

Curriculum Vitae

Amin Keramati

Assistant Professor of Supply Chain & Data Analytics

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New York, NY 10010



Education

2015-2021, PhD. in Transportation and Logistics, North Dakota State University, Fargo, ND, USA

Dissertation Topic: Safety Management System for Highway-Rail Grade Crossings (HRGCs)

Dissertation Contributions:

- Secured a \$150,000 federal grant for the "Safety Support System for Highway-Rail Grade Crossings" project, leading the development of advanced data-driven solutions to enhance safety at all 3,900 active crossings in North Dakota.
- Proposed a Random Survival Forest model to analyze the impact of grade crossing crash factors, such as train detection systems, on crash severity, achieving 98% prediction accuracy for crash likelihood across three severity levels.
- Developed a Cox proportional-hazards model to assess traffic countermeasures' impact on grade crossing accidents, leading to the creation of Crash Modification Factors published as technical references for DOT agencies by the [Federal Highway Administration](#).
- Calculated geometric factors, including proximity to intersections, and crossing angles, for 5,000 crossings in North Dakota using Python, and ArcGIS, creating a new reference to enhance safety beyond existing DOT documentation.
- Designed a web application using a time-to-event machine learning algorithm to visualize and estimate changes in crash likelihood and severity based on technical crossing modifications, enhancing decision-making for ND DOT agencies.

Cumulative GPA: 3.94/4

2011-2014, M.S. in Industrial Management (Financial), Islamic Azad University Najafabad Branch, Isfahan, Iran

Thesis Topic: A mathematical model to solve Multimode Resource-Constrained Project Scheduling Problem (MRCPSP) with different costs and three payment models to maximize Net Present Value (NPV) of the project.

Thesis Contributions:

- Introduced a novel scheduling model for the Multi-Mode Resource-Constrained Project Scheduling Problem (MRCPSP), targeting NPV maximization through advanced non-linear programming techniques. The

proposed model is inspired by the Rectangle Packing Problem (RPP) and MRCPSP.

- Unlike conventional models using specific methods such as Floyd-Warshall algorithm to obtain an initial schedule, the proposed model is capable of generating schedules.
- The proposed mathematical model capable of yielding an exact solution for the MRCPSP.
- The proposed model was extended to consider overtime costs as well as bonus-penalty structures, which impact the NPV.
- To obtain a more realistic model, three classic payment policies were considered in the objective function of the model.

Cumulative GPA: 3.81/4

2006-2011, B.S. in Industrial Engineering, Islamic Azad University Najafabad Branch, Isfahan, Iran

Cumulative GPA: 3.00/4

Certifications

- **Jun 2022**, Trainer Skills 2022 - Artificial Intelligence with SAP Business Technology Platform
Location: US
Verify: <https://www.credly.com/go/6h29NcnE>
Public Link: https://www.credly.com/badges/2befe36b-7dd7-438a-bbc6-87477e8b4021/public_url
- **Jun 2022**, Trainer Skills 2022 - Intro to BPI with SAP S/4 HANA
Issuing Body: SAP
Location: US
Verify: <https://www.credly.com/go/3w8XPeBP>
Public Link: https://www.credly.com/badges/459401c4-1e4f-4c71-8c94-ad9875759ac7/public_url
- **Mrch-2018**, Graduate Degree Certificate of Statistics
Issuing Body: North Dakota State University
Location: US
- **January 2016**, Getting Started with Linear Referencing
Issuing Body: ESRI
Location: US
- **September 2011**, Certification of Primavera 6.0 (Project Management Software)
Certificate No: 90/15587

Issuing Body: Industrial Management Institute
Location: Iran

- **May 2010**, Customer relationship Management
Certificate No: EKM89C-05-321
Issuing Body: EKM
Location: Iran

Honorable Mentions

- **2024**: Distinguished Research Professor Award, Widener University School of Business Administration
- **2017**: First Place, American Association of State Highway and Transportation Officials (AASHTO) GIS for Transportation Student Paper Contest

Journal Paper

- **Keramati, A.**, Lu, P., & Moatari-Kazerouni, A. (2025). Evaluating crash severity at highway-rail grade crossings using an analytic hierarchy process-based hazard index model. *Accident Analysis & Prevention*, 211, 107918.
<https://doi.org/10.1016/j.aap.2025.107918>
- Ren, Y., Lu, P., Ai, C., & **Keramati, A.** (2025). Hybrid Local-Feature-Based Approach for Automated Rail Extraction from Lidar Data. *Transportation Research Record*, 03611981241311575.
<https://doi.org/10.1177/03611981241311575>
- Adibpour, N., & **Keramati, A.** (2025). A Two-Stage Reverse Supply Chain Model for Pricing Remanufactured Products Under Collection Policy and Promotional Incentives: A Game Theory Approach. *Uncertain Supply Chain Management*.
[10.5267/j.uscm.2025.3.003](https://doi.org/10.5267/j.uscm.2025.3.003)
- Moatari-Kazerouni, A., Pai, D. R., Chicas, A. E., & **Keramati, A.** (2024). How blockchain technology supports the business processes of clinical trials: a systematic review. *Business Process Management Journal*, 30(2), 388-410.
- Lu, P., Tolliver, D., **Keramati, A.**, Ren, Y., Zheng, Z., & Zhou, X. (2023). Safety Support System for Highway Rail Grade Crossings(No. MPC-23-493- Research Report). <https://rosap.nhtl.bts.gov/view/dot/66790>.

- Haji Esmaeili, S. A., Sobhani, A., Ebrahimi, S., Szmerekovsky, J., Dybing, A., **Keramati, A.** (2023). Optimal siting of biorefineries for a switchgrass-based bioethanol supply chain using energy consumption and emissions: A case study in North Dakota. *Logistics*, 7(1), 5. <https://doi.org/10.3390/logistics7010005>.
- **Keramati, A.**, Lu, P., Ren, Y., Tolliver, D., Ai, C. (2021). Investigating the Effectiveness of Safety Countermeasures at Highway-Rail At-Grade Crossings Using a Competing Risk Model. *Journal of Safety Research*, 78, <https://doi.org/10.1016/j.jsr.2021.04.008>.
- **Keramati, A.**, Lu, P., Iranitalab, A., (2020). A Crash Severity Analysis at Highway-Rail Grade Crossings: The Random Survival Forests Method. *Accident Analysis & Prevention*, 144, 105683. <https://doi.org/10.1016/j.aap.2020.105683>.
- **Keramati, A.**, Lu, P., Tolliver, D., & Wang, X. (2020). Geometric effect analysis of highway-rail grade crossing safety performance. *Accident Analysis & Prevention*, 138, 105470. <https://doi.org/10.1016/j.aap.2020.105470>.
- **Keramati, A.**, Lu, P., Zhou, X., & Tolliver, D. (2020). A Simultaneous Safety Analysis of Crash Frequency and Severity for Highway-Rail Grade Crossings: The Competing Risks Method. *Journal of Advanced Transportation*, 2020, 8878911. <https://doi.org/10.1155/2020/8878911>
- Zhou, X., Lu, P., Zheng, Z., Tolliver, D., & **Keramati, A.** (2020). Accident Prediction Accuracy Assessment for Highway-Rail Grade Crossings Using Random Forest Algorithm Compared with Decision Tree. *Reliability Engineering & System Safety*, 106931. Retrieved from <https://doi.org/10.1016/j.ress.2020.106931>.
- Lu, P., Zheng, Z., Ren, Y., Zhou, X., **Keramati, A.**, Tolliver, D., & Huang, Y. (2020). A Gradient Boosting Crash Prediction Approach for Highway-Rail Grade Crossing Crash Analysis. *Journal of Advanced Transportation*, 2020, 6751728. <https://doi.org/10.1155/2020/6751728>.
- **Keramati, A.**, Lu, P., Sobhani, A., & Haji Esmaeili, S. A. (2020). Impact of Forest Road Maintenance Policies on Log Transportation Cost, Routing, and Carbon-Emission Trade-Offs: Oregon Case Study. *Journal of Transportation Engineering, Part A: Systems*, 146(5), 4020028. Retrieved from <https://ascelibrary.org/doi/abs/10.1061/JTEPBS.0000335>
- **Keramati, A.**, Esmaeilian, M., & Rabieh, M. (2016). A New Model for The Multi-Mode Resource-Constrained Project Scheduling Problem with Discount Cash Flows. *Journal of Industrial Management Studies*.
- **Keramati, A.**, Esmaeilian, M., & Rabieh, M. (2015a). Designing a Mathematical RCPS model for a Gas Station Project Scheduling in Fnavaran Naftabzar Company with considering Net Present Value of project. *Asian Journal of*

Research in Business Economics and Management, 5(2), 117–129. Retrieved from <http://dx.doi.org/10.5958/2249-7307.2015.00035.3>.

- **Keramati, A.**, Esmailian, M., & Rabieh, M. (2015b). Developing a Model for Project Scheduling with Limited resources and Budget with Considering Discounted Cash Flows through Fixed Prioritization Method. *Asian Journal of Research in Business Economics and Management*, 5(1), 212–220. Retrieved from <http://dx.doi.org/10.5958/2249-7307.2015.00011.0>.

Journal Papers Under Review

- **Keramati, A.**, Lu, P. (2025). A Crash Severity at Highway-Rail Grade Crossing: Positive Monotonic Neural Network. *Accident Analysis & Prevention*.
- Badshah, I., Thompson, E., Ali, A., Lu, P., **Keramati, A.** (2025). Evaluating the Impact of Highway User Actions on Crash Severity at Highway-Rail Grade Crossings. *Accident Analysis & Prevention*.
- Du, J., Lu, P., **Keramati, A.**, Gao, L., Yang, X., Li, Q. (2025). The Imbalanced Machine Learning Prediction on Highway-Rail Grade Crossing Crash Severity with Comprehensive Variables. *Reliability Engineering & System Safety*.
- Isaac, T., Pujol, A., Larson, B., & **Keramati, A.** (2024). Small but Mighty: The Influence of Small-Scale Sport Event Factors on Event and Destination Satisfaction. *European Sport Management Quarterly*.

Conference Paper

- **Keramati A.** Introducing a Web Application Leveraged by an Optimized Proximity Algorithm to Improve Logistics Network Efficiency and Reduce Travel Times. In: Informs Annual Meetings. Seattle WA AZ: Informs Annual Meetings; 2024. (*Accepted for oral presentation*)
- **Keramati A.**, Rineer, R. Proposing a Time-to-Event Analysis for Assessing Supply Chain Disruption Severity and Occurrence Using a Competing Risk Model. In: Informs Annual Meetings. Seattle WA AZ: Informs Annual Meetings; 2024. (*Accepted for poster presentation*)
- Larson, B, **Keramati A.** Impact of Gameday Touchpoint Efforts at Professional MLS Games. In: 35th Annual International Academy of Business Disciplines

Conference

Las Vegas, NV - April 3-6, 2024. (*Accepted for oral presentation*)

- **Keramati A**, Lu P, Moatari-Kazerouni A. Assessing Supply Chain Disruption Severity and Occurrence with a Competing Risk Model Using Random Survival Forests. In: Informs Annual Meetings. Phoenix AZ: Informs Annual Meetings; 2023. <https://e.ctt.bz/e.asp?e=63A8B8AD-C79C-4668-816C-6EE065EFF96E> (*Accepted for oral presentation*)
- Moatari-Kazerouni A, **Keramati A**. An Examination Of Disruptive Healthcare Technologies For Emergency Departments. In: Informs Annual Meetings. Phoenix AZ; 2023. <https://e.ctt.bz/e.asp?e=9AA12952-9BEC-42EE-88E7-7D454CCB54BE> (*Accepted for oral presentation*)
- **Keramati A**, Lu P, Moatari-Kazerouni A. A Mixed Approach for Highway-Rail Grade Crossings Risk Analysis Considering Crash Likelihood and Severity. In: NEDSI 52nd Annual Conference. Washington DC: Northeast Decision Sciences Institute; 2023. <https://nedsi.decisionsciences.org/wp-content/uploads/sites/5/2023/03/Conference-Booklet-FINAL-2023.pdf> (*Accepted for oral presentation*)
- Moatari-Kazerouni A, **Keramati A**. A Case Study on Scheduling and Human Resource Allocation for Surgical Procedures. In: NEDSI 52nd Annual Conference. Washington DC: Northeast Decision Sciences Institute; 2023. <https://nedsi.decisionsciences.org/wp-content/uploads/sites/5/2023/03/Conference-Booklet-FINAL-2023.pdf> (*Accepted for oral presentation*)
- Chicas AE, Moatari-Kazerouni A, **Keramati A**. Blockchain-Based Data Transparency in Pharmaceutical Supply Chain. In: Informs Annual Meetings. Indianapolis IN: Informs Annual Meetings; 2022. (*Accepted for poster presentation*)
- Moatari-Kazerouni A, **Keramati A**. An RFID-based Decision-making Framework for Healthcare Emergency Departments. In: Informs Annual Meeting. Indianapolis IN: Informs Annual Meeting ; 2022. (*Accepted for oral presentation*)
- **Keramati A**, Lu P, Moatari-Kazerouni A. Modeling Accident Hazard Index For Highway-rail Grade Crossings Using Analytic Hierarchy Process. In: Informs Annual Meeting . Indianapolis IN: Informs Annual Meeting ; 2022. (*Accepted for oral presentation*)
- **Keramati A**, Moatari-Kazerouni A, Szmerekovsky J. A New Formulation for Multi-Mode Resource-Constrained Project Scheduling Problem. In: NEDSI 51st Annual Conference. Newark NJ: Northeast Decision Sciences Institute ; 2022 [cited 2022 Jul 11]. p. 50. Available from: <https://nedsi.decisionsciences.org/wp-content/uploads/sites/5/2022/03/Conference-Booklet-FINAL-2022.pdf>

content/uploads/2022/05/NEDSI_2022_Program_Proceedings.pdf. *(Accepted for oral presentation)*

- Moatari-Kazerouni A, **Keramati A**. Improving Data Transparency in Clinical Trials Using Blockchain Technology. In: NEDSI 51st Annual Conference. Newark NJ: Northeast Decision Sciences Institute; 2022 [cited 2022 Jul 11]. p. 45. Available from: https://nedsi.decisionsciences.org/wp-content/uploads/2022/05/NEDSI_2022_Program_Proceedings.pdf. *(Accepted for oral presentation)*
- **Keramati A**, Lu P, Tolliver D. Modeling Crash Frequency and Severity for Highway-Rail Grade Crossings Using Inventory and Historical Crash Data from North Dakota State . In: AREMA 2020 Virtual Conference & Expo, Communications & Signals. Dallas TX: American Railway Engineering and Maintenance-of-Way Association; 2020 [cited 2022 Jul 11]. p. 644–57. *Available from:* <https://www.arema.org/files/proceedings/2020/Modeling%20Crash%20Frequency%20and%20Severity%20for%20Highway-Rail%20Grade%20Crossings.pdf>. *(Accepted for oral presentation)*
- **Keramati A**, Szmerekovsky J. Solving the log-truck routing problem while accounting for forest road maintenance levels: a case study of Oregon . In: MSOM. Chapel Hill: Manufacturing and Service Operations Management Conference; 2017 *(Accepted for poster presentation)*.
- **Keramati A**. Solving the log-truck routing problem while accounting for forest road maintenance levels: a case study of Oregon. In: AASHTO GIS -T Symposium. Phoenix AR: American Association of State Highway and Transportation Officials GIS for Transportation Symposium; 2017 [cited 2022 Jul 13]. Available from: <https://gis-t.transportation.org/wp-content/uploads/sites/51/2020/10/2017-Amin-Keramati-1.pdf>. *(Accepted for oral presentation)*
- **Keramati A**, Sobhani A, Esmaeili SAH, Lu P. Solving the log-truck routing problem while accounting for forest road maintenance levels: a case study of Oregon. In: Transportation Research Board 97th Annual Meeting. Washington DC; 2018 [cited 2022 Jul 11]. p. 6. Available from: <https://trid.trb.org/view/1495908>. *(Accepted for oral presentation)*
- Esmaeili SAH, Sobhani A, Keramati A, Lee E. Integrating GIS with Optimization Method for a Switchgrass-Based Bioethanol Supply Chain. In: Transportation Research Board 97th Annual Meeting [Internet]. Washington DC: TRB; 2018 [cited 2022 Jul 14]. Available from: <https://trid.trb.org/view/1495856>. *(Accepted for oral presentation)*
- **Keramati A**, Szmerekovsky J. A Mixed Integer Linear Program for Train Routing and Scheduling Complex Railway Networks. In: MSOM Conference.

Chapel Hill NC: Manufacturing and Service Operations Management Conference; 2018 [cited 2022 Jul 11]. Available from:
https://static.sched.com/hosted_files/msomconference2018/fd/H8_47_MSOM_Abstract.pdf. (Accepted for oral presentation)

- **Keramati, A**, Esmaelian, M., & Rabieh, M., A mathematical model for the multi-mode resource-constrained project scheduling problem with costs of overtime, bonus-penalty structure and three payment models to maximize NPV of project. Seventh International Conference of Iranian Operations Research Society. Semnan, Iran, May 14-15, 2014. (Accepted for oral presentation)
- **Keramati, A**, Beyranvand, M., Fazel, R., & ShekarchiZadeh, A. R., The model for scheduling of production-related manufacture with fixed-position layout, constrained resources, and discounted cash flows through absolute priorities approach. The first National Conference on Industrial engineering and Systems. Najafabad, Iran, December 19-20, 2012. (Accepted for oral presentation)

In Progress Studies

- Conducted provost-funded research to develop advanced machine learning techniques, encompassing Random Survival Forest and Neural Network-based Competing Risks Model, to analyze the timing and severity of supply chain disruptions.
- Assessing Fan Service Satisfaction: A Comparative Study on Professional Soccer Fans Using Servicescape, Fan Journey, and Service Quality Metrics.
- Geometric and Countermeasures Interaction Effect Analysis of Highway-Rail Grade Crossing Safety Performance: Random Survival Forest Partial Analysis Method.
- Using Mixed Highway-Rail Grade Crossings Satellite Imagery Data and Structured Data to Forecast Crash at Crossings Using the Convolutional Neural Network.
- The New Mixed Integer Linear Programming for Train Routing and Scheduling Problem.

Teaching Experiences

Fall 2022, Management Information System (MIS 290)

School of Business Administration, Widener University, Chester, PA.

Level: Undergraduate

- Teaching principle of Management Information Systems

Spring 2022 to Present, Operations Management (SCM 352)

School of Business Administration, Widener University, Chester, PA.

Level: Undergraduate

- Teaching principle of Operations Management

Spring 2022, to Present, Supply Chain Management (SCM 460)

School of Business Administration, Widener University, Chester, PA.

Level: Undergraduate

- Teaching principle of Supply Chain Management
- Expose students to ERP systems and how they are used to manage the SC with an emphasis on SAP software.
- Leverage ArcGIS Pro software, supplemented with minimal coding in Python and SQL within ArcGIS Pro, to execute GIS projects and case analyses. This approach integrates data analysis, logistics, and decision-making theories for hands-on applications.

Fall 2021, to Present, Database Systems (IS 610).

School of Business Administration, Widener University, Chester, PA.

Level: Graduate

- Instructed graduate students in database design and implementation using relational database principles, SQL, and data management techniques.
- Integrated real-world case studies to teach data manipulation and querying in SQL, enhancing students' practical skills.
- Utilized Tableau to visualize dynamic datasets queried from MySQL Server, enabling students to build interactive dashboards and extract actionable insights from large-scale data.
- Guided students in optimizing database performance and normalization techniques to improve system efficiency.
- Developed hands-on lab sessions and assignments to reinforce concepts of ER modeling, SQL queries, and data warehousing.
- Taught SAS for data management.

Fall 2021 to present, Information Systems and Data Analysis (BUS 615).

School of Business Administration, Widener University, Chester, PA.

Level: Graduate

- Taught information systems (IS) as an enabler and driver of corporate strategy, electronic business and inter-organizational information systems, business intelligence and knowledge management.
- Taught data analysis from its collection and consolidation through analysis and modeling, with particular emphasis on decision theory and data mining techniques.
- Taught the fundamentals of Big Data Technologies and Management of AI, guiding students through the primary challenges faced by CIOs, especially during the adoption of technologies like cloud computing and SaaS.

Fall 2021, ERP Systems and Workflow Management (MIS 430).

School of Business Administration, Widener University, Chester, PA.

Level: Undergraduate

- Taught ERP systems introduction and the role of workflow management in enabling those systems.
- Taught various modules of SAP and basic experience with SAP.

Summer 2016, Presenter for teaching component of Modeling for Transportation & Logistics Decision Analysis (TL 831).

College of Business, North Dakota State University, Fargo, ND.

Level: Graduate

- Taught transportation mathematical modeling including shortest path problem, traveling sales man problem, and vehicle routing problems.

Fall 2015, Presenter for teaching component of Modeling for Logistic Research (TL 811).

College of Business, North Dakota State University, Fargo, ND.

Level: Graduate

- Taught rail transport planning and management including trip plan generation using optimization methods, freight routing and scheduling policies, MIP/LP formulation with continue time representation, customer commitment constraints, Service Network Design (SND), Time Space Network (TSN), and rail cars routing.

Summary of Service

UNIVERSITY:			
Committee / Service	Role	Brief Summary of Activities/Accomplishments (describe Leadership activities here as well)	Academic Year(s)
Faculty Council Faculty Grants & Awards Committee	Faculty member	Reviewing nominations for the Provost and faculty grants and evaluating award budgets. Assessing nominations for the Chester Faculty Awards and recommending the winning faculty members.	2024-present
Provost Research Grant	Researcher	Conducting research funded by a Provost grant to develop a forecasting model analyzing time and severity of supply chain disruptions. Additionally, one or two students from Widener University will collaborate as research assistants on this project.	Spring 2023-present
Student Affairs Committee	Faculty member	The charge to the Student Affairs Committee is to: 1) make recommendations concerning all aspects of student affairs to the appropriate university departments, and 2) serve as a forum for communication among the faculty, students, and the Offices of Student Life and Affairs as well as other student services departments.	Spring 2022-2024
SCHOOL:			
Committee / Service	Role	Brief Summary of Activities/Accomplishments (describe Leadership activities here as well)	Academic Year(s)
Search Committee for tenure-track Assistant Professor of Information Systems/Analytics Position	member	Evaluating and recommending candidates for the position. The faculty member is responsible for assessing the qualifications, skills, and experience of the candidates and making recommendations based on their findings.	Spring 2023
Search Committee for non-tenure-track Assistant Professor of Information	member	Evaluating and recommending candidates for the position. The faculty member is responsible for assessing the qualifications, skills, and experience of the candidates and making recommendations based on their findings.	Spring 2023

Systems/Analytics Position			
SBA GIS solutions	Administrator	An ArcGIS administrator is responsible for the installation, configuration, and maintenance of the ArcGIS software including ArcGIS pro and Arc GIS online. This includes ensuring that the software is working properly, setting up and managing users and security, and managing the data stored within the system. The administrator may also provide support to users, monitor the system performance, and develop custom tools and applications using the ArcGIS platform.	Spring 2023
Widener SAP University Alliance	Coordinator	The SAP University Alliance (UA) requires that each university assigns an SAP UA Coordinator who is the Point person between SAP and the University. This person coordinates all SAP utilization activity. This includes Interactions with SAP AG and also the University's SAP UCC (The SAP UCC is the designated SAP hosting site of The university's SAP applications	Spring 2022-present
Widener ErpSim team	Co-Coach	I had an opportunity to be co-coach of the Widener ErpSim team in the ERPSim North America Competition 2022. We trained students for three 2-hours sessions	Spring 2022
DEPARTMENT:			
Committee / Service	Role	Brief Summary of Activities/Accomplishments (describe Leadership activities here as well)	Academic Year(s)
Faculty Research Presentation	Presenter	Presenting at a faculty research meeting with the aim of introducing GIS and spatial analysis, and showcasing how students and faculty can utilize ARCGIS solutions such as ArcGIS Pro and other SBA resources in their research and curriculum.	Spring 2023
GIS Dashboard	Dashboard Developer	Designing and developing an interactive online dashboard for the SBA Dean's Office to analyze the locations of admitted students.	Summer 2023
-Advising students: curriculum and course selection	Advisor	-I served as an academic advisor to ten students to guide them through their semester curriculum and course selection while considering their interests, majors, minors, and graduation dates.	Fall 2021-present
Thought Leadership Team	Faculty member	-One of my recent activities as a member of the Thought Leadership Team was a collaboration to provide a comprehensive database, including faculty research activities based on their G65oogle Scholar records.	Fall 2021-present
AOL redesigning	Faculty member	-I collaborated with Dr. Afrooz Moatari Kazerouni on redesigning the OPM-352 AOL questions.	Fall 2021-present
Attending SBA Faculty Research Club	Faculty member	-Attending SBA Faculty Research Club in Fall 2021 was another opportunity for me to become familiar with other faculty research areas, give them feedback regarding their research, and network for potential future collaborations.	Fall 2021-present
PROFESSION:			
Committee / Service	Role	Brief Summary of Activities/Accomplishments (describe Leadership activities here as well)	Academic Year(s)
Informs annual meeting	Session chair	I will serve as session chair for session ME48- Modeling of Transportation at Informs annual meeting in Indianapolis.	Spring 2022
NEDSI	Track chairs	I'm invited to be one of the track chairs for the 52st Annual Conference of Northeast Decision Sciences Institute (NEDSI), Washington, DC, Oct 16 th -19 th . Our duties are reviewing submitted summaries and manuscripts, selecting the best paper winner, etc.	Spring 2022
SAP Supply chain Management Curriculums Development Group	Member	I serve as an SAP Supply chain Management Curriculums Development Group member, and I'm currently working on improving the Global Bike case study (GBI) curriculum.	Spring 2022-present
COMMUNITY:			
Committee / Service	Role	Brief Summary of Activities/Accomplishments (describe Leadership activities here as well)	Academic Year(s)
Transportation Research Board (TRB) Panel SA-59	Oversight panel member	I serve as a member of the Transportation Research Board (TRB) Panel SA-59 on "Electronic Surveillance of Railroad-Highway Crossings for Collision Avoidance, State of the Practice," which is being conducted under the Transit Cooperative Research Program (TCRP) Synthesis Studies. The specific objectives of a synthesis are 1. To locate and assemble information; 2. To learn what practice has been used; 3. To identify ongoing and recently completed research; 4. To learn what problems remain largely unsolved; and 5. To organize, evaluate, and document the useful information acquired.	Spring 2022-present

Wallethub.com	Expert	I was interviewed about young drivers' and EV car insurance as an expert by Wallethub.com	Spring 2022
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Skills

- Python
- R & R shiny
- ArcGIS Pro & Online
- SQL
- SAS9.2
- GAMS
- ERP Sim (SAP)
- MS Office
- SAP Predictive Analytics
- SAP ERP:
- Tableau
- Map-Matching Technics
- Primavera 6
- Data Science

Work Experiences

2021-Present, Assistant Professor of Supply Chain Management, Widener University, Chester, PA.

- Deliver high-quality education to graduate and undergraduate students in courses such as Operations Management, Supply Chain Management, Management Information Systems, and Data Analytics.
- Serve as SAP University Alliance Faculty Coordinator, responsible for training faculty on SAP content, acting as a liaison between SAP University Alliances and the university, and ensuring the university maintains its valuable SAP award accreditation.
- Administer GIS systems to support academic and administrative needs, including teaching GIS software and spatial analysis to faculty, guiding them on integrating GIS solutions into their courses, facilitating ESRI-provided training, and advising on the use of GIS in research projects.
- Provide academic guidance and support to students as an advisor.
- Conduct cutting-edge research, focusing on submitting grant proposals and publishing in reputable academic journals.

2015-2021, Graduate Research Assistant at Upper Great Plains Transportation Institute, Fargo, North Dakota.

- Contributed significantly to a federally funded proposal, handling data generation and statistical analysis.
- Led a team of two PhD students and three data scientists to assess the accuracy of crash prediction models on unbalanced data, proposing a Random Forest approach that improved accuracy by 20% and reduced false alarms by 18.5%.
- Collaborated with a team, including postdoc researchers and PhD students, to develop a Gradient Boosting model that analyzed technical crash

factors, such as train and highway user speed, increasing prediction accuracy by 6.5%.

- Managed collection, analysis, and cleaning of safety data from various sources for North Dakota's grade crossings.
- Utilized ArcGIS and Python to assess specific data elements at each crossing point.
- Employed advanced techniques, including machine learning and statistical models, for time series predictions of crash instances.
- Evaluated countermeasures and geometric designs to enhance grade crossings' safety using ArcGIS and R.
- Created an interactive web app to project changes in crash likelihood and severity based on modifications to crossing attributes.

Research Interests

- Transportation Safety Analysis
- Decision-Making Supported by Big Data
- Project Management and Scheduling
- Supply Chain Management
- Data Science
- Data Mining & Statistical Analysis
- Web Application Design

Teaching Interests

- Data Base Systems
- Data Analytics
- Supply Chain/Operations Management
- AI Management
- Management Information Systems

Volunteer Experience

Memberships:

- **2023-Present**, Member of National Cooperative Highway Research Program (NCHRP) Panel on Light, Medium, and Heavy Rail and Roadway Interface Safety Performance Functions and Crash Modification Factors Development. Organization: National Academy of Sciences
- **2022-Present**, Member of Transit Cooperative Research Program (TCRP) Panel on Electronic Surveillance of Railroad-Highway Crossings for Collision Avoidance, State of the Practice Organization: National Academy of Sciences
- **2021-Present**, SAP Coordinator of Widener University Organization: SAP
- **2019-Present**, Friend Member of Transportation Research Board: Standing Committee on Agriculture and Food Transportation AT030
- **2019-Present**, Friend Member of Transportation Research Board: Standing Committee on Highway/Rail Grade Crossings AR080
- **2018-Present**, Friend Member of Transportation Research Board: Standing Committee on Transportation Network Modeling AEP40
- **2016-2018**, Secretary of Association of Transportation and Logistics (ATL)

Peer Reviewer:

- **2022-Present**, Peer Reviewer- *MDPI journals: Information*
- **2022-Present**, Member of SAP Supply Chain Management curriculum development group
- **2022-Present**, Peer Reviewer-*TRR journal*
- **2022-Present**, Peer Reviewer-*MDPI journals: Remote Sensing*
- **2022-Present**, Peer Reviewer-*MDPI journals: Sustainability*
- **2022-Present**, Peer Reviewer- *MDPI journals: International Journal of Environmental Research and Public Health*
- **2020-Present**, Peer Reviewer- *Elsevier: Accident Analysis and Prevention Journal*

Language Skills

- Persian (mother tongue)
- English (fluent)

References

Dr. Pan Lu (Ph.D. Supervisor),
Associate Professor of Transportation & Logistics
Upper Great Plain Transportation Institute
North Dakota State University, Fargo, ND

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