

Badr-Eddine Chérif-Abdellatif

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Researcher in Statistics at **CNRS** in Paris, working on
the foundations of learning and decision-making in the face of uncertainty.

Academic Positions

CNRS, Chargé de Recherche, Paris (France) Tenured researcher in the Laboratoire de Probabilités, Statistique et Modélisation (LPSM).	2022–
Ecole Nationale des Ponts & Chaussées, Maître de Conférence, Paris (France) Secondary faculty appointment in the IMI (Engineering, Mathematics, CS) Department.	2026–
University of Oxford, Postdoctoral Fellow, Oxford (UK) Hosted by Prof. Arnaud Doucet, Department of Statistics.	2020–2021
Institut Polytechnique de Paris, PhD Student, Paris (France) Under the supervision of Prof. Pierre Alquier. Title: <i>Contributions to the theoretical study of variational inference & robustness.</i>	2017–2020

Teaching Positions

Sorbonne Université, Lecturer 15h course on PAC-Bayes and Variational Inference (Graduate).	2022–
École Nationale des Ponts & Chaussées, Lecturer 36h course on High-Dimensional Statistics (Graduate).	2022–2026
Université Paris Cité, Lecturer 24h course on High-Dimensional Statistics (Graduate).	2023–2025
ESSEC Business School, Lecturer 25h course on Business Statistics (Undergraduate).	2022–2025
ENSAE Paris, Teaching Assistant 192h (Undergraduate & Graduate).	2017–2020

Publication Record

Preprints

- [Convex Order Comparisons for Sub-Gamma Random Variables.](#)
With: E.M. Khribch, 2026
- [Asymptotics of Nonparametric Estimation under general non-monotone MAR missingness: A Bayesian Approach.](#)
With: J. Näf, 2026

- [Maxitive Donsker–Varadhan Formulation for Possibilistic Variational Inference.](#)
With: J. Singh, S. Wongso & J. Houssineau, 2026
- [Predictively Oriented Posteriors.](#)
With: Y. McLatchie, D.T. Frazier & J. Knoblauch, 2026
- [Parametric MMD Estimation with Missing Values: Robustness to Missingness and Data Model Misspecification.](#)
With: J. Näf, 2025
- [On the Asymptotics of Importance Weighted Variational Inference.](#)
With: R. Douc, A. Doucet & H. Marival, 2025

Peer-reviewed Journal & Conference Papers

- [From Bayes' Rule to Bayes Rules: Optimal Information Processing and Axiomatic Foundations Beyond Probability.](#)
With: J. Houssineau, *Uncertainty in Artificial Intelligence (UAI)*, 2026
- [Bayes Meets Bernstein at the Meta Level: An Analysis of Fast Rates in Meta-Learning with PAC-Bayes.](#)
With: C. Riou & P. Alquier, *Journal of Machine Learning Research (JMLR)*, 2025
- [Recursive PAC-Bayes: A frequentist approach to sequential prior updates with no information loss.](#)
With: Y.S. Wu, Y. Zhang & Y. Seldin, *Advances in Neural Information Systems (NeurIPS)*, *Spotlight*, 2024
- [Label Shift Quantification via Distribution Feature Matching.](#)
With: B. Dussap & G. Blanchard, *European Conference on Machine Learning and Knowledge Discovery in Databases (ECML/PKDD)*, 2023. *Best Student Paper Award.*
- [Estimation of Copulas via Maximum Mean Discrepancy.](#)
With: P. Alquier, A. Derumigny & J.D. Fermanian, *Journal of the American Statistical Association (JASA)*, 2023
- [On PAC-Bayesian Reconstruction Guarantees for VAEs.](#)
With: Y. Shi, B. Guedj & A. Doucet, *Artificial Intelligence & Statistics (AISTATS)*, 2022
- [Finite sample properties of parametric MMD estimation: robustness to misspecification & dependence.](#)
With: P. Alquier, *Bernoulli*, 2022
- [Convergence Rates of Variational Inference in Sparse Deep Learning.](#)
Single author, *International Conference on Machine Learning (ICML)*, 2020
- [MMD-Bayes: Robust Bayesian Estimation via Maximum Mean Discrepancy.](#)
With: P. Alquier, *Advances in Approximate Bayesian Inference (AABI)*, 2020
- [A Generalization Bound for Online Variational Inference.](#)
With: P. Alquier & M.E. Khan, *Asian Conference on Machine Learning (ACML)*, 2019. *Best Paper Award.*
- [Consistency of ELBO maximization for model selection.](#)
Single author, *Advances in Approximate Bayesian Inference (AABI)*, 2019
- [Consistency of Variational Bayes Inference for Estimation and Model Selection in Mixtures.](#)
Co-author: P. Alquier, *Electronic Journal of Statistic (EJS)*, 2018

Other Research Outputs

- **Patent:** [Method for determining proportions of populations in an ensemble of biological objects.](#)
Co-inventors: 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.](#)
Co-authors: P. Alquier, A. Derumigny & J.-D. Fermanian, R Package (CRAN), 2022
- **PhD Thesis:** [Contributions to the theoretical study of variational inference and robustness.](#)
Institut Polytechnique de Paris, 2020

Education

PhD in Mathematical Statistics, Institut Polytechnique de Paris	2017–2020
MSc in Machine Learning, ENS Paris-Saclay (MVA Master Program)	2016–2017
MSc in Economics and Statistics, ENSAE Paris (Engineering degree)	2014–2017

Research Activities

Awards

- [Best Student Paper Award](#), ECML/PKDD, 2023.
- [Best Paper Award](#), ACML, 2019.
- [Travel Award](#), AABI Symposium, 2018.

Current Grant

- ANR PRC Grant (BACKUP project), 2023–2027 — €517k.

Past Grants

- Emergence Grant (MARS project), 2023–2025 — €60k.
- 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), 2020.
- PhD Grant, from GENES (French Ministry for the Economy and Finance), 2017–2020.

Supervision of Students

- Elie Cohen, PhD, 2026–. Co-supervised with S. Le Corff (Sorbonne) & M. Lécuyer (UBC, Canada).
- Gabriel Mariadass, MSc, 2026. Co-supervised with J. Houssineau (NTU, Singapore).
- Semyon Faib, MSc, 2024. Co-supervised with S. Le Corff (Sorbonne), & Wiremind.
- Siqi Chen, MSc, 2023. Co-supervised with S. Le Corff (Sorbonne), & Wiremind.
- Angus Phillips, MSc, 2021. Now PhD student at Oxford with A. Doucet.

Reviewing

Annals of Statistics, JASA, JRSS-B, Biometrika, Statistical Science, IEEE TPAMI, JMLR, EJS, AABI, NeurIPS, ICML, AISTATS, UAI.