Mathematics > Optimization and Control

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

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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.

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