

Fuzzy Database Modeling Of Imprecise And Uncertain Engineering Information Studies In Fuzziness And Soft Computing

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[Selected Readings on Database Technologies and Applications](#) Halpin, Terry 2008-08-31
"This book offers research

articles focused on key issues concerning the development, design, and analysis of databases"--Provided by publisher.

Intelligent Systems: Concepts, Methodologies, Tools, and Applications - Management Association, Information Resources 2018-06-04
Ongoing advancements in modern technology have led to significant developments in intelligent systems. With the numerous applications available, it becomes imperative to conduct research and make further progress in this field. Intelligent Systems: Concepts, Methodologies, Tools, and Applications contains a compendium of the latest academic material on the latest breakthroughs and recent progress in intelligent systems. Including innovative studies on information retrieval, artificial intelligence, and software engineering, this multi-volume book is an ideal source for researchers, professionals, academics, upper-level students, and practitioners interested in

emerging perspectives in the field of intelligent systems.

Modeling Complex Data for Creating Information -

Jacques-Emile Dubois
2012-12-06

J.-E DUBOIS and N. GERSHON
As with Volume 1 in this series, this book was inspired by the Symposium on "Communications and Computer Aided Systems" held at the 14th International CODATA Conference in September 1994 in Chambéry, France. This book was conceived and influenced by the discussions at the Symposium and most of the contributions were written following the Conference. Whereas the first volume dealt with the numerous challenges facing the information revolution, especially its communication aspects, this one provides an insight into the recent tools provided by computer science for handling the complex aspects of scientific and technological data. This volume, "Modeling Complex Data for Creating Information," is concerned with

real and virtual objects often involved with data handling processes encountered frequently in modeling physical phenomena and systems behavior. Topics concerning modeling complex data for creating information include:

- Object oriented approach for structuring data and knowledge
- Imprecision and uncertainty in information systems
- Fractal modeling and shape and surface processing
- Symmetry applications for molecular data

The choice of these topics reflects recent developments in information systems technologies. One example is object oriented technology. Recently, research, development and applications have been using object-oriented modeling for computer handling of data and data management. Object oriented technology offers increasingly easy-to-use software applications and operating systems. As a result, science and technology research and applications can now provide more flexible and effective services.

Modeling and Management of Fuzzy Semantic RDF Data - Zongmin Ma 2022-09-08

This book systemically presents the latest research findings in fuzzy RDF data modeling and management. Fuzziness widely exist in many data and knowledge intensive applications. With the increasing amount of metadata available, efficient and scalable management of massive semantic data with uncertainty is of crucial importance. This book goes to great depth concerning the fast-growing topic of technologies and approaches of modeling and managing fuzzy metadata with Resource Description Framework (RDF) format. Its major topics include representation of fuzzy RDF data, fuzzy RDF graph matching, query of fuzzy RDF data, and persistence of fuzzy RDF data in diverse databases. The objective of the book is to provide the state-of-the-art information to researchers, practitioners, and postgraduates students who work on the area of big data

intelligence and at the same time serve as the uncertain data and knowledge engineering professional as a valuable real-world reference.

Fuzzy XML Data

Management - Li Yan

2013-11-25

This book presents an exhaustive and timely review of key research work on fuzzy XML data management, and provides readers with a comprehensive resource on the state-of-the-art tools and theories in this fast growing area. Topics covered in the book include: representation of fuzzy XML, query of fuzzy XML, fuzzy database models, extraction of fuzzy XML from fuzzy database models, reengineering of fuzzy XML into fuzzy database models, and reasoning of fuzzy XML.

The book is intended as a reference guide for researchers, practitioners and graduate students working and/or studying in the field of Web Intelligence, as well as for data and knowledge engineering professionals seeking new approaches to

replace traditional methods, which may be unnecessarily complex or even unproductive.

Flexible Databases Supporting Imprecision and Uncertainty -

Gloria Bordogna 2007-06-02

This volume offers the advice of selected expert contributors on the application of heterogeneous methods for managing uncertainty and imprecision in databases. It contains both survey chapters on classic topics such as "flexible querying in databases", and up to date information on "database models to represent imperfect data". Further, it includes specific contributions on uncertainty management in database integration, and in representing and querying semistructured and spatial data.

Soft Computing in XML Data Management - Zongmin Ma

2010-09-07

Being the de-facto standard for data representation and exchange over the Web, XML (Extensible Markup Language) allows the easy development of applications that exchange

data over the Web. This creates a set of data management requirements involving XML. XML and related standards have been extensively applied in many business, service, and multimedia applications. As a result, a large volume of data is managed today directly in XML format. With the wide and in-depth utilization of XML in diverse application domains, some particularities of data management in concrete applications emerge, which challenge current XML technology. This is very similar with the situation that some database models and special database systems have been developed so that databases can satisfy the need of managing diverse data well. In data- and knowledge- intensive application systems, one of the challenges can be generalized as the need to handle imprecise and uncertain information in XML data management by applying fuzzy logic, probability, and more generally soft computing. Currently, two kinds of situations are roughly

identified in soft computing for XML data management: applying soft computing for the intelligent processing of classical XML data; applying soft computing for the representation and processing of imprecise and uncertain XML data. For the former, soft computing can be used for flexible query of XML document as well as XML data mining, XML duplicate detection, and so on.

Advances in Probabilistic Databases for Uncertain Information Management -

Zongmin Ma 2013-03-30

This book covers a fast-growing topic in great depth and focuses on the technologies and applications of probabilistic data management. It aims to provide a single account of current studies in probabilistic data management. The objective of the book is to provide the state of the art information to researchers, practitioners, and graduate students of information technology of intelligent information processing, and at the same time serving the

information technology professional faced with non-traditional applications that make the application of conventional approaches difficult or impossible.

Soft Computing

Applications for Database

Technologies - K. Anbumani

2010-01-01

"This book investigates the advent of soft computing and its applications in database technologies"--Provided by publisher.

Encyclopedia of Information Science and Technology -

Mehdi Khosrow-Pour 2009

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

Flexible Query Answering

Systems - Henning

Christiansen 2004-06-17

This volume constitutes the proceedings of the Sixth International Conference on Flexible Query Answering Systems, FQAS 2004, held in Lyon, France, on June 24-26, 2004. FQAS is the

premier conference for researchers and practitioners concerned with the vital task of providing easy, flexible, and intuitive access to information for every type of need. This multidisciplinary conference draws on several research areas, including databases, information retrieval, knowledge representation, soft computing, multimedia, and human-computer interaction. With FQAS 2004, the FQAS conference series celebrated its tenth anniversary as it has been held every two years since 1994. The overall theme of the FQAS conferences is innovative query systems aimed at providing easy, flexible, and intuitive access to information. Such systems are intended to facilitate retrieval from information repositories such as databases, libraries, and the Web. These repositories are typically equipped with standard query systems that are often inadequate for users. The focus of FQAS is the development of query systems that are more expressive, informative,

cooperative, productive, and intuitive to use.

Computing with Words in Information/Intelligent Systems 2

- Lotfi Zadeh

2013-06-29

These two volumes consisting of Foundations and Applications provide the current status of theoretical and empirical developments in "computing with words". In philosophy, the twentieth century is said to be the century of language. This is mainly due to Wittgenstein who said: "The meaning of a word is its use in the language game". "The concept game is a concept with blurred edges". In the first phrase, "the language game" implies the everyday human activity with language, and in the latter, "game" simply implies an ordinary word. Thus, Wittgenstein precisely stated that a word is fuzzy in real life. Unfortunately this idea about a word was not accepted in the conventional science. We had to wait for Zadeh's fuzzy sets theory. Remembering Wittgenstein's statement, we should consider, on the one

hand, the concept of "computing with words" from a philosophical point of view. It deeply relates to the everyday use of a word in which the meaning of a word is fuzzy in its nature.

Knowledge-Based Intelligent Information and Engineering Systems -

Mircea Gh. Negoita 2004-10-14

We were very pleased to once again extend to the delegates and, we are pleased to say, our friends the warmest of welcomes to the 8 International Conference on Knowledge-Based Intelligent Information and Engineering Systems at Wellington - Institute of Technology in Wellington, New Zealand. The KES conferences attract a wide range of interest. The broad focus of the conference series is the theory and applications of computational intelligence and emergent technologies. Once purely a research field, intelligent systems have advanced to the point where their abilities have been incorporated into many conventional application areas.

The quest to encapsulate human knowledge and capabilities in domains such as reasoning, problem solving, sensory analysis, and other complex areas has been avidly pursued. This is because it has been demonstrated that these abilities have definite practical applications. The techniques long ago reached the point where they are being exploited to provide commercial advantages for companies and real beneficial effects on profits. KES 2004 provided a valuable mechanism for delegates to obtain a profound view of the latest intelligent systems research into a range of - gorithms, tools and techniques. KES 2004 also gave delegates the chance to come into contact with those applying intelligent systems in diverse commercial areas. The combination of theory and practice represents a uniquely valuable opportunity for -preciating the full spectrum of intelligent-systems activity and the “state of the art”.
Uncertainty Modelling and Quality Control for Spatial Data

- Shi Wenzhong 2015-11-04
Offers New Insight on Uncertainty Modelling Focused on major research relative to spatial information, Uncertainty Modelling and Quality Control for Spatial Data introduces methods for managing uncertainties—such as data of questionable quality—in geographic information science (GIS) applications. By using original research, current advancement, and emerging developments in the field, the authors compile various aspects of spatial data quality control. From multidimensional and multi-scale data integration to uncertainties in spatial data mining, this book launches into areas that are rarely addressed. Topics covered include: New developments of uncertainty modelling, quality control of spatial data, and related research issues in spatial analysis Spatial statistical solutions in spatial data quality Eliminating systematic error in the analytical results of GIS applications A data quality

perspective for GIS function workflow design Data quality in multi-dimensional integration Research challenges on data quality in the integration and analysis of data from multiple sources A new approach for imprecision management in the qualitative data warehouse A multi-dimensional quality assessment of photogrammetric and LiDAR datasets based on a vector approach An analysis on the uncertainty of multi-scale representation for street-block settlement Uncertainty Modelling and Quality Control for Spatial Data serves university students, researchers and professionals in GIS, and investigates the uncertainty modelling and quality control in multi-dimensional data integration, multi-scale data representation, national or regional spatial data products, and new spatial data mining methods.

Uncertainty and Imprecision in Decision Making and Decision Support: New Advances, Challenges, and Perspectives -

Krassimir T. Atanassov
2022-02-18

This book is composed of selected papers from the Sixteenth National Conference on Operational and Systems Research, BOS-2020, held on December 14-15, 2020, one of premiere conferences in the field of operational and systems research. The second is the Nineteenth International Workshop on Intuitionistic Fuzzy Sets and Generalized Nets, IWIFSGN 2020, held on December 10-11, 2020, in Warsaw, Poland, in turn—one of premiere conferences on fuzzy logic, notably on extensions of the traditional fuzzy sets, also comprising a considerable part on the generalized nets (GNs), an important extension of the traditional Petri nets. A joint publication of selected papers from the two conferences follows a long tradition of such a joint organization and—from a substantial point of view—combines systems modeling, systems analysis, broadly perceived operational research, notably optimization,

decision making, and decision support, with various aspects of uncertain and imprecise information and their related tools and techniques.

Intelligent Databases -

Zongmin Ma 2007-01-01

"This book integrates data management in databases with intelligent data processing and analysis in artificial intelligence. It challenges today's database technology and promotes its evolution"--

Provided by publisher.

Fuzzy Database Modeling -

Adnan Yazici 2013-06-05

Some recent fuzzy database modeling advances for the non-traditional applications are introduced in this book. The focus is on database models for modeling complex information and uncertainty at the conceptual, logical, physical design levels and from integrity constraints defined on the fuzzy relations. The database models addressed here are; the conceptual data models, including the ExIFO and ExIFO2 data models, the logical database models, including the extended NF2

database model, fuzzy object-oriented database model, and the fuzzy deductive object-oriented database model.

Integrity constraints are defined on the fuzzy relations are also addressed. A continuing reason for the limited adoption of fuzzy database systems has been performance. There have been few efforts at defining physical structures that accomodate fuzzy information. A new access structure and data organization for fuzzy information is introduced in this book.

Fuzzy and Uncertain Object-oriented Databases - Rita de Caluwe 1997

Enriching database models to allow the user to deal with fuzzy and uncertain information has been of scientists' concern for years. This book presents the latest research results in dealing with fuzziness and uncertainty in object-oriented databases. The readership will be researchers and engineers interested in databases and software engineering programming.

Soft Computing and Its Applications - R A Aliev
2001-09-06

The concept of soft computing is still in its initial stages of crystallization. Presently available books on soft computing are merely collections of chapters or articles about different aspects of the field. This book is the first to provide a systematic account of the major concepts and methodologies of soft computing, presenting a unified framework that makes the subject more accessible to students and practitioners. Particularly worthy of note is the inclusion of a wealth of information about neuro-fuzzy, neuro-genetic, fuzzy-genetic and neuro-fuzzy-genetic systems, with many illuminating applications and examples.

Uncertainty Modeling for Data Mining - Zengchang Qin
2014-10-30

Machine learning and data mining are inseparably connected with uncertainty. The observable data for learning is usually imprecise,

incomplete or noisy.

Uncertainty Modeling for Data Mining: A Label Semantics Approach introduces 'label semantics', a fuzzy-logic-based theory for modeling uncertainty. Several new data mining algorithms based on label semantics are proposed and tested on real-world datasets. A prototype interpretation of label semantics and new prototype-based data mining algorithms are also discussed. This book offers a valuable resource for postgraduates, researchers and other professionals in the fields of data mining, fuzzy computing and uncertainty reasoning. Zengchang Qin is an associate professor at the School of Automation Science and Electrical Engineering, Beihang University, China; Yongchuan Tang is an associate professor at the College of Computer Science, Zhejiang University, China.

Fuzzy Database Modeling with XML - Zongmin Ma
2006-03-30

Fuzzy Database Modeling with XML aims to provide a single

record of current research and practical applications in the fuzzy databases. This volume is the outgrowth of research the author has conducted in recent years. Fuzzy Database Modeling with XML introduces state-of-the-art information to the database research, while at the same time serving the information technology professional faced with a non-traditional application that defeats conventional approaches. The research on fuzzy conceptual models and fuzzy object-oriented databases is receiving increasing attention, in addition to fuzzy relational database models. With rapid advances in network and internet techniques as well, the databases have been applied under the environment of distributed information systems. It is essential in this case to integrate multiple fuzzy database systems. Since databases are commonly employed to store and manipulate XML data, additional requirements are necessary to model fuzzy

information with XML. Secondly, this book maps fuzzy XML model to the fuzzy databases. Very few efforts at investigating these issues have thus far occurred. Fuzzy Database Modeling with XML is designed for a professional audience of researchers and practitioners in industry. This book is also suitable for graduate-level students in computer science.

Environmental Information Systems: Concepts, Methodologies, Tools, and Applications - Management Association, Information Resources 2018-09-07

Environmental information and systems play a major role in environmental decision making. As such, it is vital to understand the impact that they have on different aspects of sustainable environmental management, as well as to understand the opportunism they might present for further improvement. Environmental Information Systems: Concepts, Methodologies, Tools, and Applications is an innovative reference source

containing the latest research on the use of information systems to track and organize environmental data for use in an overall environmental management system. Highlighting a range of topics such as environmental analysis, remote sensing, and geographic information science, this multi-volume book is designed for engineers, data scientists, practitioners, academicians, and researchers interested in all aspects of environmental information systems.

Fuzzy And Uncertain Object-Oriented Databases - Rita de Caluwe 1997-10-22

Enriching database models so as to allow the user to deal with fuzzy and uncertain information has been of scientists' concern for years. This resulted in numerous contributions, mainly with respect to the popular relational model or to some related form of it. The experience was instructive, although still far from concrete applications. The time has come that the advantages of

object-oriented databases are acknowledged outside the research and academic worlds and a breakthrough of new commercial softwares is observed. Lately research has been devoted to the endowment of this type of databases with more real-world reflecting semantics. It proved that the object-oriented paradigm lends itself extremely well to it. This is very promising and opens new perspectives for the availability of new-generation database products in the near future. The book presents the latest research results in dealing with fuzziness and uncertainty in object-oriented databases. Contents:Foreword (R Yager)Preface (R de Caluwe)Basic Notions and Rationale of the Integration of Uncertainty Management and Object-Oriented Databases (R de Caluwe et al.)A Hierarchical Model of Fuzzy Classes (J-P Rossazza et al.)Modelling Impreciseness and Uncertainty in the Object-Oriented Data Model — A Similarity-Based Approach (R George et

al.)Extending a Graph-Based Data Model to Manage Fuzzy and Uncertain Information (G Bordogna et al.)The UFO Database Model: Dealing with Imperfect Information (N van Gysegghem & R de Caluwe)Fuzzy Object-Oriented Data Model and Fuzzy Association Algebra (S Na & S Park) Readership: Researchers and engineers interested in databases and software engineering/programming. keywords:Concepts of Fuzzy Databases;Modeling of Fuzzy Data;Modeling of Uncertain Data;Modeling of Databases;Modeling of Object-Oriented Databases;Modeling of Fuzziness in Databases;Modeling of Uncertainty in Databases;Fuzzy Databases;Fuzzy Object-Oriented Databases;Uncertain Object-Oriented Databases *Fuzzy Knowledge Management for the Semantic Web - Zongmin Ma 2013-09-28* This book goes to great depth concerning the fast growing topic of technologies and approaches of fuzzy logic in the

Semantic Web. The topics of this book include fuzzy description logics and fuzzy ontologies, queries of fuzzy description logics and fuzzy ontology knowledge bases, extraction of fuzzy description logics and ontologies from fuzzy data models, storage of fuzzy ontology knowledge bases in fuzzy databases, fuzzy Semantic Web ontology mapping, and fuzzy rules and their interchange in the Semantic Web. The book aims to provide a single record of current research in the fuzzy knowledge representation and reasoning for the Semantic Web. The objective of the book is to provide the state of the art information to researchers, practitioners and graduate students of the Web intelligence and at the same time serve the knowledge and data engineering professional faced with non-traditional applications that make the application of conventional approaches difficult or impossible. *Handbook of Research on Innovative Database Query*

Processing Techniques - Yan, Li
2015-09-25

Research and development surrounding the use of data queries is receiving increased attention from computer scientists and data specialists alike. Through the use of query technology, large volumes of data in databases can be retrieved, and information systems built based on databases can support problem solving and decision making across industries. The Handbook of Research on Innovative Database Query Processing Techniques focuses on the growing topic of database query processing methods, technologies, and applications. Aimed at providing an all-inclusive reference source of technologies and practices in advanced database query systems, this book investigates various techniques, including database and XML queries, spatiotemporal data queries, big data queries, metadata queries, and applications of database query systems. This comprehensive handbook is a

necessary resource for students, IT professionals, data analysts, and academicians interested in uncovering the latest methods for using queries as a means to extract information from databases. This all-inclusive handbook includes the latest research on topics pertaining to information retrieval, data extraction, data management, design and development of database queries, and database and XM queries.

Database Technologies:

Concepts, Methodologies, Tools, and Applications -

Erickson, John 2009-02-28

"This reference expands the field of database technologies through four-volumes of in-depth, advanced research articles from nearly 300 of the world's leading professionals"-- Provided by publisher.

Database Modeling for Industrial Data Management: Emerging Technologies and Applications - Ma, Zongmin
2005-12-31

"This book covers industrial databases and applications and offers generic database

modeling techniques"--
Provided by publisher.
Encyclopedia of Database
Technologies and Applications -
Rivero, Laura C. 2005-06-30
"Addresses the evolution of
database management,
technologies and applications
along with the progress and
endeavors of new research
areas."--P. xiii.

*Advances in Artificial
Intelligence* - Eleni Stroulia
2003-06-29

AI 2001 is the 14th in the
series of Artificial Intelligence
conferences sponsored by the
Canadian Society for
Computational Studies of
Intelligence/Société
canadienne pour l'étude de
l'intelligence par ordinateur.
As was the case last year too,
the conference is being held in
conjunction with the annual
conferences of two other
Canadian societies, Graphics
Interface (GI 2001) and Vision
Interface (VI 2001). We believe
that the overall experience will
be enriched by this conjunction
of conferences. This year is the
"silver anniversary" of the
conference: the first Canadian

AI conference was held in 1976
at UBC. During its lifetime, it
has attracted Canadian and
international papers of high
quality from a variety of AI
research areas. All papers
submitted to the conference
received at least three indepen-
dent reviews. Approximately
one third were accepted for
plenary presentation at the
conference. The best paper of
the conference will be invited
to appear in Computational
Intelligence.

Uncertainty Approaches for
Spatial Data Modeling and
Processing - Frederick E. Petry
2010-03-10

We are facing an immense
growth of digital data and
information resources, both in
terms of size, complexity,
modalities and intrusiveness.
Almost every aspect of our
existence is being digitally
captured. This is exemplified
by the omnipresent existence
of all kinds of data storage, far
beyond those stored in
traditional relational
databases. The spectrum of
data being digitally stored runs
from multimedia data

repositories to your purchases in most stores. Every tweet that you broadcast is captured for posterity. Needless to say this situation poses new research opportunities, challenges and problems in the ways we store, manipulate, search, and - in general - make use of such data and information. Attempts to cope with these problems have been emerging all over the world with thousands of people devoted to developing tools and techniques to deal with this new area of research. One of the prominent scholars and researchers in this field was the late Professor Ashley Morris who died suddenly and tragically at a young age. Ashley's career begun in industry, where he specialized in databases.

Interval / Probabilistic Uncertainty and Non-classical Logics - Van-Nam Huynh
2008-01-11

This book contains the proceedings of the first International Workshop on Interval/Probabilistic Uncertainty and Non Classical

Logics, Ishikawa, Japan, March 25-28, 2008. The workshop brought together researchers working on interval and probabilistic uncertainty and on non-classical logics. It is hoped this workshop will lead to a boost in the much-needed collaboration between the uncertainty analysis and non-classical logic communities, and thus, to better processing of uncertainty.

Intelligent Multimedia Databases and Information Retrieval: Advancing Applications and Technologies - Yan, Li
2011-09-30

As consumer costs for multimedia devices such as digital cameras and Web phones have decreased and diversity in the market has skyrocketed, the amount of digital information has grown considerably. Intelligent Multimedia Databases and Information Retrieval: Advancing Applications and Technologies details the latest information retrieval technologies and applications, the research surrounding the

field, and the methodologies and design related to multimedia databases. Together with academic researchers and developers from both information retrieval and artificial intelligence fields, this book details issues and semantics of data retrieval with contributions from around the globe. As the information and data from multimedia databases continues to expand, the research and documentation surrounding it should keep pace as best as possible, and this book provides an excellent resource for the latest developments.

Knowledge is Power in Four Dimensions: Models to Forecast Future Paradigm -

Bahman Zohuri 2022-07-19
Knowledge is Power in Four Dimensions: Models to Forecast Future Paradigms, Forecasting Energy for Tomorrow's World with Mathematical Modeling and Python Programming Driven Artificial Intelligence delivers knowledge on key infrastructure topics in both AI technology and energy.

Sections lay the groundwork for tomorrow's computing functionality, starting with how to build a Business Resilience System (BRS), data warehousing, data management, and fuzzy logic. Subsequent chapters dive into the impact of energy on economic development and the environment and mathematical modeling, including energy forecasting and engineering statistics. Energy examples are included for application and learning opportunities. A final section deliver the most advanced content on artificial intelligence with the integration of machine learning and deep learning as a tool to forecast and make energy predictions. The reference covers many introductory programming tools, such as Python, Scikit, TensorFlow and Kera. Helps users gain fundamental knowledge in technology infrastructure, including AI, machine learning and fuzzy logic
Compartmentalizes data knowledge into near-term and long-term forecasting models,

with examples involving both renewable and non-renewable energy outcomes. Advances in climate resiliency and helps readers build a business resiliency system for assets

Transformation of Knowledge, Information and Data

- Patrick van Bommel
2005-01-01

This book considers transformations within the context of computing science and information science, as they are essential in changing organizations. It not only considers transformations of structured models, rather, the transformation of instances (i.e. the actual contents of those structures) is addressed as well.

Fuzzy Database Modeling of Imprecise and Uncertain Engineering Information

- Zongmin Ma 2008-09-12

Computer-based information technologies have been extensively used to help industries manage their processes and information systems hereby - come their nervous center. More specially, databases are designed to s-

port the data storage, processing, and retrieval activities related to data management in information systems. Database management systems provide efficient task support and database systems are the key to implementing industrial data management. Industrial data management requires database technique support. Industrial applications, however, are typically data and knowledge intensive applications and have some unique characteristics that makes their management difficult. Besides, some new techniques such as Web, artificial intelligence, and etc. have been introduced into industrial applications. These unique characteristics and usage of new technologies have put many potential requirements on industrial data management, which challenge today's database systems and promote their evolvement. Viewed from database technology, information modeling in databases can be identified at two levels: (conceptual) data modeling and

(logical) database modeling. This results in conceptual (semantic) data model and logical database model. Generally a conceptual data model is designed and then the designed conceptual data model will be transformed into a chosen logical database schema. Database systems based on logical database model are used to build information systems for data management. Much attention has been directed at conceptual data modeling of industrial information systems. Product data models, for example, can be views as a class of semantic data models (i. e.

Dictionary of Information Science and Technology - Khosrow-Pour, Mehdi
2006-11-30

"This book is the premier comprehensive reference source for the latest terms, acronyms and definitions related to all aspects of information science and technology. It provides the most current information to researchers on every level"--

Provided by publisher.

Data Warehousing and Mining: Concepts, Methodologies, Tools, and Applications - Wang, John
2008-05-31

In recent years, the science of managing and analyzing large datasets has emerged as a critical area of research. In the race to answer vital questions and make knowledgeable decisions, impressive amounts of data are now being generated at a rapid pace, increasing the opportunities and challenges associated with the ability to effectively analyze this data.

Proceedings of the International Congress on Information and Communication Technology - Suresh Chandra Satapathy
2016-06-08

This volume contains 69 papers presented at ICICT 2015: International Congress on Information and Communication Technology. The conference was held during 9th and 10th October, 2015, Udaipur, India and organized by CSI Udaipur Chapter, Division IV, SIG-WNS,

SIG-e-Agriculture in association with ACM Udaipur Professional Chapter, The Institution of Engineers (India), Udaipur Local Centre and Mining Engineers Association of India, Rajasthan Udaipur Chapter. This volume contains papers mainly focused on ICT for Managerial Applications, E-governance, IOT and e-Mining. *Uncertainty Approaches for Spatial Data Modeling and Processing* - Janusz Kacprzyk
2010-02-22

This volume is dedicated to the memory of Professor Ashley Morris who passed away some two years ago. Ashley was a close friend of all of us, the editors of this volume, and was also a Ph.D. student of one of us. We all had a chance to not only fully appreciate, and be inspired by his contributions, which have had a considerable impact on the entire research community. Due to our personal relations with Ashley, we also had an opportunity to get familiar with his deep thinking about the areas of his expertise and interests. Ashley has been involved since the

very beginning of his professional career in database research and practice. Notably, he introduced first some novel solution in database management systems that could handle imprecise and uncertain data, and flexible queries based on imprecisely specified user interests. He proposed to use for that purpose fuzzy logic as an effective and efficient tool. Later the interests of Ashley moved to ways of how to represent and manipulate more complicated databases involving spatial or temporal objects. In this research he discovered and pursued the power of Geographic Information Systems (GISs). These two main lines of Ashley's research interests and contributions are reflected in the composition of this volume. Basically, we collected some significant papers by well known researchers and scholars on the above mentioned topics. The particular contributions will now be briefly summarized to help the reader get a view of

the topics covered and the contents of the particular contributions.

Fuzziness in Database Management Systems - Patrick Bosc 2013-11-27

The volume "Fuzziness in Database Management Systems" is a highly informative, well-organized and up-to-date collection of contributions authored by many of the leading experts in its field. Among the contributors are the editors, Professors Patrick Bose and Janusz Kacprzyk, both of whom are known internationally. The book is like a movie with an all-star cast. The issue of fuzziness in database management systems has a long history. It begins in 1968 and 1971, when I spent my sabbatical leaves at the IBM Research Laboratory in San Jose, California, as a visiting scholar. During these periods I was associated with Dr. E.F. Codd, the father of

relational models of database systems, and came in contact with the developers of IBM's System R and SQL. These associations and contacts at a time when the methodology of relational models of data was in its formative stages, made me aware of the basic importance of such models and the desirability of extending them to fuzzy database systems and fuzzy query languages. This perception was reflected in my 1973 fM report which led to the paper on the concept of a linguistic variable and later to the paper on the meaning representation language PRUF (Possibilistic Relational Universal Fuzzy). More directly related to database issues during that period were the theses of my students V. Tahani, J. Yang, A. Bolour, M. Shen and R. Sheng, and many subsequent reports by both graduate and undergraduate students at Berkeley.