

## **A Semantically Based Lattice Approach For Assessing**

The three volume set LNAI 5177, LNAI 5178, and LNAI 5179, constitutes the refereed proceedings of the 12th International Conference on Knowledge-Based Intelligent Information and Engineering Systems, KES 2008, held in Zagreb, Croatia, in September 2008. The 316 revised papers presented were carefully reviewed and selected. The papers present a wealth of original research results from the field of intelligent information processing in the broadest sense; topics covered in the second volume are artificial intelligence driven engineering design optimization; biomedical informatics: intelligent information management from nanomedicine to public health; communicative intelligence; computational intelligence for image processing and pattern recognition; computational intelligence in human cancer research; computational intelligence techniques for Web personalization; computational intelligent techniques for bioprocess modelling, monitoring and control; intelligent computing for Grid; intelligent security techniques; intelligent utilization of soft computing techniques; reasoning-based intelligent systems: relevant reasoning for discovery and prediction; spatio-temporal database concept support for organizing virtual earth; advanced knowledge-based systems; chance discovery; innovation-oriented knowledge management platform; knowledge-based creativity support systems; knowledge-based interface systems; knowledge-based multi-criteria decision support; and knowledge-based systems for e-business.

This book constitutes the refereed proceedings of the European Workshop on Logics in Artificial Intelligence, JELIA 2000, held in Malaga, Spain in September/October 2000. The 24 revised full papers presented together with three invited papers were carefully reviewed and selected out of 60 submissions. The papers are organized in topical sections on knowledge representation, reasoning about actions, belief revision, theorem proving, argumentation, agents, decidability and complexity, updates, and preferences.

Explore the exciting research where semantics meets morphology, syntax and pragmatics. In this book, leading researchers use in-depth articles to explain a wide range of topics at these interfaces, including the semantics of intonation, inflection, compounding, argument structure, type shifting, compositionality, implicature, context dependence, deixis and presupposition. Now in paperback for the first time since its original publication, the highly cited material in this book is an ideal starting point for anyone interested in semantics where it crosses over with other dimensions of grammar.

This book constitutes the refereed proceedings of the 6th Software Quality Days Conference (SWQD) held in Vienna, Austria, in January 2014. This professional symposium and conference offers a range of comprehensive and valuable opportunities for advanced professional training, new ideas and networking with a series of keynote speeches, professional lectures, exhibits and tutorials. The four scientific full papers accepted for SWQD were each peer reviewed by three or

more reviewers and selected out of 24 high-quality submissions. Further, one keynote and ten short papers on promising research directions were also presented and included in order to spark discussions between researchers and practitioners. The papers are organized into topical sections on software process improvement and measurement, requirements management, value-based software engineering, software and systems testing, automation-supported testing and quality assurance and collaboration.

This volume is based on contributions from the First International Conference on “Recent Advances in Natural Language Processing” (RANLP'95) held in Tzigrav, Bulgaria, 14-16 September 1995. This conference was one of the most important and competitively reviewed conferences in Natural Language Processing (NLP) for 1995 with submissions from more than 30 countries. Of the 48 papers presented at RANLP'95, the best (revised) papers have been selected for this book, in the hope that they reflect the most significant and promising trends (and latest successful results) in NLP. The book is organised thematically and the contributions are grouped according to the traditional topics found in NLP: morphology, syntax, grammars, parsing, semantics, discourse, grammars, generation, machine translation, corpus processing and multimedia. To help the reader find his/her way, the authors have prepared an extensive index which contains major terms used in NLP; an index of authors which lists the names of the authors and the page numbers of their paper(s); a list of figures; and a list of tables. This book will be of interest to researchers, lecturers and graduate students interested in Natural Language Processing and more specifically to those who work in Computational Linguistics, Corpus Linguistics and Machine Translation.

Proceedings of the Sixth International Conference on Intelligent System and Knowledge Engineering presents selected papers from the conference ISKE 2011, held December 15-17 in Shanghai, China. This proceedings doesn't only examine original research and approaches in the broad areas of intelligent systems and knowledge engineering, but also present new methodologies and practices in intelligent computing paradigms. The book introduces the current scientific and technical advances in the fields of artificial intelligence, machine learning, pattern recognition, data mining, information retrieval, knowledge-based systems, knowledge representation and reasoning, multi-agent systems, natural-language processing, etc. Furthermore, new computing methodologies are presented, including cloud computing, service computing and pervasive computing with traditional intelligent methods. The proceedings will be beneficial for both researchers and practitioners who want to utilize intelligent methods in their specific research fields. Dr. Yinglin Wang is a professor at the Department of Computer Science and Engineering, Shanghai Jiao Tong University, China; Dr. Tianrui Li is a professor at the School of Information Science and Technology, Southwest Jiaotong University, China.

Complex human activity recognition suffers from ambiguity of interpretation

problem. A novel neutrosophic formal concept analysis method has been proposed to quantify non-determinism leading to ambiguity of interpretation and utilize it in activity recognition. The method works by penalizing performance of non-deterministic activities and rewarding the deterministic ones. Thus, non-deterministic activities are identified during testing due to significantly reduced performance and contexts can be redesigned to improve their description. The proposed method has been implemented on benchmark dataset having both types of activities. Our approach successfully identified nondeterminism in activities description without compromising recognition performance of deterministic activities. It has also been shown that other approaches fail to identify non deterministic activities. Overall accuracy of activity recognition of our approach was comparable to other approaches.

This volume is the post conference proceedings of the 8th International Seminar on Relational Methods in Computer Science (ReMiCS 8), held in conjunction with the 3rd International Workshop on Applications of Kleene Algebra and a COST Action 274 (TARSKI) Workshop. This combined meeting took place in St. Catharines, Ontario, Canada, from February 22 to February 26, 2005.

The two-volume set LNCS 8802 and LNCS 8803 constitutes the refereed proceedings of the 6th International Symposium on Leveraging Applications of Formal Methods, Verification and Validation, ISoLA 2014, held in Imperial, Corfu, Greece, in October 2014. The total of 67 full papers was carefully reviewed and selected for inclusion in the proceedings. Featuring a track introduction to each section, the papers are organized in topical sections named: evolving critical systems; rigorous engineering of autonomic ensembles; automata learning; formal methods and analysis in software product line engineering; model-based code generators and compilers; engineering virtualized systems; statistical model checking; risk-based testing; medical cyber-physical systems; scientific workflows; evaluation and reproducibility of program analysis; processes and data integration in the networked healthcare; semantic heterogeneity in the formal development of complex systems. In addition, part I contains a tutorial on automata learning in practice; as well as the preliminary manifesto to the LNCS Transactions on the Foundations for Mastering Change with several position papers. Part II contains information on the industrial track and the doctoral symposium and poster session.

Coverage in this proceedings volume includes data mining and knowledge discovery, wireless, sensor networks and grid, XML and query processing and optimization, security, information extraction, semantic Web and Web applications, and workflow and middleware.

Data processing has become essential to modern civilization. The original data for this processing comes from measurements or from experts, and both sources are subject to uncertainty. Traditionally, probabilistic methods have been used to process uncertainty. However, in many practical situations, we do not know the corresponding probabilities: in measurements, we often only know the upper

bound on the measurement errors; this is known as interval uncertainty. In turn, expert estimates often include imprecise (fuzzy) words from natural language such as "small"; this is known as fuzzy uncertainty. In this book, leading specialists on interval, fuzzy, probabilistic uncertainty and their combination describe state-of-the-art developments in their research areas. Accordingly, the book offers a valuable guide for researchers and practitioners interested in data processing under uncertainty, and an introduction to the latest trends and techniques in this area, suitable for graduate students.

In recent decades Multimedia processing has emerged as an important technology to generate content based on images, video, audio, graphics, and text. This book is a compilation of the latest trends and developments in the field of computational intelligence in multimedia processing. The edited book presents a large number of interesting applications to intelligent multimedia processing of various Computational Intelligence techniques including neural networks and fuzzy logic.

FLINS, originally an acronym for Fuzzy Logic and Intelligent Technologies in Nuclear Science, is now extended to Computational Intelligence for applied research. The contributions to the 11th of FLINS conference cover state-of-the-art research, development, and technology for computational intelligence systems, both from the foundations and the applications points-of-view.

Contents:Invited Lectures:The Contribution of Fuzzy Sets to Decision Sciences (D Dubois)Granular Fuzzy Systems: A New Direction in Soft Computing and Human Centric Decision-Making (Witold Pedrycz)Some Approaches Towards Lattice Computing in Mathematical Morphology and Computational Intelligence (Peter Sussner)Decision Making and Decision Support SystemsStatistics, Data Analysis and Data MiningFoundations of Computational IntelligenceSoft Computing and Applied ResearchIntelligent Systems and Knowledge EngineeringUncertainty ModelingIntelligent Information Processing Readership: Graduate students, researchers, and academics in artificial intelligence/machine learning, information management, decision sciences, databases/information sciences and fuzzy logic. Keywords:FLINS 2014;Soft Computing;Knowledge Engineering;Decision Making

The central themes of the 14th International Conference on Knowledge Engineering and Knowledge Management (EKAW 2004) were ontological engineering and the Semantic Web. These provide the key foundational and delivery mechanisms for building open, Web-based knowledge services. However, consistent with the tradition of EKAW conferences, EKAW 2004 was concerned with all aspects of eliciting, acquiring, modelling and managing knowledge, and its role in the construction of knowledge-intensive systems. Indeed a key aspect of the Knowledge Acquisition Workshops (KAWs) held in the US, Europe and Asia over the past 20 years has been the emphasis on 'holistic' knowledge engineering, addressing problem solving, usability, socio-technological factors and knowledge modelling, rather than simply analyzing and

designing symbol-level inferential mechanisms. The papers included in this volume are thus drawn from a variety of research areas both at the cutting edge of research in ontologies and the Semantic Web and in the more traditionally grounded areas of knowledge engineering. A Semantic Web service can be seen as the addition of semantic technologies to Web services to produce Web-accessible services that can be described using appropriate ontologies, reasoned about and combined automatically. Since Web services can be seen as Web-accessible computational objects, much of the work in this area is also concerned with problem-solving methods (PSMs).

This book contains revised and significantly extended versions of selected papers from three workshops on Uncertainty Reasoning for the Semantic Web (URSW), held at the International Semantic Web Conferences (ISWC) in 2011, 2012, and 2013. The 16 papers presented were carefully reviewed and selected from numerous submissions. The papers included in this volume are organized in topical sections on probabilistic and Dempster-Shafer models, fuzzy and possibilistic models, inductive reasoning and machine learning, and hybrid approaches.

The discipline of formal concept analysis (FCA) is concerned with the formalization of concepts and conceptual thinking. Built on the solid foundation of lattice and order theory, FCA is first and foremost a mathematical discipline.

However, its motivation and guiding principles are based on strong philosophical underpinnings. In practice, FCA provides a powerful framework for the qualitative, formal analysis of data, as demonstrated by numerous applications in diverse areas. Likewise, it emphasizes the aspect of human-centered information processing by employing visualization techniques capable of revealing inherent structure in data in an intuitively graspable way. FCA thereby contributes to structuring and navigating the ever-growing amount of information available in our evolving information society and supports the process of turning data into information and ultimately into knowledge. In response to an expanding FCA community, the International Conference on Formal Concept Analysis (ICFCA) was established to provide an annual opportunity for the exchange of ideas. Previous ICFCA conferences were held in Darmstadt (2003), Sydney (2004), Lens (2005), Dresden (2006), Clermont-Ferrand (2007), as well as Montreal (2008) and are evidence of vivid ongoing interest and activities in FCA theory and applications. ICFCA 2009 took place during May 21–24 at the University of Applied Sciences in Darmstadt. Beyond serving as a host of the very first ICFCA in 2003, Darmstadt can be seen as the birthplace of FCA itself, where this discipline was introduced in the early 1980s and elaborated over the subsequent decades.

Collection of selected, peer reviewed papers from the 2013 2nd International Conference on Information Technology and Management Innovation (ICITMI 2013), July 23-24, 2013, Zhuhai, China. Volume is indexed by Thomson Reuters CPCI-S (WoS). The 642 papers are grouped as follows: Chapter 1: Information

Processing and Information Security; Chapter 2: Information Storage and Database System; Chapter 3: Software Engineering; Chapter 4: Computer Networks; Chapter 5: Modern Technologies in Communication and Navigation; Chapter 6: Multimedia Technology; Chapter 7: Data and Signal Processing; Chapter 8: Processing Image and Video; Chapter 9: Applied and Computational Mathematics; Chapter 10: Sensors, Detection Technology and Instrument; Chapter 11: Circuit Theory and Microelectronic Devices and Technologies; Chapter 12: Automation, Control and Mechatronics; Chapter 13: Artificial Intelligence and Optimization Algorithm; Chapter 14: E-commerce, E-government and Management; Chapter 15: Enterprise Resource Planning, Management System and Engineering Management; Chapter 16: Innovative Decisions in Transportation, Supply Chain and Logistic; Chapter 17: Information and Innovation Technologies in Engineering Education; Chapter 18: Applied Research in Materials, Mechanical Engineering and Technologies of Manufacture and Processing; Chapter 19: Applied Biotechnologies.

This Festschrift volume is published in honor of Hanne Riis Nielson and Flemming Nielson on the occasion of their 60th birthdays in 2014 and 2015, respectively. The papers included in this volume deal with the wide area of calculi, semantics, and analysis. The book features contributions from colleagues, who have worked together with Hanne and Flemming through their scientific life and are dedicated to them and to their work. The papers were presented at a colloquium at the Technical University of Denmark in January 2016.

This book is part of a three volume set that constitutes the refereed proceedings of the 4th International Symposium on Neural Networks, ISNN 2007, held in Nanjing, China in June 2007. Coverage includes neural networks for control applications, robotics, data mining and feature extraction, chaos and synchronization, support vector machines, fault diagnosis/detection, image/video processing, and applications of neural networks.

This book constitutes the first volume of the first journal in the new LNCS Journal Subline, the Journal on Data Semantics. Publishing a journal in a book series might come as a surprise to customers, readers, and librarians, thus we would like to provide some background information and our motivation for introducing this new LNCS subline. As a consequence of the very tight interaction between the Lecture Notes in

Computer Science series and the international computer science research and development community, we receive quite a few proposals for new archive journals. From the successful launch of workshops or conferences and publication of their proceedings in the LNCS series, it might seem like a natural step to approach the publisher about launching a journal once this specific field has gained a certain level of maturity and stability. Each year we receive about a dozen such proposals and even more informal inquiries. Like other publishers, it has been our experience that launching a new journal and making it a long-term success is

a hard job nowadays, due to a generally difficult market situation, and library budget restrictions in particular. Because many of the proceedings in LNCS, and especially many of the LNCS postproceedings, apply the same strict reviewing and selection criteria as established journals, we started discussing with proposers of new journals the alternative of devoting a few volumes in LNCS to their field, instead of going through the painful Sisyphean adventure of establishing a new journal on its own.

This book mainly introduces a series of theory and approaches of group decision-making based on several types of uncertain linguistic expressions and addresses their applications. The book pursues three major objectives: (1) to introduce some techniques to model several types of natural linguistic expressions; (2) to handle these expressions in group decision-making; and (3) to clarify the involved approaches by practical applications. The book is especially valuable for readers to understand how linguistic expressions could be employed and operated to make decisions, and motivates researchers to consider more types of natural linguistic expressions in decision analysis under uncertainties.

Excerpt from Context Interchange: A Lattice Based Approach What exactly constitutes the context is difficult to answer [Iyo81]. The concept of context has been addressed in many areas such as sensory process, perception, language, concept learning, recall and recognition [bur52, Coe77, Tho88]. The main reason for the context assuming a central role in these areas is that objects and their associated events constitute an integral part of their environment and cannot be understood in isolation of that environment. In this paper we do not attempt to give precise definition for this term, even though this is part of our long term research objective. We assume that context knowledge of a data item is a triple given by the semantic knowledge of the data, the organization of the data, and the quality parameters of the data. In this paper, we concentrate only on the semantic component of the context, which is formally defined in Section 3.

Consider the process by which a financial analyst accesses the prices for shares of a particular company. He or she needs to gather information from several stock exchanges located in different nations and must overcome semantic discrepancies at multiple levels: the stock prices are stated in different currencies, the currencies are floating with respect to each other; the stock price may be the latest-price or the closing-price; etc. Such semantics are implicit in many existing databases. Unless these semantics are made explicit, it is difficult to identify and resolve underlying semantic incompatibilities. The fundamental question is how to make such semantics explicit and how to quickly identify the incompatibilities and resolve them if possible. About the Publisher Forgotten Books publishes hundreds of thousands of rare and classic books. Find more at [www.forgottenbooks.com](http://www.forgottenbooks.com) This book is a reproduction of an important historical work. Forgotten Books uses state-of-the-art technology to digitally reconstruct the work, preserving the original format whilst repairing imperfections present in the aged copy. In rare cases, an imperfection in the original, such as a blemish or

missing page, may be replicated in our edition. We do, however, repair the vast majority of imperfections successfully; any imperfections that remain are intentionally left to preserve the state of such historical works.

This book constitutes the refereed proceedings of the 16th International Semantic Web Conference, ESWC 2019, held in Portorož, Slovenia. The 39 revised full papers presented were carefully reviewed and selected from 134 submissions. The papers are organized in three tracks: research track, resources track, and in-use track and deal with the following topical areas: distribution and decentralisation, velocity on the Web, research of research, ontologies and reasoning, linked data, natural language processing and information retrieval, semantic data management and data infrastructures, social and human aspects of the Semantic Web, and, machine learning.

This book constitutes the refereed proceedings of the 13th Symposium on Theoretical Aspects of Computer Science, STACS 96, held in Grenoble, France in February 1996. The 52 revised papers presented were selected from a total of 185 submissions; also included are three invited papers. The volume addresses all current aspects of theoretical computer science and is organized in sections on complexity theory, automata theory, parallel algorithms, learning, parallel and distributed systems, cryptography, logic and database theory, algorithms, semantics and program verification, and communication complexity.

This book constitutes the refereed proceedings of the 14th International Conference on Conceptual Structures, ICCS 2006, held in Aalborg, Denmark in July 2006. The volume presents 24 revised full papers, together with 6 invited papers. The papers address topics such as conceptual structures; their interplay with language, semantics and pragmatics; formal methods for concept analysis and contextual logic, modeling, representation, and visualization of concepts; conceptual knowledge acquisition and more.

This contributed volume includes both theoretical research on philosophical logic and its applications in artificial intelligence, mostly employing the concepts and techniques of modal logic. It collects selected papers presented at the Second Asia Workshop on Philosophical Logic, held in Guangzhou, China in 2014, as well as a number of invited papers by specialists in related fields. The contributions represent pioneering philosophical logic research in Asia.

This book constitutes the refereed proceedings of the 19th International Symposium on Formal Methods, FM 2014, held in Singapore, May 2014. The 45 papers presented together with 3 invited talks were carefully reviewed and selected from 150 submissions. The focus of the papers is on the following topics: Interdisciplinary Formal Methods, Practical Applications of Formal Methods in Industrial and Research Settings, Experimental Validation of Tools and Methods as well as Construction and Evolution of Formal Methods Tools.

This book constitutes the thoroughly refereed joint post-proceedings of three international workshops organized by the Japanese Society for Artificial Intelligence, held in Tokyo, Japan in June 2006 during the 20th Annual

Conference JSAI 2006. The volume starts with eight award winning papers of the JSAI 2006 main conference that are presented along with the 21 revised full workshop papers, carefully reviewed and selected for inclusion in the volume. "This book is a comprehensive and in-depth reference to the most recent developments in the field covering theoretical developments, techniques, technologies, among others"--Provided by publisher.

This book constitutes the thoroughly refereed post-conference proceedings of three workshops of the 12th International Conference on Web-Age Information Management, WAIM 2011, held in Wuhan, China, in September 2011. The 20 revised full papers are organized in topical sections on the three following workshops: the First International Workshop on Web-based Geographic Information Management (WGIM 2011), the Third International Workshop on XML Data Management (XMLDM 2011), and the First International Workshop on Social Network Analysis (SNA 2011).

This book celebrates and expands on J. Michael Dunn's work on informational interpretations of logic. Dunn, in his Ph.D. thesis (1966), introduced a semantics for first-degree entailments utilizing the idea that a sentence can provide positive or negative information about a topic, possibly supplying both or neither. He later published a related interpretation of the logic R-mingle, which turned out to be one of the first relational semantics for a relevance logic. An incompatibility relation between information states lends itself to a definition of negation and it has figured into Dunn's comprehensive investigations into representations of various negations. The informational view of semantics is also a prominent theme in Dunn's research on other logics, such as quantum logic and linear logic, and led to the encompassing theory of generalized Galois logics (or "gaggles"). Dunn's latest work addresses informational interpretations of the ternary accessibility relation and the very nature of information. The book opens with Dunn's autobiography, followed by a list of his publications. It then presents a series of papers written by respected logicians working on different aspects of information-based logics. The topics covered include the logic R-mingle, which was introduced by Dunn, and its applications in mathematical reasoning as well as its importance in obtaining results for other relevance logics. There are also interpretations of the accessibility relation in the semantics of relevance and other non-classical logics using different notions of information. It also presents a collection of papers that develop semantics for various logics, including certain modal and many-valued logics. The publication of this book is well timed, since we are living in an "information age." Providing new technical findings, intellectual history and careful expositions of intriguing ideas, it appeals to a wide audience of scholars and researchers.

FLINS, originally an acronym for Fuzzy Logic and Intelligent Technologies in Nuclear Science, is now extended to include Computational Intelligence for applied research. The contributions to the 12th of FLINS conference cover state-of-the-art research, development, and technology for computational intelligence

systems, both from the foundations and the applications points-of-view. These are exciting times in the fields of Fuzzy Logic and the Semantic Web, and this book will add to the excitement, as it is the first volume to focus on the growing connections between these two fields. This book is expected to be a valuable aid to anyone considering the application of Fuzzy Logic to the Semantic Web, because it contains a number of detailed accounts of these combined fields, written by leading authors in several countries. The Fuzzy Logic field has been maturing for forty years. These years have witnessed a tremendous growth in the number and variety of applications, with a real-world impact across a wide variety of domains with humanlike behavior and reasoning. And we believe that in the coming years, the Semantic Web will be major field of applications of Fuzzy Logic. This book, the first in the new series Capturing Intelligence, shows the positive role Fuzzy Logic, and more generally Soft Computing, can play in the development of the Semantic Web, filling a gap and facing a new challenge. It covers concepts, tools, techniques and applications exhibiting the usefulness, and the necessity, for using Fuzzy Logic in the Semantic Web. It finally opens the road to new systems with a high Web IQ. Most of today's Web content is suitable for human consumption. The Semantic Web is presented as an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation. For example, within the Semantic Web, computers will understand the meaning of semantic data on a web page by following links to specified ontologies. But while the Semantic Web vision and research attracts attention, as long as it will be used two-valued-based logical methods no progress will be expected in handling ill-structured, uncertain or imprecise information encountered in real world knowledge. Fuzzy Logic and associated concepts and techniques (more generally, Soft Computing), has certainly a positive role to play in the development of the Semantic Web. Fuzzy Logic will not supposed to be the basis for the Semantic Web but its related concepts and techniques will certainly reinforce the systems classically developed within W3C. In fact, Fuzzy Logic cannot be ignored in order to bridge the gap between human-understandable soft logic and machine-readable hard logic. None of the usual logical requirements can be guaranteed: there is no centrally defined format for data, no guarantee of truth for assertions made, no guarantee of consistency. To support these arguments, this book shows how components of the Semantic Web (like XML, RDF, Description Logics, Conceptual Graphs, Ontologies) can be covered, with in each case a Fuzzy Logic focus. First volume to focus on the growing connections between Fuzzy Logic and the Semantic Web Keynote chapter by Lotfi Zadeh The Semantic Web is presently expected to be a major field of applications of Fuzzy Logic It fills a gap and faces a new challenge in the development of the Semantic Web It opens the road to new systems with a high Web IQ Contributed chapters by Fuzzy Logic leading experts

This unique collection of research papers offers a comprehensive and up-to-date guide to algebraic approaches to rough sets and reasoning with vagueness. It bridges important gaps, outlines intriguing future research directions, and connects algebraic approaches to rough sets with those for other forms of approximate reasoning. In addition, the book reworks algebraic approaches to axiomatic granularity. Given its scope, the book offers a valuable resource for researchers and teachers in the areas of rough sets and algebras of rough sets, algebraic logic, non classical logic, fuzzy sets,

possibility theory, formal concept analysis, computational learning theory, category theory, and other formal approaches to vagueness and approximate reasoning. Consultants in AI and allied fields will also find the book to be of great practical value. This paper is an extended version of "A Lattice Theoretic Look: A Negated Approach to Adjectival (Intersective, Neutrosophic and Private) Phrases" in INISTA 2017. Firstly, some new negations of intersective adjectival phrases and their set-theoretic semantics such as non-red non-cars and red non-cars are presented. Secondly, a lattice structure is built on positive and negative nouns and their positive and negative intersective adjectival phrases. Thirdly, a richer lattice is obtained from previous one by adding neutrosophic prefixes neut and anti to intersective adjectival phrases. Finally, the richest lattice is constructed via extending the previous lattice structures by private adjectives (fake, counterfeit). These lattice classes are called Neutrosophic Linguistic Lattices (NLL). In the last part of the paper (Section 4 does not take place in the paper introduced in INISTA 2017), noun and adjective based positive and negative sublattices of NLL are introduced.

Explores quantum computation from the perspective of the branch of theoretical computer science known as semantics.

The use of mathematical logic as a formalism for artificial intelligence was recognized by John McCarthy in 1959 in his paper on Programs with Common Sense. In a series of papers in the 1960's he expanded upon these ideas and continues to do so to this date. It is now 41 years since the idea of using a formal mechanism for AI arose. It is therefore appropriate to consider some of the research, applications and implementations that have resulted from this idea. In early 1995 John McCarthy suggested to me that we have a workshop on Logic-Based Artificial Intelligence (LBAI). In June 1999, the Workshop on Logic-Based Artificial Intelligence was held as a consequence of McCarthy's suggestion. The workshop came about with the support of Ephraim Glinert of the National Science Foundation (IIS-9S2013S), the American Association for Artificial Intelligence who provided support for graduate students to attend, and Joseph JaJa, Director of the University of Maryland Institute for Advanced Computer Studies who provided both manpower and financial support, and the Department of Computer Science. We are grateful for their support. This book consists of refereed papers based on presentations made at the Workshop. Not all of the Workshop participants were able to contribute papers for the book. The common theme of papers at the workshop and in this book is the use of logic as a formalism to solve problems in AI.

This book constitutes the refereed proceedings of the International RuleML Symposium, RuleML 2011-America, held in Fort Lauderdale, FL, USA, in November 2011 - collocated with the 22nd International Joint Conference on Artificial Intelligence, IJCAI 2011. It is the second of two RuleML events that take place in 2011. The first RuleML Symposium, RuleML 2011-Europe, has been held in Barcelona, Spain, in July 2011. The 12 full papers, 5 short papers and 5 invited track and position papers presented together with 3 keynote speeches were carefully reviewed and selected from numerous submissions. The accepted papers address a wide range of rules, semantic technology, and cross-industry standards, rules and automated reasoning, rule-based event processing and reaction rules, vocabularies, ontologies and business rules, cloud computing and rules, clinical semantics and rules.

Role-based access control (RBAC) is a widely used technology to control information flows as well as control flows within and between applications in compliance with restrictions implied by security policies, in particular, to prevent disclosure of information or access to resources beyond restrictions defined by those security policies. Since RBAC only provides the alternatives of either granting or denying access, more fine-grained control of information flows such as “granting access to information provided that it will not be disclosed to targets outside our organisation during further processing” is not possible. In business processes, in particular those spanning several organisations, which are commonly defined using business process execution language (BPEL), useful information flows not violating security policy-implied limitations would be prevented if only the access control capabilities offered by RBAC are in use. The book shows a way of providing more refined methods of information flow control that allow for granting access to information or resources by taking in consideration the former or further information flow in a business process requesting this access. The methods proposed are comparatively easy to apply and have been proven to be largely machine-executable by a prototypical realisation. As an addition, the methods are extended to be also applicable to BPEL-defined workflows that make use of Grid services or Cloud services. IT Security Specialists Chief Information Officers (CIOs) Chief Security Officers (CSOs) Security Policy and Quality Assurance Officers and Managers Business Process and Web/Grid/Cloud Service Designers, Developers, Operational Managers Interested Learners / Students in the Field of Security Management.

Combining and integrating cross-institutional data remains a challenge for both researchers and those involved in patient care. Patient-generated data can contribute precious information to healthcare professionals by enabling monitoring under normal life conditions and also helping patients play a more active role in their own care. This book presents the proceedings of MEDINFO 2019, the 17th World Congress on Medical and Health Informatics, held in Lyon, France, from 25 to 30 August 2019. The theme of this year’s conference was ‘Health and Wellbeing: E-Networks for All’, stressing the increasing importance of networks in healthcare on the one hand, and the patient-centered perspective on the other. Over 1100 manuscripts were submitted to the conference and, after a thorough review process by at least three reviewers and assessment by a scientific program committee member, 285 papers and 296 posters were accepted, together with 47 podium abstracts, 7 demonstrations, 45 panels, 21 workshops and 9 tutorials. All accepted paper and poster contributions are included in these proceedings. The papers are grouped under four thematic tracks: interpreting health and biomedical data, supporting care delivery, enabling precision medicine and public health, and the human element in medical informatics. The posters are divided into the same four groups. The book presents an overview of state-of-the-art informatics projects from multiple regions of the world; it will be of interest to anyone working in the field of medical informatics.

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