

Academic positions

- 2022– **CNRS**, *Chargé de Recherche*, Paris (France)
CNRS researcher in the Laboratoire de Probabilités, Statistique et Modélisation (LPSM)
Lecturer at Sorbonne Université (M2), Université Paris Cité (M2), Ecole des Ponts (2A), ESSEC (1A)
- 2020–2022 **University of Oxford**, *Postdoctoral fellow*, Oxford (UK)
Postdoctoral researcher in the department of Statistics, working with Pr. Arnaud Doucet
- 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: E. Gassiat (President), I. Castillo, A. Doucet (Reviewers), A. Dalalyan, A. Garivier, V. Rivoirard (Examiners)

Publications

- 2024 **Recursive PAC-Bayes: A Frequentist Approach to Sequential Prior Updates with No Information Loss**, with Y.S. Wu, Y. Zhang, & Y. Seldin, Proceedings of the 38th Annual Conference on Neural Information Processing Systems (NeurIPS 2024)
- 2023 **Estimation of Copulas via Maximum Mean Discrepancy**, with P. Alquier, A. Derumigny & J.-D. Fermanian, Journal of the American Statistical Association (JASA)
- 2023 **Label Shift Quantification with Robust Guarantees via Distribution Feature Matching**, with B. Dussap & G. Blanchard, Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2023)
- 2022 **On PAC-Bayesian Reconstruction Guarantees for VAEs**, with Y. Shi, B. Guedj & A. Doucet, Proceedings of the 25th International Conference on Artificial Intelligence and Statistics (AISTATS 2022)
- 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**, *Single author*, 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)
- 2019 **Consistency of ELBO maximization for model selection**, *Single author*, Proceedings of the 1st Symposium on Advances in Approximate Bayesian Inference (AABI 2019)
- 2018 **Consistency of Variational Bayes Inference for Estimation and Model Selection in Mixtures**, with P. Alquier, Electronic Journal of Statistics (EJS)
- Submitted **Bayes meets Bernstein at the Meta Level: an Analysis of Fast Rates in Meta-Learning with PAC-Bayes**, with C. Riou & P. Alquier, Submitted to the Journal of Machine Learning Research (JMLR)
- Patent **Method for determining proportions of populations in an ensemble of biological objects**, with B. Dussap, G. Blanchard & B. Labarthe, Invention related to the field of cytometric data analysis, International Publication under the Patent Cooperation Treaty (PCT), 2024
- Software **MMDCopula**, with P. Alquier, A. Derumigny & J.-D. Fermanian, Estimation of Copula via MMD, R Package

Research Activities

- Awards **Best Student Paper Award**, European Conference on Machine Learning and PKDD, 2023.
Best Paper Award, 11th Asian Conference on Machine Learning, 2019.
Travel Award, 1st Symposium on Advances in Approximate Bayesian Inference, 2018.
- Project member **Emergence Grant**, MARS project (2023-2025). 60k€
ANR PRC Grant, BACKUP project (2023-2027). 516,942k€
- Past 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.
- Supervision of MSc Students
 - Semyon Faib (Sorbonne Université) – 2024, co-supervised by Sylvain Le Corff & the Startup Wiremind.
 - Siqi Chen (Sorbonne Université) – 2023, co-supervised by Sylvain Le Corff & the Startup Wiremind.
 - Angus Phillips (University of Oxford) – 2021. *Currently PhD Student at Oxford with Pr. Arnaud Doucet.*
- Reviewing ICML, NeurIPS, AISTATS, AABI, JMLR, Biometrika, JASA, IEEE TPAMI, EJS, Statistics and Computing.