Mohamed-Mehdi Ouaki

Education

September 2017- May 2022 — **University of California**, *Berkeley*, California.
PhD in the Statistics department under the supervision of Steven N. Evans and Fraydoun Rezakhanlou.
Primary research area : Probability theory and Partial Differential Equations.
Courses taken : Probability Theory / Theoretical Statistics / PDE / Machine Learning / Dynamical Systems etc..
Served as a Graduate Student Instructor for the following courses : STAT 150 (Stochastic processes) in Spring 2018, Fall 2018, Spring 2021 and Fall 2021, STAT 134 (Introduction to Probability) in Spring 2019, STAT 205A in Fall 2020 and STAT 205B in Spring 2022.
GPA : 4.0/4

September 2014–March 2017 — **Ecole Polytechnique**, *Palaiseau*, France.
Bachelor and Master in Mathematics and Applied Mathematics.
Courses taken : Stochastic Calculus and application to Finance / Machine Learning / Optimization / Numerical analysis / Econometrics / Time Series etc...
Ranked 4th/500

Publications

2021 **Random tesselations of the plane and Hamilton-Jacobi equations**, *with Fraydoun Rezakhanlou*, ***Commun. Math. Phys. (2022). https://doi.org/10.1007/s00220-022-04402-0***.

2021 **Markovian structure in the concave majorant of Brownian motion**, *with Jim Pitman*, ***Electron. J. Probab. 27: 1-21 (2022). DOI: 10.1214/22-EJP769.***.

2020 **Scalar conservation laws with white noise initial data**, ***Probab. Theory Relat. Fields 182, 955–998 (2022)***.

2020 **Two continua of embedded regenerative sets**, *with Steven N.Evans*, ***A Lifetime of Excursions Through Random Walks and Lévy Processes. Progress in Probability, vol 78, pp 215-230.***.

2019 **Excursions away from the Lipschitz minorant of a Lévy process**, *with Steven N.Evans*, ***Ann. Inst. H. Poincaré Probab. Statist. 58(1): 424-454***.

Related Experience

Summer 2020 — **Hedge Fund Internship**, *Quantitative Researcher*, Citadel Securities, Chicago, USA.

March - August 2017 — **Hedge Fund Internship**, *Quantitative Researcher*, Squarepoint Capital, London, United Kingdom.

451 Evans Hall – Berkeley – California
mouaki@berkeley.edu • Citizenships : Canadian/French/Moroccan.

2016–2017 **Scientific Project**, Ecole Polytechnique, with Nizar Touzi and Thibaut Mastrolia.
A project in applied mathematics about contract theory in continuous time models. Involving stochastic differential equations and optimal control, the goal of the project was to solve a principal-agent problem by giving an explicit characterization of the solutions set.

2015–2016 **Laboratory Project**, Ecole Polytechnique, with Ugo Boscain.
A scientific project about mathematical control theory applied to a population transfer problem in quantum mechanics.

2014–2015 **Education Internship**, *Assistant Teacher*, Lycée Jean-Baptiste, Savigny sur Orge, France.
Six months in "Jean Baptiste Corot" high school, where I worked as an assistant teacher of mathematics to help students as well as colleagues in their work.

Invited Talks

2021 **Probability Seminar**, *Mathematics department*, Brown University.

2021 **Probability/PDE Seminar**, *Mathematics department*, UC Berkeley.

2021 **Probability seminar**, *Mathematics department*, Duke University.

2021 **Probability seminar**, *Statistics department*, UC Berkeley.

2020 **Probability/PDE Seminar**, *Mathematics Department*, UC Berkeley.

2020 **Probability seminar**, *Statistics Department*, UC Berkeley.

2019 **Probability Seminar**, *Statistics department*, Stanford University.

2019 **Probability/PDE Seminar**, *Mathematics department*, UC Berkeley.

Awards and Honors

2022 **Department Citation in Probability**, *Berkeley*, USA.
Given in recognition of an outstanding PhD student in probability.

2022 **Friedman Memorial Prize in Mathematics**, *Berkeley*, USA.
Bernard Friedman Memorial Prize in Applied Mathematics given by UC Berkeley's Mathematics department.

2019-2020 **Citadel Fellowship**, *Berkeley*, USA.
Presented to one exceptional PhD graduate student in Berkeley Statistics department.

2014 **French Government's Major-Excellence Scholarship**, *Paris*, France.
Three years long scholarship given to the top incoming students to Ecole Polytechnique

2014-2017 **Ecole Polytechnique**, *Palaiseau*, France.
Ranked first at the entrance exam for incoming students and fourth out of 500 students at the exit exam.

2012 **International Mathematical Olympiad**, *Mar Del Plata*, Argentina.
Bronze medalist in the International Mathematics Olympiad representing Morocco.

2012 **Baccalaureate in Mathematical and Physical Sciences**, *Rabat*, Morocco.
Ranked first nationally in the baccalaureate exam.

2012 **Concours general**, *Rabat*, Morocco.
First place in the subject of mathematics.

2012 **Asian Pacific Mathematics Olympiad**, *Rabat*, Morocco.
Honourable Mention.

Computer Skills

Basic	Java,C++
Intermediate	Scilab, Mathematica, MATLAB
Advanced	Python, Latex

Languages

Arabic	Mothertongue
French	Bilingual
English	Professional proficiency