

Relationships between Clarke-Ye type penalization and vectorial penalization in multi-objective optimization

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Abstract

Penalization approaches in multi-objective optimization aim to replace the original constrained optimization problem by some related problems with an easier structured feasible set (e.g., unconstrained problems). One approach, namely the Clarke-Ye type penalization method, consists of adding a penalization term with respect to the feasible set in each component function of the objective function. In contrast, the vectorial penalization approach is based on the idea to add a new penalization (component) function to the vector-valued objective function. In this talk, we compare both approaches.