

Nicola Onose

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AREAS OF INTEREST

- Web services, query capabilities, XML query optimization

EDUCATION

- **Ph.D., Computer Science**
University of California, San Diego(UCSD), 2004—present,
expected graduation year: 2009
- **Master of Science, Computer Science**
University of California, San Diego(UCSD), 2004—2007
- **Engineering Degree**
Ecole Polytechnique(Palaiseau, France), 2001—2003
in collaboration with ENSIMAG(Grenoble, France), 2003—2004
- **Engineering Degree in Computer Science,**
“Politehnica” University(Bucharest, Romania), 1998—2003

RESEARCH EXPERIENCE

- **Graduate Research Projects**, at UCSD:
 - QSSL Views, a grammar-based specification for a potentially infinite set of XPath views, for which we develop query-rewriting algorithms. Target applications are sources with limited query capabilities and security views. On-going project.
 - REFORM, a system for rewriting nested XML queries using nested views. Co-authored the design of the rewriting algorithm and implemented it. Website: <http://db.ucsd.edu/reform>
 - MARS, a tool for query reformulation under constraints. Extended it with disjunction, such that it could be used for reformulation of RDF queries. Website: <http://db.ucsd.edu/mars>
- **Industrial Research Projects:**
 - Compiler that translates the ProjectZero Flow Language (developed at IBM), into DXQ, an extension of XQuery with updates and parallelism.

- GALAX, distributed under Lucent Open License, with permanent developers from IBM Watson and AT&T Labs. It is a standard implementation of the XQuery language, now also extended to support XML updates.
 - contributed to the design and implementation of an XML algebra with updates; also added procedural extensions to the language (XQueryP).
 - integration with Web Services: automatic generation of XQuery server and client stubs starting from a WSDL description

- AquaLogic Data Services Platform, BEA's industrial framework for data integration using XML services. Added the ability to record rewriting rules with inverse functions such that the optimizer could better use the capabilities of the data source.

- GUPSTER, developed at Lucent Technologies, a system for general user profile management in a distributed architecture. Implemented the first version of the metadata server.

PROFESSIONAL EXPERIENCE

- **Research intern**, Microsoft Research Redmond, June-Sept 2008.
- **Research intern**, IBM T.J. Watson Research Center, June-Sept 2007. Implementation of a workflow language in XQuery.
- **Research intern**, IBM T.J. Watson Research Center, July-Sept 2006. Worked on extensions of XQuery with updates inside the Galax project.
- **Engineering intern**, BEA Systems, June-September 2005. Contributed to the design and implementation of XQuery compiler optimizations for the AquaLogic Data Services Platform
- **Research intern**, Bell Labs, Lucent Technologies, April-June 2003. Collaborated to the Galax and GUPster projects.
- **Visual C++ developer**, Popnet Agentscape(Bucharest), July-September 2000. Implemented parts of the GUI for an intelligent software agent.
- **Visual Basic developer**, Macroinformatica(Bucharest), April-June 2000. Implemented software modules for a printer.

PROFESSIONAL ACTIVITIES

- **External Reviewer**, VLDB 2008
- **Teaching Assistant**, UCSD, CSE132B (Database Systems Applications), April-June 2005

TECHNICAL SKILLS

- Hands on experience: Java, C/C++(gcc, Visual C), OCaml, XQuery, C#
- Competency with: Latex, HTML

CONFERENCE AND WORKSHOP PAPERS

- *Querying Data Sources that Export Infinite Sets of Views*
Bogdan Cautis, Alin Deutsch, Nicola Onose
In **ICDT** 2009, 12th International Conference on Database Theory
- *XPath Rewriting Using Multiple Views: Achieving Completeness and Efficiency*
Bogdan Cautis, Alin Deutsch, Nicola Onose
In WebDB 2008, 11th International Workshop on Web and Databases
- *A Restful Workflow Implementation on Top of Distributed XQuery*
Nicola Onose, Rania Khalaf, Kristoffer Rose, Jérôme Siméon
In XIME-P 2008, 5th International Workshop on XQuery Implementation, Experience and Perspectives
- *XML Query Optimization in the Presence of Side Effects*
Giorgio Ghelli, Nicola Onose, Kristoffer Rose, Jérôme Siméon
In research track of ACM **SIGMOD** International Conference on Management of Data, 2008
- *Inverse Functions in the AquaLogic Data Services Platform*
Nicola Onose, Vinayak Borkar, Michael Carey
In industrial track of International Conference on Very Large Databases (**VLDB**) 2007
- *A Better Semantics for XQuery with Side-Effects*
Giorgio Ghelli, Nicola Onose, Kristoffer Rose, Jérôme Siméon
In DBPL 2007, 11th International Symposium on Database Programming Languages
- *DXQ, A Distributed XQuery Scripting Language*
Mary Fernández, Trevor Jim, Kristi Morton, Nicola Onose, Jérôme Siméon
In XIME-P 2007, 4th International Workshop on XQuery Implementation, Experience and Perspectives
- *Highly Distributed XQuery with DXQ*
Mary Fernández, Trevor Jim, Kristi Morton, Nicola Onose, Jérôme Siméon
In demo track of ACM **SIGMOD** International Conference on Management of Data, 2007
- *Query Processing in the AquaLogic Data Services Platform*
Vinayak Borkar, Michael Carey, Dmitry Lychagin, Till Westmann, Daniel Engovatov, Nicola Onose
In industrial track of International Conference on Very Large Databases (**VLDB**) 2006

- *Rewriting Nested XML Queries Using Nested Views*
Nicola Onose, Alin Deutsch, Emiran Curtmola, Yannis Papakonstantinou
In research track of ACM **SIGMOD** International Conference on Management of Data, 2006
- *Yoo-Hoo! Building a Presence Service with XQuery and WSDL*
Mary Fernández, Richard Hull, Nicola Onose, Jérôme Siméon
In demo track of ACM **SIGMOD** International Conference on Management of Data, 2004
- *Share Your Data, Keep Your Secrets*
Irina Fundulaki, Daniel Lieuwen, Guillaume Giraud, Nicola Onose, Nicolas Pombourcq, Arnaud Sahuguet
In demo track of ACM **SIGMOD** International Conference on Management of Data, 2004
- *XQuery at Your Web Service*
Nicola Onose, Jérôme Siméon
In referred track of International World Wide Web Conference (**WWW**), 2004

FELLOWSHIPS

- Jacobs Fellowship, UCSD, 2004-2007
- Eiffel Excellence Programme, 2001-2004
French Government Fellowship, offered each year to about 800-1300 foreign undergraduate and graduate students that French higher education centers have identified as specially deserving of a place on their courses
- Romanian Government Scholarship for very high GPA, 1999-2001
Given to less than 5% of the students each year.

EXTRA-PROFESSIONAL EXPERIENCE

- **Journalism**, member in the editorial board of XPassion, the cultural magazine of the students of Ecole Polytechnique, 2001-2002.