

Stefanus Jasin

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CONTACT INFORMATION

Stephen M. Ross School of Business
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RESEARCH INTERESTS

Primary interests: Algorithmic and prescriptive business analytic.

Current application areas: Revenue management and pricing, marketing and retail analytic, supply chain and inventory management, e-commerce and omni-channel logistics, 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. Qiaochu Wang, Yan Huang, Param Vir Singh, Stefanus Jasin. 2022. **Algorithmic Transparency with Strategic Users**. *Accepted at Management Science*.
2. Sentao Miao, Stefanus Jasin, Xiuli Chao. 2022. **Asymptotically Optimal Lagrangian Inventory Policies for Multi-Warehouse Multi-Store System with Lost Sales**. *Operations Research*, 70 (1): 141-159.
 - Presented at MSOM SIG 2021
3. Huanan Zhang, Stefanus Jasin. 2022. **Online Learning and Optimization of (Some) Cyclic Pricing Policies for Revenue Management with Patient Customers**. *Manufacturing and Service Operations Management*, 24 (2): 1165-1182.
4. Xiangyu Gao, Stefanus Jasin, Sajjad Najafi, Huanan Zhang. 2021. **Joint Learning and Optimization of Multiproduct Pricing (and Ranking) under a General Cascade Click Model**. *Accepted at Management Science*.
 - Finalist, POMS-JD.com Best Paper Competition 2019
5. 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*.

6. 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.*
7. Lai Wei, Stefanus Jasin, Linwei Xin. 2021. **On a Deterministic Approximation of Stochastic Inventory Systems with Sequential Probabilistic Service Level Constraints.** *Operations Research*, 69 (4): 1057-1076.
8. 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.
9. Lai Wei, Roman Kapuscinski, Stefanus Jasin. 2021. **Shipping Consolidation across Two Warehouses with Delivery Deadline and Expedited Options for E-Commerce and Omni-Channel Retailers.** *Manufacturing and Service Operations Management*, 23 (6): 1634-1650.
 - Finalist, MSOM Student Paper Competition 2018
 - Finalist, IBM Best Student Award (INFORMS Service Science) Competition 2018
10. 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.
11. 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
12. 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.
13. 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.
14. 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.
15. 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 Best Student Paper Competition 2017
16. 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.
17. Qi Chen, Stefanus Jasin, Izak Duenyas. 2016. **Real-Time Dynamic Pricing with Minimal and Flexible Price Adjustments.** *Management Science*, 62 (8): 2437-2455.
18. Stefanus Jasin, Amitabh Sinha. 2015. **An LP-Based Correlated Rounding Scheme for Multi-Item E-Commerce Order Fulfillment.** *Operations Research*, 63 (6): 1336-1351.
19. Stefanus Jasin. 2015. **Performance of an LP-based Control for Revenue Management with Unknown Demand Parameters.** *Operations Research*, 63 (4): 909-915.

20. 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.
21. Stefanus Jasin, Sunil Kumar. 2013. **Analysis of Deterministic LP-based Heuristics for Network Revenue Management**. *Operations Research*, 61 (6): 1312-1320.
22. 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. Yiwei Chen, Stefanus Jasin. **Provably Near-Optimal Simple Markdown Readjustment Pricing Policies**. *Under 2nd round review*.
2. Qi Chen, Yanzhe Lei, Stefanus Jasin. **Real-Time Spatial-Intertemporal Dynamic Pricing (and Relocation) for Balancing Supply and Demand in a Ride-Hailing Network**. *Under 2nd round review*.
3. 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*.
4. Sajjad Najafi, Izak Duenyas, Stefanus Jasin, Joline Uichanco. **Multi-Product Dynamic Pricing (and Ranking) with Limited Inventories under Cascade Click Model**. *Under major revision*.
5. Lyu Chengyi, Stefanus Jasin, Sajjad Najafi, Huanan Zhang. **Assortment Optimization with Multi-Item Basket Purchase under Multivariate MNL Model**. *Under major revision*.
6. Jiaxin Liang, Stefanus Jasin, Joline Uichanco. **Assortment and Inventory Planning Under Dynamic Substitution with MNL Model: Structural Results and a Near-Optimal Heuristic**. *Under major revision*.

SELECT
RESEARCH IN
PROGRESS/
PAPERS IN
PREPARATION

1. Jiaxin Liang, Stefanus Jasin, Joline Uichanco. **Combining a Smart Pricing Policy with a Simple Replenishment Policy: Managing Uncertainties in the Presence of Stochastic Purchase Returns**.
 - Second prize, POMS-HK Best Student Paper Competition 2022
 - Winner, EURO Working Group for Pricing and Revenue Management Student Video Award 2022
2. Xiuli Chao, Stefanus Jasin, Sentao Miao. **Dynamically Adjusted Lagrangian Policies for Multi-Warehouse Multi-Store Inventory System with Lost Sales**.
3. Xiuli Chao, Stefanus Jasin, Sentao Miao. **A Lagrangian Inventory Policy for Multi-Warehouse Multi-Store Inventory System with Lost Sales and Fixed Cost**.
4. Boxiao Chen, Selvaprabu Nadarajah, Parshan Pakiman, Stefanus Jasin. **Self-Adapting Robustness in Demand Learning**.
5. Lyu Chengyi, Stefanus Jasin, Andrew Vakhutinsky, Huanan Zhang. **Assortment and Price Optimization under MNL Model with Price Range Effect**.
6. Sentao Miao, Yanzhe Lei, Stefanus Jasin, Debjit Roy. **A Lagrangian Policy for a Joint Inventory, Pricing, and Fulfillment Problem in a Two-Echelon E-Commerce Network**.
7. Jiaxin Liang, Stefanus Jasin, Joline Uichanco. **Taming the Effect of Retail Returns: Joint Optimization of Inventory Replenishment and Return Management**.

8. Boxiao Chen, Stefanus Jasin, Lai Wei, Yu Zhang. **A Multi-Product Joint Inventory and Pricing Control for Lost Sales System with Positive Lead Time and Random Yield: An Exponential Smoothing Approach.**

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. To be published in 2022.
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

National University of Singapore (IORA Seminar, 2022); University of Chicago (Booth OM Seminar, 2022); University of Maryland (DO&IT Seminar, 2021); UT Austin (McCombs IROM Seminar, 2021); Northwestern University (Kellogg Seminar, 2021); Columbia University (DRO - IEO Seminar, 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

- Winner, EURO Working Group for Pricing and Revenue Management Student Award 2022 (with Jiaxin Liang and Joline Uichanco)
- Second prize, POMS-HK Best Student Paper Competition 2022 (with Jiaxin Liang and Joline Uichanco)
- Finalist, POMS-JD.com Best Paper Competition 2019 (with Xiangyu Gao, Sajjad Najafi, and Huanan Zhang)
- Winner, 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)
- Winner, INFORMS eBusiness Section Best Paper Award 2017 (with Yan Huang and Puneet Manchanda)
- Second prize, POMS-HK Best 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 2005
(UC Berkeley Department of Mathematics)

TEACHINGS

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

- TO 557. Applied Business Statistics.
- 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
Summer 2015, 2017: at Shanghai University of Finance and Economics (SHUFE)

SERVICE

Department Editor (DE):

- Production and Operations Management
 - DE for Revenue Management and Market Analytics (2022-now)

Senior/Associate Editor (SE/AE):

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

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.

Others:

- Co-department Editor (together with Yun Fong Lim) for Naval Research Logistics Special Issue on Online Retail; appeared in volume 68, issue 6, pg. 679-854, September 2021.
- MSOM Student Paper Competition judge (2017-now).
- MSOM SIG judge (2016-2019).
- INFORMS Revenue Management and Pricing Section Data Competition committee (2020).
- INFORMS Revenue Management and Pricing Section Student Paper Award committee (2019).
- 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, 2021).

STUDENTS SUPERVISED

Current students:

1. Jiaxin Liang (2017-now): 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