# Brown–Robinson and a Graphical Method for Interval Matrix Games

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## Abstract

In this talk, I will consider two person interval matrix games and by means of acceptability index notion, Brown–Robinson method to find mixed-strategy equilibrium will adapt to interval matrix games. I will also present a graphical method for solving 2×n or m×2 interval matrix games.

Interval matrix game is the interval generation of classical matrix games and it is the special case of fuzzy games. Because of uncertainty in real-world applications, payoffs of a matrix game may not be a fixed number, even though the players do not change their strategies. Since the payoffs may vary within a range for fixed strategies, we can use an interval-valued matrix to model such uncertainties.

The iterative Brown-Robinson method is one of the common techniques to approximate calculation for the value of game. In this method, the players choose in each step $k$ their strategy assuming that the strategies of the other players in step $k$ correspond to the frequency with which the various strategies were applied in the previous $k-1$ steps.