

Dr Alessandro Micheli

PERSONAL DETAILS

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nationality: Italian, British

EDUCATION

Imperial College London, London, United Kingdom Sep 2019 - March 2023
Ph.D. in Mathematics of Random Systems.
Ph.D. program as part of the Centre for Doctoral Training in Mathematics of Random Systems. Fully Funded by EPSRC.
1st student to graduate from the Centre for Doctoral Training across all cohorts.
Supervisors: Prof. Damiano Brigo and Dr. Eyal Neuman.
Thesis Title: *Multi-Agent Market Equilibria: Mathematical Models and Empirical Analyses.*

University of Cambridge, Cambridge, United Kingdom Sep 2018 - Jun 2019
Master of Advanced Studies in Applied Mathematics.
Part III of the Mathematical Tripos, Pembroke College.
Final Grade: Distinction.

King's College London, London, United Kingdom Sep 2015 - Jun 2018
Bachelor of Science in Physics with Theoretical Physics.
Final Grade: 92/100, **Class Rank:** 1st out of about 100 students.

WORK EXPERIENCE

Imperial College London, London, United Kingdom Oct 2024 - Currently
Research Associate in Machine Learning
My research focuses on developing Probabilistic AI. So far I have focused on problems in Bayesian Deep Learning [3] and Diffusion Models [2]. I am currently exploring the interplay of Probabilistic AI methods and heavily geometric data structures [4].

Virtu Financial, Dublin, Ireland Nov 2022 - Sep 2024
Quant Strategist
Strategy and signal research focused on algorithmic trading in European equities markets. Supervised one intern during the Summer 2023.

BNP Paribas, London, United Kingdom Sep 2021 - Dec 2021
Quant Trader Intern
Developed a statistical model for cross-venue price impact. Secured an offer for a full-time position based on internship performance.

Virtu Financial, London, United Kingdom Jun 2021 - Aug 2021
Summer Intern
Designed and deployed a statistical machine learning model to enhance trading strategy monetization. Secured an offer for a full-time position based on internship performance.

Imperial College London, London, United Kingdom Jun 2019 - Sep 2019
Summer Research Assistant at the CFM-Imperial Institute for Quantitative Finance.
Created an internal python package for Capital Fund Management (CFM) to streamline financial data analysis.

University of Oxford, Oxford, United Kingdom Jun 2018 - Aug 2018
Summer Research Assistant in the Particle Physics Group.
Developed and implemented C++ code for big-data analysis, contributing to the research published in [8].

Weizmann Institute of Science, Rehovot, Israel Jun 2017 - Aug 2017
Summer Research Assistant in the Heavy Ion Physics Group.
 Collaborated with the Heavy Ion Physics group to perform C++-based big-data analysis on long-range correlations observed in Z-tagged proton-proton collisions at 8 TeV, a project within the Kupcinec-Getz summer school program.

PROGRAMMING SKILLS

Programming skills: Python, C++, SQL
Libraries: PyTorch, sklearn, NumPy, SciPy, Matplotlib, pandas

PUBLICATIONS

- [1] Rama Cont, Alessandro Micheli, and Eyal Neuman. “Fast and slow optimal trading with exogenous information”. In: *Finance and Stochastics* 29 (2025), pp. 553–607.
- [2] Alessandro Micheli, Mélodie Monod, and Samir Bhatt. *Diffusion Models for Inverse Problems in the Exponential Family*. Preprint. Available online at <https://arxiv.org/abs/2502.05994>. 2025.
- [3] Alessandro Micheli, Mélodie Monod, and Samir Bhatt. *NeuralSurv: Deep Survival Analysis with Bayesian Uncertainty Quantification*. Preprint. Available online at <https://arxiv.org/abs/2505.11054>. Provisionally accepted to *NeurIPS 2025*. 2025.
- [4] Alessandro Micheli et al. *From Graphs to Tori: Learning Transport Maps via Tropical Geometry*. In preparation. 2025.
- [5] Alessandro Micheli and Mélodie Monod. *Deep Reinforcement Learning for Online Optimal Execution Strategies*. Preprint. Available online at <https://arxiv.org/abs/2410.13493>. 2024.
- [6] Alessandro Micheli, Johannes Muhle-Karbe, and Eyal Neuman. “Closed-loop Nash competition for liquidity”. In: *Mathematical Finance* 33.4 (2023), pp. 1082–1118.
- [7] Alessandro Micheli and Eyal Neuman. “Evidence of Crowding on Russell 3000 Reconstitution Events”. In: *Market Microstructure and Liquidity* (2022).
- [8] Jacob Amacker et al. “Higgs self-coupling measurements using deep learning and jet substructure in the $b\bar{b}b\bar{b}$ final state”. In: *Journal of High Energy Physics* 2020.12 (2020), pp. 1–58.

AWARDS

Nova 111	2025
Among best 26-35 Italian talents in NGOs, Public Service & Research	
EPSRC Mathematics of Random Systems Ph.D. Scholarship	2019
Department of Mathematics, Imperial College London, London, United Kingdom	
Foundation Scholar	2019
Pembroke College, University Of Cambridge, Cambridge, United Kingdom	
Foundress Prize	2019
Pembroke College, University Of Cambridge, Cambridge, United Kingdom	
Cambridge European Scholarship (Declined)	2018
University of Cambridge, Cambridge, United Kingdom	
Layton Science Research Award	2018
King’s College London, London, United Kingdom	
Nikon Prize for Physics Project	2018
King’s College London, London, United Kingdom	
Sambrooke Exhibition in Natural Science (Physics)	2017
King’s College London, London, United Kingdom	
Gordon Rogers Scholarship	2017
King’s College London, London, United Kingdom	
The Andrewes Prize	2017
King’s College London, London, United Kingdom	

TEACHING	Imperial College London , London, UK	
	<i>Teaching Assistant, Stochastic Processes</i>	Autumn 2020
	<i>Teaching Assistant, Interest Rates Models</i>	Spring 2021
	<i>Teaching Assistant, Stochastic Control in Finance</i>	Spring 2021
	<i>Teaching Assistant, Algorithmic and High-Frequency Trading</i>	Spring 2021
PROFESSIONAL DEVELOPMENT	LOGML Summer School, Imperial College London, London, UK	July 2025
	ProbAI Winter School, University of Warwick, Warwick, UK	January 2026
PROFESSIONAL SERVICES	Reviewer for <i>Mathematics of Operations Research</i>	2024 - Currenty
	MSc Thesis Student Supervision: James Morris (2025), Hanchi Xiao (2025)	
LANGUAGES	Italian: Native Speaker.	
	English: Fluent.	