

## OPTIMIZATION UNDER UNCERTAINTY VIA RANDOM SAMPLING OF SCENARIOS, I

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**ABSTRACT.** The problem of separating two finite sets of points is formulated as an optimization problem with an objective function containing max-min of linear functions. We study the differential properties of the objective function and develop an algorithm for its minimization. The results of numerical experiments are presented which show the effectiveness of the proposed algorithm.

**Key words:** Classification, separability, nonconvex optimization, nonsmooth optimization.