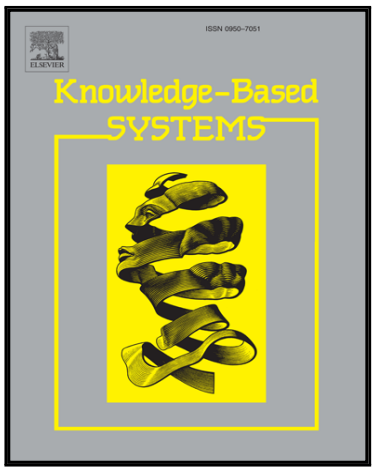
Accepted Manuscript



Information fusion and numerical characterization of a multi-source information system

Xiaoya Che, Jusheng Mi, Degang Chen

PII: S0950-7051(18)30008-X
DOI: 10.1016/j.knosys.2018.01.008
Reference: KNOSYS 4181

To appear in: *Knowledge-Based Systems*

Received date: 6 August 2017
Revised date: 3 January 2018
Accepted date: 4 January 2018

Please cite this article as: Xiaoya Che, Jusheng Mi, Degang Chen, Information fusion and numerical characterization of a multi-source information system, *Knowledge-Based Systems* (2018), doi: 10.1016/j.knosys.2018.01.008

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- In order to take fully advantage of evidence theory, integrate multi-granulation structures, we propose a novel definitions of multi-source rough approximations and corresponding multi- granulation rough approximations, probability distribution and basic probability assignment, then construct the connection between rough approximations and evidence theory.
- The results in (1) are extended to multi-source covering information system.
- Two Shannon's fusion algorithms based on equivalence relations and coverings, involved in the significance degree of condition attributes set with respect to a sample, conditional probability and information entropy, are presented to measure the classification uncertainty degree of a decision class or a decision partition in a multi-source information system, respectively.
- . By combining the significance degree and conditional probability, defined in this paper, we designed a novel probabilistic rough set and considered the relationship with Multi-granulation rough set.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/6861651

Download Persian Version:

https://daneshyari.com/article/6861651

Daneshyari.com