

# Applications of Semantic Technologies

AST2009

## 4<sup>th</sup> International Workshop

Organisers: Stephan Grimm<sup>1</sup>, Pascal Hitzler<sup>2</sup>

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Organised in cooperation with the  
Knowledge Representation Fachgruppe of the German Informatics Society (GI)  
and the  
Semantic Technologies Institute Germany, STI Germany.

## 1 Objectives

Semantic Web is a major international research effort with the goal to make web content available for intelligent knowledge processing. It draws on standard and novel techniques from various disciplines within Computer Science, including Knowledge Management, Artificial Intelligence, Databases, Internet Technology, Software Agents, eCommerce, etc. The methods and tools developed and integrated for this purpose – often called Semantic Technologies – are generic and have a very large application potential outside the domain of the Semantic Web.

Such applications are currently being investigated in various disciplines within Computer Science, including Ambient Intelligence, Software Engineering, Cognitive Systems, Corporate Intranets, Knowledge Management, Bioinformatics, etc. We believe that Semantic Technologies provide methods and tools that will persist in these and other application areas for the foreseeable future.

This workshop brings together researchers and practitioners who work on applications of Semantic Technologies. It furthers the cross-fertilization between application areas and aids the technology transfer from foundational research into practice. The workshop covers diverse application areas of Semantic Technologies, including the following.

- Ambient Intelligence
- Cognitive Systems
- Data Integration
- Software Engineering
- Multimedia Data Management
- Service-Oriented Computing
- Machine Learning
- eScience
- Information Extraction
- Grid Computing
- Peer-to-Peer Systems
- eCommerce
- eGovernment
- Bioinformatics

## 2 Programme

2<sup>nd</sup> of October, 2009

09:00–09:20 Pascal Bihler, Holger Mügge, Mark Schmatz, Armin Cremers.

*Using Semantic UI Descriptions for Adaptive Mobile Games*

09:20–09:40 Florian Schmedding.

*Content-sensitive User Interfaces for Annotated Web Pages*

09:40–10:00 Jörg Wurzer, Bela Mutschler.

*Bringing Innovative Semantic Technology to Practice: The iQuser Approach and its Use Cases*

10:00–10:20 Thomas Daniel Ullmann, Victoria Uren, Andriy Nikolov.

*The SemSearchXplorer – Exploring Semantic Search Results with Semantic Visualizations*

### coffee break

11:00–12:30 **Invited Keynote by Peter Mika, Yahoo! Research Barcelona**

*Year of the Monkey: Lessons from the first year of SearchMonkey*

### lunch break

14:00–14:20 Frank Kleiner, Andreas Abecker, Ning Liu.

*Automatic Population and Updating of a Semantic Wiki-based Configuration Management Database*

14:20–14:40 Peter Wolf, Andreas Schmidt, Michael Klein.

*Applying Semantic Technologies for Context-Aware AAL Services: What we can learn from SOPRANO*

14:40–15:00 Susanne Richter, Robert Tolksdorf.

*Planning Teams with Semantic Web Technologies*

15:00–15:20 Grigori Babitski, Florian Probst, Joerg Hoffmann, Daniel Oberle.

*Ontology Design for Information Integration in disaster Management*

### coffee break

16:00–16:10 Andreas Abecker.

*STI Germany*

16:10–16:30 Gabriele Weiler, Arnd Poetzsch-Heffter, Stephan Kiefer.

*A Static Analysis Technique to Detect Unsatisfiable Conditions in Ontology-based Workflows*

16:30–16:50 Atila Kaya, Sofia Espinosa Peraldi, Ralf Möller.

*The BOEMIE Semantic Browser: A Semantic Application Exploiting Rich Semantic Metadata*

16:50–17:10 Oleksandr Kolomiyets, Marie-Francine Moens .

*Machine Learning Approaches for Temporal Information Extraction: A comparative study*

17:10–17:30 Deyan Ginev, Constantin Jucovschi, Stefan Anca, Mihai Grigore, Catalin David, Michael Kohlhase.

*An Architecture for Linguistic and Semantic Analysis on the arXMLiv Corpus*

## 3 Committees

### 3.1 Workshop Organising Committee

**Dr. Stephan Grimm** is a researcher at the FZI Research Center for Information Technologies. He received his Ph.D. degree in 2008 at the University of Karlsruhe in the field of Semantic Web and Ontology research with his thesis titled “Semantic Matchmaking with Nonmonotonic Description Logics”. He has contributed to several projects funded by the European Union related to the topics of Semantic Web Services and ontology-based information retrieval and is currently working on the German-funded research programme THESEUS where he leads ontology management activities. His research interests are primarily centered around ontologies, knowledge representation and reasoning. He serves as a reviewer for international journals, conferences and workshops in the field of Semantic Web. He is an editor of a recent book on Semantic Web Services (Semantic Web Service – Concepts, Technologies and Applications, Springer 2007).

**Prof Dr. Pascal Hitzler** is assistant professor at the Kno.e.sis Center, Wright State University, Dayton, Ohio since September 2009. Beforehand, he graduated in Mathematics at Tübingen University, did his dissertation at the National University of Ireland in Cork, worked as a postdoctoral researcher at the AI institute at TU Dresden and at Case Western Reserve University in Cleveland, Ohio. Between 2004 and 2009 he was assistant professor and project leader at the Institute for Applied Informatics and Formal Description Methods (AIFB) of the University of Karlsruhe in Germany. The focus of his research is foundations and applications of knowledge representation and reasoning, and his research record lists over 130 publications in such diverse areas as semantic web, neural-symbolic integration, knowledge representation and reasoning, lattice and domain theory, denotational semantics, and set-theoretic topology. He is co-author of the user-facing document “OWL 2 Primer” as part of the forthcoming revision of the W3C recommendation OWL. He is co-author of the first German textbook on the foundations of the Semantic Web (Semantic Web – Grundlagen, Springer 2008) and of a similar English textbook (Foundations of Semantic Web Technologies, CRC Press 2009). He is a steering committee member of the conference series Web Reasoning and Rules System (as vice-chair) and of the International Conference on Conceptual Structures, and also of the workshop series OWL – Experiences and Directions. He is editor in chief of the IOS Press book series “Studies on the Semantic Web”. He is editorial board member of the journals “Journal of Artificial General Intelligence,” “Journal of Algorithms in Cognition, Informatics and Logic” and “Advances in Artificial Intelligence,” and the Atlantis Press book series “Thinking Machines.” For more information, please see <http://www.pascal-hitzler.de>.

### 3.2 Programme Committee

- Sören Auer, University of Leipzig
- Franz Baader, TU Dresden
- Bernhard Bauer, University of Augsburg
- Christoph Beierle, University of Hagen
- Stephan Bloehdorn, University of Karlsruhe
- François Bry, University of Munich
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- Elmar Dorner, SAP AG
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- Jürgen Ziegler, University of Duisburg-Essen

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- The EU IST Integrated Project “Large Scale Knowledge Sharing and Reuse Across Media” (X-Media)
- The DFG Graduate School Information Management and Market Engineering (IME) at University of Karlsruhe (TH)
- Semantic Technologies Institute Germany, STI Germany

# **Year of the Monkey: Lessons from the First Year of SearchMonkey**

Peter Mika

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## **Keynote Abstract.**

In this presentation we reflect on the experiences we have gained in the year since Yahoo's groundbreaking Semantic Web application platform launched in May, 2008. We discuss the development of the Semantic Web field through the uptake of technology and discuss the experiences of our communities of developers and publishers who got acquainted with semantic technologies for the very first time through SearchMonkey. This presentation provides key insights to those interested in what the Semantic Web looks like in action and at a large scale, viewed from the perspective of a search engine provider. It also highlights critical bottlenecks in the adoption of semantic technologies on the Web and therefore should be also of interest for Semantic Web researchers and developers.