

Operation with Concentration Inequalities in High Dimension

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In this talk we will present new results [1] to trace concentration inequalities through Lipschitz but also non-Lipschitz functionals. The flexibility of our approach shows that the same mechanism allows to treat similarly concentrated vectors whose observation tails have exponential decay, up to those which do not admit finite moments. We will give some precise and natural examples of such heavy-tailed vectors in high dimension. We will then apply our tools to set Marcenko-Pastur result on Wishart matrices.

References:

[1] Operation with concentration inequalities and Conjugate of parallel sum, C. Louart. arXiv:2402.08206 (2024)