

Steven A. Campbell

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Academic Employment

- 2027–  **Assistant Professor**, Dept. of Mathematics, Imperial College London (*from Spring 2027*)
- 2023–2027  **Assistant Professor (Limited Term)**, Dept. of Statistics, Columbia University

Education

- 2019–2023  **Ph.D. Statistics** (4.00/4.00), University of Toronto
Thesis title: *Optimization Problems in Model-Free Stochastic Portfolio Theory and Sequential Testing Games*
Advisors: Profs. Ting-Kam Leonard Wong and Yuchong Zhang
- 2018–2019  **M.A. Applied Mathematics** (4.00/4.00), York University
- 2017–2018  **B.A. Applied Mathematics** (9.00/9.00), York University
- 2013–2017  **B.B.A. Finance** (8.65/9.00), Schulich School of Business, York University

Academic Awards and Research Grants

- 2025–2027  **NSERC Postdoctoral Fellowship (Award No. PDF - 599675 - 2025)**, Natural Sciences and Engineering Research Council of Canada (NSERC) [\$140,000 CAD]
- 2026–2027  **CDFT Research Grant**, Center for Digital Finance and Technologies, Columbia University (Co-Investigator with Marcel Nutz) [\$20,000 USD]
- 2025–2026  **CDFT Research Grant**, Center for Digital Finance and Technologies, Columbia University (Co-Investigator with Marcel Nutz) [\$25,000 USD]
- 2025  **Early Career Travel Award**, Society for Applied and Industrial Mathematics (SIAM) [\$1260 USD]
- 2023  **SGS Conference Grant**, University of Toronto [\$1240 CAD]
-  **DoSS Conference Travel Award**, University of Toronto [\$500 CAD]
- 2022–2023  **Ontario Graduate Scholarship - Doctoral**, Government of Ontario [\$15,000 CAD]
- 2022  **Doctoral Early Research Excellence Award**, University of Toronto [\$1,500 CAD]
- 2019–2022  **Alexander Graham Bell Canada Graduate Scholarship (CGS D)**, Natural Sciences and Engineering Research Council of Canada (NSERC) [\$105,000 CAD]
- 2018–2019  **Alexander Graham Bell Canada Graduate Scholarship (CGS M)**, Natural Sciences and Engineering Research Council of Canada (NSERC) [\$17,500 CAD]
- 2018  **York University Graduate Scholarship**, York University [\$4,000 CAD]
-  **Dr. James Wu Prize for Best Honours Thesis**, York University [\$500 CAD]
- 2017  **Toronto Dominion Bank Award**, York University [\$3,000 CAD]
- 2016  **The Olympia and Spyros Thomas Scholarship**, York University [\$1,200 CAD]
- 2015  **The Dagonas Family Scholarship**, York University [\$1,200 CAD]
- 2013–2017  **President's Scholarship**, York University [\$21,600 CAD]
- 2013  **Awards of Distinction Merit Scholarship**, York University [\$2,000 CAD]
-  **Governor General's Academic Medal (Bronze)**, Government of Canada

Publications and Preprints

Academic Articles

- 1 S. Campbell, G. Gaitsgori, R. Groenewald, and I. Karatzas, “Parametric continuity of optimal stopping rules,” *In preparation*, 2026+ [an early version can be found in R. Groenewald’s thesis [here](#)].
- 2 S. Campbell, G. Gaitsgori, R. Groenewald, and I. Karatzas, “Grab it before it’s gone: Testing Uncertain Rewards under a Stochastic Deadline,” *Stochastic Processes and their Applications*, vol. 201, 105069, Nov. 2026.
- 3 S. Campbell and K. K. Englund, “When should one stop the most exciting game? Sequential Inference for win-martingales,” *arXiv preprint arXiv:2608.12291*, Under Review, Aug. 2026.
- 4 S. Campbell and K. K. Englund, “Embedding martingale diffusions as binary posteriors in sequential inference,” *arXiv preprint arXiv:2607.20373*, Under Review, Jul. 2026.
- 5 S. Campbell, N. Hey, C. C. Moallemi, and M. Nutz, “Risk-Based Auto-Deleveraging,” *Proceedings of the ACM Conference on Economics and Computation*, Accepted, Jul. 2026, (full-length version under review).
- 6 S. Campbell and M. Nutz, “Optimal Execution among N Traders with Transient Price Impact,” *Mathematical Finance*, Jun. 2026.
- 7 S. Campbell, A. Parashar, and A. Capponi, “Portfolio Choice with Competing Precautionary and Accumulation Goals,” *arXiv preprint arXiv:2606.03158*, Jun. 2026.
- 8 S. Campbell and M. Nutz, “Randomization in Optimal Execution Games,” *SIAM Journal on Financial Mathematics*, Accepted, Apr. 2026.
- 9 S. Campbell and T.-K. L. Wong, “A mathematical study of the excess growth rate,” *arXiv preprint arXiv:2510.25740*, Under Revision (*IEEE Transactions on Information Theory*), Oct. 2025.
- 10 S. Campbell, G. Gaitsgori, and R. Groenewald, “A Sequential Testing Problem with Signal Control,” *arXiv preprint arXiv:2509.18209*, Under Review, Sep. 2025.
- 11 S. Campbell, P. Bergault, J. Millionis, and M. Nutz, “Optimal Fees for Liquidity Provision in Automated Market Makers,” *arXiv preprint arXiv:2508.08152*, Under Revision (*Management Science*), Aug. 2025.
- 12 S. Campbell, Q. Song, and T.-K. L. Wong, “Macroscopic properties of equity markets: stylized facts and portfolio performance,” *Quantitative Finance*, pp. 1–23, Aug. 2025.
- 13 S. Campbell and T.-K. L. Wong, “Efficient convex PCA with applications to Wasserstein GPCA and ranked data,” *Journal of Computational and Graphical Statistics*, vol. 34, no. 2, pp. 540–551, Apr. 2025.
- 14 S. Campbell and Y. Zhang, “A Bayesian sequential soft classification problem for a Brownian motion’s drift,” *arXiv preprint arXiv:2501.11314*, Under Review, Jan. 2025.
- 15 S. Campbell and Y. Zhang, “A Mean Field Game of Sequential Testing,” *arXiv preprint arXiv:2403.18297*, Under Revision (*Annals of Applied Probability*), Mar. 2024.
- 16 S. Campbell and T.-K. L. Wong, “Functional portfolio optimization in stochastic portfolio theory,” *SIAM Journal on Financial Mathematics*, vol. 13, no. 2, pp. 576–618, Jun. 2022.
- 17 S. Campbell and E. J. Janse van Rensburg, “Lattice star and acyclic branched polymer vertex exponents in 3d,” *Journal of Physics A: Mathematical and Theoretical*, vol. 55, no. 1, p. 015 002, Dec. 2021.
- 18 S. Campbell, Y. Chen, A. Shrivats, and S. Jaimungal, “Deep Learning for Principal-Agent Mean Field Games,” *arXiv preprint arXiv:2110.01127 (Working paper)*, Oct. 2021.
- 19 S. Campbell and E. J. Janse van Rensburg, “Numerical estimates of square lattice star vertex exponents,” *Phys. Rev. E*, vol. 103, p. 052 137, 5 May 2021.

- 20 S. Campbell and E. J. Janse van Rensburg, “Parallel PERM,” *Journal of Physics A: Mathematical and Theoretical*, vol. 53, no. 26, p. 265 005, Jun. 2020.

Other Publications

- 1 S. Campbell, “Optimization Problems in Model-Free Stochastic Portfolio Theory and Sequential Testing Games,” Ph.D. dissertation, University of Toronto, 2023.
- 2 S. Campbell and K. Whitehead, *Toys ‘R’ Us Canada: Is Playtime Over?* Ivey Publishing, 2018.
- 3 K. Whitehead and S. Campbell, *Hudson’s Bay Company: Restructuring in a Retail Decline*, Ivey Publishing, 2018.

Academic Presentations

* Contributed presentations

- 2026
- International Conference on Stochastic Analysis, Statistics of Random Processes and Optimization, Bakuriani, Georgia. (*forthcoming*)
 - FRE Department Seminar Series, NYU Tandon, New York, NY. (*forthcoming*)
 - INFORMS Annual Meeting, San Francisco, CA. (*forthcoming*)
 - Statistics Student Seminar, Columbia University, New York, NY.
 - Special Summer Seminar (Statistical Sciences), University of Toronto, Toronto, ON.
 - Probability/Math Finance Seminar, Carnegie Mellon University, Pittsburgh, PA.
 - 13th World Congress, Bachelier Finance Society, Bologna, Italy.
 - Seminar in Math Finance and Probability, University of Vienna, Vienna, Austria.
 - Department of Mathematics Seminar, Imperial College London, London, UK.
 - Decision Sciences Seminar, HEC Montréal, Montreal, QC.
- 2025
- Mathematical and Statistical Sciences Seminar, University of Alberta, Edmonton, AB.
 - Math Colloquium, University of Georgia, Athens, GA.
 - London Mathematical Finance Seminar, London Mathematical Finance Group, London, UK.
 - Finance and Stochastics Seminar, Imperial College London, London, UK.
 - Financial Mathematics Seminar, Florida State University, Tallahassee, FL.
 - Berkeley–Columbia Meeting in Engineering and Statistics, UC Berkeley, Berkeley, CA.
 - SIAM Conference on Financial Mathematics and Engineering, Miami, FL.
 - 12th General AMaMeF Conference, University of Verona, Verona, Italy.*
 - Statistics Seminar, Collegio Carlo Alberto, Torino, Italy.
 - Stevanovich Center Conference on Market Microstructure, Quantitative Trading, High Frequency, and Large Data, University of Chicago, Chicago, IL.
 - AMS Spring Eastern Sectional Meeting, Hartford, CT.
 - Optimal Stopping Seminar, Columbia University, New York, NY.
 - Statistics Student Seminar, Columbia University, New York, NY.
- 2024
- INFORMS Annual Meeting, Seattle, WA.
 - 8th Eastern Conference on Mathematical Finance, Fields Institute, Toronto, ON.
 - 12th World Congress, Bachelier Finance Society, Rio de Janeiro, Brazil.*
 - Finance and Stochastics Seminar, Imperial College London, London, UK.
 - Optimal Stopping Seminar, Columbia University, New York, NY.
- 2023
- Mathematical Finance Seminar, Columbia University, New York, NY.
 - 64th World Statistics Congress, International Statistical Institute, Ottawa, ON.*

- SIAM Conference on Financial Mathematics and Engineering, Philadelphia, PA.
- Probability and Mathematical Finance Seminar, Carnegie Mellon University, Pittsburgh, PA.
- Financial and Actuarial Mathematics Seminar, University of Michigan, Ann Arbor, MI.
- 2022 ■ 6th Eastern Conference on Mathematical Finance, New Brunswick, NJ.* (*Poster*)
- SIAM Annual Meeting, Pittsburgh, PA.
- Statistics Graduate Student Research Day, University of Toronto, Toronto, ON.
- 2021 ■ CMS 75th+1 Anniversary Summer Meeting, Canadian Mathematical Society, Virtual.
- Statistics Graduate Student Research Day, Fields Institute, Toronto, ON.
- ACTSCI/MAFI Research Meeting, University of Toronto, Toronto, ON.

Teaching

- 2026 ■ Modern Machine Learning Module, *Summer School on Machine Learning, Applied Statistics, and Quantitative Finance, Imperial College London.*
- 2024–2026 ■ Stochastic Processes with Applications (GU4264/GR5264), *Columbia University.*
- 2026 ■ MA Mentored Research (STAT 5398), *Columbia University.*
- 2024–2025 ■ Stochastic Methods in Finance (GU4265/GR5265), *Columbia University.*
- 2025 ■ Research Project in Applied Mathematics (APAM E6650), *Columbia University.*
- 2024 ■ Undergraduate Mentored Research (STAT UN3107), *Columbia University.*
- 2023 ■ Linear Regression Models (GU4205), *Columbia University.*
- 2021–2023 ■ MFI Annual Statistics Bootcamp, *University of Toronto.*
- 2021 ■ Fixed Income Fundamentals (FINE 3810), *York University.*

Other Academic Experience

Journal Referee

- Annals of Operations Research
- Applied Mathematical Finance
- Asian Journal of Control
- Decisions in Economics and Finance
- Finance and Stochastics
- Management Science
- Mathematical Finance
- Mathematics of Operations Research
- Quantitative Finance
- SIAM Journal on Financial Mathematics
- Stochastics

Undergraduate and Graduate Student Supervision

- 2025–2026 ■ Karl Kristian Englund (PhD Visiting Scholar), *Columbia University.*
- 2026 ■ Gayatri Dittakavi (QMSS Master Thesis Supervisor), *Columbia University.*
- Yanan Lin (MA Mentored Research, STAT 5398), *Columbia University.*
- 2025 ■ Shuangqi Bao (Graduate Research Project), *Columbia University.*
- Yanbo Li (Graduate Research Project), *Columbia University.*

- 2024
 - Yi'an Wang (Graduate Research Project), *Columbia University*.
 - Yusang He (Graduate Research Course, APMA E6650), *Columbia University*.
 - Luca Terzariol (Undergraduate Research Assistant), *Columbia University*.
 - Orange Ao (Undergraduate Summer Research Project), *Columbia University*.
 - Luca Terzariol (Undergraduate Research Intern, STAT UN3107), *Columbia University*.
 - Ivan Wong (Undergraduate Directed Reading), *Columbia University*.
- 2022
 - Michael Shen (Graduate Research Assistant), *University of Toronto*.
 - John Song (Undergraduate Summer Research Project), *University of Toronto*.

Co-organizer

- 2026
 - Session Chair, Finance Cluster, *INFORMS Annual Meeting*.
- 2025–2026
 - Optimal Stopping Seminar, *Columbia University*.
- 2023–2026
 - Mathematical Finance Seminar, *Columbia University*.

University and Professional Service

- 2026
 - Oral Examination Committee for Alessandro Proserpi, *Columbia University*.
 - Program Committee, Designing DeFi 2026 Conference, *Columbia Business School*.
- 2025–2026
 - Mathematics of Finance (MAFN) Academic Committee, *Columbia University*.
- 2025
 - Doctoral Dissertation Committee for Abishek Tilva, *Columbia University*.
- 2023–2026
 - MA Admission Committee, *Columbia University*.

Research Visits

- 2026
 - University of Vienna with Christa Cuchiero.
- 2025
 - Collegio Carlo Alberto and the University of Turin (joint visit) with Tiziano De Angelis.
- 2024
 - University of Toronto with Ting-Kam Leonard Wong.
 - Imperial College London with David Itkin.

Code Packages and Repositories

- Functional Portfolio Optimization:
<https://github.com/stevenacampbell/FunctionalPortfolioOptimization>
- Convex PCA and Wasserstein Geodesic PCA:
<https://github.com/stevenacampbell/ConvexPCA>
- Macroscopic Properties of Equity Markets and a Portfolio Backtesting Engine:
<https://github.com/stevenacampbell/Macroscopic-Properties-of-Equity-Markets>
- Optimal Fees for Liquidity Provision in Automated Market Makers:
<https://github.com/JasonSome/cpmm-trading/tree/master>
- Risk-Based Auto-Deleveraging:
<https://github.com/nataschahey/adl-paper-repro>

Skills and Professional Memberships

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| Languages | <ul style="list-style-type: none"> English (native), Greek (limited working proficiency), French (elementary proficiency). |
| Coding | <ul style="list-style-type: none"> Python, R, C/C++, MATLAB, Maple, $\text{\LaTeX}$, VBA. |
| Societies | <ul style="list-style-type: none"> Bachelier Finance Society, INFORMS, SIAM. |

Last Updated

September 23, 2026