

Séminaire de Probabilités et Statistique

Mardi 24 Janvier 2023 à 14h00

Laboratoire Dieudonné

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Portfolio optimisation under CVAR constraint with stochastic mirror descent.

We study and solve the problem of optimal portfolio allocation with CV@R constraints when dealing with imperfectly simulated financial assets. We use a Stochastic biased Mirror Descent to find optimal resource allocation for a portfolio whose underlying assets cannot be generated exactly and may only be approximated with a numerical scheme that satisfies suitable error bounds, under a risk management constraint. We establish almost sure asymptotic properties as well as the rate of convergence for the averaged algorithm. We then focus on the optimal tuning of the overall procedure to obtain an optimized numerical cost. Our results are then illustrated numerically on simulated as well as real data sets..