FAYÇAL DRISSI

Post-Doctoral Researcher · University of Oxford · Financial Technology

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EDUCATION

2024-2028 **University of Oxford**, Postodoctoral Research.
2020-2023 **Université Paris 1 Panthéon-Sorbonne**, PhD in Applied Mathematics.
2013-2014 **Université Paris Dauphine-PSL**, MSc in Financial Engineering
2009-2012 **IAE Graduate School of Management & ENSIMAG**, *Diplôme ingénieur* Applied Mathematics & Quant Finance
2008-2009 **Classes Préparatoires**, Advanced Courses in Mathematics and Physics. Distinction.

RESEARCH

Publications[1]

Cartea, Á., Drissi, F. & Monga, M (2025). Decentralised Finance and Automated Market Making: Execution and Speculation
Journal of Economic Dynamics and Control, Volume 177, 105134. *link.* (citation count: 35)

Cartea, Á., Drissi, F. & Monga, M (2024). Decentralised Finance and Automated Market Making: Predictable Loss and Optimal Liquidity Provision
SIAM Journal on Financial Mathematics, 15(3), 931-959. *link.* (citation count: 73)

Waldon, H., Drissi F., Limmer. Y, Berdica U., Foerster JN., Cartea Á (2024). DARE: The Deep Adaptive Regulator for Control of Uncertain Continuous-Time Systems
ICML 2024 Foundations of Reinforcement Learning and Control. *link.* (citation count: 6)

Cartea, Á., Drissi, F. & Monga, M (2023). Decentralised Finance and Automated Market Making: Predictable Losses of Liquidity Provision in Constant Function and Concentrated Liquidity Markets
Applied Mathematical Finance, 30(2), 69-93. *link.* (citation count: 35)

Cartea, Á., Drissi, F. & Monga, M (2023). Execution & Statistical Arbitrage with Signals in Multiple Automated Market Makers
IEEE 43rd International Conference on Distributed Computing Systems, 37-42. *link.* (citation count: 21)

Bergault, P., Drissi, F. & Guéant, O. Multi-asset Optimal Execution & Statistical Arbitrage Strategies under Ornstein–Uhlenbeck Dynamics (2022)
SIAM Journal on Financial Mathematics, 13 (1), 353-390. *link.* (citation count: 33)

Drissi, F (2022). Solvability of Differential Riccati Equations and Applications to Algorithmic Trading with Signals
Applied Mathematical Finance, 29 (6), 457–493. *link.* (citation count: 26)

Submitted

Cartea, Á., Drissi, F., Sánchez-Betancourt, L., Siska, & D., Szpruch L (2024). Strategic Bonding Curves in Automated Market Makers
Mathematics of Operations Research (2nd round). *link.* (citation count: 31)

Cartea, Á., Drissi, F. & Palmari, G (2024). Multi-Task Gaussian Process Bandits for Regime-Switching in Optimal Execution
SIAM Journal on Financial Mathematics (2nd round). *link.* (citation count: 15)

Duran-Martin, G., Palmari, G., Drissi, F., Cartea, A (2025). Adaptive Lookback for Bayesian Decision Making in Regime-Switching Financial Environments

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[1] Citations are from Google Scholar: link.

Working papers

Capponi A., Cartea, Á., & Drissi, F (2025). Do longer block times impair market efficiency in decentralized markets? *link.*

Drissi F., John. K, Saleh, F. Bitcoin As A Hedge Asset

Aqsha, A., Drissi, F., & Sánchez-Betancourt, L (2024). Strategic Learning and Trading in Broker-Mediated Markets

Drissi F., Jaimungal, S., & Wu, X. Hedging Liquidity Positions in Automated Market Makers

Drissi F., Feinstein, Z., & Williams, B. Ethereum Staking Market: Incentives and Implications

Cartea, A., Drissi, F., García-Arenas, G. Private Order Flow Fragmentation in Proposer-Builder Separation Consensus Layer

Cartea, Á., Drissi, F., & Herdegen, M. Equilibrium Concentrated Liquidity

Alden, A., Cartea, Á, Drissi, F., & Horvath, B. Neural Policy Stochastic Differential Equations for Decision-Making

TEACHING and SUPERVISION[2]

Lecturer

2025-2026 **University of Oxford, Saïd Business School**, MSc Financial Economics (MFE).
Lecturer, Continuous-time Finance, 24 hours. link

2024 **University of Oxford, Maths Institute**, MSc Mathematical and Computational Finance.
Lecturer, Microstructure and Algorithmic Trading, 8 hours. link

2022 **Université Paris 1 Panthéon-Sorbonne**, Msc modélisation aléatoire finance & data science.
Lecturer, Computer C++ and Applications to Finance, 21 hours. link

PhD co-supervision

2025 **Gabriel García-Arenas**, University of Oxford (with Prof. Álvaro Cartea)
2025 **Gianluca Palmari**, Scuola Normale Superiore (with Prof. Fabrizio Lillo)

Msc thesis supervision

2024 **University of Oxford, Mathematical Institute**, 4 students (DeFi and deep learning/control)
2023 **University of Oxford, Department of Statistics**, 2 students (blockchain data analysis)
2023 **University of Oxford, Mathematical Institute**, 2 students (high-frequency trading)
2021 **ENSAE ParisTech**, 3 students (Almgren-Chriss model)

SCHOLARSHIPS & GRANTS

Grants

2025 **Uniswap Foundation**, Research grant, £40 000.
2023 **Chaire Fintech at University Paris Dauphine - PSL**, Research Grant, €10 000.

Scholarships and Awards

2023 **Best PhD Thesis prize**, EURO Working Group for Commodities and Financial Modelling.
2023 **Best PhD Thesis prizePhD Prize in Maths and Data Science**, G-Research.
2022-2023 **PhD Bursary**, Oxford-Man Institute of Quantitative Finance.
2020-2022 **PhD Bursary**, New-York Life Insurance.
2009-2012 **Excellence Scholarship**, Moroccan Ministry of Higher Education, Scientific Research and Innovation.

ACADEMIC ACTIVITIES

Referee Management Science, Mathematical Finance, Finance & Stochastics, SIAM,
Applied Mathematical Finance, International Journal of Theoretical and Applied Finance,
Digital Finance, Quantitative Finance, Ledger, Frontiers of Mathematical Finance.
Curator **Quantitative Finance Research Newsletter (OMIReNew)** Oxford-Man Institute.

[2] Details and lecture notes: www.faycaldrissi.com/teaching/

INDUSTRY EXPERIENCE

2017-2020 **New-York Life Investment – Candriam**, Quantitative trading, Systematic & Global Macro.
2015-2017 **AXA Investment Managers**, Quantitative research, rates derivatives & Systematic investment.

CONFERENCES / SEMINARS

Organized

2025. INFORMS Annual Meeting 2025 session on Blockchain Economics and Decentralized Finance.
2025. The Fields Institute Workshop on Decentralized Finance and Market Microstructure. **link**.
2025. Oxford-Harvard Conference on Decentralised Finance and Market Microstructure. **link**.
2023-Present. OMI Finance Seminar monthly series, OMI Students Seminar, and OMI Crossroads Seminar. **link**.
2023-2024. DeFox weekly seminar series on decentralised finance, University of Oxford. **link**.
2023. Financial Technology Conference, University of Oxford. **link**.
2023. Blockchain@X-OMI Workshop on Blockchain and Decentralized Finance, Ecole Polytechnique/Oxford. **link**.

Invited

2025. CBER Crafting the Cryptoeconomy Conference. Columbia University's Center for Digital Finance and Technologies.
2025. AI & Digital Assets (AIDA) Workshop. University of Edinburgh, Business School. **link**.
2025. SIAM-BFS Mathematical Finance Online Seminar. **link**.
2025. Crypto Academic Camp. Edge Esmeralda. Uniswap Foundation.
2024. Finance & Stochastics seminar, Imperial College London .
2024. Stochastic Finance @Warwick seminar, Warwick University.
2024. AMMs beyond constant functions. *Frontiers in DeFi. Complexity Science Hub, Vienna.* **link**.
2024. Bonding curves of AMMs. *Conference on Microstructure, Quantitative Trading, High Frequency, and Large Data. Stevanovich Center for Financial Mathematics, University of Chicago.* **link**.
2024. Equilibrium liquidity in AMMs. *Seminar on DeFi, Harvard University*.
2024. Price impact in Quote Driven Markets. *Seminar on Microstructure, Imperial College London*. **link**.
2024. OTC Market Making with Competition and Impact. *Online Finance Seminar, University of California, Los Angeles*.
2023. AMM design and predictable losses. *Mathematical Institute Seminar, University of Oxford*.
2023. Liquidity provision in AMMs. *QuantMinds International Deep Dive & Digital Assets*.
2023. Optimal liquidity provision in AMMs. *BlockSem seminar, Ecole Polytechnique*.
2023. Bandits for algorithmic trading. *Machine Learning Conference, University of Oxford*.
2023. The microstructure of AMMs. *Seminar for master students, University of Edinburgh*.
2023. Optimal Liquidity Provision in AMMs. *KCL Financial Mathematics seminar, King's College London*.

Contributed

2024. Price formation in mempools. *CBER Cryptoeconomy Conf. Center for Digital Finance, Columbia University*.
2024. Mathematics of DeFi. *Workshop on Mathematical Insights of Markets, Control, and Learning. Ecole Polytechnique*.
2024. Advances in automated market making. *Oxford-Princeton Workshop XIII, Princeton University*.
2024. Equilibrium liquidity in Decentralised Markets. *Bachelier Finance Society – World Congress*.
2023. Predictable Losses of Liquidity Provision in AMMs. *EURO Working Group, Rome*.
2023. AMMs beyond constant functions. *WBS Gillmore Centre Conference: DeFi & Digital Currencies, Warwick University*.
2023. Bandits for algorithmic trading. *EURO Working Group for Commodities and Financial Modelling, Abu-Dhabi*.
2023. Bandits in algorithmic trading. *Fields-CFI Conf. on Advances in Math Finance and Insurance, University of Toronto*.
2023. Optimal liquidity Provision in AMMs. *SIAM Conference on Financial Mathematics, Philadelphia*.
2023. Optimal liquidity provision and execution in AMMs. *Oxford-ETH Seminar, University of Oxford*.
2023. Optimal liquidity provision and execution in AMMs. *Oxford-ETH Seminar, University of Oxford*.

OTHERS

Languages: English, French, Arabic, Japanese
Programming: Python, C++, C#, C, Matlab, R, Java, SQL, Bquant (Bloomberg).