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## Online Library Resources And Processes Development Ontology Automatic Semi

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### Semi-Automatic Ontology Development: Processes and Resources

#### Processes and Resources

*IGI Global "This book includes state-of-the-art research results aimed at the automation of ontology development processes and the reuse of external resources becoming a reality, thus being of interest for a wide and diversified community of users"--*

### Semi-automatic Ontology Development

#### Processes and Resources

*"This book includes state-of-the-art research results aimed at the automation of ontology development processes and the reuse of external resources becoming a reality, thus being of interest for a wide and diversified community of users"--Provided by publisher.*

### Knowledge Engineering and Knowledge Management

### EKAW 2016 Satellite Events, EKM and Drift-an-LOD, Bologna, Italy, November 19–23, 2016, Revised Selected Papers

*Springer This book contains the best selected papers of two Satellite Events held at the 20th International Conference on Knowledge Engineering and Knowledge Management, EKAW 2016, in November 2016 in Bologna, Italy: The Second International Workshop on Educational Knowledge Management, EKM 2016, and the First Workshop: Detection, Representation and Management of Concept Drift in Linked Open Data, Drift-an-LOD 2016. The 6 revised full papers included in this volume were carefully reviewed and selected from the 13 full papers that were accepted for presentation at the conference from the initial 82 submissions. This volume also contains the 37 accepted contributions for the EKAW 2016 tutorials, demo and poster sessions, and the doctoral consortium. The special focus of this year's EKAW was "evolving knowledge", which concerns all aspects of the management and acquisition of knowledge representations of evolving, contextual, and local models. This includes change management, trend detection, model evolution, streaming data and stream reasoning, event processing, time-and space dependent models, contextual and local knowledge representations with a special emphasis on the evolvability and localization of knowledge and the correct usage of these limits.*

### Artificial Intelligence in Medicine

### 16th Conference on Artificial Intelligence in Medicine, AIME 2017, Vienna, Austria, June 21-24, 2017, Proceedings

*Springer This book constitutes the refereed proceedings of the 16th Conference on Artificial Intelligence in Medicine, AIME 2017, held in Vienna, Austria, in June 2017. The 21 revised full and 23 short papers presented were carefully reviewed and selected from 113 submissions. The papers are organized in the following topical sections: ontologies and knowledge representation; Bayesian methods; temporal methods; natural language processing; health care processes; and machine learning, and a section with demo papers.*

### Intelligent Tools for Building a Scientific Information Platform

*Springer Science & Business Media This book is a selection of results obtained within one year of research performed under SYNAT - a nation-wide scientific project aiming to create an infrastructure for scientific content storage and sharing for academia, education and open knowledge society in Poland. The selection refers to the research in artificial intelligence, knowledge discovery and data mining, information retrieval and natural language processing, addressing the problems of implementing intelligent tools for building a scientific information platform. The idea of this book is based on the very successful SYNAT Project Conference and the SYNAT Workshop accompanying the 19th International Symposium on Methodologies for Intelligent Systems (ISMIS 2011). The papers included in this book present an overview and insight into such topics as architecture of scientific information platforms, semantic clustering, ontology-based systems, as well as, multimedia data processing.*

### Innovations, Developments, and Applications of Semantic Web and Information Systems

*IGI Global In the last few years, there has been an increased advancement and evolution in semantic web and information systems in a variety of fields. The integration of these approaches to ontology engineering, sophisticated methods and algorithms for open linked data extraction, and advanced decision-making creates new opportunities for a bright future. Innovations, Developments, and Applications of Semantic Web and Information Systems is a critical scholarly resource that discusses integrated methods of research and analytics in information technology. Featuring coverage on a broad range of topics, such as cognitive computing, artificial intelligence, machine learning, data analysis, and algorithms, this book is geared towards researchers, academicians, and professionals seeking current information on semantic web and information systems.*

### Frontiers of WWW Research and Development -- APWeb 2006

## 8th Asia-Pacific Web Conference, Harbin, China, January 16-18, 2006, Proceedings

[Springer Science & Business Media](#) This book constitutes the refereed proceedings of the 8th Asia-Pacific Web Conference, APWeb 2006. More than 100 papers cover all current issues on WWW-related technologies and new advanced applications for researchers and practitioners from both academic and industry.

### Advances in Computer Science and Information Engineering

#### Volume 1

[Springer Science & Business Media](#) CSIE2012 is an integrated conference concentrating its focus on Computer Science and Information Engineering. In the proceeding, you can learn much more knowledge about Computer Science and Information Engineering of researchers from all around the world. The main role of the proceeding is to be used as an exchange pillar for researchers who are working in the mentioned fields. In order to meet the high quality of Springer, AISC series, the organization committee has made their efforts to do the following things. Firstly, poor quality paper has been refused after reviewing course by anonymous referee experts. Secondly, periodically review meetings have been held around the reviewers about five times for exchanging reviewing suggestions. Finally, the conference organizers had several preliminary sessions before the conference. Through efforts of different people and departments, the conference will be successful and fruitful.

### Terminological Ontologies

#### Design, Management and Practical Applications

[Springer Science & Business Media](#) Information infrastructures are integrated solutions based on the fusion of information and communication technologies. They are characterized by the large amount of data that must be managed accordingly. An information infrastructure requires an efficient and effective information retrieval system to provide access to the items stored in the infrastructure. Terminological Ontologies: Design, Management and Practical Applications presents the main problems that affect the discovery systems of information infrastructures to manage terminological models, and introduces a combination of research tools and applications in Semantic Web technologies. This book specifically analyzes the need to create, relate, and integrate the models required for an infrastructure by elaborating on the problem of accessing these models in an efficient manner via interoperable services and components. Terminological Ontologies: Design, Management and Practical Applications is geared toward information management systems and semantic web professionals working as project managers, application developers, government workers and more. Advanced undergraduate and graduate level students, professors and researchers focusing on computer science will also find this book valuable as a secondary text or reference book.

### Systems Approaches to Knowledge Management, Transfer, and Resource Development

[IGI Global](#) The world is moving into a new era of the knowledge economy. In the past decade, the significance of developing knowledge has grown to a level where it is now dominating other socio-economic factors. Systems Approaches to Knowledge Management, Transfer, and Resource Development provides a new view of knowledge management through the lens of systems approach, which looks at each part of the knowledge management system as a section of the full overview. This cutting-edge resource will be essential for academicians, scientists, practitioners, and industry professionals as all of these individuals work toward a new understanding of knowledge and information management practices in the 21st century.

### Intelligent Tutoring Systems

## 9th International Conference on Intelligent Tutoring Systems, ITS 2008, Montreal, Canada, June 23-27, 2008, Proceedings

[Springer Science & Business Media](#) The 9th International Conference on Intelligent Tutoring Systems (ITS 2008) was held June 23-27, 2008 in Montreal. This year we celebrated the 20th anniversary of the conference founded in 1988 in Montreal. We have had biennial conferences for most of the past 10 years around the world, including in Brazil, Taiwan, France, Canada, and the USA. These ITS conferences provide a forum for the interchange of ideas in all areas of computer science and human learning, a unique environment to exchange ideas and support new developments relevant for the future. The 2008 conference was a symbolic milestone that enabled us to look back at what has been achieved and what is currently being done, in order to face the challenges of tomorrow. Much has changed in the last 20 years in terms of hardware, software, programmers, and education stakeholders. Technology is now networked, pervasive, and available anyplace and anytime. The potential exists to provide customized, ubiquitous guidance and instruction. However, much has remained the same and the need is just as great to model the learner, teaching strategies and domain knowledge. This year we saw an increase in research into student affect (motivation, boredom, and frustration), specifically attempts to detect student affect, while feedback studies considered which responses to provide given both student cognition and affect. Studies also looked at the impact on learning of positive feedback and politeness in feedback. New research was seen in data mining based on larger studies that use data from real students to diagnose effective learning and teaching. So much interest has been generated in this area that the 1st International Conference on Educational Data Mining was co-located with ITS 2008.

### Advances in Web-Age Information Management

## 6th International Conference, WAIM 2005, Hangzhou, China, October 11-13, 2005, Proceedings

[Springer](#) This book constitutes the refereed proceedings of the 6th International Conference on Web-Age Information Management, WAIM 2005, held in Hangzhou, China, in October 2005. The 48 revised full papers, 50 revised short papers and 4 industrial papers presented together with 3 invited contributions were carefully reviewed and selected from 486 submissions. The papers are organized in topical sections on XML, performance and query evaluation, data mining, semantic Web and Web ontology, data management, information systems, Web services and workflow, data grid and database languages, agent and mobile data, database application and transaction management, and 3 sections with industrial, short, and demonstration papers.

### Handbook Of Metadata, Semantics And Ontologies

[World Scientific](#) Metadata research has emerged as a discipline cross-cutting many domains, focused on the provision of distributed descriptions (often called annotations) to Web resources or applications. Such associated descriptions are supposed to serve as a foundation for advanced services in many application areas, including search and location, personalization, federation of repositories and automated delivery of information. Indeed, the Semantic Web is in itself a concrete technological framework for ontology-based metadata. For example, Web-based social networking requires metadata describing people and their interrelations, and large databases with biological information use complex and detailed metadata schemas for more precise and informed search strategies. There is a wide diversity in the languages and idioms used for providing meta-descriptions, from simple structured

text in metadata schemas to formal annotations using ontologies, and the technologies for storing, sharing and exploiting meta-descriptions are also diverse and evolve rapidly. In addition, there is a proliferation of schemas and standards related to metadata, resulting in a complex and moving technological landscape — hence, the need for specialized knowledge and skills in this area. The Handbook of Metadata, Semantics and Ontologies is intended as an authoritative reference for students, practitioners and researchers, serving as a roadmap for the variety of metadata schemas and ontologies available in a number of key domain areas, including culture, biology, education, healthcare, engineering and library science.

## On the Move to Meaningful Internet Systems 2007: CoopIS, DOA, ODBASE, GADA, and IS

### OTM Confederated International Conferences, CoopIS, DOA, ODBASE, GADA, and IS 2007, Vilamoura, Portugal, November 25-30, 2007, Proceedings, Part I

**Springer** This two-volume set LNCS 4803/4804 constitutes the refereed proceedings of the five confederated international conferences on Cooperative Information Systems (CoopIS 2007), Distributed Objects and Applications (DOA 2007), Ontologies, Databases and Applications of Semantics (ODBASE 2007), Grid computing, high performance and Distributed Applications (GADA 2007), and Information Security (IS 2007) held as OTM 2007 in Vilamoura, Portugal, in November 2007. The 95 revised full and 21 revised short papers presented together with 5 keynote talks were carefully reviewed and selected from a total of 362 submissions. Corresponding with the five OTM 2007 main conferences CoopIS, ODBASE, GADA, and DOA, the papers are organized in topical sections on process analysis and semantics, process modeling, P2P, collaboration, business transactions, dependability and security, middleware and web services, aspects and development tools, mobility and distributed algorithms, frameworks, patterns, and testbeds, ontology mapping, semantic querying, ontology development, learning and text mining, annotation and metadata management, ontology applications, data and storage, networks, collaborative grid environment and scientific grid applications, scheduling, middleware, data analysis, scheduling and management, access control and authentication, intrusion detection, system and services security, network security, malicious code and code security, as well as trust and information management.

## A Method for Reusing and Re-engineering Non-ontological Resources for Building Ontologies

**IOS Press** The general objective of the thesis is to provide domain independent, and resource independent methods and tools for speeding up the ontology development process and is achieved by reusing and re-engineering as much as possible available non-ontological resources (NORs). To fulfil this overall goal, we have decomposed it into the following methodological and technological objectives: - The definition of methodological aspects related to the reuse of non-ontological resources for building ontologies. - The definition of methodological aspects related to the re-engineering of non-ontological resources for building ontologies. - The creation of a library of patterns for re-engineering non-ontological resources into ontologies. - The development of a software library, NOR2O, that implements the suggestions given by the re-engineering patterns.

## Automatic Processing of Natural-Language Electronic Texts with Nooj

### 10th International Conference, Nooj 2016, České Budějovice, Czech Republic, June 9-11, 2016, Revised Selected Papers

**Springer** This book constitutes the refereed proceedings of the 10th International Conference, Nooj 2016, held in České Budějovice, Czech Republic, in June 2016. The 21 revised full papers presented in this volume were carefully reviewed and selected from 45 submissions. Nooj is a linguistic development environment that provides tools for linguists to construct linguistic resources that formalise a large gamut of linguistic phenomena: typography, orthography, lexicons for simple words, multiword units and discontinuous expressions, inflectional and derivational morphology, local, structural and transformational syntax, and semantics.

## Knowledge Engineering and Knowledge Management. Methods, Models, and Tools

### 12th International Conference, EKAW 2000, Juan-les-Pins, France, October 2-6, 2000 Proceedings

**Springer** This book constitutes the refereed proceedings of the 12th International Conference on Knowledge Engineering and Knowledge Management, EKAW 2000, held in Juan-les-Pins, France in October 2000. The 28 revised full papers and six revised short papers presented were carefully reviewed and selected from a high number of high-quality submissions. The book offers topical sections on knowledge modeling languages and tools, ontologies, knowledge acquisition from texts, machine learning, knowledge management and electronic commerce, problem solving methods, knowledge representation, validation, evaluation and certification, and methodologies.

## The Semantic Web: Research and Applications

### 9th Extended Semantic Web Conference, ESWC 2012, Heraklion, Crete, Greece, May 27-31, 2012, Proceedings

**Springer** This book constitutes the refereed proceedings of the 9th Extended Semantic Web Conference, ESWC 2012, held in Heraklion, Crete, Greece, in May 2012. The 53 revised full papers presented were carefully reviewed and selected from 212 submissions. They are organized in tracks on linked open data, machine learning, natural language processing and information retrieval, ontologies, reasoning, semantic data management, services, processes, and cloud computing, social Web and Web science, in-use and industrial, digital libraries and cultural heritage, and e-government. The book also includes 13 PhD papers presented at the PhD Symposium.

## Times of Convergence. Technologies Across Learning Contexts

### Third European Conference on Technology Enhanced Learning, EC-TEL 2008, Maastricht, The Netherlands, September 16-19,

## 2008, Proceedings

[Springer](#) *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.noekaleidoscope.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: education, psychology, computer science. The contributions in this volume address the design of innovative environments, computational models and architectures, results of empirical studies on socio-cognitive processes, field studies regarding the use of technologies 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, collaborative environments, resources, tangible tools, as well as learning management systems.*

## Semantics

[Walter de Gruyter](#) *This handbook comprises, in three volumes, an in-depth presentation of the state of the art in linguistic semantics from a wide variety of perspectives. It contains 112 articles written by leading scholars from around the world. These articles present detailed, yet accessible, introductions to key issues, including the analysis of specific semantic categories and constructions, the history of semantic research, theories and theoretical frameworks, methodology, and relationships with related fields; moreover, they give expert guidance on topics of debate within the field, on the strengths and weaknesses of existing theories, and on the likely directions for the future development of semantic research. In many cases, the articles written for this handbook promise to become the standard references on the topics they cover. This work will provide an essential reference for both advanced students and researchers in semantics and related fields within linguistics, psychology, philosophy, and other areas.*

## Grid and Cloud Computing: Concepts, Methodologies, Tools and Applications

### Concepts, Methodologies, Tools and Applications

[IGI Global](#) *"This reference presents a vital compendium of research detailing the latest case studies, architectures, frameworks, methodologies, and research on Grid and Cloud Computing"--*

## Ontology Learning and Population: Bridging the Gap Between Text and Knowledge

[IOS Press](#) *The promise of the Semantic Web is that future web pages will be annotated not only with bright colors and fancy fonts as they are now, but with annotation extracted from large domain ontologies that specify, to a computer in a way that it can exploit, what information is contained on the given web page. The presence of this information will allow software agents to examine pages and to make decisions about content as humans are able to do now. The classic method of building an ontology is to gather a committee of experts in the domain to be modeled by the ontology, and to have this committee agree on which concepts cover the domain, on which terms describe which concepts, on what relations exist between each concept and what the possible attributes of each concept are. All ontology learning systems begin with an ontology structure, which may just be an empty logical structure, and a collection of texts in the domain to be modeled. An ontology learning system can be seen as an interplay between three things: an existing ontology, a collection of texts, and lexical syntactic patterns. The Semantic Web will only be a reality if we can create structured, unambiguous ontologies that model domain knowledge that computers can handle. The creation of vast arrays of such ontologies, to be used to mark-up web pages for the Semantic Web, can only be accomplished by computer tools that can extract and build large parts of these ontologies automatically. This book provides the state-of-art of many automatic extraction and modeling techniques for ontology building. The maturation of these techniques will lead to the creation of the Semantic Web.*

## International Conference on Computer Applications 2012 :: Volume 05

[TECHNO FORUM R&D CENTRE](#)

## Fostering User Involvement in Ontology Alignment and Alignment Evaluation

[Linköping University Electronic Press](#) *The abundance of data at our disposal empowers data-driven applications and decision making. The knowledge captured in the data, however, has not been utilized to full potential, as it is only accessible to human interpretation and data are distributed in heterogeneous repositories. Ontologies are a key technology unlocking the knowledge in the data by providing means to model the world around us and infer knowledge implicitly captured in the data. As data are hosted by independent organizations we often need to use several ontologies and discover the relationships between them in order to support data and knowledge transfer. Broadly speaking, while ontologies provide formal representations and thus the basis, ontology alignment supplies integration techniques and thus the means to turn the data kept in distributed, heterogeneous repositories into valuable knowledge. While many automatic approaches for creating alignments have already been developed, user input is still required for obtaining the highest-quality alignments. This thesis focuses on supporting users during the cognitively intensive alignment process and makes several contributions. We have identified front- and back-end system features that foster user involvement during the alignment process and have investigated their support in existing systems by user interface evaluations and literature studies. We have further narrowed down our investigation to features in connection to the, arguably, most cognitively demanding task from the users' perspective—manual validation—and have also considered the level of user expertise by assessing the impact of user errors on alignments' quality. As developing and aligning ontologies is an error-prone task, we have focused on the benefits of the integration of ontology alignment and debugging. We have enabled interactive comparative exploration and evaluation of multiple alignments at different levels of detail by developing a dedicated visual environment—Alignment Cubes—which allows for alignments' evaluation even in the absence of reference alignments. Inspired by the latest technological advances we have investigated and identified three promising directions for the application of large, high-resolution displays in the field: improving the navigation in the ontologies and their alignments, supporting reasoning and collaboration between users.*

## Computational and Data Grids: Principles, Applications and Design

### Principles, Applications and Design

[IGI Global](#) *"This book provide relevant theoretical frameworks covering the latest empirical research findings in the area of grid computing, with a critical perspective bridging the gap between academia and the latest achievements of the computer industry"--Provided by publisher.*

## Semantic Processing of Legal Texts

## Where the Language of Law Meets the Law of Language

[Springer Science & Business Media](#) Recent years have seen much new research on the interface between artificial intelligence and law, looking at issues such as automated legal reasoning. This collection of papers represents the state of the art in this fascinating and highly topical field. [IOS Press](#)

## Proceedings of the Third International Scientific Conference “Intelligent Information Technologies for Industry” (IITI’18)

### Volume 1

[Springer](#) This book contains papers presented in the main track of IITI 2018, the Third International Scientific Conference on Intelligent Information Technologies for Industry held in Sochi, Russia on September 17-21. The conference was jointly co-organized by Rostov State Transport University (Russia) and VŠB – Technical University of Ostrava (Czech Republic) with the participation of Russian Association for Artificial Intelligence (RAAI). IITI 2018 was devoted to practical models and industrial applications related to intelligent information systems. It was considered as a meeting point for researchers and practitioners to enable the implementation of advanced information technologies into various industries. Nevertheless, some theoretical talks concerning the state-of-the-art in intelligent systems and soft computing were also included into proceedings.

## Ontology Theory, Management and Design: Advanced Tools and Models

### Advanced Tools and Models

[IGI Global](#) "The focus of this book is on information and communication sciences, computer science, and artificial intelligence and provides readers with access to the latest knowledge related to design, modeling and implementation of ontologies"--Provided by publisher.

## The Semantic Web: Research and Applications

### 3rd European Semantic Web Conference, ESWC 2006, Budva, Montenegro, June 11-14, 2006, Proceedings

[Springer Science & Business Media](#) Invited talks -- Ontology alignment -- Ontology engineering -- Ontology evaluation -- Ontology evolution -- Ontology learning -- Rules and reasoning -- Searching and querying -- Semantic annotation -- Semantic web mining and personalization -- Semantic web services - Semantic wiki and blogging -- Trust and policies.

## Natural Language Processing and Information Systems

### 15th International Conference on Applications of Natural Language to Information Systems, NLDB 2010, Cardiff, UK, June 23-25, 2010, Proceedings

[Springer Science & Business Media](#) The 15th International Conference on Applications of Natural Language to Information Systems (NLDB 2010) took place during June 23-25 in Cardiff (UK). Since the first edition in 1995, the NLDB conference has been aiming at bringing together researchers, people working in industry and potential users interested in various applications of natural language in the database and information system area. However, in order to reflect the growing importance of accessing information from a diverse collection of sources (Web, Databases, Sensors, Cloud) in an equally wide range of contexts (including mobile and tethered), the theme of the 15th International Conference on Applications of Natural Language to Information Systems 2010 was "Communicating with Anything, Anywhere in Natural Language." Natural languages and databases are core components in the development of information systems. Natural language processing (NLP) techniques may substantially enhance most phases of the information system lifecycle, starting with requirement analysis, specification and validation, and going up to conflict resolution, result processing and presentation. Furthermore, natural language-based query languages and user interfaces facilitate the access to information for all and allow for new paradigms in the usage of computerized services. Hot topics such as information retrieval (IR), software engineering applications, hidden Markov models, natural language interfaces and semantic networks and graphs imply a complete fusion of databases, IR and NLP techniques.

## Ontology and the Lexicon

### A Natural Language Processing Perspective

[Cambridge University Press](#) An edited collection focusing on the technology involved in enabling integration between lexical resources and semantic technologies.

## Personalized Information Retrieval and Access: Concepts, Methods and Practices

### Concepts, Methods and Practices

[IGI Global](#) Global information retrieval and anywhere, anytime information access has stimulated a need to design and model the personalized information search in a flexible and agile way that can use the specific personalization techniques, algorithms, and available technology infrastructure to satisfy high-level functional requirements for personalization. Personalized Information Retrieval and Access: Concepts, Methods and Practices surveys the main concepts, methods, and practices of personalized information retrieval and access in today's data intensive, dynamic, and distributed environment, and provides students, researchers, and practitioners with authoritative coverage of recent technological advances that are shaping the future of globally distributed information retrieval and anywhere, anytime information access.

## Digital Library Technologies

[Springer Nature](#) Digital libraries (DLs) have introduced new technologies, as well as leveraging, enhancing, and integrating related technologies, since the early 1990s. These efforts have been enriched through a formal approach, e.g., the 5S (Societies, Scenarios, Spaces, Structures, Streams) framework, which is discussed in two earlier volumes in this series. This volume should help advance work not only in DLs, but also in the WWW and other information systems. Drawing upon four (Kozievitch, Murthy, Park, Yang) completed and three (Elsherbiny, Farag, Srinivasan) in-process dissertations, as well as the efforts of collaborating researchers and scores of related publications, presentations, tutorials, and reports, this book should advance the DL field with regard to at least six key technologies. By integrating surveys of the state-of-the-art, new research, connections with formalization, case studies, and exercises/projects, this book can serve as a computing or information science textbook. It can support studies in cyber-security, document management, hypertext/hypermedia, IR, knowledge management, LIS, multimedia, and machine learning. Chapter 1, with a case study on fingerprint collections, focuses on complex (composite, compound) objects, connecting DL and related work on buckets, DCC, and OAI-ORE. Chapter 2, discussing annotations, as in hypertext/hypermedia, emphasizes parts of documents, including images as well as text, managing superimposed information. The SuperDR system, and prototype efforts with Flickr, should motivate further development and standardization related to annotation, which would benefit all DL and WWW users. Chapter 3, on ontologies, explains how they help with browsing, query expansion, focused crawling, and classification. This chapter connects DLs with the Semantic Web, and uses CTRnet as an example. Chapter 4, on (hierarchical) classification, leverages LIS theory, as well as machine learning, and is important for DLs as well as the WWW. Chapter 5, on extraction from text, covers document segmentation, as well as how to construct a database from heterogeneous collections of references (from ETDs); i.e., converting strings to canonical forms. Chapter 6 surveys the security approaches used in information systems, and explains how those approaches can apply to digital libraries which are not fully open. Given this rich content, those interested in DLs will be able to find solutions to key problems, using the right technologies and methods. We hope this book will help show how formal approaches can enhance the development of suitable technologies and how they can be better integrated with DLs and other information systems.

## The Semantic Web

### Semantics for Data and Services on the Web

[Springer Science & Business Media](#) The Semantic Web is a vision - the idea of having data on the Web defined and linked in such a way that it can be used by machines not just for display purposes but for automation, integration and reuse of data across various applications. However, there is a widespread misconception that the Semantic Web is a rehash of existing AI and database work. Kashyap, Bussler, and Moran dispel this notion by presenting the multi-disciplinary technological underpinnings such as machine learning, information retrieval, service-oriented architectures, and grid computing. Thus they combine the informational and computational aspects needed to realize the full potential of the Semantic Web vision.

### Incentive-Centric Semantic Web Application Engineering

[Springer Nature](#) While many Web 2.0-inspired approaches to semantic content authoring do acknowledge motivation and incentives as the main drivers of user involvement, the amount of useful human contributions actually available will always remain a scarce resource. Complementarily, there are aspects of semantic content authoring in which automatic techniques have proven to perform reliably, and the added value of human (and collective) intelligence is often a question of cost and timing. The challenge that this book attempts to tackle is how these two approaches (machine- and human-driven computation) could be combined in order to improve the cost-performance ratio of creating, managing, and meaningfully using semantic content. To do so, we need to first understand how theories and practices from social sciences and economics about user behavior and incentives could be applied to semantic content authoring. We will introduce a methodology to help software designers to embed incentives-minded functionalities into semantic applications, as well as best practices and guidelines. We will present several examples of such applications, addressing tasks such as ontology management, media annotation, and information extraction, which have been built with these considerations in mind. These examples illustrate key design issues of incentivized Semantic Web applications that might have a significant effect on the success and sustainable development of the applications: the suitability of the task and knowledge domain to the intended audience, and the mechanisms set up to ensure high-quality contributions, and extensive user involvement. Table of Contents: Semantic Data Management: A Human-driven Process / Fundamentals of Motivation and Incentives / Case Study: Motivating Employees to Annotate Content / Case Study: Building a Community of Practice Around Web Service Management and Annotation / Case Study: Games with a Purpose for Semantic Content Creation / Conclusions

## Knowledge-based Software Engineering

### Proceedings of the Eighth Joint Conference on Knowledge-Based Software Engineering

[IOS Press](#) Addresses various topics in the context of knowledge-based software engineering, including challenges that have arisen in this area of research. This book includes topics such as knowledge-based requirements engineering, domain analysis and modeling; development processes for knowledge-based applications; and, knowledge acquisition.

### Knowledge-Based Processes in Software Development

[IGI Global](#) Recent growth in knowledge management concepts has played a vital role in the improvement of organizational performance. These knowledge management approaches have been influential in achieving the goal of efficient production of software development processes. Knowledge-Based Processes in Software Development focuses on the inherent issues to help practitioners in gaining understanding of software development processes. The best practices highlighted in this publication will be essential to software professionals working in the industry as well as students and researchers in the domain of software engineering in order to successfully employ knowledge management procedures.

## Information Processing and Management of Uncertainty in Knowledge-Based Systems. Theory and Foundations

### 17th International Conference, IPMU 2018, Cádiz, Spain, June 11-15, 2018, Proceedings, Part II

[Springer](#) This three volume set (CCIS 853-855) constitutes the proceedings of the 17th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2017, held in Cádiz, Spain, in June 2018. The 193 revised full papers were carefully reviewed and selected from 383 submissions. The papers are organized in topical sections on advances on explainable artificial intelligence; aggregation operators, fuzzy metrics and applications; belief function theory and its applications; current techniques to model, process and describe time series; discrete models and computational intelligence; formal concept analysis and uncertainty; fuzzy implication functions; fuzzy logic and artificial intelligence problems; fuzzy mathematical analysis and applications; fuzzy methods in data mining and knowledge discovery; fuzzy transforms: theory and applications to data analysis and image processing; imprecise probabilities: foundations and applications; mathematical fuzzy logic, mathematical morphology; measures of comparison and entropies for fuzzy sets and their extensions; new trends in data aggregation; pre-aggregation functions and generalized forms of monotonicity; rough and fuzzy similarity modelling tools; soft computing for decision making in uncertainty; soft computing in information retrieval and sentiment analysis; tri-partitions and uncertainty; decision making modeling and applications; logical methods in mining knowledge from big data; metaheuristics and machine learning; optimization models for modern analytics; uncertainty in medicine; uncertainty in Video/Image Processing (UVIP).

# Corporate Knowledge Discovery and Organizational Learning

## The Role, Importance, and Application of Semantic Business Process Management

*Springer* This book investigates organizational learning from a variety of information processing perspectives. Continuous change and complexity in regulatory, social and economic environments are increasingly forcing organizations and their employees to acquire the necessary job-specific knowledge at the right time and in the right format. Though many regulatory documents are now available in digital form, their complexity and diversity make identifying the relevant elements for a particular context a challenging task. In such scenarios, business processes tend to be important sources of knowledge, containing rich but in many cases embedded, hidden knowledge. This book discusses the possible connection between business process models and corporate knowledge assets; knowledge extraction approaches based on organizational processes; developing and maintaining corporate knowledge bases; and semantic business process management and its relation to organizational learning approaches. The individual chapters reveal the different elements of a knowledge management solution designed to extract, organize and preserve the knowledge embedded in business processes so as to: enrich organizational knowledge bases in a systematic and controlled way, support employees in acquiring job role-specific knowledge, promote organizational learning, and steer human capital investment. All of these topics are analyzed on the basis of real-world cases from the domains of insurance, food safety, innovation, and funding.