# **IOANNIS (YANNIS) VELEGRAKIS**

### **CURRICULUM VITAE**

Department of Information Engineering and Computer Science University of Trento Via Sommarive 9 38123 Trento, Italy +39 (0461) 28-3986 velgias@disi.unitn.eu http://www.disi.unitn.eu/~velgias

### **Research Interests**

Social Data Analytics, Knowledge Discovery, Big Data Management, Information Integration & Data Exchange, Big Data Quality, Keyword Searching, Novel Query Techniques for Large Data.

### **Biographical Information**

Official Name: loannis Velegrakis Citizenship: Canadian, Greek, Italian

Languages: English (Excellent), Greek (Excellent – Mother tongue)

Italian (Very good), French (Basic)

### **Employment & Experience**

University of Trento, Italy [Sep. 2005 – now]

Associate Professor, Dep. of Information Engineering & Computer Science

(Assistant Professor until Sep. 2014)

University of California, Santa-Cruz, USA [Jun. 2007 – Sep. 2007]

Visiting Professor, Department of Computer Science

AT&T Labs - Research, USA [Sep. 2004 - Aug. 2006]

Technical Specialist, Researcher, Member of the Database Department.

IBM Almaden Research Center, USA [Jun. 2001 - Sep. 2001] & [May 2002 - Jul. 2002]

Summer Visitor

Department of Computer Science, University of Toronto, Canada [Sep. 1998 - Sep. 2004]

Research Assistant

IBM Toronto Lab, Center of Advanced Studies, Canada [Apr. 2001 - Sep. 2004]

**CAS Member** 

MakNet Corporation, Toronto, Canada [May 2000 - Sep. 2000]

**Technology Consultant** 

Department of Business Administration, CRETE D.A. College, Greece [Sep. 1996 - Jun. 1997]

System Administrator

Institute of Comp. Science, Foundation of Research & Technology, Greece [Jun. 1994 - Jun. 1998]

Research Assistant

System Administration Group, Comp. Center, University of Crete, Greece [Sep. 1992 - Jun. 1994]

System Operator, Technical Consultant

# **Education and Degrees**

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

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

Supervisor: Renée J. Miller and John Mylopoulos

M.Sc. in Computer Science, University of Crete, Greece (Summa cum Laude) [1998]

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

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Supervisor: Vassilis Christophides and Panos Constantopoulos

### B.Sc. in Computer Science, University of Crete, Greece (Summa cum Laude)

[1996]

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

Supervisor: Panos Constantopoulos

### Honors, Achievements, Prizes and Awards

|   | 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] |
|   | National Scholarship for ranked 3rd in the class. Ministry of Education. | [Sep. 1992 - Sep. 1995] |
|   | Undergraduate course completion in 3 years (normal duration: 4 years).   |                         |
| • | Greek Ministry of Education Award for Excellency                         | [Sep. 1986 - Sep. 1991] |

## **Keynote Talks**

- "Ranking Query Results based on the Query Semantics and in the Presence of Linkage and Evolution", International Workshop on Ranking in Databases (DBRank), in conjunction with VLDB, 2012
- "Updates: The Neglected Operations", International Workshop on Databases, Information Systems and Peerto-Peer Computing (DRISP2P), in conjunction with VLDB, 2008

| to-Peer Computing (DBISP2P), in conjunction with VLDB, 2008  |                                   |
|--|-----------------------------------|
| Professional Affiliations, Memberships and Services  |                                   |
| General Chair  |                                   |
| VLDB - International Conference of Very Large Databases  | [2013]                            |
| Steering Committee Member: WebDB - International Workshop on the Web and Databases   | [2013-2018]                       |
| PC Chair   |                                   |
| IKC – International Keystone Conference  | [2015]                            |
| SMAP - Int. Workshop on Semantic and Social Media Adaptation and Personalization   | [2015]                            |
| SDSW - International Workshop on Surfacing the Big and the Social Web WebDB - International Workshop on the Web and Databases                        | [2014, 2015]<br>[2012]            |
| VLDB Tutorial Program - International Conference of Very Large Databases   | [2008]                            |
| DESWeb - International Workshop of Data Engineering Meets the Semantic Web   | [2010, 2011]                      |
| SWAE - International Workshop on Semantic Web Architectures For Enterprises  | [2008]                            |
| Editorial Board  |                                   |
| Springer International Journal on Data Semantics   | [Jun. 2011- now]                  |
| International Journal On Semantic Web and Information System (Sp. Issue)   | [2015]                            |
| Program Committee Member   |                                   |
| BigData - IEEE International Conference on Big Data  | [2015, 2016]                      |
| CIKM - ACM Int. Conference on Information and Knowledge Management   | [2008, 2009, 2014]                |
| DBPL - International Conference on Databases and Programing Languages EDBT - International Conference on Extended Database Technology [2010, 2011, 2 | [2011]                            |
| ICDE - International Conference on Data Engineering [2006, 2007, 2009, 2010, 2   |                                   |
| ICDT - International Conference on Database Theory   | [2012]                            |
| ICSOC - International Conference on Service Oriented Computing   | [2008, 2009]                      |
| ICWE - International Conference on Web Engineering   | [2010]                            |
|  | 2005, 2007, 2011, 2017]           |
| SSDBM - Conference on Scientific and Statistical Database Management   | [2016]                            |
| WISE - International Conference on Web Information System Engineering  | [2006, 2007]                      |
| VLDB - International Conference on Very Large Data Bases [2007, 2008, 2 WWW - International World Wide Web Conference                                | 2009, 2010, 2015, 2017]<br>[2008] |
| BDMR – International Workshop on Big Data in Motion and Big Data at Rest   | [2015]                            |
| ADBIS – East European Conf. on Advances in Databases and Information Systems   | [2007, 2008]                      |
| CanDB - Canadian Database Research Workshop  | [2004]                            |
| CEDI – Spanish Workshop on Informatics   | [2015, 2016]                      |
|  |                                   |

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| CrowdSearch - International Workshop on Crowdsourcing Web Search DBPR - International Workshop on Big Data Processing – Reloaded DIARCHON - International Workshop on Preservation of Evolving Big Data ESWC - Extended Semantic Web Conference HDMS - Hellenic Data Management Symposium InterDB - International Workshop on Database Interoperability NoCoDa – International Workshop on Non Conventional Data Access ODBASE – Int. Conf. on Ontologies, Databases, and Applications of Semantics OM - International Workshop on Ontology Matching SEDB - Italian Symposium on Advanced Database Systems SMAP - Int. Workshop on Semantic and Social Media Adaptation and Personalization SWAE - International Workshop on Semantic Web Architectures For Enterprises SWIM - International Workshop on Semantic Web Information Management VLDB PhD Workshop WebDB - International Workshop on the Web and Databases WIDM - International Workshop on Web Information and Data Management WIRI - International Workshop on Challenges in Web Inf. Retrieval and Integration Xsym - International XML Database Symposium | [2012] [2016] [2015] [2011] [2008, 2009, 2010] [2008, 2009, 2010] [2008, 2009, 2010] [2011, 2012] [2016] [2008] [2011, 2012] [2015] [2009, 2013, 2014] [2006, 2007] [2006] [2005, 2007] |
|---|---|
| Journal Reviewer  VLDB Journal (VLDBJ)  IEEE Transactions on Knowledge and Data Engineering (TKDE)  Springer Journal on Data Semantics (JDS)  Elsevier Information Systems Journal (IS)  IEEE Intelligent Systems Journal (ISJ)  Acta Informatica, Journal of Web Semantics (JWS),  International Journal on Semantic Web and Information Systems (IJSWIS)  Springer Knowledge and Information Systems (KIS),  ACM SIGMOD Record (SIGRec)  ACM Transactions on Computational Collective Intelligence (TCCI)  ACM Transactions on Data and Knowledge Engineering (DKE),  |   |
| ACM Transactions on Management Information Systems (TMIS) ACM Transactions on the Web (TWeb), Open Journal of Databases (OJDB) [2014] Standards Committee Member  |   |
| ANSI/NISO Z39.50 Standard CIMI Working Group  Co-founder  | [Apr. 1997 - Jan. 1998]   |
| University of Crete, Computer Science Graduate Student Club   |   |
| Board Member University of Crete, Computer Science Graduate Student Club  | [1996 - 1997]   |
| Club Memberships Alumni University of Toronto Alumni University of Crete.   |   |
| Hart House Investment Club Financial group  | [1999 - 2004]   |
| Scientific Reviewer / Project Evaluator   |   |
| Fondazione Cassa di Risparmio di Padova e Rovigo, Italy<br>University of Modena and Regio Emilia, Italy<br>Free University of Bozen/Bolzano, Italy<br>Natural Sciences and Engineering Research Council of Canada   | [2015]<br>[2014]<br>[2014]<br>[2006]  |
| Research Grants   | -   |

### **Research Grants**

### Coordinator: Tweeter Analysis (10.000€)

[2014-2015]

Google Cloud Platform Funding: Methods to analyze tweets and generate personal user profiles using the Google cloud platform.

Scientific Coordinator: KEYSTONE (450.000€) [2013-2016] EU COST Action: Coordination and Collaboration action on Keyword Search and related topics with a special

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### Coordinator: Intolerance Knowledge Discovery (8.000€)

[2014]

ATHIRAT SIr.: Effective ways of using the SPARK, NUTCH and Hadoop Big Data technologies for the largescale discovery and analysis of web documents related to some specific discipline and the creation of a domain knowledge as it is expressed in the documents.

### Coordinator: Trento Big Data (800.000€)

[2013-2014]

Association Trento RISE flagship project: Design and development of a Big Data analytics platform for the exploitation of the highly heterogeneous and voluminous Open Data that the public administration is making available online.

### Participant: Neurocloud (5.000€)

[2012-2013]

Informatica Trentina: Tools and techniques for the management of the huge neuroimaging data sets and the related experiments as a cloud service.

#### Coordinator: Uniform Management of Data and Metadata (80.000€)

[2007-2009]

Marie Currie Actions, Reintegration Grant: Making metadata first class citizens through the development of management techniques for metadata in a way similar to those that already exist for data.

# Local Coordinator: Papyrus: Cultural and Historical Digital Libraries dynamically mined from News Archives (350.290€) [2008-2010]

European Union STREP Project: Bridging the heterogeneity gap across disciplines by developing technologies that allow data in one discipline to be queried by experts that use queries expressed in their own, different discipline.

#### Participant: OKKAM - Enabling the Web of Entities (5.125.000€)

[2008-2011]

European Union IP Project: Framework for providing persistent identifiers to Web objects and in general to the Internet of Things. Responsible for the query and maintenance of the large entity repository, and the management of the evolution that occurs naturally on the entities.

### **Educational Grants**

### EIT Digital Master (186.000€)

[2016]

Funds to support the educational activities of the EIT Digital Master program in the areas of Embedded Systems, Media, HCI, Security & Privacy, Software Engineering, and Internet Technologies.

#### Administrative Activities

Coordinator, Master Program of the EIT Digital, University of Trento, Department of Information Engineering and Computer Science [Jun. 2015 – now]

MSc Selection Committee Member, University of Trento, Department of Information Engineering and Computer Science [Sep. 2013 – now]

Coordinator, University of Trento Node, CINI Big Data Laboratory

[Sep. 2014 - now]

Co-Founder & Coordinator, University of Trento Data and Information Management Research Group,
Department of Information Engineering and Computer Science [Sep. 2006 – now]

Coordinator, Data & Knowledge Management Research Program, Department of Information Engineering and Computer Science, University of Trento [Sep. 2013 – now]

Department Seminar Series Organizer

[2014 - now]

PhD School Selection Committee member, Department of Information Engineering and Computer Science, University of Trento [Spring 2012]

PhD School Executive Committee member, Department of Information Engineering and Computer Science, University of Trento [May 2005 – Aug. 2010]

PhD School Qualifying exam committee member, Department of Information Engineering and Computer Science, University of Trento [Feb. 2008 – Aug. 2010]

Teaching Coordinator of the Data and Knowledge Management area, Department of Information Engineering and Computer Science, University of Trento [Sep. 2006 – Sep. 2009]

Local Coordinator of the European Master in Informatics, Department of Information Engineering and Computer Science, University of Trento [Mar. 2007 – Mar. 2010]

# **Teaching Experience**

### Department of Engineering and Computer Science, University of Trento, Italy

Big Data and Social Applications [2014, 2015]
Massive Data Analytics / Data Mining [2013, 2014, 2015]

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| Databases   | [2014, 2015]                         |  |  |  |
|---|--------------------------------------|--|--|--|
| Data and Information Integration                                  | [2009, 2010, 2011, 2012, 2013]       |  |  |  |
| Software Engineering  | [2012, 2013]                         |  |  |  |
| Web Programming   | [2009, 2010, 2011]                   |  |  |  |
| Information Management and Integration                            | [2007, 2008, 2009, 2010]             |  |  |  |
| Research Project in Data, Media and Knowledge                     | [2010]                               |  |  |  |
| Advanced Information Systems                                      | [2006, 2007, 2008]                   |  |  |  |
| Organizational Information Systems                                | [2005]                               |  |  |  |
| Department of Computer Science, University of Toronto, Canada     |                                      |  |  |  |
| Database Management Systems                                       | [2002]                               |  |  |  |
| Database Management Systems (as TA)                               | [1999, 2000, 2001, 2002, 2003, 2004] |  |  |  |
| Department of Computer Science, University of Crete, Greece       |                                      |  |  |  |
| Information Systems (as TA)                                       | [1996, 1997, 1998]                   |  |  |  |
| Department of Business Administration, CRETE D.A. College, Greece |                                      |  |  |  |
| Information Technology  | [1996, 1997]                         |  |  |  |

# **Summer / Winter School Teaching**

• Taming Big Data: From management and curation to storage and analysis. Cuso Winter School, February 1-5, 2016, Champéry, Switzerland

# **Supervision**

| Supervision  |                   |
|--|-------------------|
| PhD Students   |                   |
| Annamaria Chiasera   | [2012]            |
| <ul> <li>Thesis Title: "Privacy elicitation and utilization in distributed data exchange systems"</li> </ul>                                   | ·                 |
| Siarhei Bykau  | [2013]            |
| <ul> <li>Thesis Title: "Exploiting the Volatile Nature of Data and Information in Evolving<br/>Systems with User Generated Content"</li> </ul> | Repositories and  |
| Davide Mottin  | [2015]            |
| Thesis on: Novel Query Paradigms for Big Data  |                   |
| Matteo Lissandrini   | [2016 (expected)] |
| Thesis on: User Profile Discovery & Social Analytics   | . ( 1 /2          |
| Dimitra Papadimitriou  | [2017 (expected)] |
| Thesis on: Goal Oriented Data Analysis & Management  | . ( 1 /2          |
| Paolo Sottovia   | [2019 (expected)] |
| Thesis on: Knowledge and Opinion Extraction from Voluminous Data   | [ (-   /]         |
| Daniele Foroni   | [2019 (expected)] |
| Thesis on: Data Quality in Big Data  | [ (-   /]         |
| Post-docs  |                   |
| Sabeur Aridhi  | [2014 – now]      |
| Work on: Distributed Discovery of k-core in Big Data Graphs  | [2014 HOW]        |
| Chrisa Tsinaraki   | [2008 - 2009]     |
| Work on: Management and Exploitation of Polysemous Terms   | [2000 2000]       |
| Flavio Rizzolo   | [2007 - 2008]     |
| Work on: Modeling of Concept Evolution   | [2007 2000]       |
| Nadzeya Kiyavitskaya   | [2007-2010]       |
| Work on: Modeling Heterogeneous Domains  | [2007 2010]       |
|  |                   |
| PhD Defense Committees  Payer Kusharbasy Wang Viaguai - University of Tranta Italy   |                   |
| Pavel Kucherbaev Wang Xiaowei – University of Trento, Italy<br>Aikaterini Tzompanaki – University of Paris-Sud, France                         | [2015]            |
| Katsiaryna Mirylenka, Zolzaya Dashdorj – University of Trento, Italy   | [2015]            |
| Daniel Taliun – University of Bolzano, Italy   | [2015]            |
| Ekaterini loannou – Leibniz Universität Hannover, Germany  | [2013]            |
| Endomin loannou – Leibniz Oniversitat Hannover, Germany  | ردران             |

## **Publications**

(from the most recent to the oldest)

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### **Conference and Workshop Papers**

- [c1] S. Aridhi, M. Brugnara, A. Montressor and Y. Velegrakis, "Distributed k-core Decomposition and Maintenance in Large Dynamic Graphs", in Proceedings of the 10th ACM International Conference on Distributed and Event-Based Systems (DEBS'16), 2016.
- [c2] S. Aridhi, A. Montressor and Y. Velegrakis, "BLADYG: A novel block-centric framework for the analysis of large dynamic graphs", in Proceedings of 1st High Performance Graph Processing workshop (HPGP'16), 2016.
- [c3] P. Kozikowski, E. Ioannou, Y. Velegrakis, and F. Guerra, "Support of Part-whole Relations in Query Answering", In Proceedings of the International Keystone Conference (IKC'15), 2015.
- [c4] S. Cadegnani, F. Guerra, S. Ilarri, M. Rodriguez-Hernandez, R. Trillo-Lado, and Y. Velegrakis, "Recommending Web Pages using Item-based Collaborative Filtering Approaches", In Proceedings of the International Keystone Conference (IKC'15), 2015.
- [c5] S. Bykau, F. Korn, D. Srivastava, and Y. Velegrakis, "Fine-Grained Controversy Detection in Wikipedia", In Proceedings of the International Conference on Data Engineering (ICDE'15), 2015.
- [c6] A. Guerierri, A. Montresor, and Y. Velegrakis, "*Top-k Item Identification on Dynamic and Distributed Datasets*", In Proceedings of the 20<sup>th</sup> International European Conference on Parallel Processing (EuroPar'14), pp. 270-281, 2014.
- [c7] M. Haddad, J. Stevovic, A. Chiasera, Y. Velegrakis, and M. Hacid, "Access Control for Data Integration in Presence of Data Dependencies", In Proceedings of the 19<sup>th</sup> International Conference on Database Systems for Advanced Applications (DASFAA'14), 2014
- [c8] S. Bykau, J. Mylopoulos, F. Rizzolo and Y. Velegrakis, "Supporting Queries Spanning Across Phases of Evolving Artifacts using Steine rForests", In Proceedings of the International Conference on Information and Knowledge Management (CIKM'11), pp. 1649-1658, 2011.
- [c9] S. Bergamaschi, F. Guerra, S. Rota and Y. Velegrakis, "A Hidden Markov Model Approach to Keyword-based Search over Relational Databases", In Proceedings of the International Conference on Conceptual Modeling (ER'11), pp. 411-420, 2011.
- [c10] S. Bergamaschi, E. Domnori, F. Guerra, R. Trillo Lado and Y. Velegrakis, "Keyword Search over Relational Databases: A Metadata Approach", In Proceedings of the International Conference on Management of Data (SIGMOD'11), pp. 565-576, 2011.
- [c11] S. Bergamaschi, E. Domnori, F. Guerra, R. Trillo Lado and Y. Velegrakis, "Keyword-based Search in Data Integration Systems", In Proceedings of the Italian Symposium on Advanced Database Systems, 2011.
- [c12] S. Bergamaschi, F. Guerra, S. Rota and Y. Velegrakis, "Understanding Linked Open Data through Keyword Searching: the KEYRY approach", In Proceedings of the International Workshop on Linked Web Data Management (LWDM'11), pp 34-35, 2011.
- [c13] C. Tsinaraki, Y. Velegrakis, N. Kiyavitskaya and J. Mylopoulos: "A Context-based Model for the Interpretation of Polysemous Terms", In Proceedings of the International Conference on Ontologies, DataBases, and Applications of Semantics (ODBASE '10), Oct. 2010.
- [c14] S. Bykau, N. Kiyavitskaya, C. Tsinaraki and Y. Velegrakis: "Bridging the gap between heterogeneous and semantically diverse content of different disciplines", In Proceedings of the Flexible Database and Information System Technology (FlexDBIST '10), pp. 305-309, Aug. 2010.
- [c15] E. Ioannou, C. Niederee and Y. Velegrakis: "Enabling Entity-Based Aggregators for Web 2.0 data", In Proceedings of the International World Wide Web Conference (WWW '10), pp. 1119-1120, Apr. 2010.
- [c16] A. Presa, Y. Velegrakis, F. Rizzolo and S. Bykau: "Modeling Associations through Intensional Attributes", In Proceedings of the International Conference on Semantic Modeling (ER '09), pp. 315-330, Nov. 2009.
- [c17] 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 '09), pp. 331-345, Nov. 2009.
- [c18] 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.
- [c19] 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), pp. 729-733, Sep. 2008.
- [c20] 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), pp. 219-228, Aug. 2008.

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- [c21] 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.
- [c22] D. Srivastava and Y. Velegrakis: "Using Queries to Associate Metadata with Data", In Proceedings of the 23rd International Conference on Data Engineering (ICDE '07), pp. 1451-1453, Apr. 2007.
- [c23] 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), pp. 13-24, Apr. 2006.
- [c24] Y. Velegrakis, R. J. Miller and J. Mylopoulos: "Representing and Querying Data Transformations", In Proceedings of the International Conference on Data Engineering (ICDE '05), pp. 81-92, Apr. 2005.
- [c25] Y. Velegrakis, R. J. Miller and L. Popa: "Mapping Adaptation under Evolving Schemas", In Proceedings of the International Conference for Very Large Databases (VLDB '03), pp. 584-595, Sep. 2003.
- [c26] 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.
- [c27] 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).

#### **Parts in Books or Collections**

- [s1] S. Bergamaschi, E. Domnori, F. Guerra, S. Rota, R. Trillo Lado and Yannis Velegrakis, "Understanding the Semantics of KeywordQueries on Relational Data Without Accessing the Instance", In R. De Virgilio, F. Guerra and Y. Velegrakis (ed.), Semantic Search over the Web, Springer-Verlag, Chapter 6, pp. 129-156, 2012
- [s2] E. Ioannou, W. Nejdl, C. Niederee, and Yannis Velegrakis, "Embracing Uncertainty in Entity Linking", In R. De Virgilio, F. Guerra and Y. Velegrakis (ed.), Semantic Search over the Web, Springer-Verlag, Chapter 9, pp. 223-251, 2012
- [s3] Z. Bellahsene, A. Bonifati, F. Duchateau and Y. Velegrakis, "On Evaluating Schema Matching and Mapping", In Z. Bellahsene, A. Bonifati and E. Rahm (ed.), Schema Matching and Mapping, Springer, pp. 253-291, 2011.
- [s4] A. Bonifati, G. Mecca, P. Papotti and Y. Velegrakis, "Discovery and Correctness of Schema Mapping Transformations", In Z. Bellahsene, A. Bonifati and E. Rahm, (ed.) Schema Matching and Mapping, Springer, pp. 111-148, 2011.
- [s5] Y. Velegrakis, "Relational Technologies, Metadata and RDF", In R. De Virgilio, F. Giunchiglia and L. Tanca (ed.), *Semantic Web Information Management: A Model-based Perspective*, Springer, pp. 45-69, 2010.
- [s6] 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 (ed.), *Conceptual Modeling: Foundations and Applications*, Springer, pp. 198-236, 2009.
- [s7] Y. Velegrakis, Updates through Views, In Encyclopedia of Database Systems, Springer, pp. 3244-3247, 2009.
- [s8] Y. Velegrakis, Side-Effect-Free View Updates, In Encyclopedia of Database Systems, Springer, pp. 2639-2642, 2009.

### Books

- [b1] R. De Virgilio, F. Guerra and Y. Velegrakis, "Semantic Search over the Web", Springer-Verlag, p. 417, 2012.
- [b2] R. De Virgilio, F. Giunchiglia, F. Guerra, L. Tanca, Y. Velegrakis, "Special Issue on Semantic Web Data Management." Information Systems, 37(4), Elsevier 2012.

### **Editorships**

- [e1] Z. Ives and Y. Velegrakis: Proceedings of the 15<sup>th</sup> International Workshop on the Web and Databases (WebDB), 2012.
- [e2] T. K. Sellis, R. J. Miller, A. Kementsietsidis, Y. Velegrakis: Proceedings of the ACM SIGMOD International Conference on Management of Data, ACM, 2011.
- [e3] H. R. M. Nezhar, F. Toumani and Y. Velegrakis: Proceedings of the PhD Symposium at the 6<sup>th</sup> International Conference on Service Oriented Computing (ICSOC), 2008

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#### **Journal Articles**

- [j1] S. Bergamaschi, D. Ferrari, F. Guerra, G. Simonini nd Y. Velegrakis, "Providing insight into data source topics", Journal of Data Semantics, 2016.
- [j2] E. Ioannou and Y. Velegrakis, "Searching Web 2.0 Data through Entity-Based Aggregation", Transactions on Computational Collective Intelligence, 21, pp. 159-174, 2016.
- [j3] S. Cadegnani, F. Guerra, S. Ilarri, M. Rodriguez-Hernandez, R. Trillo-Lado, Y. Velegrakis, and R. Amaro, "Exploiting Linguistic Analysis on URLs for Recommending Web Pages: a comparative study", Transactions on Computational Collective Intelligence, 2016.
- [j4] E. Sartori, Y. Velegrakis and F. Guerra, "Entity-based keyword search in web documents", Transactions on Computational Collective Intelligence, 21, pp. 21-49, 2016.
- [j5] S. Bergamaschi, F. Guerra, M. Interlandi, R. Trillo-Lado and Y. Velegrakis, "Combining User and Database Perspective for Solving Keyword Queries over Relational Databases", Information Systems 55, pp. 1-19, 2016.
- [j6] D. Mottin, M. Lissandrini, D. Papadimitriou, T. Palpanas and Y. Velegrakis, "Unleashing the Power of Information Graphs", SIGMOD Record 43(4), 2014.
- [j7] D. Mottin, M. Lissandrini, Y. Velegrakis, T. Palpanas, "Exemplar Queries: Give me an Example of What You Need", Proceedings of the VLDB Endowment (PVLDB), 7(5), 2014.
- [j8] D. Mottin, A. Marascu, S. Basu Roy, G. Das, T. Palpanas, Y. Velegrakis, "A Probabilistic Optimization Framework for the Empty-Answer Problem", Proceedings of the VLDB Endowment (PVLDB), 6(14), 2013.
- [j9] I. Bedini, B. Elser and Y. Velegrakis, "The Trento Big Data Platform for Public Administration and Large Companies: Use cases and Opportunities", Proceedings of the 39<sup>th</sup> International Conference on Very Large Databases (PVLDB), 6(11), pp. 1166-1167, 2013.
- [j10] E. Ioannou, N. Rassadko and Y. Velegrakis, "On Generating Benchmark Data for Entity Matching", Journal on Data Semantics, 2(1), pp. 37-56, 2013.
- [j11] D. Mottin, T. Palpanas and Y. Velegrakis, "Entity Ranking Using Click-Log Information", Intelligent Data Analysis Journal, 17(5), pp. 837-856, 2013.
- [j12] T. Palpanas and Y. Velegrakis, "dbTrento: The Data and Information Management group at the University of Trento", SIGMOD Record 41(3), pp. 28-33, 2012.
- [j13] S. Bykau, J. Mylopoulos, F. Rizzolo and Y. Velegrakis: "On Modeling and Querying Concept Evolution", Journal on Data Semantics 1(1), pp. 31-55, 2012.
- [j14] E. Ioannou, W. Nejdl, C. Niederee and Y. Velegrakis: "On-the-Fly Entity-Aware Query Processing in the Presence of Linkage", Proceedings of the VLDB Endowment (PVLDB), 3(1), pp. 429-438, Sep. 2010.
- [j15] B. Alexe, W. Tan and Y. Velegrakis: "STBenchmark: Towards a Benchmark for Mapping Systems", Proceedings of the VLDB Endowment (PVLDB), 1(1), pp. 230-244, Aug. 2008.
- [j16] P. Andritsos, A. Fuxman, A. Kementsietsidis, R. J. Miller and Y. Velegrakis: "Kanata: Adaptation and Evolution in Data Sharing Systems", SIGMOD Record, 33(4), pp. 32-37, Dec. 2004.
- [j17] Y. Velegrakis, R. J. Miller and L. Popa: "Preserving mapping consistency under schema changes", VLDB Journal The International Journal on Very Large Data Bases, 13(3), pp. 274-293, Sep. 2004.
- [j18] 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", IEEE Data Engineering Bulletin, 25(3), pp. 32-38, Sep. 2002.
- [j19] Y. Velegrakis, V. Christophides and P. Constantopoulos: "On Z39.50 Wrapping and Description Logics", International Journal on Digital Libraries (JODL), 3(3), pp. 208-220, Sep. 2000.

### System Demonstrations / Demo Papers

- [d1] E. Ioannou and Y. Velegrakis, "EMBench: Generating Entity-Related Benchmark Data", In Proceedings of the 13<sup>th</sup> International Semantic Web Conference (ISWC'14), pp. 113-116, 2014.
- [d2] D. Mottin, M. Lissandrini, T. Palpanas and Y. Velegrakis, "Searching with XQ: the eXemplar Query Search Engine", In Proceedings of the 33rd International Conference on Management of Data (SIGMOD'14), pp. 901-904, 2014.
- [d3] D. Mottin, A. Marascu, S. Basu Roy, G. Das, T. Palpanas and Y. Velegrakis, "IQR: An Interactive Query Relaxation System for the Empty-Answer Problem", In Proceedings of the 33rd International Conference on Management of Data (SIGMOD'14), pp. 1095-1098, 2014.

Yannis Velegrakis 8/10

- [d4] S. Bergamaschi, F. Guerra, M. Interlandi, R. Trillo-Lado and Y. Velegrakis, "QUEST: A Keyword Search System for Relational Data based on Semantic and Machine Learning Techniques", In Proceedings of the 39<sup>th</sup> International Conference on Very Large Databases (PVLDB'13), 6(12), pp. 1222-1225, 2013.
- [d5] S. Bykau, F. Rizzolo and Y. Velegrakis, "A Query Answering System for Data with Evolution Relationships", In Proceedings of the 32nd International Conference on Management of Data (SIGMOD'13), pp. 989-992, 2013.
- [d6] S. Bergamaschi, F. Guerra, S. Rota and Y. Velegrakis,"KEYRY: a Keyword-based Search Engine over Relational Databases based on a Hidden Markov Model", In Proceedings of the International Conference of Conceptual Modeling (ER'11), pp. 328-331, 2011.
- [d7] A. Katifori, C. Nikolaou, M. Platakis, Y. Ioannidis, A. Tympas, M. Koubarakis, N. Sarris, V. Tountopoulos, E. Tzoanos, S. Bykau, N. Kiyavitskaya, C. Tsinaraki and Y. Velegrakis. The Papyrus Digital Library: Discovering History in the News", In International Conference on Theory and Practice of Digital Libraries, pp. 465-468, 2011.
- [d8] E. Ioannou, W. Nejdl, C. Niederee and Y. Velegrakis, "LinkDB: A Probabilistic Linkage Database System", In Proceedings of the 30th International Conference on Management of Data (SIGMOD '11), pp. 1307-1309, Jun 2011
- [d9] S. Bergamaschi, E. Domnori, F. Guerra, M. Orsini, R. T. Lado and Y. Velegrakis: "Keymantic: Semantic Keyword based Searching in Data Integration Systems", Proceedings of the VLDB Endowment, 3(2), pp. 1637-1640, Sep. 2010.
- [d10] E. Ioannou, C. Niederée, Y. Velegrakis: "A Matching Framework for Entity-Based Aggregation", In Proceedings of the Hellenic Data Management Symposium (HDMS '10), Jun. 2010.
- [d11] 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), pp. 1468-1471, Aug. 2008.
- [d12] 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), pp. 1481-1482, Apr. 2007.
- [d13] 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.
- [d14] L. Popa, M. Hernandez, Y. Velegrakis, R. J. Miller, F. Naumann 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.

#### **Patents**

- [p1] D. Srivastava, Y. Velegrakis: "Method and apparatus for associating metadata with data", US Patent 8145624, Mar. 2012.
- [p2] Y. Kotidis, D. Srivastava, Y. Velegrakis: "Updates Through Views", US Patent 7440957, Oct. 2008.

### **Tutorials**

- [t1] D. Papadimitriou, Y. Velegrakis, G. Koutrika and J. Mylopoulos, "Goals in Social Media, Information Retrieval and Intelligent Agents", In International Conference on Management of Data (ICDE'15), 2015.
- [t2] O. Hassanzadeh, A. Kementsietsidis and Y. Velegrakis, "Data Management Issues on the Semantic Web", In International Conference on Management of Data (ICDE'12), pp. 1204-1206, 2012.
- [t3] A. Bonifati and Y. Velegrakis: "Schema Matching and Mapping: From Usage to Evaluation", In Proceedings of the International Conference on Extending Database Technology (EDBT'11), pp. 527-529, Mar. 2011.
- [t4] A. Kementsietsidis, O. Hassanzadeh and Y. Velegrakis: "Publishing Relational Data in the Semantic Web", Extended Sematic Web Conference (ESWC'11), May 2011.

#### **Online Articles**

[01] Y. Velegrakis, "Data Integration", In Al Research in Greece: Information Processing/Management, by M. Koubarakis and T. Sellis,

http://ai-lab-webserver.aegean.gr/EETN/information processing and management#4, 2008.

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