

Redouane Yagouti

PhD Candidate

Inria Lille Nord-Europe, Scool Team
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Education

- 2025– **PhD in Machine Learning**, *Inria Scool, Université de Lille, France*
Title: (Optimal) Adaptive Testing For Clinical Trials
Supervisors: Emilie Kaufmann, Rémy Degenne
- 2024–2025 **M.Sc in Optimization**, *Université Paris-Saclay & IP Paris, France*
Optimization, Statistics, Machine Learning
- 2020–2021 **M.Sc in Quantitative Finance & Data**, *Université Gustave Eiffel & ENPC, France*
Stochastic Calculus, Probability, Monte Carlo Methods
- 2017–2021 **B.Sc and M.Sc in Applied Maths**, *ENSIMAG, France*
Applied Maths, Computer Science

Research Experience

- 2026 **Visiting Researcher**, *University of Cambridge, Cambridge, UK*
Invited by Sofia Villar from MRC Biostatistics Unit
- 2025– **PhD Candidate**, *Inria Scool, Lille, France*
Adaptive Testing, Multi-armed Bandits, Statistical Hypothesis Test, Clinical Trials
- 2025 **Research Intern**, *Inria Scool, Lille, France*
Designed an optimal adaptive allocation strategy for clinical trials with potentially more than two arms, ensuring strong theoretical and empirical performance
- 2022–2024 **Quant Analyst**, *Barclays Bank, London, UK*
Developed stochastic process models combining diffusion and Lévy dynamics for complex multi-factor systems
- 2021 **Quant Research Intern**, *Barclays Bank, London, UK*
Developed a Normal Inverse Gaussian Lévy model designed to reproduce SABR-type stochastic volatility smiles while preserving analytical pricing formulas

Research Projects

- [1] **On Response-Adaptive Targeting Strategies for Multi-Treatment Experiments**
Yagouti, R., Degenne, R., and Kaufmann, E. *Preprint forthcoming, 2026*
- [2] **Pure Exploration with Asymmetric Confidence Guarantees** with Kaufmann, E. and Degenne, R. *Studying sequential identification problems with distinct false-positive and false-negative confidence constraints. Ongoing research project, 2026*
- [3] **On Asymptotic Properties for Adaptive Designs in Clinical Trials**
Master Thesis, Inria Scool 2025. Supervised by Emilie Kaufmann and Rémy Degenne.
Studied asymptotic behavior of response-adaptive procedures in sequential clinical experimentation

Research Activities

Talks

2026 **Scool Seminar**, *Inria Lille*, France

Poster

2026 **Advances in Adaptive Experimentation Workshop**, *UCL, London*, UK

Skills

Languages English (Fluent), French (Fluent), Arabic (Native)

Programming Python, C/C++, Java

ML/AI PyTorch, TensorFlow, Keras, JAX

Tools Git, Linux

Honors & Activities

Finalist of the Physics and Chemistry Moroccan Competition (*Best 20 students*)

Moroccan Merit Scholarship (*Reserved for the best scientific students*)