

Robust Multi-Objective Optimization with Uncertain Constraints

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Abstract

Multi-objective optimization deals with optimization problems with not one, but several (usually conflicting) objectives. A single optimal solution does not exist though a set of efficient solutions can be determined. In *robust optimization* one considers problems with some degree of uncertainty. Constraints and/or objectives depend on external factors that are unknown and cannot be influenced. A good solution is distinguished by an amount of robustness against these uncertainties.

Robust multi-objective optimization aims at connecting both approaches. Problems of this kind but with uncertainty only in the objective have been researched in recent years. This talk rather focuses on problems with uncertain constraints: Several concepts of optimality will be introduced and their respective relationships will be probed.