Mikolaj KASPRZAK

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FORMATION

2019	Doctor of Philosophy, Statistique, University of Oxford, Royaume-Uni
2015	Master of Science, Mathematics, Operational Research, Statistics and Economics, University of Warwick, Royaume-Uni

EXPERIENCE PROFESSIONNELLE

Positions académiques principales

2024 - Présent	Professeur assistant, ESSEC Business School, France
2023 - 2024	Visiting Researcher, Université du Luxembourg, Luxembourg
2022 - 2023	Marie Skłodowska-Curie Individual Fellow, Université du Luxembourg, Luxembourg
2022 - 2022	Marie Skłodowska-Curie Individual Fellow (Secondment), University College London, Royaume-Uni
2021 - 2022	Marie Skłodowska-Curie Individual Fellow, Massachusetts Institute of Technology, États-Unis
2018 - 2021	Research Associate, Université du Luxembourg, Luxembourg
2015 - 2019	DPhil student, University of Oxford, Royaume-Uni

Autres affiliations académiques

2024 - 2028	Titulaire de la Chaire d'Excellence « Data Science », ESSEC Business School, France

BOURSES, PRIX ET DISTINCTIONS

Prix et Distinctions

2019	New Researcher Travel Award, IMS - Bernoulli Society

Bourses

2024	EUTOPIA Young Leaders Academy Fellowship
2024	Junior Chair of Excellence in Data Analytics, CY Initiative
2021	Marie Skłodowska-Curie Individual (Global) Fellowship, Commission européenne
2015	Full Doctoral Studentship, UK Engineering and Physical Sciences Research

Council, Royaume-Uni

PUBLICATIONS

Articles

WYNNE, G., KASPRZAK, M. et DUNCAN, A.B. (2025). A Fourier Representation of Kernel Stein Discrepancy with Application to Goodness-of-Fit Tests for measures on infinite dimensional Hilbert spaces. *Bernoulli: A Journal of Mathematical Statistics and Probability*, 31(2), pp. 868-893.

KASPRZAK, M., GIORDANO, R. et BRODERICK, T. (2025). How good is your Laplace approximation of the Bayesian posterior? Finite-sample computable error bounds for a variety of useful divergences. *Journal of Machine Learning Research*, 26(87), pp. 1−81.

KASPRZAK, M. et PECCATI, G. (2023). Vector-valued statistics of binomial processes: Berry–Esseen bounds in the convex distance. *Annals of Applied Probability*, 33(5).

DÖBLER, C., KASPRZAK, M. et PECCATI, G. (2022). Functional convergence of sequential U-processes with size-dependent kernels. *Annals of Applied Probability*, 32(1), pp. 551-601.

DÖBLER, C., KASPRZAK, M. et PECCATI, G. (2022). The multivariate functional de Jong CLT. *Probability Theory and Related Fields*, 184(1-2), pp. 367-399.

DÖBLER, C. et KASPRZAK, M. (2021). Stein's method of exchangeable pairs in multivariate functional approximations. *Electronic Journal of Probability*, 26, pp. 1-50.

KASPRZAK, M. (2020). Stein's method for multivariate Brownian approximations of sums under dependence. *Stochastic Processes and their Applications*, 130(8), pp. 4927-4967.

KASPRZAK, M. (2020). Functional approximations via Stein's method of exchangeable pairs. *Annales de l Institut Henri Poincare-Probabilites et Statistiques*, 56(4).

KASPRZAK, M., DUNCAN, A.B. et VOLLMER, S.J. (2017). Note on A. Barbour's paper on Stein's method for diffusion approximations. *Electronic Communications in Probability*, 22, pp. 1-8.

Actes d'une conférence

WANG, Y., KASPRZAK, M. et HUGGINS, J.H. (2023). A Targeted Accuracy Diagnostic for Variational Approximations. Dans: *26th International Conference on Artificial Intelligence and Statistics (AISTATS)*. Valencia: Proceedings of Machine Learning Research.

HUGGINS, J.H., KASPRZAK, M., CAMPBELL, T. et BRODERICK, T. (2020). Validated Variational Inference via Practical Posterior Error Bounds. Dans: *23rd International Conference on Artificial Intelligence and Statistics (AISTATS)*. Palermo: Proceedings of Machine Learning Research.

HUGGINS, J.H., CAMPBELL, T., KASPRZAK, M. et BRODERICK, T. (2019). Scalable Gaussian Process Inference with Finite-data Mean and Variance Guarantees. Dans: *22nd International Conference on Artificial Intelligence and Statistics (AISTATS)*. Proceedings of Machine Learning Research.

Conférences

WYNNE, G., KASPRZAK, M. et DUCAN, A. (2024). A Fourier Representation of Kernel Stein Discrepancy with Application to Goodness-of-Fit Tests for Measures on Infinite Dimensional Hilbert Spaces. Dans: 2024 Meeting in Mathematical Statistics: New challenges in high-dimensional statistics. Marseille.

Présentation dans un séminaire de recherche

KASPRZAK, M., GIORDANO, R., BRODERICK, T., POMPE, E. et JACOB, P. (2026). Quality of the Laplace approximation of Bayesian posteriors and cut posteriors. Dans: Statistics Seminar, LPSM, Sorbonne Université. Paris.

KASPRZAK, M., WYNNE, G. et DUNCAN, A.B. (2025). A Fourier Representation of Kernel Stein Discrepancy with Application to Goodness-of-Fit Tests for Functional Data. Dans: Functional Data Analysis Seminar, Université Paris Cité. Paris.

KASPRZAK, M., GIORDANO, R. et BRODERICK, T. (2023). How good is your Laplace approximation of the Bayesian posterior? Finite-sample error bounds for a variety of useful divergences. Dans: Stochastics Seminar, Karlsruhe Institute of Technology. Karlsruhe.

KASPRZAK, M., GIORDANO, R. et BRODERICK, T. (2022). How good is your Laplace approximation? Finite-sample error bounds for a variety of useful divergences. Dans: Mathematical Statistics seminar, Weierstrass Institute. Berlin.

KASPRZAK, M., GIORDANO, R. et BRODERICK, T. (2022). How good is your Laplace approximation? Finite-sample error bounds for a variety of useful divergences. Dans: Statistics seminar, Université Catholique de Louvain. Louvain-la-Neuve.

KASPRZAK, M., GIORDANO, R. et BRODERICK, T. (2022). How good is your Laplace approximation? Finite-sample error bounds for a variety of useful divergences. Dans: Research Seminar, Centre for Mathematical and Statistical Modelling, Brunel University. London.

KASPRZAK, M., DÖBLER, C. et PECCATI, G. (2022). Stein's method and Gaussian process approximations. Dans: Probability and Statistics Seminar, University of Manchester. Manchester.

KASPRZAK, M., DÖBLER, C. et PECCATI, G. (2021). Functional limit theorems via Stein's method. Dans: Probability and Statistics Seminar, University of Boston. Boston.

KASPRZAK, M., DÖBLER, C. et PECCATI, G. (2020). Infinite-dimensional Stein's method with applications. Dans: Statistics Seminar, Imperial College London. London.

KASPRZAK, M., HUGGINS, J.H., CAMPBELL, T. et BRODERICK, T. (2019). Scalable Gaussian Process Inference with Finite-data Mean and Variance Guarantees. Dans: Probability seminar, University of Luxembourg. Luxembourg.

KASPRZAK, M. (2017). Diffusion approximations via time changes and Stein's method. Dans: Probability Seminar, University of Liége. Liége.

KASPRZAK, M. (2017). Functional approximations with Stein's method. Dans: Machine Learning Seminar, Gatsby Unit, University College London. London.

KASPRZAK, M. (2017). Diffusion approximations via time changes and Stein's method. Dans: Probability Seminar, University of Luxembourg. Luxembourg.