

# Jaouad Mourtada

*Assistant professor in Statistics*

## Positions

- sep. 2020 – **Assistant Professor**, ENSAE/CREST, Department of Statistics.  
...  
nov. 2019 – **Research Fellow**, under the supervision of Lorenzo Rosasco, Laboratory for Computational and Statistical Learning, MaLga center, University of Genova.  
aug. 2020

## Education

- 2016–2020 **Ph.D. in Applied Mathematics**, under the supervision of Stéphane Gaïffas and Erwan Scornet, Centre de Mathématiques Appliquées (CMAP), École Polytechnique. Thesis: “Contributions to statistical learning: density estimation, expert aggregation and random forests”. Defended June 8th, 2020.  
2012 – 2016 **Student at École Normale Supérieure, Paris**, Department of Mathematics and Applications (DMA), with minors in economics and physics.  
2016 **Master 2 in Mathematics**, Université Pierre et Marie Curie (Paris VI), Major “Probabilités et Modèles Aléatoires” (Probability and Random Models).  
2015 **Master 2 in Mathematics**, Université Pierre et Marie Curie (Paris VI), Major “Mathématiques fondamentales” (Fundamental Mathematics).  
2013 **B.S. in Mathematics**, École Normale Supérieure & Université Pierre et Marie Curie (Paris VI).  
2010 – 2012 **Classes préparatoires**, Lycée Louis-le-Grand, Paris.

## Publications

- 2022 **Distribution-free robust linear regression**, J. Mourtada, T. Vaškevičius, N. Zhivotovskiy, *Mathematical Statistics and Learning*, online first. [Link arXiv](#).  
2021 **Regularized ERM on random subspaces**, A. Della Vecchia, J. Mourtada, E. De Vito, L. Rosasco, *Proceedings of the 24th international conference on Artificial Intelligence and Statistics*, PMLR 130:4006–4014. [Link arXiv](#).  
2021 **Asymptotics of ridge(less) regression under general source condition**, D. Richards, J. Mourtada, L. Rosasco, *Proceedings of the 24th international conference on Artificial Intelligence and Statistics*, PMLR 130:3889–3897. [Link arXiv](#).  
2019 **An improper estimator with optimal excess risk in misspecified density estimation and logistic regression**, J. Mourtada, S. Gaïffas, To appear in *Journal of Machine Learning Research*, arXiv:1912.10784. [arXiv](#).

10T rue Lecuirot – 75014 Paris, France

☎ +33 6 14 47 58 93 • ✉ [jaouad.mourtada@ensae.fr](mailto:jaouad.mourtada@ensae.fr)

📄 [jaouadmourtada.github.io/](https://jaouadmourtada.github.io/)

- 2019 **Exact minimax risk for linear least squares, and the lower tail of sample covariance matrices**, J. Mourtada, Under major revision in *Annals of Statistics*, arXiv:1912.10754. [arXiv](#).
- 2021 **AMF: Aggregated Mondrian forests for online learning**, J. Mourtada, S. Gaïffas, E. Scornet, *Journal of the Royal Statistical Society (B)*, 83(3):505–533. [Link arXiv](#).
- 2019 **On the optimality of the Hedge algorithm in the stochastic regime**, J. Mourtada, S. Gaïffas, *Journal of Machine Learning Research*, 20(83):1–28. [Link arXiv](#).
- 2020 **Minimax optimal rates for Mondrian trees and forests**, J. Mourtada, S. Gaïffas, E. Scornet, *Annals of Statistics*, 48(4):2253–2276. [Link arXiv](#).
- 2017 **Universal consistency and minimax rates for online Mondrian Forests**, J. Mourtada, S. Gaïffas, E. Scornet, *Advances in Neural Information Processing Systems 30*, pp. 3758–3767. [Link arXiv](#).
- 2017 **Efficient tracking of a growing number of experts**, J. Mourtada, O.-A. Maillard, *Proceedings of the 28th international conference on Algorithmic Learning Theory*, PMLR 76:517–539. [Link arXiv](#).

## Talks

- Nov 2021 **Math and Data (MAD+) Seminar**, *ETH Zürich*.
- Nov 2021 **Séminaire du LMAC**, *Université de Technologie de Compiègne*.
- Jun 2021 **LCSL seminar**, *University of Genova*.
- May 2021 **Workshop “New trends in statistical learning”**, *Porquerolles*.
- Apr 2021 **Séminaire de Probabilités et Statistique**, *LJAD, Université de Nice*.
- Mar 2021 **Seminar**, *University of Toronto*.
- Mar 2021 **Séminaire Palaisien**, *IP Paris, Palaiseau*.
- Mar 2021 **MIA seminar**, *AgroParisTech, INRAE, Paris*.
- Nov 2020 **LPSM seminar**, *Université Paris Diderot & Sorbonne Université, Paris*.
- Sep 2020 **Statistics seminar**, *CREST-ENSAE, Palaiseau*.
- May 2020 **LCSL seminar**, *University of Genova*.
- Jan 2020 **Séminaire Parisien de Statistique**, *Institut Henri Poincaré, Paris*.
- Sep 2019 **StatMathAppli 2019**, *Fréjus*.
- Jun 2019 **Journées de Statistiques (JdS 2019)**, *Nancy*.
- Apr 2019 **PhD students seminar**, *École polytechnique*.
- Dec 2018 **CMStatistics 2018**, *University of Pisa*.
- Sep 2018 **Young Mathematicians Symposium of the Greater Region**, *Nancy*.
- May 2018 **Journées de Statistiques (JdS 2018)**, *EDF Lab Paris Saclay*.
- May 2018 **Young probabilists and statisticians**, *Oléron*.
- Oct 2017 **ALT 2017**, *Kyoto*.
- Feb 2017 **Sequel seminar**, *INRIA Lille*.

## Awards

2020 **Jacques Neveu prize 2020**, for a French Ph.D in probability and statistics.

## Service

- Journal reviewing Annals of Statistics, Bernoulli, Electronic Journal of Statistics, Journal of Machine Learning Research, Mathematical Statistics and Learning, SIAM Journal on Mathematics of Data Science.
- Conference reviewing NeurIPS, ICML, AISTATS.
- Seminars Co-organizer of the Statistics Seminar, *CREST*, *ENSAE & CMAP*, *École polytechnique*, with C. Butucea, K. Lounici and A. Tsybakov, [Seminar page](#).

## Teaching

- fall 2020 & 2021 **Statistical learning theory**, *Master 2 Data Science*, *École polytechnique & ENSAE 3rd year*.
- fall 2020 & 2021 **Probability theory**, *2e année directe*, ENSAE.
- fall 2018 **Teaching assistant, “Probability Refresher” (MAP 534)**, *T. Rebafka, T. Mastrolia*, “Data Science for Business” Master program (Polytechnique–HEC).
- spring 2018 **Teaching assistant, “Statistics in Action with R” (MAP 546)**, *M. Lavielle*, “Data Science for Business” Master program (Polytechnique–HEC).
- spring 2018 & 2019 **Teaching assistant, “Python for Probability” (MAP 311-312)**, *F. Benaych-Georges*, *École Polytechnique* (first year).
- fall 2017 & 2018 **Teaching assistant, “Machine Learning: from theory to practice”**, *F. d’Alché-Buc and E. Le Pennec*, *Master 2 Data Science*, *Université Paris-Saclay*.
- fall 2018 & 2019 **Teaching assistant, “Statistical inference” (MAP 433)**, *E. Moulines*, *École Polytechnique* (second year).
- summer 2017 **Contributed to lecture notes for the “Statistical inference” class (MAP 433)**, *taught by E. Moulines, with G. Fort, M. Lerasle, E. Moulines*, *École polytechnique*.
- fall 2016 **Teaching assistant, “Optimization for Machine Learning”**, *A. Gramfort, S. Gaïffas*, *Master 2 Data Science*, *Université Paris-Saclay*.

## Student supervision

- 2021–... **Hugo Chardon**, *Ph.D. thesis*, co-supervised with M. Lerasle.
- 2020 **Koen Sanders**, *MSc. internship*, co-supervised with L. Rosasco.

## Internships

- summer 2016 **Master 2 research internship**, *supervised by Odalric-ambrym Maillard*, *Sequential prediction through expert aggregation*, *INRIA Saclay*.
- summer 2015 **Research internship**, *supervised by Olivier Commowick and Christian Barillot*, *Interpolation of multi-compartment models in brain imaging*, *INRIA/IRISA Rennes*.

spring 2015 **Master 2 research internship**, supervised by *Frédéric Le Roux*, Morphisms between diffeomorphism groups of manifolds, Paris VI.

---

## Miscellaneous

Programming Python, Matlab, OCaml

Languages French (mother tongue), English (fluent), Spanish (intermediate), Italian (beginner)