

# JOLINE UICHANCO

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University of Michigan, Ross School of Business  
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Date of CV: January 2021

## EDUCATION

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- 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

## APPOINTMENTS

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- Assistant Professor* 2014 to present  
Technology & Operations area  
Ross School of Business, University of Michigan
- Postdoctoral Researcher* 2013 to 2014  
IBM T.J. Watson Research Center, Yorktown Heights, NY
- Summer Intern* 2010  
IBM Zürich Research Lab, Rüschlikon, Switzerland

## HONORS AND AWARDS

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### 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*) coauthored 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: 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 4<sup>th</sup> or 5<sup>th</sup> year Ph.D. student to recognize academic excellence, contributions to the research environment, and service to the program

## PUBLICATIONS AND SCHOLARLY PRESENTATIONS

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

### Refereed Journals

- [1] Forthcoming. J. Uichanco, “A model for pre-positioning emergency relief items before a typhoon with uncertain trajectory”, Forthcoming in *Manufacturing & Service Operations Management*
- [2] Forthcoming. Y. Lei, S. Jasin, J. Uichanco, A. Vakhutinski<sup>†</sup>, “Joint product framing (display, ranking, pricing) and order fulfillment under the MNL model for e-commerce retailers”, Forthcoming in *Manufacturing & Service Operations Management*
- [3] Forthcoming. M. Zhang, H.-S. Ahn, J. Uichanco, “Data-driven pricing for new products”, Forthcoming in *Operations Research*
- [4] 2021. A. Govindarajan, A. Sinha<sup>†</sup>, 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
- [5] 2020. 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
- [6] 2019. P. Harsha<sup>†</sup>, S. Subramanian<sup>†</sup>, **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
- [7] 2018. K. Natarajan, M. Sim, **J. Uichanco**, “Asymmetry and Ambiguity in Newsvendor Models”, *Management Science*, Volume: 64, Issue: 7, Pages: 3146–3167
- [8] 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
- [9] 2014. M. Angalakudati<sup>†</sup>, S. Balwani<sup>†</sup>, J. Calzada<sup>†</sup>, B. Chatterjee<sup>†</sup>, G. Perakis, N. Raad<sup>†</sup>, **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
- [10] 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**

- [11] M. Lin, T. Huh, H. Krishnan, **J. Uichanco**, “Data-driven newsvendor problem: Performance of the sample approximation approach”, *Operations Research*, Minor revision
- [12] J. Liang, S. Jasin, **J. Uichanco**, “Combining a Smart Pricing Policy with a Simple Replenishment Policy: Managing Uncertainties in the Presence of Stochastic Purchase Returns”, *Management Science*, Under a 1<sup>st</sup> round of reviews
- Second Place in the 2022 POMS-HK Best Student Paper Competition
- [13] H.-S. Ahn, C. Ryan, **J. Uichanco**, M. Zhang, “On the performance of certainty equivalent pricing”, *Management Science*, Under a 2<sup>nd</sup> round of reviews
- 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)
- [14] S. Najafi, I. Duenyas, S. Jasin, **J. Uichanco**, “Multi-product dynamic pricing (and ranking) with limited inventories under Cascade Click model”, *Manufacturing & Service Operations Management*, Under a 1<sup>st</sup> round of reviews
- [15] 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*, Invited for a major revision (Round 2)
- [16] C. Wu, M. Eftekhari, **J. Uichanco**, “Workforce Configuration in Charity Settings: A Forward-Looking Approach”, Submitted to *Manufacturing & Service Operations Management*, Under a 1<sup>st</sup> round of reviews

### **Working Papers**

- [17] H.-S. Ahn, A. Govindarajan, **J. Uichanco**, “The operational value of customer return behavior information and personalized return policies”, In preparation
- [18] 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 Talks (Since joining U of M)**

- 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. 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**

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## **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**

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### **Graduated Ph.D. students**

- Mengzhenyu Zhang, 2021, Revenue management in the new age: Analysis and learning with dependency and non-stationarity, Co-chair with Hyun-soo Ahn. Accepted faculty position in University College London (UCL). Current position: IBM T.J. Watson Research Center, Postdoctoral Researcher
- 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: 2023, Co-chair with Stefanus Jasin.
- Chao Wu, Expected graduation: 2024, Arizona State University Ph.D. student co-advised with Mahyar Eftekhari

### **Current Pre-doctoral Research Fellows**

- Benjamin Lewis, Expected graduation: 2022

### **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**

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## Significant Service Assignments

<i>Senior Editor</i> Journal <i>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 present
<i>Core Course Coordinator (TO 313)</i> Ross School of Business, University of Michigan	2017 to present
<i>Ross Integrative Semester (RIS) Committee Member</i> Ross School of Business, University of Michigan	2017 to present
<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

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