

JOLINE UICHANCO

University of Michigan, Ross School of Business
701 Tappan St, Room R4418, Ann Arbor MI 48109
Email: jolineu@umich.edu

Date of CV: October 13, 2023

PROFESSIONAL

- University of Michigan, Ross School of Business, Ann Arbor, MI**
- Associate Professor of Technology and Operations (tenured) 2022 to present
 - Assistant Professor of Technology and Operations 2014 to 2022
- Amazon (on leave from U of Michigan)**
- Senior Research Scientist, Modeling and Optimization 2022 to 2023
- IBM T.J. Watson Research Center, Yorktown Heights, NY**
- Postdoctoral Researcher, Supply Chain Analytics 2013 to 2014

EDUCATION

- Ph.D. in Operations Research** 2013
Massachusetts Institute of Technology (MIT), Sloan School of Management
Dissertation: Data-driven optimization and analytics for operations management applications
Advisors: Prof. Retsef Levi and Prof. Georgia Perakis
- M.S. in Computation for Design and Optimization** 2007
Massachusetts Institute of Technology (MIT), School of Engineering
Dissertation: Data-driven revenue management
Advisors: Prof. Retsef Levi and Prof. Georgia Perakis
- M.S. in Computational Engineering** 2007
National University of Singapore (NUS)
Dissertation: Ambiguous risk measures and piecewise linear utility models in portfolio management
Advisors: Prof. Karthik Natarajan and Prof. Melvyn Sim
- B.Sc. (Honors) in Computational Finance** 2006
National University of Singapore (NUS)
Lijen Industrial Development Medal for the best 2006 Honors-year project in Computational Finance

HONORS AND AWARDS

Institutional

- 2019. **Arnold M and Linda T Jacob Faculty Development Award**, Ross School of Business, University of Michigan (Ross school-wide, junior faculty research award)

Grants

- NSF, CMMI, 1561791, “Joint optimization of pricing, assortment, and fulfillment in omnichannel retail”, 6/1/2016–05/31/2020, Total: \$246,263, Stef Jasin (PI), Joline Uichanco (co-PI)

Professional

- 2017. **INFORMS Revenue Management Practice Prize**, a prestigious award given once every 2 years to outstanding applications of revenue management techniques, for the project “Omni-Channel Mark-down Optimization” with IBM Research (Markus Ettl, Pavithra Harsha, and Shiva Subramanian) and a Top 15 U.S. retailer
- 2017. Honorable Mention in the first-ever **Biennial M&SOM Practice-Based Research Competition** for the paper “Dynamic pricing for omnichannel inventories” (appearing in the journal *M&SOM*) co-authored with Pavithra Harsha (IBM Research) and Shiva Subramanian (IBM Research)
- 2012. First Prize in the **IBM Service Science Best Student Paper Award** for the paper “Stochastic Optimization for Resource Allocation with Random Emergencies”

Student Awards

- 2022. Jiaxin (Alys) Liang: Winner of **EURO Working Group for Pricing and Revenue Management Student Video Award** for the presentation of the paper “Asymptotically Optimal Dynamic Pricing in the Presence of Stochastic Returns”
- 2022. Jiaxin (Alys) Liang: Second Place in the **POMS-HK Best Student Paper Competition** for the paper “Managing Retail Inventory and Pricing in the Presence of Stochastic Purchase Returns”
- 2020. Mengzhenyu Zhang: Awarded the **Rackham Predoctoral Fellowship**, one of the most prestigious awards granted by the University of Michigan for outstanding doctoral candidates working on dissertations that are unusually creative, ambitious and impactful
- 2019. Aravind Govindarajan: Second Place in the **POMS College of Supply Chain Management Best Student Paper Competition** for the paper “The distribution-free inventory problem for e-commerce fulfillment networks”
- 2019. Aravind Govindarajan: Finalist in the **POMS-HK Best Student Paper Competition** for the paper “The distribution-free inventory problem for e-commerce fulfillment networks”
- 2018. Mengzhenyu Zhang: Awarded the **W. Allen Spivey/Valerie and William Hall Family Fellowship** by the Ross School of Business, an award given to a 4th or 5th year Ph.D. student to recognize academic excellence, contributions to the research environment, and service to the program

PUBLICATIONS AND SCHOLARLY PRESENTATIONS

Notes: Underline denotes co-authors who (at the time of authorship) were Ph.D. students I supervised
Dagger[†] denotes co-authors who (at the time of authorship) were industry collaborators

Refereed Journals

- [1] S. Najafi, I. Duenyas, S. Jasin, **J. Uichanco**, “Multi-product dynamic pricing (and ranking) with limited inventories under Cascade Click model”, Accepted to *Manufacturing & Service Operations Management*
- [2] 2022. M. Lin, T. Huh, H. Krishnan, **J. Uichanco**, “Technical Note–Data-driven newsvendor problem: Performance of the sample approximation approach”, *Operations Research*, Volume: 70, Issue: 4, Pages: iii-vii
- [3] 2022. M. Zhang, H.-S. Ahn, **J. Uichanco**, “Data-driven pricing for new products”, *Operations Research*, Volume: 70, Issue: 2, Pages: 847–866
- [4] 2022. Y. Lei, S. Jasin, **J. Uichanco**, A. Vakhutinsky[†], “Joint product framing (display, ranking, pricing) and order fulfillment under the MNL model for e-commerce retailers”, *Manufacturing & Service Operations Management*, Volume: 24, Issue: 3, Pages: 1261-1885
- [5] 2021. **J. Uichanco**, “A model for pre-positioning emergency relief items before a typhoon with uncertain trajectory”, *Manufacturing & Service Operations Management*, Volume: 24, Issue: 2, Pages: 766–790
- [6] 2021. A. Govindarajan, A. Sinha[†], **J. Uichanco**, “Distribution-free inventory risk pooling in a multi-location newsvendor”, *Management Science*, Volume: 67, Issue: 4, Pages 2272-2291
 - Second Place in the 2019 POMS College of Supply Chain Management Best Student Paper Competition
 - Finalist in the 2019 POMS-HK Best Student Paper Competition
- [7] 2021. A. Govindarajan, A. Sinha, **J. Uichanco**, “Joint inventory and fulfillment decisions for omnichannel retail networks”, *Naval Research Logistics*, Special issue on Analytics and Operations of Online Retailing, Volume: 68, Issue: 6, Pages: 779–794
- [8] 2019. P. Harsha[†], S. Subramanian[†], **J. Uichanco**, “Dynamic pricing of omnichannel inventories”, *Manufacturing & Service Operations Management* (Special Section: First M&SOM Practice-Based Research Competition), Volume: 21, Issue: 1, Pages: 47–65
 - Winner of the 2017 INFORMS Revenue Management Practice Prize
 - Honorable mention in the 2017 Biennial M&SOM Practice-Based Research Competition
- [9] 2018. K. Natarajan, M. Sim, **J. Uichanco**, “Asymmetry and Ambiguity in Newsvendor Models”, *Management Science*, Volume: 64, Issue: 7, Pages: 3146–3167
- [10] 2015. R. Levi, G. Perakis, **J. Uichanco**, “The data-driven newsvendor problem: New bounds and insights”, *Operations Research*, Volume: 63, Issue: 6, Pages: 1294–1306
- [11] 2014. M. Angalakudati[†], S. Balwani[†], J. Calzada[†], B. Chatterjee[†], G. Perakis, N. Raad[†], **J. Uichanco**, “Business analytics for flexible resource allocation under random emergencies”, *Management Science*, Volume: 60, Issue: 6, Pages: 1552–1573
 - Winner of the 2012 IBM Service Science Best Student Paper Award
- [12] 2010. K. Natarajan, M. Sim, **J. Uichanco**, “Tractable robust expected utility and risk models for portfolio optimization”, *Mathematical Finance*, Volume: 20, Issue: 4, Pages: 695–731

Under Review in Refereed Journals

- [13] H.-S. Ahn, C. Ryan, **J. Uichanco**, M. Zhang, “Valuing influence”, Submitted to *Management Science*
- [14] S. Najafi, S. Jasin, **J. Uichanco**, J. Zhao, “Assortment and Price Optimization Under a Multi-Attribute (Contextual) Choice Model”, *Operations Research*, Under review (Round 1)
- [15] J. Liang, S. Jasin, **J. Uichanco**, “Asymptotically Optimal Dynamic Pricing in the Presence of Stochastic Purchase Returns”, *Mathematics of Operations Research*, Invited for a major revision (Round 1)
- Selected for the 2023 MSOM Supply Chain Management SIG
 - Winner of 2022 EURO Working Group for Pricing and Revenue Management Student Video Award
 - Second Place in the 2022 POMS-HK Best Student Paper Competition
- [16] H.-S. Ahn, C. Ryan, **J. Uichanco**, M. Zhang, “Certainty-equivalent pricing with dependent demand and limited price-changing opportunities”, *Mathematics of Operations Research*, Invited for a major revision (Round 1)
- Selected through a full-paper peer-review process as a Spotlight presentation at the 2019 Revenue Management and Pricing Conference (In the Top 16 out of 86 full paper submissions)
- [17] J. Liang, S. Jasin, **J. Uichanco**, “Assortment and Inventory Planning Under Dynamic Substitution with MNL Model: Structural Results and a Near-Optimal Heuristic”, *Operations Research*, Under review (Round 2)
- [18] C. Wu, M. Eftekhari, **J. Uichanco**, “Workforce Configuration in Charity Settings: A Forward-Looking Approach”, *Manufacturing & Service Operations Management*, Invited for a major revision (Round 1)

Working Papers

- [16] **J. Uichanco**, A. Sinha, “Data-driven uncertainty sets from high-dimensional data for Amazon’s transportation network”, In preparation
- [17] S. Jasin, S. Najafi, **J. Uichanco**, J. Zhao, “Assortment and price optimization under a multi-attribute (contextual) choice model”, In preparation
- [18] H.-S. Ahn, A. Govindarajan, **J. Uichanco**, “The operational value of customer return behavior information and personalized return policies”, In preparation
- [19] R. Levi, G. Perakis, **J. Uichanco**, “Regret optimization for stochastic inventory models with spread information”, In preparation (Pre-print available)

Chapters in books

- 2019. S. Jasin, A. Sinha, **J. Uichanco**, “Omni-channel operations: Challenges, opportunities, and models”, in S. Gallino and T. Moreno-Garcia (ed.) *Operations in an Omnichannel World*, Springer Series in Supply Chain Management: pp. 15–34

Invited Seminar/Workshop Talks (Since joining U of M)

- 2023. Overcoming the profitability problem of e-commerce retail using data-driven product framing, April 28, The 7th Women in Data Science (WiDS) Conference at the American University of Beirut (AUB), Beirut, Lebanon
- 2023. On using data for disaster preparedness in the Pacific typhoon belt: A case study of the Philippines, April 27, The 7th Women in Data Science (WiDS) Conference at the American University of Beirut (AUB), Beirut, Lebanon
- 2023. Overcoming the profitability problem of e-commerce retail using data-driven product framing, April 25, Industrial Engineering Seminar, Bilkent University, Ankara, Turkey
- 2023. Overcoming the profitability problem of e-commerce retail using data-driven product framing, April 20, City University of New York (CUNY), Zicklin School of Business, Operations Management Seminar Series (OMEGA)
- 2022. Distribution-free inventory optimization for a retail fulfillment network, November 7, New York University Stern School of Business (NYU Stern), Operations Management Lunch Seminar (MOILS)
- 2022. Dynamic pricing under a Cascade Click model, Summer workshop on new trends and challenges in e-commerce, supply chain management, and logistics, August 26, University of Chicago Booth School of Business
- 2022. Product Framing for E-commerce Retailers, February, Amazon Tech Talk
- 2021. A model for prepositioning emergency relief items before a typhoon with uncertain trajectory, November 15, University of California Los Angeles (UCLA), Decisions, Operations & Technology Management
- 2021. Hosmer-Hall Interdisciplinary Research (Scholar's Journey) presentation, March 17, University of Michigan, Ross School of Business
- 2020. Product Framing for E-commerce Retailers, July 17, Institute for Data, Systems, and Society (IDSS) seminar series (Virtual seminar), Massachusetts Institute of Technology
- 2020. Decision-making under uncertainty using distributionally robust optimization, January 13, Operations Research and Financial Engineering (ORFE) seminar series, Princeton University
- 2018. Dynamic pricing of omnichannel inventories, October, Operations Management seminar series, Georgia Institute of Technology Scheller School of Business
- 2018. E-commerce revenue management through personalized website displays, pricing and fulfillment, June, Retail Analytics workshop, University of North Carolina Kenan-Flagler Business School
- 2018. Dynamic pricing of omnichannel inventories, February, Operations Management seminar series, Yale School of Management
- 2018. Dynamic pricing of omnichannel inventories, February, Operations Management seminar series, Massachusetts Institute of Technology, Sloan School of Business
- 2017. Dynamic pricing of omnichannel inventories, May, Institute for Data, Systems, and Society (IDSS) seminar series, Massachusetts Institute of Technology
- 2017. Asymmetry and ambiguity in newsvendor models, May, Operations Research and Financial Engineering (ORFE) seminar series, Princeton University
- 2017. Dynamic pricing of omnichannel inventories, May, Operations Management seminar series,

Carnegie Mellon University, Tepper Business School

- 2014. Analytics for humanitarian logistics, December, IBM Philippines and University of Asia and the Pacific, Philippines
- 2014. Analytics for humanitarian logistics, December, Ateneo Institute of Sustainability, Ateneo de Manila University, Philippines

TECHNOLOGY TRANSFER

U.S. Patents Awarded

- J. Brereton, A. Deshpande, A. Hampapur, M. He, A. King, X. Liu, C. Milite, J.-E. Park, **J. Uichanco**, S. Xing, S. Igrejas, H. Fei, V. Ramamurthy, Y. Li, K. Hendrix, X.B. Zheng, “Big data sourcing simulator”, US20160110681A1, Date issued: 2020-06-16
- M. Ettl, P. Harsha, S. Subramanian, **J. Uichanco**, “Demand-supply matching with a time and virtual space network”, US20160283953A1, Date submitted: 2015-03-26
- J. Brereton, A. Deshpande, A. Hampapur, M. He, A. King, X. Liu, C. Milite, J.-E. Park, **J. Uichanco**, S. Xing, S. Igrejas, H. Fei, V. Ramamurthy, Y. Li, K. Hendrix, X.B. Zheng, “System and method for optimizing delivering sources of online orders”, US20170228812A1, Date submitted: 2016-02-08

TEACHING AND MENTORSHIP

Graduated Ph.D. students

- Chao Wu, 2023, Arizona State University Ph.D. student co-advised with Mahyar Eftekhari. Current position: Assistant Professor, Wayne State University
- Mengzhenyu Zhang, 2021, Revenue management in the new age: Analysis and learning with dependency and non-stationarity, Co-chair with Hyun-soo Ahn. Current position: Assistant Professor, University College London (UCL)
- Aravind Govindarajan, 2019, Essays on e-commerce and omnichannel retail operations, Chair. Current position: Lead Data Scientist, Target Corp.

Current Ph.D. students

- Hanqi Wen, Expected graduation: 2026, Co-chair with Izak Duenyas.
- Jiaxin Liang, Expected graduation: 2024, Co-chair with Stefanus Jasin.

Graduated Pre-doctoral Research Fellows

- Benjamin Lewis, Currently: Masters in Technology and Public Policy, MIT

Dissertation committee membership

- Manqi Li, 2021, Data-driven Operations Management.
- Amando Bernal, 2020, Pricing in Network Revenue Management Systems with Reusable Resources.
- Qi Luo, 2020, Incentive Contracts in Multi-agent Systems: Theory and Applications.
- Ece Sancı, 2019, Strategies for Disaster Preparedness and Disruption Risk Mitigation.
- Hao Yuan, 2019, Data Driven Optimization: Theory and Applications in Supply Chain Systems.

New courses introduced at University of Michigan

- Survey of Topics in Technology & Operations (TO 899), Ph.D. level (3 Credits), Winter 2020, Winter 2022
- Humanitarian Operations (TO 899), Ph.D. level (3 Credits), Winter 2015

Courses taught at University of Michigan

- Introduction to Operations Management (TO 313), undergraduate level (3 Credits, Core), Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020, Fall 2021

SERVICE

Significant Service Assignments

<i>Senior Editor</i> <i>Journal Production and Operations Management</i> (Impact Factor: 1.772)	2022 to present
<i>Ph.D. Program Faculty Coordinator</i> Technology & Operations area, Ross School of Business, University of Michigan	2018 to 2022
<i>Core Course Coordinator (TO 313)</i> Ross School of Business, University of Michigan	2017 to 2022
<i>Ross Integrative Semester (RIS) Committee Member</i> Ross School of Business, University of Michigan	2017 to 2022
<i>Associate Editor for Supply Chain Management</i> Journal 4OR (jointly published by the Belgian, French, and Italian Operations Research Societies, Impact Factor: 2.056)	2014 to present

Service to Profession

- 2023. Selection Committee member for the 2023 POMS College of SCM Best Student Paper Competition
- 2022. Discussant at the Revenue Management and Pricing (RMP) Conference (Virtual)
- 2022. Selection Committee member for the 2022 Best Working Paper Competition for the Technology, Innovation Management, and Entrepreneurship Section (TIMES) of INFORMS
- 2022. Selection Committee member for the POMS Supply Chain Management Student Paper Competition
- 2021. Cluster Chair of the POM in Practice Cluster, POMS 2021 Conference (Virtual)
- 2021. Selection Committee member for the MSOM Best Student Paper Award
- 2020. Selection Committee member for the INFORMS Public Sector Operations Research Best Paper Award
- 2020. Student Paper Prize Committee for the INFORMS Revenue Management and Pricing (RMP) Section
- 2020. Cluster Chair of the POM in Practice Cluster, POMS 2020 Conference in Minneapolis, Minnesota
- 2019. Selection Committee member for the INFORMS Public Sector Operations Research Best Paper Award
- 2019. Cluster Chair of the Revenue Management and Pricing, INFORMS International Conference, Cancun, Mexico

- 2019. Program Committee member, INFORMS Revenue Management & Pricing Section, Stanford, California
- 2019. Selection Committee member for the POM College of Supply Chain Management Best Student Paper Award
- 2018. Selection Committee member for The Elwood S. Buffa Doctoral Dissertation Award given by the Decision Sciences Institute
- Served as reviewer for Operations Research (OR), Management Science (MS), Manufacturing & Service Operations Management (M&SOM), Production and Operations Management (POM), Mathematical Programming (MP), Mathematics of Operations Research (MOR), European Journal of Operations Research (EJOR), Wiley Encyclopedia of Operations Research and Management Science, SIAM Workshop on Analytic Algorithms and Combinatorics (ANALCO '10)

Service to Institution

- *Faculty Advisor* 2018 to 2020
Bronze Elegance (a UofM Sponsored Student Organization)
- *Faculty Search Committee Member* 2014
Technology & Operations area, Ross School of Business, University of Michigan