

New Trends Of Research In Ontologies And Lexical Resources Ideas Projects Systems Theory And Applications Of Natural Language Processing

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Recent Trends and Developments in Social Software - John G Breslin
2010-10-08

BlogTalk, the International Conference on Social Software, brings together different groups of people using and advancing the Internet and its usage: technical and conceptual developers, researchers with interdisciplinary backgrounds, and practitioners alike. The focus is on social software as an expression of a culture that is based on the exchange of information, ideas and knowledge. The present volume includes 6 papers from BlogTalk 2008 as well as 11 papers from BlogTalk 2009. The areas discussed include: forms and consequences of emerging social software practices; social software in enterprise and educational environments; the political impact of social software; applications, prototypes, concepts and standards.

Current Trends in Semantic Web Technologies: Theory and Practice - Giner Alor-Hernández 2019-01-17

This book presents innovative and high-quality research regarding the implementation of Semantic Web technologies for knowledge representation and developing intelligent applications in various domains. Semantic Web technologies have inspired many people to create innovative technologies and applications for knowledge representation, Semantic Searches, NLP and Social Networks. The goal of this book is to collect and consolidate novel and high-quality research contributions on Semantic Web technologies and their theoretical and practical application to a range of different domains. In addition to researchers, the book offers a valuable resource for PhD students, master and undergraduate students in IT-related fields such as Computer Science and Information Systems.

Interactive Storytelling - Alex Mitchell 2014-09-25

This book constitutes the refereed proceedings of the 7th International Conference on Interactive Storytelling, ICIDS 2014, Singapore, Singapore, November 2014. The 20 revised full papers presented together with 8 short papers 7 posters, and 5 demonstration papers were carefully reviewed and selected from 67 submissions. The papers are organized in topical sections on story generation, authoring, evaluation and analysis, theory, retrospectives, and user experience.

The Fiesta Data Model - Peter Menke 2016-03-11

Diese Dissertation stellt ein Datenmodell zur Repräsentation experimentbasierter Datensätze aus dem Forschungsgebiet der multimodalen Kommunikation vor. Es werden Belege für die Existenz verschiedener Probleme und Unzulänglichkeiten in der Arbeit mit multimodalen Datensammlungen aufgezeigt. Diese resultieren aus (a) einer Analyse bestehender multimodaler Korpora und (b) einer Umfrage, an der Wissenschaftlerinnen teilgenommen haben, die zu konkreten Problemen in der Arbeit mit ihren multimodalen Datensammlungen befragt wurden. Auf dieser Grundlage wird herausgearbeitet, dass trotz der Existenz einer Vielzahl von Datenmodellen und Formalismen zur Darstellung klassischer Textkorpora sich diese nicht eignen, um die den multimodalen Korpora eigenen Besonderheiten abbilden zu können. Aus diesem Grund wird ein Datenmodell entwickelt, das all jene spezifischen Eigenschaften multimodaler Korpora zu berücksichtigen sucht. Dieses Datenmodell bietet Lösungen speziell für die Arbeit mit einer oder mehreren Zeitachsen und Raumkoordinaten, für die Darstellung komplexer Annotationswerte, und für die Transformation zwischen verschiedenen (bisher inkompatiblen) Dateiformaten verbreiteter Annotationswerkzeuge.

New Trends in Civil Aviation - Vladimir Socha 2018-06-27

The NTCA conference series is dedicated to publishing peer-reviewed proceedings of the conference. The goal is to disseminate state-of-the-art scientific results available in the domain of civil aviation. These proceedings contain a collection of scientific contributions to the NTCA 2017 conference, which took place in Prague from 7-8 December 2017 and was hosted by the Department of Air Transport, Czech Technical University in Prague with the cooperation of the Faculty of Aeronautics, Technical University of Košice; Institute of Aerospace Engineering, Brno University of Technology; Air Transport Department, University of Žilina, and the Czech Aerospace Society. The NTCA conference aims to build and extend a platform for interaction between communities interested in aviation problems and applications. NTCA 2017 followed this established practice and provided room for discussing and sharing views on the current issues in the field of aviation. As a result, these proceedings include contributions on air transport operations, air traffic management and economic aspects, aviation safety and security, aircraft technologies, unmanned aerial systems, human factors and ergonomics in aviation.

Legal Ontology Engineering - Núria Casellas 2011-08-12

Enabling information interoperability, fostering legal knowledge usability and reuse, enhancing legal information search, in short, formalizing the complexity of legal knowledge to enhance legal knowledge management are challenging tasks, for which different solutions and lines of research have been proposed. During the last decade, research and applications based on the use of legal ontologies as a technique to represent legal knowledge has raised a very interesting debate about their capacity and limitations to represent conceptual structures in the legal domain. Making conceptual legal knowledge explicit would support the development of a web of legal knowledge, improve communication, create trust and enable and support open data, e-government and e-democracy activities. Moreover, this explicit knowledge is also relevant to the formalization of software agents and the shaping of virtual institutions and multi-agent systems or environments. This book explores the use of ontologism in legal knowledge representation for semantically-enhanced legal knowledge systems or web-based applications. In it, current methodologies, tools and languages used for ontology development are revised, and the book includes an exhaustive revision of existing ontologies in the legal domain. The development of the Ontology of Professional Judicial Knowledge (OPJK) is presented as a case study.

New Trends in Intelligent Software Methodologies, Tools and Techniques - H. Fujita 2018-09-18

Knowledge-based systems, fully integrated with software, have become essential enablers for both science and commerce. But current software methodologies, tools and techniques are not robust or reliable enough for the demands of a constantly changing and evolving market, and many promising approaches have proved to be no more than case-oriented methods that are not fully automated. This book presents the proceedings of the 17th international conference on New Trends in Intelligent Software Methodology, Tools and Techniques (SoMeT18) held in Granada, Spain, 26-28 September 2018. The SoMeT conferences provide a forum for the exchange of ideas and experience, foster new directions in software development methodologies and related tools and techniques, and focus on exploring innovations, controversies, and the current challenges facing the software engineering community. The 80 selected papers included here are divided into 13 chapters, and cover subjects as diverse as intelligent software systems; medical informatics and bioinformatics; artificial intelligence techniques; social learning

software and sentiment analysis; cognitive systems and neural analytics; and security, among other things. Offering a state-of-the-art overview of methodologies, tools and techniques, this book will be of interest to all those whose work involves the development or application of software.

New Trends of Research in Ontologies and Lexical Resources - Alessandro Oltramari 2013-02-01

In order to exchange knowledge, humans need to share a common lexicon of words as well as to access the world models underlying that lexicon. What is a natural process for a human turns out to be an extremely hard task for a machine: computers can't represent knowledge as effectively as humans do, which hampers, for example, meaning disambiguation and communication. Applied ontologies and NLP have been developed to face these challenges. Integrating ontologies with (possibly multilingual) lexical resources is an essential requirement to make human language understandable by machines, and also to enable interoperability and computability across information systems and, ultimately, in the Web. This book explores recent advances in the integration of ontologies and lexical resources, including questions such as building the required infrastructure (e.g., the Semantic Web) and different formalisms, methods and platforms for eliciting, analyzing and encoding knowledge contents (e.g., multimedia, emotions, events, etc.). The contributors look towards next-generation technologies, shifting the focus from the state of the art to the future of Ontologies and Lexical Resources. This work will be of interest to research scientists, graduate students, and professionals in the fields of knowledge engineering, computational linguistics, and semantic technologies.

Collaborative Knowledge in Scientific Research Networks - Diviacco, Paolo 2014-10-31

Research inherently requires collaborative efforts between individuals, databases, and institutions. However, the systems that enable such interpersonal cooperation must be properly suited in facilitating such efforts to avoid impeding productivity. Collaborative Knowledge in Scientific Research Networks addresses the various systems in place for collaborative e-research and how these practices serve to enhance the quality of research across disciplines. Covering new networks available through social media as well as traditional methods such as mailing lists and forums, this publication considers various scientific disciplines and their individual needs. Theorists of collaborative scientific work, technology developers, researchers, and funding agency officials will find this book valuable in exploring and understanding the process of scientific collaboration.

Interactive Task Learning - Kevin A. Gluck 2019-08-16

Experts from a range of disciplines explore how humans and artificial agents can quickly learn completely new tasks through natural interactions with each other. Humans are not limited to a fixed set of innate or preprogrammed tasks. We learn quickly through language and other forms of natural interaction, and we improve our performance and teach others what we have learned. Understanding the mechanisms that underlie the acquisition of new tasks through natural interaction is an ongoing challenge. Advances in artificial intelligence, cognitive science, and robotics are leading us to future systems with human-like capabilities. A huge gap exists, however, between the highly specialized niche capabilities of current machine learning systems and the generality, flexibility, and in situ robustness of human instruction and learning. Drawing on expertise from multiple disciplines, this Strüngmann Forum Report explores how humans and artificial agents can quickly learn completely new tasks through natural interactions with each other. The contributors consider functional knowledge requirements, the ontology of interactive task learning, and the representation of task knowledge at multiple levels of abstraction. They explore natural forms of interactions among humans as well as the use of interaction to teach robots and software agents new tasks in complex, dynamic environments. They discuss research challenges and opportunities, including ethical considerations, and make proposals to further understanding of interactive task learning and create new capabilities in assistive robotics, healthcare, education, training, and gaming. Contributors Tony Belpaeme, Katrien Beuls, Maya Cakmak, Joyce Y. Chai, Franklin Chang, Ropafadzo Denga, Marc Destefano, Mark d'Inverno, Kenneth D. Forbus, Simon Garrod, Kevin A. Gluck, Wayne D. Gray, James Kirk, Kenneth R. Koedinger, Parisa Kordjamshidi, John E. Laird, Christian Lebiere, Stephen C. Levinson, Elena Lieven, John K. Lindstedt, Aaron Mininger, Tom Mitchell, Shiwali Mohan, Ana Paiva, Katerina Pastra, Peter Pirolli, Roussell Rahman, Charles Rich, Katharina J. Rohlfing, Paul S. Rosenbloom, Nele Russwinkel, Dario D. Salvucci, Matthew-Donald D. Sangster, Matthias Scheutz, Julie A. Shah, Candace

L. Sidner, Catherine Sibert, Michael Spranger, Luc Steels, Suzanne Stevenson, Terrence C. Stewart, Arthur Still, Andrea Stocco, Niels Taatgen, Andrea L. Thomaz, J. Gregory Trafton, Han L. J. van der Maas, Paul Van Eecke, Kurt VanLehn, Anna-Lisa Vollmer, Janet Wiles, Robert E. Wray III, Matthew Yee-King

The Semantic Web for Knowledge and Data Management - Ma, Zongmin 2008-08-31

Provides a single record of technologies and practices of the Semantic approach to the management, organization, interpretation, retrieval, and use of Web-based data.

Metaphor in Communication, Science and Education - Francesca Ervas 2017-08-07

This collection of papers presents some recent trends in metaphor studies that propose new directions of research on the embodied cognition perspective. The overall volume, in particular, shows how the embodied cognition still remains a relevant approach in a multidisciplinary research on the communicative side of metaphors, by focusing on both comprehension processes in science as well as learning processes in education.

On the Move to Meaningful Internet Systems. OTM 2017 Conferences - Hervé Panetto 2017-10-20

This double volumes LNCS 10573-10574 constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2017, Ontologies, Databases, and Applications of Semantics, ODBASE 2017, and Cloud and Trusted Computing, C&TC, held as part of OTM 2017 in October 2017 in Rhodes, Greece. The 61 full papers presented together with 19 short papers were carefully reviewed and selected from 180 submissions. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, information systems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

Semantic Web Technologies - John Davies 2006-05-01

The Semantic Web combines the descriptive languages RDF (Resource Description Framework) and OWL (Web Ontology Language), with the data-centric, customizable XML (eXtensible Mark-up Language) to provide descriptions of the content of Web documents. These machine-interpretable descriptions allow more intelligent software systems to be written, automating the analysis and exploitation of web-based information. Software agents will be able to create automatically new services from already published services, with potentially huge implications for models of e-Business. Semantic Web Technologies provides a comprehensive overview of key semantic knowledge technologies and research. The authors explain (semi-)automatic ontology generation and metadata extraction in depth, along with ontology management and mediation. Further chapters examine how Semantic Web technology is being applied in knowledge management ("Semantic Information Access") and in the next generation of Web services. Semantic Web Technologies: Provides a comprehensive exposition of the state-of-the art in Semantic Web research and key technologies. Explains the use of ontologies and metadata to achieve machine-interpretable. Describes methods for ontology learning and metadata generation. Discusses ontology management and evolution, covering ontology change detection and propagation, ontology dependency and mediation. Illustrates the theoretical concepts with three case studies on industrial applications in digital libraries, the legal sector and the telecommunication industry. Graduate and advanced undergraduate students, academic and industrial researchers in the field will all find Semantic Web Technologies an essential guide to the technologies of the Semantic Web.

The Semantic Web: ESWC 2020 Satellite Events - Andreas Harth 2020-11-10

This book constitutes the proceedings of the satellite events held at the 17th Extended Semantic Web Conference, ESWC 2020, in May/June 2020. The conference was planned to take place in Heraklion, Crete, Greece, but changed to an online format due to the COVID-19 pandemic. ESWC is a major venue for presenting and discussing the latest scientific results and technology innovations related to the Semantic Web, Linked Data and Knowledge Graphs. The 36 poster and demo papers, 7 PhD symposium papers, and 4 industry track papers, included in this volume were carefully reviewed and selected from 59 submissions to the poster and demo track; 11 submissions to the PhD symposium track, and 5 submissions to the Industry track.

On the Move to Meaningful Internet Systems: OTM 2014 Workshops - Robert Meersman 2014-10-18

This volume constitutes the refereed proceedings of the following 9 international workshops: OTM Academy, OTM Industry Case Studies Program, Cloud and Trusted Computing, C&TC, Enterprise Integration, Interoperability, and Networking, EI2N, Industrial and Business Applications of Semantic Web Technologies, INBAST, Information Systems, on Distributed Environment, ISDE, Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for the e-Society, META4eS, Mobile and Social Computing for collaborative interactions, MSC, and Ontology Content, OnToContent 2014. These workshops were held as associated events at OTM 2014, the federated conferences "On The Move Towards Meaningful Internet Systems and Ubiquitous Computing", in Amantea, Italy, in October 2014. The 56 full papers presented together with 8 short papers, 6 posters and 5 keynotes were carefully reviewed and selected from a total of 96 submissions. The focus of the workshops were on the following subjects: models for interoperable infrastructures, applications, privacy and access control, reliability and performance, cloud and configuration management, interoperability in (System-of-)Systems, distributed information systems applications, architecture and process in distributed information system, distributed information system development and operational environment, ontology is use for eSociety, knowledge management and applications for eSociety, social networks and social services, social and mobile intelligence, and multimodal interaction and collaboration.

Ontology Makes Sense - S. Borgo 2019-04-05

Nicola Guarino is widely recognized as one of the founders of applied ontology. His deep interest in the subtlest details of theoretical analysis and his vision of ontology as the Rosetta Stone for semantic interoperability guided the development and understanding of this domain. His motivations in research stem from the conviction that all science must be for the benefit of society at large, and his motto has always been that ontologies are not just for making information systems interoperable, but - more importantly - for ensuring that systems' users understand each other. He was among the first to recognize that applied ontology must be an interdisciplinary enterprise if it is to capture the intended meaning of the terms used by an information system. This book is a collection of essays written in homage to Nicola Guarino; a tribute to his many scientific contributions to the discipline of applied ontology. The papers presented here reflect the wide variety of research topics that marked Nicola's impact on the applied ontology community. They are grouped according to the five general areas addressed by Nicola in his career: what is an ontology; knowledge engineering; ontologies and language; ontological categories and relationships; and ontologies and applications. Nicola Guarino's work and dedication will undoubtedly continue to influence the applied ontology community, and this book will be of interest to the many researchers aiming to establish ontologically sound bases for their research areas.

Artificial Intelligence Research and Development - Z. Falomir 2018-10-04

It is almost impossible today to find an economic sector or aspect of society which does not involve AI techniques in some way. This pervasive technology has become indispensable in a multitude of ways, from supporting decision making to managing digital devices such as smart sensors, mechanical arms or artificial eyes. The ability of AI to emulate intelligence in the resolution of challenging problems has placed it at the centre of problem solving in all areas of our society. This book presents contributions from CCIA 2018, the 21st International Conference of the Catalan Association for Artificial Intelligence which took place in Alt Empordà, Catalonia, Spain, on 8-10th October 2018. The book aims to provide a picture of what is being achieved and what is under development in AI today. As such, its contents represent the diversity of approaches and applications currently being researched, but it also presents invited contributions which deal with some of the challenges that will have to be faced in the decade to come. The contributions included in this book are organized under the following headings: logic, satisfiability and fuzzy sets; classifiers, networks and machine learning; data science, recommender systems and case-based reasoning; natural language and sound processing; cognitive systems and agents; and computer vision and robotics. The book also covers a number of current AI challenges and new trends like big data, spatial problem solving, ethics and AI, and how blockchain impacts AI. Providing an up-to-the-minute overview of current AI technology and research, this book will be of value to all those with an interest in the subject.

Ontology-Based Information Retrieval for Healthcare Systems - Vishal Jain 2020-07-28

With the advancements of semantic web, ontology has become the crucial mechanism for representing concepts in various domains. For research and dispersal of customized healthcare services, a major challenge is to efficiently retrieve and analyze individual patient data from a large volume of heterogeneous data over a long time span. This requirement demands effective ontology-based information retrieval approaches for clinical information systems so that the pertinent information can be mined from large amount of distributed data. This unique and groundbreaking book highlights the key advances in ontology-based information retrieval techniques being applied in the healthcare domain and covers the following areas: Semantic data integration in e-health care systems Keyword-based medical information retrieval Ontology-based query retrieval support for e-health implementation Ontologies as a database management system technology for medical information retrieval Information integration using contextual knowledge and ontology merging Collaborative ontology-based information indexing and retrieval in health informatics An ontology-based text mining framework for vulnerability assessment in health and social care An ontology-based multi-agent system for matchmaking patient healthcare monitoring A multi-agent system for querying heterogeneous data sources with ontologies for reducing cost of customized healthcare systems A methodology for ontology based multi agent systems development Ontology based systems for clinical systems: validity, ethics and regulation

Ontology of Sex - Carrie Hull 2006-01-16

Poststructuralism, particularly through the writings of Michel Foucault and Judith Butler, has achieved remarkable success in challenging our belief in natural sex categories and instincts. Here, Carrie Hull endorses the progressive ideals of poststructuralism while demonstrating the superiority of a realist account of sex and sexuality. Embracing biological and cultural variability, Hull nonetheless shows that the sexed body is naturally structured and deeply meaningful. Poststructuralist philosophers have argued that biological sex is a continuum rather than a binary, and that sex identity and drive are entirely performances of cultural norms rather than expressions of innate qualities. Hull draws parallels with Nelson Goodman, W.V.O. Quine, and B.F. Skinner to show that these poststructuralist theories are rooted in a nominalist, relativist, and behaviourist philosophy, and develops an alternative framework using arguments from contemporary and critical realism. Employing colourful illustrations from biology, anthropology and psychology, Hull demonstrates the rich potential of realist philosophy, and concludes that it is philosophically and scientifically correct, on one hand, and politically advisable, on the other, to maintain a distinction - albeit attenuated - between sex and gender, and sexuality and behaviour.

New Trends in Databases and Information Systems - Mykola Pechenizkiy 2012-08-23

Database and information systems technologies have been rapidly evolving in several directions over the past years. New types and kinds of data, new types of applications and information systems to support them raise diverse challenges to be addressed. The so-called big data challenge, streaming data management and processing, social networks and other complex data analysis, including semantic reasoning into information systems supporting for instance trading, negotiations, and bidding mechanisms are just some of the emerging research topics. This volume contains papers contributed by six workshops: ADBIS Workshop on GPUs in Databases (GID 2012), Mining Complex and Stream Data (MCSD'12), International Workshop on Ontologies meet Advanced Information Systems (OAIS'2012), Second Workshop on Modeling Multi-commodity Trade: Data models and processing (MMT'12), 1st ADBIS Workshop on Social Data Processing (SDP'12), 1st ADBIS Workshop on Social and Algorithmic Issues in Business Support (SAIBS), and the Ph.D. Consortium associated with the ADBIS 2012 conference that report on the recent developments and an ongoing research in the aforementioned areas.

Formal Ontology in Information Systems - S. Borgo 2018-09-28

FOIS is the flagship conference of the International Association for Ontology and its Applications (IAOA). Its interdisciplinary research focus lies at the intersection of philosophical ontology, linguistics, logic, cognitive science, and computer science, as well as in the applications of ontological analysis to conceptual modeling, knowledge engineering, knowledge management, information-systems development, library and information science, scientific research, and semantic technologies in general. This volume presents the proceedings of FOIS 2018, held in Cape Town, South Africa, from 19-21 September. It was the 10th edition and 20th anniversary of the conference series. The volume contains 19

papers grouped into 4 sections: Foundations (7 papers), Agents and Properties (4 papers), Methods and Tools (4 papers), and Applications (4 papers). Regarding the applications of ontologies, a broad spectrum of areas is covered, including in particular biology and medicine, IoT, engineering and linguistics. Formal Ontology in Information Systems - Proceedings of the 10th International Conference (FOIS 2018) will be of interest to researchers from all disciplines with an interest in formal ontology.

Enterprise Information Systems - Joaquim Filipe 2011-03-07

This book contains substantially extended and revised versions of the best papers from the 12th International Conference on Enterprise Information Systems (ICEIS 2010), held in Funchal, Madeira, Portugal, June 8-12, 2010. Two invited papers are presented together with 39 contributions, which were carefully reviewed and selected from 62 full papers presented at the conference (out of 448 submissions). They reflect state-of-the-art research work that is often driven by real-world applications, thus successfully relating the academic with the industrial community. The topics covered are: databases and information systems integration, artificial intelligence and decision support systems, information systems analysis and specification, software agents and internet computing, and human-computer interaction.

Legal Ontology Engineering - Núria Casellas 2011-08-12

Enabling information interoperability, fostering legal knowledge usability and reuse, enhancing legal information search, in short, formalizing the complexity of legal knowledge to enhance legal knowledge management are challenging tasks, for which different solutions and lines of research have been proposed. During the last decade, research and applications based on the use of legal ontologies as a technique to represent legal knowledge has raised a very interesting debate about their capacity and limitations to represent conceptual structures in the legal domain.

Making conceptual legal knowledge explicit would support the development of a web of legal knowledge, improve communication, create trust and enable and support open data, e-government and e-democracy activities. Moreover, this explicit knowledge is also relevant to the formalization of software agents and the shaping of virtual institutions and multi-agent systems or environments. This book explores the use of ontologism in legal knowledge representation for semantically-enhanced legal knowledge systems or web-based applications. In it, current methodologies, tools and languages used for ontology development are revised, and the book includes an exhaustive revision of existing ontologies in the legal domain. The development of the Ontology of Professional Judicial Knowledge (OPJK) is presented as a case study.

Development of Linguistic Linked Open Data Resources for Collaborative Data-Intensive Research in the Language Sciences - Antonio Pareja-Lora 2020-01-07

Making diverse data in linguistics and the language sciences open, distributed, and accessible: perspectives from language/language acquisition researchers and technical LOD (linked open data) researchers. This volume examines the challenges inherent in making diverse data in linguistics and the language sciences open, distributed, integrated, and accessible, thus fostering wide data sharing and collaboration. It is unique in integrating the perspectives of language researchers and technical LOD (linked open data) researchers. Reporting on both active research needs in the field of language acquisition and technical advances in the development of data interoperability, the book demonstrates the advantages of an international infrastructure for scholarship in the field of language sciences. With contributions by researchers who produce complex data content and scholars involved in both the technology and the conceptual foundations of LLOD (linguistics linked open data), the book focuses on the area of language acquisition because it involves complex and diverse data sets, cross-linguistic analyses, and urgent collaborative research. The contributors discuss a variety of research methods, resources, and infrastructures. Contributors Isabelle Barrière, Nan Bernstein Ratner, Steven Bird, Maria Blume, Ted Caldwell, Christian Chiarcos, Cristina Dye, Suzanne Flynn, Claire Foley, Nancy Ide, Carissa Kang, D. Terence Langendoen, Barbara Lust, Brian MacWhinney, Jonathan Masci, Steven Moran, Antonio Pareja-Lora, Jim Reidy, Oya Y. Rieger, Gary F. Simons, Thorsten Trippel, Kara Warburton, Sue Ellen Wright, Claus Zinn

Approaches to Legal Ontologies - Giovanni Sartor 2010-12-25

The book provides the reader with a unique source regarding the current theoretical landscape in legal ontology engineering as well as on foreseeable future trends for the definition of conceptual structures to enhance the automatic processing and retrieval of legal information in the Semantic Web framework. It will thus interest researchers in the

domains of the SW, legal informatics, Artificial Intelligence and law, legal theory and legal philosophy, as well as developers of e-government applications based on the intelligent management of legal or public information to provide both back-office and front-office support.

Formal Ontologies Meet Industry - Stefano Borgo 2008

The success of the methodologies associated with knowledge modeling and ontologies led to increased need of a comparison between different approaches and results. This book focuses on ontology in relation to business, enterprise, enterprise knowledge, practice and linguistics.

Recent Trends and Advances in Model Based Systems Engineering - Azad M. Madni 2022-03-24

This volume comprises papers from the 18th Conference on Systems Engineering Research (CSER). The theme of this volume, "Recent Trends and Advances in Model-Based Systems Engineering," reflects the fact that systems engineering is undergoing a transformation motivated by mission and system complexity and enabled by technological advances such as model-based systems engineering, digital engineering, and the convergence of systems engineering with other disciplines. This conference is focused on exploring recent trends and advances in model-based systems engineering (MBSE) and the synergy of MBSE with simulation technology and digital engineering. Contributors have submitted papers on MBSE methods, modeling approaches, integration of digital engineering with MBSE, standards, modeling languages, ontologies and metamodels, and economics analysis of MBSE to respond to the challenges posed by 21st century systems. What distinguishes this volume are the latest advances in MBSE research, the convergence of MBSE with digital engineering, and recent advances in applied research in MBSE, including growing convergence with systems science and decision science. This volume is appropriate as a reference text in graduate engineering courses in Model-Based Systems Engineering.

Ontology-Based Interpretation of Natural Language - Philipp Cimiano 2022-06-01

For humans, understanding a natural language sentence or discourse is so effortless that we hardly ever think about it. For machines, however, the task of interpreting natural language, especially grasping meaning beyond the literal content, has proven extremely difficult and requires a large amount of background knowledge. This book focuses on the interpretation of natural language with respect to specific domain knowledge captured in ontologies. The main contribution is an approach that puts ontologies at the center of the interpretation process. This means that ontologies not only provide a formalization of domain knowledge necessary for interpretation but also support and guide the construction of meaning representations. We start with an introduction to ontologies and demonstrate how linguistic information can be attached to them by means of the ontology lexicon model lemon. These lexica then serve as basis for the automatic generation of grammars, which we use to compositionally construct meaning representations that conform with the vocabulary of an underlying ontology. As a result, the level of representational granularity is not driven by language but by the semantic distinctions made in the underlying ontology and thus by distinctions that are relevant in the context of a particular domain. We highlight some of the challenges involved in the construction of ontology-based meaning representations, and show how ontologies can be exploited for ambiguity resolution and the interpretation of temporal expressions. Finally, we present a question answering system that combines all tools and techniques introduced throughout the book in a real-world application, and sketch how the presented approach can scale to larger, multi-domain scenarios in the context of the Semantic Web. Table of Contents: List of Figures / Preface / Acknowledgments / Introduction / Ontologies / Linguistic Formalisms / Ontology Lexica / Grammar Generation / Putting Everything Together / Ontological Reasoning for Ambiguity Resolution / Temporal Interpretation / Ontology-Based Interpretation for Question Answering / Conclusion / Bibliography / Authors' Biographies

New Trends in Information and Communications Technology Applications - Abbas M. Al-Bakry 2022-01-11

This book constitutes refereed proceedings of the 5th International Conference on New Trends in Information and Communications Technology Applications, NTICT 2021, held in Baghdad, Iraq, in November 2021. The 13 full papers presented were thoroughly reviewed and selected from 52 qualified submissions. The volume presents the latest research results in such areas as network protocols, overlay and other logical network structures, wireless access networks, computer vision, machine learning, artificial Intelligence, data mining, control methods.

New Trends in Databases and Information Systems - Mykola Pechenizkiy 2012-08-22

Database and information systems technologies have been rapidly evolving in several directions over the past years. New types and kinds of data, new types of applications and information systems to support them raise diverse challenges to be addressed. The so-called big data challenge, streaming data management and processing, social networks and other complex data analysis, including semantic reasoning into information systems supporting for instance trading, negotiations, and bidding mechanisms are just some of the emerging research topics. This volume contains papers contributed by six workshops: ADBIS Workshop on GPUs in Databases (GID 2012), Mining Complex and Stream Data (MCS'D'12), International Workshop on Ontologies meet Advanced Information Systems (OAI'S'2012), Second Workshop on Modeling Multi-commodity Trade: Data models and processing (MMT'12), 1st ADBIS Workshop on Social Data Processing (SDP'12), 1st ADBIS Workshop on Social and Algorithmic Issues in Business Support (SAIBS), and the Ph.D. Consortium associated with the ADBIS 2012 conference that report on the recent developments and an ongoing research in the aforementioned areas.

Law, Ontologies and the Semantic Web - Joost Breuker 2009

Based on workshops and conferences on Artificial Intelligence (AI) and Law, this work deals with legal ontologies and Semantic Web applications, covering both theoretical aspects and practical systems. *Qualitative Inquiry and the Politics of Research* - Norman K Denzin 2016-07-01

This volume of plenary addresses and other key presentations from the 2014 International Congress of Qualitative Inquiry highlights the politics of research in the neoliberal state and the role of qualitative researchers in that debate. Marginalized by an increasingly top-down, assessment-driven university system, the fifteen contributors from a variety of disciplines show the responses of qualitative scholars in their research, writing, advocacy, and teaching, both inside the university and in the broader society. Sponsored by the International Congress of Qualitative Inquiry.

New Trends in Software Methodologies, Tools and Techniques - Hamido Fujita 2007

"Software is the essential enabler for the new economy and for science. It creates new markets and new directions for a more reliable, flexible and robust society. It empowers the exploration of our world in ever more depth. However, software often falls short of our expectations. Current software methodologies, tools, and techniques remain expensive and not yet reliable enough for a highly changeable and evolutionary market. Many approaches have been proven only as case-by-case oriented methods. This book, as part of the SOMET series, presents new trends and theories in the direction in which we believe software science and engineering may develop to transform the role of software and science integration in tomorrow's global information society. This book is an attempt to capture the essence on a new state of art in software science and its supporting technology. The book also aims at identifying the challenges such a technology has to master. One of the important issues addressed by this book is software development security tools and techniques."

New Trends in Software Methodologies, Tools and Techniques - H. Fujita 2009-08-31

Software is an essential enabler for science and the new economy, but software often falls short of our expectations, remaining expensive and not yet sufficiently reliable for a constantly changing and evolving market. This publication, which forms part of the SoMeT series, consists of 41 papers, carefully reviewed and revised on the basis of technical soundness, relevance, originality, significance, and clarity. These explore new trends and theories which illuminate the direction of developments which may lead to a transformation of the role of software in tomorrow's global information society. The book offers an opportunity for the software science community to think about where they are today and where they are going. The emphasis has been placed on human-centric software methodologies, end-user development techniques, and emotional reasoning, for an optimally harmonised performance between the design tool and the user. The handling of cognitive issues in software development and the tools and techniques related to this form part of the contribution to this book. Other comparable theories and practices in software science, including emerging technologies essential for a comprehensive overview of information systems and research projects, are also addressed. This work represents another milestone in mastering the new challenges of software and its promising technology, and

provides the reader with new insights, inspiration and concrete material to further the study of this new technology.

Advances and New Trends in Environmental Informatics - Hans-Joachim Bungartz 2018-11-03

This book presents the latest findings and ongoing research in the field of environmental informatics. It addresses a wide range of cross-cutting activities, such as efficient computing, virtual reality, disruption management, big data, open science and the internet of things, and showcases how these green information & communication technologies (ICT) can be used to effectively address environmental and societal challenges. Presenting a selection of extended contributions to the 32nd edition of the International Conference EnviroInfo 2018, at the Leibniz Supercomputing Centre in Garching near Munich, it is essential reading for anyone looking to expand their expertise in the area.

New Trends of Research in Ontologies and Lexical Resources - Alessandro Oltramari 2013-02-02

In order to exchange knowledge, humans need to share a common lexicon of words as well as to access the world models underlying that lexicon. What is a natural process for a human turns out to be an extremely hard task for a machine: computers can't represent knowledge as effectively as humans do, which hampers, for example, meaning disambiguation and communication. Applied ontologies and NLP have been developed to face these challenges. Integrating ontologies with (possibly multilingual) lexical resources is an essential requirement to make human language understandable by machines, and also to enable interoperability and computability across information systems and, ultimately, in the Web. This book explores recent advances in the integration of ontologies and lexical resources, including questions such as building the required infrastructure (e.g., the Semantic Web) and different formalisms, methods and platforms for eliciting, analyzing and encoding knowledge contents (e.g., multimedia, emotions, events, etc.). The contributors look towards next-generation technologies, shifting the focus from the state of the art to the future of Ontologies and Lexical Resources. This work will be of interest to research scientists, graduate students, and professionals in the fields of knowledge engineering, computational linguistics, and semantic technologies.

Advances and New Trends in Environmental and Energy Informatics - Jorge Marx Gomez 2015-12-24

This book presents the latest findings and ongoing research in the field of green information systems and green information and communication technology (ICT). It provides insights into a whole range of cross-cutting topics in ICT and environmental sciences as well as showcases how information and communication technologies allow environmental and energy efficiency issues to be handled effectively. The papers presented in this book are a selection of extended and improved contributions to the 28th International Conference on Informatics for Environmental Protection dedicated to ICT for energy efficiency. This book is essential and particularly worth reading for those who already gained basic knowledge and want to deepen and extend their expertise in the subjects mentioned above.

Recent Trends in Discourse and Dialogue - Laila Dybkjær 2008-02-13

The eleven chapters of this book represent an original contribution to the field of multimodal spoken dialogue systems. The material includes highly relevant topics, such as dialogue modeling in research systems versus industrial systems. The book contains detailed application studies, including speech-controlled MP3 players in a car environment, negotiation training with a virtual human in a military context and the application of spoken dialogue to question-answering systems.

Ontologies of Rock Art - Oscar Moro Abadía 2021-03-03

Ontologies of Rock Art is the first publication to explore a wide range of ontological approaches to rock art interpretation, constituting the basis for groundbreaking studies on Indigenous knowledges, relational metaphysics, and rock imageries. The book contributes to the growing body of research on the ontology of images by focusing on five main topics: ontology as a theoretical framework; the development of new concepts and methods for an ontological approach to rock art; the examination of the relationships between ontology, images, and Indigenous knowledges; the development of relational models for the analysis of rock images; and the impact of ontological approaches on different rock art traditions across the world. Generating new avenues of research in ontological theory, political ontology, and rock art research, this collection will be relevant to archaeologists, anthropologists, and philosophers. In the context of an increasing interest in Indigenous ontologies, the volume will also be of interest to scholars in Indigenous studies.

