NEW POPULATION-BASED DESCENT ALGORITHM USING

MEAN VALUE OF COORDINATE COMPONENTS

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ABSTRACT

Supported by dramatic advances in computer processing, heuristic methods such as metaheuristics (also known as meta-strategies and meta-solutions) have found widespread use for solving complex combinatorial optimization problems and nonlinear optimization problems. Algorithm performance and ease of implementation are important factors in solving complex optimization problems in the real world. With the aim of developing an algorithm that excels in both performance and ease of implementation, we propose a mean search algorithm and report on its superior results in various performance-comparison tests.

Keywords: non-linear programming problem, metaheuristics, mean search algorithm, population-based descent algorithm, operational research.