

PhD in Statistics, CNRS Researcher, Paris

Academic positions

- 2022– **CNRS**, *Chargé de Recherche*, Paris (France)
CNRS researcher in the Laboratoire de Probabilités, Statistique et Modélisation (LPSM)
- 2020-2022 **University of Oxford**, *Postdoctoral fellow*, Oxford (UK)
Postdoctoral researcher in the department of Statistics, working with Pr. Arnaud Doucet

Teaching positions

- 2022– **Sorbonne Université**, *Lecturer*, Paris (France)
PAC-Bayes Theory & Variational Inference – Master 2
- 2022– **Ecole des Ponts**, *Lecturer*, Champs-sur-Marne (France)
High-Dimensional Statistics – 2A
- 2022– **ESSEC Business School**, *Lecturer*, Cergy (France)
Business Statistics & Analytics – 1A
- 2017-2020 **ENSAE Paris**, *Teaching Assistant*, Paris (France)
Statistics, Machine Learning, Measure Theory & Topology

Education

- 2017–2020 **Institut Polytechnique de Paris**, *PhD in Statistics & Machine Learning*
PhD in the department of Statistics of CREST, supervised by Pr. Pierre Alquier
Title: *Contributions to the theoretical study of variational inference & robustness*
Jury: Elisabeth Gassiat (President), Ismaël Castillo & Arnaud Doucet (Reviewers), Arnak Dalalyan, Aurélien Garivier, Vincent Rivoirard (Examiners), Pierre Alquier (Supervisor)
- 2016-2017 **ENS Paris-Saclay**, *MSc in Machine Learning, MVA Master Program*
- 2014-2017 **ENSAE Paris**, *MSc in Economics and Statistics, Engineering degree*

Publications

- 2023 **Label Shift Quantification with Robust Guarantees via Distribution Feature Matching**, with B. Dussopt & Gilles Blanchard, Submitted
- 2023 **Bayes meets Bernstein at the Meta Level: an Analysis of Fast Rates in Meta-Learning with PAC-Bayes**, with C. Riou & P. Alquier, Submitted
- 2022 **On PAC-Bayesian Reconstruction Guarantees for VAEs**, with Y. Shi, B. Guedj & A. Doucet, Accepted, 25th International Conference on Artificial Intelligence and Statistics (AISTATS 2022)
- 2022 **Estimation of Copulas via Maximum Mean Discrepancy**, with P. Alquier, A. Derumigny & J.-D. Fermanian, Accepted, Journal of the American Statistical Association (JASA)
- 2022 **Finite sample properties of parametric MMD estimation: robustness to misspecification and dependence**, with P. Alquier, Bernoulli
- 2020 **Convergence Rates of Variational Inference in Sparse Deep Learning**, Proceedings of the 37th International Conference on Machine Learning (ICML 2020)
- 2020 **MMD-Bayes: Robust Bayesian Estimation via Maximum Mean Discrepancy**, with P. Alquier, Proceedings of the 2nd Symposium on Advances in Approximate Bayesian Inference (AABI 2020)

- 2019 **A Generalization Bound for Online Variational Inference**, with *P. Alquier & M.E. Khan*, Proceedings of the 11th Asian Conference on Machine Learning (ACML 2019)
Best paper award
- 2019 **Consistency of ELBO maximization for model selection**, *BECA*, Proceedings of the 1st Symposium on Advances in Approximate Bayesian Inference (AABI 2019)
Travel award
- 2018 **Consistency of Variational Bayes Inference for Estimation and Model Selection in Mixtures**, with *P. Alquier*, Electronic Journal of Statistics (EJS)

Research Activities

- Talks
 - Ecole des Ponts, Stochastic Methods Seminar, Champs-sur-Marne (France), Feb. 2023.
 - University College London, Statistical Science Seminar (UK), Jan. 2023.
 - Institut Henri Poincaré, Young Statisticians and Probabilists day, Jan. 2023.
 - University of Warwick, Statistics Seminar, Warwick (UK), June 2022.
 - DeepMind/UCL, DeepMind/ELLIS CSML Seminar Series, London (UK), May 2022.
 - INRAE, MalAGE team Seminar, Jouy-en-Josas (France), Jan. 2022.
 - Université Paris-Saclay, Probability and Statistics Seminar, Orsay (France), Dec. 2021.
 - University of Bristol, Statistics Seminar (UK), Oct. 2021.
 - Imperial College London, Statistics Seminar (UK), May 2021.
 - Sorbonne Université - Université de Paris, LPSM Seminar (France), Jan. 2021.
 - Alan Turing Institute, DCE Seminar, London (UK), Sept. 2020.
 - ICML (Remote), July 2020.
 - Riken AIP, PI Seminar, Tokyo (Japan), Feb. 2020.
 - CREST, Stats/ML/Econometrics Seminar, Palaiseau (France), Nov. 2019.
 - I2M, Statistics Seminar, Marseille (France), Nov. 2019.
 - INRIA - ENS Paris, Sierra Team Seminar, Paris (France), Oct. 2019.
 - Ecole Doctorale Mathématiques Hadamard, PhD days, Palaiseau (France), May 2019.
 - AABI Symposium, Montréal (Canada), Dec. 2018.
 - CREST, Stats/ML/Econometrics Seminar, Palaiseau (France), Oct. 2018.
 - Université Paris-Saclay, Probability and Statistics Seminar, Orsay (France), June 2018.
- Posters
 - MHC Conference, Université Paris-Saclay, Orsay (France), June 2021.
 - AABI Symposium, Vancouver (Canada), Dec. 2019.
 - Structural Inference in High-Dimensional Models 2, HSE, St. Petersburg (Russia), Aug. 2019.
 - AABI Symposium, Montréal (Canada), Dec. 2018.
- Awards
 - Best Paper Award**, 11th Asian Conference on Machine Learning, 2019.
 - Travel Award**, 1st Symposium on Advances in Approximate Bayesian Inference, 2018.
- Grants
 - Visiting Student Researcher Grant**, from the Jacques Hadamard Foundation (Junior Scientific Visibility) to visit the ABI Team of the RIKEN AIP led by M.E. Khan, Tokyo (Japan), Feb. 2020.
 - PhD Grant**, from GENES (French Ministry for the Economy and Finance), 2017-2020.
- Reviewing ICML, NeurIPS, AISTATS, AABI, JMLR, TMLR, Biometrika, Entropy, IEEE TPAMI, Statistics & Probability Letters.
- Supervision MSc Students.
 - Siqi Chen (Sorbonne), 2023, co-supervised by Sylvain Le Corff & the Startup Wiremind.
 - Sebastian Reboul (Sorbonne), 2023, co-supervised by Sylvain Le Corff & the Startup Wiremind.
 - Angus Phillips (Oxford) – 2021. *Currently PhD Student at Oxford with Pr. Arnaud Doucet*

Industrial experience

- May–Sept. **Quantitative analyst**, *BNP Paribas*, Paris
2017 Internship in the Global Market Data & Artificial Intelligence Lab of the bank BNP Paribas
- Exploitation of techniques of machine learning on financial and client data
 - Prediction and recommendation tasks on the bonds and on the Forex markets
 - Building of support models for traders and sales in a Python environment
- June–Sept. **Economist**, *Mines ParisTech & Yacast*, Paris
2016 Internship in the research centre for industrial economics of the Grande Ecole Mines ParisTech
- Analysis of the market of French radio for the monitoring media company Yacast
 - Building of a predictive model of musical playlists in a Python environment
- Jan.–May **Data scientist**, *Accenture & M6*, Paris
2016 Part-time internship in the professional services company Accenture for the TV channel M6
- Building of a recommender system for the TV on-demand service M6 Replay
 - Use of machine learning algorithms and data analysis tools in an R environment
- June–Aug. **Statistician-Economist**, *DARES*, Paris
2015 Internship in the French statistical office of the Ministry of Labour
- Statistical analysis of a survey dealing with training contracts in a SAS environment

Skills and interests

- Programming Python, R
- Languages French (Native), English (Fluent), German (Intermediate), Chinese (Beginner)
- Interests Music (Doublebass, Piano), Sport (Football)