



*Ph.D. programme
in Mathematics and Computer Science*

Title: Querying and Mining Knowledge from Knowledge Graphs

Speaker: Dott. Giuseppe Pirrò, Institute for High Performance Computing and Networking (ICAR-CNR)

Abstract: The goal of this course is to describe the state of the art in querying and mining knowledge from Knowledge Graphs (KGs). We will start with a characterization of the underlying data models (i.e., property graphs, RDF) and query languages (e.g., SPARQL). Then, we will investigate three main strands of research. The first is about building knowledge explanations; an explanation allows to understand how and why different pieces of knowledge are related (e.g., why is C. Manson related to D. Willson?). The second, tackles the problem of similarity search; given some input entities, find the most similar entities (e.g., which product is the most similar to an iPad?). The third is about fact checking and addresses the problem of checking the truth of a statement (e.g., is it true that B. Obama is a Muslim?). For each of these strands we will introduce the underlying research challenges, discuss algorithmic solutions, and outline future research.

Short Bio: Giuseppe Pirrò is a researcher at the Institute for High Performance Computing and Networking (ICAR-CNR). He got his PhD in Computer and System Engineering and Master Degree in Computer Engineering at the University of Calabria. His research interests include Semantic Web, graph databases, and distributed systems. He published papers in top journals and conferences including AIJ, TWEB, PVLDB, ISWC, AAI, WWW, CIKM.

Course organization:

Wednesday, May 2, 2018: 5.00-7.30 pm, MT 11

Tuesday, May 3, 2018: 5.00-7.30 pm, MT 11

Friday, May 4, 2018: 4.30-7.30 pm, MT 11