Gracia Dong

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June 2023

Employment and Internships

- Postdoctoral Fellow, University of Toronto and University of Victoria, September 2022 – Present
- Data Science Consultant, Polyalgorithm Machine Learning (PolyML), October 2022 – April 2023
- Evaluation Consultant, Student Success Office, University of Waterloo, February 2021 – April 2022
- Associate Business Analyst, Risk Management Information Technology, Scotiabank, September 2016 – December 2016
- Actuarial Student, Audit Services, Manulife, January 2016 – April 2016
- Undergraduate Research Assistant (NSERC USRA), Department of Statistics, University of Waterloo, May 2015 – August 2015
- Actuarial Student, Pricing and Valuation, Aurigen Reinsurance, January 2014 – April 2014 and September 2014 – December 2014
- Co-op Student, Development Services, City of Markham, September 2012 – December 2012

Education

- PhD in Statistics, University of Waterloo, September 2018 – August 2022
  - Supervisor: Dr. Christiane Lemieux
  - Thesis Title: Constructions and applications of quasi-random point sets with negative dependence
  - Certificate of University Teaching Program, completed 2022
  - Fundamentals of University Teaching Program, completed 2020
- MMath in Statistics, University of Waterloo, September 2017 – August 2018
  - Supervisor: Dr. Christiane Lemieux
  - Research Paper Title: Estimating state space parameters using quasi-Monte Carlo methods
- BMath, Co-op program in Statistics, Actuarial Science with Finance Option, Computer Science Minor, January 2013 – August 2017

Awards and Scholarships

- 2022-2024, CANSSI Distinguished Postdoctoral Fellowship, $118000
- 2021–2022, Ontario Graduate Scholarship, $15000
- 2021–2022, President's Graduate Scholarship, $10000
- 2021, Statistics & Actuarial Science Chair's Award, $1000
- 2021, Statistics & Actuarial Science Graduate Award, $250
- 2020–2022, Math Domestic Doctoral Scholarship, $10000
- 2020–2021, Queen Elizabeth II Graduate Scholarship in Science and Technology, $15000
- 2020–2021, President's Graduate Scholarship, $10000
- 2019–2020, Ontario Graduate Scholarship, $15000
- 2019–2020, President's Graduate Scholarship, $10000
- 2019, University of Waterloo Graduate Scholarship, $1000
- 2019, Statistics & Actuarial Science Chair's Award, $1000
- 2018–2020, Math Domestic Doctoral Scholarship, $10000
- 2018, Math Domestic Graduate Award, $6000

- 2018, Provost Doctoral Entrance Award, $5000
- 2018, Doctoral Entrance Award, $5000
- 2018, University of Waterloo Graduate Scholarship, $1000, x2
- 2018, Statistics & Actuarial Science Chair's Award, $1000, x2
- 2018, Statistics & Actuarial Science Graduate Award, $1000
- 2017, University of Waterloo Graduate Scholarship, $1000
- 2014, NSERC USRA, $4500
- 2013, President's Scholarship, $2000

Community-building and Service
- Judge, Canadian Statistics Student Conference, May 2022
- Mentor, Datafest 2021, American Statistical Association, May 2021
- Conference Organizer, First Waterloo Student Conference in Statistics, Actuarial Science, and Finance, October 2019
- Co-founder and President, Statistics Anti-Depression (S.A.D.) Club, University of Waterloo, May 2019 – August 2022

Teaching Experience
- Course Instructor
  - STA220H1F: The Practice of Statistics I, University of Toronto, Fall 2023
  - MATH490: Directed Studies in Mathematics, Section Topic Title: Inequalities in Healthcare, University of Victoria, Spring 2023
  - AFM 113: Analytic Methods 2 for Business, University of Waterloo, Spring 2021
- Teaching Assistant, University of Waterloo
  - AFM113: Analytic Methods 2 for Business (Spring 2022)
  - MATH127: Calculus 1 for the Sciences (Winter 2017)
  - MATH135: Algebra for Honours Mathematics (Fall 2015)
  - MATH136: Linear Algebra 1 for Honours Mathematics (Spring 2016, Winter 2017)
  - MATH137: Calculus 1 for Honours Mathematics (Fall 2015)
  - MATH138: Calculus 2 for Honours Mathematics (Winter 2015)
  - MATH600: Introduction to Mathematical Software for Teachers (Fall 2018)
  - STAT231: Statistics (Spring 2014, Fall 2017)
  - STAT330: Mathematical Statistics (Winter 2018)
  - STAT333: Applied Probability/Stochastic Processes 1 (Spring 2018)
  - STAT340: Stochastic Simulation Methods (Winter 2021, Winter 2022)
  - STAT341: Computational Statistics and Data Analysis (Winter 2019, Winter 2020, Fall 2021)
  - STAT430: Experimental Design (Spring 2019)
  - STAT431: Generalized Linear Models and Their Applications (Fall 2017, Fall 2018, Spring 2020)
  - STAT443: Forecasting (Winter 2018, Spring 2018, Winter 2019, Spring 2019)
  - STAT906: Computer Intensive Methods for Stochastic Models in Finance (Fall 2020)

Research Areas
Quasi Monte-Carlo Methods, Negative Dependence, Computational Statistics, Statistics Education, Public Health, Population Health, Healthcare Equity

Publications, Submitted and In Press
1. **Dong, G. Y.**; Hintz, E.; Hofert, M.; Lemieux, C. (submitted 2023). Randomized quasi-Monte Carlo methods on triangles: Extensible lattices and sequences. Submitted to *Journal of Computational and Applied Mathematics*.
2. Mugon, J.; **Dong, G.Y.**; Kim, N.; Jobidon, E. (2023). Adapting the Motivated Strategies for Learning Questionnaire for a writing and communication program. *Collected Essays in Teaching and Learning.*
3. Faure, H.; **Dong, G.Y.**; Lemieux, C. (2022). A negative dependence framework to assess different forms of scrambling. *arXiv preprint.*
4. **Dong, G.Y.** & Lemieux C. (2022). Dependence properties of scrambled Halton sequences. *Mathematics and Computers in Simulation*
5. Wiart, J., Lemieux, C., & **Dong, G.Y.** (2021). On the dependence structure and quality of scrambled (t, m, s)-nets. *Monte Carlo Methods and Applications*

Working Papers
1. Bambi, J; Moselle, K; Santoso, Y; Sadri, H; Robertson, S; Hajiabadi, M; Howie, J; Hawkins-Seagram, A; Richardson, A; Rudnick, A; Chang, E; **Dong, G. Y.**; Olobatuyi, K; Kuo, A. (2023+). Methodological Considerations in Extracting and Analysing Patterns of Service Utilization for Patients with Complex Problems to Optimize Care Delivery.
2. **Dong, G. Y.**; Cowen, L.; Moselle, K. (2023+). Estimating the abundance of homeless individuals on Vancouver Island using electronic health data via capture recapture.
3. Bambi, J.; **Dong, G.Y.**; Santoso, Y.; Howie, J.; Dugas, S.; Olobatuyi, K.; Robertson, S.; Rudnick, A.; Sadri, H.; Moselle, K. (2023+). Disparities in access to services, as evident in patient journeys: Illustrating an approach using Island Health longitudinal encounter data.
4. Perreault, S.; Stringer, A.; **Dong, G.Y.**; Brown, P. (2023+). Overdispersed case-crossover design with application in air pollution epidemiology
5. **Dong, G.Y.** & Brown, P. (2023+). Analyzing Indian mortality with temperature attribution using case-crossover models.

Research Presentations, Invited
1. **Dong, G.Y.**; Brown; P. (2023). Analyzing Indian mortality with temperature attribution using case-crossover models. Statistical Society of Canada Annual Meeting, Ottawa, ON, Canada.
2. **Dong, G.Y.**; Hintz, E; Hofert, M; Lemieux, C. (2022). Randomized Quasi-Monte Carlo Methods on triangles: Extensible lattices and sequences. CORS/INFORMS International Conference, Vancouver, BC, Canada.

Research Presentations, Contributed
1. **Dong, G.Y.**; Cowen, L; Moselle, K. (2023). Estimating the abundance of homeless individuals on Vancouver Island using electronic health data. INFORMS Healthcare Conference, Toronto, ON, Canada.
2. Mugon, J; **Dong, G.Y.**; Kim, N; Jobidon, E. (2022). Adapting the Motivated Strategies for Learning Questionnaire (MSLQ) for first-year Faculty of Health students. Society for Teaching and Learning in Higher Education (STLHE) Annual Conference, Virtual.
3. Mugon, J., **Dong, G.Y.**, Kim, N.H., Jobidon, E., Barichello, M., & Prier, A. (2021) Adapting the Motivated Strategies for Learning Questionnaire to help students take control of their learning. University of Waterloo 12th Annual Teaching and Learning Conference & 2021 STLHE/SAPES Unconference, Virtual.

4. **Dong, G.Y.** (2021) Halton sequences and negative dependence. University of Waterloo Student Seminar Series, Waterloo, ON, Canada.
5. **Dong, G.Y.** (2019) Variance estimation of quasi-Monte Carlo integration without replication. Waterloo Student Conference in Statistics, Actuarial Science and Finance, Waterloo, ON, Canada.

Other Presentations
1. An introduction to Pseudo- and Quasi- random number generation. Guest Lecture, STAT 464, Fall 2022, University of Victoria, Victoria, BC, Canada.