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Stefano Spaccapietra (Ed.)

Journal on Data Semantics XV

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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.

Although the journal issues look like the books from the well-known Springer LNCS series, the mode of operation is that of a journal. Contributions are freely submitted by authors and 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 Co-editor-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.

IMPORTANT NOTE

This is the last JoDS issue published as an LNCS volume. Starting in 2012 JoDS will become a Springer journal with a regular, quarterly, publication schedule. All information about the “new” journal will be available on Springer’s website. A new Call for Papers will very soon give to prospective authors instructions for submission.

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

Previous Issues

- JoDS I: Special Issue on Extended Papers from 2002 Conferences, LNCS 2800, December 2003
Co-editors: Sal March and Karl Aberer
- JoDS II: Special Issue on Extended Papers from 2003 Conferences, LNCS 3360, December 2004
Co-editors: Roger (Buzz) King, Maria Orłowska, Elisa Bertino, Dennis McLeod, Sushil Jajodia, and Leon Strous
- JoDS III: Special Issue on Semantic-Based Geographical Information Systems, LNCS 3534, August 2005
Guest Editor: Esteban Zimányi
- JoDS IV: Normal Issue, LNCS 3730, December 2005
- JoDS V: Special Issue on Extended Papers from 2004 Conferences, LNCS 3870, February 2006
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- JoDS VI: Special Issue on Emergent Semantics, LNCS 4090, September 2006
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- JoDS VII: Normal Issue, LNCS 4244, November 2006
- JoDS VIII: Special Issue on Extended Papers from 2005 Conferences, LNCS 4830, February 2007
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- JoDS IX: Special Issue on Extended Papers from 2005 Conferences (continued), LNCS 4601, September 2007
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- JoDS X: Normal Issue, LNCS 4900, February 2008

- JoDS XI: Special Issue on Extended Papers from 2006 Conferences, LNCS 5383, December 2008
Co-editors: Jeff Z. Pan, Philippe Thiran, Terry Halpin, Steffen Staab, Vojtech Svatek, Pavel Shvaiko, and John Roddick
- JoDS XII: Normal Issue, LNCS 5480, July 2009
- JoDS XIII: Special Issue on Semantic Data Warehouses, LNCS 5530, August 2009
Guest Editors: Esteban Zimanyi and Il-Yeong Song
- JoDS XIV: Normal Issue, LNCS 5880, November 2009
Co-editor: Lois Delcambre

JoDS Volume XV

This volume of JoDS presents articles selected from among 25 full-paper submissions received in response to two calls for contributions issued in 2009 and 2010.

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

This volume also hosts, for the first time in JoDS history, a special report on the Ontology Alignment Evaluation Initiative, an event that has been held once a year in the last five years and has attracted considerable attention from the ontology community.

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.

This is the last volume of JoDS to be published as an LNCS volume. The next issue of JoDS will be as a regular Springer journal, published quarterly starting in 2012. Please look for the Call for Papers that will announce the “new” journal, whose definition will introduce some significant changes to the LNCS JoDS. One thing will not change: the goal to be a well-known publication venue for high-quality contributions.

Meanwhile, we hope you’ll enjoy reading this volume.

Stefano Spaccapietra

Editor-in-Chief

<http://lbdwww.epfl.ch/e/Springer/>

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