

Algorithm to Solving Multiple Criteria Linear Fractional Optimization

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Abstract

The aim of this paper is to develop an interactive method of solving multiple objective linear fractional programming problems using an extended Rosen algorithm.

Starting from the idea of Rosen's algorithm, in 1999 Cocan and Pop proposed a method of solving convex programming problems with several objective functions optimizing more than one criteria over a common direction. When the case of linear fractional programs is considered, the optimization of a convex one input value function should be changed by the algebraical selection of the optimal value of a decreased one input value function. The advantage of this change is proved and a new algorithm is formulated here. On the basis of the proposed method illustrative numerical examples are solved.

Mathematics Subject Classification: 90C32, 90C29.

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