

SUMMARY

- My mission is to excel as a distinguished scholar, promoting an academic environment enriched by innovative teaching, groundbreaking research, and a deep commitment to learning, hard work, intellectual curiosity, and collaboration.
- My research primarily focuses on stochastic optimization and simulation modeling in supply chain systems, with a secondary interest in exploring the social impact of technology and business operations.
- As an educator, I teach statistical modeling, multivariate analysis, and simulation & optimization, achieving an average student evaluation of 4.7/5. I am also honored with the 2021 President's Excellence in Teaching Award from Texas Tech University.
- In leadership roles, I serve as the Director of the Master of Science in Data Science Program and am the former Director of the ISQS Outreach Program.
- Leading a team of three faculty members as the Principal Investigator, our collaborative efforts secured first place in the 2022 Defense Data Grand Prix, earning a \$40,000 Research Award from the US Department of Defense.

EMPLOYMENT

Assistant Professor, 2020-Present

Director of Master of Science in Data Science Program
Texas Tech University

Assistant Professor of Practice, 2017-2020

Texas Tech University

EDUCATION

Ph.D. in Industrial Engineering (2017)

University of Arkansas, Fayetteville, AR

Dissertation: "Developing New Segmentation Methods for Large-Scale Multi-Echelon Inventory Systems" (Advisor: Dr. Manuel D. Rossetti)

RESEARCH

Journal Publications

- **Sheikhzadeh, A.**, Scott, M., & Ahangar F. (2023), "The role of prescriptive data and non-linear dimension-reduction methods in spare part classification," *Computers & Industrial Engineering (CAIE)*, 175, 108912.
- Ghasemi, E.¹, **Sheikhzadeh, A.**, & Song, J. (2023), "Effort as investment in healthcare dialogue-based agents: On the role of mean-goal configurations," *Decision Support Systems (DSS)*, 169, 113943.
- Ahangar, F., Karimi B, Ahangar, N., & **Sheikhzadeh, A.** (2023), "Optimization approach for multi-floor facility layout design using flexible bays," *International Journal of Industrial and Systems Engineering (IJISE)*, 45(2), 244-270.
- **Sheikhzadeh, A.**, Rossetti, M. D., & Scott, M. (2021), "Performance-based inventory classification methods for large-scale multi-echelon replenishment systems," *Omega*, 101, 102276.

¹PhD Student under the supervision of Alireza Sheikh-Zadeh

- **Sheikhzadeh, A.**, & Rossetti, M. D. (2020), "Classification methods for problem size reduction in spare part provisioning," *International Journal of Production Economics (IJPE)*, 219, 99-114.
- **Sheikhzadeh, A.**, & Farhangi, H., & Rossetti, M. D. (2020), "Inventory grouping and sensitivity analysis in large-Scale spare part systems," *Computers and Industrial Engineering (CAIE)*, 143, 106203.
- Al-Rifai, M. H., Rossetti, M. D., & **Sheikhzadeh, A.** (2016), "A heuristic optimization algorithm for two-echelon (r, q) inventory systems with non-identical retailers," *International Journal of Inventory Research (IJIR)*, 3(2), 166-193.
- Karimi-Nasab, M., Bahalke, U., Feili, H. R., **Sheikhzadeh, A.**, & Dolatkahi, K. (2012). "Working time evaluation in assembly lines," *International Journal of Mathematics in Operational Research (IJMOR)*, 4(1), 1-17.

Articles Under Review

- **Sheikhzadeh, A.**, Wang, Y., & Song, J., (under review) "Corporate digital responsibility: Typology and expected outcomes."
- Ghasemi, E., **Sheikhzadeh, A.**, & Song, J., (under review) "Performance in technology-mediated communications: On a structured-based measurement of information sharing in crowdfunding."
- Kaskela, T., Song, J., **Sheikhzadeh, A.**, (under review) "How consumers see organizational success on social media platform: Hot streak perspective."
- Devletshin, M., Trzebiatowski, T., **Sheikhzadeh, A.**, & Golicic S., (under review) "Ties that pay: The Impact of buyer-supplier network closure and gender diversity of boards of directors on sustained revenue growth."
- Ghasemi, E., & **Sheikhzadeh, A.**, (Under review) "Profitability in P2P lending platforms: When you are better off funding borrowers who are more likely to default."

Working Papers

- Wang, Y., Song, J., Aguirre-Urreta, M., **Sheikhzadeh, A.**, "Information consistency matters in the digital markets: A longitudinal investigation on online reviews," Currently under revision for re-submission.
- Kim, Y., **Sheikhzadeh, A.**, "The role of offline social ties on Twitter network structure, information propagation, and networking behavior," Currently under revision for re-submission.
- Ghasemi, E., & **Sheikhzadeh, A.**, "User goals and complexity premium in human-computer interactions: A case of recommendation agents." Currently under revision for re-submission.

Peer-Reviewed Conference Publications

- Kim, Y., **Sheikhzadeh, A.**, (2022) "The difference between offline and online ties in Twitter," *AMCIS 2022 Proceedings*, 9.
- Padalkar, N., Song, J., & **Sheikhzadeh, A.** (2020, August), "Business value of smart contract: Case of inventory information discrepancies," *AMCIS 2020*.
- **Sheikhzadeh, A.**, & Rossetti, M. D. (2016, May), "Inventory segmentation performance improvement for multi-echelon repairable items logistics systems," In *Proceedings of the 2016 Industrial and Systems Engineering Research Conference (ISERC)*, Anaheim, CA, USA.
- **Sheikhzadeh, A.**, & Rossetti, M. D. (2015, May), "Segmentation methods for large-scale multi-echelon service parts logistics systems," In *Proceedings of the 2015 Industrial and Systems Engineering Research Conference (ISERC)*, Nashville, TN, USA.
- **Sheikhzadeh, A.**, & Heidari, H. (2012, July), "Operations management research: A 10-year survey," In *Proceedings of the 2012 International Conference on Industrial Engineering and Operations Management (IEOM)*, Istanbul, Turkey, 2472-2481.
- **Sheikhzadeh, A.**, & Heidari, H. (2011, December), "Improving a model for new service development," In *Proceedings of 2011 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, Singapore, Singapore, 674-678.

Research in Progress

- **Sheikhzadeh, A.**, “Aggregation-based contextual optimization: Addressing uncertainties in performance-based inventory systems”
- Ghasemi, E., & **Sheikhzadeh, A.**, “Exploring information sharing through the interplay of text and video in crowdfunding.”
- Scott, M. & **Sheikhzadeh, A.**, “Exploring principal-agent alignment on ESG-based dimensions of performance during crowdsourced retail fulfillment operations”.

Invited Presentations

- **Sheikhzadeh, A.** (2023, Oct.), “Aggregate then predict and optimize: Addressing uncertainties in multi-item spare part inventory systems,” INFORMS Annual Meeting, Phoenix, AZ, USA.
- Kim, Y. & **Sheikhzadeh, A.**, (2022, Aug.) “The difference between offline and online ties in Twitter,” AMCIS 2022, Minneapolis, MN.
- **Sheikhzadeh, A.** (2021, Dec.), “Corporate digital responsibility: Typology and expected outcomes,” International Conference on Information Systems 2021, Austin, TX (selected as a finalist to the Theory Development Workshop).
- **Sheikhzadeh, A.** (2021, May), “Aggregation/disaggregation process for inventory optimization size reduction,” the 2021 POMS Annual Conference, Virtual.
- **Sheikhzadeh, A.** (2021, May), “Data-driven optimization for performance-based replenishment systems,” the 2021 POMS Annual Conference, Virtual.
- **Sheikhzadeh, A.** (2020, Nov.), “Synchronized inventory classification: Breaking the curse of dimensionality,” INFORMS Virtual Annual Meeting, (“Honorable Mention” - Poster Presentation Award).
- **Sheikhzadeh, A.** (2019, May), “Aggregation and disaggregation methods for solving large-scale spare part provisioning methods,” The Industrial and Systems Engineering Conference (IISE), Orlando, FL, USA.
- Discussant of a paper: “Influence of ownership and management on IT investment: A study of Indian family firms,” Big XII+ MIS Research Symposium 2019, Lubbock, TX, USA.
- **Sheikhzadeh, A.**, & Rossetti, M. D. (2018, May), “Segmentation and aggregation methods for problem size reduction in spare-part provisioning,” the 2018 POMS Annual Conference, Houston, TX, USA.
- **Sheikhzadeh, A.**, & Rossetti, M. D. (2017, May), “Classification for large-scale multi-echelon inventory systems: A performance-based solution,” The Industrial and Systems Engineering Research Conference (ISERC), Pittsburgh, PA, USA.

GRANT PROPOSALS

- “On-Time Delivery Prediction using Clustering and Synthetic Minority Oversampling,” As a lead PI, Department of Defense, \$40,000 (2023, funded).
- “The Role of Organizations’ Digital Intensity in Orchestration of Corporate Digital Practice,” As a PI, submitted to Liberty Mutual \$39,600 (2021, unfunded).
- “A gateway to Big Data: Developing Strategic Approaches to Support Low Income and Underrepresented STEM Students,” As a CO-PI, submitted to National Science Foundation, \$999,000 (2020, unfunded).
- “Data Analytics Certificate Success Program for First-Generation and Underrepresented Students,” As a CO-PI, submitted to Texas Tech Alumni Association \$50,000 (2020, unfunded).
- “Scholarship and Collaborative Activities to Support Success for Female Students in Data-Science Programs,” As a CO-PI, submitted to CH Foundation, \$48,000 (2020, unfunded).

STUDENTS

PhD Dissertation Committee Chair

- Ehsan Ghasemi, Management Information Systems, Texas Tech University, 2021-2023
 - Title: Three Essays on Communication and Media in Crowdfunding
 - Dissertation is defended in June 2023.
 - Ehsan is placed as an assistant professor of information systems at the University of Texas at Rio Grande Valley.

PhD Dissertation Committee Member

- Hansol Lee, Management Information Systems, Texas Tech University, 2022-present
 - Title: Detrimental Effects in Artificial Intelligence Use and Design from Microscopic Views
 - Proposal is defended in September 2023.
- Yan Lu, Personal Financial Planning, Texas Tech University, 2022-Present
 - Title: Three Essays on Transaction Frequency, Financial Stress and Investment Ownership
 - Proposal is defended in October 2023.
- Ross Niswagner, Management Information Systems, Texas Tech University, 2020-2022
 - Title: Oversharing on Social Media: Self-Disclosure That Leads to Regret
 - Dissertation is defended in June 2022.
- Nakul Padalkar, Personal Financial Planning, Texas Tech University, 2019-2021
 - Title: Evaluation of Blockchain Technology for Cycle Counting in Supply Chains with Information Discrepancies
 - Dissertation is defended in June 2021.

Master Thesis Committee Member

- Jules Kwizera, Industrial Engineering, University of Arkansas, 2019-2020

TEACHING

- **ISQS 5346: Statistics for Data Science (Four offerings, average student evaluation: 4.7/5.0)**
Applied simulation-based approach utilizing R to learn statistical concepts in:
 - Data organization and visualization
 - Random variables, the law of large numbers
 - Probability modeling: Empirical, joint, and conditional probability models and parametric distributions
 - Statistical inferences: Central limit theorem, confidence interval. and hypothesis tests, including normal, t, chi-square, and F tests
- **ISQS 6350: Multivariate Analysis (Seven offerings: average student evaluation: 4.8/5.0)**
An applied approach utilizing R to learn multivariate analysis techniques such as:
 - Multivariate data preparation and visualization
 - Dimension reduction techniques including PCA, MDS, and EFA
 - Cluster analysis such as hierarchical, k-means, and model-based clustering
 - Linear discriminant analysis
 - Factor analysis
 - Market basket analysis

- **ISQS 7339: Prescriptive Analytics: Simulation and Optimization (11 offerings, average student evaluation: 4.7/5.0)**

An applied approach utilizing R and Python covering the following topics:

- Optimization modelings such as LP, IP, and MILP
- Risk analysis via Monte-Carlo simulation
- Discrete event simulation
- Advanced sampling methods such as Markov chain Monte-Carlo

- **ISQS 5347: Advanced Statistical Methods (PhD Class) (One offering, student evaluation: 4.5/5.0)**

Applied simulation-based approach utilizing R to learn statistical concepts in:

- Probability modeling: empirical, joint, and conditional probability models, and parametric distributions
- Analyzing the biases, consistency, and efficiency of estimators
- Bayesian statistics and maximum likelihood estimation
- Statistical inferences: central limit theorem, confidence interval, and hypothesis tests, including normal, t, chi-square test, and ANOVA
- Logistic regression analysis, multiple regression, and Bayesian regression analysis
- Power analysis
- Non-parametric analysis such as bootstrapping and permutation

SERVICE

Service to the ISQS Area at the Rawls College of Business

- Director of MS-DS program, 2023- present
- Assistant director of MS-DS program, 2020-2023
- ISQS Ph.D. Program committee member, 2022-2023
- Director of the ISQS outreach program, 2020-2021
- Faculty hiring chair (two times), 2020-2021
- Faculty hiring committee member (four times) 2020-2023

Service to the Rawls College of Business

- Rawls College MS programs committee member, 2023-present
- Technology adoption task force, summer 2023
- Supply chain concentration for PMBA graduate program curriculum development, 2022-2023
- E-Learning committee, 2020-2021
- STEM-MBA admission committee, 2020

Serving as Journal Reviewer

- *Production and Operations Management (POM)*
- *International Journal of Production Research (IJPR)*
- *International Journal of Production Economics (IJPE)*
- *Journal of Military Operations Research (MOR)*
- *Frontiers in Artificial Intelligence*

Professional Associations

- Member of the Institute for Operations Research and Management Science (INFORMS), 2014–present
- Member of the INFORMS MSOM Society, 2015-present
- Member of the Production and Operations Management (POM) Society, 2017-present
- Member of the Institute of Industrial Engineers (IIE), 2013-present

AWARDS

- **First Place in Defense Data Grand Prix, Heat 3 - \$40,000 Research Award** (2022), US Department of Defense, Washington, DC.
- **President's Excellence in Teaching Award** (2021), Texas Tech University, Lubbock, TX
- **"Honorable Mention" - Research Award** (2020), INFORMS Annual Meeting 2020
- **2017 Outstanding Graduate Student Award**, University of Arkansas (2017), Fayetteville, AR
- **2017 Outstanding Teaching Award**, University of Arkansas (2017), Fayetteville, AR
- **Finalist for INFORMS Poster Competition**, INFORMS Annual Meeting (2016), Nashville, TN
- **Selected for INFORMS Doctoral Colloquium**, INFORMS Annual Meeting (2016), Nashville, TN
- **Selected for IIE Doctoral Colloquium**, IIE Annual Conference (2016), Anaheim, CA
- **NSF Travel Grant Award (\$500)**, IIE Annual Conference (2016), Anaheim, CA
- **Graduate School Travel Grant (\$1,000)**, University of Arkansas (2015), Fayetteville, AR
- **Graduate School Travel Grant (\$1,000)**, University of Arkansas (2013), Fayetteville, AR
- **Ranked in Top 1% Students**, National Education Evaluation Organization (2006), Tehran, Iran