Workshop 2019
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Title: « Sampling of probability measures in the convex order and computation of robust option price bounds »

Abstract:

We propose sampling methods preserving the convex order between two probability measures. In particular, we introduce the Wasserstein projection of the first probability measure on the set of probability measures dominated by the second one for the convex order. For empirical measures, this projection can be computed by solving a quadratic optimization problem with linear constraints. We apply our techniques to compute robust price bounds by approximating Martingale Optimal Transport problems with two or three marginals.