ABSTRACT

***SANJIV KUMAR* METHOD FOR SOLVING GAME THEORY
WITH FUZZY TRAPEZOIDAL NUMBER GAME MATRIX**

by

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Game theory is one of the problems in operations research. Game theory is a mathematical approach to formulate a situation of competition or conflict between various competing interests as competitors. The purpose of writing this Final Project is to implement the Sanjiv Kumar method to determine the game value of the Sum-Zero Two-Players Games with a pay-offs matrix in the form of fuzzy trapezoidal numbers. The method used in the preparation of this final project is a literature review method and numerical simulation. In the method of the Sanjiv Kumar method, the payment value is explicitly obtained from solving 3 derivatives of a linear program with data obtained from the set of cut-1 and the set of cut-0 from the fuzzy payoffs matrix. The Sanjiv Kumar method can be used for game matrices with payments in the form of arbitrary trapezoidal fuzzy numbers or for game matrices with payout values in the form of symmetrical trapezoidal fuzzy numbers.

Keywords: Game theory, Two-person Zero Two-Players Games. Fuzzy Trapezoidal Number, Dominance Strategy, Sanjiv Kumar Method