







# LSGI & RILS RESEARCH SEMINAR

## Occupational Mobility "Similarity Trap" in the AI Era

 **5 JUN 2026 (FRI)**  
 **2:30 PM - 3:30 PM**  
 **Z414, POLYU**  
 **ENGLISH**

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### ABSTRACT

As AI is reshaping the labor markets, this study investigates how similarity between workers' occupational knowledge, skills, and abilities (KSAs) and those required by target occupations shapes upskilling over time. It challenges the assumption that higher skill alignment reliably supports upward mobility. Using longitudinal labor force data (2010-2024) linked to occupational KSA measures, the study applies fixed-effects logistic regression combined with network-based indicators of occupational similarity. Occupational mobility is disaggregated into knowledge, skill, and ability similarity to estimate their distinct and time-varying effects on transitions into higher-level occupations. Evidence reveals a persistent "Similarity Trap": higher overall KSA similarity reduces the likelihood of upward mobility, directing workers toward lateral or downward moves. Knowledge similarity shows temporal volatility, reflecting changing technological and institutional contexts. Skill similarity exhibits a growing negative effect, suggesting that highly aligned routine skills increasingly constrain mobility in AI-affected labor markets. In contrast, ability similarity's negative impact converges over time, indicating foundational cognitive capacities are becoming broadly valuable. The study reframes occupational similarity as a source of mobility lock-in rather than advantage. By disaggregating similarity into knowledge, skill, and ability dimensions and tracing their evolving impacts, it moves beyond static skill-mismatch models to show how the returns to human capital change under technological disruption.

High KSA similarity no longer guarantees advancement. Policy and practice should emphasize adaptive, cycle-sensitive knowledge development, bridging and reskilling for skill portfolios, and broad foundational abilities (e.g., adaptability, critical thinking), supported by modular, individualized learning with tiered supports to foster equitable, future-ready mobility.

### BIOGRAPHY

Dr. Ting Zhang, Professor at the Merrick School of Business and Associate Director of the Jacob France Institute at the University of Baltimore. She holds the Harry Y. Wright Chair and has earned many honors, including the University System of Maryland Board of Regents Faculty Award in Scholarship/Research (2023), the University President's Award (2024), the Black and Decker Research Award (2025), Teaching Awards (five times), APPAM Faculty Fellow, Kauffman Foundation Fellowship, USDOL Fellowship, Best Paper Awards, etc.

A past Chair of the North America Regional Science Council and President of Northeastern Regional Science Association, Dr. Zhang has held leadership roles also with Association of Public Policy Analysis and Management (APPAM) and Labor and Employment Relations Association, and served on Maryland's Equal Pay Commission. She has authored many journal articles, books, and book chapters, with research spanning human capital, employment, entrepreneurship, and workforce development. Her work appears in leading journals including Small Business Economics, Production and Operations Management, Transportation Research Part A, Journal of Small Business Management, Applied Economics, etc.

As Principal Investigator, she has secured over \$10 million in grants from agencies such as the USDOL, USDA, the Gates Foundation, Maryland agencies. A sought-after speaker worldwide, her research has been cited by major outlets like Forbes, Bloomberg Businessweek, and Time, influencing both scholarship and policy. Dr. Ting Zhang is also an editor, associate editor, or member of the editorial boards for multiple high-quality and reputable academic journals, including Small Business Economics, Journal of Urban Management, and Letters in Spatial & Resource Sciences. She has also served as a guest editor for special issues in journals such as Entrepreneurship and Economic Development and Review of Regional Research.

### Moderator:

**Prof. Xintao LIU, Associate Professor, LSGI, member of RILS**

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