

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Business

Zhixin Liu, associate professor of decision sciences, with tenure, Department of Management Studies, College of Business, is recommended for promotion to professor of decision sciences, with tenure, Department of Management Studies, College of Business.

Academic Degrees:

Ph.D.	2007	Operations Management, The Ohio State University, Columbus, OH
M.S.	2002	Operations Research, Tsinghua University, Beijing, China
B.S.	1999	Computational Mathematics, Nankai University, Tianjin, China

Professional Record:

2017-present	Associate Professor, Department of Management Studies, University of Michigan-Dearborn
2013-2017	Assistant Professor, Department of Management Studies, University of Michigan-Dearborn
2010-2013	Visiting Assistant Professor, Department of Mathematics, Texas A&M University, College Station, TX

Summary of Evaluation:

Teaching: Professor Liu teaches quantitative courses in the decision sciences and business analytics areas that are perceived as highly challenging by students in various undergraduate and graduate programs offered in the College of Business (COB). In addition, he has supervised independent research by students for credit. Since his last promotion, he has taught 62 in-load sections and five course subjects all in the decision science area. He has been rated highly by his students with evaluation scores above or near the top of the department average in numerous semesters. He has participated in the development of curriculum for both undergraduate and graduate supply chain and business analytics majors, and concentrations in the bachelor and master of business administration programs, as well as the master of science in business analytics and supply chain management programs. He has been very active in supporting Assurance of Learning (AoL) activities both at undergraduate and graduate levels for the decision science area. His breadth and depth of knowledge in teaching various decision science courses has been appreciated both by his students, as well as his colleagues in the discipline.

Research: In all, Professor Liu has published 35 peer-reviewed journal articles. Since joining the University of Michigan-Dearborn in 2013, he has published 25 journal articles with five rated as superior, and 19 as very good, and in either the former or recently revised COB journal rankings. He has received an honorable mention best paper award during the year 2015 by the *Institute of International Education Transactions*, a top-tier journal. Professor Liu was the winner of the College of Business Distinguished Performance in Research award in 2020. Professor Liu is also the winner of Researcher of the Year awards for academic years 2018-2019 and 2014-15 from the COB. Professor Liu has received research grants as either as a

principal investigator or co-principal investigator on projects funded by the Ford Motor Company through the Ford-University of Michigan Alliance, University of Michigan-Dearborn Scholars Grant, and University of Michigan MCubed Project Grant, for a total amount of \$246,254.

Professor Liu's research record is very strong, and he has earned international recognition among his peers as a leading researcher. His research contribution is primarily focused on operational decision-making relating to areas of scheduling, capacity allocation, and pricing decisions. He has accomplished this record with extensive collaborations and proven leadership with research partners, both in the U.S. and abroad. He has good research productivity with publications in very high quality and reputed journals and is well cited. He has also collaborated to obtain prestigious grants to support his research efforts.

Recent and Significant Publications:

- Li, J., Wang, Y., Liu, Z., Cai, X., Xie, W., "Joint optimal strategies on service investment and drug pricing for a two-sided online pharmaceutical platform," *International Journal of Production Economics*, vol. 252, 2022, 108556.
- Cai, X., Li, J., Lian, Z., Liu, Z., "Fixed allocation of capacity for multiple retailers under demand competition," *Omega: The International Journal of Management Science*, vol. 110, 2022, 102629.
- Xu, J., Wang, J.-Q., Liu, Z., "Parallel batch scheduling: Impact of increasing machine capacity," *Omega: The International Journal of Management Science*, vol. 108, 2022, 102567.
- Yu, N., Wang, S., Liu, Z., "Managing brand competition with consumer fairness concern via manufacturer incentive," *European Journal of Operational Research*, vol. 300, no. 2, 2022, pp. 661-675.
- Liu, Z., Lu, L., Qi, X., "The showrooming effect on integrated dual channels," *Journal of the Operational Research Society*, vol. 71, no. 9, 2020, pp. 1347-1356.
- Liu, Z., "Scheduling with partial rejection," *Operations Research Letters*, vol. 48, no. 4, 2020, pp. 524-529.
- Zhao, W., Hall, N.G., Liu, Z., "Project evaluation and selection with task failures," *Production and Operations Management*, vol. 29, no. 2, 2020, pp. 428-446.
- Chen, Z., Li, J., Liu, Z., Zheng, Z., "Incentive contracts for capacity restoration under risk of supply disruption," *IEEE Transactions on Engineering Management*, vol. 66, no. 4, 2019, pp. 746-762.

External Reviewers:

Reviewer A: "Dr. Liu's papers are motivated by important business applications, presented solid mathematical models, and proposed effective solutions. The papers in the application package cover interesting applications ranging from project management with task failures and capacity allocation to pricing and scheduling coordination. Dr. Liu is skillful at developing and employing diverse quantitative methodologies involving optimization, game theory, simulation, and statistics to design efficient algorithms and derive deep managerial insights for these applications. I commend Dr. Liu for producing high quality research papers and making novel contributions to the field."

Reviewer B: “Zhixin has published 35 papers, of which 25 were accepted after his associate professor promotion. This shows that he has been extremely productive consistently and is even more so in the last 10 years. He is clearly one of the most productive scholars among his peers in the OM community. More importantly, the overall quality of his papers is excellent. Nine of his papers are in superior journals, and 23 in very good journals. Furthermore, he has built a very healthy pipeline with many solid papers under review. I expect to see some of these papers published in top journals in the next couple of years. In my view, Zhixin’s record is stronger than most of the people that I know of in his peer group. Here I define his peer group as those who graduated between 2005 and 2007 and are currently tenured associate or full professors in a school comparable to Univ of Michigan-Dearborn. His record is even comparable to quite a few more senior tenured professors that I know of at several other schools that are better ranked than Univ of Michigan-Dearborn, including George Washington University and Rutgers University.”

Reviewer C: “After studying Zhixin’s research contributions over the years, it becomes clear that he has consistently worked on interesting, relevant [sic], and challenging topics that have significant implications for firms. Over the years, through his sustained contributions [sic] of high quality papers, Zhixin has established a national as well as international reputation as a strong researcher in Operations Management and Decision [sic] Sciences.”

Reviewer D: “Dr. Liu’s publication record is very impressive. ... His research is also quite diverse. He applies techniques such as deterministic optimization, game theory, and stochastic models to various application areas including manufacturing, service, operations, supply chains, and project management. He has made an impact in his field.”

Reviewer E: “Overall, I consider Dr. Liu’s record to be excellent and certainly meets the bar for promotion to full professor at University of Michigan-Dearborn and other comparable research universities in the United States and other parts of the world. Simply put, Professor Liu has certainly carved a strong reputation for himself in the domain of scheduling and capacity management, and there is no doubt in my mind that he would continue to be highly productive moving forward.”

Service: Professor Liu was the recipient of the prestigious College of Business Distinguished Performance in Service Award in 2021. His recent significant services have included chairing a major revision of the campus-wide Academic Code of Conduct at the behest of the Faculty Senate and serving on the 3-to-4 Course Transition Committee in the COB. He is on the Editorial Review Board of *Production and Operations Management*, a top-tier journal, and is ad-hoc reviewer for several top-tier journals in his areas of expertise. He has served as a session chair on many occasions for Institute for Operations Research and the Management Sciences (INFORMS) annual meetings and Production and Operations Management Society annual conference; two premier conferences in his area of expertise. He was the recipient of the Best Reviewer Award for *Omega, The International Journal of Management Science* for the year 2014. Among his recognition by his peers was his election in 2020 as the vice president and subsequently president in 2021 of the INFORMS Southeast Michigan Chapter. Among his significant accomplishments to this chapter has been organizing webinars by internationally recognized researchers in Management Science and Operations Research fields. Since his last promotion, Professor Liu has demonstrated the ability to take on responsibilities required to

collaborate and execute service activities at the highest levels of the college, campus, and professional organizations.

Summary of Recommendation: Professor Liu is a highly productive researcher who is elucidating newer insights on quantitative modeling for operational decisions in scheduling, capacity allocation and pricing with applications in healthcare management, inventory control, recycling, and reproductive domains. He is a devoted and inspiring teacher and has contributed substantially to his scholarly profession as well as to the development of Decision Sciences and Business Analytics fields in the COB. It is with the support of the College of Business Executive Committee and the Department of Management Studies that I recommend Zhixin Liu for promotion to professor of decision sciences, with tenure, Department of Management Studies, College of Business.



N. Raju Balakrishnan, Dean
College of Business



Domenico Grasso, Chancellor
University of Michigan-Dearborn

May 2023