

Oumaima Bencheikh

Paris, France

+33 6 12 19 44 01 • [✉ oumaima.bencheikh@hotmail.com](mailto:oumaima.bencheikh@hotmail.com) • [🌐 Homepage](#)
[in oumaïma-bencheikh](#) • DOB: 15/04/1992, Citizenships: French, Moroccan

Education

PhD in applied mathematics - Probability, CERMICS, École des Ponts ParisTech <i>Weak error analysis for time and particle discretizations of some SDEs.</i>	Paris 2017 – 2020
Research Master, Université Paris-Est MLV <i>Applied mathematics to finance (Ex. DEA Lambertson - Analysis and Random Systems).</i>	Paris 2016 – 2017
Master in quantitative finance, IAE School of Management <i>Market finance and econometrics.</i>	Grenoble 2015 – 2016
Engineering degree in computer science and applied mathematics, Ensimag <i>Graduate program in financial engineering and advanced quantitative methods.</i>	Grenoble 2013 – 2016

Work Experience

Teaching assistant at École des Ponts ParisTech <i>First and second year of the engineering program.</i> <ul style="list-style-type: none">Numerical statistics and data analysis - Lectures & TutorialsDecision in Uncertainty - Tutorials	Paris 2018 – 2020
Research intern at CERMICS, École des Ponts ParisTech <i>Worked within the Probability theory team.</i> Bias estimation and antithetic sampling for systems of particles interacting through moments.	Paris <i>April–Sept.</i> 2017
Quantitative analyst intern at BNP Paribas CIB <i>Worked within the Credit Derivatives quantitative research team.</i> Implementation of the stochastic volatility "Cheyette beta" model to price CDS options.	London <i>April–Sept.</i> 2016

Publications & Preprints

Bias behaviour and antithetic sampling in mean-field particle approximations of SDEs nonlinear in the sense of McKean: With Benjamin Jourdain, published in ESAIM:PROCEEDINGS AND SURVEYS, Vol.65, pp.219 – 235, 2019.

Weak and strong error analysis for mean-field rank based particle approximations of one dimensional viscous scalar conservation laws: With Benjamin Jourdain, Preprint arXiv:1910.11237, 2019.

Convergence in total variation of the Euler scheme applied to diffusion processes with measurable drift coefficient and additive noise: With Benjamin Jourdain, Preprint arXiv:2005.09354, 2020.

Approximation rate in Wasserstein distance of probability measures on the real line by deterministic empirical measures: With Benjamin Jourdain, Preprint arXiv:2012.09729, 2020.

Skills & Languages

IT:	Object Oriented Programming C++/Python, LaTeX
Maths:	R software, Scilab
Languages:	Arabic – Native French – Native English – Fluent

Other interests

Hobbies: Piano, Guitar.

Charity project for orphans: Initiated the project and implemented the organization assuring its sustainability.