论文与报告

实域粗糙集理论及属性约简

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摘要
本文引入属性和属性子集广义重要度的概念以及空间中的广义近邻关系，提出广义近邻关系下的实域粗糙集扩展模型. 在实域粗糙集理论中，利用广义近邻关系在全局中划分相容模块，构成集合的下、上近似，避免了Pawlak粗糙集必须量化数据的麻烦. 另外，本文给出了实域粗糙集的属性约简定义和一种贪心算法，分析了约简属性集合的质量. 最后，通过实例验证了本文理论和方法的正确性和有效性.

关键词　　实域粗糙集理论　属性约简　广义重要度　广义近邻关系　广义欧氏距离

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Real Rough Set Theory and Attribute Reduction

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Abstract
The notions of general important degree of an attribute and attributes subset are introduced, and thereupon a kind of general Euclidean distance and a general neighborhood relation are set up. And then a real rough set theory based on the general neighborhood relation is proposed. The theory partitions the universe into tolerant modules under general neighborhood relationship the give the lower and upper approximation of the set without discretizing the data. Furthermore, the definition and greedy arithmetic of attribute reduction in real rough set theory are proposed, and the quality of reduction results is analyzed. Finally, an example is given to show the validity and effectiveness of the theory and method of this paper.

Key words　Real rough set theory　attribute reduction　general important degree　general neighborhood relation　general Euclidean distance

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