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A proposed model for solving fuzzy linear fractional programming problem: Numerical Point of View

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Highlights

- Solve a real life fractional programming problem.
- Design a new method to solve fuzzy linear fractional programming .
- Compare the proposed technique with the existing methods.

Abstract: In solving real life fractional programming problem we often face the state of uncertainty as well as hesitation due to various uncontrollable factors. To overcome these limitations, the fuzzy logic approach is applied to this problem. In this paper, we propose the concepts of simple ranking approach between two triangular fuzzy numbers. We also formulate an equivalent tri-objective linear fractional programming problem to calculate the upper, middle and lower bounds of the Fuzzy Linear Fractional Programming (FLFP) problem. Furthermore, from the obtained upper, middle and lower bounds, we construct the optimal values numerically. Finally, the effectiveness of the proposed procedure is illustrated through numerical and real life examples.

Keywords: Triangular fuzzy number, linear fractional programming problem, Multi objective programming, ranking function.

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