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Thibaut Montes

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PROFESSIONAL EXPERIENCE

DESK STRAT | Deutsche Bank
Sep 2020 - Now | London, United-Kingdom

Working on the Synthetic Desk's migration to Kannon (P&L and Risk tool used by trading).

RESEARCH ADVISOR | The Independent Calculation Agent (ICA)
Nov 2016 - Mar 2020 | Paris, France

As a PhD candidate, I worked in collaboration with ICA on the following projects:

- Optimizing their analytic library using Optimal Quantization (Pricing of Exotic Options in the interest rate world).
- Identifying and *killing* bias in their xVA computation using Multilevel Monte-Carlo methods.

INTERN | The Independent Calculation Agent (ICA)
May 2016 – Oct 2016 | Paris, France

Optimization of financial products pricing and risk measures sensitivities computations.

INTERN | LPSM | Sorbonne University (former Paris VI)
Jun 2015 – Jul 2015 | Paris, France

Simulation of short rate models using trinomial trees. The project can be accessed at the following link: Trinomial Trees.

EDUCATION

PHD IN NUMERICAL PROBABILITY | LPSM | Sorbonne University (former Paris VI)
Mar 2017 – Jun 2020

I was under the direction of **Gilles Pagès** and **Vincent Lemaire** at the LPSM and the supervision of **Jean-Michel Fayolle** at ICA France.

My research subjects were **Optimal Quantization**, also known as K-means, and Multilevel Monte-Carlo methods.

RESEARCH MASTER IN PROBABILITY AND FINANCE (WITH HONORS) | Sorbonne University (former Paris VI) in collaboration with École Polytechnique
Sep 2014 – Jun 2016

- Numerical Probability (Monte-Carlo, Sensitivities Computation, . . .).
- Stochastic Algorithms (Stochastic Gradient Descent, . . .).
- Machine Learning.
- Stochastic Calculus and Control.

BACHELOR DEGREE IN MATHEMATICS (WITH HONORS) | Aix-Marseille University
Sep 2011 – Jun 2014

Third year of the Bachelor on exchange with the ERASMUS program at Lund University's mathematics department, Lund, Sweden.

SKILLS

PROGRAMMING
- **C++** (Creation of libraries)
- **Python** (Binding of C++ libraries using Pybind11)
- Basics: **Scala** ◇ **Kafka** ◇ **MongoDB**

LANGUAGES
French: native – **English**: fluent

INTERESTS
Running ◇ Trails

PUBLICATIONS

- Vincent Lemaire, Thibaut Montes and Gilles Pagès. **Stationary Heston model: Calibration and Pricing of exotics using Product Recursive Quantization**. Submitted to *Quantitative Finance*, 2020.
- Jean-Michel Fayolle, Vincent Lemaire, Thibaut Montes and Gilles Pagès. **Quantization-based Bermudan option pricing in the FX world**. Submitted to *Journal of Computational Finance*, 2019.
- Vincent Lemaire, Thibaut Montes and Gilles Pagès. **New weak error bounds and expansions for optimal quantization**. Published in *Journal of Computational and Applied Mathematics*, 2019.