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Journal on Data Semantics XII



Springer

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The LNCS Journal on Data Semantics

Computerized information handling has changed its focus from centralized data management systems to decentralized data-exchange facilities. Modern distribution channels, such as high-speed Internet networks and wireless communication infrastructure, provide reliable technical support for data distribution and data access, materializing the new, popular idea that data may be available to anybody, anywhere, anytime. However, providing huge amounts of data on request often turns into a counterproductive service, making the data useless because of poor relevance or inappropriate level of detail. Semantic knowledge is the essential missing piece that allows the delivery of information that matches user requirements. Semantic agreement, in particular, is essential to meaningful data exchange.

Semantic issues have long been open issues in data and knowledge management. However, the boom in semantically poor technologies, such as the Web and XML, has boosted renewed interest in semantics. Conferences on the Semantic Web, for instance, attract big crowds of participants, while ontologies on their own have become a hot and popular topic in the database and artificial intelligence communities.

Springer's *LNCS Journal on Data Semantics* aims at providing a highly visible dissemination channel for remarkable work that in one way or another addresses research and development related to the semantics of data. The target domain ranges from theories supporting the formal definition of semantic content to innovative domain-specific application of semantic knowledge. This publication channel should be of the highest interest to researchers and advanced practitioners working on the Semantic Web, interoperability, mobile information services, data warehousing, knowledge representation and reasoning, conceptual database modeling, ontologies, and artificial intelligence.

Topics of relevance to this journal include:

- Semantic interoperability, semantic mediators
- Ontologies
- Ontology, schema and data integration, reconciliation and alignment
- Multiple representations, alternative representations
- Knowledge representation and reasoning
- Conceptualization and representation
- Multimodel and multiparadigm approaches
- Mappings, transformations, reverse engineering
- Metadata
- Conceptual data modeling
- Integrity description and handling
- Evolution and change
- Web semantics and semi-structured data

- Semantic caching
- Data warehousing and semantic data mining
- Spatial, temporal, multimedia and multimodal semantics
- Semantics in data visualization
- Semantic services for mobile users
- Supporting tools
- Applications of semantic-driven approaches

These topics are to be understood as specifically related to semantic issues. Contributions submitted to the journal and dealing with semantics of data will be considered even if they are not from the topics in the list.

While the physical appearance of the journal issues is like the books from the well-known Springer LNCS series, the mode of operation is that of a journal. Contributions can be freely submitted by authors and are reviewed by the Editorial Board. Contributions may also be invited, and nevertheless carefully reviewed, as in the case for issues that contain extended versions of the best papers from major conferences addressing data semantics issues. Special issues, focusing on a specific topic, are coordinated by guest editors once the proposal for a special issue is accepted by the Editorial Board. Finally, it is also possible that a journal issue be devoted to a single text.

The Editorial Board comprises an Editor-in-Chief (with overall responsibility), a Coeditor-in-Chief, and several members. The Editor-in-Chief has a four-year mandate. Members of the board have a three-year mandate. Mandates are renewable and new members may be elected at any time.

We are happy to welcome you to our readership and authorship, and hope we will share this privileged contact for a long time.

Stefano Spaccapietra
Editor-in-Chief
<http://lbd.epfl.ch/e/Springer/>

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- JoDS II: Special Issue on Extended Papers from 2003 Conferences, LNCS 3360, December 2004
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JoDS Volume XII

This volume of JoDS results from a rigorous selection among 20 full papers submissions received in response to a call for contributions issued in July 2007.

Reviews of submitted papers resulted in requests for major revisions to authors of nine papers. Reviews of revised versions eventually led to the acceptance of five papers for publication. They are listed in the table of contents hereinafter.

This volume also hosts an extended version of a paper originally published in the COOPIS 2005 Conference. This paper had been selected for an extended version proposal, but a misunderstanding between the authors and conference chairs caused a halt in the preparation and review process. Once the misunderstanding cleared, the submission was updated and positively reviewed and accepted according to normal selection rules.

We would like to thank authors of all submitted papers as well as all the reviewers who contributed to improving the papers through their detailed comments.

The forthcoming volume XIII is a JoDS special issue on semantic data warehousing.

We hope you'll enjoy reading this volume.

Stefano Spaccapietra
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