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Solving the Discrete Multiple Criteria Problem Through Strength of Preference

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Abstract

In this paper a theory and an interaction method is developed for solving the Multiple Criterria Decision Making(MCDM) problem with a discrete set of alternatives through the notion of strength of preference. The approach used to implement the quasi-concave utility function is an extension of P.Korhonen, J.Wallenius, and S.Zionts(K-W-Z)method[3].It will be shown that the implementation of the notion of strength of preference with trinary relation, will facilitate the elimination of discrete alternatives. Inconsistency of the Decision Maker(DM) and an example are discussed.

Keywords: Multiple Criteria, Strength of Preference, Ranking Discrete Alternatives.