



## Exercise Sheet 08

### (Ontologies)

**Please note:** The exercises will be neither collected, corrected, nor graded.

#### Exercise 1

- a) What are upper ontologies and why are they useful?
- b) What does Dublin Core do?
- c) Why should we bother to define formal semantics for RDF?

#### Exercise 2

For this exercise, you will model some aspects of the computer science department using RDF/S and RDF. Please use the XML representation of RDF. You may use any tool you like to perform this task (text editor, XML editor, RDF editor, ontology editor, etc.)

- a) The following concepts should be included and modeled within an RDF/S schema:

*Student, Professor, Assistant, Lecture, Exam, Certificate (->Schein), Seminar, Lab (-> Praktikum), Room, Semester, Building*

- b) Please model important relationships between those concepts (e.g. “A student attends a lecture which is given by a Professor and an Assistant...”). You may also add additional concepts, if it is necessary or useful.
- c) Please use the schema to further model following entities:

*Wolf-Tilo Balke, Kinda El Maarry, yourself, the current KBS lecture, your final exam(s) resulting in a certificate with an excellent grade*

- d) Provide a short SPARQL query to find all the students who are attending the KBS lecture.