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

INVITED LECTURE

Nieves R. Brisaboa (Professor, Faculty of Informatics, University of A Coruña, Spain) is going to lecture on

Succinct Structures for Compressed and Self-indexed Data Representations

at **Room A**, Department of Informatics, Aristotle University of Thessaloniki, **Ethnikis Antistaseos 16 (2nd floor), Thessaloniki 55133** on **Tuesday December 11th, 2012 at 18:00**.

ABSTRACT

The development of applications that manage big data collections (text, graphs etc) needs efficient indexing methods. Several indexes have been proposed for text or spatial databases, which try to reach a good trade-off between the required space to store both the data and the index, and its search efficiency. Self-indexes are becoming more and more popular in the last years. Not only they index the data in compressed form, but they also keep enough information to retrieve data efficiently without decompress the whole collection. Therefore, they actually replace the data set standard representation. In this talk, two useful self-index will be presented with good properties, one for text and one for binary relationships that can be also used to represent point in a raster space. The first one requires only about a 35% of the space of the plain text, but it can efficiently answer retrieval queries thanks to their indexing capabilities. The second one was created to represent in compressed and self-indexed form web graphs but it has a big potential to represent points over a bi-dimensional space as much as any binary relationship.

About the Speaker:

Nieves R. Brisaboa

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Prof. Nieves R. Brisaboa founded the Database Laboratory (LBD, http://lbd.udc.es) at the Faculty of Informatics, University of A Coruña, Spain, and leads it since 1996. She published a good number of scientific papers in first level conferences (SIGIR, ECDL, SPIRE, ECIR, ACM GIS, DCC, ADBIS etc.) and ISI Journals (ACM TOIS, IR, SP&E, IPM, Geoinformatica, etc) and her contributions, specifically in text compression and indexing, are internationally cited. She has been the responsible for a number of research projects funded by public and private institutions. In 2002, LBD created a spin-off enterprise, ENXENIO http://www.enxenio.es, to commercialize the technology developed in LBD. Prof. Brisaboa actively participates for more than 10 years as external evaluator of research projects for the Spanish government. During the last 4 years she has also participated in Spanish committees for evaluation of research project, people and scientific infrastructures. From 2006 to 2009 Prof. Brisaboa acted as manager of the "Information Society" research program for the Galician (region of Spain) government, with responsibilities to assign evaluators to the research projects, to inform about the quality of the different proposals according the peer review external evaluations. She also monitored the project development and results. Since 2009 she is the manager for the National Research and Development Program, in the Information Technologies subprogram. As manager of this subprogram, she manages the evaluation, funding and control, following the scientific execution, of the Spanish projects in Informatics.

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