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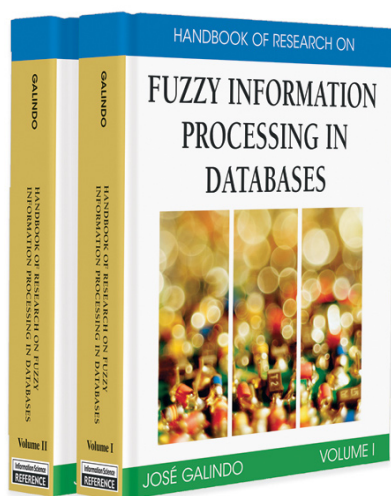
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Handbook of Research on Fuzzy Information Processing in Databases

Edited by: José Galindo, University de Malaga, Spain

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"This book offers both a breadth and depth of coverage that cannot be found elsewhere. It is an essential resource for students, educators, researchers, and practitioners in the field."
   - Olga Pons, Universidad de Granada, Spain

Information technology is one of the most rapidly changing disciplines, especially with the fuzzy extension. Fuzzy databases have been studied in many works and papers but, in general, these works study some particular area and many works are theoretical works, with very few real applications.

The **Handbook of Research on Fuzzy Information Processing in Databases** provides comprehensive coverage and definitions of the most important issues, concepts, trends, and technologies in fuzzy topics applied to databases, discussing current investigation into uncertainty and imprecision management by means of fuzzy sets and fuzzy logic in the field of databases and data mining. This compendium of research offers researchers, students, and organizations a complete, practical, guide to fuzzy information processing in databases.

Subject:
Databases, Data Mining, and Data Warehousing; Artificial Intelligence; Business/Management Information Technology and Systems; Software/Systems Engineering, Programming, Analysis and Design; Knowledge Management

Market:
This essential publication is for all academic and research libraries, as well as all those involved in applying fuzzy logic to database management systems. Researchers, practitioners, educators, managers, and students, seeking state-of-the-art applications of fuzzy information processing, will find this reference invaluable.

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Topics Covered

- Aggregation operations
- Application of fuzzy databases
- Bipolar queries in fuzzy information processing
- Case Based Reasoning (CBR)
- Dynamic causal mining
- Extension Principle
- Flexible database querying
- Fuzzy comparators
- Fuzzy Data Mining
- Fuzzy datatypes
- Fuzzy dependencies
- Fuzzy implications
- Fuzzy information processing in databases
- Fuzzy knowledge management
- Fuzzy languages
- Fuzzy libraries for processing fuzzy information
- Fuzzy modeling tools
- Fuzzy object-oriented databases
- Fuzzy object-relational databases
- Fuzzy quantifiers
- Fuzzy queries
- Fuzzy relational databases
- Fuzzy technologies for databases
- Fuzzy time
- Hierarchical fuzzy sets
- Implementation of fuzzy databases
- Linguistic labels
- Machine learning approach to data cleaning in databases
- Membership functions
- Query expansion by taxonomy
- Relational database querying
- Representation theorem
- Shipwreck scatter analysis
- Spatial uncertainty management

About the Editor:

José Galindo has a PhD in computer science from the University of Granada (Spain) and is a professor of computer science in the School of Engineering at the University of Málaga (Spain). He is the author of several didactical and research books and papers on computer science, databases, information systems, and fuzzy logic. He is co-author of the book Fuzzy Databases: Modeling, Design and Implementation published by IGI Global (Hershey) in 2006. In addition, he is the editor of the handbook Research interest: Fuzzy logic, fuzzy databases and ethical issues in the technological age. He is also a member of IDBIS research group and the Ibero-american research net RITOS-2.