GENERALIZED FUZZY HUNGARIAN METHOD FOR GENERALIZED FUZZY ASSIGNMENT PROBLEM

S. SAGAYA ROSELINE[1] AND E. C. HENRY AMIRTHARAJ[2]

[1] [2] Department of Mathematics,
Bishop Heber College,
Tiruchirappalli-620017, Tamilnadu, India

Abstract

Assignment problem is a particular case of the transportation problem in which the number of jobs (or origins or sources) is equal to the number of facilities (destinations or machines or persons and so on). The goal of a general assignment problem is to find an optimal assignment of machines (laborers) to jobs without assigning an agent more than once and ensuring that all jobs are completed. The objective might be to minimize the total time to complete a set of jobs or to maximize skill rating, maximize the total satisfaction of the group or minimize the cost of the assignment.

In this paper, Generalized fuzzy assignment problem is defined and a new method, Generalized Fuzzy Hungarian Method is proposed to find a generalized fuzzy optimal solution for a generalized fuzzy assignment problem where the costs are generalized trapezoidal fuzzy numbers. Numerical example is provided to illustrate the proposed procedure.