UNIVERSITÀ DELLA CALABRIA

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Summer lectures in Artificial Intelligence

Speaker: **Prof. Grigoris Antoniou, University of Huddersfield, UK**

Title: **Large-Scale Reasoning through Mass Parallelization**

Abstract: Data originating from the Web, sensor networks and social media result in increasingly huge datasets. The so called Big Data creates new opportunities for advanced applications in domains ranging from smart cities to intelligent healthcare, hence the increasing interest in academia and industry. Usually Big Data is associated with machine learning / data mining. This talk will argue that semantic and knowledge technologies have an important role to play. Traditionally, reasoning approaches have mostly focused on complex knowledge structures/ programs and centralized in-memory data, so the question arises whether and how they can be adapated to scale sufficiently to meet the Big Data challenges. This talk will review seminal work on large-scale massivelt parallel RDFS reasoning, before turning its attention to more recent works addressing more complex reasoning tasks (computing the well-founded semantics of logic programs, and ontology diagnosis and repair). The talk will conclude with a number of open research challenges in the area, and possible applications in the legal domain, relevant to the MIREL project.

Short Biography: Grigoris Antoniou is Professor of Computer Science at the University of Huddersfield, UK. Previously he has held professorial appointments at the University of Crete (where he was also Head of the Information Systems Laboratory at FORTH-ICS, the top-rated research institute in Greece), Griffith University, Australia, and the University of Bremen, Germany. His research interests lie in semantic technologies, particularly knowledge representation and reasoning and semantics for big data, and its application to ambient intelligence, e-health, and transportation. He has published over 200 technical papers in scientific journals and conferences. He is author of three books with international publishers (MIT Press, Addison-Wesley); his book "A Semantic Web Primer" is internationally the standard textbook in the area, and has been or is about to be translated to Japanese, Chinese, Korean, Spanish and Greek. In recognition of his work, he was elected an ECCAI Fellow in 2006, joining the prestigious list of the best AI researchers in Europe. He is member of three editorial boards of journals, has organised a number of conferences and workshops (including leadership positions at ESWC 2010 and 2011), and has served in numerous programme committees. He has led a number of national and international research projects, and has participated in many more.

Date	Time	Room
July, 28, 2016	11:30	MT10-CUBO 30B