

Practical Implementation of a Reduction Method in Semi-infinite Programming

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Abstract

We present a reduction type algorithm for solving nonlinear semi-infinite programming problems. The proposed algorithm uses the simulated annealing method equipped with a function stretching technique as a multi-local procedure, and a penalty technique for the finite optimization process. To ensure global convergence, an exponential penalty merit function is reduced along each search direction. Our preliminary numerical results seem to show that the algorithm is very promising in practice.

Keywords

Semi-infinite Programming. Global optimization. Nonlinear programming.