Combating Conservativeness in Data-Driven Optimization under Uncertainty
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In data-driven optimization, solution feasibility is often ensured through a "safe" reformulation of the constraints. Such approaches involve implicit set estimation and, if mishandled, could lead to over-conservative solutions. We show a strategy to exploit the intrinsic low dimensionality of reformulated solution sets to obtain feasible solutions that are, in a sense, asymptotically optimal among considered classes of reformulations with light dependence on problem dimensions.