

数据库、信号与信息处理

## 不相容决策系统的知识库构造研究

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**摘要** 粗糙集理论为知识库构造提供了一种形式化的理论模型, 但是针对不相容决策系统构造知识库仍然是值得深入研究的问题。基于决策系统分布约简定义规则的分布核与分布约简概念, 提出一种基于分布约简构造知识库的方法。首先确定各条件类的分布核, 进而采用启发式算法计算其分布约简, 挖掘约简规则集, 构造出决策系统的知识库。并对加入决策系统中新对象的各种情形进行分析, 对原有知识库进行增量式更新, 而无需为更新知识库重新运行知识库构造算法。该方法能适应不相容决策系统, 同样也适用于相容决策系统。

**关键词** [粗糙集](#) [知识库构造](#) [增量式更新](#)

分类号

## Study on construction of knowledge database for inconsistent decision system

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### Abstract

Rough set provides a formal theory model for construction of knowledge database, but it is worth studying in detail to construct knowledge database for inconsistent decision system. This paper defines distribution core and distribution reduction of a rule by applying notion of decision system's distribution reduction, and puts forward a kind of method based on distribution reduction for constructing knowledge database. This method gets the core of each condition class first, then achieves their distribution reductions by applying heuristic algorithm, and mines concise production rules for each condition class, constructs knowledge database for decision system. Furthermore, this method analyzes various situation that new objects are appended to the decision system, then updates current knowledge database incrementally, instead of running the whole constructins process again. This method would be applicable to inconsistent and consistent decision system.

**Key words** [rough set](#) [construction of knowledge database](#) [incremental updating](#)

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