

AlmWD-2013 Invited Talk: Jean-François Baget

Title:

Ontologies and large databases: querying algorithms for the Web of Data

Abstract:

In terms of KR languages, the Web of Data can be seen as a huge (distributed) triple store (i.e. a database), along with ontologies (written in some OWL fragment) that can be used either to infer additional knowledge or to establish alignments. In this presentation, we will use Datalog+/- as a unifying framework to present the querying problem in the Web of Data.

Even with an empty ontology, this problem is NP-complete (though in AC0 in terms of data complexity). Along our talk, we will explore various fragments of Datalog+/- (and their correspondence with description logics), different families of algorithms used to solve that querying problem, and outline the difficulties brought by the need to query huge databases.