CHEBYSHEV GOAL PROGRAMMING APPROACH FOR LINEAR BILEVEL MULTI-FOLLOWER PROGRAMMING PROBLEM

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ABSTRACT

Many problems have been formulated as bilevel programming problems in the field of sciences and industries such as traffic assignment, transportation, signal optimization etc. In past most of the research work concentrated on linear bilevel programming in which one leader and only one follower are involved and are linear in nature and many algorithms and approaches are well developed to find the global optimum of the linear bilevel programming problems \textit{viz.} \textit{K}-th best approach, Kuhn-Tucker approach etc. This paper considers a particular case of linear bilevel programming with one leader and multiple followers’ are involved and there is no sharing information among followers. To solve these problems Chebyshev (Fuzzy) Goal programming approach is suggested and the optimal solution is obtained through R \& LINGO Software. By using a numerical example it is shown that suggested approach obtains the most appropriate optimal solution.

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