

# Buyun Li

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## EDUCATION

### Indiana University

*PhD in Operation Management and Decision Sciences; Kelley School of Business*

Bloomington, Indiana

*Expected May 2026*

- **Dissertation Title:** Compounding Feedback Between Capacity Decisions and Patient Demand in Healthcare Operations
- **Committee:** Co-Chairs: Jonathan Helm and Kurt Bretthauer; **Member:** Owen Wu, Xiaoshan Peng, and Zekun Liu

### Cornell University

*Master of Science; SC Johnson College of Business*

Ithaca, New York

*May 2018 - May 2020*

### University of Queensland

*Bachelor of Administration; School of Business, Economics and Law*

Queensland, Australia

*Sep 2015 - Dec 2017*

### Beijing International Studies University

*Bachelor of Science*

Beijing, China

*Sep 2013 - May 2015*

## RESEARCH INTEREST

Healthcare Operations - Chronic Pain Operation Management, Infection Aware Nurse Staffing, Empirical Healthcare; Service Operations, Big Data & Machine Learning, Sequential Decision-Making, Stochastic Modeling, Bayesian Learning.

## PUBLICATION

### [A1] Capacity Planning for Resource Turnaround Operations

*Co-Author: Vince Slaugh*

*Accepted — M&SOM*

- **Accepted:** *Manufacturing and Service Operation Management (M&SOM)*
- **Preprint:** [SSRN](#)

## PAPERS UNDER REVIEW OR REVISION

### [A2] Does Early Pain Management Pay Off? Evidence on Utilization, Costs, and Surgeries

*Co-Authors: Mohammad Zhalechian, Christopher Chen, Henry Lee (DO), Nick Vaughn (MD)*

*Rejected, Resubmission Invited – Management Science*

- **Selected to present:** 2025 Midwest Health Economics Conference
- **Preprint:** [Available Online](#)
- **Grant Under Review:** Research Grant – National Institute of Health Care Management (NIHCM)

### [A3] Infection Aware Nurse Staffing Using Random Graphs with Hidden Health Status

*Co-Authors: Jonathan Helm, Kurt Bretthauer*

*Under Review–M&SOM*

- **Selected to present:** 2025 Life sciences and Healthcare Research Conference
- **Preprint:** [SSRN](#)

### [A4] Dynamic Scheduling with Bayesian Updating of Customer Characteristics

*Co-Authors: Xiaoshan Peng, Owen Wu*

*Under Review – POM*

- **Preprint:** [SSRN](#)

## WORK IN PROGRESS PAPERS

### [W1] Maximizing Early Pain Management Intervention Effectiveness via Heterogeneous Treatment Effects

*Co-Authors: Mohammad Zhalechian, Christopher Chen*

*Work in Progress*

### [W2] Optimal Nurse Staffing with Infection Awareness: A Random Graph and ML Approach

*Co-Authors: Jonathan Helm, Kurt Bretthauer*

*Work in Progress*

## TEACHING EXPERIENCES

### BUS-K303 Technology & Business Analytics

*Instructor*

Indiana

*FA 2023, SP 2024, FA 2025 (Two Sections)*

- **Course Organization:** Refined course materials, assignments, exams, and reading list; managed course delivery through Canvas. Organized TA and Peer Tutor orientation and coordinated task assignments.
- **Evaluations:** 6.9/7 for overall instructor evaluation, 6.8/7 for support offered to students, 6.9/7 for the material preparation.

### HADM 6070 Hospitality Operations and Consulting

*Teaching Assistant*

New York

*FA 2018*

- **Evaluation:** 8.9/10 for overall Teaching Assistant evaluation.

## EDITORIAL SERVICES

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- **Management Science:** Reviewer
- **Manufacture and Service Operation Management:** Reviewer
- **Production and Operation Management:** Reviewer
- **Health Care Management Science:** Reviewer

## FELLOWSHIP & AWARDS

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- **Finals list**, 2025 Midwest Health Economics Conference
- **Finals list**, 2025 Life sciences and Healthcare Research Conference
- **Ashok and Sarita Soni Fellowship (2023, 2024, 2025)**, Kelley School of Business, Indiana University
- **Academic Excellence Scholarship**, SC Johnson College of Business, Cornell University
- **The McLennan Howes Outstanding Honours Scholarship**, School of Business, Economics and Law, University of Queensland
- **Academic Distinction Award**, Beijing International Studies University

## CONFERENCE PRESENTATIONS

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- Does Early Pain Management Pay Off? Evidence on Utilization, Costs, and Surgeries*** Li, B.; Zhalechian, M.; Chen, C.; Lee, H.; Vaughn, N.
- **2025:** POMS Annual Conference, Atlanta, GA
  - **2025:** Midwest Health Economics Conference, Notre Dame, IN
  - **2025:** INFORMS Annual Meeting, Atlanta, GA (scheduled)
- Infection Aware Nurse Staffing Using Random Graphs with Hidden Health Status*** Li, B.; Helm, J.; Bretthauer, K.
- **2025:** POMS Annual Conference, Atlanta, GA
  - **2024:** INFORMS Annual Meeting, Seattle, WA
  - **2023:** INFORMS Annual Meeting, Phoenix (Flash Session), AZ
  - **2023:** POMS Annual Conference, Orlando, FL
- Dynamic Scheduling with Bayesian Updating of Customer Characteristic*** Li, B.; Peng, X.; Wu, O.
- **2023:** INFORMS Annual Meeting, Phoenix, AZ
  - **2023:** Purdue Operations Conference, Lafayette, IN
- Capacity Planning for Resource Turnaround Operations*** Li, B. & Slaugh, V.
- **2022:** POMS Annual Conference, Online
  - **2021:** INFORMS Annual Meeting, Anaheim, CA

## VOLUNTEER EXPERIENCE AND ENTREPRENEURSHIP

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- Earlybirds (Revenue Management)** New York, USA  
*Co-founder, Chief Operation Officer* Aug 2018 - Sep 2019
- Stars and Rain** Beijing, China  
*Palliative Care Volunteer* Aug 2013 - May 2014

## REFERENCES

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- Prof. Jonathan Helm** Indiana University  
*Professor of Operations & Decision Technologies, Kelley School of Business*  
[helmj@iu.edu](mailto:helmj@iu.edu)
- Prof. Kurt Bretthauer** Indiana University  
*Professor of Operations & Decision Technologies, Kelley School of Business*  
[kbrettha@iu.edu](mailto:kbrettha@iu.edu)
- Prof. Mohammad Zhalechian** Indiana University  
*Assistant Professor of Operations & Decision Technologies, Kelley School of Business*  
[mzhale@iu.edu](mailto:mzhale@iu.edu)
- Prof. Vince Slaugh** Cornell University  
*Assistant Professor of Applied Services, SC Johnson College of Business*  
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