

# Stefanus Jasin

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## CONTACT INFORMATION

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## RESEARCH INTERESTS

**Primary interests:** Algorithmic and prescriptive business analytic.

**Current application areas:** Revenue management and pricing, marketing analytic, supply chain and inventory management, e-commerce and omni-channel logistics, crowdsourced (on-demand) businesses, online learning and optimization.

## ACADEMIC APPOINTMENTS

### Stephen M. Ross School of Business (University of Michigan)

- Associate Professor of Technology and Operations (with tenure) Starting Winter 2019
- Assistant Professor of Technology and Operations Fall 2011-Winter 2018

### Tepper School of Business (Carnegie Mellon University)

- Visiting Assistant Professor of Operations Management Fall 2018

## EDUCATION

### Stanford University

- MS/PhD in Computational Mathematics and Engineering (PhD advisor: Sunil Kumar)
- MS in Statistics

### University of California, Berkeley

- BA in Mathematics

## ACCEPTED/PUBLISHED PAPERS

1. Qi Chen, Izak Duenyas, Stefanus Jasin. 2021. **Optimal Use and Replenishment of Two Substitutable Raw Materials in a Nonstationary Capacitated Make-to-Order Production System.** *Accepted at Manufacturing and Service Operations Management.*
2. Sentao Miao, Stefanus Jasin, Xiuli Chao. 2021. **Asymptotically Optimal Lagrangian Inventory Policies for Multi-Warehouse Multi-Store System with Lost Sales.** *Accepted at Operations Research.*
3. Yanzhe Lei, Stefanus Jasin, Joline Uichanco, Andrew Vakhutinsky. 2021. **Joint Product Framing (Display, Ranking, Pricing) and Order Fulfillment under the MNL Model for E-Commerce Retailers.** *Accepted at Manufacturing and Service Operations Management.*
4. Qi Chen, Stefanus Jasin, Izak Duenyas. 2021. **Technical Note—Joint Learning and Optimization of Multi-Product Pricing with Finite Resource Capacity and Unknown Demand Parameters.** *Operations Research*, 69(2): 560-573.
5. Huanan Zhang, Stefanus Jasin. 2020. **Online Learning and Optimization of (Some) Cyclic Pricing Policies for Revenue Management with Patient Customers.** *Forthcoming at Manufacturing and Service Operations Management.*
6. Lai Wei, Stefanus Jasin, Linwei Xin. 2020. **On a Deterministic Approximation of Stochastic Inventory Systems with Sequential Probabilistic Service Level Constraints.** *Forthcoming at Operations Research.*

7. Lai Wei, Roman Kapuscinski, Stefanus Jasin. 2020. **Shipping Consolidation across Two Warehouses with Delivery Deadline and Expedited Options for E-Commerce and Omni-Channel Retailers.** *Forthcoming at Manufacturing and Service Operations Management.*
  - Finalist, MSOM Student Paper Competition 2018
  - Finalist, IBM Best Student Award (INFORMS Service Science) Competition 2018
8. Yanzhe Lei, Stefanus Jasin. 2020. **Real-Time Dynamic Pricing for Revenue Management with Reusable Resources, Advanced Reservations, and Deterministic Service Time Requirements.** *Operations Research*, 68 (1): 676-685.
9. Yan Huang, Stefanus Jasin, Puneet Manchanda. 2019. **Level Up: Leveraging Skill and Engagement to Maximize Player Retention in Online Video Games.** *Information Systems Research*, 30 (3): 927-947.
  - Winner, INFORMS eBusiness Best Paper Award 2017
10. Gabriel Zayas Caban, Stefanus Jasin, Guihua Wang. 2019. **An Asymptotically Optimal Heuristic for General Nonstationary Finite-Horizon Restless Multi-Armed Multi-Action Bandits.** *Advances in Applied Probability*, 51 (3): 745-772.
11. Qi Chen, Stefanus Jasin, Izak Duenyas. 2019. **Nonparametric Self-Adjusting Control for Joint Learning and Optimization of Multiproduct Pricing with Finite Resource Capacity.** *Mathematics of Operations Research*, 44 (2): 601-631.
12. Hakjin Chung, Hyun Soo Ahn, Stefanus Jasin. 2019. **(Re-Scaled) Multi-Attempt Approximation of Choice Model and Its Application to Assortment Optimization.** *Production and Operations Management*, 28 (2): 341-353.
13. Yanzhe Lei, Stefanus Jasin, Amitabh Sinha. 2018. **Joint Dynamic Pricing and Order Fulfillment for E-Commerce Retailers.** *Manufacturing and Service Operations Management*, 20 (2): 269-284.
  - Second prize, POMS-HK Student Paper Competition 2017
14. Hyun Soo Ahn, Stefanus Jasin, Philip Kaminsky, Yang Wang. 2018. **Analysis of Deterministic Control and Its Improvements for an Inventory Problem with Multi-Product Batch Differentiation.** *Operations Research*, 66 (1): 58-76.
15. Qi Chen, Stefanus Jasin, Izak Duenyas. 2016. **Real-Time Dynamic Pricing with Minimal and Flexible Price Adjustments.** *Management Science*, 62 (8): 2437-2455.
16. Stefanus Jasin, Amitabh Sinha. 2015. **An LP-Based Correlated Rounding Scheme for Multi-Item E-Commerce Order Fulfillment.** *Operations Research*, 63 (6): 1336-1351.
17. Stefanus Jasin. 2015. **Performance of an LP-based Control for Revenue Management with Unknown Demand Parameters.** *Operations Research*, 63 (4): 909-915.
18. Stefanus Jasin. 2014. **Re-Optimization and Self-Adjusting Price Control for Network Revenue Management.** *Operations Research*, 62 (5): 1168-1178.
  - Winner, INFORMS Revenue Management and Pricing Section Prize Award 2018.
19. Stefanus Jasin, Sunil Kumar. 2013. **Analysis of Deterministic LP-based Heuristics for Network Revenue Management.** *Operations Research*, 61 (6): 1312-1320.
20. Stefanus Jasin, Sunil Kumar. 2012. **A Re-Solving Heuristic with Bounded Revenue Loss for Network Revenue Management with Customer Choice.** *Mathematics of Operations Research*, 37 (2): 313-345.

PAPERS UNDER  
REVIEW/REVISION

1. Jiaxin Liang, Stefanus Jasin, Joline Uichanco. **Managing Retail Inventory and Pricing in the Presence of Stochastic Purchase Return.** *Under 1<sup>st</sup> round review.*
2. Lyu Chengyi, Stefanus Jasin, Sajjad Najafi, Huanan Zhang. **Assortment Optimization with Multi-Item Basket Purchase under Multivariate MNL Model.** *Under 1<sup>st</sup> round review.*
3. Yiwei Chen, Stefanus Jasin. **Provably Near-Optimal Simple Markdown Readjustment Pricing Policies.** *Under 1<sup>st</sup> round review.*
4. Jiaxin Liang, Stefanus Jasin, Joline Uichanco. **Assortment and Inventory Planning Under Dynamic Substitution with MNL Model: Structural Results and a Near-Optimal Heuristic.** *Under 1<sup>st</sup> round review.*
5. Sajjad Najafi, Izak Duenyas, Stefanus Jasin, Joline Uichanco. **Multi-Product Dynamic Pricing (and Ranking) with Limited Inventories under Cascade Click Model.** *Under 2<sup>nd</sup> round review.*
6. Xiangyu Gao, Stefanus Jasin, Sajjad Najafi, Huanan Zhang. **Joint Learning and Optimization of Multiproduct Pricing (and Ranking) under a General Cascade Click Model.** *Under 2<sup>nd</sup> round review.*
  - Finalist, POMS-JD.com Best Paper Competition 2019
7. Yanzhe Lei, Sheng Liu, Stefanus Jasin, Andrew Vakhutinsky. **On the Joint Inventory and Pricing Control for a One-Warehouse Multi-Store Problem with Lost Sales: Spiraling Phenomena and a Near-Optimal Heuristic.** *Under major revision.*
8. Qi Chen, Yanzhe Lei, Stefanus Jasin. **Real-Time Spatial-Intertemporal Dynamic Pricing for Balancing Supply and Demand in a Ride-Hailing Network.** *Under major revision.*
9. Qiaochu Wang, Yan Huang, Param Vir Singh, Stefanus Jasin. **Algorithmic Transparency with Strategic Users.** *Under major revision.*

SELECT  
RESEARCH IN  
PROGRESS/  
PAPERS IN  
PREPARATION

1. Boxiao Chen, Selvaprabu Nadarajah, Parshan Pakiman, Stefanus Jasin. **Self-Adapting Robustness in Demand Learning.**
2. Yanzhe Lei, Stefanus Jasin, Jingyi Wang, Houtao Deng, Jagannath Putrevu. **Dynamic Workforce Acquisition for Crowdsourced Last-Mile Delivery Platforms.**
3. Xiuli Chao, Stefanus Jasin, Sentao Miao. **Adaptive Algorithms for Multi-Warehouse Multi-Store Inventory Control Problem with Lost Sales and Fixed Cost.**

OTHER  
PUBLICATIONS

1. Co-editors (with Xi Chen and Cong Shi) of a book titled **The Elements of Joint Learning and Optimization in Operations Management**, in collaboration with Springer.
2. Stefanus Jasin, Amitabh Sinha, Joline Uichanco. **Omni-Channel Operations: Challenges, Opportunities, and Models.** A chapter in the book *Operations in an Omnichannel World* published by Springer, September 9, 2019.
3. Joline Uichanco, Stefanus Jasin. **Putting the Customer First: How Researchers are Hoping to Optimize a New Flexible Retail Model.** An article appeared at researchfeatures.com, July 9, 2018.

SELECT  
INVITED TALKS

Northwestern University (Kellogg Seminar, scheduled on 2021); Columbia University (DRO - IEOR Seminar, scheduled on 2021); Indian Institute of Management Ahmedabad (Research Seminar, 2020); McGill University (MSRC Seminar, 2020); Erasmus University (Rotterdam Seminar, 2020); MIT (DSL Seminar, 2020); Tsinghua University (2019); International Symposium on Revenue Management (Zhejiang University, China, 2019); JHU-Carey Symposium on Data-Driven Decision Making (John Hopkins University, 2019); Oracle Lab (Fall 2018); Boston College (Walter Klein OM Seminar, 2018); Carnegie Mellon University (Tepper OM Seminar, 2018); University of Southern California (Marshall OM Seminar, 2018); University of Chicago (Booth OM Seminar, 2017); MIT (DSL Seminar, 2016); Carnegie Mellon University (Tepper OM Seminar, 2014); University of Michigan (Ross OM Seminar, 2011); Duke University (Fuqua Decision Science Seminar, 2011); MIT (Sloan OM Seminar, 2011); New York University (Stern OM Seminar, 2011); Northwestern University (Kellogg OM Seminar, 2011); HP Lab (Spring 2010).

AWARDS AND  
HONORS

- INFORMS Revenue Management and Pricing Section Prize Award (2018)
- Finalist, MSOM Student Paper Competition (2018) (with Lai Wei and Roman Kapuscinski)
- Finalist, IBM Best Student Award Competition (2018) (with Lai Wei and Roman Kapuscinski)
- INFORMS eBusiness Section Best Paper Award (2017) (with Yan Huang and Puneet Manchanda)
- Second prize POMS-HK Student Paper Competition (2017) (with Yanzhe Lei and Amitabh Sinha)
- Arnold M. and Linda T. Jacob Faculty Development Award (2016) (Ross Business School junior faculty research award)
- NSF Award 1561791 (June 1, 2016 - May 31, 2020): Joint Optimization of Pricing, Assortment, and Fulfillment in Omnichannel Retail (Principal Investigator, with Joline Uichanco and Amitabh Sinha)
- Wharton Customer Analytics Initiative (2014) (with Yan Huang and Puneet Manchanda)
- Percy Lionel Davis Award (UC Berkeley Department of Mathematics, 2005)

TEACHINGS

**Stephen M. Ross School of Business (University of Michigan):**

- TO 566. Applied Linear Regression.
- TO 572. Applied Business Forecasting.
- TO 621. Logistics.
- TO 301. Business Statistics and Analytic.
- OMS 899. PhD Seminar in Revenue Management.

**Others:**

- MBA course in Revenue Management (Fall 2018) at Tepper School of Business, Carnegie Mellon University.
- Short course in Dynamic Pricing and Revenue Management (Summer 2017) at Soochow University.
- Short course in Dynamic Pricing and Revenue Management (Summer 2015, 2017) at Shanghai University of Finance and Economics (SHUFE).

SERVICE

**Senior/Associate Editor:**

- Management Science (2018-now)
- Operations Research (2020-now)
- Manufacturing and Service Operations Management (2021-now)
- Production and Operations Management (2019-now)
- Naval Research Logistics (2018-now)

**Others:**

- Co-department Editor (together with Yun Fong Lim) for Naval Research Logistics Special Issue on Online Retails.
- Reviewer: Management Science, Operations Research, Mathematics of Operations Research, Manufacturing and Service Operations Management, Stochastic Systems, Production and Operations Management, Naval Research Logistics, European Journal of Operations Research.
- MSOM Student Paper Competition judge (2017-now).
- MSOM SIG judge (2016-now).
- INFORMS Revenue Management and Pricing Section Board Member (2018-2020).
- INFORMS Annual Meeting, Revenue Management cluster co-chair (2018).
- Session chairs at INFORMS Annual Meeting (2011-now).
- Co-advised MAP projects (Winter 2012).
- Co-advised Tauber projects (Summer 2012-2016).

STUDENTS  
SUPERVISED

**Current students:**

1. Jiaxin Liang (2017-present): co-advised with Joline Uichanco

**Past students:**

1. Qi Chen (2011-2017), co-advised with Izak Duenyas  
     Fall 2017: Assistant Professor at Naveen Jindal School of Management (UT Dallas)  
     Fall 2018-now: Assistant Professor at London School of Business
2. Yanzhe Lei (2012-2018), co-advised with Amitabh Sinha  
     Fall 2018-now: Assistant Professor at Smith School of Business, Queen's University
3. Lai Wei (2013-2019), co-advised with Roman Kapuscinski  
     Fall 2019-now: Assistant Professor at Carroll School of Management, Boston College