

Craig Fernandes

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Education

PhD Operations Research , University of Toronto Advisors: Timothy C.Y. Chan and Ningyuan Chen	Sep 2021 – Aug 2026
MASc Operations Research , University of Toronto Advisor: Timothy C.Y. Chan	Jan 2020 – Aug 2021
BASc Industrial Engineering , University of Toronto	Sep 2014 – May 2018

Research Visits

Dartmouth College , Tuck School of Business Hosts: James Siderius and Raghav Singal	Summer 2024
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Research (by Topic)

Operations Management

11. *Data-Driven B2B Pricing: Learning from Bargainers*

Timothy Chan, Ningyuan Chen, Craig Fernandes

Working paper, 2025.

10. *Estimating Distributions with Failure Rate Properties from Noisy Quantile Data*

Timothy Chan, Ningyuan Chen, Craig Fernandes, Muhammad Maaz

Working paper, 2025.

9. *Handicapping Strategies for Maximizing Engagement in Amateur Darts Tournaments*

Timothy Chan, Craig Fernandes, Rachael Walker

Working paper, 2025.

- First Place, MIT Sloan Sports Analytics Conference Paper Competition, 2024
- Finalist, CORS Student Paper Competition (Undergraduate Category), 2023 [Awarded to Rachael]

8. *Peer Review Market Design: Effort-Based Matching and Admission Control*

Craig Fernandes, James Siderius, Raghav Singal

*Under review at **Management Science**, 2025.*

- Accepted, ACM Economics and Computation (EC), 2025

7. *Income pools for superstar markets*

Timothy Chan, Ningyuan Chen, Craig Fernandes

Management Science, 2025 (Forthcoming).

- First Place, CORS Student Paper Competition (Open Category), 2025

6. *Points gained in football: Using Markov process-based value functions to assess team performance*

Timothy Chan, Craig Fernandes, Martin Puterman

Operations Research, 69(3): 877-894, 2021.

- Media Coverage: [INFORMS Analytics Magazine](#)

Analytics Education

5. *Moneyball for Murderball: Using analytics to construct lineups in wheelchair rugby*

Timothy Chan, Craig Fernandes, Albert Loa, Nathan Sandholtz

INFORMS Transactions on Education, 24(2):175-181, 2023.

- First Place, INFORMS Case Competition, 2022
- Media Coverage: [ORMS Today](#)

4. *Advising student-driven analytics projects: A summary of experiences and lessons learned*

Aaron Babier, Craig Fernandes, Ian Zhu

INFORMS Transactions on Education, 23(2):121-135, 2023.

- Media Coverage: [ORMS Today](#)

Sports Analytics

3. *Equity, diversity, and inclusion in sports analytics*

Craig Fernandes, Jason Vescovi, Richard Norman, Cheri Bradish, Nathan Taback, Timothy Chan

Journal of Quantitative Analysis in Sports, 20(2): 87-111, 2024.

2. *A Markov approach to untangling intention versus execution in tennis*

Timothy Chan, Doug Fearing, Craig Fernandes, Stephanie Kovalchik

Journal of Quantitative Analysis in Sports, 18(2): 127-145, 2022.

- Finalist, MIT Sloan Sports Analytics Conference Poster Competition, 2022

1. *Predicting plays in the National Football League*

Craig Fernandes, Ronen Yakubov, Yuze Li, Amrit Prasad, Timothy Chan

Journal of Sports Analytics, 6(1): 35-43, 2020.

Teaching Experience

Course Instructor

MIE368: Analytics in Action

Fall 2023

Teaching Assistant

MIE263: Stochastic Operations Research, Rated 4.62/5

Winter 2023, 2024, 2025

MIE368: Analytics in Action, Rated 4.86/5

Fall 2020, 2021, 2022

- MIE Teaching Assistant Award, 2022
- MIE Group Teaching Assistant Award, 2020

Invited Seminars

Rotman Young Scholar Seminar Series (Toronto)	2025
Tuck School of Business OM Group (Dartmouth College)	2024

Conferences

Data-Driven B2B Pricing

- INFORMS (Atlanta)	2025
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Peer Review Market Design

- MSOM (LBS), ACM EC (Stanford), RMP (Columbia), INFORMS (Atlanta)	2025
- NYC Ops Day (NYU), CORS (Edmonton),	2025
- INFORMS (Seattle)	2024

Income Pools for Superstar Markets

- MIW (Virtual), CORS (Edmonton), MSOM (LBS), RMP (Columbia), INFORMS (Atlanta)	2025
- MSOM (McGill), RMP (Imperial), INFORMS (Phoenix)	2023
- CORS (Vancouver), INFORMS (Indianapolis)	2022

Handicapping Strategies for Maximizing Engagement in Amateur Darts Tournaments

- NESSIS (Harvard), SSAC (MIT)	2023, 2024
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A Markov approach to untangling intention versus execution in tennis

- CORS (Virtual), NESSIS (Harvard), SSAC (MIT)	2021, 2022
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Points gained in football: Using Markov process-based value functions to assess team performance

- CORS (Halifax), Sport Innovation Summit (Toronto)	2018, 2019
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Predicting plays in the National Football League

- NESSIS (Harvard), CORS (Halifax), Sport Innovation Summit (Toronto)	2017, 2018, 2019
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Industry

Amazon , Data Scientist I (Supply Chain Optimization Technologies)	Summer 2021
PepsiCo , Process Improvement Engineering Intern	Summer 2017, 2019

Research Mentorship

Undergraduate Thesis Advising

Rachael Walker	2023
Mustafa Arif (co-advised with Binghao Zhang)	2021
Michael Yin (co-advised with Timothy Chan)	2020
Albert Loa (co-advised with Timothy Chan)	2020

Service

Session Chair

INFORMS Annual Meeting (Revenue Management)	2025
CORS Annual Meeting (Revenue Management)	2025
CORS / INFORMS International (Sports Analytics)	2022

Scholarships

Paul Cadario Fellowship in Global Engineering (\$8,900)	2025
NSERC CGS MSFSS (\$6,000)	2023
Mitacs Globalink Research Award (\$6,000)	2023
TD MDAL Research Grant (\$4,000)	2023
NSERC Vanier CGS (\$150,000)	2023-2025
NSERC CGS D [Declined] (\$105,000)	2023-2025
Wallberg Research Fellowship (\$7,500)	2022
U of T SGS Conference Travel Grant (\$800)	2022
U of T MIE Conference Travel Grant (\$650)	2022
Ontario Graduate Scholarship (\$15,000)	2021
NSERC CGS M (\$17,500)	2020
U of T President's Entrance Scholarship (\$5,000)	2014