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Département: Systèmes d'Information, Data Analytics et Opérations
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INTERETS DE RECHERCHE

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

FORMATION

2019 Doctorat en Statistiques Mathématiques, Université Paris-Saclay, France
High dimensional statistics

2016 Master of Science, Finance, Université Pierre et Marie Curie (UPMC), France

2015 Ecole d'ingénieur, Mathématiques, École Polytechnique, France

EXPERIENCE PROFESSIONNELLE

Positions académiques principales

2024 - Présent Professeur associé, ESSEC Business School, France

2021 - 2024 Professeur assistant, ESSEC Business School, France

Autres affiliations académiques

2021 - 2027 Responsable de chaire « Data Science », ESSEC Business School, France

BOURSES, PRIX ET DISTINCTIONS

Prix et Distinctions

2020 IMS New Researcher Travel Award

2019 Best Student Paper Award

Bourses

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

PUBLICATIONS

Articles

NDAOUD, M. (2026). Robust Regression under Adversarial Contamination: Theory and Algorithms for the Welsch Estimator. *Journal of the American Statistical Association*, In press, pp. 1-41.

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.

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. (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 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. (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.

ENSEIGNEMENT

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-