

<<不完全信息系统及粗糙集理论>>

图书基本信息

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## <<不完全信息系统及粗糙集理论>>

### 内容概要

Incomplete Information System and Rough Set Theory : Models And Attribute Re-ductions provides evidence of present growth in the rough set approach to the incomplete information system. The topics discussed in this book have received significant attentions in recent years because researchers can apply new tools for problem solving. This book reflects a number of approaches those were either directly or indirectly begun by the seminal work on rough set by Zdzislaw Pawlak. It is well-know that the knowledge representation system or the so-called information system plays a crucial role in Pawlak's rough set theory. Evidence of the growth of various rough set-based research streams can be found in the rough set databasel. However , in many practical applications , since the difficulties of acquisitions of knowledge , incomplete instead of the complete information systems can be seen everywhere. Therefore , how to employ the rough set approach to deal with the incomplete information systems is very important to the development of the rough set theory.

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插图：Abstract Pawlak's rough set model, was firstly constructed on the basis of an indiscernibility relation. Such an indiscernibility relation is an intersection of some equivalence relations in knowledge base and then it is also an equivalence relation. This chapter introduced the basic concepts of Pawlak's rough set, Ziarko's variable precision rough set and Qian's multigranulation rough sets. These models were all proposed on the basis of indiscernibility relation. Variable precision rough set generalizes classical rough approximation by introducing a threshold  $\alpha$ . Such  $\alpha$  value represents a bound on the conditional probability of an equivalence class, which are classified into the target concept. Multigranulation rough set uses a family of the indiscernibility relation instead of a single one to construct rough approximation. In multigranulation rough set approach, the optimistic and pessimistic multigranulation rough sets are two basic models.

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