Enzo Miller | PhD Student

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Publications

- **Linear-Quadratic stochastic delayed control and deep learning resolution**. Published in *Submitted*, with William Lefebvre, 2021.
- **Markowitz portfolio selection for multivariate affine and quadratic Volterra models**. Published in *SIAM Journal on Financial Mathematics*, with Eduardo Abi Jaber and Huyên Pham, 2020.
- **Linear-Quadratic control for a class of stochastic Volterra equations: solvability and approximation** Published in *Annals of Applied Probability*, with Eduardo Abi Jaber and Huyên Pham, 2019
- **Integral operator Riccati equations arising in stochastic Volterra control problems**. Published in *SIAM Journal on Control and Optimization*, with Eduardo Abi Jaber and Huyên Pham, 2019.
- **Linear-Quadratic McKean-Vlasov Stochastic Differential Games**. Published in *Modeling, Stochastic Control, Optimization, and Applications. The IMA Volumes in Mathematics and its Applications, vol 164. Springer*, with Huyên Pham, 2019.

Talks in Conferences

- **XXII Workshop On Quantitative Finance**, University of Verona, online event, January 30, 2021.
- **13th European Summer School in Financial Mathematics**, University of Vienna, September 03, 2020.
- **XXI Workshop On Quantitative Finance**, University of Parthenope, Naples, January 31, 2020.
- **Bachelier Colloquium**, Metabief, 2020.
- **PGMO Days**, EDF Lab, Paris, December 04, 2019.
- **Mean-field games and applications in Energy**, University of Edinburgh, April 01, 2019.
- **Mean-field games**, University of Bologna, January 14, 2019.

Education

Université Paris-Diderot **Paris - France**

Phd in applied mathematics, *2018–2021*

Non markovian stochastic control under the supervision of professor Huyên Pham.

- Control of stochastic Volterra equations (fractional Brownian motion, etc.).
- Multivariate rough mean-variance portfolio equations.
- Control of stochastic delayed equations.
- Existence of generalised Riccati equations.

Université d'Orsay **Orsay - France**

Master 2: Mathématiques de l'aléatoire, *2017–2018*

Stochastic calculus, concentration of measure, convergence of measure, random graphs & trees, simulation, online learning, theory of local times and excursions, non-parametric bayesian estimation, random models of population in biology, probabilistic tools for the study of genetic diversity.

École polytechnique **Palaiseau - France**

One of France's leading universities for high-level scientific studies, *2014–2018*

Specialized in: Applied mathematics and computer science.

Experience

Qovoltis **Paris**
Machine learning consultant (freelance) *2020 - now*
Neural networks to build smart electric vehicle charging stations. Use of TensorFlow to build a controller controlling charging stations. The goal : minimize the bill while keeping all the promises made to the client and satisfying the constrains from the technology used.

EDF **Saclay**
Machine learning consultant *2018 - 2019*
Neural networks to optimally control a battery linked to a solar panel, a house and an electric grid with random prices. The goal : minimize the bill while satisfying the constrains from the technology used.

Université Paris-Diderot **Paris**
Master Thesis, professor : Huyên Pham *April 2018 - August 2018*
Game theory and stochastic control.

École polytechnique **Paris**
Tutor in pure mathematics *Sept 2017 - June 2018*
Distribution theory for 2nd year students. Real analysis for 1st year student during the common core curriculum.

Columbia University **New York**
Visiting reasercher, professor : Guillaume Bal *April 2017 - Sept 2017*
Applied diffusion approximation theory in the context of waves propagation in topological insulators with random fluctuations. Physics and applied mathematics.

Mazars **London**
Quant *Summer 2016*
Learnt financial concepts, improved the valuation tools.

Officer student **Lyon**
French military *November 2014–April 2015*
Part of the curiculum at École polytechnique.

Languages

French mother tongue **English** fluent **Italian & Spanish** conversational
Programming languages Python
ML frameworks TensorFlow, GCP

Interests & activities

Sport: CrossFit, strolling through the streets of Paris (outdated now).

fun: Rollerblade, table football, reading.