

An Ontological Framework For Representing Topological

This book constitutes the thoroughly refereed post-conference proceedings of the 27th British National Conference on Databases, BNCOD 27, held in Dundee, UK, in June 2010. The 10 revised full papers and 6 short papers, presented together with 3 invited papers, 1 best paper of the associated event on Teaching, Learning and Assessment of Databases (TLAD), and 2 PhD forum best papers were carefully reviewed and selected from 42 submissions. Special focus of the conference has been "Data Security and Security Data" and so the papers cover a wide range of topics such as data security, privacy and trust, security data, data integration and interoperability, data management for ubiquitous and mobile computing, data mining and information extraction, data modelling and architectures, data provenance, dataspace, data streaming, databases and the grid, distributed information systems, electronic commerce, enterprise systems, heterogeneous databases, industrial applications, infrastructures and systems, intermittently connected data, file access methods and index structures, managing legacy data, new applications and processes, parallel and distributed databases, peer-to-peer data management, performance modelling of ubiquitous data use, personal data management, query and manipulation languages, query processing and optimisation, scientific applications, semantic Web and ontologies, semi-structured data, metadata and xml, user interfaces and data visualisation, Web data management and deep Web, Web services, and workflow support systems.

The field of artificial intelligence (AI) and the law is on the cusp of a revolution that began with text analytic programs like IBM's Watson and Debater and the open-source information management architectures on which they are based. Today, new legal applications are beginning to appear and this book - designed to explain computational processes to non-programmers - describes how they will change the practice of law, specifically by connecting computational models of legal reasoning directly with legal text, generating arguments for and against particular outcomes, predicting outcomes and explaining these predictions with reasons that legal professionals will be able to evaluate for themselves. These legal applications will support conceptual legal information retrieval and allow cognitive computing, enabling a collaboration between humans and computers in which each does what it can do best. Anyone interested in how AI is changing the practice of law should read this illuminating work.

This volume highlights the ways in which the prospect of peace can generate anxieties and consequently set in motion social and political processes that reproduce and reactivate conflicts. In analysing this issue, the volume builds on the notion of ontological security and its recent applications to international relations theory. Although conflicts threaten the physical security of the parties involved, they also help settle existential questions about basic parameters of life, being, and identity, and thus over time become sources of ontological security. The prospect of peace, through the resolution or transformation of conflict, threatens to unsettle the stability and consistency of self-narratives, and their associated routines and habits at the individual, group, and state levels. The contributors argue two key points: 1) that ontological insecurity may set in motion political and social processes that reproduce and reactivate conflicts; 2) that coping with peace anxieties necessitates the formulation of alternative self-narratives at the individual, societal, and state levels that re-situate the Self in relation to Other and to the world at large. Consequently, the book analyses the ways in which, and the conditions under which, conflict resolution induces ontological insecurity, and the different ways in which ontological insecurity has prevented the successful culmination of peace processes in different conflict contexts, including Cyprus, Israel-Palestine and Northern Ireland. This book will be of much interest to students of critical

security studies, conflict resolution, peace and conflict studies, social theory and IR in general.

Intelligent Medical Technologies and Biomedical Engineering: Tools and Applications helps young researchers and developers understand the basics of the field while highlighting the various developments over the last several years. Broad in scope and comprehensive in depth, this volume serves as a base text for any project or work into the domain of medical diagnosis or other areas of medical engineering.

In organizations, accounting produces organizational knowledge that affects decision-making and managerial action. Companies placing importance on shareholder value sometimes tend to elevate accounting to a higher truth criterion for justifying managerial actions. Yet, the nature of accounting renders it difficult to argue that accounting information necessarily produce a better basis for decision-making than arguments which are not based on accounting. This is because, as previous research has also argued, accounting counts some things but omits many others, while managers are accountable for much more than what accounting actually counts. Using a theoretical apparatus from Deleuze and Guattari, this book illustrates that accounting-based actions such as making management decisions, maintaining organisational responsibility and hierarchical control are manifestations of the ways in which accounting is composed. This concise introduction will be invaluable for researchers and advanced students of management accounting exploring responsibility accounting and accountability.

This book constitutes extended selected papers from the 15th Conference on Advanced Information Technologies for Management, AITM 2017, and the 12th Conference on Information Systems Management, ISM 2017, held as part of the Federated Conference on Computer Science and Information Systems, FedCSIS, which took place in Prague, Poland, in September 2017. The 13 papers presented in this volume were carefully reviewed and selected from 48 submissions. They were organized in topical sections named: information technology and systems for knowledge management; information technology and systems for business transformation; and implementation and evaluation of information systems.

The Definitive Volume on Cutting-Edge Exploratory Analysis of Massive Spatial and Spatiotemporal Databases Since the publication of the first edition of Geographic Data Mining and Knowledge Discovery, new techniques for geographic data warehousing (GDW), spatial data mining, and geovisualization (GVis) have been developed. In addition, there has been

By systematically uncovering and comprehensively examining the epistemological implications of Heidegger's history of being and Foucault's archaeology of discursive formations, Towards an Epistemology of Ruptures shows how Heidegger and Foucault significantly expand the notions of knowledge and thought. This is done by tracing their path-breaking responses to the question: What is the object of thought? The book shows how for both thinkers thought is not just the act by which the object is represented in an idea, and knowledge not just a state of the mind of the individual subject corresponding to the object. Each thinker, in his own way, argues that thought is a productive event in which the subject and the object gain their respective identity and knowledge is the opening up of a space in which the subject and object can encounter each other and in which true and false statements about an object become possible. They thereby lay the ground for a new conceptual framework for rethinking the very relationship between knowledge and its object.

Chapters of this book offer a careful selection of the best contributions to the Italian Association for Information Systems (ItAIS) Annual Conference, that took place in Venice, San Servolo Island, in October 2007. The main goal of this book is to disseminate academic knowledge, both theoretical and pragmatic, in the information systems community. Recognizing the relevance of many different disciplines, the book takes an interdisciplinary approach to the subject of information systems, thus providing a

comprehensive and current coverage of this important area. ItAIS (<http://www.itais.org>) is the Italian chapter of the Association for Information Systems (<http://www.aisnet.org>). It was established in 2003 and has since been promoting the exchange of ideas, experience and knowledge among both academics and professionals committed to the development, management, organization and use of information systems.

This book constitutes the proceedings of the satellite events held at the 18th Extended Semantic Web Conference, ESWC 2021, in June 2021. The conference was held online, due to the COVID-19 pandemic. During ESWC 2021, the following six workshops took place: 1) the Second International Workshop on Deep Learning meets Ontologies and Natural Language Processing (DeepOntoNLP 2021) 2) the Second International Workshop on Semantic Digital Twins (SeDiT 2021) 3) the Second International Workshop on Knowledge Graph Construction (KGC 2021) 5) the 6th International Workshop on eXplainable SENTiment Mining and EmotioN deTectioN (X-SENTIMENT 2021) 6) the 4th International Workshop on Geospatial Linked Data (GeoLD 2021).

"Prior knowledge in data mining is helpful for selecting suitable data and mining techniques, pruning the space of hypothesis, representing the output in a comprehensible way, and improving the overall method. This book examines methodologies and research for the development of ontological foundations for data mining to enhance the ability of ontology utilization and design"--Provided by publisher.

This book constitutes the refereed proceedings of the 22 International Conference on Database and Expert Systems Applications, DEXA 2011, held in Toulouse, France, August 29 - September 2, 2011. The 52 revised full papers and 40 short papers presented were carefully reviewed and selected from 207 submissions. The papers are organized in topical sections on XML querying and views; data mining; queries and search; semantic web; information retrieval; business applications; user support; indexing; queries, views and data warehouses; ontologies; physical aspects of databases; Design; distribution; miscellaneous topics.

The European Conference on Technology-Enhanced Learning (EC-TEL 2008) was the third event of a series that started in 2006. The two first editions were organized by Pro-Learn (<http://www.prolearn-project.org/>), a European Network of Excellence. In 2008, several members of Kaleidoscope, the other European Network of Excellence (<http://www.noe-kaleidoscope.org/pub/>), joined as co-chair, committee members, reviewers and authors. These two networks are no longer funded, but our aim was to turn EC-TEL into a sustainable series of high-quality events and thereby to contribute to the scientific landscape of technology-enhanced learning. A new network, named STELLAR, will be launched in 2009, with members from both existing networks as well as new members and will support the future editions of this conference. The scope of EC-TEL 2008 covered the different fields of learning technologies: e- cation, psychology, computer science. The contributions in this volume address the - sign of innovative environments, computational models and architectures, results of empirical studies on socio-cognitive processes, field studies regarding the use of te- nologies in context, collaborative processes, pedagogical scenarios, reusable learning objects and emerging objects, groups and communities, learning networks, interaction analysis, metadata, personalization, collaboration scripts, learning adaptation, collabo- tive environments, resources, tangible tools, as well as learning management systems.

In this book, the authors present the latest research results in the multimedia and semantic web communities, bridging the "Semantic Gap" This book explains, collects and reports on the latest research results that aim at narrowing the so-called multimedia "Semantic Gap": the large disparity between descriptions of multimedia content that can be computed automatically, and the richness and subjectivity of semantics in user queries and human interpretations of audiovisual media. Addressing the grand challenge posed by the "Semantic Gap" requires a multi-disciplinary approach (computer science, computer vision and signal processing, cognitive science, web science, etc.) and this is reflected in recent research in this area. In addition, the book targets an interdisciplinary community, and in particular the Multimedia and the Semantic Web communities. Finally, the authors provide both the fundamental knowledge and the latest state-of-the-art results from both communities with the goal of making the knowledge of one community available to the other. Key Features: Presents state-of-the art research results in multimedia semantics: multimedia analysis, metadata standards and multimedia knowledge representation, semantic interaction with multimedia Contains real industrial problems exemplified by user case scenarios Offers an insight into various standardisation bodies including W3C, IPTC and ISO MPEG Contains contributions from academic and industrial communities from Europe, USA and Asia Includes an accompanying website containing user cases, datasets, and software mentioned in the book, as well as links to the K-Space NoE and the SMaRT society web sites (<http://www.multimediasemantics.com/>) This book will be a valuable reference for academic and industry researchers /practitioners in multimedia, computational intelligence and computer science fields. Graduate students, project leaders, and consultants will also find this book of interest.

"Evolve or perish" – this is the motto for living systems. Judging by this saying, the Web is alive and well: new sites and business ideas are coming online almost daily and are able to attract millions of users often. The more recently coined term "Web 2.0" summarizes many of the new developments, capturing efforts making the Web more interactive (like Ajax), more collaborative (like Wikis), or more relationship oriented (like online social networks), aiming to partially fulfill the original promise of the Web. These new Web developments offer an opportunity and challenge for the Semantic Web: what previously manifested itself mostly in "dry" specifications is now becoming the foundation for information exchange on the Web, creating a shared semantic information space. These and other challenges have been picked up by several hundred computer scientists, developers, vendors, government workers, venture capitalists, students, and users, gathered in Athens, Atlanta, USA, November 5–9, 2006, for the Fifth International Semantic Web Conference (ISWC 2006). Building on previous successful meetings in Sardinia, Sanibel Island, Hiroshima, and Galway, this sixth annual conference demonstrates new research results, technology, and applications that show current incarnations of the Semantic Web. Especially encouraging is the shift towards more applications—whereas the Research Track attracted roughly as many papers as in the previous year, the contributions submitted to the In-Use Track doubled.

E-Government describes the utilization of technologies to improve the lives of citizens and business organizations while facilitating the operation of the government. With the rise of new technologies, governments need to consider implementing Web 2.0 and mobile technologies as a way to offer relevant e-services to citizens so that they may fully participate in governmental affairs.

Emerging Mobile and Web 2.0 Technologies for Connected E-Government highlights the latest technologies and how they can be implemented by the government and effectively used by citizens. This book aims to be an inclusive reference source for researchers, practitioners, students, and managers interested in the application of recent technological innovations to develop a more effective e-government system.

A diagrammatic representation is an intuitive way to present domain knowledge and findings. Automated conversion of a domain description to a diagrammatic representation should be correct and expressive, hence a challenging research. However, the representations used for descriptive and diagrammatic formats are inconsistent with one another due to heterogeneity in their perspectives. Thus lack of semantic interoperability is a major hurdle in bridging the representational gap. This thesis proposes an ontological framework called OntoDiagram that converts domain descriptions to diagrams. OntoDiagram facilitates the interpretation of descriptive terms and the extraction of implicit domain knowledge. It then infers a diagrammatic representation that illustrates features in a consistent fashion. OntoDiagram is designed to be suitable for different domains and across multiple levels of abstraction. A pilot study of prototype system developed, for use in pediatric cardiology, shows that the approach is feasible and efficient in generating diagrams for domain descriptions.

Action C21 of the European programme for Cooperation in the field of Scientific and Technical Research (COST - <http://www.cost.esf.org/>) is dedicated to investigating urban ontologies for an improved communication in urban civil engineering projects. The Action, known informally as "Towntology", brings together a large and heterogeneous grouping from across Europe, whose interests range from construction to urban tourism and from transport infrastructure to resource visualisation. On 6-7 November 2006, in Geneva, the Action convened a successful workshop to address emerging issues in the field. This volume presents the contributions to that workshop, in many cases revised afterwards to capture some of the outcomes of discussion. Many of these contributions are from members of the Towntology group, but there are also contributions from other European researchers, and from researchers in the US. The volume represents a valuable overview of major current issues in the field of urban ontologies and encapsulates many useful and different approaches. We hope that it will serve not only as a worthy outcome of Action C21, but also as a valuable resource for a wide range of researchers.

This volume collects the papers selected for presentation at the IX Congress of the Italian Association for Artificial Intelligence (AI*IA), held in Milan at the University of Milano–Bicocca (September 21–23, 2005). On the one hand this congress continues the tradition of AI*IA in organizing its biannual scientific meeting from 1989; on the other hand, this edition is a landmark in the involvement of the international community of artificial intelligence (AI), directly involving a

broad number of experts from several countries in the Program Committee. Moreover, the peculiar nature of scientific research in artificial intelligence (which is intrinsically international) and several consolidated international collaborations in projects and mobility programs allowed the collection and selection of papers from many different countries, all around the world, enlarging the visibility of the Italian contribution within this research field. Artificial intelligence is today a growing complex set of conceptual, theoretical, methodological, and technological frameworks, offering innovative computational solutions in the design and development of computer-based systems. Within this perspective, researchers working in this area must tackle a broad range of knowledge about methods, results, and solutions coming from different classical areas of this discipline. The congress was designed as a forum allowing researchers to present and discuss specialized results as general contributions to AI growth.

The two-volume set LNAI 8856 and LNAI 8857 constitutes the proceedings of the 13th Mexican International Conference on Artificial Intelligence, MICAI 2014, held in Tuxtla, Mexico, in November 2014. The total of 87 papers plus 1 invited talk presented in these proceedings were carefully reviewed and selected from 348 submissions. The first volume deals with advances in human-inspired computing and its applications. It contains 44 papers structured into seven sections: natural language processing, natural language processing applications, opinion mining, sentiment analysis, and social network applications, computer vision, image processing, logic, reasoning, and multi-agent systems, and intelligent tutoring systems. The second volume deals with advances in nature-inspired computation and machine learning and contains also 44 papers structured into eight sections: genetic and evolutionary algorithms, neural networks, machine learning, machine learning applications to audio and text, data mining, fuzzy logic, robotics, planning, and scheduling, and biomedical applications.

This comprehensive book examines a range of examples, prepared by a diverse group of academic and industry practitioners, which demonstrate how cloud-based simulation is being extensively used across many disciplines, including cyber-physical systems engineering. This book is a compendium of the state of the art in cloud-based simulation that instructors can use to inform the next generation. It highlights the underlying infrastructure, modeling paradigms, and simulation methodologies that can be brought to bear to develop the next generation of systems for a highly connected society. Such systems, aptly termed cyber-physical systems (CPS), are now widely used in e.g. transportation systems, smart grids, connected vehicles, industrial production systems, healthcare, education, and defense. Modeling and simulation (M&S), along with big data technologies, are at the forefront of complex systems engineering research. The disciplines of cloud-based simulation and CPS engineering are evolving at a rapid pace, but are not optimally supporting each other's advancement. This book brings together these two communities, which already

serve multi-disciplinary applications. It provides an overview of the simulation technologies landscape, and of infrastructure pertaining to the use of cloud-based environments for CPS engineering. It covers the engineering, design, and application of cloud simulation technologies and infrastructures applicable for CPS engineering. The contributions share valuable lessons learned from developing real-time embedded and robotic systems deployed through cloud-based infrastructures for application in CPS engineering and IoT-enabled society. The coverage incorporates cloud-based M&S as a medium for facilitating CPS engineering and governance, and elaborates on available cloud-based M&S technologies and their impacts on specific aspects of CPS engineering.

Abstract: "The Knowledge-Based Machine Translation paradigm requires a comprehensive analysis of input texts into an unambiguous machine-tractable representation of the propositional and meta- propositional meaning of that text, for which we use a particular framework referred to as ontological semantics. The work presented here begins with a definition of a representation language for lexical semantic specification (and syntax/semantics interface) to support such an analysis, as well as a generalized algorithm for building the meaning representation from these lexical semantic specifications, utilizing the ontology and a syntactic parse as knowledge sources. The core of the algorithm is an algorithm for semantic constraint satisfaction and relaxation, involving finding the best path over the ontology between a candidate filler of a relation and semantic constraints on that relation. The ontology is viewed as a multi-dimensional graph, with distinct topologies in each dimension reflecting specific semantic relations between nodes (representing concepts), where weights or arc distance reflects strength of semantic relatedness in context (where the path-so-far context is maintained in a state transition table). Simulated annealing is used for acquiring these weights from training corpora. The selectional restriction satisfaction algorithm is imbedded within a framework which traverses the search space of all possible semantic interpretations, using both a data-driven operator and an expectation-driven operator. This algorithm and framework for meaning interpretation are applied in the generic semantic dependency structure-building case (involving satisfaction and relaxation of semantic constraints), word sense disambiguation (WSD), as well as metonymy processing. WSD relies on this very rich set of constraints (generalized from traditional selectional restrictions) where any concept in the ontology can serve as a constraint; using this notion of constraints and the ontological graph search for checking constraint satisfaction (which combines traditional syntagmatic and paradigmatic approaches) provides encouraging results for WSD. The approach to metonymy processing uses both an extensive language-specific inventory of frequent metonymic relations and a mechanism for allowing any other semantic relation or chain of relations which exist in the ontology to provide the metonymic relation that is recovered from text."

As the (in)famous definition states: "An ontology is an explicit specification of a conceptualization". However, an ontology

is also a philosophical theory of existence, a knowledge management resource, a database schema, or a type of knowledge representation artefact on the semantic web. Over the years the term 'ontology' has been used in so many different ways that one can no longer be sure what is meant by it at any given occasion. This book clarifies the role ontologies play in knowledge representation; it discusses the distinctions with their use in philosophy, gives insight in the features, rationale and limitations of the OWL 2 web ontology language, and provides a critical review of methodologies and design principles advocated to improve the quality of ontologies. It covers both theory and practice of knowledge acquisition, representation and ontologies; it emphasises human understanding as knowledge structuring principle, and demonstrates this approach in the development of a core ontology of basic legal concepts (LKIF Core) and in the exploration of expressive ontology design patterns for the representation of social reality, change and causation, actions and transactions. In doing so it contributes to a better understanding of the representation of ontologies; or rather, what it means to do ontology representation.

"This book documents high-quality research addressing ontological issues relevant to the modeling of enterprises and information systems in general, and business processes in particular covering both static and dynamic aspects of structural concepts. It provides reference content to researchers, practitioners, and scholars in the fields of language design, information systems, enterprise modeling, artificial intelligence, and the Semantic Web"--Provided by publisher. The book aims to integrate the aspects of IoT, Cloud computing and data analytics from diversified perspectives. The book also plans to discuss the recent research trends and advanced topics in the field which will be of interest to academicians and researchers working in this area. Thus, the book intends to help its readers to understand and explore the spectrum of applications of IoT, cloud computing and data analytics. Here, it is also worth mentioning that the book is believed to draw attention on the applications of said technology in various disciplines in order to obtain enhanced understanding of the readers. Also, this book focuses on the researches and challenges in the domain of IoT, Cloud computing and Data analytics from perspectives of various stakeholders.

The primary objective of this collection of 42 peer-reviewed authoritative articles is to share with the reader the very latest information on cutting-edge technologies in the fields of safety and structural integrity.

An Ontological Framework for the Formal Representation and Management of Human Stress Knowledge

This book argues that contemporary European politics creates new forms of transnational power that challenge the traditional parameters of the nation-state. Kauppi identifies and critically explores the evolving dynamics between national and transnational spaces, groups and knowledge, and suggests that European public policies and transnational institutions like the European Parliament create new spaces, types of knowledge and novel political practices. Toward a

Reflexive Political Sociology of the European Union is structured around three parts. The first focuses on evolving transnational fields. The second explores the changing role of academics and universities. The third section engages with the works of Pierre Bourdieu on politics and the media. The issues discussed throughout the book revolve around the challenges to the nation-state and of knowledge production that is tied to it. This book will be an invaluable resource to academics and researchers interested in European politics, European Union studies and political sociology.

The task of structuring information on built environment has presented challenges to the research community, software developers and the industry for the last 20 years. Recent work has taken advantage of Web and industry standards such as XML, OWL, IFC and STEP. Another important technology for the fragmented AEC industry is digital communication. Wired or wireless, it brings together architects, engineers and construction site workers, enabling them to exchange information, communicate and work together. Virtual enterprise organization structures, involving mobile teams over distance, are highly compatible with the needs of the construction industry.

This book constitutes the refereed thoroughly refereed post-workshop proceedings of the 18th International Conference on Web Engineering, ICWE 2018, held in Cáceres, Spain, in June 2018. The 18 revised full papers were selected from 40 submissions. The workshops complement the main conference and explore new trends on core topics of Web engineering and provide an open discussion space combining solid theory work with practical on-the-field experience. The workshop committee accepted five workshops for publication in this volume: First International Workshop on Maturity of Web Engineering Practices (MATWEP 2018), Second International Workshop on Engineering theWeb of Things (EnWoT 2018), Fourth International Workshop on Knowledge Discovery on the Web (KDWEB 2018), International Workshop on Engineering Open Data (WEOD 2018), First International Workshop on Knowledge Graphs on Travel and Tourism (TourismKG 2018).

Contains papers which reflect the breadth and depth of the field of biomedical and health informatics, covering topics such as; health information systems, education, standards, consumer health and human factors, emerging technologies, sustainability, organizational and economic issues, genomics, and image and signal processing.

Previous efforts to classify and organize stress-related phenomena have not been sufficiently inclusive and none of them has considered the use of ontology as an effective facilitating tool for the abovementioned issues.

This book constitutes the thoroughly refereed post-conference proceedings of the Second International Joint Conference on Knowledge Discovery, Knowledge Engineering, and Knowledge Management, IC3K 2010, held in Valencia, Spain, in October 2010. This book includes revised and extended versions of a strict selection of the best papers presented at the conference; 26 revised full papers together with 2 invited lectures were carefully reviewed and selected from 369 submissions. According to the three covered conferences KDIR 2010, KEOD

2010, and KMIS 2010, the papers are organized in topical sections on knowledge discovery and information retrieval, knowledge engineering and ontology development, and on knowledge management and information sharing.

This book offers a selection of papers from the 2016 International Conference on Software Process Improvement (CIMPS'16), held between the 12th and 14th of October 2016 in Aguascalientes, Aguascalientes, México. The CIMPS'16 is a global forum for researchers and practitioners to present and discuss the most recent innovations, trends, results, experiences and concerns in the different aspects of software engineering with a focus on, but not limited to, software processes, security in information and communication technology, and big data. The main topics covered include: organizational models, standards and methodologies, knowledge management, software systems, applications and tools, information and communication technologies and processes in non-software domains (mining, automotive, aerospace, business, health care, manufacturing, etc.) with a clear focus on software process challenges.

The contributions in this volume represent the latest research results in the field of Classification, Clustering, and Data Analysis. Besides the theoretical analysis, papers focus on various application fields as Archaeology, Astronomy, Bio-Sciences, Business, Electronic Data and Web, Finance and Insurance, Library Science and Linguistics, Marketing, Music Science, and Quality Assurance.

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.

Efficiency and Efficacy are crucial to the success of national and international business operations today. With this in mind, businesses are continuously searching for the information and communication technologies that will improve job productivity and performance and enhance communications, collaboration, cooperation, and connection between employees, employers, and stakeholders. The Evolution of the Internet in the Business Sector: Web 1.0 to Web 3.0 takes a historical look at the policy, implementation, management, and governance of productivity enhancing technologies. This work shares best practices with public and private universities, IS developers and researchers, education managers, and business and web professionals interested in implementing the latest technologies to improve organizational productivity and communication.

The field of Artificial Intelligence is one in which novel ideas and new and original perspectives are of more than usual importance. The Starting AI Researchers' Symposium (STAIRS) is an international meeting which supports AI researchers from all countries at the beginning of their career, PhD students and those who have held a PhD for less than one year. It offers doctoral students and young post-doctoral AI fellows a unique and valuable opportunity to gain experience in presenting their work in a supportive scientific environment, where they can obtain constructive feedback on the technical content of their work, as well as advice on how to present it, and where they can also establish contacts with the broader European AI research community. This book presents revised versions of peer-reviewed papers presented at the Sixth STAIRS, which took place in Montpellier, France, in conjunction with the 20th European Conference on Artificial Intelligence (ECAI) and the Seventh Conference on Prestigious Applications of Intelligent Systems (PAIS) in August 2012. The topics covered in the book range over a broad spectrum of subjects in the field of AI: machine learning and data mining, constraint satisfaction problems and belief propagation, logic and reasoning, dialogue and multiagent systems, and games and planning. Offering a fascinating opportunity to glimpse the current

work of the AI researchers of the future, this book will be of interest to anyone whose work involves the use of artificial intelligence and intelligent systems.

This book constitutes the proceedings of the KR4HC 2010 workshop held at ECAI in Lisbon, Portugal, in August 2010. The 11 extended papers presented were carefully reviewed and selected from 19 submissions. The papers cover topics like ontologies, patient data, records, and guidelines, and clinical practice guidelines.

Advance exact science of nowadays inherited the original ontology's its efforts to systemize and conceptualize. In this respect the concept of ontology is now a non-speculative methodology for both studying reality objects and its used tools, which both instruments are important for our orientation in the space of physical, technical, mental and societal world. So, within the exactly considered ontology, we deal with the process of studying, as well as with the outcome of such studying of the objects observed or created by man and their respective made by man concepts, relations between them and relations between their systems in the fields of the given scientific branches. This book *Ontological Analyses in Science, Technology and Informatics* - the second volume released within the framework of the IntechOpen project in this field - is the illustration of application of the concept of ontology approach understood in the modern and exact way, it is the presentation of the Ontology science. This book covers the examples of the modern ontology approach, especially the approach in the branch of the Information Science dealing with the Inference and Proof, Knowledge patterns, Cross-Application Communication, Diagnosis and Expert systems in Health and Food and the Taxonomy problems. The intended readers of this book are researchers, students and all the practitioners in the field.

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