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Minimizing a linear function under a fuzzy max-min relational equation constraint. (English)

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Summary: We investigate the problem of minimizing a linear objective function subject to a fuzzy relational equation constraint. A necessary condition for optimal solution is proposed. Based on this necessary condition, we propose three rules to simplify the work of computing an optimal solution. Numerical examples are provided to illustrate the procedure. Experimental results are reported showing that our new procedure systematically outperforms our previous work.

MSC:

90C70 Fuzzy and other nonstochastic uncertainty mathematical programming

90C47 Minimax problems in mathematical programming

Cited in **44** Documents

Keywords:

Fuzzy optimization; Fuzzy relational equation; Max-min composition

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