DAVID ITKIN

Department of Mathematics ⋄ Imperial College London ⋄ London, UK
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Citizenship: Canada & Latvia ⋄ Last updated: November 4, 2023

EDUCATION

Carnegie Mellon University, Pittsburgh PA, USA *August 2017 - May 2022*
PhD in Mathematical Sciences
Advisor: Prof. Martin Larsson
Thesis title: *Growth optimization in stochastic portfolio theory with applications to robust finance and open markets*

University of Western Ontario, London ON, Canada *Sept 2013 - May 2017*
Honors Bachelor of Science, Financial Modelling and Mathematics
J.B. Bancroft Science Prize – Highest graduating average in the faculty of science

ACADEMIC WORK EXPERIENCE

Imperial College London, London, UK *August 2022-Present*
Chapman Fellow, Mathematics Department

PUBLICATIONS/ACCEPTED PAPERS

[1] D. Itkin, M. Larsson. Open markets and hybrid Jacobi processes. Accepted to *Annals of Applied Probability*. 2023+.
[2] D. Itkin. Generalized Rank Dirichlet distributions. *Statistics and Probability Letters*, 2024; 205, 109950.
[3] D. Itkin, M. Larsson. Robust asymptotic growth in stochastic portfolio theory under long-only constraints. *Mathematical Finance*, 2022; 32: 114–171.
[4] T. Barron, D. Itkin. Toeplitz operators with discontinuous symbols on the sphere. In "Lie theory and its applications in physics", *Springer Proceedings in Mathematics and Statistics 191*, Springer, 2016.

PREPRINTS/SUBMITTED

[1] X. Brokmann, D. Itkin, J. Muhle-Karbe, P. Schmidt. Tackling nonlinear price impact with linear strategies. Available on SSRN (2023).
[2] D. Itkin, M. Larsson. A calibrated rank-based volatility stabilized model for a large equity market. Preprint (2023).
[3] D. Itkin, B. Koch, M. Larsson, J. Teichmann. Ergodic robust maximization of asymptotic growth under stochastic volatility. arXiv:2211.15628 (2022).

WORKING PAPERS

[1] D. Itkin, M. Larsson. On a class of rank-based continuous semimartingales. arXiv:2104.04396 (2021).

PRESENTATIONS

Invited Talks

- Forum for Young Mathematicians at NUS, Singapore — Jan 2024
- York Mathematical Finance and Stochastic Analysis Seminar — Nov 2023
- Warwick Stochastic Finance Seminar — Nov 2023
- King's College London Financial Math Seminar — Oct 2023

- SIAM FME Early Career Talk (Online) Sep 2023
- ETH Finance and Insurance Mathematics Sep 2023
- Oxford Mathematical and Computational Finance Seminar May 2023
- Berlin Math Finance Seminar Jan 2023
- Mathematical Finance Seminar, Columbia University Dec 2022
- Brownbag Seminar, Boston University Dec 2022
- Joint Risk & Stochastics and Financial Math Seminar, London School of Economics Oct 2022
- Finance and Stochastics Seminar, Imperial College London May 2022
- Financial/Actuarial Math Seminar, University of Michigan (Online) Mar 2022
- Department Seminar, University of Waterloo (Online) Feb 2022
- SPAAM Seminar, University of Warwick (Online) Dec 2021
- 5th Eastern Conference on Mathematical Finance (Online) Oct 2021
- Two Sigma PhD Symposium (Online) July 2021
- Intech Meeting (Online) July 2021
- Financial Mathematics Seminar, Princeton University (Online) Mar 2021

Other Presentations

- Junior Researchers in Stochastic Optimal Control, Berlin Aug 2023
- AMaMeF, Bielefeld June 2023
- SCFE Conference, Princeton June 2023
- SIAM FME 2023, Philadelphia June 2023
- Bachelier Finance Congress (Virtual) June 2022
- 2nd Waterloo Student Conference of Stats, Act. Sci and Finance (Online) Nov 2021
- Math Finance/Probability Seminar, Carnegie Mellon University (Online) Mar 2021

AWARDS

Cecilia Tanner Workshop Support (GBP 5000, with I. Gasteratos) 2023
Cecilia Tanner Research Impulse Award (GBP 1500 $\times$ 2) 2022-23
NSERC Postgraduate Scholarships: PGS-D (CAD 21,000 per annum x 3) 2019-2021

INDUSTRY WORK EXPERIENCE

Verition Fund Management
Consultant Jan 2023-Present
Summer Intern June-July 2022

National Bank of Canada, Toronto May-Aug 2016
Summer Associate in Sales and Trading, Risk Management Solutions Group

BMO Financial Group, Toronto May-Aug 2015
Summer Intern in Credit Strategy, Enterprise Risk and Portfolio Management Group

TEACHING EXPERIENCE

Imperial College London – Instructor/Lecturer

MATH70126 – Stochastic Control in Finance* Spring 2023, 2024
MATH70122 – Convex Optimization* Spring 2023
*Indicates course in the MSc in Mathematical Finance at Imperial

Carnegie Mellon University – Teaching Assistant

46-944 Stochastic Calculus for Finance I* Spring 2019, 2020, 2021 and Fall 2017
46-915 Advanced Derivative Models* Fall 2020

46-950 Numerical Methods* Fall 2019
46-956 Fixed Income* Fall 2018
21-217 Concepts of Mathematics Spring 2018
*Indicates course in the Masters of Computational Finance Program at CMU

STUDENT SUPERVISION

Master's (MSc) Thesis Supervision at Imperial

Student: Matthieu Baboulène (with Velador Associates) Summer 2023
Thesis title: *Investing intraday momentum*

Student: Tommaso Ludovici (with Gresham Investment Management) Summer 2023
Thesis title: *Hierarchical online risk management*

Student: Tingqu Zhou (with Bainbridge Partners) Summer 2023
Thesis title: *Cross-sectional event analysis and machine learning forecasting around earnings announcements*

Undergraduate (BSc) Thesis Supervision at Imperial

Student: Pedro Urbina Jan-June 2023
Thesis title: *Comparison of open markets using rank Jacobi processes*

EVENTS (CO)-ORGANIZED

- Finance & Stochastics Seminar at Imperial (with J. Muhle-Karbe, Y. Zhang) Sep 2022-Present
- Bachelier London–Paris 2023 Workshop (with I. Gasteratos) Sep 2023
- Stochastic Portfolio Theory Workshop (with J. Muhle-Karbe) March 2023