

Huanan Zhang

Contact Information Leeds School of Business
995 Regent Drive, 419 UCB [✉Huanan.Zhang@colorado.edu](mailto:Huanan.Zhang@colorado.edu)
Boulder, CO, 80309 webpage: huananzhang.mystrikingly.com/

Employment **University of Colorado Boulder**, Boulder, CO
Assistant Professor, Leeds School of Business 6/2020 - Present
Penn 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 & Operations Engineering 9/2012 - 8/2017
Thesis co-advisors: Xiuli Chao & Cong Shi
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 Honours

Research Interests

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

Preprints and Journal Publications

- D. Simchi-levi, R. Sun, H. Zhang, Online Learning and Optimization for Revenue Management Problems with Add-on Discounts. Submitted to *Management Science*.
- X. Gao, S. Jasin, S. Najafi, H. Zhang, Joint Learning and Optimization for Multi-product Pricing under a General Cascade Click Model, submitted to *Management Science*. (The authors' names are alphabetically ordered.) **Finalist of 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, Major revision at *Manufacturing & Service Operations Management*.
- H. Zhang, X. Chao, C. Shi, Closing the Gaps: An Online Learning Algorithm for Lost-sales Inventory Systems with Lead Times, Forthcoming at *Management Science*.
- H. Zhang, X. Chao, C. Shi, 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. (The authors' names are alphabetically ordered.)

- 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.
- H. Zhang, C. Shi, X. Chao, 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. (The authors' names are alphabetically ordered.)
- 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.

Working Papers
(Ph.D. supervisees.)

- C. Lyu, H. Zhang, L. Xin, Online Learning for the Optimal Capped Base-stock Policy in Lost-sales Inventory System with Lead Times, Working paper.
- X. Gao, H. Zhang, An Express to Convergence: A Learning Framework for Multi-Product Inventory Systems with Customer Choices, Working paper.
- L. Lu, X. Wang, H. Zhang, Y. Zhang, On the Self-Correction of Parametric Learning for Inventory Control Models, Working paper. (The authors' names are alphabetically ordered.)

Teaching Activities

Penn State University - *Sole instructor*

- IE 570 Supply Chain Engineering (Graduate) Fall 2017 - Fall 2019
- Evaluation: **6.31/7, 6.19/7, 6.67/7, 6.47/7** and **5.95/7, 5.85/7**
- IE 460 Service Systems Engineering (Undergraduate) Spring 2018
- Evaluation: **5.38/7, 5.49/7**

University of Michigan - *Sole instructor*

- IOE 440 - Operations Analysis & Management (Undergraduate) Fall 2016
- Evaluation: **4.55/5, 4.63/5**

Conference Presentations

- 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, INSEAD, France.

Invited Presentations

- Online Learning and Optimization for Revenue Management Problems with Add-on Discounts.
 - 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.
- Multi-Product Price Optimization and Learning under a General Cascade Click Model with Filters.
 - School of Economics and Management, Tsinghua University, June. 2019.
 - Alibaba DAMO Academy, Seattle, July. 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.

Services

- Reviewer for
 - *Operations Research*
 - *Management Science*
 - *Mathematics of Operations Research*
 - *Stochastic Systems*
 - *Operations Research Letters*
 - *Annals of Operations Research*
 - *Service Science*
 - *Naval Research Logistics*
 - *IEEE Transactions on Automatic Control*
 - *IEEE Transactions on Automation Science and Engineering*
- Session Chair for conferences:
 - INFORMS 2019, Seattle, WA.
 - IISE 2019, Orlando, FL.
 - INFORMS 2018, Phoenix, AZ.
 - INFORMS 2016, Nashville, TN.
 - POMS 2017, Seattle, WA.
- Member of INFORMS, MSOM Society, Optimization Society, JFIG, POMS.

Honors, Awards, & Grants

- 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).

Skills

- Proficient in Matlab , C++ , \LaTeX , AMPL and ARENA
- Knowledge of UNIX, SQL , MS Visual Basic, GAMS, AMPL, Java, C, Simio and SAS
- English (fluent), Mandarin (native), Cantonese (forgotten)