Abstract

This paper deals with priority based fuzzy goal programming approach for solving multi-objective linear fractional programming problem. In the model formulation of the problem, we construct the fractional membership functions by determining the optimal solution of the objective functions subject to the system constraints. The fractional membership functions are
then transformed into equivalent linear membership functions at the individual best solution point by first order Taylor series. In the solution process, fuzzy goal programming approach is used to solve problem by minimizing negative deviational variables. Then, sensitivity analysis is performed with the change of priorities of the fuzzy goals. Euclidean distance function is used to identify the appropriate priority structure in the decision-making situation. The efficiency of the proposed approach is illustrated by solving a numerical example.

Reference

A Priority based Fuzzy Goal Programming to Multi-Objective Linear Fractional Programming Problem

programming problem. Trakya University Journal Science 6, 80-87.

**Index Terms**

Computer Science  
Fuzzy Systems

**Key words**

Fractional programming  
Goal programming
Multi-objective linear fractional programming

Priority based fuzzy goal programming