

面向突发事件的模糊多目标应急决策方法

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A fuzzy multi-criteria emergency decision-making method

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摘要 应急环境下的信息具有不确定性、模糊性, 运用单一的方法很难做出有效决策. 集成模糊理论, 灰色系统理论和多目标决策理论, 提出了一种改进的模糊多目标应急决策方法. 该方法首先结合灰色关联度计算各决策方案到TOPSIS正负理想解的距离, 然后采用三角模糊数, 处理决策信息的模糊性和不确定性, 突出了各决策方案之间的关联影响. 最后, 结合核电站事故应急决策的例子, 验证了所提出方法的可行性和有效性.

关键词: 应急管理 模糊理论 灰色系统理论 TOPSIS

Abstract: Information under emergency situation is always uncertain and ambiguous, so it is very difficult to make decision correctly and rapidly by single method. In this paper, a new and revised fuzzy multi-criteria decision making method is proposed for emergency management. The proposed method integrated fuzzy theory, the gray system theory and multi-criteria decision making theory. A case in emergency decision making for a nuclear power station accident is introduced to demonstrate the feasibility and efficiency of the proposed method.

Key words: emergency management fuzzy theory grey theory TOPSIS




收稿日期: 2011-09-26;

基金资助: 国家自然科学基金(71173028, 70901011, 70901015); 富士康科技集团---擢才创研计划(11F81210001)

引用本文:

邬文帅, 寇纲, 彭怡等. 面向突发事件的模糊多目标应急决策方法[J]. 系统工程理论实践, 2012, (6): 1298-1304.

WU Wen-shuai, KOU Gang, PENG Yi et al. A fuzzy multi-criteria emergency decision-making method[J]. Systems Engineering - Theory & Practice, 2012, (6): 1298-1304.

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