

# Mohamed NDAOUD

Professeur associé

Département: Systèmes d'Information, Data

Analytics et Opérations

ESSEC Business School

3 avenue Bernard Hirsch

95021 Cergy-Pontoise

France

Email: mohamed.ndaoud@essec.edu

Numéro de téléphone: 0134433656

Pays d'origine: France

## INTERETS DE RECHERCHE

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Analyse des données statistiques, Sciences de la décision, Théorie des probabilités et statistiques

## FORMATION

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|------|---|
| 2019 | Doctorat en Statistiques Mathématiques, Université Paris-Saclay, France<br><i>High dimensional statistics</i> |
| 2016 | Master of Science, Finance, Université Pierre et Marie Curie (UPMC), France                                   |
| 2015 | Ecole d'ingénieur, Mathématiques, École Polytechnique, France   |

## EXPERIENCE PROFESSIONNELLE

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### Positions académiques principales

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|----------------|---|
| 2024 - Présent | Professeur associé, ESSEC Business School, France   |
| 2021 - 2024    | Professeur assistant, ESSEC Business School, France |

### Autres affiliations académiques

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|-------------|---|
| 2021 - 2025 | Responsable de chaire « Data Science », ESSEC Business School, France |
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## BOURSES, PRIX ET DISTINCTIONS

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### Prix et Distinctions

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| 2020 | IMS New Researcher Travel Award |
| 2019 | Best Student Paper Award        |

### Bourses

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| 2020 | Zumberge Individual Award 2020, University of South California (USC), États-Unis |
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## PUBLICATIONS

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### Articles

MINSKER, S., NDAOUD, M. et WANG, L. (2024). Robust and Tuning-Free Sparse Linear Regression via Square-Root Slope. *SIAM Journal on Mathematics of Data Science*, 6(2), pp. 428-453.

NDAOUD, M. (2023). Harmonic analysis meets stationarity: A general framework for series expansions of special Gaussian processes. *Bernoulli: A Journal of Mathematical Statistics and Probability*, 29(3), pp. 2295 - 2317.

BUTUCEA, C., MAMMEN, E., NDAOUD, M. et TSYBAKOV, A.B. (2023). Variable selection, monotone likelihood ratio and group sparsity. *Annals of Statistics*, 51(1), pp. 312-333.

NDAOUD, M., SIGALA, S. et TSYBAKOV, A. (2022). Improved clustering algorithms for the Bipartite Stochastic Block Model. *IEEE Transactions on Information Theory*, 68(3), pp. 1960-1975.

NDAOUD, M. (2022). Sharp optimal recovery in the two Component Gaussian Mixture Model. *Annals of Statistics*, 50(4), pp. 2096-2126.

COMMINGES, L., COLLIER, O., NDAOUD, M. et TSYBAKOV, A. (2021). Adaptive robust estimation in sparse vector model. *Annals of Statistics*, 49(3), pp. 1347-1377.

MINSKER, S. et NDAOUD, M. (2021). Robust and efficient mean estimation: an approach based on the properties of self-normalized sums. *The Electronic Journal of Statistics*, 15(2), pp. 6036-6070.

NDAOUD, M. et TSYBAKOV, A. (2020). Optimal variable selection and adaptive noisy Compressed Sensing. *IEEE Transactions on Information Theory*, 66(4), pp. 2517-2532.

BUTUCEA, C., NDAOUD, M., STEPANOVA, N. et TSYBAKOV, A.B. (2018). Variable selection with Hamming loss. *Annals of Statistics*, 46(5), pp. 1837-1875.

### Actes d'une conférence

NDAOUD, M. (2019). Interplay of minimax estimation and minimax support recovery under sparsity. Dans: *Algorithmic Learning Theory (ALT)*. Proceedings of Machine Learning Research.

### Conférences

NDAOUD, M., MINSKER, S. et WANG, L. (2024). Robust and Tuning-Free Sparse Linear Regression via Square-Root Slope. Dans: 6th Institute for Mathematical Statistics – Asia-Pacific Rim Meeting (IMS-APRM 2024). Melbourne.

NDAOUD, M. et KARAGULYAN, V. (2024). Improved Mean Estimation in the Hidden Markovian Gaussian Mixture Model. Dans: 2024 International Symposium on Nonparametric Statistics. Braga.

NDAOUD, M. et MINSKER, S. (2023). Robust and Efficient Mean Estimation: an Approach Based on the Properties of Self-Normalized Sums. Dans: 2023 Mathematics & Decision Conference. Ben Guerir.

NDAOUD, M. et MINSKER, S. (2022). Adaptive Robust and Sub-Gaussian Deviations in Sparse Linear Regression. Dans: 2022 Institute of Mathematical Statistics (IMS) International Conference on Statistics and Data Science (ICSIDS). Florence.

BUTUCEA, C., MAMMEN, E., NDAOUD, M. et TSYBAKOV, A.B. (2022). Variable selection, monotone likelihood ratio and group sparsity. Dans: 2022 Institute of Mathematical Statistics (IMS) Annual Meeting. London.

NDAOUD, M. et MINSKER, S. (2022). Adaptive Robustness and sub-Gaussian Deviations in Sparse Linear Regression through Pivotal Double SLOPE. Dans: Re-thinking High-dimensional Mathematical Statistics. Oberwolfach.

## ENSEIGNEMENT

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2021 Analysis of Variance and Design, University of South California (USC), États-Unis

2020

Foundations of Statistical Learning Theory, University of South California (USC),

2019

Statistical Inference and Data Analysis, University of South California (USC), États-