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## FINDING AN EFFICIENT SOLUTION FOR MULTI-OBJECTIVE FUZZY LINEAR PROGRAMMING PROBLEMS

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## Abstract

Fuzzy linear programming problem in which both cost coefficients and parameters in the constraints are fuzzy numbers has applications in a large number of practical situations. In the presence of multiple objectives, this problem is called Multi-objective Fuzzy Linear Programming (MOFLP) which has been considered in the context of fuzzy optimization with much attention. Unfortunately, finding the whole set of non-dominated solutions is not an easy task because the number of non-dominated solutions can be very large. Thus it is not an effective way of presenting all alternative non-dominated solutions to the decision maker. In this paper, we define an efficient solution for MOFLP problems whose all parameters can be any types of fuzzy numbers and present an algorithm for obtaining such a solution. The algorithm not only generates an efficient solution, but also gives a degree of efficiency that shows how much the feasibility and optimality is achieved. To illustrate the proposed algorithm, two numerical examples are presented to show the superiority of the proposed method.

Key Words: Fuzzy sets, Fuzzy programming, Multi-objective programming.

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