Mikolaj KASPRZAK
Assistant Professor

mikolaj.kasprzak@essec.edu

Department: Information Systems, Data Analytics
and Operations
Campus de Cergy

DIPLOMAS

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2019	Doctor of Philosophy, Statistics (University of Oxford United Kingdom)
2015	Master of Science, Mathematics, Operational Research, Statistics and Economics (University of Warwick United Kingdom)

CAREER

FULL-TIME ACADEMIC APPOINTMENTS

2024 - Now	Assistant Professor (ESSEC Business School France)
2015 - 2019-02-26	DPhil student (University of Oxford United Kingdom)
2018 - 2021-08-31	Research Associate (Université du Luxembourg Luxembourg)
2021 - 2022-08-31	Marie Sk?odowska-Curie Individual Fellow (Massachusetts Institute of Technology United States of America)
2022 - 2022-11-30	Marie Sk?odowska-Curie Individual Fellow (Secondment) (University College London United Kingdom)
2022 - 2023-11-30	Marie Sk?odowska-Curie Individual Fellow (Université du Luxembourg Luxembourg)

OTHER APPOINTMENTS

2023 - 2024-08-31	Visiting Researcher (Université du Luxembourg Luxembourg)

OTHER ACADEMIC APPOINTMENTS

2024 - 2028-08-31   Holder of the "Data Science" Chair of Excellence (CY) (ESSEC Business School France)

PUBLICATIONS

PRESENTATIONS AT A FACULTY RESEARCH SEMINAR

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. (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.

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., 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., 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., 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.

JOURNAL ARTICLES

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.

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).

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

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.

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).

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.

CONFERENCE PROCEEDINGS

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.

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.

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.

PRESENTATIONS AT AN ACADEMIC OR PROFESSIONAL CONFERENCE

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.