Guest Lecture

Efficient Query Processing over the Web of Data

Dr. Katja Hose

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Tuesday, July 8th, 2014

2:00 pm - 3:00 pm

Room: INF 3105

(building of the Faculty of Computer Science, Nöthnitzer Straße 46)

Abstract: With the increasing popularity of (Linked) Open Data and the growth of the Semantic Web, more and more information is becoming available on the Web in a machine-readable format (RDF). By using HTTP URIs to identify entities and concepts, data sources become naturally connected to each other and in this way form the Web of Data. But it is not only the amount of data per source that keeps on growing, it is also the number of sources itself. Hence, an important challenge in this naturally distributed setup is to process queries over multiple sources efficiently. Because of the triple structure of RDF data and the complexity of a user's information need, structured query languages were developed and one of them, SPARQL, has become a common standard. Hence, in this talk I will focus on queries formulated in SPARQL and present efficient distributed query processing and source selection strategies in this naturally distributed setup as well as techniques for scalable query optimization at a single source.

Bio: Katja Hose is an Assistant Professor at the department of Computer Science at Aalborg University in Denmark. Before joining Aalborg University, she was a post-doctoral researcher at the Max-Planck Institute for Informatics in Saarbrücken, Germany. She obtained her doctoral degree from Ilmenau University of Technology in Germany, where she also studied Computer Science. Her interests include scalable solutions for query processing over semantic data and distributed systems, Linked Data, knowledge extraction and mining, and rank-aware query operators.