A Parallel Algorithm and Duality for a Fuzzy Multiobjective Linear Fractional Programming Problem

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ABSTRACT: This paper deals with the duality and the associated results in a special type of nonconvex fuzzy programming with linear fractional objectives. Extending the results on the generalized linear fractional program by Jagannathan and Schaible, the associated dual is derived via Farkas' lemma. An algorithm in a dual-parallel-processor environment is developed based on the duality relations established. The effectiveness of the algorithm is illustrated by the computational experiments conducted with five test problems in fuzzy multiobjective linear fractional programming. Sensitivity analysis results for the FMOLFP with respect to fuzzy parameters are also presented.