

Yu (Renee) Shi

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[Google Scholar Profile](#)

Education

- Ph.D. in Business Administration, WPI Business School, Worcester Polytechnic Institute 01/2019 – 05/2023
- Operations analytics and management concentration
- Master of Finance, Smith School of Business, Queen's University 08/2017 – 11/2018
- Bachelor of Commerce, Rotman School of Management, University of Toronto 09/2013 – 05/2017
- Finance and economics specialist degree

Research Interests

- Optimization Modelling, Machine Learning, Benchmarking, Performance Evaluation
- Organizational sustainability assessment using data envelopment analysis (DEA) and machine learning

Teaching Experience

- Adjunct Faculty, University of Massachusetts Lowell Spring 2021
- POMS2010 Introduction to Business Analytics (online/virtual)
- Adjunct Faculty, University of Massachusetts Lowell Spring 2020
- POMS2010 Introduction to Business Analytics
 - POMS3010 Operations Management (hybrid)
- Teaching Assistant, Worcester Polytechnic Institute 01/2019 – 05/2023
- Graduate level courses: OIE 548 Performance Analytics, OIE552 Modelling and Optimization
 - Undergraduate level course: OIE 4410 Case Studies in Industrial Engineering

Journal Publications

Shi, Y.,* Zhao, W. (2023), An Integrated Machine Learning and DEA-predefined Performance Outcome Prediction Framework with High-dimensional Imbalanced Data. *INFOR: Information Systems and Operational Research*, 1-30.

Yu, A., **Shi, Y.,** & Zhu, J.* (2021), Innovation performance evaluation for high-tech companies using a dynamic network data envelopment analysis approach, *European Journal of Operational Research*, Volume 292, Issue 1, 199-212.

Shi, Y.,* Yu, A., Higgins, H., & Zhu, J. (2021), Shared and Unsplittable Performance Links in Network DEA. *Annals of Operations Research*, Volume 303, Issue 1 (2021), 507–528.

Shi, Y.,* Charles, V., & Zhu, J. (2021), Data Science and Productivity: A Review of Data Science Applications and Approaches in Productivity Evaluations. *Journal of the Operational Research Society*, Volume 72, Issue 5, 975-988.

*indicates corresponding author(s)

Yu, A., Zhang, H., Liu, H., **Shi, Y.**,* Bi, W. (under review, major revision given), Dynamic Centralized Resource Allocation Approach with Contextual Impacts: Analyzing Chinese Carbon Allocation Plans. *Annals of Operations Research*.

Book Chapters

Yu, A., **Shi, Y.**, & Zhu, J. (2021). Acceleration of Large-Scale DEA Computations Using Random Forest Classification. In: Zhu, J., Charles, V. (eds) *Data-Enabled Analytics*. International Series in Operations Research & Management Science, vol 312, 31–49. Springer, Cham.

Zhou, H., Yang, Y., Chen, Y., Zhu, J., & **Shi, Y.** (2021). DEA Application in Sustainability 1996–2019: The Origins, Development, and Future Directions. In: Chen, C., Chen, Y., Jayaraman, V. (eds) *Pursuing Sustainability*. International Series in Operations Research & Management Science, vol 301, 71-109. Springer, Cham.

Conference Presentations

Performance Evaluation of US Financial Institutions Using Extended Network DEA. Informs 2021 Annual Meeting, DSI 2021 Annual Conference, Virtual, 10/2021 and 11/2021

Shared and Unsplittable Performance Links in Network DEA. Informs 2020 Annual Meeting, DSI 2020 Annual Conference, Virtual, 10/2020 and 11/2020

Data Science and Productivity: A Review of Data Science Applications and Approaches in Productivity Evaluations. DEAIC 2020 Conference, Virtual, 07/2020

DEA and Technological Innovation. DEAIC 2019 Conference, the University of Kent, UK, 06/2019

Journal Reviews

Annals of Operations Research, 2021

INFOR: Information Systems and Operational Research, 2021

Empirical Economics, 2021

Industry Work Experience

Project Assistant, Intact Financial Corporation (TSE: IFC) 10/2018 – 12/2018

Finance Editorial Intern, Sina Corporation (NASDAQ: SINA) 05 – 07/2018

Business Analyst Intern, PathCore Digital Pathology, Toronto, Ontario 05 – 08/2015

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