Mikolaj KASPRZAK

Assistant Professor
Department: Information Systems, Data Analytics and Operations
ESSEC Business School
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EDUCATION

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

EMPLOYMENT

Full-time academic positions

2024 - Present	Assistant Professor, ESSEC Business School, France
2023 - 2024	Visiting Researcher, University of Luxembourg, Luxembourg
2022 - 2023	Marie Skłodowska-Curie Individual Fellow, University of Luxembourg, Luxembourg
2022 - 2022	Marie Skłodowska-Curie Individual Fellow (Secondment), University College London, United Kingdom
2021 - 2022	Marie Skłodowska-Curie Individual Fellow, Massachusetts Institute of Technology, United States of America
2018 - 2021	Research Associate, University of Luxembourg, Luxembourg
2015 - 2019	DPhil student, University of Oxford, United Kingdom

Other affiliations and appointments

2024 - 2028	Holder of the “Data Science” Chair of Excellence (CY), CY Cergy Paris University, France

GRANTS AND HONORS

Awards and Honors

2019	New Researcher Travel Award, IMS - Bernoulli Society

Grants

2024	Junior Chair of Excellence in Data Analytics, CY Initiative
2024	EUTOPIA Young Leaders Academy Fellowship
2021	Marie Skłodowska-Curie Individual (Global) Fellowship, European Commission

2015 Full Doctoral Studentship, UK Engineering and Physical Sciences Research Council, United Kingdom

PUBLICATIONS

Journal Articles

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

DÖBLER, C. and 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. and 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.

Conference proceedings

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

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

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

Conferences

KASPRZAK, M., POMPE, E. and JACOB, P. (2025). Asymptotics of cut posteriors and robust modular inference. In: 2025 BayesComp. Singapore.

KASPRZAK, M., GIORDANO, R. and BRODERICK, T. (2025). How good is your Laplace approximation of a Bayesian posterior? In: 2025 Recent Advances in Statistical Robustness Conference. Rabat.

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

Presentations at a Faculty research seminar

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

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

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

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

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

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

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

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

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

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

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

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

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