

Fan Bu, Ph.D., Assistant Professor

CONTACT INFORMATION

219 IMSE Texas Tech University
Lubbock, TX 79416

fabu@ttu.edu (email)

EDUCATION

Ph.D., Industrial Engineering

University of Arkansas, August 2024
Advisor: Heather Nachtmann, Ph.D.

M.S., Engineering Business Management

Warwick University, UK, August 2014
Advisor: Paul Connor, Ph.D.

B.S., Telecommunication Engineering

Beijing Jiaotong University, China, July 2013

RESEARCH INTERESTS

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|---------------------------------------|--------------------------------------|
| • Economic Analysis | • Supply Chain Management |
| • Intermodal Transportation | • Mathematical Programming |
| • Decision Models & Decision Analysis | • Data Science with Machine Learning |
| • Freight Logistics | |

PUBLICATIONS

Journal Articles

Hasan, M., Rahman, S., & Bu, F. (2024) Forecasting Container Throughput in Northwest Europe's Inland Waterways: A Data-Driven Approach. *Journal of Traffic and Transportation Engineering*. (Under Review)

Bu, F., & Nachtmann, H. (2024) Forecasting inland waterway container on barge volume: A machine learning approach using economic features. *Applied Artificial Intelligence*. (Under Review)

Bu, F., & Nachtmann, H. (2024). Value-Focused Assessment of Container on Barge Freight Transportation Readiness. *Engineering Management Journal*, 1-17.

Bu, F., Liu, J., Liao, H., & Nachtmann, H. (2023). An alternative solution to congestion relief of US seaports by container-on-barge: A simulation study. *Simulation Modelling Practice and Theory*, 129, 102836.

Bu, F., & Nachtmann, H. (2021). Literature review and comparative analysis of inland waterways transport: "Container on Barge". *Maritime Economics & Logistics*, 1-34.

Works in Progress

Hasan, M., Rahman, S., & Bu, F. (2024) Forecasting US inland waterway container throughput volume by state: A transfer learning approach.

Rahman, S., Hasan, M., & Bu, F. (2025) Modeling the Impacts of Policy and Infrastructure Investments on Freight Emissions and Congestion: An Agent-Based Simulation Approach.

Conference Proceedings

Oztanriseven, F., Bu, F., & Nachtmann, H. (2019). Measuring economic impacts of inland waterway transportation. In Proceedings of the International Annual Conference of the American Society for Engineering Management. (pp. 1-9). American Society for Engineering Management (ASEM).

Bu, F. (2018). A data mining framework for massive RFID data based on Apriori algorithm. In Journal of Physics: Conference Series (Vol. 1087, No. 2, p. 022020). IOP Publishing.

CONFERENCE PRESENTATIONS

Bu, F. (Speaker), & Nachtmann, H. (Nov 2024). An alternative solution to congestion relief of US seaports by container-on-barge: A simulation study. ASEM International Annual Conference, Virginia Beach, Virginia.

Bu, F. (Speaker), & Nachtmann, H. (May 2023). Predicting container-on-barge waterway traffic in the United States. Institute of Industrial and Systems Engineering (IISE) Annual Conference, New Orleans, Louisiana.

Bu, F. (Speaker), & Nachtmann, H. (May 2022). Value-focused thinking assessment of inland waterway container-on-barge readiness. Institute of Industrial and Systems Engineering (IISE) Annual Conference, Seattle, Washington.

Bu, F. (Speaker), & Nachtmann, H. (May 2021). Measuring container-on-barge transportation readiness. Institute of Industrial and Systems Engineering (IISE) Virtual Annual Conference.

Bu, F. (Speaker), & Nachtmann, H. (October 2021). Feasibility study of implementing inland waterway container-on-barge transportation. Institute for Operations Research and the Management Sciences (INFORMS) Virtual Annual Conference.

Bu, F. (Speaker), & Nachtmann, H. (October 2019). Measuring Economic Impacts of Inland Waterway Transportation. ASEM International Annual Conference. Philadelphia, Pennsylvania.

Bu, F. (speaker), Moradpour, S., Nachtmann, H., & Chimka, J. (May 2018). Regional economic impacts of the McClellan-Kerr Arkansas River Navigation System (MKARNS). Institute of Industrial and Systems Engineering (IISE) Annual Conference, Orlando, Florida.

OTHER PRESENTATIONS

Bu, F. (speaker). (November 2019). Modeling dynamic behavior of navigable inland waterways. Jack Buffington Student Poster Session, Mack-Blackwell Transportation Center, Fayetteville, Arkansas.

Bu, F. (speaker), Moradpour, S., Nachtmann, H., & Chimka, J. (November 2018). Modeling dynamic behavior of navigable inland waterways. Jack Buffington Student Poster Session, Mack-Blackwell Transportation Center, Fayetteville, Arkansas.

PATENTS PENDING

John Seward, Ngoc Childress, Fan Bu, Claire Dildy, Abdallah Dalabih, 04/28/2023, V-Ready-Blood Vessel Locator, Provisional patent pending

CERTIFICATES

IBM Data Science Professional Certificate, IBM - January 2022

PROFESSIONAL MEMBERSHIPS AND DEVELOPMENT

Member, Institute for Operations Research and the Management Sciences (INFORMS) (2020-present)

Member, ASEM (2019-present)

Member, IISE (2018-present)

Member, Alpha Pi Mu Honor Society (2018-present)

Participant, 2022 IISE Doctoral Colloquium

Participant, 2023 IISE Future Faculty Fellows

Session Chair, Supply Chain Management, 2024 ASEM