

## **Dr Maria Vargas-Vera bio:**

Dr Maria Vargas-Vera received her first degree in Mathematics and Master in Computer Science from the Universidad Nacional Autonoma de Mexico and her PhD in Artificial intelligence from Edinburgh University, UK in 1995.

In the early years of her career in Europe she focussed her research in Knowledge-based Systems, Logic Programming and Uncertainty Reasoning. In 2000 she got involved in a project called "Advanced Knowledge Technologies" at Open University UK. This was a turning point into as she experienced the possibility of the use of Artificial Intelligence into new fields such as the Semantic Web, Ontologies and Natural Language Processing. Her major contribution in the Semantic Web was the automatic enrichment of text using semantics encoded in an ontology. The method was embedded in the MnM system a well know system in the Semantic Web Community. The MnM system automatically learns patterns from text and recognizes these patterns in unseen documents and populates automatically an ontology. It is worth to mention that MnM has boosted research on Information Extraction technologies.

Furthermore, Dr Vargas-Vera (together with Miklos Nagy) contribution in the Ontologies field was the development of a unique method for the ontology alignment using Dempster-Shafer (Theory of Evidence) coupled with a Fuzzy Voting Model. The system which contains the novel alignment method is called DSSim which was one of the top systems in the International Evaluation of Ontology Alignment in 2008 where Dr. Vargas-Vera's algorithms were benchmarked. Also, DSSim has been applied to the Discovery of Semantic Web Services, Trust of Semantic Web Services and Computer Configuration problems. These examples show the pioneer role of Dr. Vargas-Vera in different areas (Maths, Computer Science and Artificial Intelligence). Furthermore, during her career Dr Vargas-Vera puts a lot emphasis on practical applications of her ideas. She was involved in the development of MnM, SVE, AQUA, DSSim, DeepThink among other technologies. These software systems help to further disseminate and validate her ideas. Her work is highly cited and has influenced many Computer Scientists. In short, it is remarkable the interest of Dr Vargas-Vera to contribute in the development of other fields of Computer Science & Artificial Intelligence. She has presented open lectures around the world and she has been Guest Researcher at Poznan University of Economics, Poland and TU Dortmund Germany.

Finally, Dr Maria Vargas-Vera has been awarded Marie-Curie Fellow (TOC) in 2007 and Fellow of British Computer Society (FBCS) in 2009. The FBCS grade was granted after an evaluation from the Fellowship Panel at BCS. The grade of Fellowship comprises the most senior and respected professionals in the Information Technology (IT) field.