

SWFAT

Proceedings of the International Workshop on Semantic Web Foundations and Application Technologies

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Welcome from the SWFAT Co-Chairs

We would like to extend our warmest welcome to all the participants of this international workshop on Semantic Web Foundations and Application Technologies. It is our pleasure to welcome you here in Nara, one of the oldest and most historic cities in Japan, famous for its ancient culture as well as being the capital of Japan during the 8th century A.D. The workshop program includes what we hope will be an exciting mixture of invited talks and a panel discussion by world-leaders in Semantic Web technology as well as refereed papers by academics and industrialists representing the state-of-the-art in research and development.

The Semantic Web is one of the key technologies that can provide a foundation for future communication of information on the World Wide Web, mediated by machines that understand the meaning of the data they are processing. It is founded on a number of established and developing W3C standards that we hope will facilitate human access to useful information, something that is increasingly important as the amount of information on the Web grows rapidly.

The SWFAT workshop in Japan will focus on two major issues related to Semantic Web. The first is the need to coordinate academic activities such as ontology theory with future business applications. The second is the crucial need to raise awareness of Semantic Web technology and key research issues in the Asia and Pacific region. As such we have endeavoured to bring together leading researchers in academia and industry from the US, Europe and the Asia-Pacific region to share experience and begin to develop a common vision for the future.

Despite the short time schedule we had for organizing the workshop we were pleased at the overall standard and numbers of submitted papers. In the end we decided to accept 8 regular papers out of the 13 submitted and a further 7 short papers. The topics of the papers include ontology authoring and development, ontology integration, protocols and standards, human networking issues and applications which cover the various levels of the 'layer cake' that forms the Semantic Web, from RDF to the Trust layer. We thank all the authors who submitted papers to the workshop and also to the program committee for the quality of their reviews.

Welcome from the SWFAT Co-Chairs

We thank you all for your efforts in travelling to attend the workshop, particularly those from outside Japan. While you are in Nara we hope that you will not only enjoy the workshop but also the rich culture that Japan and the Kansai region has to offer. Nara itself is full of places of historic and artistic interest such as the many classical temples and shrines that make it one of the quintessential Japanese cities. We hope that you will enjoy a fruitful and unconstrained exchange of information in this free and relaxed atmosphere.

With very best wishes,

Hideaki Takeda, Nigel Collier, Riichiro Mizoguchi

Keynote Speech

"Handling Heterogeneous Semantic Data models on the Web"

Stefan Decker (ISI, University of Southern California, USA)

Abstract

The Semantic Web is often referred to as the next generation of the Web, in which machine-processable data dominates over human-readable content. The first part of the talk motivates the Semantic Web. The main focus of the talk is a specific problem in the Semantic Web context: the interoperation of heterogeneous data, based on different data models and modelling languages like RDF Schema, Topic Maps, UML, etc. To tackle the interoperation problem, we developed TRIPLE, an RDF query, inference, and transformation language and system. TRIPLE allows the semantics of languages to be defined with Horn rules.

Keynote Speech

"The Semantic Grid: The Grid meets the Semantic Web"

Carole Goble (University of Manchester, UK)

Abstract

The "Grid problem" is defined as flexible, secure, coordinated resource sharing among dynamic collections of individuals, institutions, and resources - virtual organizations. Compare this with a description of the Semantic Web. The Grid is beginning to exploit technologies developed for Web Services and the Semantic Web. Perhaps the Grid and its scientific users can provide the application pull the Semantic Web needs. Perhaps the Grid can benefit from its Semantic Web technologies to realise its potential. Many argue that there a gap between current grid endeavours and the vision of a grid future in which there is a high degree of easy-to-use and seamless automation and in which there are flexible collaborations and computations on a global scale. Is the Semantic Web necessary to bridge this practice-aspiration divide? Or is this the combination of two still unproven distributing computing technologies a bridge too far?

Panel Discussion

“A glimpse into the future: how will Semantic Web change our lives in the next ten years?”

Panel Members

James Hendler (University of Maryland, USA)

Frank van Harmelen (Free University Amsterdam, The Netherlands)

Rudi Studer (Karlsruhe University, Germany)

Bijan Parsia (University of Maryland, USA)

Hideaki Takeda (NII, Japan)