

Thibaut Montes

montest.github.io | montes.thibaut@gmail.com

LINKS

Website:// montest.github.io

Github:// [montest](https://github.com/montest)

LinkedIn:// [thibaut-montes-194a77a9](https://www.linkedin.com/in/thibaut-montes-194a77a9)

SKILLS

PROGRAMMING

- Over 5000 lines:
C++ (Creation of libraries) ♦ \LaTeX
- Over 1000 lines:
Python (Binding of C++ libraries using Pybind11, PyTorch) ♦ Scala (just for fun)
- Discovering:
Kafka ♦ MongoDB

LANGUAGES

- French: native
- English: fluent

INTERESTS

Running ♦ Trails

EDUCATION

PHD CANDIDATE IN NUMERICAL PROBABILITY | LABORATOIRE DE PROBABILITÉS, STATISTIQUES ET MODÉLISATION (LPSM) | SORBONNE UNIVERSITY (FORMER PARIS VI - UPMC)

Mar 2017 – June 2020 | Paris, France

In collaboration with ICA France, a fintech aiming at efficiently compute risk measures linked to counterparty default. 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 are 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 - UPMC) IN COLLABORATION WITH ECOLE POLYTECHNIQUE

Sep 2014 – Jun 2016 | Paris, France

- 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 | Paris, France

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

PROFESSIONAL EXPERIENCE

INTERN | ICA FRANCE

May 2016 – Oct 2016 | Paris, France

Optimization of financial products pricing and risk measures sensitivities computations (Malliavin calculus and finite differences methods).

INTERN | LPSM (FORMER LPMA)

Jun 2015 – Jul 2015 | Paris, France

We simulated numerically short rate models (Vasicek Model) using trinomial trees. The project can be accessed at the following link: **Trinomial Trees Simulation**

PUBLICATIONS

- Vincent Lemaire, Thibaut Montes and Gilles Pagès. **Stationary Heston model: Calibration and Pricing of exotics using Product Recursive Quantization.** Available on *arXiv*, 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.