

# Guillaume LECUE

Professeur

Département: Systèmes d'information, sciences  
de la décision et statistiques

ESSEC Business School

3 avenue Bernard Hirsch

95021 Cergy-Pontoise

France

Email: b00806953@essec.edu

Numéro de téléphone: 01 34 43 36 02

Pays d'origine: France

## INTERETS DE RECHERCHE

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Analyse des données statistiques, Economie de la santé, Mathématiques, Sciences de la décision,

## FORMATION

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| 2012 | Doctorat, Autre, Mathématiques, Université Paris Est Créteil, France  |
| 2007 | Doctorat, Mathématiques, Université Pierre et Marie Curie (UPMC), France<br><i>Aggregation methods: optimality and fast rates</i> |
| 2004 | Ecole d'ingénieur, Mathématiques, École Normale Supérieure de Rennes, France  |

## EXPERIENCE PROFESSIONNELLE

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### Positions académiques principales

2022 - Présent      Professeur, ESSEC Business School, France

### Autres affiliations académiques

2022 - 2024      Directeur académique du BSc AIDAMS, ESSEC Business School, France

## PUBLICATIONS

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### Articles

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.

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.

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.

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.

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.

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

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.

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.

BELLEÇ, 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.

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

### Conférences

LECUE, G. et SHANG, Z. (2023). A Geometrical Viewpoint on the Benign Overfitting Property of the Minimum  $l_2$ -norm Interpolant Estimator. Dans: 2023 Mini-Workshop: Interpolation and Overparameterization 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.

## AUTRES ACTIVITES DE RECHERCHE

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### Membre d'un comité de lecture

Depuis 2024 Annals of Statistics

Depuis 2022 ALEA