Management de données sur la Web

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Résumé

Linked Data provides access to huge, continuously growing amounts of open data and ontologies in RDF format that describe entities, links and properties on those entities. Equipping Linked Data with inference paves the way to make the Semantic Web a reality. In this presentation, I will describe a unifying framework for RDF ontologies and databases that we call deductive RDF triplestores. It consists in equipping RDF triplestores with Datalog inference rules. This rule language allows to capture in a uniform manner OWL constraints that are useful in practice, but also domain-specific rules with practical relevance for users in many domains of interest. I will illustrate the expressivity of this framework for modeling Linked Data applications and its genericity for developing inference algorithms. In particular, we will show how it allows to model the problem of data linkage in Linked Data as a reasoning problem on possibly decentralized data. Experiments conducted on real-world datasets have demonstrated the feasibility of this approach and its usefulness in practice for data integration and information extraction.
Marie-Christine Rousset is a Professor of Computer Science at the University of Grenoble Alpes and senior member of Institut Universitaire de France. Her areas of research are Knowledge Representation, Information Integration, Pattern Mining and the Semantic Web. She has published around 100 refereed international journal articles and conference papers, and participated in several cooperative industry-university projects. She received a best paper award from AAAI in 1996, and has been nominated ECCAI fellow in 2005. She has served in many program committees of international conferences and workshops and in editorial boards of several journals.

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