

Grégoire Szymanski

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EDUCATION

PhD under the supervision of M. Rosenbaum and M. Hoffmann <i>Ecole Polytechnique, CMAP</i>	Oct. 2024 <i>Palaiseau, France</i>
Diplôme de l'ENS in Mathematics <i>Ecole Normale Supérieure</i>	Sept. 2021 <i>Paris, France</i>
Master El Karoui – Master of Science in quantitative finance <i>Sorbonne Universités</i>	Sept. 2020 <i>Paris, France</i>
Licence degree in Mathematics and computer science <i>Ecole Normale Supérieure</i>	Sept. 2018 <i>Paris, France</i>

ACADEMIC POSITIONS

PostDoc under the supervision of M. Podolskij <i>University of Luxembourg, Department of Mathematics</i>	Sept. 2024 – Sept. 2027 <i>Esch-Sur-Alzette, Luxembourg</i>
Graduate Student under the supervision of M. Rosenbaum and M. Hoffmann <i>Ecole Polytechnique, CMAP</i>	Sept. 2021 – Sept. 2024 <i>Palaiseau, France</i>

OTHER POSITIONS

Consultant (freelance) <i>Various industrial projects</i>	2022 – 2024 <i>Paris, France</i>
Undergraduate Research Assistant <i>Ecole Polytechnique, CMAP</i>	Feb. 2021 – Sept. 2021 <i>Palaiseau, France</i>
Quantitative analyst intern <i>BNP Paribas</i>	June 2020 – Dec. 2020 <i>London, UK</i>
Research internship <i>University of Helsinki</i>	Feb. 2019 – June 2019 <i>Helsinki, Finland</i>
Research internship <i>Paris Diderot</i>	June 2017 – July 2017 <i>Paris, France</i>

SEMINAR AND CONFERENCE PRESENTATIONS

Ceremade Winter School , Domaine de la Tour, Saint Pierre Canivet, France	Feb. 27 – March 04, 2022
Dynstoch 2022 , Institut Henri Poincaré, Paris, France	June 29 – July 1, 2022
StatMathAppli 2022 , La Villa Clythia, Fréjus, France	Aug. 29 – Sept. 2, 2022
Séminaire des jeunes chercheurs du Ceremade , Université Paris Dauphine, Paris, France	Oct. 13, 2022
Groupe de travail des thésards du LPSM , Jussieu, Paris, France	Nov. 7, 2022
Séminaire des doctorants du CMAP , Ecole Polytechnique, Palaiseau, France	Feb. 22, 2023
Groupe de Travail du CERMICS , École des Ponts, Palaiseau, France	May. 15, 2023
Workshop on modeling with Hawkes processes: Theory, Statistics and Applications , Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland	May 29 – June 2, 2023
Summer School on Big Data and Finance , Centre Paul Langevin, Aussois, France	June 12 – June 16, 2023
ICIAM 2023 , Waseda University, Tokyo, Japan	Aug. 21 – Aug 25, 2023
Seminar , Beijing Institute of Technology, Beijing, China	Sept. 21, 2023

Séminaire des doctorants du CMAP , Ecole Polytechnique, Palaiseau, France	Nov 22, 2023
Séminaire des doctorants du Ceremade , Université Paris Dauphine, Paris, France	Nov 23, 2023
EFFI France-Japan seminar , Le Mans Université, Le Mans, France	Dec. 5, 2023
Matinée recherche CFM , Capital Fund Management, Paris, France	March 12, 2024
SMSA 2024 , TU Delft, Delft, Netherland	March. 13 – March 15, 2024
Third year PhD students’ Day , Université Paris Dauphine, Paris, France	March 26, 2024
FinML Workshop , Centre Paul Langevin, Aussois, France	Sept. 23 – Sept. 27, 2024
Prob&Stat Seminar , University of Luxembourg, Esch-sur-Alzette, Luxembourg	Oct. 17, 2024
Luxembourg Workshop in Stochastic Analysis , University of Luxembourg, Esch-sur-Alzette, Luxembourg	Feb. 12, 2025
SoFiE Conference , ESSEC Campus of Cergy, Cergy, France	June 9 – June 12, 2025
SIAM Conference on Financial Mathematics and Engineering , , Miami, FL, USA	July 15 - July 18, 2025
Mathematical Finance Seminar , Columbia University, New York, NY, USA	Sept. 4, 2025
Young Researchers in Stochastic Analysis and Stochastic Geometric Analysis , Bernoulli Center, EPFL, Lausanne, Switzerland	Sept. 23–26, 2025

PUBLICATIONS AND PREPRINTS

- Grégoire Szymanski (2024): Optimal estimation of the rough Hurst parameter in additive noise. **Stochastic Processes and their Applications**.
- Carsten Chong, Marc Hoffmann, Yanghui Liu, Mathieu Rosenbaum and Grégoire Szymanski (2023): Statistical inference for rough volatility: Minimax Theory. **The Annals of Statistics**.
- Carsten Chong, Marc Hoffmann, Yanghui Liu, Mathieu Rosenbaum and Grégoire Szymanski (2023): Statistical inference for rough volatility: Central limit theorems. **The Annals of Applied Probability**.
- Bruno Durin, Mathieu Rosenbaum and Grégoire Szymanski (2023): The two square root laws of market impact and the role of sophisticated market participants. **Submitted for publication**.
- Grégoire Szymanski and Tetsuya Takabatake (2023): Asymptotic Efficiency for Fractional Brownian Motion with general noise. **Submitted for publication**.
- Raphael Maillet and Grégoire Szymanski (2024): Estimation of the invariant measure of a multidimensional diffusion from noisy observations. **Submitted for publication**.
- Youssef Ouazzani Chahdi, Mathieu Rosenbaum and Grégoire Szymanski (2024): A theory of passive market impact. **Submitted for publication**.
- Grégoire Szymanski and Wei Xu (2025): Mean-Field Limits for Nearly Unstable Hawkes Processes. **Submitted for publication**.

WORKING PAPERS

- Grégoire Szymanski, Tetsuya Takabatake (2024): Asymptotic Efficiency for Mixed Fractional Brownian Motion.
- Timothée Fabre, Adele Ravagnani, Emmanouil Sfindourakis and Grégoire Szymanski (2025): Simulation of sparse limit order books using neural networks.
- Carsten Chong, Marc Hoffmann, Mathieu Rosenbaum and Grégoire Szymanski (2025): Robust estimation of the volatility roughness.

SCIENTIFIC RESPONSIBILITIES

Reviewer <i>The Annals of Applied Probability, Quantitative Finance, SPA, and Electronic Journal of Statistics</i>	Since 2022
Co-Organizer of the FinML Workshop - Mathematical Insights from Markets, Control, and Learning <i>with Lorenzo Croissant and Antonio Ocello</i>	2024 <i>Aussois, France</i>

TEACHING EXPERIENCE

Mathematics (High School, TALENS section) Lecture and Exercises, ENS	2018 – 2019
How to write mathematics (Bachelor 1 st year) Lecture and Exercises, Ecole Polytechnique	2021 – 2022
Processus stochastiques (M2 Mathématiques pour les Sciences du Vivant) Exercices, Ecole Polytechnique	2021 – 2022
Probabilistic models in finance (Master of Mathematics) Lecture and Exercises, University of Luxembourg	2024
Logiciels mathématiques (Master of Mathematics) Lecture and Exercises, University of Luxembourg	2024

STUDENTS

Karel Moryoussef <i>Bachelor's project, Ecole Polytechnique</i>	2024 <i>Palaiseau, France</i>
Adan Fhima <i>Bachelor's thesis, University of Luxembourg</i>	2025 <i>Esch-sur-Alzette, Luxembourg</i>
Karel Moryoussef <i>Bachelor's thesis, University of Luxembourg</i>	2025 <i>Esch-sur-Alzette, Luxembourg</i>

VISITING

University of Hiroshima <i>Invited by Tetsuya Takabatake</i>	Aug - Sept. 2023 <i>Hiroshima, Japan</i>
Hong Kong University of Science and Technology <i>Invited by Carsten Chong</i>	Sept. 2023 <i>Hong Kong, China</i>
Beijing Institute of Technology <i>Invited by Wei Xu</i>	Sept. 2023 <i>Liangxiang, China</i>