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Dominanzmengen und Optimalitätsbegriffe in der Vektoroptimierung. (Domination sets and optimality conditions in vector optimization theory). (German) Zbl 0582.90086

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The decision maker's preferences on a set, which can be given by a vector optimization problem, are aggregated by local and global domination sets in a linear topological space. Properties of those sets are investigated, especially for the case, that the decision maker iteratively completes his preference statements. The introduction of the notion "complete domination set" allows to deduce further preferences from known ones, thus extending the global domination set. The interdependence between non-dominated, efficient, weakly efficient, different properly efficient and locally efficient points illustrates the influence of the preferences on the optimal sets and advantages of the different optimality notions. The consideration contains properties of the sets of those optimal points. Ways to obtain the best solution according to the decision maker's preferences are indicated.

MSC:

90C31 Sensitivity, stability, parametric optimization

Cited in **5** Documents

Keywords:

vector optimization; non-dominance; efficiency; local and global domination sets; linear topological space