PENG LI

Department of Marketing, Management and Supply Chain

Woody L. Hunt College of Business | The University of Texas at El Paso

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ACADEMIC EXPERIENCE

Visiting Professor	Woody L. Hunt College of Business The University of Texas at El Paso	Sep 2024 - present
Adjunct Faculty	School of Business Management New Jersey City University	Sep 2023 - July 2024
Teaching Assistant	Supply Chain Management Rutgers Business School, Rutgers University	Sep 2017- May 2022

EDUCATION

Ph.D.	Department of Supply Chain Management Rutgers University, Newark and New Brunswick, NJ Minor in Operations Research	Dec 2024 (Expected)
Ph.D.	Department of Civil & Environmental Engineering University of Wisconsin - Milwaukee, Milwaukee, WI Minor in Operations Research	May 2016
M.S.	Department of Transportation Engineering Beihang University, Beijing, China	Dec 2012
B.S.	Huaibei Normal University, Huaibei, China Department of Mathematics Minor in Information and Computation Science	Jul 2010

RESEARCH INTERESTS

Research Interests:	Stochastic Optimization, Queueing Theory, Markov Chain, Machine Learning, Text Mining, Classification
Applications:	Appointment Scheduling Problems, EVs Battery Inventory Control, Transportation Network Optimization, Online Review Platform

INDUSTRIAL EXPERIENCE

STARCOR Information Technology Co. Ltd., Chengdu, China   May 2018 - Aug 2018

- Developed customers segmentation algorithm using semi-supervised learning in Python to increase online video product sales by 30%

- Designed a novel recommendation algorithm for potential customers and increased 5% new customers through video sales

- Optimized advertisement release time for segmented customers and increased the advertisement revenue

- Collaborated with data engineer and team lead to create solutions increasing company's growth by 15%

Tools: Python, Hdoop/Spark, and SQL
Algorithms: Classification, Recommendation Algorithms, and A/B test

Hangzhou LineZone Data Technology Co. Ltd., Hangzhou, China   Sep 2016 - Dec 2016

- Predicted the demand of children's shoes based on the sales data from previous 36 months

- Conducted time series analysis and built an inventory model to reduce inventory cost

- Identified the Cash Cow and Star products and prioritized the difficult business by their degree of profitability

- Designed dynamic pricing model and increased total profit by 20%.
  Tools: SQL, SAS, and R
  Algorithms: Multiple Linear Regression, Time Series Forecasting

REFEREED JOURNAL PUBLICATIONS

- Ma, W., **Li, P.**, and Zhao, J.,(2023). Joint optimization of ramp closure, lane reorganization, and signal control strategies for freeway mainline closure due to construction zones. Transportmetrica B: Transport Dynamics, 11(1), 2231158.

- Hu, X., **Li, P.** (2022). Relief and stimulus in a cross-sector multi-product scarce resource supply chain network. Transportation Research Part E: Logistics and Transportation Review, 168, 102932.

- Wang, J., Han,Y., **Li, P.** (2022). Integrated Robust Optimization of Scheduling and Signal Timing for Bus Rapid Transit, Sustainability 14 (24), 16922.

- Sun, S., An, X., Zhao, J., **Li, P.**, & Shao, H. (2021). Modeling and Simulation of Lane-Changing Management Strategies at On-Ramp and Off-Ramp Pair Areas Based on Cellular Automaton. IEEE Access, 9, 35034-35044.

- Wang, T., Tang, T.Q., Zhang, J. and **Li, P.**, (2020). Analysis of Traffic Properties of Commuters in a Speed-Limit Corridor with Toll Station under Microscopic Method. *Journal of Transportation Engineering, Part A: Systems*, 146(3), p.04020004.

- Malenje, J.O., Zhao, J., **Li, P.** and Han, Y., (2019). Vehicle yielding probability estimation model at unsignalized midblock crosswalks in Shanghai, China. *PLoS one*, 14(3), p.e0213876.

- An, X., Zhao, J., **Li, P.**, Ma, X., (2019). Effect of Lane Allocation on Operational Efficiency at Weaving Areas based on A Cellular Automation Model. *IET Intelligent Transportation System*, 13(5), 851-859.

- Malenje, J., Zhao, J., **Li, P.,** Han, Y., (2018). An Extended Car-Following Model with the Consideration of the Illegal Pedestrian Crossing. *Physic A: Statistical Mechanics and its Applications*, 508(15), 650-661.

- Wang, T., Zhao, J. and **Li, P.**, (2018). An extended car-following model at un-signalized intersections under V2V communication environment. *PloS one*, 13(2), p.e0192787.

- Zhao, J., **Li, P.,** Zheng, Z., Han, Y., (2018). Analysis of Saturation Flow Rate at Tandem Intersections Using Field Data. *IET Intelligent Transport System*, 12(5), 394-403.

- Zhao, J., Liu, Y., **Li, P.**, (2016). A network enhancement model with integrated lane reorganization and traffic control strategies. *Journal of Advanced Transportation*, 50(6), 1090-1110.

- Zhao, J., **Li, P*.**, (2016). An Extended Car-following Model with Consideration of Vehicle to

Vehicle Communication of Two Conflicting Streams. *Physica A: Statistical Mechanics and its Applications*, 473(1), 178-187.

- Zhao, J., **Li, P*.**, (2016). An Extended Car-Following Model with Consideration of Speed Guidance at Intersections. *Physic A: Statistical Mechanics and its Applications*, 461(1), 1-8.

- Zhao, J., **Li, P.**, Ma, W.J. *, (2016). Integrated Design of Location and Signal Timing for Mid-block Crosswalk to Achieve Tradeoff between Vehicles and Pedestrians. *Journal of Transportation Engineering. Part A: Systems*, 143 (1), 04016003:1-11

- Zhao, J., **Li, P.** *, Zhou, X., (2016). Capacity Estimation Model for Signalized Intersections under the Impact of Access Point, *PLoS One*, 11(1), e0145989:1-16.

- Chen, W., Liu, Y., Yang, X., Bai, Y., Gao, Y. and **Li, P.**, (2015). Platoon-based speed control algorithm for ecodriving at signalized intersection. *Transportation Research Record*, 2489(1), pp.29-38.

- Liu, Y., Liu, D., Yu, J., Li, X. and **Li, P.**, (2014). Optimal Conversion of an Evacuation Network to Signalized and Uninterrupted Flow Intersections (No. 14-2261).

- Liu, Y.*, **Li, P.**, Wehner, K., (2013). A Generalized Corridor Diversion Control Model for Freeway Incident Management, *Computer-aided Civil and Infrastructure Engineering*, 28(8), 604-620.

- Tang, T., Q., **Li, P.** Yang, X., B., (2013). An Extended Macro Model for Traffic Flow with Consideration of Multi Static Bottlenecks, *Physic A: Statistical Mechanics and its Applications*, 392(17), 3537–3545.

- Tang, T., **Li, P.**, Wu, Y., Huang, H., (2012). A macro model for traffic flow with consideration of static bottleneck. *Communications in Theoretical Physics*, 58(2), p.300.
  ∗ Corresponding author.

PAPERS UNDER REVIEW

- **Organized Traffic Interweaving: Cooperative Trajectory Control of Vehicles Merging From Exit Ramps onto Surface Streets**, with co-authors Wanda Ma and Jing Zhao. Minor Revision on Journal of Transportation Engineering, Part A: Systems.

- **A Two-sided Market Pricing Model for Optimizing Revenue in a Self-Operating Taxi Service Platform**, with co-authors Chaojun Wang and Jing Zhao. Submitted to Transportation Research Part E: Logistics and Transportation Review.

WORKING PAPERS

- **Toward a More Populous Online Platform: The Economic Impacts of Compensated Reviews**, with co-authors Arim Park, Soohyun Cho, Yao Zhao, and Liangfei Qiu. Target resubmission to Production and Operations Management.

- **Queueing System with a Parallel Auxiliary Service**, with co-authors Chunliu Zhou and Lian Qi. Target submission to European Journal of Operational Research.

- **A Distributionally Robust Optimal Approach for Vaccination Appointment Scheduling Problem**, with co-author Lian Qi. Target submission to Production and Operations Management.

- **Modeling Rare Earth Material Recycling, Chip Shortage, and Policy Uncertainties in Closed-loop Supply Chain Networks: A Robust Generalized Nash Equilibrium Approach**, with co-author Xiaowei Hu. Target submission to INFORMS Journal on Computing.

CONFERENCE PRESENTATIONS

- **Li, P.**, Zhou, C., Qi, L*. Queueing System with a Parallel Auxiliary Service, INFORMS Annual Meeting, Seattle (forthcoming), 2024.

- **Li, P.**, Park, A., Cho, S., Zhao, Y., Qiu, L., Toward a Better Online Platform Review: Differentiating Compensated vs. Non-Compensated Reviews, INFORMS Annual Meeting, Arizona, 2023.

- **Li, P.**, Park, A., Cho, S., Zhao, Y., Toward a Better Online Platform Review: Differentiating Compensated vs. Non-Compensated Reviews, INFORMS Annual Meeting (Virtual), Maryland, 2020.

- **Li, P.**, Zhou, C., Qi, L*. Optimal Investment Plan for Electric Vehicle Battery Swapping Stations, INFORMS Annual Meeting (Virtual), Maryland, 2020.

- **Li, P.**, Zhao, S.Q., Liu, K., Zhao, Y., How Consumers Evaluate a New Fashion Product Through Online Review Platform, INFORMS Annual Meeting, Seattle, 2019.

- **Li, P.**, Park, A., Cho, S., Zhao, Y., Toward a Better Online Platform Review: Differentiating Compensated vs. Non-Compensated Reviews, INFORMS Annual Meeting, Seattle, 2019.

- **Li, P.**, Zhou, C., Qi, L*. Optimal Investment Plan for Electric Vehicle Battery Swapping Stations, INFORMS Annual Meeting, Seattle, 2019.

- **Li, P.**, Zhou, C., Qi, L*. Optimal Recharging Policy for Electric Vehicle Battery (EVB), POMs Conference, Washington, D.C., 2019.

- **Li, P.**, Liu, Y., A Two-stage Stochastic Mixed-Integer Programming Approach to Integrated Location of Suppliers and Route Optimization. 94th Transportation Research Board Annual Meeting, Washington, D.C., 2015.

- Zhao, J., Liu, Y., **Li, P.**, Ma, W., Yang, X., Network Enhancement Model with Integrated Lane Reorganization and Traffic Control Strategies, 93rd Transportation Research Board Annual Meeting, Washington D.C., 2014.

- Liu, Y. *, **Li, P.** Yu, J., , Wehner, K. , A generalized integrated corridor diversion control model for freeway incident management, Mid-Continent Transportation Research Symposium, Ames, Iowa, 2013.

- **Li, P.** , Liu, Y. *, A Lane-based Network Enhancement Model for Special Event and Emergency Traffic Management, INFORMS Annual Meeting, Minneapolis, Minnesota, 2013.

PROFESSIONAL ACTIVITIES

- Editorial board member: PLOS ONE, 2018-present

- Reviewed articles for
  European Journal of Operational Research, International Journal of Production Research, Transportation Research Part B, Transportation Research Part C, Research in Transportation Economics, Physic A: Statistical Mechanics and its Applications, Nonlinear Dynamics, PLOS ONE, Journal of Advanced Transportation, Control Engineering Practice, European Journal of Control, IET Intelligent Transport Systems, Transportation research Board, IEEE Transactions on Vehicular Technology, International Journal of Sustainable Transportation, Transportmetrica A: Transport Science, Transportmetrica B: Transport Dynamics

- 2019 Institute for Operation Management Science (INFORMS) Annual Conference invited session

Chair

- 2019 Institute for Operation Management Science (POMs) Annual Conference invited session Chair

TEACHING EXPERIENCE

Visiting Assistant Professor	UTEP
OSCM 3333 - Production Planning & Control	Fall 2024
OSCM 3337 - Logistics Management	
OSCM 4371 - Transportation Warehousing & System	
Teaching Assistant for MBA or Graduate Courses	RBS
Procurement & Global Sourcing (by Dr. Arash Azadegan)	Spring 2022
Supply Chain Strategy & Disruption Management	
for Fashion (by Dr. Arash Azadegan)	Spring 2022
Operations Analysis (by Dr. Benjamin Melamed)	Spring 2022, Fall 2021, Spring 2021, Fall 2020, Summer 2020,Fall 2019
Operations Analysis (by Dr. Weiwei Chen)	Fall 2021
Operations Analysis (by Dr. David Dreyfus)	Summer 2021, Spring 2021, Fall 2020
Operations Analysis (by Dr. Yao Zhao)	Summer 2021, Spring 2021, Summer 2020, Spring 2020
Supply Chain Analytics (by Dr. Yao Zhao)	Spring 2022, Spring 2019
Special Topics for SCM (by Dr.Weiwei Chen)	Spring 2019
Operations Analysis (by Dr. Alok Baveja)	Spring 2018
Undergraduate Courses	
Demand Planning (by Dr. Mark Rodgers)	Fall 2021
Service Management (by Dr. Alok Baveja)	Fall 2017
Introduction of SCM (by Dr. William Walker)	Fall 2017
* *SCM–Supply Chain Management*	
Instructor	UWM
CE202-805 Dynamics, 3.89/5.0	Fall 2015
CE250-801 Surveying Engineering, 3.76/5.0	Fall 2015
CE202-804 Dynamics, 4.06/5.0	Spring 2015
CE250-803 Surveying Engineering, 4.46/5.0	Spring 2015

SCHOLARSHIP AND AWARDS

Rutgers Research Scholarship	Rutgers Graduate School	2023
Dean's Dissertation Fellowship	Rutgers Graduate School	2021
A. J. Battaglia Memorial Fellowship	Rutgers Business School	2020
Summer Research Dean Fund	Rutgers Business School	2019, 2020, 2021
Travel Award	Rutgers Graduate School	2019
Martin Bruening Award	Wisconsin ITE	2014
UWM Chancellor Award	UW-Milwaukee	2013, 2014, 2015
BUAA Outstanding Research Award	Beihang University	2012

SKILLS

Wireframe	Tikz-network, Visio
Machine Learning	Python with Numpy and Pandas
Data Visualisation	Tableau
Typesetting Document	Latex, DokuWiki, Obsidian
Programming	Python, Matlab, Stata, R, SAS, SQL

REFERENCES

Yao Zhao (Co-advisor)
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Rutgers Business School, Rutgers University
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