

数据库、信号与信息处理

基于区间灰数的多属性决策方法

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摘要 以灰色系统理论的思想与方法为基础, 探讨了属性值和属性权重均为区间灰数的多属性决策方法。根据结合理想方案与临界方案的综合关联度, 提出了考虑属性权重因素的线性规划优化模型, 将经典灰色关联决策由清晰数的情况推广到了区间灰数的情况。最后通过实例分析说明所提出的灰色关联决策方法的合理性及其算法的有效性。

关键词 [多属性决策](#) [灰色系统理论](#) [区间灰数](#) [灰色关联系数](#) [灰色关联度](#)

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Multi-attribute decision making method based on interval gray numbers

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Abstract

Based on the gray system theory, the multi-attribute decision making problem is discussed, in which both the attribute values and the attribute weights are interval gray numbers. By introducing the integrated incidence degree method together with some relational concepts based on ideal and critical projects, a linear programming model which also considers the attribute weights is presented, which extends the classical gray incidence decision-making to the case of interval gray numbers. Finally, an example shows the rationality of gray incidence decision-making and the validity of the arithmetic mentioned above.

Key words [multi-attribute decision making](#) [gray system theory](#) [interval gray number](#) [gray relational coefficient](#) [gray relational grade](#)

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