

Craig Fernandes

craig.fernandes@mail.utoronto.ca | 416-436-5210 | <https://craigfernandes1.github.io/>

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)

Niche Market Design and Analysis

10. *Data-Driven B2B Pricing*

Timothy Chan, Ningyuan Chen, Craig Fernandes
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, 2025.

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

7. *Income pools for superstar markets*

Timothy Chan, Ningyuan Chen, Craig Fernandes
Management Science, 2025 (Forthcoming).

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

Peer Review Market Design

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

Income Pools for Superstar Markets

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

Handicapping Strategies for Maximizing Engagement in Amateur Darts Tournaments

- SSAC (MIT) 2024

A Markov approach to untangling intention versus execution in tennis

- CORS (Virtual), NESSIS (Harvard), SSAC (MIT) 2021, 2022

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

- CORS (Halifax), Sport Innovation Summit (Toronto) 2018, 2019

Predicting plays in the National Football League

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

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

Honors and Awards

Paul Cadario Fellowship in Global Engineering (\$8,900)	2025
First Place, MIT Sloan Sports Analytics Conference (\$10,000)	2024
NSERC CGS MSFSS (\$6,000)	2023
Mitacs Globalink Research Award (\$6,000)	2023
TD MDAL Research Grant (\$4,000)	2023
U of T MIE TA Teaching Excellence Award (\$500)	2023
NSERC Vanier CGS (\$150,000)	2023-2025
NSERC CGS D [Declined] (\$105,000)	2023-2025
Wallberg Research Fellowship (\$7,500)	2022
First Place, INFORMS Case Competition (\$500)	2022
U of T SGS Conference Travel Grant (\$800)	2022
U of T MIE Conference Travel Grant (\$650)	2022
Finalist, MIT Sloan Sports Analytics Conference Poster Competition	2022
Ontario Graduate Scholarship (\$15,000)	2021
U of T MIE Group TA Teaching Excellence Award (\$300)	2021
NSERC CGS M (\$17,500)	2020
Second place, CORS Undergraduate Student Paper Competition (\$200)	2018
U of T President's Entrance Scholarship (\$5,000)	2014