

# Kamélia DAUDEL

Professeur assistant

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Analytics et Opérations

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## INTERETS DE RECHERCHE

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Inférence approximative, Méthodes d'inférence variationnelle

## FORMATION

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| 2021 | Doctorat en Mathématiques Appliquées, Télécom Paris, France                      |
| 2018 | MSc in Mathematical and Computational Finance, University of Oxford, Royaume-Uni |
| 2018 | Diplôme d'Ingénieur, Télécom Paris, France                                       |

## EXPERIENCE PROFESSIONNELLE

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### Positions académiques principales

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|----------------|---|
| 2023 - Présent | Professeur assistant, ESSEC Business School, France |
| 2021 - 2022    | Post-Doctorante, University of Oxford, Royaume-Uni  |

## BOURSES, PRIX ET DISTINCTIONS

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### Prix et Distinctions

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| 2022 | Premier Prix de Thèse 2022 de l'Institut Polytechnique de Paris |
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## PUBLICATIONS

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### Articles

- DAUDEL, K., DOUC, R. et ROUEFF, F. (2023). Monotonic Alpha-divergence Minimisation for Variational Inference. *Journal of Machine Learning Research*, 24(62), pp. 1-76.
- DAUDEL, K., BENTON, J., SHI, Y. et DOUCET, A. (2023). Alpha-divergence Variational Inference Meets Importance Weighted Auto-Encoders: Methodology and Asymptotics. *Journal of Machine Learning Research*, 24(243), pp. 1-83.
- DAUDEL, K., DOUC, R. et PORTIER, F. (2021). Infinite-dimensional gradient-based descent for alpha-divergence minimisation. *Annals of Statistics*, 49(4), pp. 2250 - 2270.

### Actes d'une conférence

- DAUDEL, K. et DOUC, R. (2021). Mixture weights optimisation for Alpha-Divergence Variational Inference. Dans: *35th Conference on Neural Information Processing Systems (NeurIPS 2021)*. Curran Associates, Inc. pp. 4397–4408.

## Conférences

DAUDEL, K. et ROUEFF, F. (2025). Learning with Importance Weighted Variational Inference: Asymptotics for Gradient Estimators of the VR-IWAE Bound. Dans: 2025 BIRS Workshop "Efficient Approximate Bayesian Inference". Banff.

DAUDEL, K. et ROUEFF, F. (2025). Learning with Importance Weighted Variational Inference. Dans: CFE-CMStatistics 2025. London.

DAUDEL, K. et ROUEFF, F. (2024). Learning with Importance Weighted Variational Inference: Asymptotics for Gradient Estimators of the VR-IWAE Bound. Dans: 2024 Rethinking the Role of Bayesianism in the Age of Modern AI. Saarbrücken.

DAUDEL, K., BENTON, J., SHI, Y. et DOUCET, A. (2023). Alpha-divergence Variational Inference Meets Importance Weighted Auto-Encoders: Methodology and Asymptotics. Dans: 37th Conference on Neural Information Processing Systems 2023 (NeurIPS 2023). New-Orleans.

## Documents de travail

DAUDEL, K. et ROUEFF, F. (2024). *Learning with Importance Weighted Variational Inference: Asymptotics for Gradient Estimators of the VR-IWAE Bound*. arXiv.

## ENSEIGNEMENT

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2023	Statistical Inference, ESSEC Business School, France
2023	Business Statistics & Introduction to Analytics, ESSEC Business School, France