

Jue Wang

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Education

PhD (2013) Industrial Engineering, University of Toronto, Toronto, Canada

BSc (2007) Biomedical Engineering, Xi'an Jiaotong University, Xi'an, China

Academic Positions

Queen's University, Smith School of Business, Kingston, ON, Canada

Associate Professor (with tenure, 2022–present)

Distinguished Faculty Fellow of Management Analytics (2021–present)

Assistant Professor (2016–2022)

Postdoctoral fellow (2014–2016)

University of Toronto, Department of Mechanical & Industrial Engineering, Toronto, ON, Canada

Affiliate Professor (2019–present), Centre for Maintenance Optimization & Reliability Engineering

Publications

Wang, J. (2022) Optimal sequential multi-class diagnosis. *Operations Research*, 70(1), 201–222

Wang, J. (2021) Optimal Bayesian demand learning over short horizons. *Production & Operations Management*, 30(4), 1154–1177

Wang, J., Levin Y., Nediak M. (2020) Selling passes to strategic customers. *Operations Research*, 68(4), 1095–1115

Wang, J. (2016) Minimizing the false alarm rate in systems with transient abnormality. *Naval Research Logistics*, 63(4), 320–334

Wang, J., Lee, C.G. (2015) Multi-state Bayesian control chart over a finite horizon. *Operations Research*, 63(4), 949–964

Research Grants

Principal Investigator, MITACS Accelerate Grant \$60,000 (2022–2023)

Distinguished Faculty Fellow of Management Analytics, Smith School of Business, Queen's University, \$45,000 (2021–2024)

Co-recipient, MITACS Accelerate Grant (2020)

Principal Investigator, Discovery Grant (Individual), Natural Sciences and Engineering Research Council of Canada (NSERC), \$142,500 (2019–2024)

Co-recipient, NSERC Collaborative Research and Development (CRD) Grant \$ 159,400 (2019–2020)

Co-recipient, Monieson Centre “Future of Business Research” Grant, \$9,000 (2018–2020)

Co-recipient, NSERC Collaborative Research and Development (CRD) Grant (2017–2021)

Principal Investigator, Smith School of Business General Research Grant, \$9,000 (2017–2018)

Research Initiation Grant, Queen’s University, \$45,000 (2016–2019)

Fellowships and Awards

New Researcher Achievement Award, Smith School of Business, Queen’s University, 2021

Distinguished Faculty Fellow of Management Analytics, Smith School of Business, Queen’s University
(2021-present)

Scotiabank scholar, Smith School of Business, Queen’s University (2018–present)

Second place (Open category), Canadian Operations Research Society Student Paper Competition (2013)

University of Toronto Early Stage Technology Award for promising information technology (2012)

First place, Quantitative Finance & Risk Management Student Paper Competition (2012)

Best oral presentation, Research symposium of the Department of Mechanical & Industrial Engineering,
University of Toronto (2011)

Outstanding Graduate, Xi’an Jiaotong University (2007)

First prize, Competition of Physics, Xi’an Jiaotong University (2005)

Working Papers (†student supervised)

R. Yousefi, J. Wang, Joint monitoring and learning of threatened species (under revision at *Management Science*)

A. Ovchinnikov, J. Wang, Customer value in dynamic pricing situations

Y.Xie, J. Wang, The value of information in optimal online learning

R. Yousefi, J. Wang, Y. Levin, M. Nediak, The impact of strategic customers on dynamic subscription Pricing

Work in progress

J. Wang, Y. Levin, M. Nediak, Dynamic price competition under strategic repeat purchase

J. Wang, Condition-based maintenance in a changing environment

X. Song, J. Wang, Active sequential learning through belief reconstruction

Academic Service

Ad-hoc reviewer for *Operations Research*, *Management Science*, *Manufacturing & Service Operations Management*, *Production & Operations Management*, *Naval Research Logistics*, *European Journal of Operations Research*, *Critical Care Medicine*, *Health Care Management Science*, *Omega*

Cluster chair (Revenue Management), Canadian Operations Research Society (CORS) Annual Meeting, Saskatoon, 2019

Session chair: CORS 2012, 2016, 2017, 2018, 2020, INFORMS 2016, 2017, 2019

Invited Talks

University of Toronto Engineering Research Conference (keynote talk), 2022

DeGroote School of Business, McMaster University, 2022

Rotman School of Business, University of Toronto, 2022

Alberta School of Business, University of Alberta, 2021

Zhejiang University, Hangzhou, China, 2021

University of Science and Technology of China, Hefei, China, 2020

The UBC Sauder School of Business, Vancouver, BC, Canada, 2020

Huazhong University of Science and Technology, Wuhan, China, 2018

Sophia University, Department of Economics, Tokyo, Japan, 2017

Kyoto University, Research Institute of Mathematical Sciences, Kyoto, Japan, 2017

Chinese University of Hong Kong, Systems Engineering & Engineering Management, Hong Kong, 2015

Hong Kong Polytechnic University, Department of Logistics and Maritime Studies, 2015

City University of Hong Kong, Department of Management Science, Hong Kong, 2015

Korea Advanced Institute of Science & Technology (KAIST), Industrial & System Engineering, Korea, 2013

Students Supervised

Roosbeh Yousefi, PhD (completed in 2022), Queen's University

Alireza Farhang-Doost, PhD candidate, Queen's University (2018-present)

Tian Xie, MSc candidate, Queen's University (2021-present)

Zheng Xu, summer (undergraduate) student, Queen's University (2020)

Xueze Song, visiting student, Huazhong University of Science and Technology (2018)

Kuan Zeng, visiting student, Huazhong University of Science and Technology (2018)

Conference Presentations

Data-driven inactivity detection, INFORMS Annual meeting, Seattle, WA, USA, October 2019

Bayesian optimal price fine-tuning. INFORMS Revenue Management and Pricing Section Conference, Stanford University, CA. USA, June 7, 2019

Bayes-optimal Fine-tuning under Imperfect Observations. Decision making theories under uncertainty and its applications: the extensions of mathematics for programming, Research Institute for Mathematical Sciences (RIMS) Kokyuroku, Kyoto University, July 2018.

Bayesian optimal exploration-and-exploitation in process monitoring and optimization, 26th meeting of division of “Stochastic models and its applications” in Operations Research Society of Japan. Sophia University, Tokyo, Japan. November 18, 2017.

Bayes-optimal fine-tuning under incomplete information, Annual workshop of decision-making under uncertainty, Research Institute of Mathematical Sciences, Kyoto University, Kyoto, Japan, November 15, 2017.

Bayesian optimal exploration and exploitation in dynamic pricing. IFORS 2017, Quebec City, QC, Canada, July 17-21, 2017.

Oligopolistic price competition under strategic repeat purchases. POMS Annual meeting, Seattle, WA, USA, May 5-8, 2017.

Which customers are more valuable in a dynamic pricing situation? POMS Annual meeting, Seattle, WA, USA, May 5-8, 2017.

Which customers are more valuable in a dynamic pricing situation? INFORMS Annual meeting, Nashville, TN, USA, November 13-16, 2016.

Oligopolistic price competition under strategic repeat purchases. INFORMS Revenue Management and Pricing Section Conference, New York, NY. USA, June 16, 2016

Which customers are more valuable in a dynamic pricing situation? Annual meeting of the Canadian Operational Research Society (CORS), Banff, AB, Canada, May. 31, 2016.

Turnpike Equilibrium for Oligopolistic Dynamic Pricing Competition with Strategic Consumers. POMS Annual Conference, Orlando, Florida, USA, May 8, 2016.

Turnpike Equilibrium for Oligopolistic Dynamic Pricing Competition with Strategic Consumers. Annual meeting of the Institute of Operational Research and Management Science (INFORMS), Philadelphia, PA, USA. Nov. 1, 2015.

Selling passes to strategic customers. Manufacturing & Service Operations Management (MSOM) Conference, Toronto, ON, Canada, June 30, 2015.

Selling passes to strategic customers. INFORMS Revenue Management and Pricing Section Conference, New York, NY. USA, June 12, 2015.

Bayesian control chart for multi-state processes over a finite horizon, Annual meeting of the Canadian Operational Research Society (CORS), Vancouver, BC, Canada. May. 28, 2013.

Bayesian control of multi-state deteriorating systems, Annual meeting of the Institute of Operational Research and Management Science (INFORMS), Phoenix, AZ, USA. Oct. 13, 2012.

Bayesian process control with multiple assignable causes, Annual conference of the Canadian Operational Research Society (CORS), Niagara Falls, ON, Canada. June 11, 2012.

Bayesian trading strategies based on partially observable Markov decision processes, Annual conference of the Canadian Operational Research Society (CORS), Niagara Falls, ON, Canada. June 11, 2012

Bayesian estimation and real-time decision-making in Markov switching models, Quantitative Finance & Risk

Management, Toronto, ON, Canada, 2012.

Bayesian change detection under competing risks, 3-C Risk forum and International Conference on Engineering and Risk Management (ERM), Toronto, ON, Canada, October 2011

Cross-scale prediction of hemodynamic instability, INFORMS Healthcare, Montreal, QC, Canada, June 2011

Teaching Experience

Queen's University, Smith School of Business

MMA 867: Predictive Analytics (2019 - Present)

MMA 865: Big Data Analytics (2021)

MMA 847: Capstone Projects (2021-2022)

MMA 867: Multivariate Statistical Analysis (2018 Summer)

COM 161: Introduction to Mathematical Analysis for Management (2016 Fall, 2017 Fall)

COM 162: Managerial Statistics (2016 Winter)

University of Toronto, Department of Mechanical & Industrial Engineering

MIE 1605: Stochastic Processes (2012 Fall, 2013 Fall, 2014 Fall)

MIE 1615: Markov Decision Processes (2015 Spring)