Ramesh Jain and Amit Sheth, Eds.

Semantic Web and Beyond: Computing for Human Experience

This book series brings together forward looking research and technology that will shape our world more intimately than ever before as computing becomes an extension of human experience. It covers all aspects of computing that is very closely tied to human perception, understanding and experience. It brings together computing that deal with semantics, perception and experience. It serves as the platform for exchange of both practical technologies and far reaching research.

As computing becomes ubiquitous and pervasive, it is increasingly becoming an extension of human, modifying or enhancing human experience. Today's car reacts to human perception of danger with a series of computers participating in how to handle the vehicle to human command and environmental conditions. Proliferating sensors help with observations, decision making as well as sensory modifications. The emergent semantic web will lead to machine understanding of data and help exploit heterogeneous, multi-source digital media. Emerging applications in situation monitoring and entertainment applications are resulting in development of experiential environments.

Unique Aspect of the Series

This series presents a set of novel integrative themes that will reshape computing and encompasses some of the hottest and emerging areas of computing. The series is led by co-editors whose experience spans academics, industry, and entrepreneurships. Consequently, the book series will bring project that will include long term research as well as near term practical technologies to serve university students and professionals, academic researchers, and industry practitioners.

Scope

Scope of the series includes but is not limited to:

- Semantics of Information: Interoperability and Integration
- Multimedia Semantics, Geospatial Semantics
- Semantic Web, Ontology driven systems
- World knowledge: incomplete, uncertain, inconsistent, imperfect, unspecific knowledge
- Humanist computing: modeling and computing with words, concepts and behavior; Human and social factors in knowledge management

Primary Audience of Book Series

- Research Monographs, primarily service academic and industry researchers (no dissertations)
- Edited books on time emerging topics and hot areas
- Books targeted at professionals, covering technologies finding commercial applications and standards
- Advanced course textbooks targeted at university community (students and professors)

Titles in this Series so far — details on reverse side

Vol. 1: Semantic Management of Middleware, Oberle, Daniel, 2006

Vol. 2: Canadian Semantic Web, Koné, Mamadou Tadiou; Lemire, Daniel (Eds.), 2006

Vol. 3: Semantic Web Services, Processes and Applications, Cardoso, Jorge; Sheth, Amit P. (Eds.), 2006

Vol. 4: Ontology Alignment, Bridging the Semantic Gap, Ehrig, Marc, 2006

Vol. 5: Social Networks and the Semantic Web, Mika, Peter, 2007

Vol. 6: The Semantic Web, Real-World Applications from Industry, Cardoso, Jorge; Hepp, Martin; Lytras, Miltiadis (Eds.), 2008

Vol. 7: Ontology Management, Semantic Web, Semantic Web Services, and Business Applications, Hepp, M.; De Leenheer, P.; de Moor, A.; Sure, Y. (Eds.), 2008
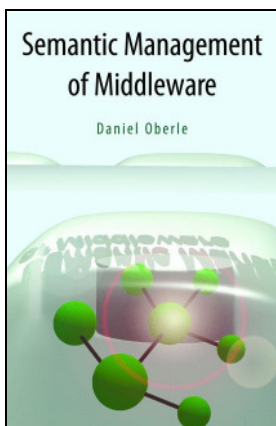
Daniel Oberle, University of Karlsruhe, Germany

Semantic Management of Middleware

This new reference provides a detailed road map on how semantics and Semantic Web technologies can play a significant role in creating a middleware system and in managing heterogeneous software systems. The book builds a rigorous approach towards giving the declarative descriptions of components and services a well-defined meaning by specifying ontological foundations and by showing how such foundations may be realized in practical, up-and-running systems. An introduction to the basics of middleware technology is provided, along with a discussion of ontologies, to help readers who are not familiar with the area to get the necessary background information.

2006. 268 p. 60 illus. Hardcover / Semantic Web and Beyond, Volume 1 / ISBN: 978-0-387-27630-4
**► $ 89.95**
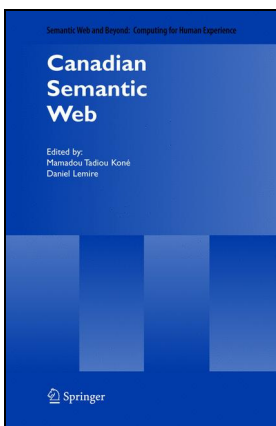
Mamadou Tadiou Koné, Laval University, Quebec, QC, Canada; Daniel Lemire, University of Quebec at Montreal, QC, Canada (Eds.)

Canadian Semantic Web

This text covers a variety of well known topics of interest to practitioners in industry and research scientists. The range of topics includes languages, tools and methodologies for the semantic Web, semantic Web-based ontology management and engineering, semantic Web services, practical applications of the semantic Web techniques, artificial intelligence methods and tools for the semantic Web, software agents on the semantic Web, visualization and modeling of the semantic Web. The goal of this book is to provide a state-of-the-art review of the research as well as to introduce topics of interest to experts.

2006. 232 p. 20 illus. Hardcover / Semantic Web and Beyond, Volume 2 / ISBN: 978-0-387-29815-3
**► $ 139.00**
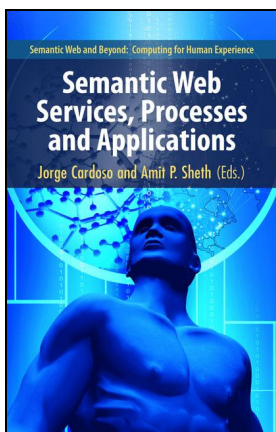
Jorge Cardoso, Universidade da Madeira, Funchal, Portugal; Amit P. Sheth, University of Georgia, Athens, GA, USA (Eds.)

Semantic Web Services, Processes and Applications

This book envisages the intelligent combination of Web services and the Semantic Web. The Semantic Web will create an environment where computers are able to understand the meaning of information and automatically process it. Web services support application-to-application Internet communication, allowing applications at different network locations to function as if they were part of a single, large software system. The book brings together contributions from research scientists in both industry and academia to study, explore and understand the phases that compose the lifecycle of Semantic Web processes. Detailing, in short, a technological revolution that will ultimately lead to a new breed of web-based applications.

2006. 383 p. 129 illus. Hardcover / Semantic Web and Beyond, Volume 3 / ISBN: 978-0-387-30239-3
► $ 99.00
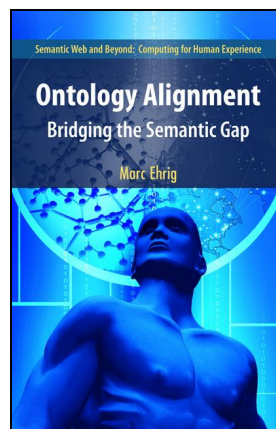
Marc Ehrig, University of Karlsruhe, Germany

Ontology Alignment
Bridging the Semantic Gap

This book introduces novel methods and approaches for semantic integration. In addition to developing ground-breaking new methods for ontology alignment, the author provides extensive explanations of up-to-date case studies. It includes a thorough investigation of the foundations and provides pointers to future steps in ontology alignment with conclusion linking this work to the knowledge society.

2007. 248 p. Hardcover / Semantic Web and Beyond, Volume 4 / ISBN: 978-0-387-32805-8
► $ 129.00