

YANNIS VELEGRAKIS

CURRICULUM VITAE

Department of Information Engineering
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Research Interests

Information Integration & Data Exchange. Schema mapping and data translation in highly heterogeneous environments. Data evolution and maintenance, mapping adaptation, updates through views. Meta-data management and efficient storage methods. Algorithm design, analysis, and tool building to simplify heterogeneous data translation. Digital libraries. Wrapper generation. Business Intelligence. Semantic Web.

Education

Ph.D. in Computer Science, University of Toronto, Canada, June 2005.

Dissertation: "Managing Schema Mappings in Highly Heterogeneous Environments".

M.Sc. in Computer Science, University of Crete, Greece, July 1998, Summa cum Laude

Thesis: "Declarative Specification of Z39.50 Wrappers by using Description Logics".

B.Sc. in Computer Science, University of Crete, Greece, November 1996, Summa cum Laude

Thesis: "VRW: Creation, Modification and Production of data reports".

Department of Physics, University of Crete, Greece, Sep. 1991 - Jun. 1992

Honors, Awards, Achievements and Grants

- Marie-Curie Fellow: International Reintegration Grant (Feb. 2007 - Jan. 2009)
- IBM PhD Fellowship (Sep. 2002 - Aug. 2004)
- IBM Center of Advanced Studies Fellowship (Jan. 2001 - Jan. 2003)
- University of Toronto Open Fellowship (Sep. 1998 - Jan. 2001).
- Foundation for Research and Technology Graduate Scholarship (Sep. 1996 - Jun. 1998).
- Foundation for Research and Technology Undergraduate Scholarship (Jun. 1994 - Aug. 1996).
- Greek National Scholarship Nomination for ranking 3rd in the class. Department of Computer Science, University of Crete (Sep. 1992 - Sep. 1995).
- Completed all the undergraduate course requirements in 3 years (normal duration: 4 years).
- Greek Ministry of Education Award for Excellency (Sep 1986 - Sep 1991).

Publications

Refereed Publications

- [1] A. Presa, Y. Velegrakis, F. Rizzolo and S. Bykau: “Modeling Associations through Intensional Attributes”, In Proceedings of the International Conference on Semantic Modeling (ER ‘08), Nov. 2009.
- [2] F. Rizzolo, Y. Velegrakis, J. Mylopoulos and S. Bykau: “Modeling Concept Evolution: a Historical Perspective”, In Proceedings of the International Conference on Semantic Modeling (ER ‘08), Nov. 2009.
- [3] A. Morris, Y. Velegrakis and P. Bouquet: “Entity Identification on the Semantic Web”, In Proceedings of the 5th Semantic Web Applications and Perspectives (SWAP ‘08), Dec. 2008.
- [4] T. Palpanas, J. Chaudhry, P. Andritsos, and Y. Velegrakis: “Entity Data Management in OKKAM”, In Proceedings of the 2nd International Workshop on Semantic Web Architectures For Enterprises (SWAE ‘08), Sep. 2008.
- [5] Y. Velegrakis: “On the Importance of Updates in Information Integration and Data Exchange Systems”, Keynote talk, In Proceedings of the 6th International Workshop on Databases, Information Systems and Peer-to-Peer Computing (DBISP2P ‘08), Aug. 2008.
- [6] Y. Velegrakis: “Data Integration”, In AI Research in Greece, Information Processing and Management Section, Oct. 2008.
- [7] A. Chiasera, F. Casati, F. Daniel, and Y. Velegrakis: “Engineering Privacy Requirements in Business Intelligence Applications”, In Proceedings of the 5th International Workshop on Secure Data Management (SDM’08), Aug. 2008.
- [8] D. Srivastava and Y. Velegrakis: “Uniform Management Of Data And Metadata”, In Proceedings of the 8th Hellenic Data Management Symposium (HDMS ‘08), Jul. 2008.
- [9] D. Srivastava and Y. Velegrakis: “Intensional Associations between Data and Metadata”, In Proceedings of the 26th International Conference on Management of Data (SIGMOD ‘07), Jun. 2007.
- [10] D. Srivastava and Y. Velegrakis: “Using Queries to Associate Metadata with Data”, In Proceedings of the 23rd International Conference on Data Engineering (ICDE ‘07), Apr. 2007.
- [11] D. Srivastava and Y. Velegrakis: “Achieving the Much-desired Side-effect-free View Update”, In Proceedings of the 6th Hellenic Symposium on Data Management (HDMS ‘06), Sep. 2006.
- [12] Y. Kotidis, D. Srivastava and Y. Velegrakis: “Updates Through Views: A New Hope”, In Proceedings of the 22nd International Conference on Data Engineering (ICDE ‘06), Apr. 2006.
- [13] Y. Velegrakis, R. J. Miller and J. Mylopoulos: “Representing and Querying Data Transformations”, In Proceedings of the 21st International Conference on Data Engineering (ICDE ‘05), pp. 81-92, Apr. 2005.
- [14] Y. Velegrakis, R. J. Miller and L. Popa: “Mapping Adaptation under Evolving Schemas”, In Proceedings of the 29th International Conference for Very Large Databases (VLDB ‘03), pp. 584-595, Sep. 2003.
- [15] Y. Velegrakis, R. J. Miller, L. Popa and J. Mylopoulos: “ToMAS: Mapping Adaptation under Evolving Schemas”, in 2nd Hellenic Symposium of Data Management (HDMS ‘03), Sep. 2003.
- [16] L. Popa, Y. Velegrakis, M. Hernandez, R. J. Miller and R. Fagin: “Translating Web Data”, In Proceedings of the 28th International Conference for Very Large Databases (VLDB ‘02), pp. 598-609, Aug. 2002.
- [17] L. Popa, Y. Velegrakis, R. J. Miller, M. Hernandez and R. Fagin: “Mapping Generation and Data Translation of Heterogeneous Web Data”, In Proceedings of the 2nd International Workshop on Data Integration over the Web (DIWeb 2002), May 2002.

- [18] Y. Velegrakis, V. Christophides and P. Constantopoulos: "Declarative Specification of Z39.50 Wrappers using Description Logics", In Proceedings of 3rd European Conference on Research and Advanced Technology for Digital Libraries (ECDL'99), pp. 383-402, Sep. 1999. (*Selected as one of the eight best papers of the conference for publishing in the International Journal for Digital Libraries*).

Book Chapters

- [1] R. Fagin, L. M. Haas, M. Hernandez, R. J. Miller, L. Popa and Y. Velegrakis, "Clio: Schema Mapping Creation and Data Exchange", In A. Borgida, V. Chaudhri, P. Giorgini, and E. Yu, *Conceptual Modeling: Foundations and Applications*, Springer, 2009.
- [2] Y. Velegrakis, "Relational Technologies, Metadata and RDF", In Roberto De Virgilio, Fausto Giunchiglia and Letizia Tanca, *Semantic Web Information Management: A Model-based Perspective*, Springer, 2009.

Journal Papers

- [1] B. Alexe, W. Tan and Y. Velegrakis: "STBenchmark: Towards a Benchmark for Mapping Systems", In Proceedings of the VLDB Endowment, 1(1): 230-244, Aug. 2008.
- [2] P. Andritsos, A. Fuxman, A. Kementsietsidis, R. J. Miller and Y. Velegrakis: "Kanata: Adaptation and Evolution in Data Sharing Systems", In SIGMOD Record, 33(4): 32-37, Dec. 2004.
- [3] Y. Velegrakis, R. J. Miller and L. Popa: "Preserving mapping consistency under schema changes", In VLDB Journal The International Journal on Very Large Data Bases, 13(3): 274 - 293, Sep. 2004.
- [4] P. Andritsos, R. Fagin, A. Fuxman, L. M. Haas, M. A. Hernandez, C. Ho, A. Kementsietsidis, R. J. Miller, F. Naumann, L. Popa, Y. Velegrakis, C. Vilarem and L. Yan: "Schema Management", In IEEE Data Engineering Bulletin, 25(3), pp. 32-38, Sep. 2002.
- [5] Y. Velegrakis, V. Christophides and P. Constantopoulos: "On Z39.50 Wrapping and Description Logics", In International Journal on Digital Libraries (JODL), 3(3): 208-220, Sep. 2000.

System Demonstrations / Demo Papers

- [1] B. Alexe, W. Tan and Y. Velegrakis: "Comparing and Evaluating Mapping Systems with STBenchmark", In Proceedings of the 34th International Conference for Very Large Databases (VLDB '08), 2008.
- [2] D. Srivastava and Y. Velegrakis: "MMS: Using Queries as Data Values for Metadata Management", In Proceedings of the 23rd International Conference on Data Engineering (ICDE '07), Apr. 2007.
- [3] Y. Velegrakis, R. J. Miller, L. Popa and J. Mylopoulos: "ToMAS: A System for Adapting Mappings while Schemas Evolve", In Proceedings of the International Conference in Data Engineering (ICDE'04), pp. 862, Mar. 2004.
- [4] Y. Velegrakis, R. J. Miller, J. Mylopoulos, L. Popa, M. Hernandez, H. Ho and M. Litoiu: "Schema Mapping: Generation and Maintenance Under Evolving Schemas", IBM Center of Advanced Studies Conference (CASCON '03), Oct. 2003.
- [5] L. Popa, M. Hernandez, Y. Velegrakis, R. J. Miller, F. Neumann and H. Ho: "Mapping XML and Relational Schemas with Clio", In Proceedings of the International Conference in Data Engineering (ICDE'02), pp. 498-499, Feb. 2002.

Technical Reports

- [1] Y. Velegrakis, L. Popa, and R. J. Miller: "Adapting Mappings in Frequently Changing Environments", Technical Report CSRG-468, University of Toronto, Department of Computer Science, Feb. 2003.
- [2] L. Popa, Y. Velegrakis, R. Fagin, M. Hernandez, and R. J. Miller: "Translating Web Data", University of Toronto, Department of Computer Science, Technical Report CSRG-441, Feb. 2002.
- [3] Y. Velegrakis: "Declarative Specification of Z39.50 Wrappers by Using Description Logics", Technical Report TR-225, Department of Computer Science, University of Crete, Jul. 1998.
- [4] Y. Velegrakis: "VRW: A System for the Creation and Modification of Reports." Technical Report FORTH-ICS-TR-197, May 1997.

Patents

- [1] D. Srivastava, Y. Velegrakis: "Metadata = Data + Associations", AT&T Patent, Filed Nov. 2005.
- [2] Y. Kotidis, D. Srivastava, Y. Velegrakis: "Updates Through Views", US Patent 7,440,957, Oct. 21st, 2008.
- [3] R. Fagin, M. Hernandez, R. J. Miller, L. Popa and Y. Velegrakis: "System and method for translating data from a source schema to a target schema", IBM Patent ARC920030001US1, Filed Mar. 2003.

Research Experience

University of Trento, Italy, Sep '05 - now

Assistant Professor

University of California, Santa-Cruz, USA, Jun '07 – Sep '07

Visiting Professor

AT&T Labs - Research, USA, Sep. '04 - Sep. '06

Technical Specialist, Researcher, Member of the Database Department.

IBM Almaden Research Center, USA, Jun. '01 - Sep. '01

Summer Visitor

IBM Almaden Research Center, USA, May '02 - Jul. '02

Summer Visitor

Department of Computer Science, University of Toronto, Canada, Sep. '98 - Sep. '04

Research Assistant

IBM Toronto Lab, Center of Advanced Studies, Canada, Apr. '01 - Sep. '04

CAS student

Institute of Computer Science, Foundation of Research & Technology, Greece, Jun. '94 - Jun. '98

Research Assistant

Teaching Experience

Department of Information and Telecommunications, University of Trento, Italy, Sep. '05 - Present

Instructor for Organizational Information Systems (Fall '05), Advanced Information Systems (Fall '07, Fall '08, Fall '09), Information Managements and Integration (Fall '07, Fall '08), Research Programs in Data and Knowledge Management (Spring '07, Spring '08)

Department of Computer Science, University of Toronto, Canada, Jun. '02 - Aug. '02

Instructor for Database Management Systems ('02)

Department of Computer Science, University of Toronto, Canada, Jan. '99 – Jun. '04

Teaching Assistant for Database Management Systems (Spring '99, Fall '99, Spring '00, Fall '00, Spring '01, Fall '01, Spring '02, Fall '02, Spring '03, Fall '03, Spring '04)

Department of Computer Science, University of Crete, Greece, Oct. '96 - Jun. '98

Teaching Assistant

Department of Business Administration, CRETE D.A. College, Greece, Sep. '96 - Jun. '97

Lecturer

Professional Experience

MakNet Corporation, Toronto, Canada, May '00 - Sep. '00

Technology Consultant

Department of Business Administration, CRETE D.A. College, Greece, Sep. '96 - Jun. '97

System Administrator

System Administration Group, Computer Center, University of Crete, Greece, Sep. '92 - Jun. '94

System Operator, Technical Consultant

Professional Activities & Memberships

- **PC Chair:** VLDB ('08), SWAE ('08).
- **Scientific Reviewer:** Natural Sciences and Engineering Research Council of Canada (NSERC).
- **Program Committee Member:** ADBIS ('07, '08), CanDB ('04), CIKM ('08), HDMS ('08), ICDE ('06, '07, '09), InterDB ('06), ODBASE ('08), OM ('08), SIGMOD ('05, '07), SWAE ('08), VLDB ('07, '08), WIDM ('06, '07), WIRI ('06), WISE ('06, '07), WWW ('08), Xsym ('05, '07).
- **External Reviewer:** DBPL, VLDB, SIGMOD, WebDB, ICDE, CoopIS and KDD Conferences.
- **Reviewer:** VLDB, TKDE, Journal on Data Semantics and Acta Informatica Scientific Journals.
- **Member:** ACM and IEEE Professional Organizations.
- **Committee Member:** ANSI/NISO Z39.50 Standard CIMI profile Working Group (Apr. '97 - Jan. '98)
- **Member:** Hart House Investment Club Financial group (1999-2004).
- **Webmaster:** University of Toronto Database Group (2000-2004).
- **Member and co-founder:** University of Crete, Computer Science Graduate Student Club.
- **Board Member:** University of Crete, Computer Science Graduate Student Club (1996-1997).
- **Alumni:** Department of Computer Science at the University of Crete.
- **Alumni:** University of Toronto.

Funding

Coordinator: Uniform Management of Data and Metadata (2007-2009) [80.000€]

Marie Currie Actions, Reintegration Grant

Local Coordinator: Papyrus: Cultural and Historical Digital Libraries dynamically mined from News Archives (2008-2010) [2.200.000€]

European Union STREP Project

Participant: OKKAM - Enabling the Web of Entities (2008-2010) [5.125.000€]

European Union IP Project

Administrative Activities

- University of Trento, Department of Information Engineering and Computer Science, PhD School Executive Committee member (May '05 – now)
- University of Trento, Department of Information Engineering and Computer Science, PhD School Qualifying exam committee member (Feb '08 – now)
- University of Trento, Department of Information Engineering and Computer Science, Teaching Coordinator of the Data and Knowledge Management area (Sep '06 – now)
- University of Trento, Department of Information Engineering and Computer Science, Local Coordinator of the European Master in Informatics (Mar '07 – now)

Languages

English (Fluent), French (Moderate), Greek (Native Speaker), Italian (Moderate)

Citizenship

Canadian, Greek

References

Available upon request.