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# Solutions of Fuzzy LR Linear Systems Using Optimization Models

چکیده

We first establish some necessary and sufficient conditions for solvability of fuzzy LR linear systems. We then provide the concept of an approximate solution when a fuzzy LR linear system lacks a solution (exact solution). Recently, we have proposed the notion of an approximate solution for a fuzzy LR linear system under the condition that a corresponding crisp linear system was solvable. Here, we remove this condition by presenting a more general concept of an approximate solution based on a least squares model. We also develop the conditions for uniqueness of the approximate solution. To compute an approximate solution, we propose an algorithm using a quadratic programming model with bound constraints on certain variables. Finally, we show numerically the appropriateness of our proposed approximate solution for large scale problems in comparison with other recently proposed approximate solutions.

مکان

تالار دکتر جناب

(آمفی تئاتر دانشکده فیزیک)