Distinguished Lecturer Series "Leon the Mathematician" at the Department of Informatics, Aristotle University of Thessaloniki Greece (http://dls.csd.auth.gr)

Department of Informatics
Aristotle University of Thessaloniki

AUTH ACM Student Chapter

INVITED LECTURE

Professor Alexandra Poulovassilis (Professor of Computer Science at Birkbeck, University of London, and Co-Director of the London Knowledge Lab) is going to lecture on

Flexible Querying for SPARQL

at **Lecture Hall 1 of the facilities of the Dept. of Informatics in Kalamaria** (located at Ethinikis Antistaseos 16) on **Wednesday November 19th, 2014 at 19:00**

ABSTRACT

Flexible querying techniques can be used to enhance users' access to heterogeneous data sets such as Linked Open Data. In particular, users querying an RDF dataset may not always be aware of how a query should be formulated in order to correctly retrieve the desired answers. This problem may be caused by a lack of knowledge about the schema of the dataset or about the URIs used in the dataset; and moreover, both schema and URIs can change over time. In recent work, we have extended the SPARQL 1.1 language with *Approximation* and *Relaxation* operators that can be applied to regular expressions for querying property paths in order to find more answers than would be returned by the exact form of a user's query. We call the extended language SPARQL^{AR}. We have specified the semantics of this language and have investigated the complexity of query answering with the new operators, showing that both data and query complexity are not impacted by our extensions. We have developed a query evaluation algorithm that returns results incrementally according to their `distance' from the original query. We have implemented this algorithm and have conducted preliminary trials over the YAGO SPARQL endpoint and the Lehigh University Benchmark, showing promising performance. The talk will cover this recent work, giving examples, and identifying directions for further work.

About the Speaker:
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Alexandra Poulovassilis is Professor of Computer Science at Birkbeck, University of London, as well as Co-Director of the London Knowledge Lab: a joint research collaboration between Birkbeck and the Institute of Education which aims to explore the ways in which digital technologies and new media are shaping the future of knowledge and learning). Her research interests are in the querying, integration and personalisation of information, with applications in e-learning and e-science. See http://www.dcs.bbk.ac.uk/~ap/ for more details.