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INTERETS DE RECHERCHE

Contrôle optimal (et son calcul efficace), Inférence bayésienne, Méthodes de Monte Carlo,

FORMATION

2017	PhD en Statistiques, University of Oxford, Royaume-Uni
2012	BSc en Statistiques, University College London, Royaume-Uni

EXPERIENCE PROFESSIONNELLE

Positions académiques principales

2024 - Présent	Professeur associé, ESSEC Business School, France
2019 - 2024	Professeur assistant, ESSEC Business School, Singapour

Autres affiliations académiques

2025 - 2026	Responsable de la filière BUSINESS ANALYTICS METHODS (BAM), ESSEC Business School, France
2017 - 2019	Postdoctoral Fellow, Harvard University, États-Unis

BOURSES, PRIX ET DISTINCTIONS

Prix et Distinctions

2022	2022 Blackwell-Rosenbluth Award, International Society for Bayesian Analysis,, États-Unis

PUBLICATIONS

Articles

HENG, J., DE BORTOLI, V., DOUCET, A. et THORNTON, J. (2025). Simulating diffusion bridges with score matching. *Biometrika*, 112(4), pp. asaf048.

HENG, J., DE BORTOLI, V. et DOUCET, A. (2024). Diffusion Schrödinger Bridges for Bayesian Computation. *Statistical Science*, 39(1), pp. 90-99.

HENG, J., HOUSSINEAU, J. et JASRA, A. (2024). On Unbiased Score Estimation for Partially Observed Diffusions. *Journal of Machine Learning Research*, 25(66), pp. 1-66.

HENG, J., JASRA, A., LAW, K. et TARAKANOV, A. (2023). On Unbiased Estimation for Discretized Models. *SIAM/ASA Journal on Uncertainty Quantification*, 11(2), pp. 10.1137/21M1460788.

FULOP, A., HENG, J., LI, J. et LIU, H. (2022). Bayesian Estimation of Long-Run Risk Models Using Sequential Monte Carlo. *Journal of Econometrics*, 228(1), pp. 62-84.

JASRA, A., HENG, J., XU, Y. et BISHOP, A.N. (2022). A Multilevel Approach for Stochastic Nonlinear Optimal Control. *International Journal of Control*, 95(5), pp. 1290-1304.

JASRA, A., HENG, J., XU, Y. et BISHOP, A.N. (2022). A Multilevel Approach for Stochastic Nonlinear Optimal Control. *International Journal of Control*, 95(5), pp. 1290-1304.

DAI, C., HENG, J., JACOB, P. et WHITELEY, N. (2022). An invitation to sequential Monte Carlo samplers. *Journal of the American Statistical Association*, 117(539), pp. 1587-1600.

HENG, J., DOUCET, A. et POKERN, Y. (2021). Gibbs flow for approximate transport with applications to Bayesian computation. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 83(1), pp. 157-187.

HENG, J., YU, F. et HENG, J. (2020). Multilevel Particle Filters for the Non-Linear Filtering Problem in Continuous Time. *Statistics and Computing*, 30, pp. 1381-1402.

HENG, J., YU, F. et HENG, J. (2020). Multilevel Particle Filters for the Non-Linear Filtering Problem in Continuous Time. *Statistics and Computing*, 30, pp. 1381-1402.

HENG, J. et JACOB, P. (2019). Unbiased Hamiltonian Monte Carlo with couplings. *Biometrika*, 106(2), pp. 287-302.

HENG, J., BISHOP, A.N., DELIGIANNIDIS, G. et DOUCET, A. (2019). Controlled Sequential Monte Carlo. *Annals of Statistics*, 48(5), pp. 2904-2929.

Actes d'une conférence

CHOPIN, N., FULOP, A., HENG, J. et THIERY, A.H. (2023). Computational Doob h-transforms for Online Filtering of Discretely Observed Diffusions. Dans: *Proceedings of the 40th International Conference on Machine Learning, PMLR 202:5904-5923*. Honolulu: Proceedings of Machine Learning Research.

DE BORTOLI, V., THORNTON, J., HENG, J. et DOUCET, A. (2021). Diffusion Schrödinger Bridge with Applications to Score-Based Generative Modeling. Dans: *NeurIPS 2021*. Proceedings of Machine Learning Research.

LIN, A., ZHANG, Y., HENG, J., ALLSOP, S.A., TYE, K.M. et JACOB, P. (2019). Clustering Time Series with Nonlinear Dynamics: A Bayesian Non-Parametric and Particle-Based Approach. Dans: *Proceedings of Machine Learning Research*.

JACOB, P., LIN, A., ZHANG, Y., HENG, J., ALLSOP, S.A., TYE, K.M. et BA, D. (2019). Clustering Time Series with Nonlinear Dynamics: A Bayesian Non-Parametric and Particle-Based Approach. Dans: *The 22nd International Conference on Artificial Intelligence and Statistics*. Proceedings of Machine Learning Research, pp. 2476-2484.

Conférences

JU, N., HENG, J. et JACOB, P. (2024). Statistical Inference for Individual-based Models of Disease Transmission. Dans: 2024 Eastern Asia Chapter International Society for Bayesian Analysis Conference. Hong Kong.

CHOPIN, N., FULOP, A., HENG, J. et THIERY, A.H. (2024). Computational Doob's h-transforms for Online Filtering. Dans: 6th Workshop on Sequential Monte Carlo Methods 2024. Edinburgh.

HENG, J. (2022). Diffusion Schrodinger Bridge with Applications to Score-based Generative Modeling. Dans: 5th International Conference on Econometrics and Statistics (EcoSta) 2022. Kyoto.

NIANQUIOA, J., HENG, J. et JACOB, P. (2022). Artificial Intelligence, Data challenges. Dans: 2022 Institute of Mathematical Statistics (IMS) Annual Meeting in Probability and Statistics. London.

FULOP, A., HENG, J. et LI, Y. (2021). Efficient Likelihood-based Estimation via Annealing for Dynamic Structural Macrofinance Models. Dans: 2021 European Winter Meetings of the Econometric Society. Barcelona.

HENG, J., POKERN, Y. et DOUCET, A. (2019). Gibbs Flow for Approximate Transport with Applications to Bayesian Computation. Dans: International Conference on Scientific Computation and Differential Equations (SciCADE 2019).

AUTRES ACTIVITES DE RECHERCHE

Membre d'un comité de lecture

2022 - 2023 Statistics and Computing