Mohamed NDAOUD

Associate Professor

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Department: Information Systems, Data Analytics
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Campus de Cergy

DIPLOMAS

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2019	Doctorate in Mathematical Statistics (Université Paris-Saclay France)
2016	Master of Science, Finance (Université Pierre et Marie Curie (UPMC) France)
2015	Master of Engineering, Mathematics (École Polytechnique France)

CAREER

FULL-TIME ACADEMIC APPOINTMENTS

| 2021 - 2024-08-31 | Assistant Professor (ESSEC Business School France) |
| 2024 - Now | Associate Professor (ESSEC Business School France) |

OTHER APPOINTMENTS

| 2021 - 2027-05-31 | Chaired Professor « Data Science »(ESSEC Business School France) |

PUBLICATIONS

PRESENTATIONS AT AN ACADEMIC OR PROFESSIONAL CONFERENCE

NDAOUD, M. (2025). On some recent advances in high dimensional binary sub-Gaussian mixture models. Dans: 2025 Heidelberg-Paris Workshop on Mathematical Statistics. Heidelberg.

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 (ICSDS). 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.

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

INVITED SPEAKER AT AN ACADEMIC CONFERENCE

MINSKER, S., NDAOUD, M. et SHEN, Y. (2021). Minimax Supervised Clustering in the Anisotropic Gaussian Mixture Model: interpolation is all you need. Dans: 2021 Mathematical Statistics and Learning. Barcelona.

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 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.

JOURNAL ARTICLES

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

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.

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

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.

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

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.

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.

MINSKER, S. et NDAOUD, M. (2025). Classification in the high dimensional Anisotropic mixture framework: A new take on Robust Interpolation. *Journal of Machine Learning Research*, 26(153), pp. 1-39.

CONFERENCE PROCEEDINGS

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