

## Ioana MANOLESCU

Researcher

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**RESEARCH INTERESTS** XML data management and query processing; query processing in peer-to-peer systems; web applications and web services; XML storage and indexing techniques; data integration.

## PUBLICATIONS

2004

- Andrei Arion, Angela Bonifati, Gianni Costa, Sandra d'Aguanno, Ioana Manolescu and Andrea Pugliese: "Efficient Query Evaluation over Compressed XML Data", in *Extending Database Technologies (EDBT)*.
- Ioana Manolescu: "XML query processing: storage and execution model interplay", tutorial to be presented at the EDBT Summer School, and at SBBD 2004.
- Marco Brambilla, Stefano Ceri, Sara Comai, Marco Dario, Piero Fraternali and Ioana Manolescu: "Declarative Specification of Web Applications Exploiting Web Services and Workflows", in the ACM Conference of the Special Interest Group on Management of Data (SIGMOD), demo paper.
- Serge Abiteboul, Omar Benjelloun, Bogdan Cautis, Ioana Manolescu, Tova Milo and Nicoleta Preda: "Lazy Query Evaluation for Active XML", in SIGMOD.
- Ioana Manolescu, Marco Brambilla, Stefano Ceri, Sara Comai and Piero Fraternali: "Model-Driven Design and Deployment of Service-Enabled Web Applications", accepted for publication in ACM TOIT.
- Ioana Manolescu, Andrei Arion, Angela Bonifati and Gianni Costa: "Path Sequence-Based XML Query Processing", in *Journées Francophones de Bases de Données Avancées (BDA)*.
- Serge Abiteboul, Ioana Manolescu and Nicoleta Preda: "Peer-to-peer Warehousing of XML Resources" (demo), in BDA.
- Nicolaas Ruberg, Gabriela Ruberg and Ioana Manolescu: "Towards cost-based optimization for data-intensive Web service computations", submitted for publication (extended version: INRIA Research Report no. 5222).

2003

- Serge Abiteboul, Jérôme Baumgarten, Angela Bonifati, Grégory Cobéna, Cosmin Cremarencu, Florin Dragan, Ioana Manolescu, Tova Milo and Nicoleta Preda: "Managing Distributed Workspaces with Active XML", in the Int'l. Very Large Databases Conference (VLDB), demo paper.  
This demo was also presented in BDA.
- Andrei Arion, Angela Bonifati, Gianni Costa, Sandra D'Aguanno, Ioana Manolescu and Andrea Pugliese: "XQueC: Pushing XML Queries to Compressed XML Data", VLDB demo paper.  
This demo was also presented in BDA.
- Serge Abiteboul, Angela Bonifati, Grégory Cobéna, Ioana Manolescu and Tova Milo: "Dynamic XML Documents with Distribution and Replication", in SIGMOD.

- Stefano Ceri and Ioana Manolescu. "Model-driven design of Web applications", tutorial presented at VLDB.
- Ioana Manolescu, Stefano Ceri, Marco Brambilla, Piero Fraternali and Sara Comai: "Exploiting the Combined Potential of Web Applications and Web Services", poster at the World Wide Web Conference (WWW).
- Stefano Ceri, Marco Brambilla, Sara Comai, Piero Fraternali and Ioana Manolescu: "Specification and Design of Workflow-Driven Hypertexts", poster at the WWW Conference.
- Alberto Lerner and Ioana Manolescu. "The nuts and bolts of DBMS construction: building your own prototype", tutorial presented at the Brazilian Databases Conference (SBBD).

2002

- Marco Brambilla, Stefano Ceri, Sara Comai, Piero Fraternali and Ioana Manolescu: "Model-Driven Specification of Web Service Composition and Integration with Data-Driven Web Applications", in the Data Engineering Bulletin (special issue on Web Services).
- Ioana Manolescu: "Adaptive and Self-Tuning Query Processing", tutorial at the EDBT summer school.
- Serge Abiteboul, Omar Benjelloun, Ioana Manolescu, Tova Milo and Roger Weber: "Active XML demonstration: peer-to-peer data and web services integration", in the VLDB Conference.
- Albrecht Schmidt, Florian Waas, Martin Kersten, Michael Carey, Ioana Manolescu and Ralph Busse: "XMark: a benchmark for XML Data Management", in the VLDB Conference.
- Ioana Manolescu, Luc Bouganim, Françoise Fabret and Eric Simon: "Efficient Querying of Distributed Resources in Mediator Systems", in the Cooperative Information Systems (CoopIS) Conference.  
This paper was also presented in BDA.
- Serge Abiteboul, Omar Benjelloun, Ioana Manolescu, Tova Milo and Roger Weber: "Active XML: a Data-Centric Perspective on Web Services", in BDA.

2001

- Ioana Manolescu, Daniela Florescu, and Donald Kossmann: "Answering XML Queries over Heterogeneous Data Sources", in the VLDB Conference.  
This paper was also presented in BDA.
- Albrecht Schmidt, Florian Waas, Martin Kersten, Daniela Florescu, Michael Carey, Ioana Manolescu and Ralph Busse: "Why and How to Benchmark XML Databases", in SIGMOD Record.

2000

- Ioana Manolescu, Daniela Florescu, Donald Kossmann, Dan Olteanu and Florian Xhumari: "Agora: Living with XML and Relational", in VLDB, demo paper.
- Daniela Florescu, Donald Kossmann, and Ioana Manolescu: "Integrating Keyword Search into XML Query Processing", in the WWW Conference.  
This paper was also presented in BDA.

1999

- Daniela Florescu, Alon Levy, Ioana Manolescu, and Dan Suciu: "Query Optimization with Limited Access Patterns", in ACM SIGMOD Conference.  
This paper was also presented in BDA.

## OTHER PROFESSIONAL ACTIVITIES

*Co-chair* of the First International Workshop on XQuery Implementation, Applications and Experience (XIME-P), in cooperation with SIGMOD.

*Program committee member:*

- International Conference on Data Engineering (ICDE), 2004 and 2005
- International Conference on Very Large Databases (VLDB), 2004 and 2005
- International Conference on Management of Data (COMAD) 2005
- International Conference of the ACM Special Interest Group on Management of Data (ACM SIGMOD) 2004
- Journées Francophones en Bases de Données Avancées (BDA) 2004
- Simpósio Brasileiro de Bancos de Dados (SBBDB) 2004
- International Conference in Artificial Intelligence: Methodology, Systems, Applications (AIMSA) 2004
- ACM International Workshop on Web Information and Data Management (WIDM) 2004
- XML Symposium 2003.

*External referee for journals:* ACM Transactions on Database Systems; Data and Knowledge Engineering Journal.

*Participation to research contracts / projects:*

- Participant to the cooperative ACI “Masses de Données” Tralala: French R&D project (starting in 2004 for a period of 3 years) on XML data management based on the study of XML transformation and query languages. My contribution in this framework consists of studying a generic algorithm for XQuery optimization, capable of handling various persistent storage models and multiple query language paradigms.
- Manager for the Gemo group in the cooperative ACI “Masses de Données” MDP2P: French R&D project (starting in 2003) on massive XML data management in a peer-to-peer environment. The solutions we are developing rely on the usage of distributed hash table technologies, and semantic models, to represent distributed XML resources (documents and Web services).
- External collaborator with the research group in Politecnico di Milano, in the WebSI European project (5<sup>th</sup> framework), March 2002 - March 2003. I was involved in the research work of the Milano team within the project; the resulting material was incorporated in the deliverables of the project and led to several publications.

*Students supervised* for six-months internships:

- Andrei Arion (co-supervised with Veronique Benzaken) and Nicoleta Preda (co-supervised with Serge Abiteboul), from the University of Orsay.

- Dan Olteanu, from the Polytechnic Univ. of Bucharest (PUB), Romania; currently PhD student in Munich
- Lucian Precup, from PUB, currently engineer in INRIA
- Florin Dragan and Cosmin Cremarencu (co-supervised with Serge Abiteboul and Tova Milo).
- Sandra d'Aguanno, from the University of Versailles, France.

*Prototypes:*

- Participation (20%) in developing the LESELECT v.1 data integration system (2000-2001).
- Participation (35%) in designing and implementing XQUEC, an XML query processing system on compressed XML data.

**EDUCATION**

- **PhD:** "Optimization Techniques for Querying Heterogeneous Distributed Data Sources", 2001. Advisor: Patrick Valduriez.  
This thesis investigates several aspects of querying distributed resources, having heterogeneous data structure, data models, and query processing capabilities.
- **MS** in Computer Systems at the University of Paris VI.
- Foreign student at Ecole Normale Supérieure in Paris, France (1996-1999). Licence and Maitrise French undergraduate diplomas, GPA: 14/20.

**OTHER RESEARCH EXPERIENCE**

- 2003: post-doc at the Computer Science Department of the Polytechnic University of Milano, Italy, working into the team of Professor Stefano Ceri on the integration of workflow primitives, Web applications, and Web services.