

# Kejia Hu

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Owen Graduate School of Management

401 21st Ave S, Nashville, TN, 37203

## ACADEMIC POSITION

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2017 - Present

Owen Graduate School of Management, Vanderbilt University, Nashville, TN

Assistant Professor of Operations Management

2019 Awarded as Brownlee O. Currey Jr. Dean's Faculty Fellow

## EDUCATION

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Ph.D. Operations Management, Kellogg School of Management, Northwestern University (2017)

– Empirical Operations Management (Committee: Jan A. Van Mieghem, Achal Bassamboo, Sunil Chopra, Gad Allon)

M.S. Statistics, Department of Statistics, University of California, Davis (2013)

– Prediction with Generalized Linear Mixed Model using Lasso (Advisor: Jiming Jiang)

B.S. Statistics, School of Management, Fudan University, China (2011)

## RESEARCH INTERESTS

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Topic Expertise: Service System Design, Forecasting & Artificial Intelligence, Business Analytics

Methodology Expertise: Structural Modeling, Causal Inference, Statistical Forecasting, Machine Learning, Text Mining and Stochastic Modeling

## PUBLICATIONS

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Research Method: \* Structural Modeling, \*\* Causal Inference, \*\*\* Forecasting, Statistics & Machine Learning

### Appeared/Forthcoming

#### *Top Business Journals*

#### **Service System Design**

1. [Service Chains' Operational Strategies: Standardization or Customization? Evidence from the Nursing Home Industry](#)

with Lu Kong and Rohit Verma

**Manufacturing & Service Operations Management** ◦ Forthcoming \*\*

2. [Analytics Applications and Strategies in the Restaurant Industry](#)  
with Xiande Zhao and Morgan Swink  
**Production and Operations Management** ◦ 2022
3. [Understanding Customers' Retrial in Call Centers: Preferences of Service Speed and Service Quality](#)  
with Gad Allon and Achal Bassamboo  
**Manufacturing & Service Operations Management** ◦ 2021 \*
4. [The Effect of Tightening Standards on Automakers' Non-compliance](#)  
with Sunil Chopra, and Yuche Chen  
**Production and Operations Management** ◦ 2021 \*\*

### Forecasting & Artificial Intelligence

5. [Forecasting Product Life Cycle Curves: Practical Approach and Empirical Analysis](#)  
with Jason Acimovic, Francisco Erize, Douglas J. Thomas, and Jan A. Van Mieghem  
**Manufacturing & Service Operations Management** ◦ 2018 \*\*\*  
• *Finalist in the 2017 M&SOM Practice-based Competition.*
6. [Product Life Cycle Data Set: Raw and Cleaned Data of Weekly Orders for Personal Computers](#)  
with Jason Acimovic, Francisco Erize, Douglas J. Thomas, and Jan A. Van Mieghem  
**Manufacturing & Service Operations Management** ◦ 2018 \*\*\*

### *Specialty Journals*

#### Service System Design

7. [Caring for an Aging Population in a Post-Pandemic World: Emerging Trends in the U.S. Older Adult Care Industry](#)  
with Lu Kong and Matthew Walsman  
**Service Science** ◦ 2021 \*\*\*
8. [Fostering Older Adult Care Experiences to Maximize Well-Being Outcomes: A Conceptual Framework](#)  
with Sertan Kabadayi, Yuna S.H. Lee, Lydia Hanks, Matthew Walsman, and David Dobrzykowski  
**Journal of Service Management** ◦ 2020
9. [Equilibrium Fuel Supply and Carbon Credit Pricing under Market Competition and Environmental Regulations](#)  
with Yuche Chen  
**Applied Energy** ◦ 2019
10. [Technological Growth of Fuel Efficiency in European Automobile Market 1975–2015](#)  
with Yuche Chen  
**Energy Policy** ◦ 2016 \*\*\*

11. [A Dynamic Programming Approach for Modeling Low-carbon Fuel Technology Adoption Considering Learning-by-doing Effect](#)  
with Yuche Chen, Yunteng Zhang, Yueyue Fan, and Jianyou Zhao  
**Applied Energy** ◦ 2017
12. [Strategic Choice of Open and Closed Platforms: Game Theory Analysis of Downstream Vendors' Behavior based on Demand and Cost Advantages](#)  
with Guangzhen Guo and Yulan Zhang  
**China Industrial Economics** ◦ 2017

### Forecasting & Artificial Intelligence

13. [Best Predictive Generalized Linear Mixed Model with Predictive Lasso for High-speed Network Data Analysis](#)  
with Jaesik Choi, Alex Sim, and Jiming Jiang  
**International Journal of Statistics and Probability** ◦ 2015 \*\*\*
14. [Estimating and Forecasting Network Traffic Performance based on Statistical Patterns Observed in SNMP Data](#)  
with Alex Sim, Demetris Antoniadis, and Constantine Dovrolis  
**Proceedings of International Workshop on Machine Learning and Data Mining in Pattern Recognition** ◦ 2013 \*\*\*
15. [Regional Reserves Growth Shows Decline in Annual Rate of Increase](#)  
with Gongming Yu and Yijun Wang  
**Oil & Gas Journal** ◦ 2016 \*\*\*

### Under Review/Revision

#### *Top Business Journals*

### Service System Design

16. [Delegation with Technology Migration: An Empirical Analysis of Mobile Virtual Network Operators](#)  
with Fan Zou, Yan Dong, and Sriram Venkataraman  
**Management Science** ◦ Major Revision \*\*
17. [How Women Promote Greater Social Responsibility on Social Media](#)  
with Li Xiang and Huibin Du  
**MIS Quarterly** ◦ Major Revision \*\*
  - *2021 INFORMS Social Media Analytics Section Best Student Paper Award Finalist*
18. [Promotional Design for Small Businesses: the Operational Value of Online Deals](#)  
with Simin Li and Martin Lariviere  
**Management Science** ◦ Major Revision \*

- *Finalist in the 2019 IBM Service Science Section Best Student Paper Competition*
19. [To What Extent Do Workers' Preferences Matter?](#)  
with Zhenzhen Jia, Jianqiang Hu, and Vishal Ahuja  
**Management Science** ◦ Resubmitted \*\*
- *2020 INFORMS Best Working Paper Award Behavioral OM – Runner Up*
  - *2021 POMS College of Behavior OM Junior Scholar Paper – Honorable Mention*
  - *2021 INFORMS Service Science Best Cluster Paper Award Finalist*
20. [WeStore or AppStore: Customer Behavior Differences in Mobile Apps and Social Commerce](#)  
with Nil Karacaoglu  
**Production and Operations Management** ◦ Major Revision \*
- *2021 INFORMS TIMES Best Working Paper Award Third Place*
21. [The Psychology of Virtual Queue: When Waiting Becomes Less Like Waiting](#)  
with Xun Xu and Leo Ao  
**Manufacturing & Service Operations Management** ◦ Major Revision \*\*
22. [The Cardless and Cashless Future: the Rise of Mobile Payment](#)  
with Shuai Ling, and Sriram Venkataraman  
**Information Systems Research** ◦ Under Review \*
23. [More or Less: How Information Richness Affects Our Choice Consistency](#)  
with Iris Wang  
**Management Science** ◦ Under Review \*\*
24. [How Operational Complexity Drives Inventory Record Inaccuracy: Empirical Evidence from Cross-border E-commerce](#)  
with Ting Wang, Stanley Lim, Yun Fong Lim, Yugang Yu  
**Management Science** ◦ Under Review \*\*

### Forecasting & Artificial Intelligence

25. [Simultaneous Imputation and Prediction with High-dimensional Data \(SIP-HD\): A Deep Learning Model for Disease Diagnosis](#)  
with Zhenzhen Jia, Jianqiang Hu, Qingchen Wang, and Ning Zhang  
**Journal of Operations Management** ◦ Under Review \*\*\*

### Working Papers

#### Service System Design

26. [The Acquisition Performance of Multi-unit Service Firms: Achieving Operational Synergy through Geographic Clustering](#)  
with Susan Lu and Lauren Lu \*\*

27. [The Good and Evil Inside: From Within-organization Features to the Social-orientation of Innovations](#)  
with Mark Cohen \*\*

### **Forecasting & Artificial Intelligence**

28. [Intermittent Demand Forecasting](#)  
with Feng Liu, Teng Lian, and Jianqiang Hu. \*\*\*

### **CASE STUDY**

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- Jointown Pharmaceutical Group Co Ltd, China (with Prof. Jianqiang Hu, Fudan University, China)  
—Awarded as the National Top 100 MBA Case Studies, China, 2011

### **HONORS, AWARDS & CERTIFICATES**

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- Vanderbilt Research Productivity Award, 2022
- Management Science Distinguished Service Award recipients for the 2020
- Vanderbilt Strong Faculty Grant, 2020
- Business of VU (Vanderbilt University) Certificate, 2020
- MIT Sloan + CSAIL Artificial Intelligence Certificate, 2020
- M&SOM Meritorious Service Award, 2020
- Brownlee O. Currey Jr. Dean's Faculty Fellow, 2019
- SEC Faculty Travel Grant, 2019
- Vanderbilt Junior Faculty Teaching Fellowship, 2018
- Graduate School Fellowship, Kellogg School of Management, Northwestern University, 2013 - 2017
- Graduate School Fellowship, University of California, Davis, 2011 - 2013
- Junzheng Scholarship, Junzheng Foundation, 2010
- Wangdao Scholar Fellowship, Fudan University, 2010

### **INVITED INSTITUTIONAL TALKS**

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#### **Academia**

1. Harvard Business School, IMS/HBS Data Science Conference, U.S., 2022
2. University of California, Davis, U.S., 2022
3. Yale University, School of Management, U.S., 2022
4. Singapore Management University, Singapore, 2021
5. Michigan State University, U.S., 2021
6. University of Toronto, Canada, 2021
7. IIASA, Austria, 2021
8. Purdue University, U.S., 2020

9. University of California, Davis, U.S., 2019
10. University of Pennsylvania, Wharton School, Empirical Workshop, U.S., 2019
11. Cornell University, Thought Leadership Forum, U.S., 2019
12. Zhejiang University, Empirical Workshop, China 2019
13. Ohio State University, Fisher School of Management, U.S., 2019
14. Fudan University, School of Management, China 2018
15. Texas A&M University, Mays Business School, U.S., 2018
16. Zhejiang University, School of Management, China, 2018
17. Tianjin University, College of Business Administration, China, 2018
18. CEIBS, China, 2018
19. London Business School, United Kingdom, 2017
20. Southern Methodist University, Cox School of Business, U.S., 2017
21. Oxford University, Said Business School, United Kingdom, 2017
22. Nanyang Technological University, Nanyang Business School, Singapore, 2017
23. Emory University, Goizueta Business School, U.S., 2017
24. Cornell University, SC Johnson College of Business, U.S., 2016
25. Peking University, Guanghua School of Management, China, 2016
26. HKUST Business School, China, 2016
27. Vanderbilt University, Owen Graduate School of Management, U.S., 2016
28. University of Hong Kong, Business School, China, 2016
29. Fudan University, School of Management, China, 2016
30. University of Notre Dame, Mendoza College of Business, U.S., 2016
31. University of Illinois Urbana-Champaign, Gies College of Business, U.S., 2016
32. City University of Hong Kong, College of Business, China, 2016
33. West Virginia University, College of Business and Economics, U.S., 2016
34. Oregon State University, College of Business, U.S., 2016

## Industry

1. Protestant Church-Owned Publishers Association, U.S., 2022
2. Marriott International: Multi-Channel Customer Relationship Management, U.S., 2017

## MEDIA COVERAGE

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1. *“Optimizing Data Collection is on the Table for the Restaurant Industry”* Vanderbilt News 2022. [Link](#)
2. *“Research Snapshot: COVID-19 is the disruptive moment the older adult care industry has been waiting for”* Vanderbilt News 2021. [Link](#)
3. *“New Research Identifies Service Frameworks to Improve Customer Service without Breaking the Bank”* Vanderbilt News 2021. [Link](#)

4. “*Tightening Vehicle Emissions Standards Resulted in Higher Rates of Automaker Non-Compliance*” Vanderbilt News 2021. [Link](#)
5. “*Launching New Tech? How Do You Make Data-driven Decisions Without Any Sales Data?*” Vanderbilt News 2018. [Link](#)
6. “*What Volkswagen’s Emissions Scandal Can Teach Us about Why Companies Cheat*” Kellogg Insights 2017. [Link](#)
7. “*How to Predict Demand for Your New Product*” Kellogg Insights 2017. [Link](#)
8. “*Empiricist Brings Skills with Big Data to Service Operations Research*” Vanderbilt Faculty Spotlight 2017. [Link](#)

## **TEACHING EXPERIENCE**

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### **Assistant Professor, Owen School of Management, Vanderbilt University**

- Management of Service Operations (MBA 2018-2021 Spring)
- Operations Management (Undergraduate 2019-2021 Spring)

### **Teaching Assistant, Kellogg School of Management, Northwestern University**

- Supply Chain Management (MBA 2014 Fall, 2015 Spring/Fall, 2016 Spring/Fall; EMBA Spring 2015)
- Operations Management (MBA 2015 Winter, 2015 Summer)
- Operations Strategy (MBA 2016 Spring)
- Foundations of Operations Management (Ph.D. 2015 Winter)
- Stochastic Foundations (Ph.D. 2015 Spring)

### **Discussion Lecturer, University of California, Davis**

- Statistical Computing (Graduate 2013 Winter; Undergraduate 2012 Fall)
- Statistical Methods for Research with SAS (Graduate 2012-2013 Spring)
- Applied Statistics for Business and Economics (Senior Undergraduate 2012 Winter)
- Applied Statistics Methods: Nonparametric Statistics (Senior Undergraduate 2013 Winter)
- Applied Statistics Methods: Analysis of Variance (Junior Undergraduate 2012 Fall)

## **PROFESSIONAL SERVICES**

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### **Academic Field**

- 2022-Present, Board Member, POMS College of Service Operations
- 2021-Present, Board Member, INFORMS Service Science Section
- 2021-Present, Member Engagement Committee at POMS College of Service Operations
- 2017-Present, Reviewer for Journals ( including *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Production and Operations Management*, *Naval Research Logistics*, *Journal of Operations Management*, *Service Science*)

- 2019, Session Chair of Policy Intervention to Firms' Sustainability Actions, INFORMS
- 2019, Session Chair of Service Design in Platform Economy, INFORMS
- 2019, Panelist on Academic Job Search Panel, INFORMS
- 2019, Session Chair of Management Issues for Online Platforms, POMS
- 2019, Session Chair of Emerging Topics in Operations Management, POMS
- 2019, Session Chair of Multi-Channel Management, POMS
- 2019, Track Chair of Service Operations, POMS, managed 21 sessions
- 2018, Session Chair of Empirical Research for New Service Business, INFORMS
- 2018, Session Chair of Empirical Research in Sustainability, INFORMS
- 2018, Session Chair of Empirical Research in Service Operations, POMS
- 2018, Session Chair of Supply Chain Analytics, POMS
- 2017, Session Chair of Environmental Operations Management, POMS
- 2015, Session Chair of Green Manufacturing, INFORMS

## University

### Vanderbilt University

- 2018 - 2020, Faculty Member of Provost's WAVE Council — Family Friendly Policies Subcommittee
- 2019, Faculty Representative for Board of Trust - Strategic Session on Faculty Growth and Development
- 2018, Faculty Representative for “Lunch and Learn” with Chancellor Zeppos

## School

### Owen Graduate School of Management, Vanderbilt University

- 2020 - Present, Student Achievement Committee
- 2018 - Present, Faculty Advisor, Great Chinese Business Club
- 2019, Member of Student Achievement Committee
- 2019, Member of Faculty Hiring Committee of Operations Management and Quantitative Methods
- 2018, Member of Faculty Hiring Committee of Operations Management and Quantitative Methods

### Kellogg School of Management, Northwestern University

- 2014-2015, Marketing VP, Chinese Business Club
- 2014, Finance VP, Great China Business Conference

## Industry

- 2020 - Present, Academic Scholars, L'Oreal, China



- 2017 - Present, Academic Scholars, Cornell Institute for Healthy Futures, U.S.
- 2012-2013, Researcher, Scientific Data Management, Lawrence Berkeley National Lab, Berkeley, U.S.
  - Project: Algorithm for Improving Efficiency of Data Transfer on High-speed Network
- 2012, Financial Trainee, Morgan Stanley, Sacramento, CA, U.S.
  - Project: Optimal Timing Policy for Asset Trading and Allocation
- 2011, Supply Chain Investigator, Yiwu County Government – World's Largest Wholesale Market for Small Commodities, China,
  - Project: Evaluation of Supply Chain Management of Yiwu Wholesale Market in Global Trading
- 2010, Research Intern in Supply Chain Management, Jointown Pharmaceutical Co Ltd, China
  - Project: A Case Study on Jointown Pharmaceutical Group Co Ltd. Inventory Management System