

Curriculum Vitae et Studiorum

Diego Calvanese

March 2011

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1 Personal Information

First Name: Diego
Last Name: Calvanese
Date of Birth: January 17, 1966
Place of Birth: Innsbruck (Austria)
Citizenship: Italian
Marital Status: married since 1994, 2 children

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2 Education

School (1976–1984): Bundesrealgymnasiums (Scientific Liceum) Adolf-Pichler Platz, Innsbruck, Austria; diploma cum laudae, 1984.

University (1984–1990): Faculty of Engineering of the University of Rome “La Sapienza”; degree in Electrical Engineering 110/110 cum laudae, December 1990.

Thesis: *Integration between Datalog and Frame Languages*; supervisor: Prof. Maurizio Lenzerini.

Ph.D. (1992–1995): in Computer Engineering at the Dipartimento di Informatica e Sistemistica, University of Rome “La Sapienza”; degree Dottore di Ricerca in Computer Engineering, 1996.

Thesis: *Unrestricted and Finite Model Reasoning in Class-Based Representation Systems*; supervisor: Prof. Maurizio Lenzerini; external reviewers: Prof. Alexander Borgida, Rutgers University, U.S.A.; Prof. Jan Van den Bussche, University of Limburg, Belgium.

Languages: Italian written and spoken: native;

German written and spoken: native;

English written and spoken: excellent.

3 Employment and Appointments Held

Feb. 1991 – Jul. 1992: Responsible for software development for the company “Ionen-Technik”, Innsbruck, Austria; development of the control software for an ion-beam gas-analyzer.

Sep. 1992 – Mar. 1993: Consultant for the company “Computer and Microimage”, Rome, Italy; development of an expert system with multimedia interface for insurance counseling.

Oct. 1994 – Jul. 1995: Visiting Scholar, Department of Theoretical Computer Science, Technical University of Aachen (RWTH), Germany.

Research interests: Description Logics. Supervisor: Prof. Franz Baader.

Nov. 1996 – Feb. 1998: Postdoctoral Fellow, Dipartimento di Informatica e Sistemistica (DIS), University of Rome “La Sapienza”.

Research interests: Knowledge Representation, Class-based Formalisms, Description Logics, Databases, Data Modeling.

Mar. 1998 – Aug. 2000: Postdoctoral Scholarship at DIS, University of Rome “La Sapienza”, supported by three awards from the Italian Research Council.

Research interests: Data Warehousing, Data and Information Integration, Semistructured Data Modeling, Logics for Knowledge Representation, Modal Logics.

Sep. 2000 – Oct. 2003: Ricercatore (Assistant Professor) at the Dipartimento di Informatica e Sistemistica, University of Rome “La Sapienza”. Research interests: Data Integration, Databases, Semistructured Data and XML, Automata Theory, Planning, e-Services.

Nov. 2003 – Today: Associate Professor at the Faculty of Computer Science, Free University of Bolzano/Bozen. Research interests: Ontologies, Logics for Knowledge Representation, Data Integration, Databases, Semistructured Data and XML, Automata Theory, Planning, e-Services.

4 Organization and Promotion of Research

4.1 Impact Factors

The following table reports the values of the h-index¹, g-index², and the h_m-index³ calculated on 30/3/2011 for “Diego Calvanese” using the Scholarometer Firefox plugin (which makes use of the citation data provided by Google Scholar).

	h-index	g-index	h _m -index
Value	53	94	26.97

In the listing at “CiteSeerX”⁴, which provides a ranking of the most cited authors in computer science worldwide, on 14/9/2010, Diego Calvanese is ranked in position 1154 (among more than 750,000 authors in computer science).

4.2 Coordination of Research Projects

Since Feb. 2004: Coordinator of the project *Foundations of KRDB*, which studies the fundamental problem, both in knowledge representation (KR) and in databases (DB) of defining in a declarative way the relevant aspects of an application domain, and of developing methods and techniques for querying and manipulating such representations. The participants to the project are various researchers and PhD students of the KRDB Research Centre for Knowledge and Data. The project has a duration till 2013, and is funded internally by the Free University of Bozen-Bolzano.

Sep. 2005 – Dec. 2008: Coordinator of the European Union 6th Framework IST-STREP project *Thinking ONtologiES* (TONES)⁵, run under the FET-Open scheme. The goal of the project is to study methodologies and techniques for the design, evolution, access to, integration, and, interoperation of ontologies. Partners are: Free Univ. of Bozen-Bolzano, Italy, Prof. D. Calvanese, coordinator; Univ. of Rome “La Sapienza”, Italy, Prof. M. Lenzerini; Univ. of Manchester, U.K., Prof. U. Sattler; Univ. of Dresden, Germany, Prof. F. Baader; Univ. of Hamburg, Germany, Prof. R. Möller. The project was funded with 1.400.000 Euro for 3 years, of which 355.000 Euro for the Free Univ. of Bozen-Bolzano.

Oct. 2005 – Sep. 2009: Coordinator of the project *Foundations for the Access to LArge Data INTensive Ontologies* (ALADINO and ALADINO-II), whose objective is to study the problem of accessing large data repositories through ontologies, and to develop systems that support this kind of activity. The project consists of a first phase, terminated in Oct. 2006, in which the foundational aspects of the problem have been studied and a first prototype system has been developed (project ALADINO), and a second phase, in which the results, the techniques, and the prototype system developed in the first phase are extended (ALADINO-II). The participants to the project are various researchers and PhD students of the KRDB Research Centre for Knowledge and Data. The research is carried out in collaboration with various research groups both in Italy and abroad, including the Dipartimento di Informatica e Sistemistica of the Sapienza University of Rome, and the Technische Universität Hamburg-Harburg. The project is funded internally by the Free University of Bozen-Bolzano.

Feb. 2007 – Feb. 2009: Principal investigator of the project *Discovering content of web sources via ontology-based query reformulation*, as part of the project *New technologies and tools for the integration of Web search services* (NGS). The goal of the project is to contribute to the development of a new generation search engine (NGS) that integrates known services and offers a uniform search interface. Central aspects are the technological integration, the development of new matching algorithms between results of independent search engines, and the use of query reformulation and rewriting techniques in the presence of web sources and services. Partners are Politecnico di Milano, Italy, Prof. S. Ceri, coordinator; Free Univ. of Bozen-Bolzano, Italy, Prof. D. Calvanese.; Università degli Studi di Roma Tre, Italy, Prof. R. Torlone. The project is funded by the Italian Ministry for University and Research under the basic research program PRIN, year 2006, with 66.500 Euro for the Free Univ. of Bozen-Bolzano.

¹A researcher has a value of the Hirsch-index (or h-index) equal to h if h of her/his N publications have at least h citations each, while the other $N - h$ publications have not more than h citations each. The h-index measures the cumulative impact of the scientific production of a researcher, evaluated by means of the number of citations that her/his work has obtained.

²Given a list of publications sorted in decreasing order of number of received citations, the value of the g-index is the largest integer g such that the first g publications have received together at least g^2 citations. With respect to the h-index, the g-index gives more weight to publications with a high number of citations.

³The h_m-index is calculated by first normalizing the number of citations for each publication with respect to the number of authors, and then calculating the h-index on the normalized number of citations. This index measures better the individual impact of a researcher, since it reduces the effect on the index that is caused by publications with multiple authors.

⁴<http://citeseerx.ist.psu.edu/stats/authors>

⁵<http://www.inf.unibz.it/tones/>

Since Oct. 2007: Coordinator of the project *Knowledge Based Access to Services* (KBASE), whose objective is to study the problem of modelling information services and the context in which such services operate, the access to such services, and their combination and integration. These problems are addressed by resorting to declarative languages to describe a domain of interest, services, and their interaction, taking into account the trade-off between high expressiveness of the formalisms and efficiency in automated support to the various activities. The participants to the project are various researchers and PhD students of the KRDB Research Centre for Knowledge and Data. The project has a duration of 5 years and is funded internally by the Free University of Bozen-Bolzano.

June 2010 – May 2013: Principal investigator of the European Union 7th Framework IST-STREP project *Artifact-centric Service Interoperation* (ACSI). The goal of the project is to dramatically reduce the effort and time-to-usage of designing, deploying, and maintaining environments that support service collaborations. The project is coordinated by IBM Israel, and the additional partners are Sapienza Università di Roma, Italy, Imperial College, U.K., Technische Universiteit Eindhoven, Netherlands, Tartu Ülikool, Estonia, Indra Software Labs, Spain, and Collibra, Belgium. The project is funded for 3 years with 411.000 Euro for the Free Univ. of Bozen-Bolzano.

Since Oct. 2010: Coordinator of the project *Logics for Ontology-based Data Management* (LODAM), whose primary goal is the design and implementation of a novel system for ontology-based data management, which can be considered as the representative of a new generation of systems. The purpose of the system is to extend the current technology for ontology-based data management in different directions, including mapping management, answering complex queries, update management, and explanation facilities. The participants to the project are various researchers and PhD students of the KRDB Research Centre for Knowledge and Data. The project has a duration of 2 years and is funded internally by the Free University of Bozen-Bolzano.

4.3 Participation to Research Projects

Nov. 1992 – Dec. 1994: Member of the Italian National Research Council (CNR) funded project *Sistemi Informativi e Calcolo Parallelo*, area Hybrid Systems. Partners are: Univ. of Roma “La Sapienza”, Prof. M. Lenzerini, coordinator; CNR-IP, Rome, C. Castelfranchi; CNR-Computational Linguistics Institute, Pisa, A. Cappelli; CNR-LADSEB, Padova, N. Guarino; ITC-irst, Trento, E. Franconi; Quinary SpA, Milano, L. Spampinato. The goal of the project was the study and the development of hybrid knowledge representation systems, based on Description Logics.

Nov. 1992 – May. 1996: Member of the ESPRIT Basic Research Action Project COMPULOG2.

Oct. 1996 – Dec. 1999: Co-investigator of the European ESPRIT-4 Long Term Research (LTR) Project *Foundations of Data Warehouse Quality* (DWQ)⁶. Partners are: National Technical Univ. of Athens (NTUA), Greece, Prof. Y. Vassiliou, coordinator, Prof. T. Sellis; DFKI Saarbrücken, Germany, Dr. W. Nutt; INRIA Rocquencourt, France, Prof. E. Simon, Prof. M. Bouzeghoub; Technical Univ. of Aachen (RWTH), Germany, Prof. M. Jarke, Prof. F. Baader; Univ. of Roma “La Sapienza”, Italy, Prof. M. Lenzerini; Univ. of Manchester, U.K., Prof. E. Franconi. The goal of the DWQ project was to develop a semantic foundation that allows the designers of data warehouses to link the choice of deeper models, richer data structures and rigorous implementation techniques to quality-of-service factors in a systematic manner, thus improving the design, the operation, and the evolution of data warehouse applications. Our research covered data integration and reconciliation in the context of data warehousing; we proposed a general three-layered architecture that was adopted within the project, in which mappings between data sources are established at the conceptual level, and data reconciliation correspondences are specified at the logical level. We also developed a prototype data integration and reconciliation tool. Our research was funded for 120,000 Euro for 3 years.

Nov. 1996 – Oct. 1998: Co-investigator of the Italian National Research Council (CNR) funded project *Reingegnerizzazione dei dati e dei processi nella Pubblica Amministrazione (Process and Data Reengineering in the Public Administration, PROGRESS)*, which was part of the CNR Strategic Project *Informatica nella Pubblica Amministrazione (Computer Science in the Public Administration)*. Partners are: Univ. of Napoli, Prof. A. Cimitile, coordinator; Technical Univ. of Milan, Prof. V. De Antonellis; Univ. of Rome “La Sapienza”, Prof. M. Lenzerini; CNR-IASI, Rome, P. Bertolazzi; Italian Ministry of Justice, Dr. Roller. The goal of the project was the development of methodologies and techniques for the reengineering of data and processes of the Public Administration; the developed techniques have been experimented on the case of the Juvenile Court of the Italian Ministry of Justice. Our research was funded for 42 ML Italian Lire (22,000 Euro) for 2 years.

⁶<http://www.dbnet.ece.ntua.gr/~dwq/>

- Nov. 1996 – Nov. 1999: Member of the Italian Space Agency (ASI) project *Integrazione ed Accesso a Basi di Dati Eterogenee (Integration and Access to Heterogeneous Databases)*. Project partners are the leading Italian research groups in knowledge representation applied to databases. The goal of this project was to study and develop methodologies, techniques, algorithms, and software modules specifications for the integration of and the access to heterogeneous databases. The research activity was evaluated in its wholeness in an experimental domain of data in the space sciences, including images, spectra, and other data products from a wide range of space-based missions. Our research was funded for 60 ML Italian Lire (31,000 Euro) for 2 years.
- May 1998 – Dec. 2000: Member of the European Project *Libraries and Archives Collecting Newspaper Clippings Unified for their Integration into Networks (LAURIN)*⁷, part of the 4th Framework Project *Telematics for Libraries*. Partners are: Univ. of Innsbruck, Austria, Dr. G. Mühlberger, coordinator; Univ. Oberta de Catalunya, Spain, Dr. B. Aguilera Caballero; Univ. of Roma “La Sapienza”, Italy, Prof. T. Catarci; Software companies: Improx (Austria), CM Sistemi (Italy); European libraries: Centre Documentacio Politica (Spain), Innsbrucker Zeitungsarchiv (Austria), Univ. Marburg - Literaturvermittlung (Germany), Nasjonalbibliotekavdelinga i Rana (Norway), Nasjonalbibliotek Oslo Branch (Norway), Biblioteca Statale A. Baldini (Italy), Pressarkivet Uppsala Universitetsbibliotek (Sweden). The goal of the project was the development of a generic model and system for the electronic acquisition of newspaper clippings with distributed archiving and querying via the Web; the system allows for storing and retrieving both scanned images of articles and their full text; an integrated multilingual thesaurus system supports librarians in indexing and archiving the clippings, and users in querying the system to retrieve clippings. LAURIN has also set up a network of seven European libraries and archives collecting newspapers and clippings. Our responsibility was in the design of the distributed database architecture, and in the development of the central server node for the system, which maintains the structural data about all clippings archived in the network and controls replication of the information in the local nodes. Our research was funded for 180,000 Euro for 3 years.
- Nov. 1999 – Oct. 2000: Co-investigator of the Italian National Research Council (CNR) funded project *Documenti elettronici per la Pubblica Amministrazione (Electronic Documents for the Public Administration, DEP)*. Members are: Technical Univ. of Turin, Prof. M. Mezzalama, coordinator; Technical Univ. of Milan, Prof. V. De Antonellis; Univ. of Rome “La Sapienza”, Prof. M. Lenzerini; various units of CNR, M. Missikoff, F. Fabbrini, D. Latella, A. Meo; Italian Authority for Computer Science in the Public Administration (AIPA); Italian Ministry of Justice, Dr. Roller. The goal of the project was the study of the aspects related to the introduction of electronic documents and of the electronic signature in the Italian Public Administration. Our research covered the proposal of techniques for the integration of semistructured information, and for its efficient querying. It was funded for 25 ML Italian Lire (13,000 Euro) for 1 year.
- Dec. 2000 – Dec. 2002: Co-investigator of the Italian Ministry of University and Research (MIUR) project *Integrazione, warehousing, e mining di sorgenti di dati eterogenee (Integration, Warehousing, and Mining of Heterogeneous Data Sources, D2I)*. Partners are: Univ. of Rome “La Sapienza”, Prof. M. Lenzerini, coordinator; Univ. of Bologna, Prof. Stefano Rizzi; Univ. della Calabria, Prof. S. Greco; Univ. of Milano, Prof. S. Castano; Univ. of Modena and Reggio Emilia, Prof. S. Bergamaschi. The goal of the project was the definition of a general methodological framework for the integration, warehousing, and mining of highly heterogeneous and autonomous data sources, i.e., ordinary relational databases together with semistructured data on the Web. Our research was concerned with the development of techniques for answering queries using views and query rewriting over structured and semistructured data sources, taking into account also the presence of constraints over the global schema. Our research was funded 92,000 Euro for 2 years.
- Apr. 2002 – Oct. 2003: Member of the European Union 5th framework IST project *Boosting information integration (INFOMIX)*⁸. Partners are: Univ. della Calabria, Italy, Prof. N. Leone, coordinator; Technical Univ. Wien, Austria, Prof. T. Eiter; Univ. of Rome “La Sapienza”, Prof. M. Lenzerini; Rodan Systems S.A., Poland. The goal of the project was the development of an advanced system for information integration, capable of handling semi-structured data, dealing with incomplete and inconsistent data sources, and exploiting advanced reasoning capabilities. Our research is concerned with the development of techniques for answering queries over a data integration system in the presence of inconsistent and incomplete data. Our research was funded for 179,000 Euro for 3 years.
- Apr. 2002 – Oct. 2003: Member of the European Union 5th framework IST project *Semantic Webs and Agents in Integrated Economies (SEWASIE)*⁹. The goal of the project was the design and implementation of an

⁷<http://laurin.uibk.ac.at/>

⁸<http://www.dis.uniroma1.it/~rosati/infomix/>

⁹<http://www.sewasie.org/>

advanced search engine enabling intelligent access to heterogeneous data sources on the web via semantic enrichment, to provide the basis for structured secure web-based communication. Partners are: Univ. of Modena and Reggio Emilia, Italy, Prof. S. Bergamaschi, coordinator; Free Univ. of Bozen-Bolzano, Italy, Prof. E. Franconi; Technical Univ. of Aachen (RWTH), Germany, Prof. M. Jarke; Univ. of Rome “La Sapienza”, Italy, Prof. M. Lenzerini; Confederazione Nazionale dell’Artigianato e della Piccola e Media Impresa (CNA SERVIZI-Modena), Italy; IBM Italia SpA, Italy; Thinking Networks AG, Aachen, Germany. Our research was funded 206,000 Euro for 3 years.

Jul. 2005 – Feb. 2008: Participation to the development work within the system *MUltilingual Search In Libraries* (MuSiL), realized within the project *Computational Linguistics*, whose objective is the development and the experimentation of a system for multilingual access and search to the university library of the Free university of Bozen-Bolzano. The project aims at improving search results by adopting domain ontologies and mapping mechanism such as those used in knowledge representation to establish correspondences between subject terms in different languages. The project involves researchers from the KRDB Research Centre for Knowledge and Data, library personell, and companies specialized in the development and use of language technologies. The project was funded by the University Library of the Free university of Bozen-Bolzano.

4.4 Participation to Projects in Collaboration with Industry

Sep. 1992 – Mar. 2003: Collaboration with the company *Computer and Microimage* in the context of the project ESINA (Expert System Istituto Nazionale delle Assicurazioni), whose aim was the development of an expert system with a multimedia interface for supporting insurance consultants.

Nov. 2000 – Oct. 2003: Co-investigator of the industrial project *System Management Ontology* (SMO) between IBM Tivoli Labs and the Dipartimento di Informatica e Sistemistica of the Univ. of Rome “La Sapienza”. The goal of the project is the development of a framework and of techniques for the extraction of intensional knowledge from CIM (Common Information Model), adopted by IBM Tivoli Labs to support system management. The research was funded 60,000 Euro for 3 years.

Jan. 2001 – Dec. 2002: Co-investigator of the industrial project *Internet-Based Information System* (IBIS) between CM Sistemi SpA and the Dipartimento di Informatica e Sistemistica of the Univ. of Rome “La Sapienza”. The goal of the project was the development of a system for the semantic integration of heterogeneous data sources that adopts innovative and state-of-the-art solutions to deal with all aspects of a complex data-integration environment, including query answering under integrity constraints and limitations on source access. The research was funded 40,000 Euro for 2 years.

Jan. 2003 – Dec. 2003: Co-investigator of the industrial project *PICASSO* between CM Sistemi SpA and the Dipartimento di Informatica e Sistemistica of the Univ. of Rome “La Sapienza”. The goal of the project was to extend the IBIS system to deal also with more complex types of mappings between data sources and global schema, and to cope with inconsistencies between the data at the sources and the constraints expressed over the global schema. The research was funded 40,000 Euro for 1 year.

Since 2008: Collaboration with the IBM Thomas J. Watson Research Center on *Artifact-centric Workflow and Business Models*. The research activity is carried out within an agreement for Open Collaborative Research between the Free University of Bozen-Bolzano and the IBM Thomas J. Watson Research Center.

5 Activities in Scientific Committees

5.1 Scientific Committee Chair

- Responsible for technical support for the *27th International Conference on Very Large Databases* (VLDB 2001), Sep. 2001, Rome (Italy).
- Co-chair of the *International Workshop on Foundations of Models for Information Integration* (FMII 2001), the 10th Workshop in the series *Foundations of Models and Languages for Data and Objects* (FMLDO), Sep. 2001, Viterbo (Italy).
- Co-chair of the *9th International Workshop on Knowledge Representation meets Databases* (KRDB 2002), Apr. 2002, Toulouse (France).
- Organization-chair of the *9th International Conference on Database Theory* (ICDT 2003), Jan. 2003, Siena (Italy).
- Co-chair of the *2003 International Workshop on Description Logics* (DL 2003), Sep. 2003, Rome (Italy).
- Co-chair of the *13th Italian Database Conference* (SEBD 2005), June 2005, Bressanone (Italy).

- Co-chair of the *2007 International Workshop on Description Logics* (DL 2007), June 2007, Bressanone (Italy).
- Co-organizer and member of the scientific committee of the *8th EDBT Summer School on Database Technologies for Novel Applications* (EDBTSS 2007), Sep. 2007, Bolzano (Italy).
- Program committee co-chair of the *2nd International Conference on Web Reasoning and Rule Systems* (RR 2008), Nov. 2008, Karlsruhe (Germany).
- Organizer of the *4th International Conference on Web Reasoning and Rule Systems* (RR 2010), Sep. 2010, Bressanone (Italy).
- Program committee co-chair of the *6th Workshop on Semantic Web Applications and Perspectives* (SWAP 2010), Sep. 2010, Bressanone (Italy).
- Chair of the track on *Data Quality, Security, and Semantic Web* for the *13th Asia-Pacific Web Conference* (APWeb 2011), Beijing (China), Apr. 2011.

5.2 Scientific Committee Membership

- Member of the Description Logic Steering Committee (Apr. 2002 to June 2007).
- Member of the World-Wide-Web Consortium (W3C) Web Ontology Language (OWL) working group (since Feb. 2008).
- Member of the Steering Committee of the International Conference on Web Reasoning and Rule Systems (since Oct. 2008).
- Representative of the Faculty of Computer Science in the Research Committee of the Free University of Bozen-Bolzano (Oct. 2010 to Oct. 2013).

5.3 Editorial Board Membership

- Member of the Editorial Board of the *Journal of Artificial Intelligence Research* (since 2010).
- Member of the Editorial Board of the series *Lecture Notes in Logic, Language and Information* (LNLLI), published by Springer as part of the series *Lecture Notes in Computer Science* and of the series *Lecture Notes in Artificial Intelligence* (since 2005).
- Member of the Editorial Board of the series *Studies on the Semantic Web*, published by IOS Press (since 2011).

5.4 Program Committee Membership

Has been member of the Program Committee of the following conferences:

Before 2003

- *4th IFCIS Conference on Cooperative Information Systems* (CoopIS'99), Edinburgh (U.K.), Sep. 1999.
- *6th International Workshop on Knowledge Representation meets Databases* (KRDB'99), Linköping (Sweden), Jul. 1999.
- *2000 International Workshop on Description Logics* (DL 2000), Aachen (Germany), Aug. 2000.
- *8th Biennial Workshop on Data Bases and Programming Languages* (DBPL 2001), Rome (Italy), Sep. 2001.
- *Workshop on Formal Ontology, Knowledge Representation and Intelligent Systems for the World Wide Web* (SemWeb@KR 2002), Toulouse (France), Apr. 2002.

2003

- *9th International Conference on Database Theory* (ICDT 2003), Siena (Italy), Jan. 2003.
- *22nd ACM Symposium on Principles of Database Systems* (PODS 2003), San Diego (U.S.A), Jun. 2003.
- *11th Italian Database Conference* (SEBD 2003), Cetraro (Italy), Jun. 2003.
- *4th International Conference on Web Information Systems Engineering* (WISE 2003), Rome (Italy), Dec. 2003.

2004

- *IASTED International Conference on Databases and Applications* (DBA 2004), as part of the 22nd IASTED International Multi-Conference on Applied Informatics, Innsbruck (Austria), Feb. 2004.
- *International Workshop on Peer-to-Peer Computing and DataBases* (P2PDB 2004), Heraklion (Greece), Mar. 2004.
- *2004 International Workshop on Description Logics* (DL 2004), Whistler, British Columbia, (Canada), Jun. 2004.
- *23rd International Conference on Conceptual Modeling* (ER 2004), Shanghai (China), Nov. 2004.
- *11th International Conference on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2004), Varna (Bulgaria), Sep. 2004.
- *3rd International Semantic Web Conference* (ISWC 2004) Hiroshima (Japan), Nov. 2004,.

2005

- *17th European Summer School in Logic, Language and Information* (ESSLLI 2005), Edinburgh (U.K.), Aug. 2005.
- *24th ACM Symposium on Principles of Database Systems* (PODS 2005), Baltimore, Maryland (U.S.A), June 2005.
- *13^o Convegno Nazionale su Sistemi Evoluti per Basi di Dati* (SEBD 2005), Bressanone (Italy), June 2005.
- *24th International Conference on Conceptual Modeling* (ER 2005), Klagenfurt (Austria), Oct. 2005.
- *4th International Semantic Web Conference* (ISWC 2005), Galway (Ireland), Nov. 2005.
- *1st International Workshop on Mediation in Semantic Web Services* (MEDIATE 2005), Amsterdam (Netherlands), Dec. 2005; colocated with the 3rd International Conference on Service Oriented Computing (ICSOC 2005).

2006

- *10th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2006), Lake District (U.K), June 2006.
- *21st National Conference on Artificial Intelligence* (AAAI 2006), Boston, Massachussets (U.S.A.), July 2006.
- *IFIP International Conference on Theoretical Computer Science* (IFIP-TCS 2006), Santiago (Chile), Aug. 2006.
- *17th European Conference on Artificial Intelligence* (ECAI 2006), Riva del Garda (Italy), Aug. 2006.
- *2nd International Conference on Intelligent Computer Communication and Processing* (ICCP 2006), Cluj Napoca (Romania), Sept. 2006.
- *12th International Conference on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2006), Varna (Bulgaria), Sept. 2006.
- *25th International Conference on Conceptual Modeling* (ER 2006), Tucson, Arizona (U.S.A.), Nov. 2006.

2007

- *11th International Conference on Database Theory* (ICDT 2007), Barcellona (Spain), Jan. 2007.
- *ICDT Workshop on Emerging Research Opportunities in Web Data Management* (EROW 2007), Barcellona (Spain), Jan. 2007.
- *3rd International Workshop on OWL: Experiences and Directions* (OWLED 2007), Innsbruck (Austria), June 2007.
- *22nd National Conference on Artificial Intelligence* (AAAI 2007), Vancouver (British Columbia, Canada), July 2007.
- *6th International Semantic Web Conference e 2nd Asian Semantic Web Conference*, (ISWC 2007 + ASWC 2007), Busan (South Korea), Nov. 2007.

2008

- *24th International Conference on Data Engineering (ICDE 2008)*, Cancun (Mexico), Apr. 2008.
- *2008 International Workshop on Description Logics (DL 2008)*, Dresden (Germany), May 2008.
- *5th European Semantic Web Conference (ESWC 2008)*, June 2008, Tenerife (Spain), June 2008,.
- *23rd National Conference on Artificial Intelligence (AAAI 2008)*, Chicago (USA), July 2008.
- *11th International Conference on Principles of Knowledge Representation and Reasoning (KR 2008)*, Sidney (Australia), Sep. 2008.

2009

- *12th International Conference on Database Theory (ICDT 2009)*, Saint Petersburg (Russia), Mar. 2009.
- *6th European Semantic Web Conference (ESWC 2009)*, Heraklion (Greece), June 2009.
- *21st International Conference on Artificial Intelligence (IJCAI 2009)*, Pasadena, CA (USA), July 2009.
- *6th International Workshop on Web Services and Formal Methods (WS-FM 2009)*, Bologna (Italy), Sep. 2009.
- *8th International Semantic Web Conference (ISWC 2009)*, Washington DC (U.S.A.), Oct. 2009.

2010

- *13th International Conference on Extending Database Technology (EDBT 2010)*, Lausanne (Switzerland), Mar. 2010.
- *13th International Conference on Business Information Systems (BIS 2010)*, Berlin (Germany), May 2010.
- *23rd International Workshop on Description Logics (DL 2010)*, Waterloo (Canada), May 2010.
- *12th International Conference on Principles of Knowledge Representation and Reasoning (KR 2010)*, Toronto (Canada), May 2010.
- *7th International Workshop on OWL: Experiences and Directions (OWLED 2010)*, San Francisco (CA, U.S.A.), June 2010.
- *7th Extended Semantic Web Conference (ESWC 2010)*, June 2010, Heraklion (Greece).
- *48th Annual Meeting of the Association for Computational Linguistics (ACL 2010)*, Uppsala (Sveden), July 2010.
- *19th European Conference on Artificial Intelligence (ECAI 2010)*, Lisbon (Portugal), Aug. 2010.
- *14th International Conference on Artificial Intelligence: Methodology, Systems, Applications (AIMSA 2010)*, Varna (Bulgaria), Sep. 2010.
- *9th International Semantic Web Conference (ISWC 2010)*, Shanghai (China), Nov. 2010.

2011

- *14th International Conference on Database Theory (ICDT 2011)*, Uppsala (Sweden), Mar. 2011.
- *International Workshop on Linked Web Data Management (LWDM 2011)*, Uppsala (Sweden), Mar. 2011.
- *5th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2011)*, Santiago (Chile), May 2011.
- *8th Extended Semantic Web Conference (ESWC 2011)*, Heraklion (Greece), May 2011.
- *24th International Workshop on Description Logics (DL 2011)*, Barcelona (Spain), Jul. 2011.
- *22nd International Conference on Artificial Intelligence (IJCAI 2011)*, Barcelona (Spain), Jul. 2011.
- *25th AAAI Conference on Artificial Intelligence (AAAI 2011)*, San Francisco, CA (USA), Aug. 2011.

5.5 Referee Activity

Referee activity for journals:

Journal of the ACM; Information and Computation; Theoretical Computer Science; Information Systems; ACM Transactions on Computational Logic; ACM Transactions on Database Systems; ACM Transactions on Internet Technology; Journal of Artificial Intelligence Research; VLDB Journal; International Journal of Cooperative Information Systems; Journal of Data Semantics; International Journal of Semantic Web and Information Systems.

Referee activity for conferences (excluding the conferences in which I am in the Program Committee):

ACM Symposium on Principles of Database Systems (PODS), 2000, 2002, 2007, 2008, 2009, 2010, 2011; ACM SIGMOD Conference on Management of Data (SIGMOD), 2001, 2002; International Conference on Database Theory (ICDT), 1997, 1999, 2001, 2005, 2010; International Conference on Very Large Data Bases (VLDB), 1998; Conference on Advanced Information Systems Engineering (CAiSE), 2003; IEEE International Conference on Scientific and Statistical Databases (SSDBM), 2000; International Conference on Conceptual Modeling (ER), 1999, 2000, 2002; International Conference on Extending Database Technology (EDBT), 2004, 2006; International Conference on Deductive and Object Oriented Databases (DOOD), 2000; East-European Symposium on Advances in Databases and Information Systems (ADBIS), 1997, 2003; Convegno Nazionale su Sistemi Evoluti per Basi di Dati (SEBD), 1998, 2002; International Symposium on Cooperative Database Systems for Advanced Applications (CODAS), 2001; International Joint Conference on Artificial Intelligence (IJCAI), 1999, 2001, 2003, 2005, 2007; International Conference on Principles of Knowledge Representation and Reasoning (KR), 1998, 2000, 2002; European Conference on Artificial Intelligence (ECAI), 1994, 1998; National Conference on Artificial Intelligence (AAAI), 1998, 2000, 2002; International Conference on Logics in Computer Science (LICS), 2005; International Conference on Automated Deduction (CADE), 1999, 2003, 2011; International Conference on Logic Programming (ICLP), 2003; Congress of the Italian Association for Artificial Intelligence (AI*IA), 1997, 2002, 2003; German Annual Conference on Artificial Intelligence (KI), 1997, 2002; International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA-AIE), 1998.

5.6 Project evaluation and other referee activities

2005, 2008: Member of the evaluation committee for project proposals submitted to the *Natural Science and Engineering Research Council of Canada* (NSERC), Canada.

2008: Member of the selection panel for project proposals submitted to one of the calls of the 7th Framework Program of the European Union (for confidentiality reasons, further details about the specific call cannot be provided). The activity foresaw the evaluation of several research proposals with a budget between 5 and 10 Million Euro, and the participation to several meetings for the selection of the projects to support financially.

2009: Member of the selection committee for project proposals submitted to the *Israel Science Foundation*, Israel.

2010: Participation as an expert to the selection process for project proposals submitted to the *European Research Council Executive Agency* (ERCEA).

2009: Member of the selection committee for the Price of the Italian Association for Artificial Intelligence for the best MSc Thesis in Artificial Intelligence.

5.7 Invited Talks and Tutorials

- Invited seminar on *The Correspondence between the Entity-Relationship Model and Concept Languages*, at the company “Computer and Microimage”, Rome (Italy), Dec. 1992.
- Invited seminar on *Logic Based Formalisms for Object-Based Knowledge Representation*, at the Faculty of Computer Science of the Technical University of Aachen (RWTH), Aachen (Germany), Oct. 1994.
- “Satisfiability in the Logic *ALUN^T*” at the Faculty of Computer Science of the Technical University of Aachen (RWTH), Aachen (Germany), Dec. 1994.
- Invited seminar on *Reasoning in a Unified Framework for Class Based Representation Formalisms*, at the Istituto per la Ricerca Scientifica e Tecnologica (IRST), Trento (Italy), Dec. 1995.
- Invited speaker on *A Description Logics Based Approach to Data Integration*, at the Dagstuhl seminar *Logics for Emerging Applications of Databases*, organized by Jan Chomicki, Ron van der Meyden, and Günther Saake, Schloß Dagstuhl (Germany), Jul. 2000.
- Invited speaker on *Automata Based Techniques for Query Processing in Semistructured Data*, at the Dagstuhl seminar *Foundations of Semistructured Data*, organized by Alberto Mendelzon, Thomas Schwentick, and Dan Suciu, Schloß Dagstuhl (Germany), Sep. 2001.
- Keynote speaker at the *CAiSE 2003 Workshop on Decision Systems Engineering*, Velden (Austria), Jun. 2003; title of the talk: *Information Integration in the Design of Data Warehouses and Decision Support Systems*.
- Keynote speaker at the *10th International Workshop on Knowledge Representation Meets Databases (KRDB 2003)*, Hamburg (Germany), Sep. 2003; title of the talk: *View-based Query Processing for Semistructured Data*.

- Invited seminar on *Processing Regular Path Queries for Data Integration*, at the Department of Computer Science of the Victoria University of Manchester, Manchester (U.K.), Feb. 2004.
- Keynote speaker at the *International Conference on Automated Reasoning with Analytic Tableaux and Related Methods* (TABLEAUX 2005), Koblenz (Germany), Sep. 2005; title of the talk: *Query Processing in Peer-to-Peer Systems: an Epistemic Logic Approach*.
- Invited speaker on *Logical Foundations of Peer-to-Peer Data Integration*, at the Dagstuhl seminar *Logic Based Information Agents*, organized by Jürgen Dix, Thomas Eiter, and Enrico Franconi, Schloß Dagstuhl (Germany), Apr. 2004.
- Invited seminar on *Query Answering over DL-Lite Ontologies*, at the Faculty of Computer Science of the University of Technology Dresden, Dresden (Germany), Apr. 2006.
- Full-day tutorial on *Ontology-Based Data Access*, at the *6th International Semantic Web Conference* (ISWC 2007), Busan (South Korea), Nov. 2007.
- Tutorial on *Reasoning for Ontology Engineering and Usage – Integrating Data into Ontologies*, at the *7th International Semantic Web Conference* (ISWC 2008), Karlsruhe (Germany), Oct. 2008.
- Invited seminar on *Ontology-based Data Access and Integration*, at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne (Switzerland), Feb. 2009.
- Invited seminar on *Comparing the expressiveness of artifact-centric workflows*, at the *Bertinoro Workshop on Data and Service Integration*, Bertinoro (Italy), Mar. 2009.
- Invited seminar on *Ontology-based Data Integration*, at the INRIA Saclay research center, Orsay (France), Mar. 2009.
- Tutorial on *Ontology-based Data Integration*, at the *Semantic Days 2009 conference* (SemDays 2009), Stavanger (Norway), May 2009.
- Full-day tutorial on *Ontologies and Databases*, at the *Reasoning Web Summer School 2009*, Bressanone (Italy), Sep. 2009.
- Invited seminar on *Ontology-Based Data Access and Data Integration*, at the Technical University of Catalonia, Barcelona (Spain), Feb. 2010.
- Invited seminar on *View-Synthesis from Schema Mappings*, at the Technische Universität Wien, Vienna (Austria), May 2010.

6 Teaching Activity

6.1 Organizational Activities Related to Teaching

He has taken up various organizational and coordination duties, among which:

- 2000: Member of the Commission for the State Exam for Engineers, as computer science expert for the Faculty of Engineering of the Univ. of Rome “La Sapienza”.
- 2000/2002: Member of the Consiglio d’Area (Board of Studies) for the Corso di Laurea in Electronic Engineering at the Faculty of Engineering of the University of Rome “La Sapienza”.
- 2001/2003: Responsible for evaluating and processing student requests for transfer to the Corso di Laurea in Computer Engineering at the Faculty of Engineering of the University of Rome “La Sapienza”.
- 2002/2003: Member of the Consiglio d’Area (Board of Studies) for the Corso di Laurea in Computer Engineering at the Faculty of Engineering of the University of Rome “La Sapienza”.
- 2003: Member of the Giunta del Consiglio d’Area (Operative Committee) for the Corso di Laurea in Computer Engineering at the Faculty of Engineering of the University of Rome “La Sapienza”.
- 2004–2007: Director of the Master of Science in Computer Science at the Faculty of Computer Science of the Free University of Bozen-Bolzano.
- since 2004: President of the committee for the selection of lecturers at the Faculty of Computer Science of the Free University of Bozen-Bolzano.
- since 2008: President of the selection committee for the admission to the PhD Program in Computer Science at the Faculty of Computer Science of the Free University of Bozen-Bolzano.

6.2 Lecturer of Graduate and Master Courses

- 1999/2000: *Data Integration* (20 hours), within the Ph.D. program in Computer Engineering of the University of Rome “La Sapienza” (together with Prof. Giuseppe De Giacomo and Prof. Maurizio Lenzerini).
- 2001/2002: *Introduction to Computer Science* (20 hours), within the Master in Information Communication Technology of the University of Rome “La Sapienza” (together with Prof. Luigi Cinque).
- Aug. 2003: *Description Logics for Conceptual Data Modeling in UML*, at the 15th European Summer School in Logic Language and Information (ESSLLI 2003), Vienna, Austria (together with Prof. Giuseppe De Giacomo).
- Sep. 2003: *Introduction to Programming*, within the “Corso di Alta Formazione in Organizzazione e Gestione dei Sistemi Informativi per le Istituzioni e le Imprese Pubbliche e Private nei Paesi in via di Sviluppo” (together with Prof. Giorgio Ausiello and Prof. Giuseppe De Giacomo).
- Oct. 2003: *Database Systems and Database Design*, within the “Corso di Alta Formazione in Organizzazione e Gestione dei Sistemi Informativi per le Istituzioni e le Imprese Pubbliche e Private nei Paesi in via di Sviluppo” (together with Prof. Tiziana Catarci).
- Nov. 2005: *View-based query processing*, within the Ph.D. program in Computer Engineering of the University of Rome “La Sapienza” (together with Prof. Giuseppe De Giacomo, Prof. Georg Gottlob, Prof. Maurizio Lenzerini, and Prof. Riccardo Rosati).
- Jul. 2006: *Query processing in data integration systems*, at the BIT PhD Summer School, offered by the Free University of Bozen-Bolzano, together with the University of Innsbruck and the University of Trento.
- Sep. 2009: *Ontology-based Data Management*, at the *Masters Ontology Spring School 2009*, Pretoria, South Africa.
- Jun. 2010: *Reasoning and Query Answering in Lightweight Ontology Languages*, at the Departamento Ciencia de la Computación, Universidad de La Habana, Havana, Cuba.
- Aug. 2010: *Answering Queries in Description Logics: Theory and Applications to Data Management*, at the 22nd European Summer School in Logic Language and Information (ESSLLI 2010), Copenhagen, Denmark (together with Prof. Michael Zakharyashev).

6.3 Main Lecturer of BSc and MSc Level Courses

The specified hours refer to total hours of frontal teaching, and do not include additional activities related to the course, such as office hours, tutoring, project supervision, or exam sessions.

- 1996/1997, 1997/1998: *Foundations of Computer Science* (50 hours), at the Corso di Diploma Universitario in Electrical Engineering, Faculty of Engineering of the University of Rome “La Sapienza”;
- 1998/1999: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Aeronautical Engineering, Faculty of Engineering of the University of Rome “La Sapienza”;
- 1999/2000: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Mechanical Engineering, Faculty of Engineering of the University of Rome “La Sapienza”;
- 2000/2001, 2001/2002: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Electronic Engineering, Faculty of Engineering of the University of Rome “La Sapienza”;
- 2002/2003: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Computer Engineering, Faculty of Engineering of the University of Rome “La Sapienza”;
- 2002/2003, 2003/2004: *Databases* (50 hours), at the Corso di Laurea in Computer Engineering, Faculty of Engineering of the University of Rome “La Sapienza”;
- 2004/2005, 2005/2006, 2006/2007, 2007/2008, 2008/2009, 2009/2010, 2010/2011: *Theory of Computing* (72 hours), at the Master of Science in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano;
- 2004/2005, 2005/2006, 2006/2007: *Introduction to Programming* (72 hours), at the Bachelor of Science in Applied Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano;
- 2007/2008, 2008/2009, 2009/2010, 2010/2011: *Formal Languages* (36 hours), at the Bachelor of Science in Applied Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano;
- 2007/2008, 2008/2009: *Knowledge Bases and Databases* (36 hours), at the Master of Science in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.
- 2009/2010, 2010/2011: *Knowledge Representation and Ontologies* (36 hours), at the Master of Science in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

6.4 Course Tutor

*Tutor*¹⁰ for the following undergraduate courses at the Faculty of Engineering of the University of Rome “La Sapienza”:

1995/1996: *Formal Languages and Compilers* (regular course held by Prof. Daniele Nardi), at the Corso di Diploma Universitario in Computer Engineering;

1996/1997: *Formal Languages and Compilers* (regular course held by Prof. Luigi Carlucci Aiello), at the Corso di Diploma Universitario in Computer Engineering.

6.5 Assistant Instructor

*Assistant instructor*¹¹ for the following undergraduate courses at the Faculty of Engineering of the University of Rome “La Sapienza”:

1992/1993: *Foundations of Computer Science II*, held by Prof. Maurizio Lenzerini;

1993/1994, 1995/1996: *Foundations of Computer Science*, held by Prof. Mirella Casini Schaerf;

1996/1997: *Formal Languages and Compilers*, held by Prof. Daniele Nardi;

1996/1997: *Formal Languages and Compilers* of the Corso di Diploma, held by Prof. Luigia Carlucci Aiello;

1997/1998, 1998/1999, 1999/2000, 2000/2001, 2001/2002: *Formal Languages and Compilers*, held by Prof. Daniele Nardi;

2000/2001: *Databases* of the Corso di Diploma, held by Prof. Maurizio Lenzerini.

6.6 Teaching Assistant

Teaching assistant for the following courses at the Faculty of Computer Science of the Technical University of Aachen (RWTH), Germany:

1994/1995 (winter semester): *Automata Theory*, held by Prof. Franz Baader;

1994/1995 (summer semester): *Foundations of Theoretical Computer Science*, held by Prof. Franz Baader.

6.7 Other Courses Lectured

Dec. 2000 *Introduction to Databases* (8 hours), at the Italian Foreign Ministry, organized by Scuola Superiore G. Reiss Romoli.

May and Oct. 2001 *Information Systems, Databases, and Data Warehouses* (2 editions of 30 hours each), as part of the lectures on *Information Technology*, at the Scuola Superiore della Pubblica Amministrazione della Presidenza del Consiglio dei Ministri (together with Prof. M. Lenzerini).

Apr. and July 2001 *Introduction to XML* (2 editions of 20 hours each), as part of the lectures on *Preparation of Researchers for the e-Commerce (FreCom)*, offered by the Dipartimento di Informatica e Sistemistica, Univ. di Roma “La Sapienza” to the company I&T SpA of Pomezia.

6.8 Thesis Supervision and Evaluation

6.8.1 PhD Thesis Supervision

2006–2010: PhD supervisor of Mariano Rodriguez-Muro on the topic *Tools and Techniques for Ontology Based Data Access in Lightweight Description Logics*; graduated March 2010.

2006–2010: PhD supervisor of Camilo Thorne on the topic *Query Answering over Ontologies Using Controlled Natural Languages*; graduated March 2010.

2005–2010: PhD co-supervisor (with Prof. Thomas Eiter, Technical University of Vienna) of Magdalena Ortiz on the topic *Query Answering in Expressive Description Logics: Techniques and Complexity Results*; graduated May 2010.

since 2009: PhD supervisor of Babak Bagheri-Hariri on the topic *Verification of Processes in the Presence of Data*.

¹⁰At the Faculty of Engineering of the University of Rome “La Sapienza”, the courses of the Corso di Diploma Universitario in Computer Engineering have also been lectured in the evening as 40 hours courses. The evening lectures were held by a tutor, appointed by the professor holding the regular course.

¹¹In the Italian Academic System, each course has a main lecturer and possibly an assistant instructor. The assistant instructor prepares and delivers 20%-25% of the lectures, and prepares and marks assignments and exams.

since 2010: PhD supervisor of Elena Botoeva on the topic *Non-monotonic Extensions of Description Logics*.

since 2010: PhD supervisor of Dmitriy Zheleznyakov on the topic *Evolution in Description Logics Ontologies*.

6.8.2 PhD Thesis Evaluation

2001: Invited by Prof. Jan Paredaens of the *Technische Universiteit Eindhoven*, Belgium, to be part of the Ph.D. Award Committee of Jan Hidders. This required to evaluate the Thesis, *A Graph-based Update Language for Object-Oriented Data Models*, and interrogate Jan Hidders during the public promotion ceremony.

2002: External evaluator of the Ph.D. Thesis *A New Method for Query Containment Checking in Deductive Databases* by Carles Farré, at the *Universitat Politecnica de Catalunya*, Spain; supervisors Dr. E. Teniente and Dr. A. Urpi.

2006: External evaluator and member of the committee for the defense of the Ph.D. Thesis *Standard and Non-Standard Reasoning in Description Logics* by Sebastian Brandt, at the *Technical University of Dresden*, Germany; supervisor Prof. Franz Baader.

2008: Member of the committee for the defense of the Ph.D. Thesis *Semantic Web Language Layering with Ontologies, Rules, and Meta-Modeling* by Jos De Bruijn, at the *Leopold-Franzens Universität Innsbruck*, Austria; supervisor Prof. Dieter Fensel.

2010: Member of the examination panel for the defense of the Ph.D. Thesis *Automating the Multidimensional Design of Data Warehouses* by Oscar Romero Moral, at the *Universitat Politecnica de Catalunya*, Spain; supervisor Dr. Alberto Abello.

6.8.3 Master Thesis Supervision

- Magdalena Ortiz, *Answering Conjunctive Queries in Expressive Description Logics*, Jul. 2006. The thesis obtained the prize for the best thesis of the European Master in Computational Logic in the Academic Year 2005/2006. Moreover, the publications [WI-159, CI-98, JI-29], which include a publication in the proceedings of a high level international conference and a publication in a prestigious journal, are based on the results obtained in the thesis.
- Evgeny Kharlamov, *Model Theory and Calculus for the Description Logic DL-Lite_F*, Oct. 2006. The publication [WI-169] is based on the results obtained in the thesis.
- Abhinav Kumar, *Practical Reasoning in Expressive Description Logics using Alternating Automata*, Mar. 2009.
- Elena Botoeva, *Query Rewriting for DL-Lite with Number Restrictions*, Oct. 2009. The publication [WI-184] is based on the results obtained in the thesis.
- Yazmin Angelica Ibanez Garcia, *Complexity Boundaries for Full Satisfiability of Restricted UML Class Diagrams*, Oct. 2009. The publications [WI-181, WI-183, CI-113], are based on the results obtained in the thesis.
- Alejandra Lorenzo, *Enhancing a Hybrid Tableaux Algorithm*, Oct. 2009.
- Dmitriy Zheleznyakov, *Updating Description Logic Knowledge Bases*, Oct. 2009.
- Domenico Carbotta, *A Practical Automata-Based Technique For Reasoning in Expressive Description Logics*, Oct. 2010. The publication [CI-118] is based on the results obtained in the thesis.
- Giorgio Stefanoni, *Explanation of Negative Answers in DL-Lite*, ongoing.
- Ario Santoso, *Enhancing eService Synthesis Techniques*, ongoing.
- Ognjen Savkovic, *Managing Data Types in Ontology-Based Data Access*, ongoing.
- Ullah Zaka, *Information Management at the Court of Bolzano*, ongoing.

6.8.4 Bachelor Thesis Supervision

- Lorenzo Angeli, *Realization and Test of an OLAP Application Based on Open Source Systems*, Jul. 2006.
- Reinstadler Martin, *OntoJob: A Tool Providing Automatic Taxonomy Upgrading*, Jul. 2007.
- Gerstgrasser Manfred, *Optimizing Query Evaluation for Ontology-based Data Access*, Mar. 2009.
- Seravalli Marco, *A Tool for the Generation of Bibliographic Reference Pages*, ongoing.

Publications

Books

- [B-1] A. Borgida, D. Calvanese, L. Cholvy, and M.-C. Rousset, editors. *Proc. of the 9th Int. Workshop on Knowledge Representation meets Databases (KRDB 2002)*, volume 54 of *CEUR Electronic Workshop Proceedings*, <http://ceur-ws.org/>, 2002.
- [B-2] F. Baader, D. Calvanese, D. McGuinness, D. Nardi, and P. F. Patel-Schneider, editors. *The Description Logic Handbook: Theory, Implementation, and Applications*. Cambridge University Press, 2003. ISBN 9780511060632.
- [B-3] D. Calvanese, M. Lenzerini, and R. Motwani, editors. *Proc. of the 9th Int. Conf. on Database Theory (ICDT 2003)*, volume 2572 of *Lecture Notes in Computer Science*. Springer, 2003.
- [B-4] D. Calvanese, G. De Giacomo, and E. Franconi, editors. *Proc. of the 16th Int. Workshop on Description Logic (DL 2003)*, volume 81 of *CEUR Electronic Workshop Proceedings*, <http://ceur-ws.org/>, 2003.
- [B-5] A. Cali, D. Calvanese, E. Franconi, M. Lenzerini, and L. Tanca, editors. *Proc. of the 13th Italian Conf. on Database Systems (SEBD 2005)*, 2005.
- [B-6] D. Calvanese, E. Franconi, V. Haarslev, D. Lembo, B. Motik, A.-Y. Turhan, and S. Tessaris, editors. *Proc. of the 20th Int. Workshop on Description Logic (DL 2007)*, volume 250 of *CEUR Electronic Workshop Proceedings*, <http://ceur-ws.org/>, 2007.
- [B-7] D. Calvanese and G. Lausen, editors. *Proc. of the 2nd Int. Conf. on Web Reasoning and Rule Systems (RR 2008)*, volume 5341 of *Lecture Notes in Computer Science*. Springer, 2008.

Papers in Refereed International Journals

- [JI-8] D. Calvanese, M. Lenzerini, and D. Nardi. Unifying class-based representation formalisms. *J. of Artificial Intelligence Research*, 11:199–240, 1999.
- [JI-9] D. Calvanese, G. De Giacomo, and M. Lenzerini. Representing and reasoning on XML documents: A description logic approach. *J. of Logic and Computation*, 9(3):295–318, 1999.
- [JI-10] D. Calvanese, G. De Giacomo, and M. Lenzerini. Modeling and querying semi-structured data. *Network and Information Systems*, 2(2):253–273, 1999.
- [JI-11] D. Calvanese, G. De Giacomo, and R. Rosati. Data integration and reconciliation in data warehousing: Conceptual modeling and reasoning support. *Network and Information Systems*, 2(4):413–432, 1999.
- [JI-12] D. Calvanese, G. De Giacomo, M. Lenzerini, D. Nardi, and R. Rosati. Data integration in data warehousing. *Int. J. of Cooperative Information Systems*, 10(3):237–271, 2001.
- [JI-13] D. Calvanese, T. Catarci, and G. Santucci. LAURIN: A distributed digital library of newspaper clippings. *World Wide Web J.*, 4(1/2):5–20, 2001.
- [JI-14] D. Calvanese, G. De Giacomo, M. Lenzerini, and M. Y. Vardi. Rewriting of regular expressions and regular path queries. *J. of Computer and System Sciences*, 64(3):443–465, 2002.
- [JI-15] A. Cali, D. Calvanese, G. De Giacomo, and M. Lenzerini. On the role of integrity constraints in data integration. *Bull. of the IEEE Computer Society Technical Committee on Data Engineering*, 25(3):39–45, 2002.
- [JI-16] G. Lanfranchi, P. Della Peruta, A. Perrone, and D. Calvanese. Toward a new landscape of system management in an autonomic computing environment. *IBM Systems Journal*, 42(1):119–128, 2003.
- [JI-17] D. Calvanese, G. De Giacomo, M. Lenzerini, and M. Y. Vardi. Reasoning on regular path queries. *SIGMOD Record*, 32(4):83–92, 2003.
- [JI-18] A. Cali, D. Calvanese, G. De Giacomo, and M. Lenzerini. Data integration under integrity constraints. *Information Systems*, 29(2):147–163, 2004.
- [JI-19] D. Calvanese and G. De Giacomo. Data integration: A logic-based perspective. *AI Magazine*, 26(1):59–70, 2005.

- [JI-20] D. Calvanese, G. De Giacomo, and M. Y. Vardi. Decidable containment of recursive queries. *Theoretical Computer Science*, 336(1):33–56, 2005.
- [JI-21] D. Berardi, D. Calvanese, G. De Giacomo, M. Lenzerini, and M. Mecella. Automatic service composition based on behavioral descriptions. *Int. J. of Cooperative Information Systems*, 14(4):333–376, 2005.
- [JI-22] D. Berardi, D. Calvanese, and G. De Giacomo. Reasoning on UML class diagrams. *Artificial Intelligence*, 168(1–2):70–118, 2005.
- [JI-23] D. Calvanese, L. Dragone, D. Nardi, R. Rosati, and S. M. Trisolini. Enterprise modeling and data warehousing in TELECOM ITALIA. *Information Systems*, 31(1):1–32, 2006.
- [JI-24] D. Calvanese, G. De Giacomo, M. Lenzerini, and M. Y. Vardi. View-based query processing: On the relationship between rewriting, answering and losslessness. *Theoretical Computer Science*, 371(3):169–182, 2007.
- [JI-25] D. Calvanese, G. De Giacomo, D. Lembo, M. Lenzerini, and R. Rosati. Tractable reasoning and efficient query answering in description logics: The *DL-Lite* family. *J. of Automated Reasoning*, 39(3):385–429, 2007.
- [JI-26] A. Poggi, D. Lembo, D. Calvanese, G. De Giacomo, M. Lenzerini, and R. Rosati. Linking data to ontologies. *J. on Data Semantics*, X:133–173, 2008.
- [JI-27] D. Calvanese, G. De Giacomo, and M. Lenzerini. Conjunctive query containment and answering under description logics constraints. *ACM Trans. on Computational Logic*, 9(3):22.1–22.31, 2008.
- [JI-28] D. Calvanese, G. De Giacomo, D. Lembo, M. Lenzerini, and R. Rosati. Inconsistency tolerance in P2P data integration: an epistemic logic approach. *Information Systems*, 33(4):360–384, 2008.
- [JI-29] M. Ortiz, D. Calvanese, and T. Eiter. Data complexity of query answering in expressive description logics via tableaux. *J. of Automated Reasoning*, 41(1):61–98, 2008.
- [JI-30] D. Calvanese, G. De Giacomo, M. Lenzerini, M. Mecella, and F. Patrizi. Automatic service composition and synthesis: the Roman Model. *Bull. of the IEEE Computer Society Technical Committee on Data Engineering*, 31(3):18–22, 2008.
- [JI-31] A. Cali, D. Calvanese, and D. Martinenghi. Dynamic query optimization under access limitations and dependencies. *J. of Universal Computer Science*, 15(1):33–62, 2009.
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