EDUCATION

The University of Texas at Dallas, Richardson, TX

Ph.D., Management Science, (GPA 3.9) Advisor: Suresh P. Sethi

Tianjin University, Tianjin, China

B.S., Material Science and Engineering & Financial Management

ACADEMIC POSITION

Leavey School of Business, Santa Clara University, Santa Clara, CA

Department of Information Systems and Analytics

Director of MS Program in Business Analytics

Feb/2020–Present

Coordinator of MBA Program Concentration in Data Sciences and Business Analytics

Mar/2022–Present

Advisory Board Member of Ciocca Center for Innovation and Entrepreneurship

Sept/2022–Present

Associate Professor (with Tenure)

Sept/2018–Present

Assistant Professor

Sept/2012–Aug/2018

School of Management, Fudan University, Shanghai, China

Visiting Professor

Aug/2018–Sept/2018

School of Management, USTC, Hefei, China

Visiting Professor

Jul/2018–Aug/2018

RESEARCH

PUBLICATIONS

- Meng Li, **Tao Li**, Lili Yu. 2024. “Retail Platform Analytics: Practice, Literature, and Future Research.” *Production and Operations Management*. Forthcoming.
- Jingna Ji, **Tao Li***, Lei Yang. 2023. “Pricing and Carbon Emission Reduction Strategies for Vertically Differentiated Firms under Cap-and-Trade Regulation.” *Transportation Research Part E: Logistics and Transportation Review*, **171**, 103064.
- Xi Shan, **Tao Li**, Suresh P. Sethi. 2022. “A Responsive Pricing Retailer Sourcing from Competing Suppliers Facing Disruptions.” *Manufacturing & Service Operations Management*, **24**(1), 196-213.
- Meng Li, **Tao Li***. 2022. “AI Automation and Retailer Regret in Supply Chains.” *Production and Operations Management*, **31**(1), 83-97.
- Xiaolong Guo, Qian Gao, **Tao Li**, Yugang Yu. 2022. “A Cash-strapped Creator’s Reward-based Crowdfunding and Spot Sales Strategies.” *Naval Research Logistics*, **69**(8), 1080-1095.

6. Meng Li, **Tao Li***. 2018. "Consumer Search, Transshipment, and Bargaining Power in a Supply Chain." *International Journal of Production Research*, **56**(10), 3423-3438.
7. **Tao Li**, Suresh P. Sethi, Jun Zhang. 2017. "Mitigating Supply Uncertainty: The Interplay Between Diversification and Pricing." *Production and Operations Management*, **26**(3), 369-388.
The runner-up/honorable mention for 2018 POMS **Wickham Skinner Best Paper Award**.
8. **Tao Li**, Suresh P. Sethi. 2017. "A Review of Dynamic Stackelberg Game Models." *Discrete and Continuous Dynamical Systems - Series B*, **22**(1), 125-159.
9. **Tao Li**, Suresh P. Sethi, Xiuli He. 2015. "Dynamic Pricing, Production, and Channel Coordination with Stochastic Learning." *Production and Operations Management*, **24**(6), 857-882.
10. **Tao Li**, Suresh P. Sethi, Jun Zhang. 2014. "Supply Diversification with Isoelastic Demand." *International Journal of Production Economics*, **157**, 2-6.
11. **Tao Li**, Suresh P. Sethi, Jun Zhang. 2013. "How Does Pricing Power Affect a Firm's Sourcing Decisions from Unreliable Suppliers?" *International Journal of Production Research*, **51**(23-24), 6990-7005.
International Journal of Production Research 50th volume anniversary special issue (by invitation only).
12. **Tao Li**, Suresh P. Sethi, Jun Zhang. 2013. "Supply Diversification with Responsive Pricing." *Production and Operations Management*, **22**(2), 447-458.
13. Ernan Haruvy, **Tao Li***, Suresh P. Sethi. 2012. "Two-Stage Pricing for Custom-Made Products." *European Journal of Operational Research*, **219**(2), 405-414.

SUBMITTED/WORKING PAPERS

- **Tao Li**, Dali Huang, Zhen He. "Product Sharing: A Threat or an Opportunity for Vertically Differentiated Manufacturers?" **Under Review** in *Production and Operations Management*.
- Baozhuang Niu, Haotao Xu, **Tao Li**, Fanzhuo Zeng. "Dual Sourcing with Probabilistic Selling: Will it Compensate for Heterogeneous Consumer Utility?" **Under Review** in *Production and Operations Management*.
- Shujie Luan, Weili Xue, Lijun Ma, **Tao Li***. "Pull-Push Strategies under Cournot Competition." **Under Review** in *Naval Research Logistics*.
- **Tao Li**, Zhaoli Li, Guo Li, Yifan Xu. "Personal Information Selling Strategy with Endogenous Privacy." Target Journal: *Management Science*.
- **Tao Li**, Suresh P. Sethi. "Coordinating Contracts and Feedback Stackelberg Equilibrium." Target Journal: *Production and Operations Management*.
- **Tao Li**, Xiuli He, Suresh P. Sethi. "Strategic Inventories with Stochastic Learning." Target Journal: *Management Science*.

WORKS IN PROGRESS

- **Tao Li**, Meng Li. "The Interplay between Algorithm Aversion and Risk Sensitivity in Pricing."
- **Tao Li**, Meng Li. "Competing Regretful Retailers in Supply Chains."
- **Tao Li**, Hau Lee. "The Bertrand Competition between the Manufacturer and Its Unreliable Suppliers with Random Yield."
- Xi Shan, **Tao Li**, Suresh P. Sethi. "A Committed Pricing Retailer Sourcing from Competing Suppliers facing Disruption."
- **Tao Li**, Suresh P. Sethi, Jun Zhang. "Supply Diversification with Strategic Suppliers."
- **Tao Li**, Suresh P. Sethi, Xiuli He. "Myopic or Far-Sighted? Competition Strategies with Stochastic Learning."

TEACHING EXPERIENCE

Associate Professor, Santa Clara University (Average Teaching Rating > 4.5/5) 2012 – Present

- Machine Learning with Python (MSIS 2508; Core Course for MS in Business Analytics)
- Data Analytics with Python (MSIS 2507; Core Course for MS in Business Analytics)
- Prescriptive Analytics (MSIS 2510; Core Course for MS in Business Analytics)
- Dashboards with Tableau (MSIS 2529; Core Course for MS in Business Analytics)
- Business Analytics (OMIS 3000; Core Course for MBA)
- Operations Management (OMIS 3252; Core Course for MBA)
- Analytical Decision Making (OMIS 3202; Core Course for MBA)
- Operations Management (OMIS 3357; Core Course for Accelerated MBA)
- Computer Based Decision Models (OMIS 2355; Core Course for MS in Information Systems)
- Predictive Analytics (OMIS 115; Undergraduate Core for Business Analytics)
- Data Analytics with Python (OMIS 114; Undergraduate Core for Business Analytics)
- Prescriptive Analytics (OMIS 109; Undergraduate Core for Business Analytics)
- Operations Management (OMIS 108S; Undergraduate Core for Leavey Scholars & University Honors)
- Sustainable Operations Management (OMIS 108E)
- Operations Management (OMIS 108; Undergraduate Core for all business majors)

Instructor, The University of Texas at Dallas (Average Teaching Rating > 4.5/5) 2011 – 2012

- Operations Management (Undergraduate Core for all business majors)

Temporary Tutorial Instructor, The University of Texas at Dallas Fall 2010

- Supply Chain Management/Demand and Revenue Management (MBA Courses)

Tutorial Instructor, The University of Texas at Dallas Spring 2010

- Optimal Control (PhD Core)

INDUSTRY EXPERIENCE

Teladoc Health Jan/2023 – Present

- Project Advisor. I am leading two projects. 1. Develop a chatbot (AIVA) that capitalizes on core technologies like ML, NLP, Gen AI, Microsoft Azure and Bot Composer, OpenAI API, and Workday API to not only guide or provide answers but also to perform transactions on behalf of an employee. 2. Develop a predictive model for provider/talent recruitment and retention strategies using ML and NLP.
- Project Sponsor: Arnon Geshuri (Chief People Officer)

Intuitive Surgical Ltd Jan/2023 – Present

- Project Advisor. I am leading a project to help Accounts Receivable (AR) team build a predictive ML model to identify high risks customers so that the team can collect debts more effectively and efficiently.
- Project Sponsor: Chris Halford (Sr Manager, Accounts Receivable)
- Project Advisor. Supervised a project to analyze speech transcripts in the events of Earning's Calls, investor conference, etc. to generate business insights by developing a pipeline to identify, extract, and label topics and key conversations in transcripts, performing sentiment analysis to the conversations, and creating log on the core message of conversation history for each topic.
- Project Sponsor: Brandon Lamm (Sr Manager, Investor Relations)

Amazon Web Services (AWS) Jan/2022 – Jun/2023

- Project Advisor. Supervised a project, with the external data from the customer intelligence portal at AWS, to develop an algorithm to prioritize the customers and next sales actions, i.e., which customers have the best potential for closing a sale, and what sales actions are necessary to move a deal forward.
- Project Sponsor: Swati Choksi (Senior Leader, Solutions Architecture)
- Project Advisor. Supervised a project to apply a set of financial tools recently launched on AWS SageMaker JumpStart on a dataset of quarterly earnings calls and build a demo use case to analyze earnings calls with machine learning. Earnings calls are widely employed by industry players as a source of forward-looking information. The objectives of this project include (1) Build a large dataset of earnings calls (audio files and transcripts) downloaded from various sources on the web. (2) Collect daily stock return data for each ticker in the sample for a month before and after the earnings call and join it with the transcripts. (3) Collect SEC filings for each quarter for all tickers and quarters in the sample and join the data to the transcripts. (4) Use ML to fit a stock prediction model using the multimodal dataframe created in (1)-(3). (5) Use Transformer models to summarize earnings calls transcripts (both, the management section and the analyst Q&A). (6) Build a question-answering system for the text of SEC filings and earnings calls. Come up with a list of questions that financial analysts may want to ask about these reports. (7) Score each ticker's earnings calls and build a document comparison between quarters. (8) Come up with a way to use ML on the audio files for the same tasks.
- Project Sponsor: Bratin Saha (VP and GM at Amazon), Sanjiv Das (Amazon Scholar)

Rubrik, Inc.

Jan/2022 – Jun/2022

- Project Advisor. Supervised a project to predict pipeline to booking conversion ratio for different categories by leveraging various machine learning and time series models.
- Project Sponsor: Sham Reddy (Director of Data, BI & Advanced Analytics)

Cloudera, Inc.

Jan/2022 – Jun/2022

- Project Advisor. Supervised a project to help Cloudera to analyze their industry and revenue size band grouping penetration relative to the competitors. Use these relative penetration rates as an indicator for the likelihood of landing/expanding and/or churn risk. Based on IT spend and competitor penetration, find the largest market segments (defined by industry, size, geo) based on TAM for Cloudera's products. Use Diag bundle to determine which market segments have the largest installs/consumption footprints. Use this as a proxy for the data intensity of a market segment and use as an opportunity sizing data point (like TAM).
- Project Sponsor: Thibault Aimé (Director of Corporate Strategy)

Adobe, Inc.

Jan/2021 – Dec/2021

- Project Advisor. Supervised a project to develop a tool/system which identifies and isolates cohorts of customers with atypical product engagement patterns as well as those customer cohorts which are driving overall engagement trends. The resulting customer cohorts are then brought to the attention of the relevant internal stakeholders to act on, if appropriate.
- Project Sponsor: Matt Bergstrom (Director of Product & Customer Analytics)

Nuveen, A TIAA Company

Jan/2021 – Jun/2021

- Project Advisor. Supervised a project to enable diversification across product offering by building cross sell & retention models which helped to target high risk individual advisors. This project identified anomalies in advisor behaviors and helped to take actions in a timely manner. Besides data science modeling, this project also helped to build life cycle analytics to measure prospecting, client acquisition, client development and retention.
- Project Sponsor: Santanu Sengupta (Managing Director)

Atollogy, Inc.

Jan/2019 – Dec/2020

- Project Advisor. Supervised two projects. The goal of the first project is to build a dashboard to visualize large volume of sensor readings data that can provide customers a lens into the day to day operation of their machines, and then to aggregate this data into patterns and metrics that are more insightful over

a larger period of operation (weekly/monthly etc.). The goal of the second project is to build a machine learning model to recognize and correct the misread vehicle license plate numbers caused by irregular stoppage times of vehicles and many other factors.

- Project Sponsor: Rob Schoenthaler (CEO)

AWARDS AND HONORS

- Member of INFORMS, MSOM, POMS, DSI, CSAMSE, Phi Kappa Phi, Beta Gamma Sigma
- Tao Li (PI). SCU Leavey Research Grant (\$3,750) 2023–2025
- Tao Li (PI). SCU Leavey Research Grant (\$3,000) 2023–2025
- Tao Li (PI). SCU University Research Grant (\$3,920) 2023–2025
- Tao Li (PI). SCU Leavey Research Grant (\$4,750) 2022–2024
- Tao Li (PI). SCU Leavey Research Grant (\$5,000) 2022–2024
- Tao Li (PI). SCU Leavey Research Grant (\$3,000) 2021–2023
- Tao Li (PI). SCU Leavey Research Grant (\$2,300) 2020–2022
- Tao Li (PI). SCU Leavey Research Grant (\$8,000) 2019–2021
- Tao Li (PI). SCU University Teaching Grant (\$1,700) 2019–2021
- The ACE (Accelerated Cooperative Education Leadership Program) Outstanding Faculty Award (only one tenure-stream faculty per year) Mar/2019
- Tao Li (PI). SCU Leavey Research Grant (\$7,800) 2018–2020
- The runner-up/honorable mention for 2018 POMS **Wickham Skinner Best Paper Award** May/2018
- Tao Li (PI). Santa Clara University Sustainability Research Grant (\$15,000) 2017–2019
- Tao Li (PI). SCU Leavey Research Grant (\$3,000) 2017–2019
- SCU Leavey School of Business Extraordinary Teaching Award (\$250) 2017–2018
- SCU Leavey School of Business Extraordinary Research Award (\$250) 2016–2017
- SCU Leavey School of Business Extraordinary Teaching Award (\$250) 2016–2017
- Tao Li (Co-PI, with Graeme Warren and Fouad Mirzaei) Enhancing Teaching with Technology Grant (\$4,500) Jun/2016
- The ACE (Accelerated Cooperative Education Leadership Program) Outstanding Faculty Award (only one tenure-stream faculty per year) Mar/2016
- SCU Leavey School of Business Extraordinary Teaching Award (\$800) 2014–2015
- SCU Junior Faculty Development Leave Grant (\$3,000) 2015–2017
- Tao Li (PI). SCU Leavey Research Grant (\$4,000) 2015–2017
- Tao Li (PI). SCU University Research Grant (\$5,000) 2015–2017
- SCU Leavey School of Business Extraordinary Research Award (\$800) 2013–2014
- SCU Leavey School of Business Extraordinary Teaching Award (\$800) 2013–2014
- Tao Li (PI). SCU Leavey Research Grant (\$4,000) 2014–2016
- Tao Li (PI). SCU University Research Grant (\$2,000) 2014–2016
- Tao Li (PI). SCU Leavey Research Grant (\$4,000) 2013–2015
- Invited to the 10th POMS Emerging Scholars Program May/2013
- Invited to the INFORMS Teaching Effectiveness Colloquium Oct/2012
- M.S. Graduation in Supply Chain Management with High Distinction May/2012
- Spring 2012 Phi Kappa Phi-The University of Texas at Dallas Travel Grant (\$500) Apr/2012
- The University of Texas at Dallas Ph.D. Research Small Grant (\$1,000) Apr/2012
- Invited to the INFORMS Future Academicians Colloquium Nov/2011

- Invited to the DSI Doctoral Student Consortium Nov/2011
- The University of Texas at Dallas Doctoral Student Consortium Grant (\$2,000) Nov/2011
- Invited to the POMS Doctoral Student Consortium May/2011
- The University of Texas at Dallas Doctoral Student Consortium Grant (\$1,000) May/2011
- MBA Graduation with High Distinction May/2011
- The University of Texas at Dallas Ph.D. Research Small Grant (\$1,000) Nov/2010

CONFERENCE PRESENTATIONS

- INFORMS Annual Meeting at Indianapolis, IN Oct/2022
- *Product Sharing: A Threat or an Opportunity for Competing Manufacturers?*
- POMS Annual Meeting (Virtual) May/2021
- *AI Automation and Retailer Regret in Supply Chains*
- POMS Annual Meeting at Washington, D.C. May/2019
- *Product Sharing: A Damage or an Opportunity for Manufacturers and Consumers*
- The Eleventh Annual International Conference of the Chinese Scholars Association for Management Science and Engineering at Ningbo, China Jul/2018
- *Pricing and Carbon Emission Reduction Decisions for Vertically Differentiated Firms with Consumer Preference*
- POMS 2017 International Conference at Sydney, Australia. Dec/2017
- *Carbon Emission Reduction Strategies for Two Competing Firms under Cap-and-Trade Regulation with Consumers' Preference*
- The Tenth Annual International Conference of the Chinese Scholars Association for Management Science and Engineering at Guangzhou, China. Jul/2017
- *Carbon Emission Reduction Strategies for Two Competing Firms under Cap-and-Trade Regulation with Consumers' Preference*
- The Eighth POMS-HK International Conference at Hong Kong, China Jan/2017
- *A Responsive Pricing Retailer Sourcing from Competing Suppliers facing Disruptions*
- The Ninth Annual International Conference of the Chinese Scholars Association for Management Science and Engineering at Hefei, China. Jul/2016
- *A Responsive Pricing Retailer Sourcing from Competing Suppliers facing Disruptions*
- INFORMS International Meeting at Waikoloa, HI Jun/2016
- *Five Steps to Supply Chain Coordination*
- POMS Annual Meeting at Orlando, FL May/2016
- *Five Steps to Supply Chain Coordination*
- The Seventh POMS-HK International Conference at Macau, China Jan/2016
- *Mitigating Supply Uncertainty: The Interplay Between Diversification and Pricing*
- INFORMS Annual Meeting at Philadelphia, PA Nov/2015
- *Consumer Search, Transshipment, and Bargaining Power in a Supply Chain*
- The Eighth Annual International Conference of the Chinese Scholars Association for Management Science and Engineering at Shenyang, China. Jul/2015

- *Mitigating Supply Uncertainty: The Interplay Between Diversification and Pricing*
 POMS Annual Meeting at Washington, D.C. May/2015
- *Mitigating Supply Uncertainty: The Interplay Between Diversification and Pricing*
 INFORMS Annual Meeting at San Francisco, CA Nov/2014
- *Dynamic Pricing, Production, and Channel Coordination with Stochastic Learning*
 MSOM Annual Meeting at Seattle, WA Jun/2014
- *Dynamic Pricing, Production, and Channel Coordination with Stochastic Learning*
 POMS Annual Meeting at Denver, CO May/2013
- *Mitigating Supply Uncertainty: The Interplay Between Diversification and Pricing*
 - *Dynamic Pricing, Procurement, and Channel Coordination with Stochastic Learning*
 INFORMS Annual Meeting at Phoenix, AZ Oct/2012
- *Are Responsive Pricing and Supply Diversification Substitutes in Hedging Supply Uncertainty?*
 - *Strategic Inventories and Dynamic Coordination with Production Cost Learning*
 POMS Annual Meeting at Chicago, IL Apr/2012
- *Are Responsive Pricing and Supply Diversification Substitutes in Hedging Supply Uncertainty?*
 - *Myopic versus Strategic Decisions with Production Cost Learning*
 DSI Annual Meeting at Boston, MA Nov/2011
- *Supply Diversification with Responsive Pricing*
 INFORMS Annual Meeting at Charlotte, NC Nov/2011
- *Are Responsive Pricing and Supply Diversification Substitutes in Hedging Supply Uncertainty?*
 - *Supply Diversification with Responsive Pricing*
 - *Pricing, Production and Coordination in a Two-Period Inventory Model with Stochastic Cost Learning*
 POMS Annual Meeting at Reno, NV May/2011
- *Supply Diversification with Responsive Pricing*
 - *Coordination in a Two-Period Inventory Model with Production Cost Volume Learning*
 INFORMS Annual Meeting at Austin, TX Nov/2010
- *Supplier Diversification with Price-Dependent Demand*

PROFESSIONAL ACTIVITIES

- Senior Editor for **Production and Operations Management** 2017–Present
- Guest Associate Editor for **Naval Research Logistics** 2018–Present
- Associate Editor for **Transportation Research Part E: Logistics and Transportation Review** 2019–Present
- Member of Editorial Review Board for **Production and Operations Management** 2013–Present
- Member of Editorial Advisory Board for **Transportation Research Part E: Logistics and Transportation Review** 2019–Present

Ad-Hoc reviewer for **National Science Foundation, Research Grant Council of the Hong Kong Government, Management Science, Operations Research, Manufacturing & Service Operations Management, Naval Research Logistics, Decision Sciences, European Journal of Operational Research, Annals of Operations Research, International Journal of Production Economics, OMEGA, Applied Mathematical Modeling, Applied Mathematics and Computation, Transportation Research Part E: Logistics and Transportation Review, Journal of the Operational Research Society, Journal of Cleaner Production, OR Spectrum, International Journal of Internet Manufacturing and Services, Electronic Commerce Research, International Transactions in Operational Research**

- Invited Session Chair of the Fifteenth Annual International Conference of CSAMSE Jul/2023
- Invited Session Chair of the Twelvth Annual International Conference of CSAMSE Jul/2019
- Invited Session Chair of the Eleventh Annual International Conference of CSAMSE Jul/2018
- Invited Session Chair of the Tenth Annual International Conference of CSAMSE Jul/2017
- Invited Session Co-Chair of POMS Annual Meeting May/2017
- Invited Session Chair of the Eighth POMS-HK International Conference Jan/2017
- External reviewer for Research Grant Council of the Hong Kong Government Sept/2016
- Invited Session Chair of the Ninth Annual International Conference of CSAMSE Jul/2016
- Member of the technical committee for Supply Chain and Internet Financing Annual Forum Jun/2016
- Invited Session Chair of INFORMS International Meeting Jun/2016
- Invited Session Chair of POMS Annual Meeting May/2016
- Invited Session Chair of INFORMS Annual Meeting Nov/2015
- Invited Session Chair of the Eighth Annual International Conference of CSAMSE Jul/2015
- Invited Session Chair of POMS Annual Meeting May/2013
- Invited Session Co-Chair of INFORMS Annual Meeting Nov/2011

UNIVERSITY SERVICE

- Director of MS Program in Business Analytics Winter 2020–Present
- Coordinator of MBA Program Concentration in Data Sciences and Business Analytics Mar 2022–Present
- Advisory Board Member of Ciocca Center for Innovation and Entrepreneurship Fall 2022–Present
- Committee member for ULT (Undergraduate Leadership Team) Fall 2018–Winter 2020
- Committee member for new undergraduate minor in Business Analytics Winter 2017–Fall 2017
- Feasibility study for new undergraduate major/minor in Business Analytics/Supply Chain Management/Operations Management Fall 2014–Fall 2016
- OMIS department library liaison Spring 2014–Present
- Coordinator for the learning goal of “Analysis to drive decision making” for the undergraduate program Fall 2013–Fall 2020
- Business students advising (average 25-30 per year) Fall 2013–Present
- OMIS 108 Operations Management course coordinator Fall 2012–Fall 2021
- Redesigning Provost Webpages OMIS representative Spring 2015
- Faculty advisor for summer orientation Summer 2014 & 2017
- Leavey Research Seminar Series Committee Member 2012–2013

REFERENCES

Suresh P. Sethi (PhD Advisor)

Eugene McDermott Chair Professor of Operations Management

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Jindal School of Management
The University of Texas at Dallas
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Milind Dawande

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