Strekalovskii, A. S.

On the minimization of the difference of convex functions on a feasible set. (Russian, English)

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Zh. Vychisl. Mat. Mat. Fiz. 43, No. 3, 399-409 (2003); translation in Comput. Math. Math. Phys. 43, No. 3, 380-390 (2003).

The nonconvex constrained minimization problem for a differentiable function that can be written as the difference of two convex functions is examined. Global optimality conditions are given for a point and a minimizing sequence. A global search strategy based on these conditions is developed, and its convergence is shown. A special local search method is presented, and its convergence is proved.

Reviewer: Evgenij Nechaev (Moskva)

MSC:

26A51	Convexity of real functions in one variable, generalizations
90C26	Nonconvex programming, global optimization
90C29	Multi-objective and goal programming

Keywords:

differentiable function; nonconvex conditional minimization; global optimality; local search method