

Ranking of Solutions in an Integer Non-Convex Program

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Abstract: An integer non-convex programming problem is considered where the sum of a linear fractional function and a quadratic function is minimized over a set of integer points contained in a convex polytope. A related integer linear fractional programming problem is formulated which helps in finding an optimal solution of the given integer non-convex programming problem. Ranking of the integer feasible solutions of the main problem is also discussed. A numerical illustration is included to explain the proposed procedure.

Key words: integer programming, non-convex programming, nonlinear programming, fractional programming.