

Michael Zhang

ACADEMIC APPOINTMENTS

- Associate Professor in Management Science. Department of Finance, Information Systems and Management Science, Sobey School of Business, Saint Mary's University (2012 to date)
- Adjunct Professor in Applied Human Sciences. University of Prince Edward Island
- Adjunct Faculty in Industrial Engineering. Dalhousie University

EDUCATION

- Ph.D. in Management Science, Richard Ivey Business School, Western University, Canada 2007
- Master in Financial Economics. Xiamen University, China 1998
- Bachelor in Electronic Engineering. Zhejiang University, China 1994

RESEARCH

Research Interests

Data Analytics in Healthcare Services and Supply Chain Management

Research Grants

- Principle Investigator , “Enhancing Canadian Vaccination Strategies Using Machine Learning and Business Analytics” , *SSHIC IDG*; \$46,218; 2021-2023
- Co-Investigator, “The impact of COVID19 pandemic on international students’ schoolto work transition and pathways to permanent residency” (Principle Investigator: Eugena Kwon). *SSHRC IDG*; \$50,3888; 2021-2023
- Principle Investigator , “Maritime Strategy for Patient Oriented Research (SPOR) Supporting Unit – Phase II” , Nominated Principle Investigator: David Anderson). *CIHR-SPOR*; \$7,327,627; 2021-2026
- Nominated Principle Investigator , “Supporting Youth with Mental Health Conditions using Machine Learning and Analytics” , *NFRFE-SSHRC*; \$273,175; 2020-2023
- Co-Investigator, “Diversity Impression Management and Corporate Social Responsibility Reporting: a Machine Learning Approach ” (Principle Investigator: Sana Hassine). *SSHRC IG*; \$39,000; 2021-2025
- Co-Investigator, “The Changing Nature of Work and Learning in the COVID-19 Era and the Impact on international students' health and well-being in Nova Scotia” (Principle Investigator: Eugena Kwon). *SSHRC Engage*; \$24,840; 2020-2022
- Principle Investigator, “Barriers and Facilitators in Access to Child/Youth Mental Health Services: A Mixed Methods, Inter-sectorial Study in Atlantic Canada,” (Nominated Principle Investigator: Rick Audas) *CIHR-CBPHS*; \$2,363,683; 2014-2019

- Principle Investigator,, “Fencing in a Revenue Management Context: Optimization of Strategic Pricing and Inventory Decisions,” *NESRC Discovery*; \$95,000; 2009-2013
- Principle Investigator,, “Optimal Test Policy to Reduce E-Waste and Cost,” *Early Stage Commercialization Fund*, Innova Corp; \$25,000; 2012-2013
- Principle Investigator, “Peer Social Enterprise to Improve Mental Health & Academic Outcomes for Identified At-Risk Students at SMU” . *Innovative, Creative and Entrepreneurial Mindsets Fund*, SMU; \$9,750, 2018-2019
- Principle Investigator, “Advancing an Analytics Framework to Support Retail Demand Forecasting in the Pandemic” Sobey Retailing Excellence Research Grant, \$10,000; 2021-2022
- Principle Investigator, “Enhance Homecare Services in Nova Scotia I & II” Sobey Retailing Excellence Research Grant, \$20,000; 2018-2020
- Principle Investigator, “Optimal Quotation Strategy for a Make-to-Order Queue” Sobey Retailing Excellence Research Grant, \$9,875; 2017-2018
- Co-Investigator, “LIST (Learn, Identify, Support & Treat): A Comprehensive Mental Health Development and Pathway to Mental Health Care for Postsecondary Settings” (Principle Investigator: Stan Kutcher). *Medavie Foundation*; \$680,000. 2016-2018

Other External Funding

- Faculty Application and Supervisor, “Retail Supply Chain Predictive Analytics,” *MITACS Accelerate*, \$15,000; 2020
- Faculty Application and Supervisor, “Statistical Evaluation and Management of Mineral Resources,” *MITACS Accelerate*, \$15,000; 2012
- Consultant, “Evaluation of an Intervention for Improving Community-Based Pediatric ADHD Care” (Principle Investigator: Jeff Epstein). *NIMH*; US\$2,997,444; 2010- 2015
- Consultant, “Improving Quality Management for Nova Scotia Crystal”. SpringBoard Industry Collaboration Fund. \$5,000. 2013.

Refereed Journal Articles

1. Yifeng Wei, Stan Kutcher, Michael Zhang and Rebecca Alaffe. “The Impact of Transitions, A Mental Health Literacy Intervention with Embedded Life Skills for Post-Secondary Students”, Accepted by *Canadian Journal of Psychiatry*.
2. Jiejian Feng, Michael Zhang and Jinglei Yang. 2021. “New Necessary and Sufficient Condition for the Irreducibility of Joint Inventory Positions in an Assemble-to-Order System”. Accepted at *Operations Research Letter*. [A at ABDC list]
3. David M, Ronis S, Slaunwhite A, Audas R, Jacques R, Tilleczeck K, Zhang, M. 2020. A Longitudinal Examination of Hospital Readmissions for Youth with Psychiatric Conditions. Accepted at *Child and Adolescent Mental Health*. <https://doi.org/10.1111/camh.12371>
4. Zhoujun Liu, Clavor Diallo, Jenny Chen and Michael Zhang. 2019. Optimal Pricing and Production Strategies for New and Remanufactured products under a Non-renewing Free

Replacement *International Journal of Production Economics*. Volume 226, 107 - 126. [A* at ABDC list]

5. Richard J., Thériault, M., Audas, R., Ronis, S., Tilleczek, K., Zhang, M., Bell, B., Slaunwhite, A., & Poirier, N. Barriers and Facilitators in accessing services for Francophone children and adolescents in New Brunswick diagnosed with Autism Spectrum Disorder. 2018. Accepted at *Review of Social and Community Intervention / revue d'intervention sociale et communautaire*.
6. Tracy Chen, Hui Zhang, Michael Zhang and Jenny Chen. 2018. Optimal Decisions in a Retailer Stackelberg Supply Chain. *International Journal of Production Economics*. Volume 187, Pages 260-270 [A* at ABDC list]
7. Jiejian Feng and Michael Zhang. 2017. Dynamic Quotation of Leadtime and Price for a Make-To-Order System with Multiple Customer Classes and Perfect Information on Customer Preferences. *European Journal of Operational Research* 258: 334-342 [A* at ABDC list]
8. Jiejian Feng and Michael Zhang. 2017. Reducing Cost and Abandoned E-Components in Incomplete Identification. *Journal of the Operational Research Society*. 68: 281-290 [A at ABDC list]
9. Michael Zhang and Jiejian Feng. 2015. Turpike Property in Group Testing. *Operations Research Letter* 43: 545-549 [A at ABDC list]
10. Michael Zhang and Peter Bell. 2012. Price Fencing in the Practice of Revenue Management: An Overview & Taxonomy. *Journal of Revenue & Pricing Management* 20: 1-14. [B at ABDC list]
11. Michael Zhang, Peter Bell, Gangshu Cai and Xiangfeng Chen. 2011. Optimal Fences & Joint Price & Inventory Decisions in Distinct Markets with Demand Leakage. *European Journal of Operational Research* 204: 589-596. [A* at ABDC list]
12. Michael Zhang and Peter Bell . 2010. Fencing in the Context of Revenue Management. *International Journal of Revenue Management* 4: 42-68. [C at ABDC list]
13. Gangshu Cai, George Zhang and Michael Zhang. 2009. Game Theoretical Perspectives on Dual-Channel Supply Chain. *International Journal of Production Economics* 117, 80-96. [A* at ABDC list]
14. Michael Zhang and Peter Bell. 2007. The Effect of Market Segmentation with Dem& Leakage between Market Segments on a Firm's Price & Inventory Decisions. *European Journal of Operational Research* 182, 738-754. [A* at ABDC list]
15. Peter Bell and Michael Zhang. 2006. Management Decision-Making in the Single Period Optimum Pricing Problem. *Journal of the Operational Research Society* 57, 377-388. [A at ABDC list]

Book Chapter

- Chapter 10 Fencing in the Practice of Revenue Management. *Revenue Management: A Practical Pricing Perspective*. P136-149. Published by Palgrave Macmillan

Refereed Proceedings

- Rita Beainy and Michael Zhang. Overview of Home Care in Nova Scotia: A Model to Reduce

Waiting Time. *Atlantic Business School 2012 Conference*. September 2012 Halifax

- Chris Xiao and Michael Zhang. Application of Option Price Model in Mining Industry Merge & Acquisition. *Atlantic Business School 2012 Conference*. September 2012 Halifax
- Michael Zhang. 2011. A Review of Inventory Management Models in Global Markets: A Decision-Making Perspective. *Administrative Sciences Association of Canada*. July 2011 Montreal

Manuscripts Under Review

- Mohammad Rahaman, Michael Zhang M and Jiejian Feng. "Two-Sided Market Power and Firm Performance", under review at *Journal of Finance and Accounting*.
- Jiejian Feng and Michael Zhang. "Efficiently Solve the Production Lot-Sizing Problem with Capacity Adjustment", under review at *Computer & Operations Research*
- Jiejian Feng and Michael Zhang. "Dynamic Agreement on Lead Time and Price in a Make-To-Order System", under review at *Operations Research Spectrum*
- Jiejian Feng and Michael Zhang. "A Decision Model for Free-floating Car-sharing Providers" under review at *Journal of Operational Research Society*
- Jiejian Feng and Michael Zhang. "Efficient Approaches to Identify HIV Infection", under review at *International Journal of System Science*

KNOWLEDGE MOBILIZATION

Media

- Sobey Prosperity Network (Webinar): "Business in the Covid-19 Era and Beyond: Using Data Analytics to Achieve Sustainable Recovery and Growth" July 16 2020
- Sheldon MacLeod Show: "Supply chain challenges during the pandemic" Apr 17 2020
- Global: "Study looks at mental health of 1st year business students" Oct 13 2015
<https://globalnews.ca/news/2274270/study-looks-at-mental-health-of-1st-year-business-students/>
- CTV: "Maritime Families Share Stories of Mental Health Journey for Study" Aug 13 2015
<https://atlantic.ctvnews.ca/maritime-families-share-stories-of-mental-health-journey-for-study-1.2514923>
- Henry Stewart Talks: "Fencing in the Practice of Revenue Management" Sep 2013
<https://hstalks.com/expert/1450/dr-michael-zhang/>

Conference Presentations (since 2017)

- Eugena Kwon, Ming-Jun Kwak, Steven Smith and Michael Zhang. The impact of COVID-19 on international students' health and well-being. *The Canadian Sociological Association (CSA) Annual Meeting, Online Virtual Conference*, June 1st, 2021
- Michael Zhang. The Utilization of Nova Scotia Emergent Health Services by Children and Youth with Mental Health Complaints. *International Symposium: Recreation, Sports and Social Science*.

Oct 2019 Halifax.

- Ashley Buckle, Peter Twohig and Michael Zhang. Evaluating the Closure of Emergency Departments in Nova Scotia (Poster). *Canadian Association for Health Services and Policy Research* May 2019 Halifax.
- Michael Zhang. A Novel Framework for the Comprehensive Evaluation of Ambient Assisted Living Systems. *International Conference in Health Science Conference*. June 2018 Rome.
- Michael Zhang . A Comprehensive Mental Health Development and Pathway to Mental Health Care for Postsecondary Setting. *Primary Healthcare Partnership Forum*. June 2018 Saint John's.
- Emma Boulay and Michael Zhang. Primary care provider referral patterns in New Brunswick: an in-depth analysis and comparison of psychiatric wait times to other medical specialties. *Primary Healthcare Partnership Forum*. June 2018 Saint John's.
- Katherine Houser and Michael Zhang. The Effectiveness of Transitions as a Self-Learning Tool Designed to Improve Mental Health Literacy of Students in Higher Education. *Primary Healthcare Partnership Forum*. June 2018 Saint John's.
- Keltie Wagstaff and Michael Zhang. A Survey Study on a Mental Health Literacy Intervention for University Students. *Primary Healthcare Partnership Forum*. June 2018 Saint John's.
- Zainab Almkhata and Michael Zhang . Optimal Decisions for Mental Health Services for Youth when Patients Switching to Emergency Department. *Canadian Operational Research Society*. May 2018 Halifax.
- Michael Zhang. The Application of Operations Research Community Based Primary Care Services. *Canadian Operational Research Society*. May 2018 Halifax.
- Shams Zaman and Michael Zhang. Emergency Health Service Utilized By Young Adults With Mental Health Problem In Nova Scotia (Poster). *Canadian Association for Health Services and Policy Research* May 2017 Toronto.
- Michael Zhang. Reducing Wait Times for Long Term Care in Canada. *Canadian Operational Research Society*. May 2017 Montreal.

TEACHING

Demonstrated Leadership in Curricula Development

- Leading Master of Business Analytics (MBAN) Program Development
- New curriculum design and new courses proposed:
 - MBAN 5510 Foundations of Professional Analytics (co-worked with Dirra)
 - MBAN 5520 Predictive Analytics for Management (co-worked with Wan)
 - MBAN 5530 Prescriptive Analytics & Optimization (co-worked with Wang)
 - MBAN 5540 Data Strategy, Security & Governance (co-worked with Sivakumar)
 - MBAN 5550 Data-Driven Management & Organizations (co-worked with Carroll)

- MBAN 5560 Operations and Supply Chain Analytics
- MBAN 5570 Accounting and Financial Analytics (co-worked with Rahaman)
- MBAN 5580 Marketing Analytics (co-worked with Pancer and Venkat)
- MBAN 5610 Artificial Intelligence & Machine Learning (co-worked with Aydede)
- MBAN 5620 Human Resources Analytics (co-worked with Sayin)

Courses Taught

- PhD and Master of Applied Science: Management Analytics, Analytics in Healthcare, Healthcare Modeling and Optimization, Supply Chain Analytics and Optimization (MGSC6688-6692 Directed Studies in Management Science)
- Master of Computing & Data Analytics: Business Data Analytics (MCDA5520)
- Master of Finance: Applied Data Analysis (MFIN6603)
- MBA: Management of Operations (MGSC5515), Business Statistics (MGSC5506)
- Undergraduate: Operations Management (MGSC3317), Quantitative Methods II (MGSC1206), and Quantitative Methods I (MGSC1205)

Post-Doc & Thesis Master Students Supervised

- Post-Doc: Dr. Sana Hassine. 2020-2021 (Co-supervised with Dr. Smith). Current Position: Assistant Professor, Université du Québec à Montréal
- Post-Doc: Dr. Jiejian Feng. 2010 – 2014. Current placement: Full time faculty member, Lazaridis School of Business and Economics, Wilfrid Laurier University.
- Post-Doc: Dr. Shams Zaman. 2016 – 2018. Current placement: Sessional faculty member, Computer Science, Saint Mary's University
- Master in Applied Health Service Research: Katherine Houser. 2021. Assessment of A Self-Learning Tool Designed to Improve Mental Health Literacy of Students in Higher Education.
- Master in Applied Health Service Research Candidate: Ashley Buckle. 2019. Evaluating the Closure of Emergency Departments in Nova Scotia.
- Master in Applied Health Service Research Candidate: Rosin Walls Aaron. 2019. Improving Mental Health and Social Support in the Post-Secondary Setting.
- Master in Applied Health Service Research: Aaron DeRosa. 2018. Mental Health Complaints in Emergent Medical Services (EMS) in Nova Scotia.
- Master in Applied Science: Tracy Chen. 2018. "Application of Big Data Analytics in Risk Management for Complex Supply Chain Settings".
- Master in Applied Science: Wafaa Bahha 2016. E-healthcare Application on the Cardiovascular Health Awareness Program

- Master in Applied Science: Lousia Hallal. 2015. “Senior Care Modeling and Optimization in Nova Scotia”.
- Master in Applied Science: Chris Xiao. 2013. “Application of Real Option for Merge and Acquisition in Canadian Mining Industry”.

Graduate Student Scholarships

- \$17,000 CIHR Master Award - Roisin Walls, Master in Applied Health Service Research Candidate. 2019.
- \$15,000 NS Health Research Foundation PhD Award - Zainab Almkhata, PhD in Applied Science Candidate. 2018.
- Canadian Queen Elizabeth II Diamond Jubilee Scholarship – Sharon Atim, Joint Master in Business Administration with University of Uganda. 2017

Current Post-Doc, PhD & Thesis Master Students Supervision

- Research Associate: Maxwell Poole. Social Media Analytics (Co-supervised with Dr. Pancer)
- Post-Doc: Dr. Zhuojun Liu. Funded by NFRFE-SSHRC (Co-supervised with Dr. Diallo and Chen)
- PhD in Applied Science Candidate: Zainab Almkhtar. Applying Analytics to Transform Community Based Mental Healthcare Services Delivery.
- PhD in Accounting Candidate: Robin Wu (Co-supervised with Dr. Drira)
- Master in Applied Health Service Research Candidate: Keltie Wagstaff. Evaluating Children Benefit Policy using Stats Can and Health Administrative Databases.
- Master in Applied Health Service Research Candidate: Rebecca Wang. Coordinating EHS and Primary Healthcare Services: Insights from Data Analytics
- Master in Applied Health Service Research Candidate: Emma Boulay. Improving Mental Health Services for Children and Youth using Primary Healthcare Services Surveillance Data

PhD Thesis Committee

- Adrian MacKenzie, “The Importance of Population Health Needs and Cross-profession Service Substitution in Health Human Resources Planning”. PhD in Medicine Science, Memorial University of Newfoundland. 2013-2018. (Supervisor: Rick Audas)
- Zhuojun Liu, “Revenue Management with Return in Green Supply Chain Setting” PhD Candidate in Industrial Engineering, Dalhousie University. 2018 to date. (Supervisor: Jenny Chen and Clavor Diallo)
- Vinod Bachhao, “Topics in Electrical Engineering”. Applied Science, Saint Mary’s University. 2019 to date. (Supervisor: Adel Merabet)

SERVICES

Selected Services to Professional Communities

- Ad Hoc Reviewer for *Operations Research*, *Healthcare Management Science*, *Production & Operation Management*, *European Journal of Operational Research*, *International Journal of Production Economics*, *Operations Research Letter*, *Journal of Business Logistics*, *Journal of Revenue & Pricing Management*, *Computer & Industrial Engineering*.
- Reviewer for Funding Agencies: NSERC, MITACS, HongKong General Research Fund
- Associate Scientist, Maritime SPOR SUPPORT Unit (MSSU). 2019 to date
- Organizing Committee member and cluster chair, *Canadian Operational Research Society* 2018

Selected Services to University

- President, Saint Mary's University Faculty Union. 2018-2019
- Vice President, Saint Mary's University Faculty Union. 2020-21
- Associate Dean in Research and Knowledge Mobilization (Acting), Sobey School of Business. 2019-2020.
- Chair, Department of Finance, Information Systems and Management Science. Saint Mary's University. 2012-2013
- Faculty Director, Math Help Centre, Sobey School of Business. 2016-2019
- University Peer Support Working Team 2019 to date
- University Data and Metrics Committee. 2020 to date
- University First Year Experience (FYE) Committee. 2018-2019
- Research Committee, Faculty of Graduate Study and Research. 2019 to date
- Research Advancement Committee, Sobey School of Business. 2019 to date
- Bachelor of Commerce Council, Sobey School of Business. 2020 to date
- Master of Applied Health Services Research Council. 2015 to date
- MBA Council, Sobey School of Business. 2010-2012

Honour

- Sobey Professorship in Finance, Information Systems and Management Science. 2021-2026