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Sequential Convex Programming Methods for Solving Nonlinear Optimization Problems with DC constraints

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(Submitted on 28 Jul 2011)

This paper investigates the relation between sequential convex programming (SCP) as, e.g., defined in [24] and DC (difference of two convex functions) programming. We first present an SCP algorithm for solving nonlinear optimization problems with DC constraints and prove its convergence. Then we combine the proposed algorithm with a relaxation technique to handle inconsistent linearizations. Numerical tests are performed to investigate the behaviour of the class of algorithms.

Comments: 18 pages, 1 figure

Optimization and Control (math.OC); Systems and Control Subjects:

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