

## **Meghyn Bienvenu - Ontology-mediated query answering**

Recent years have seen an increasing interest in ontology-mediated query answering, in which the semantic knowledge provided by an ontology is exploited when querying data. Enriching data with an ontology has several advantages (e.g. simplifying query formulation, integrating data from different sources, providing more complete answers to queries), but it also renders the query answering task more computationally involved, requiring the development of new algorithmic techniques.

This course provides a brief introduction to ontology-mediated query answering. We will start by giving an overview of the main formalisms used to specify ontologies, illustrating what kinds of knowledge they can capture, and defining the main reasoning tasks. Afterwards, we will focus on some particular ontology languages with desirable computational properties and present the key algorithmic techniques that can be employed to answer queries in the presence of such ontologies, namely, query rewriting and saturation.