

Dylan Spicker (PhD)

Postdoctoral Fellow
McGill University
Department of Epidemiology, Biostatistics
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Education

- 2018 – 2022 Ph.D., Statistics, University of Waterloo
(July 26, 2022) Thesis: Generalizations to Corrections of Measurement Error Effects
for Dynamic Treatment Regimes
Supervisors: Grace Yi and Michael Wallace
- 2017 – 2018 M.Math, Statistics, University of Waterloo
Masters Essay: Measurement error and personalized medicine: error-
prone tailoring covariates in dynamic treatment regimes.
Supervisor: Michael Wallace
- 2014 – 2017 B.Comm., Finance, Smith School of Business (Queen’s University)

Publications

- [1] **Spicker, Dylan**, Wallace, Michael P., and Yi, Grace Y. Generalizations to Corrections for the Effects of Measurement Error in Approximately Consistent Methodologies. arXiv preprint arXiv:2106.07401. 2021.
- [2] **Spicker, Dylan**, Wallace, Michael P., and Yi, Grace Y. Nonparametric Simulation Extrapolation for Measurement Error Models. arXiv preprint arXiv:2111.02863. 2021.
- [3] **Spicker, D**, and Wallace, Michael P. Measurement error and precision medicine: Error-prone tailoring covariates in dynamic treatment regimes. *Statistics in Medicine*. 2020; 39: 3732– 3755. <https://doi.org/10.1002/sim.8690>
- [4] Liebowitz, Jay, Chan, Yolande E., Jenkin, Tracy A., **Spicker, Dylan**, Paliszkievicz, Joanna, and Babilioni, Fabio. If numbers could “feel”: How well do executives trust their intuition?. *VINE Journal of Information and Knowledge Management Systems*. 2019. 49(4): 531-545.
- [5] Liebowitz, Jay, Chan, Yolande E., Jenkin, Tracy A., **Spicker, Dylan**, Paliszkievicz, Joanna, and Babilioni, Fabio. *How Well Do Executives Trust Their Intuition*. Taylor and Francis. Boca Raton, Florida. 2018.

Presentations and Talks

- [1] † **Spicker, Dylan**. Making Effective use of Respondent-Driven Sampling. Statistical Society of Canada general meeting (2023, Online, Upcoming)
- [2] † **Spicker, Dylan**. Nonadherence in Dynamic Treatment Regimes – Moving Beyond Intention-to-Treat Analyses. McGill University Biostatistics Seminars (2022, Online)
- [3] **Spicker, Dylan**. Nonparametric Simulation Extrapolation for Measurement Error Models. Statistical Society of Canada general meeting (2022, Online)
- [4] **Spicker, Dylan**. The Harms of Historical Hyperbole. Statistics and Actuarial Science Student Seminar Series (2021, Waterloo)
- [5] **Spicker, Dylan**. Measurement Error Corrections with Non-IID Auxiliary Data. Statistical Society of Canada general meeting (2021, Online)
- [6] † **Spicker, Dylan**. Dynamic Treatment Regimes and Measurement Error: A non-technical overview (where we mostly talk about video games!). University of Waterloo Undergraduate Mathematics Research Conference. (2019, Waterloo)
- [7] **Spicker, Dylan**. Measurement Error in Precision Medicine and Dynamic Treatment Regimes. Statistical Society of Canada general meeting (2019, Calgary)

†: Indicates an invited talk.

Selected Funding, Honours, and Awards

Major Awards

2022 – 2023	StatLab-CANSSI-CRM Postdoctoral Fellowship
2020 – 2022	NSERC Postgraduate Scholarship Doctoral (PGS-D)
2020 (Declined)	Queen Elizabeth II Graduate Scholarship in Science and Technology
2019	Queen Elizabeth II Graduate Scholarship in Science and Technology

Additional Awards and Honours

2020 – 2022	University of Waterloo President’s Graduate Scholarship
2018 – 2020	Math Domestic Graduate Student Award
2017 – 2022	Statistics & Actuarial Science Chair’s Award
2018	Statistics & Actuarial Science Doctoral Entrance Award
2017, 2018	University of Waterloo Graduate Scholarship
2017	Sutton Scholarship for Higher Education
2021	Statistical Society of Canada SARGC Video Competition. Winning Team (with Melissa Van Bussel).

- 2020 “Using Statistics to break down COVID-19 misconceptions”
 Statistical Society of Canada Case Studies in Data Analysis Competition. Winning Team (with Melsisa Van Bussel).
 “Forecasting iTunes popularity out-of-sample: in-sample validation for longitudinal and matching methods.”
- 2019 CANSI National Case Study Competition 2019. Regional Winning Team; National Finalist (with Melissa Van Bussel).
 “SuperLearn’ed Delays: Partial Domain Adaptation in Binary Classification with Complex and Noisy Data.”

Academic Appointments

- 2022 (Present) Postdoctoral Fellow, Department of Epidemiology, Biostatistics and Occupational Health, McGill University
- 2021 – 2022 Sessional Instructor, Statistics, University of Waterloo
- 2020 – 2022 Research Assistant, Statistics, University of Waterloo
- 2017 Machine Learning and Data Analyst, Smith School of Business
- 2015 – 2017 Research Assistant, Computer Science, Database Systems Lab. Queen’s University

Courses Taught

- 2022 (Winter) STAT 437, Methods for Life History Analysis University of Waterloo
 Enrollment: 37
- 2021 (Winter) STAT 231, Statistics University of Waterloo
 Enrolment: 504

Statistical Consulting

- 2022 (Summer) Web scraping e-commerce data (e-cig products). University of Waterloo
- 2021 (Summer) Web scraping e-commerce data (grocery data). University of Waterloo
- 2021 (Winter) Web scraping e-commerce data (e-cig products). University of Waterloo

Teaching Assistant

2017 – 2020	Teaching Assistant, Statistics, University of Waterloo
2016 – 2017	Teaching Assistant, Computer Science, Queen’s University

Courses

2020 (Fall)	Masters of Actuarial Science (Program)	University of Waterloo
2020 (Winter)	Masters of Actuarial Science (Program)	University of Waterloo
2019 (Fall)	Masters of Actuarial Science (Program)	University of Waterloo
2019 (Spring)	STAT 431, Generalized Linear Models	University of Waterloo
2019 (Spring)	STAT 331, Applied Linear Models	University of Waterloo
2019 (Winter)	STAT 431, Generalized Linear Models	University of Waterloo
2019 (Winter)	STAT 241, Statistics (Advanced Level)	University of Waterloo
2018 (Fall)	STAT 330, Mathematical Statistics	University of Waterloo
2018 (Fall)	STAT 443, Forecasting	University of Waterloo
2018 (Spring)	STAT 337, Intro. to Medical Statistics	University of Waterloo
2018 (Spring)	STAT 333, Applied Probability	University of Waterloo
2018 (Winter)	STAT 441, Classification	University of Waterloo
2018 (Winter)	STAT 443, Forecasting	University of Waterloo
2017 (Fall)	STAT 334, Probability Models for Business	University of Waterloo
2017 (Fall)	STAT 373, Regression and Forecasting Methods in Finance	University of Waterloo
2017 (Fall)	COMM 493 [†] , Analytics and AI for Business	Queen’s University
2016 (Fall)	CISC 490, Deep Analytics using Watson	Queen’s University
2015 (Fall)	CISC 490, Deep Analytics using Watson	Queen’s University

Leadership and Professional Activities

- Conference Judge, Statistical Society of Canada Student Conference, 2022
- Mentor for Prospective Graduate Students, University of Waterloo (Undergraduate Mathematics Research Conference), 2019
- Graduate Teaching Assistant Instructor, Volunteer Position, University of Waterloo, 2018 – 2019
- Co-founder, Queen’s Data Analytics Association, 2016–2017

- Executive, Queen's Commerce Society, 2014–2017
- Executive Team, “Career Mashup” (Queen's University), 2016

Research Interests

Causal inference, longitudinal data, observational studies, measurement error, missing data, machine learning, reinforcement learning, medical statistics, data science