

Iris Miliaraki

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Research Interests

Large-Scale Sequence Mining, Probabilistic Databases, Semantic Web, Distributed Data Management

Professional Experience

Postdoctoral Researcher

Department 5: Databases & Information Systems
Max Planck Institute for Informatics

08/2011 – present
Saarbrücken, Germany

Education

Ph.D. in Computer Science

Department of Informatics & Telecommunications
National & Kapodistrian University of Athens

Thesis: “**Distributed structural and value XML filtering**”, Supervisor: Prof. M. Koubarakis

2006 – 2011
Athens, Greece

M.Sc. in Advanced Information Systems, GPA – 8.8/10

Department of Informatics & Telecommunications
National & Kapodistrian University of Athens

Thesis: “**Retrieving semantic information for Web services using DHTs**”, Supervisor: Prof. M. Koubarakis

2003 – 2005
Athens, Greece

B.Sc. in Informatics, GPA: 7.65/10 – top 8%

Department of Informatics
Athens University of Economics and Business

Thesis: “**Handling definition questions in QA systems**”, Supervisor: Assistant Prof. I. Androutsopoulos

1999 – 2003
Athens, Greece

Scholarships

Microsoft Research European PhD Scholarship

10/2006 – 10/2009

Selected Publications

I. Miliaraki, K. Berberich, R. Gemulla, and S. Zoupanos. **Large-Scale Gap-Constrained Frequent Sequence Mining with MapReduce**. *To appear in the ACM SIGMOD International Conference on Management of Data (SIGMOD 2013)*, New York City, New York, USA, 2013.

M. Dylla, I. Miliaraki, and M. Theobald. **Top-k Query Processing in Probabilistic Databases with Non-Materialized Views**. *To appear in the 29th International Conference on Data Engineering (ICDE 2013)*, Brisbane, Australia, 2013.

I. Miliaraki and M. Koubarakis. **FoXtrot: Distributed Structural and Value XML filtering**. *ACM Transactions on the Web (TWEB) Journal*, Volume 6 Issue 3, September 2012.

I. Miliaraki and M. Koubarakis. **Distributed Structural and Value XML Filtering**. *4th ACM International Conference on Distributed Event-Based Systems (DEBS 2010)*, Cambridge, United Kingdom, 2010 (acceptance rate: 25%).

Z. Kaoudi, M. Koubarakis, K. Kyzirakos, I. Miliaraki, M. Magiridou and A. Papadakis-Pesaresi, **Atlas: Storing, Updating and Querying RDF(S) Data on Top of DHTs**. *Journal of Web Semantics*, System paper, 2010.

I. Miliaraki, Z. Kaoudi and M. Koubarakis. **XML Data Dissemination using Automata on top of Structured Overlay Networks**. *17th International World Wide Web Conference (WWW 2008)*, Beijing, China, 2008 (acceptance rate: 12%).

Z. Kaoudi, I. Miliaraki, and M. Koubarakis. **RDFS Reasoning and Query Answering on top of DHTs**. *7th International Semantic Web Conference (ISWC 2008)*, Karlsruhe, Germany, 2008 (acceptance rate: 16%).

I. Miliaraki and I. Androutsopoulos, **Learning to Identify Single-Snippet Answers to Definition Questions**. *Proceedings of the 20th International Conference on Computational Linguistics (COLING 2004)*, Geneva, Switzerland, pp. 1360, 2004.

System Development

Participated in the development of the following systems:

PFSM: Implementation in JAVA of a scalable algorithm for gap-constrained frequent sequence mining in MapReduce using the Apache Hadoop platform (2012 – present).

FoXtrot: A distributed system for filtering XML documents built on top of Pastry DHT. The implementation was done using FreePastry release in JAVA. FoXtrot has been extensively evaluated in both a local cluster and the PlanetLab network (2009 – 2011)

Atlas (<http://atlas.di.uoa.gr>): A system for distributed RDF(S) query processing built on top of the Bamboo DHT. The implementation was done using JAVA and is available for download under LGPL license. (2006 – 2008)

A prototype QA system: Implemented in JAVA for identifying single-snippet answers to definition questions using a learning method based on support vector machines (2004).

Languages

English (fluent), **French** (basic), **Greek** (native)

Technical skills

Programming languages: JAVA, C++, Python (basic), Prolog (basic)

Distributed platforms: MapReduce (Hadoop), Distributed Hash Tables (FreePastry, Bamboo DHT)

Web & Semantic Web technologies: RDF, RDFS, XML, HTML

Query Languages & DBMSs: SQL, XPath/XQuery, SPARQL, MySQL, PostgreSQL, BerkeleyDB, MayBMS

Miscellaneous: Eclipse IDE, NetBeans IDE, \LaTeX , R, Matlab (plotting), Joomla CMS

Student Supervision

Co-supervised with Prof. Manolis Koubarakis the following students:

- D. Raptis. **Using DHTs for continuous RDF query processing**. *M.Sc. Thesis, 2010*.
- M. Nicolaou. **Implementation of an XML filtering system using FreePastry**. *B.Sc. Thesis, 2008*.
- C. Nikolaou. **Implementation of LibraRing architecture using FreePastry**. *B.Sc. Thesis, 2007*.

Professional Activities

Journal Reviewer: IEEE Trans. on Parallel and Distributed Systems, Journal of Web Semantics, World Wide Web Journal

External Reviewer: KDD 2012, VLDB 2012, P2P 2008-2010, ICDE 2009, ISWC 2007-2008

Conferences & Workshops attended: VLDB 2012, SIGMOD 2011, DEBS 2010, ISWC 2008, WWW 2009, WWW 2008, Microsoft Research Summer School 2007.