

学术探讨

基于粗糙集的证据合成方法研究

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摘要 证据理论是处理不确定问题的重要方法,其处理的证据来源于专家,而专家的知识经验是有限的,且存在一定的主观性。在证据合成中,Dempster合成规则为证据理论提供了证据合成公式,但该公式在合成高度冲突的证据时,合成结果将有悖于常理。针对上述问题,将粗糙集理论中属性依赖度的思想引入到证据理论中,以此衡量证据的重要性,更合理地解决冲突证据合成问题。研究表明,该方法避免了传统证据理论的主观因素影响,能有效提高融合结果的准确性,得到符合实际的结论。

关键词 [粗糙集](#) [证据理论](#) [信息融合](#) [属性依赖度](#)

分类号

Study of evidence combination method based on rough set theory

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Abstract

The theory of evidence is important for solving uncertain problem, the evidence using in the evidence theory is given by experts.The expert's knowledge is limited, subjective and sometimes difficult to obtain.Dempster has offered a algorithm of evidence combination, but the algorithm need independent evidence.If it is used in high conflict evidence, the result would be innormal.To solve these problems, this paper presents the algorithm of evidence theory which draws into the concept of attribute dependability of rough sets, utilizes it to weigh the evidence importance, and can combine highly conflicting evidences more satisfactory.From the results, this method avoids the subjective ingredient influence, so it improves the precision of fusion result and obtains real conclusion.

Key words [rough set](#) [evidence theory](#) [information fusion](#) [attribute dependence](#)

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