

MASSIL ACHAB

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EDUCATION

Ecole Polytechnique, Palaiseau, France 2014 - 2017

Ph.D. in Machine Learning

Topics: Point Processes, Convex Optimization, Causality Inference.

PhD thesis: Learning from Sequences with Point Processes.

Professors: Prof. Emmanuel Bacry and Prof. Stéphane Gaïffas

ENSAE, Malakoff, France 2013 - 2014

MSc in Statistics & Machine Learning

Master thesis: Quantum model of interest rates.

Supervisor: Dr. Taoufik Amri

Ecole Polytechnique, Palaiseau, France 2010 - 2013

BSc, MSc in Probabilities & Random Models

Bachelor thesis: Blackjack strategies with dynamic programming.

Professor: Prof. Stéphane Gaubert

EXPERIENCE

Ecole Polytechnique, Palaiseau, France 2014 (4 months)

Research Intern

Developped a state-of-the-art algorithm for fitting large-scale Cox model.

Advisor: Dr. Stéphane Gaïffas

Banque Populaire Caisses d'Epargne, Paris, France 2013 - 2014 (7 months)

Research Assistant

Designed tools to model a yield curve using path integrals, based on Baaquie-Bouchaud model.

Advisor: Dr. Taoufik Amri

Columbia University, Earth Institute, New-York, USA 2013 (3 months)

Research Intern

Improved analysis tools of a crop simulation model based on Ensemble Kalman Filter.

Advisor: Dr. Amor Ines

PUBLICATIONS

[SGD with Variance Reduction beyond Empirical Risk Minimization](#), with A. Guillaoux, S. Gaïffas, E. Bacry, International Conference on Monte Carlo Methods and Applications (MCM), 2017.

[Uncovering Causality from Multivariate Hawkes Integrated Cumulants](#), with E. Bacry, S. Gaïffas, I. Mastromatteo, J.-F. Muzy, International Conference on Machine Learning (ICML), 2017

[Analysis of order book flows using nonparametric estimation of branching ratio matrix](#), with E. Bacry, J.-F. Muzy, M. Rambaldi, Quantitative Finance, 2017.

TECHNICAL STRENGTHS

Computer Python, C++, Scala, Spark, JavaScript

Languages French (native speaker), English (fluent), German (intermediate)

EXTRACURRICULAR ACTIVITIES

X-Passion Keen writer of poems for the Ecole Polytechnique's magazine.

Sports Football (with feet), Half Marathon runner.