Huanan Zhang

Contact Information	Room 425D. 995 Regent Dr. Boulder, CO 80309
	✉ *Huanan.Zhang@colorado.edu* webpage: huananzhang.strikingly.com

Employment

University of Colorado Boulder, Boulder, CO
Assistant Professor, Leeds School of Business   6/2020 - present

Pennsylvania State University, State College, PA
Assistant Professor, Harold and Inge Marcus Department of Industrial and Manufacturing Engineering   8/2017 - 5/2020

Education

University of Michigan, Ann Arbor, MI
Ph.D. in Industrial and Operations Engineering   9/2012 - 8/2017
Thesis title: *Data-Driven Algorithms for Stochastic Supply Chain Systems: Approximation and Online Learning*

The Chinese University of Hong Kong (CUHK), Hong Kong, China
B.E. in Systems Engineering & Engineering Management   9/2008 - 6/2012
First-Class Honour

Research Interests

- Methodology: Data-Driven Algorithms, Approximation Algorithms, Asymptotic Analysis, Stochastic Modeling and Optimization.
- Application: Revenue Management and Pricing, Inventory Management, Supply Chain Management, Service Operations.

Selected Journal Publications

- C. Lyu, H. Zhang, L. Xin, UCB-Type Learning Algorithms with Kaplan-Meier Estimator for Lost-Sales Inventory Models with Lead Times, ***Operations Research***, Vol. 72(4), 1317-1332, 2024.

- S. Jasin, C. Lyu, S. Najafi, H. Zhang, Assortment Optimization with Multi-Item Basket Purchase under Multivariate MNL Model, ***Manufacturing & Service Operations Management***, Vol. 26(1), 215-232, 2024. (Alphabetically ordered)
  * Selected for presentation in the MSOM Supply Chain Management SIG, 2023.

- X. Gao, H. Zhang, An Efficient Learning Framework for Multi-Product Inventory Systems with Customer Choices, ***Production and Operations Management***, Vol 31, 2492-2561, 2022. (Alphabetically ordered)

- D. Simchi-Levi, R. Sun, H. Zhang, Online Learning and Optimization for Revenue Management Problems with Add-on Discounts. ***Management Science***, Vol. 68(10), 7402-7421, 2022. (Alphabetically ordered)

- X. Gao, S. Jasin, S. Najafi, H. Zhang, Joint Learning and Optimization for Multi-product Pricing under a General Cascade Click Model, ***Management Science***, Vol. 68(10), 7362-7282, 2022. (Alphabetically ordered)
  * Finalist in the POMS-JD.com 2019 Best Data-Driven Research Paper Competition.

- H. Zhang, S. Jasin, Online Learning and Optimization of (Some) Cyclic Pricing Policies in the Presence of Patient Customers, **Manufacturing & Service Operations Management**, Vol. 24(2), 1165-1182, 2022.

- H. Zhang, X. Chao, C. Shi, Closing the Gaps: An Online Learning Algorithm for Lost-sales Inventory Systems with Lead Times, **Management Science**, Vol 66(5), 1962-1980, 2020.

- H. Zhang, X. Chao, C. Shi, Technical Note - Perishable Inventory Problems: Convexity Results for Base-Stock Policies and Learning Algorithms under Censored Demand, **Operations Research**, Vol. 66(5), 1189-1456, 2018.

- X. Chao, X. Gong, C. Shi, C. Yang, H. Zhang, S. X. Zhou Approximation Algorithms for Capacitated Perishable Inventory Systems with Positive Lead Time, **Management Science**, Vol. 64(11), 5038-5061, 2018. (Alphabetically ordered)

- H. Zhang, C. Shi, X. Chao, Technical Note - Approximation Algorithms for Perishable Inventory Systems with Setup Costs, **Operations Research**, Vol. 64(2), 432-440, 2016.

- X. Chao, X. Gong, C. Shi, H. Zhang, Approximation Algorithms for Perishable Inventory Systems, **Operations Research**, Vol. 63(3), 585-601, 2015. (Alphabetically ordered)

Other Publications

- H. Zhang, C. Shi, C. Qin, C. Hua, Stochastic Regret Minimization for Revenue Management Problems with Non-Stationary Demands, **Naval Research Logistics**, Vol. 63(6), 433-448, 2016.

- C. Shi, H. Zhang, C. Qin, A Faster Algorithm for the Resource Allocation Problem with Convex Cost Functions, **Journal of Discrete Algorithms**, Vol. 34, 137-146, 2015.

- C. Shi, H. Zhang, X. Chao, R. Levi, Approximation Algorithms for Capacitated Stochastic Inventory Systems with Setup Cost, **Naval Research Logistics**, Vol. 61(4), 304-319, 2014.

Book Chapters

- X. Gao, H. Zhang, Inventory Control with Censored Demand, In: Chen, X., Jasin, S., Shi, C. (eds) *The Elements of Joint Learning and Optimization in Operations Management.* Springer Series in Supply Chain Management, vol 18. Springer, Cham, 2022.

- X. Chao, B. Chen, H. Zhang, Online Learning in Inventory and Pricing Optimization, in Song, J. (eds) *Research Handbook on Inventory Management.* Edward Elgar Publishing, 2023.

Selected Working Papers

- J. Bu, H. Zhang, S. Jasin, Asymptotic Optimality of Simple Policies for Stochastic Inventory Systems with Delivery Lead Time and Purchase Returns, Under 2nd-round Major Revision at **Management Science**.

- S. Benjaafar, X. Gao, X. Shen, H. Zhang, Online Learning for Pricing of On-Demand Vehicle Sharing Networks. Under review after Major Revision at **Manufacturing & Service Operations Management**. (Alphabetically ordered)

- A. J. Liang, S. Najafi, H. Zhang, Power of Waste-Aware Display Policies in Online Grocery Retail: A Unified Framework. Working Paper.

Teaching Activities	University of Colorado Boulder - *Sole instructor* • BCOR 2206 Principles of Operations Management (Undergraduate) Spring 2021 - Spring 2024 • MBAX 6843 Supply Chain and Operations Analytics (Graduate) Spring 2023 - Spring 2024 • OPIM 7330 Data-Driven Operations Management (Graduate) Spring 2022 Pennsylvania State University - *Sole instructor* • IE 570 Supply Chain Engineering (Graduate) Fall 2017 - Fall 2019 • IE 460 Service Systems Engineering (Undergraduate) Spring 2018 - Spring 2020 University of Michigan - *Sole instructor* • IOE 440 - Operations Analysis & Management (Undergraduate) Fall 2016

Conference Presentations	• Online Learning for Pricing in On-Demand Vehicle Sharing Networks, INFORMS 2024, Seattle, WA.
	
	• Assortment Optimization with Multi-Item Basket Purchase under Multivariate MNL Model, MSOM Supply Chain Management SIG 2023, Montreal, QC, Canada.
	
	• Online Learning for the Optimal Capped Base-stock Policy in Lost-sales Inventory System with Lead Times, POMS 2023, Orlando, FL.
	
	• Assortment and Price Optimization under MNL Model with Price Range Effect, INFORMS 2022, Indianapolis, IN.
	
	• Online Learning and Optimization for Revenue Management Problems with Add-on Discounts,
	    – INFORMS 2020, joined virtually.
	    – INFORMS 2021, joined virtually.
	
	• Multi-Product Price Optimization and Learning under a General Cascade Click Model with Filters.
	    – POMS 2019, Washington, DC.
	    – IISE 2019, Orlando, FL.
	    – INFORMS 2019, Seattle, WA.
	
	• Online Learning and Optimization of (Some) Cyclic Pricing Policies for Revenue Management with Patient Customers.
	    – INFORMS 2018, Phoenix, AZ.
	    – POMS 2019, Washington, DC.
	
	• Closing the Gaps: An Online Learning Algorithm for Lost-Sales Inventory Systems with Lead Times
	    – INFORMS 2016, Nashville, TN.
	    – POMS 2017, Seattle, WA.
	    – MSOM 2017, Chapel Hill, NC.
	    – INFORMS 2017, Houston, TX.
	
	• Nonparametric Learning Algorithms for Optimal Base-Stock Policy in Perishable Inventory Systems with Censored Demand, INFORMS 2016, Nashville, TN.

- Approximation Algorithms for Perishable Inventory Systems with Setup Costs, INFORMS 2014, San Francisco, CA.

- Approximation Algorithms for Stochastic Inventory Control Problems with Regular and Expedited Supplies, INFORMS 2013, Minneapolis, MN.

- Approximation Algorithms for Capacitated Stochastic Lot-Sizing Models with Fixed Ordering Cost, MSOM 2013, Fontainebleau, France.

Invited Presentations

- Sustainability-Aware Retailing for Online Grocery: A General Fluid Analysis of Joint Operational Decisions.
  - Supply Chain Analytics Workshop before POMS HK 2025, Hong Kong, Jan. 2025.

- Asymptotic Optimality of Simple Replenishment Policies for Inventory Systems with Purchase Returns.
  - Mitchell E. Daniels, Jr. School of Business, Purdue University, Oct. 2023.

- Online Learning for Pricing of On-Demand Vehicle Sharing Networks.
  - School of Economics and Management, Southeast University (China), Sep. 2023. (virtual talk)

- Online Learning and Optimization for Revenue Management Problems with Add-on Discount.
  - Data Science Lab, MIT, Oct. 2019.
  - Leeds School of Business, University of Colorado Boulder, Dec. 2019.
  - Rotman School of Management, University of Toronto, Jan. 2020.
  - Nanjing University Business School, Nanjing University, Nov. 2020. (virtual talk)

- Multi-Product Price Optimization and Learning under a General Cascade Click Model with Filters.
  - School of Economics and Management, Tsinghua University, Jun. 2019.
  - Alibaba DAMO Academy, Seattle, Jul. 2019.

- Closing the Gaps: A Nonparametric Online Learning Algorithm for Lost-Sales Inventory System with Positive Lead Times.
  - Smeal College of Business, Penn State University, Oct. 2017.

- Data-Driven Algorithms for Complex Supply Chain Systems with Censored Demand.
  - Department of Industrial & Systems Engineering, University of Wisconsin-Madison, Jan. 2017.
  - Department of Industrial Engineering & Management Sciences, Northwestern University, Jan. 2017.
  - McCombs School of Business, University of Texas at Austin, Feb. 2017.
  - Department of Operations Research and Information Engineering, Cornell University, Feb. 2017.
  - Harold and Inge Marcus Department of Industrial and Manufacturing Engineering, Penn State University, Feb. 2017.

Services	- Senior Editor for *Production and Operations Management* - Operations Management Data Analytics Department - Revenue Management and Market Analytics Department

Services

- Senior Editor for
  - *Production and Operations Management*
    - Operations Management Data Analytics Department
    - Revenue Management and Market Analytics Department
- Reviewer for
  - *Management Science*
  - *Operations Research*
  - *Manufacturing & Service Operations Management*
  - *Production and Operations Management*
  - *Mathematics of Operations Research*
  - *INFORMS Journal on Computing*
  - *Stochastic Systems*
  - *Operations Research Letters*
  - *Annals of Operations Research*
  - *Service Science*
  - *Naval Research Logistics*
  - *Marketing Science*
  - *IEEE Transactions on Automatic Control*
  - *IEEE Transactions on Automation Science and Engineering*
- Track Chair/Co-chair for
  - INFORMS 2026, San Francisco, CA - MSOM Supply Chain SIG track
- Session Chair/Co-chair for conferences:
  - POMS Hong Kong 2025, Hong Kong.
  - POMS 2023, Orlando, FL.
  - INFORMS 2022, Indianapolis, IN.
  - INFORMS 2020, virtual conference.
  - INFORMS 2019, Seattle, WA.
  - IISE 2019, Orlando, FL.
  - INFORMS 2018, Phoenix, AZ.
  - INFORMS 2016, Nashville, TN.
  - POMS 2017, Seattle, WA.
- Resume Review Volunteer for INFORMS 2023.

Honors, Awards, & Grants

- Distinguished Service Award (for Reviewers), *Operations Research*, 2024.
- Distinguished Service Award (for Reviewers), *Management Science*, 2024.
- Kala and Shiv Khatri Endowed Faculty Scholar, Leeds School of Business, 2023-2025.
- Top Reviewer Award, *Operations Research Letters* journal, 2021.
- Kolb Teaching Award, Leeds School of Business, 2020.
- MHI/CICMHE Research Funding Program – Start-up Grants ($22,500)

- Finalist of POMS-JD.com 2019 Best Data-Driven Research Paper Competition.
- 2016-2017 IOE Outstanding Graduate Student (University of Michigan).
- Rackham travel grant in year 2013, 2014 and 2016 (University of Michigan).
- Niuniu Ji Scholarship - Silver Award in year 2010 (CUHK).
- Charles K. Kao Research Exchange Scholarship in year 2010 (CUHK).
- Dean's List in consecutive years 2009 to 2011 (CUHK).