APPLICATIONS OF FUZZY SET THEORY TO PASSENGER TRANSPORTATION PROBLEM

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In this paper we study the transportation problem of passengers traveling in a bus between two fixed points under varying constraints. We assume that the approximate number of passengers traveling between every origin-destination pair, along any route in all services is given. To determine the choice of the services, we develop a fuzzy reasoning algorithm where, the fuzzy phrases are represented by the membership function as fuzzy sets. A preference index value is chosen to determine the frequency of the services. We model the problem where the basic input data are treated as Triangular fuzzy numbers. Fuzzy optimization techniques are used to solve this problem.