Guillaume LECUE

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Professor

Department: Information Systems, Data Analytics
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DIPLOMAS

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2012	Doctorate, Other, Mathematics (Université Paris Est Créteil France)
2007	Doctorate, Mathematics (Université Pierre et Marie Curie (UPMC) France)
2004	Master of Engineering, Mathematics (École Normale Supérieure de Rennes France)

CAREER

FULL-TIME ACADEMIC APPOINTMENTS

2022 - Now   Professor (ESSEC Business School France)

OTHER ACADEMIC APPOINTMENTS

2022 - 2026-08-31 Academic director of BSc AIDAMS (ESSEC Business School France)

PUBLICATIONS

JOURNAL ARTICLES

ALQUIER, P., COTTET, V. et LECUE, G. (2019). Estimation bounds and sharp oracle inequalities of

regularized procedures with Lipschitz loss functions. *Annals of Statistics*, 47(4), pp. 2117-2144.

DEPERSIN, J. et LECUE, G. (2022). Robust sub-Gaussian estimation of a mean vector in nearly linear time. *Annals of Statistics*, 50(1), pp. 511-536.

LECUE, G. et LERASLE, M. (2020). Robust machine learning by median-of-means: Theory and practice. *Annals of Statistics*, 48(2).

LECUE, G. et LERASLE, M. (2019). Learning from MOM's principles: Le Cam's approach. *Stochastic Processes and their Applications*, 129(11), pp. 4385-4410.

LECUE, G. et MENDELSON, S. (2018). Regularization and the small-ball method I: Sparse recovery. *Annals of Statistics*, 46(2), pp. 611-641.

KWON, J., LECUE, G. et LERASLE, M. (2021). A MOM-based ensemble method for robustness, subsampling and hyperparameter tuning. *The Electronic Journal of Statistics*, 15(1), pp. 1202-1207.

BELLEC, P.C., LECUE, G. et TSYBAKOV, A.B. (2018). Slope Meets Lasso: Improved Oracle Bounds and Optimality. *Annals of Statistics*, 46(6B), pp. 3603-3642.

DEPERSIN, J. et LECUE, G. (2022). Optimal robust mean and location estimation via convex programs with respect to any pseudo-norms. *Probability Theory and Related Fields*, 183(3-4), pp. 997-1025.

CHRÉTIEN, S., CUCURINGU, M., LECUE, G. et NEIRAC, L. (2021). Learning with semi-definite programming: statistical bounds based on fixed point analysis and excess risk curvature. *Journal of Machine Learning Research*, 22(230), pp. 1-64.

CHINOT, G., LECUE, G. et LERASLE, M. (2021). Robust high dimensional learning for Lipschitz and convex losses. *Journal of Machine Learning Research*, (233), pp. 1-47.

DEPERSIN, J. et LECUE, G. (2023). On the robustness to adversarial corruption and to heavy-tailed data of the Stahel–Donoho median of means. *Information and Inference: A Journal of the IMA*, 12(2), pp. 814-850.

LECUE, G. et SHANG, Z. (2025). A geometrical viewpoint on the benign overfitting property of the minimum L2-norm interpolant estimator and its universality. *Probability Theory and Related Fields*, 191, pp. 1401-1484.

LECUE, G. et NEIRAC, L. (2025). ?Learning with a linear loss function: excess risk and estimation bounds for ERM, minmax MOM and their regularized versions with applications to robustness in sparse PCA. *Journal of Machine Learning Research*, 29(399), pp. 1-90.

GAVRILOPOULOS, G., LECUE, G. et SHANG, Z. (2025). A Geometrical Analysis of Kernel Ridge Regression and its Applications. *Annals of Statistics*, 53(6), pp. 2592-2616.

PRESENTATIONS AT AN ACADEMIC OR PROFESSIONAL CONFERENCE

LECUE, G. et SHANG, Z. (2023). A Geometrical Viewpoint on the Benign Overfitting Property of the Minimum l2-norm Interpolant Estimator. Dans: 2023 Mini-Workshop: Interpolation and Over-parameterization in Statistics and Machine Learning?. Oberwolfach.

LECUE, G. et NEIRAC, L. (2023). Learning with a linear loss function. Excess risk and estimation bounds for ERM, minmax MOM and their regularized versions. Applications to robustness in sparse PCA. Dans: 2024 Meeting in Mathematical Statistics Conference, CIRM. Marseille.

RESEARCH ACTIVITIES

Editorial Board Membership
2022 - 2026:   Associate Editor - ALEA
2024 - Now: Associate Editor - Annals of Statistics