Einladung zum Gastvortrag / Invited Talk

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Prof. Dr. Luciano Serafini

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Data and Knowledge Management (DKM)

hält am Donnerstag, den **22. Mai 2014**, **15:30-17:00 Uhr** im **Raum MT 226/1** (Mechatronik Gebäude, Science Park) einen Gastvortrag zum Thema

Contextualized Knowledge Repository: Theory and Practice

Abstract:

Representation of context dependent knowledge in the Semantic Web is becoming a recognized issue and a number of DL-based formalisms have been proposed in this regard: among them, in our previous works we introduced the Contextualized Knowledge Repository (CKR) framework. In this frameworks contexts are organized hierarchically according to a broader-narrower relation, and information propagation across contexts were limited among contexts hierarchically related. In several applications, however, these features result to be a limitation, and motivated by the need for a more flexible and scalable representation. The original formulation of the CKR has evolved into a version (based on OWL-RL profile), were contexts can be organized in any structure (declared in a OWL-RL meta-knowledge) and propagation of information can be specified among any pair of contexts, via a new "eval-in-context" that allow to evaluate a concept in a first context and import the result in a second one. In this talk, we will introduce the initial proposal of CKR and its generalization of CKR, we present a forward reasoning algorithm. Finally, we outline the current implementation of the calculus on top of SPRINGL, an extension of standard RDF triple store to deal with names RDF graphs + rules.

About the Author:

Luciano Serafini received his Master degree in Information Science from University of Milan in 1988. In October 1988 he joined ITC-IRST (Istituto per la Ricerca Scientifica e Technologica, now Fondazione Bruno Kessler) as a junior researcher. His research interests include artificial intelligence, logic for knowledge representation and multi agent systems, semantic

web, ontologies, information integration, and automated reasoning.

Luciano Serafini has published influential works in the most important international journals and conferences (his current H-index is 33). The most important scientific contribution of his career is the development of a logic of contexts called "Multi Context Systems" which has been applied in the area of formalization of multi-agent systems, information integration, semantic matching and modular ontologies.

He is currently leading the Data and Knowledge Management (DKM), a research unit at FBK, composed of 14 people, which doing research and projects in Knowledge acquisition, knowledge representation, and reasoning services.