

---

# Read Book Edition 2nd Development Ontology And Engineering Driven Model

---

Yeah, reviewing a book **Edition 2nd Development Ontology And Engineering Driven Model** could ensue your close friends listings. This is just one of the solutions for you to be successful. As understood, success does not recommend that you have fantastic points.

Comprehending as skillfully as settlement even more than supplementary will come up with the money for each success. adjacent to, the publication as competently as perception of this Edition 2nd Development Ontology And Engineering Driven Model can be taken as capably as picked to act.

---

**KEY=EDITION - MALAKI KASEY**

---

## Model Driven Engineering and Ontology Development

*Springer Science & Business Media* Defining a formal domain ontology is considered a useful, not to say necessary step in almost every software project. This is because software deals with ideas rather than with self-evident physical artefacts. However, this development step is hardly ever done, as ontologies rely on well-defined and semantically powerful AI concepts such as description logics or rule-based systems, and most software engineers are unfamiliar with these. This book fills this gap by covering the subject of MDA application for ontology development on the Semantic Web. The writing is technical yet clear, and is illustrated with examples. The book is supported by a website.

## Ontology-Driven Software Development

*Springer Science & Business Media* This book is about a significant step forward in software development. It brings state-of-the-art ontology reasoning into mainstream software development and its languages. Ontology Driven Software Development is the essential, comprehensive resource on enabling technologies, consistency checking and process guidance for ontology-driven software development (ODSD). It demonstrates how to apply ontology reasoning in the lifecycle of software development, using current and emerging standards and technologies. You will learn

new methodologies and infrastructures, additionally illustrated using detailed industrial case studies. The book will help you: Learn how ontology reasoning allows validations of structure models and key tasks in behavior models. Understand how to develop ODSD guidance engines for important software development activities, such as requirement engineering, domain modeling and process refinement. Become familiar with semantic standards, such as the Web Ontology Language (OWL) and the SPARQL query language. Make use of ontology reasoning, querying and justification techniques to integrate software models and to offer guidance and traceability supports. This book is helpful for undergraduate students and professionals who are interested in studying how ontologies and related semantic reasoning can be applied to the software development process. In addition, it will also be useful for postgraduate students, professionals and researchers who are going to embark on their research in areas related to ontology or software engineering.

## Ontology-Based Applications for Enterprise Systems and Knowledge Management

*IGI Global* "This book provides an opportunity for readers to clearly understand the notion of ontology engineering and the practical aspects of this approach in the domains of two interest areas: Knowledge Management Systems and Enterprise Systems"--

## Formal and Practical Aspects of Domain-Specific Languages: Recent Developments

### Recent Developments

*IGI Global* "This book presents current research on all aspects of domain-specific language for scholars and practitioners in the software engineering fields, providing new results and answers to open problems in DSL research"--

## Innovations in Smart Cities Applications Edition 2

# The Proceedings of the Third International Conference on Smart City Applications

*Springer* This book highlights cutting-edge research presented at the third installment of the International Conference on Smart City Applications (SCA2018), held in Tétouan, Morocco on October 10-11, 2018. It presents original research results, new ideas, and practical lessons learned that touch on all aspects of smart city applications. The respective papers share new and highly original results by leading experts on IoT, Big Data, and Cloud technologies, and address a broad range of key challenges in smart cities, including Smart Education and Intelligent Learning Systems, Smart Healthcare, Smart Building and Home Automation, Smart Environment and Smart Agriculture, Smart Economy and Digital Business, and Information Technologies and Computer Science, among others. In addition, various novel proposals regarding smart cities are discussed. Gathering peer-reviewed chapters written by prominent researchers from around the globe, the book offers an invaluable instructional and research tool for courses on computer and urban sciences; students and practitioners in computer science, information science, technology studies and urban management studies will find it particularly useful. Further, the book is an excellent reference guide for professionals and researchers working in mobility, education, governance, energy, the environment and computer sciences.

## Model Driven Architecture and Ontology Development

*Springer Science & Business Media* Defining a formal domain ontology is considered a useful, not to say necessary step in almost every software project. This is because software deals with ideas rather than with self-evident physical artefacts. However, this development step is hardly ever done, as ontologies rely on well-defined and semantically powerful AI concepts such as description logics or rule-based systems, and most software engineers are unfamiliar with these. This book fills this gap by covering the subject of MDA application for ontology development on the Semantic Web. The writing is technical yet clear, and is illustrated with examples. The book is supported by a website.

## Ontological Engineering Approach of

# Developing Ontology of Information Science

Anchor Academic Publishing Ontology has been a subject of many studies carried out in artificial intelligence (AI) and information system communities. Ontology has become an important component of the semantic web, covering a variety of knowledge domains. Although building domain ontologies still remains a big challenge with regard to its designing and implementation, there are still many areas that need to create ontologies. Information Science (IS) is one of these areas that need a unified ontology model to facilitate information access among the heterogeneous data resources and share a common understanding of the domain knowledge. Recently, the development of domain ontologies has become increasingly important for knowledge level interoperation and information integration. They provide functional features for AI and knowledge representation. Domain Ontology is a central foundation of growth for the semantic web that provides a general knowledge for correspondence and communication among heterogeneous systems. Particularly with a rise of ontology in the artificial intelligence (AI) domain, it can be seen as an almost inevitable development in computer science and AI in general.

## Software Engineering and Computer Systems, Part III Second International Conference, ICSECS 2011, Kuantan, Pahang, Malaysia, June 27-29, 2011, Proceedings

Springer Science & Business Media This Three-Volume-Set constitutes the refereed proceedings of the Second International Conference on Software Engineering and Computer Systems, ICSECS 2011, held in Kuantan, Malaysia, in June 2011. The 190 revised full papers presented together with invited papers in the three volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on software engineering; network; bioinformatics and e-health; biometrics technologies; Web engineering; neural network; parallel and distributed; e-learning; ontology; image processing; information and data management; engineering; software security; graphics and multimedia; databases;

algorithms; signal processing; software design/testing; e- technology; ad hoc networks; social networks; software process modeling; miscellaneous topics in software engineering and computer systems.

## Ontologies for Software Engineering and Software Technology

*Springer Science & Business Media* This book covers two applications of ontologies in software engineering and software technology: sharing knowledge of the problem domain and using a common terminology among all stakeholders; and filtering the knowledge when defining models and metamodels. By presenting the advanced use of ontologies in software research and software projects, this book is of benefit to software engineering researchers in both academia and industry.

## Semantic e-Science

*Springer Science & Business Media* The Semantic Web has been a very important development in how knowledge is disseminated and manipulated on the Web, but it has been of particular importance to the flow of scientific knowledge, and will continue to shape how data is stored and accessed in a broad range of disciplines, including life sciences, earth science, materials science, and the social sciences. After first presenting papers on the foundations of semantic e-science, including papers on scientific knowledge acquisition, data integration, and workflow, this volume looks at the state of the art in each of the above-mentioned disciplines, presenting research on semantic web applications in the life, earth, materials, and social sciences. Drawing papers from three semantic web workshops, as well as papers from several invited contributors, this volume illustrates how far semantic web applications have come in helping to manage scientific information flow.

## Advances in Computer Science for Engineering and Education II

*Springer* This book gathers high-quality, peer-reviewed research papers presented at the Second International Conference on Computer Science, Engineering and Education Applications (ICCSEEA2019), held in Kiev, Ukraine on 26–27 January 2019, and jointly organized by the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” and the International Research Association of Modern Education and Computer Science. The papers discuss state-of-the-art topics and advances in computer science; neural networks; pattern recognition; engineering techniques; genetic coding systems; deep learning and its medical applications; and knowledge representation and its applications in education. Given its scope, the book offers an excellent resource for researchers, engineers, management practitioners, and graduate and undergraduate students interested in computer science and its applications in engineering and education.

# Advanced Information Systems Engineering Workshops CAiSE 2021 International Workshops, Melbourne, VIC, Australia, June 28 – July 2, 2021, Proceedings

*Springer Nature* This book constitutes the thoroughly refereed proceedings of the international workshops associated with the 33rd International Conference on Advanced Information Systems Engineering, CAiSE 2021, which was held during June 28-July 2, 2021. The conference was planned to take place in Melbourne, Australia, but changed to an online format due to the COVID-19 pandemic. The workshops included in this volume are: · BC4IS: 1st International Workshop on Blockchain for Information Systems · EMOBI : 3rd International Workshop on Ethics and Morality in Business Informatics · KET4DF : 3rd International Workshop on Key Enabling Technology for Digital Factories · MOBA: 1st International Workshop on Model-driven Organizational and Business Agility · NeGIS: 2nd International Workshop on Next Generation Information Systems They focus on topics and trends ranging from blockchain technologies to digital factories, ethics, and business agility to the next generation of information systems. The 14 full papers and 1 short paper presented in this volume were carefully reviewed and selected from 33 submissions.

# Handbook Of Software Engineering And Knowledge Engineering, Vol 3: Recent Advances

*World Scientific* The book covers the recent new advances in software engineering and knowledge engineering. It is intended as a supplement to the two-volume handbook of software engineering and knowledge engineering. The editor and authors are well-known international experts in their respective fields of expertise. Each chapter in the book is entirely self-contained and gives in-depth information on a specific topic of current interest. This book will be a useful desktop companion for both practitioners and students of software engineering and knowledge engineering.

# Formal Ontology in Information Systems

## Proceedings of the Fifth International Conference (FOIS 2008)

*IOS Press* The International Conference in Formal Ontology on Information Systems (FOIS) has explored the multiple perspectives on the notion of ontology that have arisen from such diverse research communities as philosophy, logic, computer science, cognitive science, linguistics, and various scientific domains.

# Business Information Systems

## 20th International Conference, BIS 2017, Poznan, Poland, June 28–30, 2017, Proceedings

*Springer* This book constitutes the refereed proceedings of the 20th International Conference on Business Information Systems, BIS 2017, held in Poznań, Poland, in June 2017. Big Data Analytics helps to understand and enhance enterprises by linking many fields of information technology and business. This year's conference theme was: Big Data Analytics for Business and Public Administration. The 24 full papers presented in this volume were carefully reviewed and selected from 72 submissions. They were organized in topical sections named: big and smart data; business and enterprise modeling; ICT project management; process management; smart infrastructure; and applications.

# Model and Data Engineering

## 5th International Conference, MEDI

## 2015, Rhodes, Greece, September 26-28, 2015, Proceedings

*Springer* This book constitutes the refereed proceedings of the 5th International Conference on Model and Data Engineering, MEDI 2015, held in Rhodes, Greece, in September 2015. The 18 full papers and 9 short papers presented together with 2 invited talks were carefully reviewed and selected from 55 submissions. The papers are organized in topical sections such as modeling and meta modeling; ontology-based modeling, reasoning and reuse; event-B and modeling languages; context modeling and model transformation; data mining; query processing; modeling activities and inference; prediction and recommendation; requirement and systems engineering.

## On the Move to Meaningful Internet Systems: OTM 2008 Workshops

OTM Confederated International Workshops and Posters, ADI, AWeSoMe, COMBEK, EI2N, IWSSA, MONET, OnToContent & QSI, ORM, PerSys, RDDDS, SEMELS, and SWWS 2008, Monterrey, Mexico, November 9-14, 2008, Proceedings

*Springer Science & Business Media* the second covering the issues of security in complex Internet-based information systems. Each of these conferences encourages researchers to treat their respective topics within a framework that incorporates jointly (a) theory, (b) conceptual design and development, and (c) applications, in particular case studies and industrial solutions. Following and expanding the model created in 2003, we again solicited and selected quality workshop proposals to complement the more "archival" nature of the main conferences with research results in a number of selected and more "avant-garde" areas related to the general topic of distributed computing. For- stance, the so-

called Semantic Web has given rise to several novel research areas combining linguistics, information systems technology, and artificial intelligence, such as the modeling of (legal) regulatory systems and the ubiquitous nature of their usage. We were glad to see that in spite of the moves switching sides of the Atlantic, seven of our earlier successful workshops (notably AweSOME, SWWS, ORM, OnToContent, MONET, PerSys, RDDS) re-appeared in 2008 with a third or even fourth edition, sometimes by alliance with other newly emerging workshops, and that no fewer than seven brand-new independent workshops could be selected from proposals and hosted: ADI, COMBEK, DiSCo, IWSSA, QSI and SEMELS. Workshop audiences productively mingled with each other and with those of the main conferences, and there was considerable overlap in authors. The OTM organizers are especially grateful for the leadership, diplomacy and competence of Dr. Pilar Herrero in managing this complex and delicate process for the 7th consecutive year.

## Best Practices and New Perspectives in Service Science and Management

*IGI Global* Within global commerce, services and management play a vital role in the economy. Service systems are necessary for organizations, and a multi-disciplinary approach is ideal to establish full understanding of these systems. *Best Practices and New Perspectives in Service Science and Management* provides original research on all aspects of service science, service management, service engineering, and its supporting technology in order to administer cutting-edge knowledge to encourage the improvement of services. This book is essential for researchers and practitioners in the fields of computer science, software management, and engineering.

## Legal Ontology Engineering Methodologies, Modelling Trends, and the Ontology of Professional Judicial Knowledge

*Springer Science & Business Media* 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.

## Journal on Data Semantics VII

*Springer Science & Business Media* The LNCS Journal on Data Semantics is devoted to the presentation of notable work that addresses research and development on issues related to data semantics. Based on the publication platform Lecture Notes in Computer Science, this new journal is widely disseminated and available worldwide. The scope of the journal ranges from theories supporting the formal definition of semantic content to innovative domain-specific applications of semantic knowledge.

## Semantic Enterprise Application Integration for Business Processes: Service-Oriented Frameworks Service-Oriented Frameworks

*IGI Global* "This book provides methods that allow for access to corporate and customer data independent of where it resides"--Provided by publisher.

## Business Information Systems Workshops

**BIS 2018 International Workshops,  
Berlin, Germany, July 18–20, 2018,**

# Revised Papers

*Springer* This book constitutes revised papers from the seven workshops and one accompanying event which took place at the 21st International Conference on Business Information Systems, BIS 2018, held in Berlin, Germany, in July 2018. Overall across all workshops, 58 out of 122 papers were accepted. The workshops included in this volume are: AKTB 2018 - 10th Workshop on Applications of Knowledge-Based Technologies in Business BITA 2018 - 9th Workshop on Business and IT Alignment BSCT 2018 - 1st Workshop on Blockchain and Smart Contract Technologies IDEA 2018 - 4th International Workshop on Digital Enterprise Engineering and Architecture IDEATE 2018 - 3rd Workshop on Big Data and Business Analytics Ecosystems SciBOWater 2018 - Scientific Challenges & Business Opportunities in Water Management QOD 2018 - 1st Workshop on Quality of Open Data In addition, one keynote speech in full-paper length and contributions from the Doctoral Consortium are included

## ECEG2011-Proceedings of the 11th European Conference on EGovernment

### ECEG2011

*Academic Conferences Limited*

## Perspectives of System Informatics 12th International Andrei P. Ershov Informatics Conference, PSI 2019, Novosibirsk, Russia, July 2–5, 2019, Revised Selected Papers

*Springer Nature* This book constitutes the refereed proceedings of the 12th International Andrei P. Ershov Informatics Conference, PSI 2019, held in Novosibirsk, Russia, in July 2019. The 18 full papers and 3 short papers presented in this volume were carefully reviewed and selected from 70 submissions. The papers cover various topics related to the Mathematics of Computing, Information Systems, Formal Languages, dependable and fault-tolerant Systems and Network, Automata Theory,

and much more.

## Agent-Oriented Software Engineering II

Second International Workshop, AOSE 2001, Montreal, Canada, May 29, 2001. Revised Papers and Invited Contributions

*Springer* Since the 1980s, software agents and multi-agent systems have grown into what is now one of the most active areas of research and development activity in computing generally. One of the most important reasons for the current intensity of interest in the agent-based computing paradigm certainly is that the concept of an agent as an autonomous system, capable of interacting with other agents in order to satisfy its design objectives, is a natural one for software designers. This recognition has led to the growth of interest in agents as a new paradigm for software engineering. This book reflects the state of the art in the field by presenting 14 revised full papers accepted for the second workshop on this topic, AOSE 2001, together with five invited survey articles. The book offers topical sections on societies and organizations, protocols and interaction frameworks, UML and agent systems, agent-oriented requirements capture and specification, and analysis and design.

## Ambient Intelligence

First International Joint Conference, Aml 2010, Málaga, Spain, November 10-12, 2010, Proceedings

*Springer Science & Business Media* In a world supported by Ambient Intelligence (Aml), various devices embedded in the environment collectively use the distributed information and the intelligence inherent in this interconnected environment. A range of information from sensing and reas- ing technologies is used by distributed

devices in the environment. The cooperation between natural user interfaces and sensor interfaces covers all of a person's surroundings, resulting in a device environment that behaves intelligently; the term "Ambient Intelligence" has been coined to describe it. In this way, the environment is able to recognize the persons in it, to identify their individual needs, to learn from their behavior, and to act and react in their interest. Since this vision is influenced by a lot of different concepts in information processing and combines multi-disciplinary fields in electrical engineering, computer science, industrial design, user interfaces, and cognitive sciences, considerable research is needed to provide new models of technological innovation within a multi-dimensional society. Thus the Aml vision relies on the large-scale integration of electronics into the environment, enabling the actors, i.e., people and objects, to interact with their surrounding in a seamless, trustworthy, and natural manner.

## Intelligent Learning Infrastructure for Knowledge Intensive Organizations

### A Semantic Web Perspective

*IGI Global* Discusses the convergence of knowledge and learning management and provides state-of-the art knowledge with a semantic web perspective.

## Networked Digital Technologies, Part II

### 4th International Conference, NDT 2012, Dubai, UAE, April 24-26, 2012. Proceedings, Part II

*Springer* This two-volume-set (CCIS 293 and CCIS 294) constitutes the refereed proceedings of the International Conference on Networked Digital Technologies, NDT 2012, held in Dubai, UAE, in April 2012. The 96 papers presented in the two volumes were carefully reviewed and selected from 228 submissions. The papers are organized in topical sections on collaborative systems for e-sciences; context-aware processing and ubiquitous systems; data and network mining; grid and cloud computing; information and data management; intelligent agent-based systems; internet modeling and design; mobile, ad hoc and sensor network management;

peer-to-peer social networks; quality of service for networked systems; semantic Web and ontologies; security and access control; signal processing and computer vision for networked systems; social networks; Web services.

## Model Driven Architecture

### European MDA Workshops:

Foundations and Applications,

MDAFA 2003 and MDAFA 2004,

Twente, The Netherlands, June

26-27, 2003, and Linköping,

Sweden, June 10-11, 2004, Revised

### Selected Papers

*Springer Science & Business Media* Model-Driven Architecture (MDA) is an initiative proposed by the Object Management Group (OMG) for platform-generic software development. MDA separates the specification of system functionality from the implementation on a specific platform. It is aimed at making software assets more resilient to changes caused by emerging technologies. While stressing the importance of modeling, the MDA initiative covers a wide spectrum of research areas. Further efforts are required to bring them into a coherent approach based on open standards and supported by matured tools and techniques.

This volume contains the selected papers of two workshops on "Model-Driven Architecture - Foundations and Applications" (MDAFA): MDAFA 2003 held at the University of Twente, Twente, The Netherlands, June 26-27, 2003, and MDAFA 2004 held at Linköping University, Linköping, Sweden, June 10-11, 2004. The goal of the workshops was to understand the foundations of MDA, to share experience in applying MDA techniques and tools, and to outline future research directions. The workshop organizers encouraged authors of accepted papers to re-submit their papers to a post-workshop reviewing process; 15 of these papers were accepted to appear in this volume on MDA.

## The Semantic Web - ISWC 2013

# 12th International Semantic Web Conference, Sydney, NSW, Australia, October 21-25, 2013, Proceedings, Part II

*Springer* The two-volume set LNCS 8218 and 8219 constitutes the refereed proceedings of the 12th International Semantic Web Conference, ISWC 2013, held in Sydney, Australia, in October 2013. The International Semantic Web Conference is the premier forum for Semantic Web research, where cutting edge scientific results and technological innovations are presented, where problems and solutions are discussed, and where the future of this vision is being developed. It brings together specialists in fields such as artificial intelligence, databases, social networks, distributed computing, Web engineering, information systems, human-computer interaction, natural language processing, and the social sciences. Part 1 (LNCS 8218) contains a total of 45 papers which were presented in the research track. They were carefully reviewed and selected from 210 submissions. Part 2 (LNCS 8219) contains 16 papers from the in-use track which were accepted from 90 submissions. In addition, it presents 10 contributions to the evaluations and experiments track and 5 papers of the doctoral consortium.

## Theory and Applications of Ontology: Computer Applications

*Springer Science & Business Media* Ontology was once understood to be the philosophical inquiry into the structure of reality: the analysis and categorization of 'what there is'. Recently, however, a field called 'ontology' has become part of the rapidly growing research industry in information technology. The two fields have more in common than just their name. Theory and Applications of Ontology is a two-volume anthology that aims to further an informed discussion about the relationship between ontology in philosophy and ontology in information technology. It fills an important lacuna in cutting-edge research on ontology in both fields, supplying stage-setting overview articles on history and method, presenting directions of current research in either field, and highlighting areas of productive interdisciplinary contact. Theory and Applications of Ontology: Computer Applications presents ontology in ways that philosophers are not likely to find elsewhere. The volume offers an overview of current research in ontology, distinguishing basic conceptual issues, domain applications, general frameworks, and mathematical formalisms. It introduces the reader to current research on frameworks and applications in information technology in ways that are sure to invite reflection and constructive responses from ontologists in philosophy.

# Visual Knowledge Modeling for Semantic Web Technologies: Models and Ontologies

## Models and Ontologies

*IGI Global* "This book addresses how we can make the Web more useful, more intelligent, more knowledge intensive to fulfill our more and more demanding learning and working needs? It is based on the premise that representing knowledge visually is key for individuals and organizations to enable useful access to the knowledge era"--Provided by publisher.

## Transdisciplinary Engineering for Complex Socio-technical Systems - Real-life Applications

### Proceedings of the 27th ISTE International Conference on Transdisciplinary Engineering, July 1 - July 10, 2020

*IOS Press* Transdisciplinary engineering transcends other inter- and multi-disciplinary ways of working, such as Concurrent Engineering (CE). In particular, transdisciplinary processes are aimed at solving complex, ill-defined problems, or problems for which the solution is not immediately obvious. No one discipline or single person can provide sufficient knowledge to solve such problems, so collaboration is essential. This book presents the proceedings of the 27th ISTE International Conference on Transdisciplinary Engineering, organized by Warsaw University of Technology, Poland, from 1-10 July 2020. ISTE2020 was the first of this conference series to be held virtually, due to the COVID-19 restrictions. Entitled Transdisciplinary Engineering for Complex Socio-technical Systems - Real-life Applications, the book includes 71 peer-reviewed papers presented at the conference by authors from 17 countries. These range from theoretical and conceptual to strongly pragmatic and addressing industrial best practice and, together with invited talks, they have been

collated into 9 sections: Transdisciplinary Engineering (7 papers); Transdisciplinary Engineering Education (4 papers); Industry 4.0, Methods and Tools (7 papers); Human-centered Design (8 papers); Methods and Tools for Design and Production (14 papers); Product and Process Development (9 papers); Knowledge and Data Modeling (13 papers); Business Process and Supply Chain Management (7 papers); and Sustainability (2 papers). The book provides an overview of new approaches, methods, tools and their applications, as well as current research and development, and will be of interest to researchers, design practitioners, and educators working in the field.

## On the Mathematics of Modelling, Metamodelling, Ontologies and Modelling Languages

*Springer Science & Business Media* Computing as a discipline is maturing rapidly. However, with maturity often comes a plethora of subdisciplines, which, as time progresses, can become isolationist. The subdisciplines of modelling, metamodelling, ontologies and modelling languages within software engineering e.g. have, to some degree, evolved separately and without any underpinning formalisms. Introducing set theory as a consistent underlying formalism, Brian Henderson-Sellers shows how a coherent framework can be developed that clearly links these four, previously separate, areas of software engineering. In particular, he shows how the incorporation of a foundational ontology can be beneficial in resolving a number of controversial issues in conceptual modelling, especially with regard to the perceived differences between linguistic metamodelling and ontological metamodelling. An explicit consideration of domain-specific modelling languages is also included in his mathematical analysis of models, metamodels, ontologies and modelling languages. This encompassing and detailed presentation of the state-of-the-art in modelling approaches mainly aims at researchers in academia and industry. They will find the principled discussion of the various subdisciplines extremely useful, and they may exploit the unifying approach as a starting point for future research.

## The Semantic Web: Research and Applications

### 5th European Semantic Web

# Conference, ESWC 2008, Tenerife, Canary Islands, Spain

*Springer* This book constitutes the refereed proceedings of the 5th European Semantic Web Conference, ESWC 2008, held in Tenerife, Canary Islands, Spain, in June 2008. The 51 revised full papers presented together with 3 invited talks and 25 system description papers were carefully reviewed and selected from a total of 270 submitted papers. The papers are organized in topical sections on agents, application ontologies, applications, formal languages, foundational issues, learning, ontologies and natural language, ontology alignment, query processing, search, semantic Web services, storage and retrieval of semantic Web data, as well as user interfaces and personalization.

## Semantic Web and Model-Driven Engineering

*John Wiley & Sons* The next enterprise computing era will rely on the synergy between both technologies: semantic web and model-driven software development (MDS). The semantic web organizes system knowledge in conceptual domains according to its meaning. It addresses various enterprise computing needs by identifying, abstracting and rationalizing commonalities, and checking for inconsistencies across system specifications. On the other side, model-driven software development is closing the gap among business requirements, designs and executables by using domain-specific languages with custom-built syntax and semantics. It focuses on using modeling languages as programming languages. Among many areas of application, we highlight the area of configuration management. Consider the example of a telecommunication company, where managing the multiple configurations of network devices (routers, hubs, modems, etc.) is crucial. Enterprise systems identify and document the functional and physical characteristics of network devices, and control changes to those characteristics. Applying the integration of semantic web and model-driven software development allows for (1) explicitly specifying configurations of network devices with tailor-made languages, (2) for checking the consistency of these specifications (3) for defining a vocabulary to share device specifications across enterprise systems. By managing configurations with consistent and explicit concepts, we reduce cost and risk, and enhance agility in response to new requirements in the telecommunication area. This book examines the synergy between semantic web and model-driven software development. It brings together advances from disciplines like ontologies, description logics, domain-specific modeling, model transformation and ontology engineering to take enterprise computing to the next level.

# Approaches to Legal Ontologies Theories, Domains, Methodologies

*Springer Science & Business Media* 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.

# Advances and Applications in Model-Driven Engineering

*IGI Global* As organizations and research institutions continue to emphasize model-driven engineering (MDE) as a first-class approach in the software development process of complex systems, the utilization of software in multiple domains and professional networks is becoming increasingly vital. *Advances and Applications in Model-Driven Engineering* explores this relatively new approach in software development that can increase the level of abstraction of development of tasks. This publication covers the issues of bridging the gaps between various disciplines within software engineering and computer science. Professionals, researchers, and students will discover the most current tools and techniques available in the field to maximize efficiency of model-driven software development.

# Ontology Management

# Semantic Web, Semantic Web Services, and Business Applications

*Springer Science & Business Media* *Ontology Management* provides an up-to-date, scientifically correct, concise and easy-to-read reference on this topic. The book includes relevant tasks, practical and theoretical challenges, limitations and methodologies, plus available tooling support. The editors discuss integrating the conceptual and technical dimensions with a business view on using ontologies, stressing the cost dimension of ontology engineering and offering guidance on how to derive ontologies semi-automatically from existing standards and specifications.

# Knowledge Discovery, Knowledge Engineering and Knowledge Management

## Third International Joint Conference, IC3K 2011, Paris, France, October 26-29, 2011. Revised Selected Papers

*Springer* This book constitutes the thoroughly refereed post-conference proceedings of the Third International Joint Conference on Knowledge Discovery, Knowledge Engineering, and Knowledge Management, IC3K 2011, held in Paris, France, in October 2011. This book includes revised and extended versions of a strict selection of the best papers presented at the conference; 39 revised full papers together with one invited lecture were carefully reviewed and selected from 429 submissions. According to the three covered conferences KDIR 2011, KEOD 2011, and KMIS 2011, 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.