Mathurin MASSIAS

PhD in Machine Learning

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SKILLS

MATHEMATICS:	Convex optimisation, sparsity, proximal methods, high dimension
COMPUTER SCIENCE:	Python (excellent), R (good), Matlab (good)
	Github: http://github.com/mathurinm
	StackOverflow: https://stackoverflow.com/users/2902280/p-camilleri
LANGUAGES:	English (fluent), Spanish (basics)

PROFESSIONAL EXPERIENCE

JAN 2020 -	**UNIVERSITÀ DI GENOVA** (Genova, Italy) : Post-doctoral researcher, supervised par L. Rosasco and S. Villa
	Statistical learning and optimisation
SEPT. 2016 - DEC. 2019 (3 YEARS)	**INRIA** (Université Paris-Saclay, France): PhD student in the Parietal team, supervised by A. Gramfort and J. Salmon
	High dimensional sparse regression, with coloured heteroscedastic noise
	Machine Learning: Convex and non-convex optimisation, Inverse problems, Sparsity, High dimension
	Technical framework: Python (Cython, numpy, sklearn)
	Publications: [1, 2, 3, 4, 5, 6, 7, 8]
FEB. 2019 - MAY 2019 (3 MONTHS)	**U. of Tokyo/RIKEN** (Japan), Deep Learning Theory team: intern, supervised by T. Suzuki
	Work on gradient Langevin dynamics for non-convex regression in RKHS
	Machine Learning: Stochastic differential equations, Markov chains, Ergodicity
	Publications: currently writing
JUNE 2015 - JUNE 2016 (1 YEAR)	**CARDIOLOGS** (Paris, France): Data scientist
	Design and implementation of automatic heart disease screening algorithms.
	Supervised learning on a dataset of 300,000 ECGs.
	Machine Learning: Convolutional neural networks, Recurrent neural networks
	Technical framework: Python (numpy), Tensorflow, Caffe, Theano/nolearn/lasagne
OCT. 2014 - MAR. 2015 (6 MONTHS)	**DREEM-DEVICES** (Paris, France): Part-time data scientist
	Classification and dimensionality reduction on EEG signals.
	Machine Learning: Signal processing, Clustering (K-Means, Meanshift, GMM, HMM)
	Technical framework: Python (numpy, sklearn)

EDUCATION

SEPT. 2016 - SEPT. 2019	**Parietal Team, INRIA Saclay, Université Paris-Saclay** (Saclay, France): PhD student
	Title: Sparse high dimensional regression in the presence of heteroscedastic noise
	Advisors: Alexandre Gramfort, Joseph Salmon
SEPT. 2014 - APR. 2015	**ENS Cachan** (Cachan, France): MSc in Machine Learning (MVA)
	Summa cum laude (average grade: 16.8/20)
SEPT. 2011 - APR. 2015	**Ecole Centrale Paris** (Paris, France): Engineering degree
	Major in Applied Mathematics and Data Science
	Average grade: 16.3/20
JAN. 2013 - MAY 2013	**Indian Institute of Science** (Bengalore, India): Exchange semester
	Pure Mathematics Department

INTERESTS

Modern history, Antic history (latin language)
Photography

PUBLICATIONS

[1] **M. Massias***, Q. Bertrand*, A. Gramfort, and J. Salmon. Support recovery and sup-norm convergence rates for sparse pivotal estimation. *submitted to AISTATS*, 2019.

[2] **M. Massias**, S. Vaiter, A. Gramfort, and J. Salmon. Dual extrapolation for sparse Generalized Linear Models. *submitted to JMLR*, 2019.

[3] P. Ablin, T. Moreau, **M. Massias**, and A. Gramfort. Learning step sizes for unfolded sparse coding. *NeurIPS*, 2019.

[4] Q. Bertrand*, **M. Massias***, A. Gramfort, and J. Salmon. Concomitant Lasso with repetitions: beyond averaging multiple realizations of heteroscedastic noise. *NeurIPS*, 2019.

[5] **M. Massias**, A. Gramfort, and J. Salmon. Celer: a fast solver for the Lasso with dual extrapolation. *ICML*, 2018.

[6] **M. Massias**, O. Fercoq, A. Gramfort, and J. Salmon. Heteroscedastic multitask concomitant Lasso for sparse multimodal regression. *AISTATS*, 2018.

[7] **M. Massias**, J. Salmon, and A. Gramfort. Gap safe screening rules for faster complex-valued multi-task group Lasso. *SPARS*, 2017.

[8] **M. Massias**, A. Gramfort, and J. Salmon. From safe screening rules to working sets for faster Lasso-type solvers. *OPT-ML workshop at NeurIPS*, 2017.