

Nicolas SPYRATOS – Short CV (Dec.2011)

(spyratos@lri.fr)

Personal:

69 years old, married, two children
Citizenship: Greek, Canadian, French
Address: 4 Rue Ernest Cresson, 75014 Paris, France

Education:

In Greece : Dipl. Ing. (Electrical Eng.) from the National Technical University of Athens (1967)
In Canada : Master of Science, University of Ottawa (1972)
PhD Carleton University (1975)
In France : Thèse d'Etat , University of Paris Sud 11 (1981)

Languages: French, English, Greek (mother tongue), Italian (intermediate), Japanese (elementary)

Courses taught during career:

In Canada: Discrete mathematics, Network Reliability
In France: Introduction to Databases and information systems, Database design, Advanced topics in databases (graduate), Algorithms and data structures, Data warehouses and data analysis, Programming languages
In Greece: Advanced topics in databases (graduate), Algorithms and data structures

Main employment during career:

System Engineer, IBM Greece (1967-1970)
Consulting Engineer, Federal Department of Communications, Canada (1971-1973)
Researcher, Bell-Northern Research, Canada (Canadian Bell Labs, 1974-1976)
Researcher, INRIA-Rocquencourt (1976-1978), then scientific consultant of INRIA (1978-1989)
Associate Professor, University of Orleans, France (1977-1982)
Researcher at the CNRS ('chargé de recherche', October 1982 - April 1983)
Full Professor, University of Paris Sud 11, Centre d'Orsay, since April 1983
Adjunct professor at the 'Ecole Normale Supérieure de Paris' (ENS-Ulm, 1997 – 2007)
Professor, "Hitachi-Fujitsu Chair", Hokkaido University, Japan (during sabbatical, 1998-1999)
Since October 1998: Affiliated Senior Scientist at the following institutions:

- FORTH-ICS, in Greece (<http://www.ics.forth.gr/>)
- Meme Media Venture Business Lab of Hokkaido University, in Japan (<http://www.meme.hokudai.ac.jp/index-e.html>)

Note: My research activities during the career were in two different but related areas, first in the area of telecommunications, in Canada(1970-1976), and subsequently in the area of databases and information systems, in France (since 1977).

Research activities

- Current research interests: Databases and Information Systems, Conceptual Modelling, Data Analysis, Query Personalization, Digital Libraries
- Head of the database group at the Laboratory for Research in Informatics (LRI), University of Paris South 11. The group comprises currently 3 full professors, 2 associate professors, 1 post-doctoral fellow and 9 doctoral students; and the main research lines are: “Languages and Systems for Semi-structured Data”, “Information Integration” and “Temporal Databases”. The group participated in the design and development of the object oriented system O2 in late 1980. A major achievement of the group in the recent years was the design and development of the functional language CDuce and its adoption by Linux (CDuce is currently part of Ubuntu, Fedora, Mandriva)
- Supervision of 18 theses during the career, and 3 theses under way
- Recipient of the 4-year Scientific Excellence Award (PES: Prime d’Excellence Scientifique) since 1990, renewed in 1994, 1997, 2001 and 2005.

Other research related activities

- Participation in 22 national, European and international projects (as a partner or coordinator)
- Program committee member of 91 international conferences
- Organization of 15 workshops and conferences, including the Franco-Japanese Workshop ISIP (Information Integration, Search and Personalization) sponsored by the French Embassy in Japan; originally a biennial event it has become an annual event since 2005
- Teacher in several summer schools (Italy, Greece, Malaysia, Philippines, Cambodia, Lebanon, Tunisia, Indonesia)
- Reviewer for several international journals (ACM TODS, Journal of the ACM, IEEE KDE, Journal of Computer and System Sciences, Mathematical Reviews, ...)
- Member of several international evaluation boards (EU programs, ADIP - Ministry of Research in Greece, Centri di Eccellenza and FIRB in Italy, ...)

Current scientific collaborations

- Meme Media Laboratory, Hokkaido University, Japan (Y.Tanaka)
- University of Crete, Greece (A.Analiti, Y.Tzitzikas, V.Christophidis)
- ISTI-CNR of Pisa, Italy (C.Meghini)
- University of London, Birkbeck College, UK (G.Loizou)
- University of Cergy-Pontoise, France (D.Laurent)

These collaborations include joint thesis supervision, exchanges of researchers, joint publications, partnerships in research projects.

A few selected publications during career

Journals:

C.T.Dieng, T.Jen, D.Laurent, N.Spyratos, Mining Frequent Conjunctive Queries Using Functional and Inclusion Dependencies, VLDB Journal, Accepted April 2012

C.Meghini, N.Spyratos, J.Yang, A Data Model for Digital Libraries, International Journal of Digital Libraries, Vol.11, Issue 1, Springer 2010, Pages: 41-56

C.Meghini, N.Spyratos, Synthesizing Monadic Predicates, Journal of Logic and Computation, Vol.18 - No 6, December 2008

M.Theodorakis, A.Analyti, N.Spyratos, P.Constantopoulos, Contextualization as an Independent Abstraction Mechanism for Conceptual Modeling, Information Systems 32 (2007) pp. 24-60

Y.Tzitzikas, A.Analyti, N.Spyratos, P.Constantopoulos, An Algebra for Specifying Valid Compound Terms in Faceted Taxonomies, Journal Data & Knowledge Engineering 62 (2007) pp. 1-40

Y.Tzitzikas, C.Meghini, N.Spyratos, A Unified Interaction Scheme for Information Sources, Journal of Intelligent Information Systems (2006), Vol. 26, No. 1, pp 75-93

Y.Tzitzikas, N.Spyratos, P.Constantopoulos, Mediators over Taxonomy-based Information Sources, VLDB Journal (2005) 14 : 112-136

Y.Loyer, N.Spyratos and D.Stamate, Parametrized Semantics of Logic Programs, Theoretical Computer Science 308 (2003) 429-447 (TCS-B : Logic, Semantics and Theory of Programming).

D.Laurent, J.Lechtenberger, N.Spyratos, G.Vossen, Monotonic Complements for Independent Data Warehouses, VLDB Journal, Vol.10, No4, December 2001

M.Theodorakis, A.Analyti, P.Constantopoulos, N.Spyratos, A Theory of Contexts in Information Bases, Information Systems Journal, Vol.19, No.4, pp.1-54, 2001

M.Halfeld Ferrari Alves, D.Laurent, N.Spyratos, "Update Rules in Datalog Programs", Journal of Logic and Computation Vol 8, No 6 (December 98), pages 745-776

D.Laurent, V.Phan-Luong, N.Spyratos, "Updating Intensional Predicates in Deductive Databases", Data and Knowledge Engineering Journal, No 26, 98, pp 37-70

A.Analiti, P.Constantopoulos, N.Spyratos, "Deriving Semantic Information through Property Covering and Inheritance", Data and Knowledge Engineering Journal, Vol. 28 No 1, 30 (Oct. 98), pp 3-30

A.Analiti, P.Constantopoulos, N.Spyratos, "Specialization by Restriction and Schema Derivations", Information Systems Vol. 23, No 1, pp. 1-38, 1998

D.Laurent, V.Phan-Luong, N.Spyratos, "The Use of Deleted Tuples in Database Querying and Updating", Acta Informatica, Vol. 34, Fasc. 12, 97, pp.905-926.

D.Laurent, N.Spyratos, "A Partition Approach to Updating Universal Scheme Interfaces", IEEE Transactions on Knowledge and Data Engineering, 6(2), 1994.

N.Spyratos, "The partition Model : A deductive database Model", ACM Transactions on Database Systems, 12:1, March 1987, pp 1-37

S.Cosmadakis, P.Kanellakis, N.Spyratos, "Partition semantics of relations", Journal of Computer and System Sciences, 33:2, 1986

F.Bancilhon, N.Spyratos, "Update semantics of relational views", ACM Transactions on Database Systems, December 1981, pp. 557-575

N.Spyratos, B.A.Bowen, "A Fast Algorithm for Reliability Calculations, in sparse Networks", Networks, Vol. No 3, John Wiley and Sons Inc. 1977, pp. 227-246

J.DeMercado, N.Spyratos, B.A.Bowen, "A Method for Calculating Network Reliability", IEEE Transactions on Reliability, r-25, 2, June 1976, pp. 71-76

Conferences:

Note: Apart from three very recent publications, the selected publications that follow are only those in conferences that I consider as major conferences in databases and related areas, namely:

VLDB(4), PODS(4), SIGMOD(2), ICDE(5), EDBT(2), MFCS(6), ER(4), LPNMR(3), ICDT(1), ICFCA(1)

N.Spyratos, T.Sugibuchi, E.Simonenko, and C.Meghini, Computing the Skyline of a Relational Table

Based on a Query Lattice, ICFCA 2012 – 10th Intl. Conference on Formal Concept Analysis, Leuven, Belgium, May 6-10, 2012

N.Spyratos, T.Sugibuchi and J.Yang, Personalizing Queries over Large Data Tables, ADBIS 2011, 15th Intl. East European Conference on Advances in Data Bases and Information Systems, Vienna, Austria, September 20-23, 2011 (Springer LNCS Series, Vol.6909).

E.Simonenko, N.Spyratos, T. Sugibuchi, A Model for Analyzing and Visualizing Tabular Data, FQAS 2011, Ninth Intl. Conference on Flexible Query Answering Systems, Ghent University, Ghent, Belgium, October 26-28, 2011.

C.Meghini, N.Spyratos, T.Sugibuchi, Modelling Digital Libraries Based on Logic, The 14th European Conference on Research and Advanced Technology for Digital Libraries (ECDL'10), Sept. 2010, Glasgow.

A.Analyti, Y.Tzitzikas, N.Spyratos, Specifying Valid Compound Terms in Interrelated Faceted Taxonomies, ER 2009, 28th International Conference on Conceptual Modeling - Gramado, Brazil, 9-12 November 2009, pp 360-373

T.Jen, D.Laurent, N.Spyratos, Mining All Frequent Projection-Selection Queries from a Relational Table, 11th International Conference on Extending Database Technology (EDBT'08), March 25-30 2008, Nantes, France

P.Georgiadis, I.Kapantaidakis, M.Nguer, N.Spyratos, V.Christophides, Efficient Rewriting Algorithms for Preference Queries, 24th International Conference on Data Engineering (ICDE'08), April 7-12, 2008, Cancun, Mexico

C.Meghini, N.Spyratos, Computing Intensions of Digital Library Collections”, 5th Intl. Conference on Formal Concept Analysis (ICFCA'07), Clermont-Ferrand, France, February 12-16, 2007, LNCS Vol. 4390/2007

Y. Tzitzikas, C. Meghini, N. Spyratos, Taxonomy-based Conceptual Modeling for Peer-to-Peer Networks, ER-2003 (22nd International Conference on Conceptual Modeling), 13-16 October 2003, Chicago, Illinois, U.S.A., LNCS Vol. 2813 / 2003

C. Meghini, Y. Tzitzikas, N. Spyratos, An Abduction-based Method for Index Relaxation in Taxonomy-based Sources, MFCS'03 (28th International Symposium on Mathematical Foundations of Computer Science), August 25-29, 2003, Bratislava, Slovak Republic

Y. Loyer, N. Spyratos, Hypothesis-Founded Semantics for Datalog Programs with Negation, MFCS'02 (27th International Symposium on Mathematical Foundations of Computer Science), August 26-30, 2002, Warszawa - Otwock, Poland

C.T. Diop, A.Giacometti, D. Laurent, N. Spyratos, Composition of Mining Contexts for Efficient Extraction of Association Rules, EDBT'02 (8th Int. Conference on Extending Database Technology), LNCS Volume 2287/2002, March 24-28 2002, Prague, Check Republic.

M.Dekhtyar, A.Dikovsky, S. Dudakov, N. Spyratos, "Monotone Expansion of Updates in Logical Databases”, LPNMR'99, Fifth Intern. Conference on Logic Programming and Nonmonotonic Reasoning, Dallas, USA, December 99

M.Theodorakis, A.Analiti, P.Constantopoulos, N.Spyratos, Contextualization : A powerful abstraction Mechanism for Conceptual Modeling, ER'99 (17th International Conference on Conceptual Modeling), Paris, France, Nov. 99

Y.Loyer, N.Spyratos, D. Stamate, "Computing and Comparing Semantics of Programs in Multi-valued Logics", MFCS'99 (Mathematical Foundations of Computer Science), Poland, September 99

D.Laurent, J.Loechtenberger, N. Spyratos, G. Vossen, "Complements for Data Warehouses", ICDE'99 (IEEE Intern. Conference on Data Engineering), Sydney, Australia, March 99

A.Analiti, N.Spyratos, P.Constantopoulos, "Property Covering: A Powerful Construct for Schema Derivations", 16th Int. Conference on Conceptual Modelling (ER'97), Los Angeles, USA, November 97 (LNCS Vol. 1331 / 1997)

M.Dekhtyar, A.Dikovsky, N.Spyratos, "On Conservative Enforced Updates”, LPNMR'97, Third Intern. Conference on Logic Programming and Nonmonotonic Reasoning, Dagstuhl, Germany, July 97, LNAI Vol. 1265/1997 (Editors: J. Dix, U. Furbach, A. Nerode)

G.Grahne, N.Spyratos, D. tamate, Semantics and containment with internal and external conjunctions, Proc. ICDT'97 (6th International Conference on Database Theory), Delphi, Greece, January 97, LNCS Vol. 1186/1997 (Editors: F. Afrati, Ph. Kolaitis)

M.Halfeld Ferrari Alves, D.Laurent, N.Spyratos, "Update Rules in Datalog Databases", LPNMR'95, Third Intern. Conference on Logic Programming and Nonmonotonic Reasoning, Lexington, Kentucky, USA, June 1995, Vol 928 of Lecture Notes in Artificial Intelligence (LNAI)

M.Halfeld Ferrari Alves, D.Laurent, N.Spyratos, "Passive and Active Rules In Deductive Databases", Proc. MFCS (Mathematical Foundations of Computer Science), Cosice, Slovakia, August 1994, Vol 841 of Lecture Notes in Computer Science.

D.Laurent, V.Phan-Luong, N.Spyratos, "Updating Intensional Predicates in Deductive Databases", Proc. ICDE'93 (International IEEE Conference on Data Engineering), Vienna, April 1993

D.Laurent, V.Phan-Luong, N.Spyratos, "Deleted Tuples are Useful when Updating through Universal Scheme Interfaces", Proc. ICDE'92 (International IEEE Conference on Data Engineering), Phoenix, February 1992

C.Lecluse, N.Spyratos, "Implementing queries and updates in a universal relation interface, Proc. VLDB'88 (International Conference on Very Large Data Bases, Los Angeles), August 1988

D.Laurent, N.Spyratos, "Introducing negative information in relational databases", Proc. MFCS'98 (Mathematical Foundations of Computer Science), LNCS 324, Karlsbad, Chechoslovakia, August 1988

D.Laurent, N.Spyratos, "Partition Semantics for incomplete information in relational databases", Proc. ACM-SIGMOD Conference, Chicago, U.S.A., June 1988

C.Lecluse, N.Spyratos, "Incorporating functional dependencies in deductive query answering", Proc. ICDE'87 (IEEE International Conference on Data Engineering), Los Angeles, U.S.A., February 1987

S.Cosmadakis, P.Kanellakis, N.Spyratos, "Partition semantics of relations, Proc. PODS'85 (ACM-SIGACT-SIGMOD Symposium on Principles of Database Systems), Oregon, U.S.A., March 1985)

T.Imielinski, N.Spyratos, "On lossless transformations of database schemes not necessarily satisfying universal instance assumption", Proc. PODS'84 (ACM-SIGACT-SIGMOD Symposium on Principles of Database Systemes), Waterloo, Canada, April 1984, pp 258-265

A.D'Atri, M.Moscarini, N.Spyratos, "Answering queries in the relational model", Proc. ACM-SIGMOD Conference, San Jose, U.S.A., May 1983

S.Abiteboul, M.Spyratos, N. Spyratos, "Information Theoretic aspects of data bases systems", Proc. PODS'83 (ACM-SIGACT-SIGMOD Symposium on Principles of Database Systems), Atlanta, U.S.A., March 1983

N.Spyratos, "An operational approach to data bases", Proceedings PODS'82 (ACM SIGACT-SIGMOD Symposium on Principles of Data Base Systems), Los Angeles, March 29-31, 1982

F.Bancilhon, N.Spyratos, "Independent Components of databases", Proc. VLDB'81 (7th International Conference on Very Large Data Bases), Cannes, France, Sept. 1981

N.Spyratos, "Translation structures of relational views", Proc. VLDB'80 (6th International Conference on Very Large Data Bases), Montreal, October 1980

N.Spyratos, F.Bancilhon, "Name Independence and data base abstraction in the relational model", MFCS'78 (7th Symposium on Mathematical Foundations of Computer Sciences), Zakopane, Poland, September 1978

F.Bancilhon, N.Spyratos, "Protection of Information in Relational Data Bases", Proc. VLDB'77 (Third International Conference on Very Large Data Bases), Tokyo, October 1977, pp. 494-500

Chapters:

S.Minato, N.Spyratos, BDD-Based Combinatorial Keyword Query Processing under a Taxonomy Model, In: Interdisciplinary Advances in Adaptive and Intelligent Assistant Systems: Concepts, Techniques, Applications and Use (G.Kreuzberger, A.Lunzer, R.Kaschek Eds), IGI Global, 2011, Chapter 2, pp. 26-39

C.Meghini, N.Spyratos, Unifying the Concept of Collection in Digital Libraries, In: Advances in Intelligent Information Systems, Z.W. Ras and L.-S. Tsay (eds) Springer Studies in Computational Intelligence Vol. 265. Springer Verlag 2010

M. Doer, C. Meghini, N. Spyratos, Managing Co-reference Knowledge for Data Integration, Information Modelling and Knowledge Bases XX, Vol.190, Frontiers in Artificial Intelligence and Applications Series, IOS Press, January 2009, (Y.Kiyoki, T.Tokuda, H.Jaakkola, X.Chen, and N.Yoshida Eds)

N.Spyratos, Relational databases (in French) - Bases de données relationnelles, Encyclopédie de l'informatique et des systèmes d'information, Vuibert, Paris, 2006 (Editions Vuibert Informatique)

P. Georgiadis, N. Spyratos, V. Christophides, C. Meghini, Personalizing Digital Library Access with Preference-Based Queries, ERCIM News 66, Special theme: European Digital Library, July 2006

Y. Tzitzikas, N. Spyratos, P. Constantopoulos and A. Analyti, "Extended Faceted Taxonomies for Web Catalogs", ERCIM NEWS, Volume 51, October 2002

N. Spyratos and Y. Tzitzikas, "Searching", *Wiley Encyclopedia of Electrical and Electronics Engineering*, J.Wiley & Sons, Published Online: 27 DEC 1999, DOI: 10.1002/047134608X.W4324