عنوان مقاله:

FGP approach to multi objective quadratic fractional programming problem

محل انتشار:

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خلاصه مقاله:

Multi objective quadratic fractional programming (MOQFP) problem involves optimization of several objective functions in the form of a ratio of numerator and denominator functions which involve both contains linear and quadratic forms with the assumption that the set of feasible solutions is a convex polyhedral with a nite number of extreme points and the denominator part of each of the objective functions is non-zero in the constraint set. In this paper, we extend the procedure as suggested by Lachhwani (Proc. Nat. Acad. Sci. India, ۸۲(۴), ۳۱۷-۳۲۲) based on fuzzy goal programming approach for the solution of multi objective quadratic fractional programming (MOQFP) problem. The proposed technique is simple, ecient and requires less computational work. In the proposed FGP model formulation, corresponding objectives of equivalent multi objective programming problem are transformed into fuzzy goals membership functions) by means of assigning an aspiration level to each of them and suitable membership function is defined for each objectives. Then achievement of the highest membership value of each of fuzzy goals is formulated by minimizing the sum of negative deviational variables. The proposed methodology is illustrated with numerical example in order to support the proposed methodology.

کلمات کلیدی:

Multiple objective quadratic fractional programming, Fuzzy Goal programming, membership function, Negative deviational variable

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