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17. Control Theory and Optimization

1991 MS Classification: 90C29, 90C30, 90C31
Guddat, Jürgen, Humboldt-Universität Berlin, Deutschland, Guerra, Francisco, Universidad de las Americas Puebla, Mexico, Nowack, Dieter, Humboldt-Universität Berlin, Deutschland

New Embeddings for Nonlinear Multiobjective Optimization Problems I

In a dialogue procedure the decision maker has to determine in each step the aspiration and reservation level expressing his wishes. This leads to an optimization problem which is not easy to solve in the nonconvex case (the known starting point is not feasible). We propose a modified standard embedding. This problem will be discussed from the point of view of parametric optimization (singularities, pathfollowing and jumps to other connected components in sets of stationary and generalized critical points, respectively).
Reference: Guddat, Guerra, Nowack, New embeddings for nonlinear multiobjective optimization problems I, YUJOR **8** (1998), No.1, 45-73