Curriculum Vitae et Studiorum

Diego Calvanese

February 2026

Short Bio

Diego Calvanese is a full professor at the Faculty of Engineering of the Free University of Bozen-Bolzano (unibz), Italy, where he is the head of the Institute of Computer Science and Artificial Intelligence. From November 2019 to October 2024, he has also been a Wallenberg Guest Professor at the Department of Computing Science, Umeå University (Sweden). Since 2017, he is the Director of Smart Data Factory, the technology transfer lab for Computer Science at NOI Techpark, Bolzano. He received a Ph.D. from Sapienza Università di Roma in 1996. His research interests include knowledge representation and reasoning, virtual knowledge graphs for data access and integration, description logics, Semantic Web, graph data, and data-aware processes modeling and verification. He has been involved in many research projects in the above areas (including FP6 TONES, FP7 ACSI, FP7 Optique, H2020 INODE, HEU CyclOps), acquiring funding for close to 6.4M€. He has authored more than 450 refereed publications, many in the most prestigious international journals and conferences in AI and Databases, with more than 41000 citations and an h-index of 82, according to Google Scholar. He is an editor of the Description Logic Handbook. He has served in more than 200 organization and program committee roles for international events, and he has been an associate editor of AIJ, JAIR, and on the editorial board of JAR. He has been the PC chair of the 34th ACM Symposium on Principles of Database Systems (PODS 2015), the general chair of the 28th and 32nd European Summer School in Logic, Language and Information (ESSLLI 2016, 2021), a PC co-chair of the 17th International Conference on Principles of Knowledge Representation and Reasoning (KR 2020), and he is the PC chair of the 35th International Joint Conference on Artificial Intelligence (IJCAI-ECAI 2026). In 2012-2013 he has been a visiting researcher at TU Vienna as Pauli Fellow of the "Wolfgang Pauli Institute". He is the co-founder and President of Ontopic, the first spin-off company from unibz, established in 2019. Ontopic develops cutting-edge AI-based solutions and technologies for data management and integration. He is an ACM Fellow, an EurAI Fellow, and a AAIA Fellow.
Web page: `http://www.inf.unibz.it/~calvanese/`

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1 Personal Information

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2 Education

School (1976–1984): Diploma cum laude. Bundesrealgymnasium (Scientific Liceum) Adolf-Pichler Platz, Innsbruck, Austria, 1984.

University (1985–1990): Master Degree in Electronical Engineering 110/110 cum laude. Faculty of Engineering, Sapienza Università di Roma, December 1990.
Thesis: *Integration between Datalog and Frame Languages*; supervisor: Prof. Maurizio Lenzerini.

Ph.D. (1993–1996): Ph.D. (Dottore di Ricerca) in Computer Engineering, Dipartimento di Informatica e Sistemistica (DIS), Sapienza Università di Roma, 1996.
Thesis: *Unrestricted and Finite Model Reasoning in Class-Based Representation Formalisms*; supervisor: Prof. Maurizio Lenzerini.

3 Employment and Appointments Held

3.1 Present Appointment

Since Jan. 2015: Full professor in Computer Engineering (Scientific Sector ING-INF/05, *Sistemi di Elaborazione delle Informazioni*) at the Faculty of Engineering (formerly, Computer Science), Free University of Bozen-Bolzano, Italy.
Responsibilities: – research in the areas of knowledge representation in artificial intelligence, ontologies, data integration, data-aware processes, database theory, and graph data management; – coordination of European, national and local research projects; – teaching and student supervision; – administrative duties at the faculty and university level.

3.2 Professional Experience

Feb. 1991 – Jul. 1992: *Responsible for software development* for the company *Ionen-Technik*, Innsbruck (Austria).
Responsibilities: development of the control software for an ion-beam gas-analyzer.

Sep. 1992 – Mar. 1993: *Scientific consultant* for the company *Computer and Microimage*, Rome (Italy).
Responsibilities: development of an expert system with multimedia interface for insurance counseling.

Jul. 1993: Obtained the *Italian Habilitation as an Engineer*.

Oct. 1994 – Jul. 1995: *Visiting Scholar*, Department of Theoretical Computer Science, *Technical University of Aachen* (RWTH), Aachen (Germany).
Responsibilities: – research in the area of Description Logics in collaboration with members of the Department of Theoretical Computer Science; – teaching assistant.

Nov. 1996 – Feb. 1998: *Postdoctoral Fellow*, Dipartimento di Informatica e Sistemistica (DIS), Sapienza Università di Roma.
Responsibilities: – research in the areas of knowledge representation, class-based formalisms, description logics, databases, data modeling; – main lecturer of computer science courses at the Faculty of Engineering, Sapienza Università di Roma.

Mar. 1998 – Aug. 2000: *Postdoctoral Scholarship*, DIS, Sapienza Università di Roma, supported by three awards from the Italian Research Council.
Responsibilities: – research in the areas of data warehousing, data and information integration, semistructured data modeling, logics for knowledge representation, modal logics; – main lecturer of computer science courses at the Faculty of Engineering, Sapienza Università di Roma.

Sep. 2000 – Oct. 2003: *Ricercatore* (*Assistant Professor*) at the Dipartimento di Informatica e Sistemistica, Sapienza Università di Roma.
Responsibilties: – research in the areas of data integration, databases, semistructured data and XML, automata theory, planning, web-services; – main lecturer of computer science courses at the Faculty of Engineering, Sapienza Università di Roma; – administrative duties related to the Diploma in Ingegneria Informatica.

Nov. 2003 – Dec. 2014 Associate professor in Computer Engineering (Scientific Sector ING-INF/05, *Sistemi di Elaborazione delle Informazioni*) at the Faculty of Computer Science, Free University of Bozen-Bolzano.
Responsibilities: – research in the areas of ontologies, logics for knowledge representation, data integration, databases, verification of data-centric systems, graph-structured data and XML, automata theory, planning; – coordination of European, national and local research projects; – teaching and student supervision; – administrative duties at the faculty and university level.

Dec. 2013: Obtained the *Italian National Habilitation* (Abilitazione Scientifica Nazionale) as full professor in the Scientific Sector 09/H1 (Information Processing Systems).

Jan. 2014: Obtained the *Italian National Habilitation* (Abilitazione Scientifica Nazionale) as full professor in the Scientific Sector 01/B1 (Computer Science).

Jan. 2017 – today: Director of the *Smart Data Factory*[1] technology transfer lab of the Faculty of Computer Science of the Free University of Bozen-Bolzano.

Apr. 2019: Originator and co-founder of Ontopic[2], the first spin-off of the Free University of Bozen-Bolzano.

Nov. 2019 – Oct. 2024: *Wallenberg Guest Professor* at the Department of Computing Science, Umeå University, Sweden.

Jun. 2024 – today: Head of the *Institute of Computer Science and Artificial Intelligence* at the Faculty of Engineering of the Free University of Bozen-Bolzano.

4 Research and Scholarship

4.1 Summary of Main Research Directions

My past and current research interests have been centered around principled approaches to the management of structural and dynamic aspects of data and information in the wider sense. More in detail, I have carried out research on semantic and conceptual data modeling, query processing in the presence of views, management of semi-structured data, data integration and data warehousing, and management of data on the web. These research areas are tightly connected to and complemented by the extensive work that I have carried out in logic-based formalisms for data and knowledge, where I have addressed both foundational and practically relevant problems related to modeling, reasoning over, querying, and updating data and knowledge, considering both structural and dynamic properties of data intensive systems for the purpose of verification and synthesis according to temporal specifications.

Specifically, I am currently leading within the Research Centre for Knowledge and Data (KRDB) at the Faculty of Computer Science a research group consisting, apart from myself, of four assistant professors, four postdoc

[1] https://smart.inf.unibz.it/en
[2] https://ontopic.biz/

research associates, and four PhD students. We are following, in collaboration with world leading groups working in data and process management and in knowledge representation, two main lines of research, described more in detail below: one on *ontology-based data mamangement*, and one on *data and knowledge aware processes*. Such research is complemented by additional work that I am carrying out through my extensive collaboration network (see Section 4.7).

Ontology-Based Data Management and Integration

The first research line is concerned with efficient and data-scalable techniques for accessing, exchanging, and evolving data mediated through an ontology [BC-14, RC-6]. This line of work dates back to the work that I had carried out in the course of my PhD [T-2] on the correspondence [CI-3, BC-1, JI-1] between conceptual data modeling formalisms (such as UML [JI-15, JI-28] and Entity-Relationship schemas [CI-56]) and rich ontology-languages adopted in knowledge representation and reasoning [BC-3, BC-12]. However, it took a new, practically highly relevant shift in 2005, with the introduction of the so-called *lightweight* ontology languages of the *DL-Lite* family [CI-44]. These are specifically tailored towards the efficient management of large amounts of data, by relying on commercial relational database technology [JI-19]. The practical impact of such languages stems from the fact that, besides being lightweight and hence equipped with highly efficient inference tasks, they are in a direct correspondence to conceptual data modeling formalisms [WI-58, BC-13], and thus can be adopted as the underlying formalisms for logic-based conceptual modeling tools. In the context of the EU-FP6 STREP Project Thinking Ontologies (TONES), which I coordinated, and in followup research, we have set the theoretical foundations for efficient ontology-based data access and evolution [CI-50, CI-53, CI-55, JI-18, JI-25, JI-31, CI-94], and for ontology-based data integration [CI-107, CI-121]. We have then developed prototype tools for the main data management tasks in this setting, notably the Quonto/Mastro tool [CI-45, WI-49, JI-26] developed in collaboration with Sapienza Università di Roma, and the ONTOP framework[3] [WI-78, CI-74, WI-87, CN-22, WI-106, JI-40] that we are developing at the KRDB Research Centre in Bolzano.

The work has now reached a further step of maturity, and we have been exploring novel query processing, optimization, and tuning techniques [CI-94], and developing novel benchmarks [WI-101, CI-101, WI-116, WI-117], that are leading to the deployment of this technology in large-scale semantically-aware data management systems [JI-37, CI-116]. This work has been carried out mostly within Optique[4] [WI-84, WI-85, BC-18], a large EU-FP7 IP project, involving major industrial players (Statoil and Siemens) aiming at the adoption of semantic-based data management technologies in their respective domains. The role of my research team has been precisely to engineer the core technologies and tools underlying ontology-based data management and integration systems that scale to terabytes of data, including novel types of data sources [WI-109, WI-112], and to test and experiment with them on a variety of use cases [JI-37, JI-48], including industrial ones [CI-138, CI-139].

Data and Knowledge Aware Processes

The second broad line of research is concerned with investigating the dynamic properties of systems that evolve over time, and where data plays a central role [CI-81], and is not abstracted away, as currently done in many process modeling formalisms. The challenging aspect of this kind of systems is that they are inherently infinite state, due to the role of data as a first-class citizen in addition the process component specifying the dynamic behaviour. Hence, any kind of inference task, such as verifying temporal properties over the evolution of such systems [CI-73], or synthesising the specification of such a system starting from temporal conditions, becomes undecidable.

On the one hand, we have been studying in this very rich framework various inference tasks that involve both the data component and the evolution of the system, such as verification, synthesis, process monitoring, and compliance tasks. In order to ensure that these tasks stay decidable, we are investigating sufficient and possibly tight conditions, that ensure that the infinite states can be abstracted away, obtaining a finite state system over which to apply traditional finite state techniques used in formal verification. Specifically we have been investigating different variations of this framework, along a set of dimensions: *(i)* conditions to ensure state boundedness and hence decidability [TR-20, CI-80, CI-90, CI-99]; *(ii)* considering both the presence or absence of a knowledge (or semantic) component in addition to the (relational) data component [WI-70, CI-77, JI-34, CI-104]; *(iii)* the type of relationship between the data and the process component [WI-80, CI-79, CI-82, CI-85]; *(iv)* the kind of semantics to adopt in the presence of constraints/knowledge that might possibly be violated [WI-79, CI-83, CI-102]; *(v)* the interaction between different components/agents in the system [CI-89, CN-21, CI-88, CI-96, CI-100].

[3] `http://ontop.inf.unibz.it/`

[4] `http://www.optique-project.eu/`

Such a line of research has been carried out initially within the EU FP7 Strep Project ACSI, whose main practical objective has been to develop a framework, architecture, and system for the interoperation of services that manipulate data.

4.2 Summary of Additional Research

In the following, I list schematically additional research directions with respect to the ones described above, where I have been active in the past five years. To illustrate the continuity of the research, the most significant publications of the past ten years are listed.

- Reasoning in expressive ontology formalisms [CI-57, CI-72].
- Reasoning in conceptual data models [JI-15, CI-56, CI-67, JI-28, CI-78, JN-3, CI-93].
- Query answering and query containment over expressive ontologies [CI-51, JI-22, JI-20, CI-54, CI-61, CI-71, JI-27, JI-36, CI-91, CI-95].
- View-based query processing in graph databases [CI-39, JI-13, CI-43, JI-17, CI-66, JI-30, JI-33].
- Data and knowledge integration and exchange [CI-70, BC-17, CI-75, CI-84].
- Ontology evolution and update [CI-69, JI-32, CI-98]
- Managing change in graph-structured data [CI-92].
- Explanation of query answers over ontologies [CI-59, CI-76, JI-35].
- Query answering in peer-to-peer systems [CI-38, CI-39, BC-10, BC-9, JI-21].
- Service composition and synthesis [CI-42, JI-14, WI-75].
- Complexity and expressivity of controlled natural languages [WI-59, WI-60, CI-63, CI-60, JI-29, BC-19].
- Extraction of guidelines from natural language [WI-83, CI-86, CI-87].

4.3 Research Impact

My research has been considered highly significant in the research community, spanning various areas, from knowledge representation in artificial intelligence, to databases, information systems, and process management. In these areas, I have published extensively and continuously in top level international journals (e.g., Artificial Intelligence, J. of Artificial Intelligence Research, Information Systems, Information and Computation, Theoretical Computer Science, J. of Computer and Systems Sciences, ACM Trans. on Computational Logic, World Wide Web J.) and in the most selective and prestigious international conferences (e.g., IJCAI, AAAI, KR, PODS, VLDB, SIGMOD, ICDT, ICDE, BPM, ICSOC).

The high relevance of the scientific work that I have carried out is testified also by the high number of citations that my research work has obtained in the scientific community. As an objective evidence, the following table reports the values of the h-index[5], i10-index[6], and total number of citations, retrieved on 1 February 2026 from Google Scholar for "Diego Calvanese" at `http://scholar.google.com/citations?user=We0kRfEAAAAJ`.

Citation index	h-index	i10-index	Number of citations
Total	82	290	41 067
Since 2021	33	110	6 884

4.4 Research Grants and Contracts

I have both coordinated and been involved in EU FP5/6/7 and H2020 research projects on data warehousing and data integration, ontology-based data management, and data-centric process management, as well as several national and local research projects on different topics that are central to managing data and knowledge.

Table 1 reports a summary of the research projects that I have acquired since I took service at the Free University of Bozen-Bolzano (unibz), and in which I have been involved as coordinator (Coord), as a principal investigator (PI), or as co-investigator (co-PI). The projects are grouped according to the funding body. For the externally

[5] A 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.

[6] The i10-index is the number of publications with at least 10 citations.

Project	Funding body	Duration from – to	mths	Role	Funding (in €) Total	unibz
TONES	EU FP6 Strep	09/2005 – 12/2008	40	Coord	1 400 000	352 000
ACSI	EU FP7 Strep	06/2010 – 05/2013	36	PI	3 244 000	452 800
Optique	EU FP7 IP	11/2012 – 10/2016	48	PI	9 760 000	873 000
PACMEL	EU CHIST-ERA	03/2019 – 02/2022	36	PI	346 445	125 160
INODE	H2020	11/2019 – 04/2023	42	PI	5 732 000	765 500
CyclOps	HEU	01/2024 – 12/2026	36	PI	8 894 073	352 500
NGS	MUR PRIN	03/2007 – 02/2009	24	PI	160 000	66 500
HOPE	MUR PRIN	09/2019 – 08/2023	48	PI	808 029	155 332
D2G2	DFG + Province of Bolzano	07/2022 – 06/2025	36	PI	601 750	293 500
HiQu-VKG	PNRR	12/2024 – 11/2025	12	Coord		249 725
S-PIC4CHU	MUR PRIN	02/2025 – 01/2027	24	Coord	169 057	44 771
KAOS	Euregio	06/2016 – 05/2019	36	Coord	327 862	110 250
IDEE	FESR	10/2018 – 09/2021	36	PI	394 060	226 393
MENS	Province of Bolzano	10/2020 – 12/2023	39	PI	300 000	120 000
AI-Lab	Province of Bolzano	01/2024 – 12/2026	36	PI		1 008 434
Simply Digital	Province of Bolzano	03/2025 – 12/2025	10	PI		460 000
HIVE	Sparkasse Foundation	03/2021 – 02/2022	12	Coord		52 400
ROKGT	Accenture Ltd	06/2023 – 05/2026	36	Coord		82 265
KGDRiP	Accenture Ltd	07/2023 – 06/2026	36	Coord		9 152
KRDB Found.	unibz	02/2004 – 09/2013	116	Coord		58 800
ALaDInO	unibz	10/2005 – 09/2009	48	Coord		11 300
KBASe	unibz	01/2007 – 06/2012	66	Coord		57 500
LoDaM	unibz	10/2010 – 02/2013	29	Coord		40 000
MaSCoD	unibz	10/2011 – 03/2014	30	Coord		79 600
VeriCliG	unibz Foundation	02/2012 – 01/2014	24	Coord		59 300
KRDBFT	unibz	08/2012 – 01/2014	18	Coord		7 800
KrDbFdp	unibz	07/2013 – 12/2014	18	Coord		10 000
DLKEx	unibz	11/2013 – 04/2015	18	Coord		19 882
OnProm	unibz	01/2016 – 12/2018	36	Coord		50 000
StyLoLA	unibz	04/2018 – 03/2021	36	co-PI	200 000	82 250
SPIC4CHU	unibz (near misses)	01/2023 – 12/2025	36	Coord		50 000
TOGAI	unibz (near misses)	01/2024 – 12/2026	36	Coord		40 000
MuSiL	unibz Library	07/2005 – 02/2008	32	Part		–
iTract	EPSRC UK	07/2015 – 06/2018	36	Part	464 000	–
Total funding acquired at unibz						**566 432**
Total externally acquired funding						**5 818 537**
Total acquired funding						**6 384 969**

Table 1: Research projects and funding acquired since taking service at the Free University of Bozen-Bolzano

funded projects, both the total funding and the funding acquired for unibz are reported. For the MuSiL project, in which I was involved as a participant (Part), the funding was not acquired directly by me, and hence is not reported. A more detailed description of the projects listed in Table 1 is reported in the following.

4.4.1 Projects with European Funding

Sep. 2005 – Dec. 2008: Coordinator of the European Union 6th Framework IST-STREP project *Thinking ONtologiES* (TONES), grant agreement n. FP6-7603, 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 Sapienza Univ. di Roma (Italy), Univ. of Manchester (U.K.), Univ. of Dresden (Germany), and Univ. of Hamburg (Germany). The project is funded with 1 400 000 €, of which 352 000 € for the Free Univ. of Bozen-Bolzano.

June 2010 – May 2013: Principal investigator of the European Union FP7 IST-STREP project *Artifact-centric Service Interoperation* (ACSI), grant agreement n. FP7-257593. 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

Ulikool (Estonia), Indra Software Labs (Spain), and Collibra (Belgium). The project is funded with 452 800 € for the Free Univ. of Bozen-Bolzano.

Nov. 2012 – Oct. 2016: Principal investigator of the European Union FP7 IST Large Scale Integrating Project *Scalable End-user Access to Big Data* (Optique), grant agreement n. FP7-318338. The project brings about a paradigm shift for data access by providing a semantic end-to-end connection between users and data sources, enabling users to rapidly formulate intuitive queries, and seamlessly integrating data spread across multiple distributed data sources. The main objective of Optique is to develop an extensible platform that provides a complete and generic solution to the data access challenges posed by big data. The development of the platform has been evaluated against the requirements of complex real-world challenges, with two large European companies providing comprehensive use cases, and access to user groups and TB scale data sets. The project is coordinated by the Univ. of Oslo (Norway), and the additional partners are Oxford Univ. (U.K.), Hamburg Univ. of Technology (Germany), Sapienza Università di Roma (Italy), National and Kapodistrian Univ. of Athens (Greece), fluid Operations AG (Germany), Siemens AG (Germany), Statoil (Norway), and DNV (Norway). The project is funded with 873 000 € for the Free Univ. of Bozen-Bolzano.

Mar. 2019 – Feb. 2022: Principal investigator of the European Union CHIST-ERA project *Process-aware Analytics Support based on Conceptual Models for Event Logs* (PACMEL), whose main objective is to develop a process-aware analytic framework for analyzing data from sensors and devices for the purpose of process modeling, analysis, and improvement. The project is coordinate by the AGH Univ. of Science and Technology, Krakow (Poland), and an additional partner is Universidad Autonoma de Madrid (Spain). The project is funded under the CHIST-ERA call 2017, with 126 160 € for the Free Univ. of Bozen-Bolzano.

Nov. 2019 – Apr. 2023: Principal Investigator of the European Union H2020 project *Intelligent Open Data Exploration* (INODE), whose aim is to develop a suite of agile, fit-for-purpose, and sustainable services for exploration of open data sets that allow users to interact with data in a dialectic and natural way. The project is coordinated by Zürich University of Applied Sciences (Switzerland), and the additional partners are Athena Research (Greece), Max Planck Institute (Germany), Fraunhofer (Germany), SIRIS Academic (Spain), French National Centre for Scientific Research (France), SIB Swiss Institute of Bioinformatics (Switzerland), and Infili Technologies (Greece). The project is funded under the H2020 INFRAEOSC-02-2019 call, with 765 500 € for the Free Univ. of Bozen-Bolzano.

Jan. 2024 – Dec. 2026: Principal Investigator of the European Union HEU project *Automated End-to-end Data Lifecycle Management for FAIR Data Integration, Processing and Re-use* (CyclOps), which proposes a new framework for the governance and maintenance of the complete data lifecycle for large-scale volumes of data generated in heterogeneous distributed sources to enable data sharing and exchange. CyclOps intelligently automates, by means of knowledge graphs and with a human-in-the-loop approach, the generation and execution of data processing pipelines. The project is coordinated by NTT Data (Spain), and involves 24 additional partners from academia and industry. The project is funded by the EU under the HORIZON-CL4-2023-DATA-01 call, with 352 500 € for the Free Univ. of Bozen-Bolzano.

4.4.2 Projects with National Funding

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. The project is coordinated by Politecnico di Milano (Italy), and has as additional partner Università degli Studi di Roma Tre (Italy). The project is funded by the Italian Ministry for University and Research under the basic research program PRIN, year 2006, with 66 500 € for the Free Univ. of Bozen-Bolzano.

Sep. 2019 – Aug. 2023: Principal Investigator of the PRIN Italy project *High quality Open data Publishing and Enrichment* (HOPE), whose aim is to overcome the main technical problems that current open data solutions suffer from, by developing a methodology and associated tools for a new way of producing, publishing, maintaining, accessing and exploiting privacy-preserving open data. The project is coordinated by Sapienza Univ. di Roma (Italy), and the additional partners are Politecnico di Milano (Italy), Univ. of Milano (Italy), and Univ. of Cagliari (Italy). The project is funded by the Italian Ministry for University and Research under the basic research program PRIN, year 2017, with 155 332 € for the Free Univ. of Bozen-Bolzano.

Jul. 2022 – Jun. 2025: Principal Investigator of the DGF (Germany) project *Dense and Deep Geographic Virtual Knowledge Graphs* (D2G2), which has the goal to effectively integrate and analyze heterogeneous

geodata sources by bridging the research fields of Virtual Knowledge Graphs (VKG) and Geovisual Analytics. The project will develop a set of methodologies and software tools to create densely and deeply linked geospatial knowledge graphs, and it will offer a suite of intuitive visualizations and explainable analytical services over them. The project is carried out in collaboration with the Technical University of Munich (Germany), and it is jointly funded by the German Research Foundation (DFG) and by the Province of Bolzano with 293 500 € for the Free Univ. of Bozen-Bolzano.

Dec. 2024 – Nov. 2025: Coordinator of the PNNR funded project *High-quality Virtual Knowledge Graphs* (HiQu-VKG), whose aim is to enrich the Virtual Knowledge Graph paradigm with native mappings to non-relational data sources. The project will develop and implement both query optimization techniques for this enriched setting, and novel techniques to semi-automatically bootstrap mappings between non-relational data sources and a domain ontology. The project is part of the PNRR project FAIR (*Future Artificial Intelligence Research*) and is funded via a *Cascade Funding* call issued by "Spoke 5: High-quality AI" (Sapienza Univ. di Roma) with 249 725 € entirely allocated to the Free Univ. of Bozen-Bolzano.

Feb. 2025 – Jan. 2027: Coordinator of the PRIN Italy project *Semantic-based Provenance, Integrity, and Curation for Consistent, High-quality, and Unbiased data science* (S-PIC4CHU), whose aim is to develop innovative models and techniques for scalable data preparation in Data Science, leveraging data semantics throughout all data preparation stages to improve data quality and ensure unbiased results. Partners are Univ. of Roma3 (Italy), Univ. of Calabria (Italy), Univ. of Bologna (Italy), and Politecnico di Milano (Italy). The project is funded by the Italian Ministry for University and Research under the basic research program PRIN, year 2022, with 169 057 € overall and 44 771 € for the Free Univ. of Bozen-Bolzano.

4.4.3 Projects with Regional Funding

Jun. 2016 – May 2019: Coordinator of the Interregional Project Network Euregio project *Knowledge-Aware Operational Support* (KAOS), grant agreement IPN12, whose main goal is to devise a new generation of operational support techniques empowered with domain knowledge, truly flexible and able to assist humans in the effective execution of business processes inside an organization domain. Partners are the Univ. of Innsbruck (Austria), and Fondazione Bruno Kessler, Trento (Italy). The project is funded by the EGTC European Region Tyrol-South Tyrol-Trentino, with 110 250 € for the Free Univ. of Bozen-Bolzano.

Oct. 2018 – Sep. 2021: Principal Investigator of the FESR project *Data Integration for Energy Efficiency* (IDEE), whose aim is to develop a technological infrastructure based on semantic technologies for the integration of data, with an emphasis on energy-related data for buildings, and to provide techniques and tools for the visualization and analysis of such data. Partners are the South-Tyrol energy provide Alperia, and R3 GIS, a South-Tyrolean SME specialized in geographical information management. The project is funded through European funds for regional development under the EFRE-FESR 2014-2020 call, with 245 250 € for the Free Univ. of Bozen-Bolzano.

Oct. 2020 – Dec. 2023: Principal Investigator of the project *Medieval Explorations in Neuro-Science* (MENS), whose goal is to investigate the manifestations and repercussions of medieval brain anatomical thinking in a large cross-disciplinary sample corpus, and to interlink, document, and transcribe the corpus in order to find specific content. It explores knowledge representation and machine learning techniques, in particular, ontology-based keyword spotting functions, in order to screen large amounts of manuscript image data. The project is coordinated by the Institut für Amerikastudien of the University of Innsbruck (Austria). It is funded by the Province of Bolzano with 120 000 € for the Free Univ. of Bozen-Bolzano.

4.4.4 Projects with Industrial Funding

Mar. 2021 – Feb. 2022: Coordinator of the project *Heterogeneous Data Integration into Virtual Knowledge Graphs* (HIVE), whose goal is to overcome the limitations of current solutions for Virtual Knowledge Graphs, which focus on relational databases and are unsuited to applications with heterogeneous data, and extend VKGs to two widely used non-relational data sources, namely web APIs and structured data from text documents. The project is funded by the Sparkasse Foundation with 52 400 €.

Jun. 2023 – May 2026: Coordinator of the projects *Research on Ontology and Knowledge Graph-based Technologies* (ROKGT) and *Knowledge Graph-driven Risk Propagation* (KGDRiP), whose goal is to carry out foundational and applied research in collaboration with Accenture Israel on topics related to the management of ontologies and Knowledge Graphs, in particular for ontology-driven risk propagation, ontology-driven belief propagation, automation of ontology design, and data-driven discovery of mapping patterns. The projects are funded by Accenture Ltd respectively with 82 265 € and 9 152 €.

4.4.5 Projects with Internal Funding by unibz

Feb. 2004 – Sep. 2013: 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. The project is funded internally by the Free Univ. of Bozen-Bolzano with 58 000 €.

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. The research is carried out in collaboration with various research groups both in Italy and abroad, including the Dipartimento di Informatica e Sistemistica of Sapienza Università di Roma, and Technische Universität Hamburg-Harburg. The project is funded internally by the Free University of Bozen-Bolzano with 11 300 €.

Jan. 2007 – June 2012: 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. The project is funded internally by the Free University of Bozen-Bolzano with 57 500 €.

Oct. 2010 – Feb. 2013: 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. The project is funded internally by the Free University of Bozen-Bolzano with 40 000 €. and by the unibz Foundation with 29 600 €.

Oct. 2011 – Mar. 2014: Coordinator of the project *Managing Services Combined with Data* (MaSCoD), whose main objective is to explore fundamental issues regarding the modeling, inter-operation, verification, composition, and synthesis of services, while taking into account both the behaviour of the services and the data that they manipulate. The approach will advance and combine knowledge-based techniques from the areas of service and data modeling, ontologies and description logics, and verification formalisms such as temporal logics. The participants to the project are various researchers and PhD students of the KRDB Research Centre. The project is funded internally by the Free University of Bozen-Bolzano with 50 000 € and by the unibz Foundation with 29 600 €.

Feb. 2012 – Jan. 2014: Coordinator of the project *Extraction and Verification of Clinical Guidelines* (VeriCliG), whose main objective is to develop techniques to semi-automatically extract the main control-flow structures emerging from the textual description of clinical guidelines, and explore the possibility to express them using well-known representation languages, such as the Business Processing Modeling Notation (BPMN) standard. The participants to the project are Dr. Marco Montali and Dr. Camilo Thorne from unibz, and Dr. Elena Cardillo and Dr. Claudio Eccher, from the eHealth research group from FBK, Trento. The project is funded by the unibz Foundation with 59 300 €.

Jul. 2012 – Jun. 2013: Coordinator of the project *KRDB Foundations and Tools* (KRDBFT), which deals with the fundamental problem of defining in a declarative way representations, at various levels of abstraction, of relevant aspects of complex application domains, and of studying and developing methodologies, techniques, and algorithms to access and manipulate such representations for extracting specific kinds of information and for supporting their evolution. The participants to the project are various researchers and PhD students of the KRDB Research Centre. The project is funded internally by the Free University of Bozen-Bolzano with 7 800 €.

Jul. 2013 – Dec. 2014: Coordinator of the project *KRDB Foundations of Data and Process* (KrDbFdp), which deals with the fundamental problem of defining in a declarative way representations of both static (i.e., data) and dynamic (i.e., process) components of complex application domains, and of studying and developing

methodologies, techniques, and algorithms to access and manipulate such representations for extracting specific kinds of information and for verifying properties that hold for their development over time. The participants to the project are various researchers and PhD students of the KRDB Research Centre. The project is funded internally by the Free University of Bozen-Bolzano with 10 000 €.

Nov. 2013 – Apr. 2015: Coordinator of the project *Description Logic Knowledge Base Exchange* (DLKEx), which studies the problem of exchanging information between a source and a target Description Logic knowledge base connected through a mapping. The project goal is to formalize and study different notions of solution that capture the source information with varying precision, and to investigate the computational complexity of computing solutions under the different formalizations. The participants to the project are various researchers and PhD students of the KRDB Research Centre. The project is funded internally by the Free University of Bozen-Bolzano with 19 882 €.

Jan. 2016 – Dec. 2018: Coordinator of the project *Ontology-Driven Process Mining* (OnProm), whose aim is to develop a novel framework that leverages on intelligent data access and integration to support domain experts in the extraction of event log information from legacy relational databases. The participants to the project are various researchers and PhD students of the KRDB Research Centre, and the research is carried out in collaboration with Prof. Wil van der Aalst, from the Technische Universiteit Eindhoven (TU/e). The project is funded internally by the Free University of Bozen-Bolzano with 50 000 €.

Apr. 2018 – Mar. 2021: Co-investigator of the project *South Tyrol Longitudinal study on Longevity and Ageing* (StyLoLA), whose aim is to launch the South Tyrol Longitudinal Study on Longevity and Ageing, which offers a distinct opportunity to describe health and healthcare trends in South Tyrol. Carrying out the study will require the preliminary integration of multiple heterogeneous data sources, and for this task an ontology-based approach will be applied. The project involves an interdisciplinary collaboration between researchers of the KRDB Research Centre and researchers in Social Statistics from the Faculty of Education of the Free University of Bozen-Bolzano. The project is funded internally by the Free University of Bozen-Bolzano as an interdisciplinay project with 82 250 € for the KRDB Research Centre.

4.4.6 Projects without Funding for unibz

Jul. 2005 – Feb. 2008: Participation in the development work within the system *MUltilingual Search In Libraries* (MuSiL), realized within the project *Computational Linguistics* coordinated by Dr. Raffaella Bernardi, 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, 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.

Jul. 2015 – Jun. 2018: Partner without specific funding in the project *Islands of Tractability in Ontology-Based Data Access* (iTract), which addresses the problem of scalability of query answering with expressive ontology languages that go beyond the tractable profiles of the standard ontology language OWL 2. The aim of the project is to adopt an "island of tractability approach" by transferring to ontology-based data access proof methods, techniques, and methodologies from the two well-established and successful areas of constraint satisfaction and of Boolean circuit complexity. The project is coordinated by Frank Wolter from the University of Liverpool, and is funded by the UK Engineering and Physical Sciences Research Council (EPSRC) with 464 000 €.

4.5 Participation in Research Projects

Table 2 reports a summary of the research projects in which I have participated as a co-investigator, contributing to the results and deliverables of the project, but for which I was not the one directly responsible for the setup of the project proposal and for the acquisition of the funding. The reported time-frame is the one during which I was involved in the project, and funding in Italian Lira has been converted to Euro. A more detailed description of the projects listed in Table 2 is reported in the following.

Nov. 1992 – May. 1996: Co-investigator of the ESPRIT Basic Research Action Project Compulog2.

Nov. 1992 – Dec. 1994: Co-investigator of the Italian National Research Council (CNR) funded project *Sistemi Informativi e Calcolo Parallelo* (SICaP), area Hybrid Systems. The goal of the project was the study and the development of hybrid knowledge representation systems, based on Description Logics. Partners

Project	**Funding body**	**Duration**	**Funding** (in €)
COMPULOG2	EU ESPRIT BRA	11/1992 – 05/1996	
SICAP	CNR	11/1992 – 12/1994	
DWQ	EU ESPRIT-4 LTR	10/1996 – 12/1999	120 000
PROGRESS	CNR	11/1996 – 10/1998	22 000
INABADE	ASI	11/1996 – 10/1999	31 000
LAURIN	EU FP4	05/1998 – 12/2000	180 000
DEP	CNR	11/1999 – 10/2000	13 000
D2I	MIUR	12/2000 – 12/2002	92 000
INFOMIX	EU FP5 IST	04/2002 – 10/2003	179 000
SEWASIE	EU FP5 IST	04/2002 – 10/2003	206 000

Table 2: Research projects in which I have participated as a co-investigator

are: Sapienza Univ. di Roma, 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.

Oct. 1996 – Dec. 1999: Co-investigator of the European ESPRIT-4 Long Term Research (LTR) Project *Foundations of Data Warehouse Quality* (DWQ)[7]. 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. 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; Sapienza Univ. di Roma, Italy, Prof. M. Lenzerini; Univ. of Manchester, U.K., Prof. E. Franconi. Our research was funded with 120 000 €.

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*). 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. Partners are: Univ. of Napoli, Prof. A. Cimitile, coordinator; Technical Univ. of Milan, Prof. V. De Antonellis; Sapienza Univ. di Roma, Prof. M. Lenzerini; CNR-IASI, Rome, P. Bertolazzi; Italian Ministry of Justice, Dr. Rolleri. Our research was funded with 42 ML Italian Lire (22 000 €).

Nov. 1996 – Oct. 1999: Co-investigator of the Italian Space Agency (ASI) project *Integrazione ed Accesso a Basi di Dati Eterogenee* (*Integration and Access to Heterogeneous Databases*, INABADE). 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. Project partners are the leading Italian research groups in knowledge representation applied to databases. Our research was funded with 60 ML Italian Lire (31 000 €).

May 1998 – Dec. 2000: Co-investigator of the European Project *Libraries and Archives Collecting Newspaper Clippings Unified for their Integration into Networks* (LAURIN)[8], part of the 4th Framework Project *Telematics for Libraries*. 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.

[7] `http://www.dbnet.ece.ntua.gr/~dwq/`
[8] `http://laurin.uibk.ac.at/`

Partners are: Univ. of Innsbruck, Austria, Dr. G. Mühlberger, coordinator; Univ. Oberta de Catalunya, Spain, Dr. B. Aguilera Caballero; Sapienza Univ. di Roma, 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). Our research was funded with 180 000 €.

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). 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. Partners are: Technical Univ. of Turin, Prof. M. Mezzalama, coordinator; Technical Univ. of Milan, Prof. V. De Antonellis; Sapienza Univ. di Roma, Prof. M. Lenzerini; various units of CNR, M. Missikoff, F. Fabbrini, D. Latella, A. Meo; Italian Authorithy for Computer Science in the Public Administration (AIPA); Italian Ministry of Justice, Dr. Rolleri. Our research was funded with 25 ML Italian Lire (13 000 €).

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 Heterogenous Data Sources*, D2I). 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. Partners are: Sapienza Univ. di Roma, 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. Our research was funded 92 000 €.

Apr. 2002 – Oct. 2003: Co-investigator of the European Union 5th framework IST project *Boosting information integration* (INFOMIX)[9]. 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. Partners are: Univ. della Calabria, Italy, Prof. N. Leone, coordinator; Technical Univ. Wien, Austria, Prof. T. Eiter; Sapienza Univ. di Roma, Prof. M. Lenzerini; Rodan Systems S.A., Poland. Our research was funded for 179 000 €.

Apr. 2002 – Oct. 2003: Co-investigator of the European Union 5th framework IST project *Semantic Webs and Agents in Integrated Economies* (SEWASIE)[10]. The goal of the project was the design and implementation of an 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; Sapienza Univ. di Roma, 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 €.

4.6 Participation in 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 Sapienza Univ. di Roma. 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 with 60 000 €.

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 Sapienza Univ. di Roma. The goal of the project was the development of a system for the semantic integration of heterogeneous data

[9] http://www.dis.uniroma1.it/~rosati/infomix/
[10] http://www.sewasie.org/

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 €.

Jan. 2003 – Dec. 2003: Co-investigator of the industrial project *PICASSO* between CM Sistemi SpA and the Dipartimento di Informatica e Sistemistica of Sapienza Univ. di Roma. 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 €.

2008 – 2013: Collaboration with the IBM Thomas J. Watson Research Center on *Artifact-centric Workflow and Business Models*. The research activity has been carried out within an agreement for Open Collaborative Research between the Free University of Bozen-Bolzano and the IBM Thomas J. Watson Research Center.

4.7 Main Scientific Collaborations

I actively maintain scientific collaborations with worldwide leading researchers in different areas. The following list reports the collaborations that are currently active.

- G. De Giacomo, M. Lenzerini, D. Lembo, R. Rosati (Sapienza Università di Roma, Italy): *ontology-based data access and integration, information integration.*
- M.Y. Vardi (Rice University Houston, USA): *view-based query processing, graph structured data management.*
- T. Eiter, M. Ortiz, M. Simkus (Vienna University of Technology, Austria): *query answering in description logics, evolution of graph databases.*
- M. Zakharyaschev, R. Kontchakov (Birkbeck College London, UK): *reasoning over lightweight description logics.*
- G. De Giacomo, D. Lembo, M. Mecella, F. Patrizi (Sapienza Università di Roma, Italy): *intelligent management and verification of processes and data.*
- M. Arenas (Pontificia Universidad Catolica de Chile, Chile): *knowledge-base exchange.*
- A. Waaler, M. Giese (University of Oslo, Norway): *tools and systems for ontology-based access.*
- E. Teniente, A. Queralt (Universitas Politecnica de Catalunia, Spain): *reasoning over conceptual models.*
- E. Kharlamov, D.Zheleznyakov (Oxford University, UK): *ontology evolution.*
- A. Deutsch (University of California San Diego, USA): *verification of data-aware processes.*
- R. Pichler, E. Sallinger (Vienna University of Technology, Austria): *normal forms and key constraints in description logics.*
- A. Polleres (Vienna University of Economics and Business, Austria): *update of semantic web data.*
- J. Lobo (Universitat Pompeu Fabra Barcelona, Spain): *declarative distributed computing, software-defined networking.*
- G. Delzanno (University of Genoa, Italy): *verification of infinite-state distributed systems.*

4.8 Research Visits

Aug. 2008: Visit to the *IBM Thomas J. Watson Research Center*, New York (USA), to carry out research on the expressive power of artifact-centric workflow models in collaboration with Prof. Rick Hull.

Mar. 2009: Visit to the *INRIA Saclay Research Center*, Orsay (France), to carry out research on probabilistic XML in collaboration with Prof. Serge Abiteboul of the GEMO research group.

Sep. 2009: Visit to the *Meraka Institute at the Council for Scientific and Industrial Research* (CSIR), Pretoria (South Africa), to carry out research on ontology-based data access in collaboration with Dr. Thomas Meyer and Dr. Aurona Gerber of the Knowledge Systems Group.

Sep. 2012 – Jun. 2013: Guest researcher at the *Institute of Information Systems* of the *Technical University of Vienna* (Austria) as *Pauli Fellow* of the "Wolfgang Pauli Institute", to work on verification of data-centric dynamic systems in collaboration with Prof. Thomas Eiter, Dr. Magdalena Ortiz, and Dr. Mantas Simkus.

Aug. 2013: Visit to the *National Information Communications Technology Research Centre of Excellence* (NICTA), Victoria Research Laboratory in Melbourne (Australia), to carry out research on advanced planning techniques in collaboration with Prof. Adrian Pearce from the NICTA Research Group on Optimization, Melbourne, and on service composition in collaboration with Dr. Sebastian Sardina from RMIT University, Melbourne.

Jun. 2014: Visit to the *Universitat Politècnica de Catalunya*, Barcelona (Spain), to carry out research on UML based artifact-centric models in collaboration with Prof. Ernest Teniente, and on verification in declarative distributed computing with Prof. Jorge Lobo from University of Pompeu Fabra.

5 Other Scientific Achievements and Services

5.1 Honors

Jun. 1999: Winner of an award by the *Italian Association for Artificial Intelligence* (AI*IA) for the participation to the *16th Int. Joint Conference on Artificial Intelligence* (IJCAI'99).

Dec. 2008: Recipient of an award by IBM Research for research achievements in the area of artifact-centric systems, obtained in collaboration with Richard Hull, IBM Research Watson.

Jul. 2013: Best Paper Award at the *7th Int. Conference on Web Reasoning and Rule Systems* (RR 2013), for the paper [CI-82].

Nov. 2013: Award for the most influential 10 year paper of the *International Conference on Service Oriented Computing*, for the paper [CI-37].

Dec. 2013: Recipient of the first edition of the *South-Tyrolean Scientific Prize*, in recognition of extraordinary achievements in science and research.

Feb. 2015: Article [JI-26] is listed as the 4th most cited paper in the first 5 years of the *Semantic Web Journal* (see `http://www.semantic-web-journal.net/blog/swj-5-years-most-cited-papers`).

Jun. 2015: Nominated Fellow of the *European Association for Artificial Intelligence* (EurAI).

Sep. 2016: Best Paper Award at the *14th Int. Conference on Business Process Management* (BPM 2016), for the paper [CI-115].

Oct. 2016: *Semantic Web Journal* outstanding paper award 2016, for the paper [JI-40].

Jul. 2017: Best Paper Award at the *Int. Joint Conf. on Rules and Reasoning* (RuleML+RR 2017), for the paper [CI-118].

Nov. 2018: Best paper award at the *17th Int. Conf. of the Italian Assoc. for Artificial Intelligence* (AI*IA 2018), for the paper [CI-127].

Oct. 2019: Best Paper Award at the *23rd IEEE Int. Enterprise Computing Conf.* (EDOC 2019), for the paper [CI-134].

Dec. 2019: Nominated Fellow of the *Association for Computing Machinery* (ACM), for contributions to description logics and their applications in data management and software engineering.

Jan. 2020: Best Reviewer Award of the *Journal of Software and Systems Modeling*, for a review voted as one of the best over the year of 2019, among thousands of submitted reviews.

Jan. 2021: Classic Paper Award at the *35th AAAI Conf. on Artificial Intelligence* (AAAI), for the paper [CI-44], considered as the most influential AAAI paper of the past 15 years.

Oct. 2021: Nominated Fellow of the *Asia-Pacific Artificial Intelligence Association* (AAIA).

Sep. 2024: Best Student Paper Award at the *8th Int. Joint Conf. on Rules and Reasoning* (RuleML+RR), for the papers [CI-151] and [CI-152].

Nov. 2025: Test of Time Award of the *22nd Int. Conf. on Principles of Knowledge Representation and Reasoning* (KR), for the paper [CI-50].

5.2 Scientific Committee Membership and Direction

Apr. 2002 – Jun. 2007: Member of the Steering Committee of the *International Workshop on Description Logics* (DL).

Since Sep. 2004: Representative of the Free University of Bozen-Bolzano in the *Italian Association of Computer Engineering* (*Gruppo Ingegneria Informatica* – GII, representing the Italian Scientific Sector IINF-05/A).

Feb. 2008 – Dec. 2012: Member of the World-Wide-Web Consortium (W3C) *Web Ontology Language (OWL) working group.*

Oct. 2008 – Dec. 2018: Member of the Steering Committee of the *International Conference on Web Reasoning and Rule Systems* (RR).

Feb. 2012 – Jan. 2014: Member of the *Working Group on Evaluation of Research* of the *Italian Association of Computer Science* (GRIN).

Feb. 2013 – Jul. 2025: Representative of the Free University of Bozen-Bolzano in the Management Board of the *Italian National Inter-University Consortium for Informatics* (*Consorzio Interuniversitario Nazionale per l'Informatica* – CINI).

Jun. 2014 – May 2017: Member of the Executive Committee of the *ACM Symposium on the Principles of Database Systems* (PODS).

Since Oct. 2014: Member of the Advisory Team of the CEUR Workshop Proceedings Series[11].

Jun. 2015 – Oct. 2018: Member of the Steering Committee of the *International Workshop on Description Logics* (DL).

Jan. 2018 – Dec.2025: Member of the Executive Committee of the *Italian Association of Computer Engineering* (*Gruppo Ingegneria Informatica* – GII, representing the Italian Scientific Sector IINF-05/A).

Nov. 2018 – Nov. 2021: Member of the Steering Committee of the *International Conference on Principles of Knowledge Representation and Reasoning* (KR).

Jan. 2019 – Feb. 2025: President of the *Web Reasoning and Rule Systems Association* (RRA).

Since Dec. 2021: Member of the Advisory Committee of the *International Conference on Principles of Knowledge Representation and Reasoning* (KR).

Since Jun. 2022: Member of the Steering Committee of the *Symposium on Advanced Database Systems* (SEBD).

Sep. 2023 – Aug. 2028: Member of the Board of Trustees of the International Joint Conference on Artificial Intelligence (IJCAI).

Since Aug. 2025: Representative of the Free University of Bozen-Bolzano in the Assembly of the *Italian National Inter-University Consortium for Informatics* (*Consorzio Interuniversitario Nazionale per l'Informatica* – CINI).

5.3 Organization and Chair of Scientific Events

Sep. 2001: Responsible for technical support for the *27th International Conference on Very Large Databases* (VLDB 2001), Rome (Italy).

Sep. 2001: 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), Viterbo (Italy).

Apr. 2002: Co-chair of the *9th International Workshop on Knowledge Representation meets Databases* (KRDB 2002), Toulouse (France).

Jan. 2003: Organization-chair of the *9th International Conference on Database Theory* (ICDT 2003), Siena (Italy).

Sep. 2003: Co-chair of the *16th International Workshop on Description Logics* (DL 2003), Rome (Italy).

Jun. 2005: Co-chair of the *13th Italian Database Conference* (SEBD 2005), Bressanone (Italy).

Jun. 2007: Co-chair of the *20th International Workshop on Description Logics* (DL 2007), Bressanone (Italy).

Sep. 2007: Co-organizer and member of the Scientific Committee of the *8th EDBT Summer School on Database Technologies for Novel Applications* (EDBTSS 2007), Bolzano (Italy).

Nov. 2008: Program Committee Co-chair of the *2nd International Conference on Web Reasoning and Rule Systems* (RR 2008), Karlsruhe (Germany).

Sep. 2010: Organizer of the *4th International Conference on Web Reasoning and Rule Systems* (RR 2010), Bressanone (Italy).

Sep. 2010: Program Committee Co-chair of the *6th Workshop on Semantic Web Applications and Perspectives* (SWAP 2010), Bressanone (Italy).

[11] `http://ceur-ws.org/`

Apr. 2011: Chair of the track on *Data Quality, Security, and Semantic Web* for the *13th Asia-Pacific Web Conference* (APWeb 2011), Beijing (China).

Oct. 2011: Group Leader of the "Semantic Web and Ontologies" Area of the *20th ACM Conference on Information and Knowledge Management* (CIKM 2011), Glasgow (UK).

Jun. 2012: Area Chair of the *13th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2012), Rome (Italy).

May 2013: Co-organizer with Ernest Teniente and Sven Hartmann of the Dagstuhl Seminar 13211, on *Automated Reasoning on Conceptual Schemas*, `http://www.dagstuhl.de/13211/`, Schloß Dagstuhl (Germany).

Nov. 2014: Area Chair for "Knowledge Representation, Reasoning, and Visualization" at the *23rd ACM International Conference on Information and Knowledge Management* (CIKM 2014), Shanghai (China).

Jan. 2015: Program Committee Co-chair and Co-organizer of the *11th Italian Research Conference on Digital Libraries* (IRCDL 2015), Bolzano (Italy).

Jun. 2015: Program Committee Chair of the *34th ACM Symposium on Principles of Database Systems* (PODS 2015), Melbourne (Australia).

Jun. 2015: Program Committee Co-chair of the *28th International Workshop on Description Logics* (DL 2015), Athens (Greece).

Aug. 2016: Chair of the Organizing Committee of the *28th European Summer School in Logic, Language, and Information* (ESSLLI 2016), Bolzano (Italy).

Sep. 2017: Co-organizer of the *Workshop on Data meets Applied Ontology* (DAO 2017), which is part of the *Joint Ontology Workshops* (JOWO 2017), Bolzano (Italy).

Sep. 2017: General Co-chair of the *Workshop on Novel Techniques for Integrating Big Data* (BigNovelTI 2017), Nicosia (Cyprus).

Jun. 2018: Co-chair for the track on *Reasoning* of the *15th Extended Semantic Web Conference* (ESWC 2018), Heraklion, Crete (Greece).

Sep. 2018: Co-organizer of the *Workshop on Data meets Applied Ontologies in Open Science and Innovation* (DAO 2018), which is part of the *Joint Ontology Workshops* (JOWO 2018), Cape Town (South Africa).

Jan. 2019: Area Chair of the *33rd AAAI Conference on Artificial Intelligence* (AAAI 2019), Honolulu, Hawaii (U.S.A.).

Sep. 2019: General Chair of the *Bolzano Rules and Artificial Intelligence Summit* (BRAIN 2019), Bolzano (Italy).

Sep. 2019: Program Committee Co-chair of the *5th Global Conference on Artificial Intelligence* (GCAI 2019), Bolzano (Italy).

Feb. 2020: Area Chair of the *34th AAAI Conference on Artificial Intelligence* (AAAI 2020), New York (U.S.A.).

Jun. 2020: Area Chair of the *24th European Conference on Artificial Intelligence* (ECAI 2020), online.

Sep. 2020: Program Committee Co-chair of the *17th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2020), online.

Aug. 2021: Chair of the Organizing Committee of the *32nd European Summer School in Logic, Language, and Information* (ESSLLI 2021), online.

Sep. 2021: Co-organizer of the *3rd International Workshop on Data Meets Applied Ontologies in XAI* (DAO-XAI 2021), which is part of *Bratislava Knowledge September* (BAKS 2021), Bratislava (Slovakia).

Aug. 2022: Area Chair of the *19th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2022), Haifa (Israel).

Oct. 2022: General co-Chair of the *11th International Joint Conference On Knowledge Graphs* (IJCKG 2022), Hangzhou (China).

Nov. 2022: Program co-Chair of the *6th International Joint Conference on Web and Big Data* (APWeb-WAIM 2022), Nanjing (China).

Jun. 2023: General Chair of the *31st Symposium on Advanced Database Systems* (SEBD 2023), Italy.

Aug. 2025: Associate Program Chair of the *34th International Joint Conference on Artificial Intelligence* (IJCAI 2025), Montreal (Canada).

Aug. 2026: Program Chair of the *35th International Joint Conference on Artificial Intelligence* (IJCAI-ECAI 2026), Bremen (Germany).

5.4 Editorial Activity

Jan. 2005 – Jul. 2011: 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.

May 2010 – Jun. 2016: Member of the Editorial Board of the *Journal of Artificial Intelligence Research*.

Since Mar. 2011: Member of the Editorial Board of the series *Studies on the Semantic Web*, published by IOS Press.

Sep. 2011 – Aug. 2014: Member of the Editorial Board of *ISRN Artificial Intelligence*.

Oct. 2013 – Sep. 2016: Member of the Editorial Board of the *Journal on Big Data Research*, published by Elsevier.

Since Jan. 2015: Member of the Editorial Board of *PeerJ Computer Science*.

2013: Co-editor of the special issue of the *Semantic Web journal* on the 4th International Conference on Web Reasoning and Rule Systems (RR 2010).

2014: Co-editor of the special issue of the *Journal on Web Semantics* on Ontology-Based Data Access.

Jul. 2016 – Jun. 2019: Associate Editor of the *Journal of Artificial Intelligence Research*.

Jan. 2017 – Dec. 2024: Associate Editor of the *Artificial Intelligence Journal*.

Nov. 2017 – Jan. 2021: Member of the Editorial Board of the *Journal of Automated Reasoning*.

5.5 Keynotes

Jun. 2003: *CAiSE 2003 Workshop on Decision Systems Engineering*, Velden (Austria); title of the talk: *Information Integration in the Design of Data Warehouses and Decision Support Systems*.

Sep. 2003: *10th Int. Workshop on Knowledge Representation Meets Databases* (KRDB 2003), Hamburg (Germany); title of the talk: *View-based Query Processing for Semistructured Data*.

Sep. 2005: *14th Int. Conf. on Automated Reasoning with Analytic Tableaux and Related Methods* (TABLEAUX 2005), Koblenz (Germany); title of the talk: *Query Processing in Peer-to-Peer Systems: an Epistemic Logic Approach*.

Oct. 2012: *28th French Conf. on Advanced Databases* (BDA 2012), Clermont-Ferrand (France); title of the talk: *Ontology-Based Data Access: from Theory to Practice*.

Jun. 2013: *32nd ACM Symposium on Principles of Database Systems* (PODS 2013), New-York (NY, USA); title of the talk: *Foundations of Data-Aware Process Analysis: A Database Theory Perspective*.

Sep. 2014: *16th Int. Conf. on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2014), Varna (Bulgaria); title of the talk: *Scalable End-User Access to Big Data*.

Sep. 2014: *14th European Conf. on Logics in Artificial Intelligence* (JELIA 2014), Madeira (Portugal); title of the talk: *Query Answering over Description Logic Ontologies*.

Jul. 2015: *IJCAI 2015 Workshop on Formal Ontologies for Artificial Intelligence* (FOfAI 2015), Buenos-Aires (Argentina); title of the talk: *Ontologies for Data Integration*.

Apr. 2016: *29th International Workshop on Description Logics* (DL 2016), Cape Town (South Africa); title of the talk: *Managing Change in Graph-structured Data Using Description Logics*.

Jun. 2016: *10th Alberto Mendelzon International Workshop on Foundations of Data Management* (AMW 2016), Panama City (Panama); title of the talk: *Reasoning over Evolving Graph-structured Data Under Constraints*.

Oct. 2018: *44th Latin American Computing Conference and 13th Latin American Conference on Learning Technologies* (CLEI-LACLO 2018), Sãu Paulo (Brasil); title of the talk: *Ontology-based Data Access and Integration: Relational Data and Beyond*.

Dec. 2020: *2020 IEEE International Conference on Artificial Intelligence and Knowledge Engineering* (AIKE 2020), online; title of the talk: *Mapping Patterns for Virtual Knowledge Graphs*.

Mar. 2021: *26th International Computer Conference, Computer Society of Iran* (CSICC), online; title of the talk: *Virtual Knowledge Graphs for Data Access and Integration*.

Sep. 2021: *26th International Conference on Conceptual Structures* (ICCS), online; title of the talk: *Mapping Patterns for Virtual Knowledge Graphs*.

Jun. 2023: *35th Annual Workshop of the Swedish Artificial Intelligence Society* (SAIS), Karlskrona (Sweden); title of the talk: *Semantic Technologies for Digital Twins*.

Sep. 2023: *21st International Workshop on Nonmonotonic Reasoning* (NMR), Rhodes (Greece); title of the talk: *Verification of Temporal Properties for Communicating Datalog Programs*.

Sep. 2025: *38th International Workshop On Description Logics* (DL), Opole (Poland); title of the talk: *The Actual Weight of Lightweight Description Logics*.

5.6 Tutorials and Demos

Nov. 2007: Full-day tutorial on *Ontology-Based Data Access*, at the *6th International Semantic Web Conference* (ISWC 2007); Busan (South Korea); together with Domenico Lembo.

Jun. 2008: Tutorial on *Ontology-based Data Access*, at the *Graduiertenkolleg Mathematische Logik und Anwendungen*; University of Freiburg (Germany).

Oct. 2008: Tutorial on *Reasoning for Ontology Engineering and Usage – Integrating Data into Ontologies*, at the *7th International Semantic Web Conference* (ISWC 2008); Karlsruhe (Germany).

May 2009: Tutorial on *Ontology-based Data Integration*, at the *Semantic Days 2009 conference* (SemDays 2009); Stavanger (Norway).

Sep. 2009: Full-day tutorial on *Ontologies and Databases*, at the *Reasoning Web Summer School 2009*; Bressanone (Italy).

Dec. 2012: Invited tutorials on *Description Logics for Conceptual Modeling* and on *Description Logics for Accessing Data*, at the *Basic Training Camp of the European PhD Program in Computational Logic*; Dresden (Germany).

Jun. 2015: Demo on *How to Stay Ontop of Your Data: Databases, Ontologies and More*, at the *12th Extended Semantic Web Conference* (ESWC 2015); Portoroz (Slovenia); together with Benjamin Cogrel, Sarah Komla Ebri, Davide Lanti, Martin Rezk and Guohui Xiao.

Oct. 2015: Tutorial on *Ontology-based Data Access: From Theory to Practice*, at the *14th International Semantic Web Conference* (ISWC 2015); Bethlehem (USA); together with Martin Rezk and Guohui Xiao.

Jun. 2016: Invited tutorial on *Ontology-based Data Access*, at the *10th Alberto Mendelzon International Workshop on Foundations of Data Management* (AMW 2016); Panama City (Panama).

Nov. 2016: Tutorial on *Mapping Management and Expressive Ontologies in Ontology-Based Data Access*, at the *20th International Conference on Knowledge Engineering and Knowledge Management* (EKAW 2016); Bologna (Italy); together with Benjamin Cogrel and Guohui Xiao.

Sep. 2017: Invited tutorial on *Integrated Modeling and Verification of Processes and Data*, at the *15th International Conference on Business Process Management* (BPM 2017); Barcelona (Spain); together with Marco Montali.

Sep. 2017: Demo on *The onprom Toolchain for Extracting Business Process Logs using Ontology-based Data Access*, at the *15th International Conference on Business Process Management* (BPM 2017); Barcelona (Spain); together with Marco Montali.

Sep. 2018: Invited tutorial on *Ontology-based Data Access: Relational Data and Beyond*, at the *33rd Italian Conference on Computational Logic* (CILC 2018); Bolzano (Italy).

Oct. 2018: Invited tutorial on *Query Reformulation and Optimization in Ontology-based Data Access*, at the *2018 Seminar on Ontology Research in Brazil* (Ontobras 2018); São Paulo (Brasil).

Oct. 2018: Full-day tutorial on *Semantic Technologies for Data Access and Integration*, at the *27th ACM International Conference on Information and Knowledge Management* (CIKM 2018); Torino (Italy); together with Guohui Xiao.

Nov. 2018: Invited tutorial on *Novel Developments in Ontology-Based Data Access and Integration*, at the *17th International Conference of the Italian Association for Artificial Intelligence* (AI*IA 2018); Trento (Italy); together with Bejamin Cogrel and Guohui Xiao.

Nov. 2019: Invited tutorial on *Virtual Knowledge Graphs*, at the *9th Joint International Semantic Technology Conference* (JIST 2019); Hangzhou (China); together with Guohui Xiao.

Feb. 2020: Invited tutorial on *Composite Event Recognition in Logic and Artificial Intelligence*, at the Dagstuhl Seminar 20071, on *Foundations of Composite Event Recognition*, `http://www.dagstuhl.de/20071/`; Schloß Dagstuhl (Germany).

May. 2021: Invited tutorial on *Integrating Data through Virtual Knowledge Graphs with Ontop*, at the *Knowledge Graph Conference 2021*; Online; together with Bejamin Cogrel and Guohui Xiao.

Jul. 2022: Invited tutorial on *Ontology-based Data Access Made Practical*, at the *EDBT-INTENDED Summer School 2022 on Data and Knowledge*; Bordeaux (France).

Nov. 2022: Invited tutorial on *Designing Virtual Knowledge Graphs with Ontop and Ontopic Studio*, at the *15th Seminar on Ontology Research in Brazil* (OntoBras 2022); Online; together with Bejamin Cogrel and Davide Lanti.

Jun. 2024: Tutorial on *Designing Virtual Knowledge Graphs*, at the *36th International Conference on Advanced Information Systems Engineering (CAiSE 2024)*; Limassol (Cyprus); together with Davide Lanti.

Nov. 2024: Invited tutorial on *Designing Virtual Knowledge Graphs*, at the *23rd International Conference of the Italian Association for Artificial Intelligence (AIxIA 2024)*; Bolzano (Italy); together with Davide Lanti.

Feb. 2025: Invited tutorial on *Designing Virtual Knowledge Graphs*, at *CapeKR 2025*; Cape Town (South Africa).

Sep. 2025: Tutorial on *Methodologies and Tools for Virtual Knowledge Graph Design*, at the *15th International Conference on Formal Ontology in Information Systems (FOIS 2025)*; Catania (Italy); together with Benjamin Cogrel and Davide Lanti.

5.7 Invited Talks and Seminars

Dec. 1992: Invited seminar on *The Correspondence between the Entity-Relationship Model and Concept Languages*, at the company "Computer and Microimage"; Rome (Italy).

Oct. 1994: 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).

Dec. 1994: Invited seminar on *Satisfiability in the Logic $\mathcal{ALUNI}$*, at the Faculty of Computer Science of the Technical University of Aachen (RWTH); Aachen (Germany).

Dec. 1995: 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).

Jul. 2000: Invited speaker on *A Description Logics Based Approach to Data Integration*, at the Dagstuhl seminar 291, on *Logics for Emerging Applications of Databases*, organized by Jan Chomicki, Ron van der Meyden, and Günther Saake, `http://www.dagstuhl.de/00291/`; Schloß Dagstuhl (Germany).

Sep. 2001: Invited speaker on *Automata Based Techniques for Query Processing in Semistructured Data*, at the Dagstuhl seminar 1361, on *Foundations of Semistructured Data*, organized by Alberto Mendelzon, Thomas Schwentick, and Dan Suciu, `http://www.dagstuhl.de/01361/`; Schloß Dagstuhl (Germany).

Aug. 2003: Invited seminar on *What do we Need for Integrating Semistructured Data*, at the COLOGNET Workshop on *Logic-based Methods for Information Integration*; Vienna (Austria).

Feb. 2004: 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.).

Apr. 2004: Invited speaker on *Logical Foundations of Peer-to-Peer Data Integration*, at the Dagstuhl seminar 4171, on *Logic Based Information Agents*, organized by Jürgen Dix, Thomas Eiter, and Enrico Franconi, `http://www.dagstuhl.de/04171/`; Schloß Dagstuhl (Germany).

Apr. 2006: Invited seminar on *Query Answering over DL-Lite Ontologies*, at the Faculty of Computer Science of the University of Technology Dresden; Dresden (Germany).

Feb. 2009: Invited seminar on *Ontology-based Data Access and Integration*, at the Ecole Polytechnique Fédérale de Lausanne (EPFL); Lausanne (Switzerland).

Mar. 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).

Feb. 2010: Invited seminar on *Ontology-Based Data Access and Data Integration*, at the Technical University of Catalonia; Barcelona (Spain).

May 2010: Invited seminar on *View-Synthesis from Schema Mappings*, at the Technische Universität Wien; Vienna (Austria).

Sep. 2012: Invited seminar on *Optimizing Ontology-Based Data Access*, at the *ISO 15926 and Semantic Technologies Workshop 2012*; Sogndal (Norway).

Dec. 2012: Invited seminar on *Verification of Data-Centric Dynamic Systems*, at the Technische Universität Dresden; Dresden (Germany).

Feb. 2013: Invited seminar on *Verification of Relational Data-Centric Dynamic Systems with External Services*, at the Technische Universität Wien; Vienna (Austria).

Mar. 2013: Invited seminar on *Optimizing Ontology-Based Data Access*, at the Vienna PhD School of Informatics; Vienna (Austria).

May. 2013: Invited seminar on *Modeling and Reasoning over Processes and Data*, at the Dagstuhl Seminar 13211, on *Automated Reasoning on Conceptual Schemas*, `http://www.dagstuhl.de/13211/`; Schloß Dagstuhl (Germany).

Jul. 2013: Invited seminar on *Foundations of Data-Aware Process Analysis: A Database Theory Perspective*, at the Annual EPCL Workshop, Technische Universität Dresden; Dresden (Germany).

Aug. 2013: Invited seminar on *Accessing Data Through Lightweight Ontologies*, at the Department of Computing and Information Systems, University of Melbourne, and within the Computer Science and Information Technology Seminars, RMIT University; Melbourne (Australia).

Jan. 2014: Invited lecture on *Verification of Relational Data-Centric Dynamic Systems with External Services*, at the School on Foundations and Challenges of Change in Ontologies and Databases; Bolzano (Italy).

Sep. 2014: Invited seminar on *Optique: Scalable End-user Access to Big Data at Siemens and Statoil*, at the PONTI 2014 meeting on the First Business Development Platform between Italy and the German-speaking Markets; Merano (Italy).

Jul. 2015: Invited seminar on *Principles and Technologies for Ontology-Based Data Access*, at the EPNet workshop on Production and Distribution of Food during the Roman Empire: Economic and Political Dynamics; Barcelona (Spain).

Apr. 2016: Participation on invitation as expert for "Knowledge-enriched data management" to the Dagstuhl Perspectives Workshop 16151, on *Foundations of Data Management*, `http://www.dagstuhl.de/16151/`; Schloß Dagstuhl (Germany) [RC-8, RC-10].

Feb. 2019: Invited Webinar on *Ontology-based Access to Temporal Data*, at the monthly RuleML teleconference; Online.

Jun. 2019: Invited seminar on *Ontologies and Time – Past and Present*, at the colloquium for Franz Baader's 60th birthday; Dresden (Germany).

Nov. 2019: Invited seminar on *Querying Virtual Knowledge Graphs*, at the Southeast University; Nanjing (China).

Dec. 2020: Invited seminar on *Virtual Knowledge Graphs for Geodata Integration and Analysis*, at the 2020 Huawei Luojia Forum; Online.

Jan. 2021: Invited seminar on *DL-Lite: A Family of Logics for Data Management*, at Tianjin University; Tianjin (China) and online.

Jan. 2021: Invited seminar on *The DL-Lite Tractable Logics for Knowledge Graphs*, in occasion of the World Logic Day; Online.

May. 2021: Invited seminar on *Accessing and Integrating Biomedical Data through Virtual Knowledge Graphs*, at the Medical Faculty of Umeå University; Umeå (Sweden) and online.

Oct. 2021: Invited seminar on *Accessing and Integrating Data through Ontologies*, at the Huawei European Autonomous Network Forum 2021; Online.

Dec. 2021: Invited seminar on *Ontology-based Data Access and Integration – Relational Data and Beyond*, at the SAP Inspiration Sessions; Online.

Feb. 2022: Invited seminar on *Semantic Technologies in the Public Administration: Data and Process Management at unibz*, at the Ital-IA Workshop on AI for the Public Administration; Online.

Mar. 2022: Invited seminar on *Ontology-based Data Access and Integration – Past, Present, and Future Challenges*, at the Computational Intelligence and Data Science Research Groups Seminars, School of Computing, University of Kent; Kent (U.K.) and online.

Sep. 2022: Invited seminar on *Semantic Technologies for Data Management*, at the Swetaly Workshop on Artificial Intelligence, Örebro University; Örebro (Sweden) and online.

Sep. 2022: Invited seminar on *Engineering Virtual Knowledge Graphs*, at the Huawei Strategy and Technology Workshop 2022 (STW); Shenzhen (China) and online.

Feb. 2023: Invited seminar on *Designing Virtual Knowledge Graphs*, at the 4th Edition of The Academic Fringe Festival (TAFF) series, focusing on "Human-Centered AI: Knowledge and Language", organized by Delft University of Technology, Delft (Netherlands); Online.

Jun. 2023: Invited seminar on *Semantic Technologies for Industry Digital Twins*, at the Huawei Global Software Technology Summit 2023; Dublin (Ireland).

Jun. 2023: Invited seminar on *Description Logics and Information Systems* within the Description Logics Seminar Series; Online.

Feb. 2025: Invited seminar on *Virtual Knowledge Graphs for Data Management – Novel Challenges and Solutions*, at the University of Trento; Trento (Italy).

Apr. 2025: Invited seminar on *Virtual Knowledge Graphs for Data Management – Challenges and Solutions*, at the Universidade de Lisboa; Lisbon (Portugal).

5.8 Membership in Professional Associations

I am a member of the following professional associations:

- Association for Computing Machinery (ACM) – since 2003, lifetime membership;
- Association for the Advancement of Artificial Intelligence (AAAI) – since 1998, lifetime membership;
- Italian Association for Artificial Intelligence (AI*IA);
- Associazione Italiana di Calcolo Automatico (AICA).

5.9 Public Engagement Activities

Dec. 2017: Invited seminar on *Artificial Intelligence – Heaven or Hell for our Future?*, at the Planet Science event organized by the Südstern Network. Bolzano (Italy).

Oct. 2018: Invited seminar on *Artificial Intelligence and Machine Learning – What to Expect for the Future*, at the NOI Techpark Kickoff Meeting of the Machine Learning Working Group. Bolzano (Italy).

Feb. 2019: Seminar on *Artificial Intelligence – Heaven or Hell for our Future?*, as part of the course *The Face of Modern Computer Science*, at the Studium Generale of the Free University of Bozen-Bolzano. Bolzano (Italy).

May 2019: Invited seminar on *Knowledge-Driven Artificial Intelligence* (in Italian), at the workshop "on Artificial Intelligence: Key Driver for Industry", which is part of the Computer Science Research meets Business workshop series at the Free University of Bozen-Bolzano. Bolzano (Italy).

Oct. 2019: Invited seminar on *Artificial Intelligence – How Will it Impact our Future?*, at the meeting of the LIONS Club Bolzano. Bolzano (Italy).

Oct. 2019: Invited seminar on *The Role of Artificial Intelligence*, at the event "Fit for Digital – Is the Public Administration Ready for the Digital Transformation". Bolzano (Italy).

Feb. 2020: Seminar on *Artificial Intelligence – Heaven or Hell for the Future?* (In Italian: *Intelligenza Artificiale – Un paradiso o un inferno per il futuro?*), at Liceo Rosmini. Trento (Italy).

Apr. 2020: Seminar on *Artificial Intelligence – A Curse or a Blessing for our Future?* (In German: *Künstliche Intelligenz – Fluch oder Segen für unsere Zukunft?*), as part of the course "Netzwerktreffen für didaktische Systembetreuer/innen" offered by the *German Education and Training Directorate* of the Autonomous Province of Bolzano (Italy). Online.

Jul. 2020: Video interviews and participation to a panel discussion on *Artificial Intelligence, Logic, and Machine Learning*, within the *Summer School on Artificial Intelligence, Brain, Mind* (in Italian) offered by the UPAD Foundation, Bolzano (Italy). Online.

Oct. 2020: Seminar on *Artificial Intelligence: History and Applications* (in Italian: *Intelligenza Artificiale: storia e applicazioni*), as part of the course on *Artificial Intelligence, History, Developments, Social Impact*, offered by UPAD Foundation, Merano Academy (Italy). Online.

Jan. 2021: Seminar on *Artificial Intelligence – Heaven or Hell for the Future?* (in Italian: *Intelligenza Artificiale – paradiso o inferno per il futuro?*), at Liceo Rosmini. Trento (Italy).

Apr. 2021: Invited seminar on *Data and Knowledge in Artificial Intelligence – Two Sides of the Same Coin?* (in Italian: *Dati e conoscenza in Intelligenza Artificiale - Due facce della stessa medaglia?*), at the conference *Homo Digitalis – Critical Perspectives on Digital Society*, organized by EURAC Research, Bolzano (Italy). Online.

Feb. 2022: Seminar on *Artificial Intelligence – heaven or hell for our future?*, at Wirtschaftliche Fachoberschule Schlanders. Schlanders (Italy).

Oct. 2022: Invited seminar on *The Smart Data Factory Technology Transfer Lab*, in the context of the institutional visit of TU Graz and Know Center Graz at NOI Techpark Bolzano. Bolzano (Italy).

Oct. 2022: Invited seminar on *Artificial Intelligence for the Territory*, at the NOI Techpark Bolzano event "Unlock Potential – Digital Technologies". Bolzano (Italy).

Jan. 2023: Seminar on *Artificial Intelligence – A Curse or a Blessing for our Future?* (in German: *Künstliche Intelligenz – ein Fluch oder ein Segen für unsere Zukunft?*), at Wirtschaftliche Fachoberschule Bozen "Heinrich Kunter". Bolzano (Italy).

Mar. 2023: Invited participation to ff-Talks, a roundtable on *Artificial Intelligence – Between ChatGPT and creative thinking – how will we learn and work in the future?* (in German: *Künstliche Intelligenz – Zwischen ChatGPT und kreativem Denken – wie werden wir in Zukunft lernen und arbeiten?*), organized by "ff - Das Südtiroler Wochenmagazin" at Durst Campus. Bressanone (Italy).

Apr. 2023: Seminar on *Artificial Intelligence – Curse or Blessing for our Future?* (in German: *Künstliche Intelligenz – Fluch oder Segen für unsere Zukunft?*), at Franziskanergymnasium Bozen. Bolzano (Italy).

Apr. 2023: Evening Seminar on *From Eliza to ChatGPT – Developments and Implications of Artificial Intelligence* (in German: *Von Eliza bis zu ChatGPT – Entwicklungen und Auswirkungen der Künstlichen Intelligenz*), organized by Library Toblach. Toblach (Italy).

Apr. 2023: Video interview on the impact of *Artificial Intelligence* on our society, which was broadcast in an issue of "Campus Magazine" of RAI Südtirol dedicated to Artificial Intelligence.

May 2023: Seminar on *The Machine and the Ego* (in Italian: *La Macchina e l'Io*)), at the event *The Man & The Machine – AI, Blockchain, Web3: l'umanesimo del dato per il business del futuro*, organized by Jakala and IlSole24Ore, Milan (Italy).

May 2023: Seminar on *The Nature of Artificial Intelligence – Part 2: the history, the applications, the frontier* (in Italian: *La natura dell'intelligenza artificiale – Parte 2: la storia, le applicazioni, la frontiera*), organized by Mairania 857 at Centro per la Cultura, Merano (Italy).

Sep. 2023: Seminar on *Artificial Intelligence and ChatGPT in Libraries* (in German: *Künstliche Intelligenz und ChatGPT in Bibliotheken*), organized by Bibliotheksverband Südtirol (Library Association of South Tyrol), Bolzano (Italy). Online.

Sep. 2023: Evening Seminar on *From Eliza to ChatGPT – Developments and Implications of Artificial Intelligence* (in German: *Von Eliza bis zu ChatGPT – Entwicklungen und Auswirkungen der Künstlichen Intelligenz*), organized Sozialwissenschaftliches, Klassisches- Sprachen- und Kunstgymnasium Meran. Merano (Italy).

Oct. 2023: Seminar on *Artificial Intelligence – From Symbolic Reasoning to Data Processing* (in Italian: *Intelligenza Artificiale – Dal ragionamento simbolico al processamento dei dati*), organized by Sardegna Ricerce. Cagliari (Italy).

Oct. 2023: Seminar on *The Nature of Artificial Intelligence, Part 2: the History, some Applications, the Frontier*, organized by Academic Training of the Free University of Bozen-Bolzano. Bolzano (Italy).

Oct. 2023: Seminar on *Artificial Intelligence – From Symbolic Reasoning to Data Analysis* (in Italian: *Intelligenza Artificiale – Dal ragionamento simbolico all'analisi dei dati*), within the *14th Workshop Computer Science Research Meets Business*, jointly organized by the Faculty of Engineering of the Free University of Bozen-Bolzano and the ICT section of the Entrepreneurs Association of South Tyrol. Bolzano (Italy).

Nov. 2023: Seminar on *Optimization of Data and Processes – Artificial Intelligence in Use* (in German: *Optimierung von Daten und Prozessen – Künstliche Intelligenz im Einsatz*), within the *IDM Info Event Progress through Digitalization*, organized by IDM. Bolzano (Italy).

Nov. 2023: Seminar on *Artificial intelligence – what is it? Where does it come from? Where is it taking us?* (in German: *Künstliche Intelligenz – Was ist das? Woher kommt sie? Wohin führt sie uns?*), organized by BIWEP – Bildungsweg Pustertal. Sand in Taufers (Italy).

Nov. 2023: Seminar on *Developments and Impacts of Artificial Intelligence* (in German: *Entwicklungen und Auswirkungen der Künstlichen Intelligenz*), organized by Kulturrunde Bruneck. Brunico (Italy).

Jan. 2024: Seminar on *Introduction to AI and its Possible Applications in the Bus Industry* (in German: *Einführung in die KI und deren Nutzungsmöglichkeiten im Busgewerbe*), organized by Omnibus Verband Nord eigennütziger Verein. Reischach, Brunico (Italy).

Feb. 2024: Seminar on *Opportunities and Risks of Artificial Intelligence* (in German: *Chancen und Risiken der Künstlichen Intelligenz*), organized by Rotary Club Bressanone. Pfalzen, Brunico (Italy).

Feb. 2024: Seminar on *Opportunities and Risks of Artificial Intelligence* (in Italian: *Opportunità e rischi dell'Intelligenza Artificiale*), organized by Centro Culturale San Giacomo. Laives, Bolzano (Italy).

Mar. 2024: Seminar on *Reflections on Artificial Intelligence* (in German: *Reflexionen über Künstliche Intelligenz*), organized by the Education Committee of the Municipality of Burgstall. Burgstall (Italy).

Mar. 2024: Seminar on *Artificial Intelligence – What is it, how Does it Work, what Does it do?* (in German: *Kñstliche Intelligenz – Was ist das, wie funktioniert sie, was bewirkt sie?*), offered to high-school students from Vipiteno visiting the Free University of Bozen-Bolzano. Bolzano (Italy).

Mar. 2024: Seminar on *Artificial Intelligence. . . and its Risks*, offered to high-school students within the *Rotary Youth Leadership Awards* youth development program. Bressanone (Italy).

Mar. 2024: Seminar on *Reflections on Artificial Intelligence* (in German: *Reflexionen über Künstliche Intelligenz*), offered at the Free University of Bozen-Bolzano to a general public, in occasion of the National University Day. Bolzano (Italy).

Apr. 2024: Seminar on *Reflections on Artificial Intelligence* (in Italian: *Riflessioni sull'Intelligenza Artificiale*), offered at the training academy "Schloß Rechtenthal" to employees of the Public Administration of the Province of Bolzano. Bolzano (Italy).

May 2024: Seminar on *Opportunities and Risks of Artificial Intelligence* (in German: *Chancen und Risiken der Künstlichen Intelligenz*), organized by the Education Committee of the Municipality of Terlan in the context of the Action-days for Political Education 2024. Terlan (Italy).

May 2024: Seminar on *Artificial Intelligence: What is it? Where is it Taking us? What Opportunities? What Risks?* (in German: *Künstliche Intelligenz: Was ist das? Wohin führt sie uns? Welche Chancen? Welche Risiken?*), organized by the Education Committee of the Municipality of Kurtatsch in the context of the Action-days for Political Education 2024. Kurtatsch (Italy).

May 2024: Seminar on *Reflections on Artificial Intelligence* (in Italian: *Riflessioni sull'Intelligenza Artificiale*), offered at the seminar on *Artificial Intelligence. People. Work*, organized by CISL Bolzano. Bolzano (Italy).

May 2024: Seminar on *Artificial Intelligence – A Radical Change in Society and Education* (in German: *Kñstliche Intelligenz – Ein Umbruch in Gesellschaft und Bildung*), offered at the *Service Conference for School Management Staff*, organized by the Department of Education of the Province of Bolzano, Bolzano (Italy). Online.

May 2024: Seminar on *Generative AI: Its Functioning, Its Potential, and Its Risks*, offered at the workshop on *The Responsible Use of Artificial Intelligence in Research*, organized by Eurac Research, Bolzano (Italy).

Oct. 2024: Seminar on *Why Artificial Intelligence is Changing the Way we do Business* (In Italian: *Perché l'intelligenza artificiale sta cambiando il modo di fare business*), offered at the training day on *Artificial Intelligence: the Digitization of the Accounting Firm*, organized by Associazione dei Dottori Commercialisti e degli Esperti Contabili delle Tre Venezie, Venezia (Italy). Online.

Dec. 2024: Seminar on *Artificial Intelligence: How Will we Learn in the Future?* (in German: *Künstliche Intelligenz: Wie werden wir in Zukunft lernen?*), offered at the *Educational Day*, organized by Fachoberschule für Landwirtschaft, Ora (Italy).

Dec. 2024: Invited seminar on *The Artificial Intelligence Laboratory (AI-Lab) at the Faculty of Engineering*, offered at the *NOI Digital Community Meeting*, Bolzano (Italy).

Jan. 2025: Seminar on *Reflections on Artificial Intelligence* (in Italian: *Riflessioni sull'Intelligenza Artificiale*), at Liceo Rosmini. Trento (Italy).

Jan. 2025: Seminar on *The Nature of Artificial Intelligence* (in Italian: *La natura dell'Intelligenza Artificiale*), at Liceo scientifico Torricelli. Bolzano (Italy).

Jan. 2025: Seminar on *Artificial Intelligence and Business Competitiveness* (in Italian: *Intelligenza Artificiale e competitività aziendale*), at the yearly meeting of the Chamber of Commerce, Industry, Crafts, Tourism and Agriculture of Bolzano. Bressanone (Italy).

Feb. 2025: Seminar on *Artificial Intelligence – Developments and impacts* (in German: *Künstliche Intelligenz – Entwicklungen und Auswirkungen*), as part of continuous education for teachers of various subjects and all school levels. Online.

Mar. 2025: Seminar on *Artificial Intelligence – Opportunities and Risks*, at the yearly Rotary Youth Leadership Awards. Bressanone (Italy).

Apr. 2025: Seminar on *Artificial Intelligence – Opportunities and Risks* (in Italian: *Intelligenza Artificiale – Opportunità e rischi*), at Liceo Marconi. Bolzano (Italy).

6 Enterpreneurship and Industrial Experience

My research puts a strong emphasis on theoretical foundations, but it has always been driven by practically relevant problems, and often has had a high practical impact, leading to the development of software tools and systems, and the founding of a spin-off company of the Free University of Bozen-Bolzano. I briefly report the main achievements in this respect.

- I have given fundamental contributions to the foundational research on decidability and inference in expressive logics for knowledge representation and reasoning, carried out in the late 1990s till mid 2000 (see [BC-12] for a more recent survey). Such a work has been instrumental to the development of systems for reasoning in the expressive ontology languages that nowadays constitute the Web Ontology Language (OWL), which has been standardized by World Wide Web Consortium (W3C) in 2012 in its 2nd edition[12].
- I am one of the inventors of the lightweight ontology languages of the *DL-Lite* family [JI-18, JI-19, JI-25], which are in a direct correspondence with conceptual data modeling formalisms such as UML and Entity-Relationship schemas [JI-15, BC-14, JI-28], and which provide the formal underpinning for the OWL 2 QL Profile[13] of the W3C standard OWL. The work on *DL-Lite* has led to the development of systems for *ontology-based data access* (OBDA) [CI-122], which are currently deployed in industrial settings. I have directly contributed to the development of the first system of this kind, the Quonto/Mastro system [CI-45, WI-49, JI-26], developed at Sapienza Università di Roma initially in collaboration with my research group in Bolzano. The Mastro system is now being commercialized by OBDA Systems, a spin-off of Sapienza Università di Roma.

  Building on the experience gained in the development of Quonto/Mastro, the research team working at the Free University of Bozen-Bolzano under my supervision has then started the development of the Ontop OBDA framework[14], which includes an OWL 2 QL inference engine [JI-40]. Ontop is an open source project available under the terms of the Apache 2.0 License and hosted on GitHub, which has attracted a considerable user base.
- Since January 2017, I am the director of the *Smart Data Factory*[15], the laboratory for technology transfer of the Faculty of Computer Science of the Free University of Bozen-Bolzano, located at the NOI Techpark[16]. The mission of the Smart Data Factory is to promote the technology transfer from academia to industry by implementing and adapting research results of the Faculty of Computer Science. This occurs through the transfer of advanced skills present in the Faculty for the solution of complex problems in the areas of intelligent data management and in the co-design and co-development of IT applications that focus on the intelligent use of data. Currently, the Smart Data Factory employs 5 researchers with a fixed-term contract (RTDs) and one research assistant.
- In April 2019, together with some of my collaborators working on the Ontop system, I founded Ontopic[17], the first spin-off of the Free University of Bozen-Bolzano. Ontopic provides consultancy on the development of solutions for OBDA and for the integration of heterogeneous data sources, by relying on virtual knowledge graphs and on a conceptual representation of the domain of interest provided by an ontology. Ontopic offers also commercial-level support for users of the Ontop system.

6.1 Industrial Experience

After my Master graduation and before starting the Ph.D. in Computer Engineering, I held the following roles in industry:

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"; development of an expert system with multimedia interface for insurance counseling.

[12] http://www.w3.org/TR/owl2-overview/
[13] http://www.w3.org/TR/owl-profiles/
[14] http://ontop.inf.unibz.it/
[15] https://smart.inf.unibz.it/en
[16] https://noi.bz.it/en/
[17] https://ontopic.ai/

7 Teaching

We report first the total hours of institutional teaching per academic year, which includes the teaching as main lecturer of PhD level courses (see Section 7.1), as main lecturer of courses and labs in BSc and MSc level courses (see Section 7.2), and providing assistance in teaching (see Section 7.3).

– At the Faculty of Engineering of Sapienza Università di Roma:

1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
60	130	74	124	124	140	124	150	50

– At the Free University of Bozen-Bolzano:

2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
132	132	132	120	120	120	120	120	0[18]	180
2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
144	165	126	126	126	126	104	126	126	126
2024/25	2025/26								
126	126								

7.1 Lecturer of Graduate Courses (at PhD Schools and Specialized Masters)

Dec. 2000: *Data Integration*, within the Ph.D. program in Computer Engineering of Sapienza Università di Roma; together with Prof. Giuseppe De Giacomo and Prof. Maurizio Lenzerini.

Feb. 2001: *Introduction to Computer Science*, within the Master in Information and Communication Technology of Sapienza Università di Roma; 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.

Nov. 2005: *View-based Query Processing*, within the Ph.D. program in Computer Engineering of Sapienza Università di Roma; 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 Zakharyaschev.

Apr. 2013: *Description Logics, Ontology-based Data Access, and Reasoning*, at the Vienna PhD School of Informatics, Technical University Vienna, Vienna (Austria).

Jun. 2014: *Description Logics for Information Modeling and Data Access*, within the Erasmus Mundus Master's Programme in Information Technologies for Business Intelligence (IT4BI), Universitat Politècnica de Catalunya, Barcelona (Spain).

Nov. 2014, Sep. 2015, Feb. 2016, Feb. 2017, Feb. 2018, Feb. 2019, Feb. 2020, Feb. 2021, Feb. 2022, Feb. 2023, Mar. 2024: *Introduction to Research and Scientific Paper Reading/Writing*, as part of the *Research Methods* Course, within the PhD in Computer Science, Free University of Bozen-Bolzano (Italy).

Jan. 2015: *End-User Access to Big Data Using Ontologies*, at the 1st International Winter School on Big Data (BigDat 2015), Tarragona (Spain).

Feb. 2017: *Data-aware Processes: Modeling, Mining, and Verification*, at the 3rd International Winter School on Big Data (BigDat 2017), Bari (Italy).

Jul. 2017: *Verification of Data-centric Systems*, at the RiSE & LogiCS Summer School on Logic, Artificial Intelligence and Verification (LAIVe Summer School 2017), Vienna (Austria); together with Marco Montali.

[18] In the Academic Year 2012/13 I spent a sabbatical at the Technical University of Vienna, and therefore was exempted from institutional teaching.

Jul. 2017: *Verification of Data-aware Processes*, at the 29th European Summer School in Logic, Language, and Information (ESSLLI 2017), Toulouse (France); together with Marco Montali.

Jan. 2020: *Virtual Knowledge Graphs for Data Integration*, at the 6th International Winter School on Big Data (BigDat 2020), Ancona (Italy).

Mar. 2022: *Knowledge Representation* (in Italian), at the 2nd Level Master's Course on Artificial Intelligence, Mind, Enterprise (IAMI), University of Brescia (Italy).

Jul. 2022: *Ontology-based Data Access Made Practical*, at the joint EDBT-INTENDED Summer School on Data and Knowledge, Bordeaux (France).

7.2 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.

1996/97, 1997/98: *Foundations of Computer Science* (50 hours), at the Corso di Diploma Universitario in Electrical Engineering, Faculty of Engineering of Sapienza Università di Roma.

1998/99: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Aeronautical Engineering, Faculty of Engineering of Sapienza Università di Roma.

1999/00: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Mechanical Engineering, Faculty of Engineering of Sapienza Università di Roma.

2000/01, 2001/02: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Electronic Engineering, Faculty of Engineering of Sapienza Università di Roma.

2002/03: *Foundations of Computer Science* (100 hours), at the Corso di Laurea in Computer Engineering, Faculty of Engineering of Sapienza Università di Roma.

2002/03, 2003/04: *Databases* (50 hours), at the Corso di Laurea in Computer Engineering, Faculty of Engineering of Sapienza Università di Roma.

2004/05, 2005/06, 2006/07: *Introduction to Programming* (60 hours), at the BSc in Applied Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano. The course was also offered to the students of the BSc in Logistics and Production Engineering, taught at the Free University of Bolzano in cooperation with the Politecnico di Torino.

2004/05, 2005/06, 2006/07, 2007/08, 2008/09, 2009/10, 2010/11, 2011/12, 2013/14, 2014/15, 2015/16, 2016/17, 2017/18: *Theory of Computing* (72 hours), at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2007/08, 2008/09, 2009/10, 2010/11: *Formal Languages* (24 hours), at the BSc in Applied Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2007/08, 2008/09: *Knowledge Bases and Databases* (24 hours), at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2009/10, 2010/11: *Knowledge Representation and Ontologies* (24 hours), at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2011/12: *Knowledge Representation and Ontologies* (48 hours), at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2013/14: *Ontology and Database Systems* (72 hours), at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2013/14: *Seminars in Knowledge Representation* (36 hours), at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2014/15: *Knowledge Representation and Ontologies* Module (72 hours), within the *Ontology and Database Systems* Course, at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2015/16, 2016/17, 2017/18: *Knowledge Representation and Ontologies* Module (48 hours), within the *Ontology and Database Systems* Course, at the MSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2015/16: *Computer Science for Communication Science* (*Elementi di Informatica per la Comunicazione*) (45 hours), at the BSc in Science and Culture of Communication ("Scienze della Comunicazione e Cultura"), Faculty of Education of the Free University of Bozen-Bolzano. The first 30 hours of the course were also offered as a course within the "Studium Generale" of the Free University of Bozen-Bolzano.

2018/19, 2019/20, 2020/21, 2021/22, 2022/23: *Introduction to Databases* (60 hours), at the BSc in Computer Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2018/19, 2019/20, 2021/22, 2022/23: *Data Integration* (60 hours), at the MSc in Computational Data Science, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2020/21: *Data and Process Modeling for Business Informatics* (40 hours), at the BSc in Informatics and Management of Digital Business, Faculty of Computer Science of the Free University of Bozen-Bolzano.

2023/24, 2024/25. 2025/26: *Introduction to Databases* (60 hours, in German), at the BSc in Computer Science, Faculty of Engineering of the Free University of Bozen-Bolzano.

2023/24, 2024/25. 2025/26: *Data Preparation and Integration* (60 hours), at the MSc in Data Science for Computing, Faculty of Engineering of the Free University of Bozen-Bolzano.

7.3 Assistance in Teaching

Tutor[19] for the following undergraduate courses at the Faculty of Engineering of Sapienza Università di Roma:

1995/96: *Formal Languages and Compilers* (regular course held by Prof. Daniele Nardi), at the Corso di Diploma Universitario in Computer Engineering.

1996/97: *Formal Languages and Compilers* (regular course held by Prof. Luigi Carlucci Aiello), at the Corso di Diploma Universitario in Computer Engineering.

Assistant instructor[20] for the following undergraduate courses at the Faculty of Engineering of Sapienza Università di Roma:

1992/93: *Foundations of Computer Science II* of the Corso di Laurea in Computer Engineering, held by Prof. Maurizio Lenzerini.

1993/94, 1995/96: *Foundations of Computer Science* of the Corso di Laurea in Computer Engineering, held by Prof. Mirella Casini Schaerf.

1996/97: *Formal Languages and Compilers* of the Corso di Diploma Universitario in Computer Engineering, held by Prof. Luigia Carlucci Aiello.

1996/97, 1997/98, 1998/99, 1999/00, 2000/01, 2001/02: *Formal Languages and Compilers*, held by Prof. Daniele Nardi.

2000/01: *Databases* of the Corso di Diploma Universitario in Computer Engineering, held by Prof. Maurizio Lenzerini.

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

1994/95 (Winter Semester): *Automata Theory*, held by Prof. Franz Baader.

1994/95 (Summer Semester): *Foundations of Theoretical Computer Science*, held by Prof. Franz Baader.

7.4 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, Sapienza Università di Roma to the company I&T SpA of Pomezia.

[19] At the Faculty of Engineering of Sapienza Università di Roma, 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.

[20] At the Faculty of Engineering of Sapienza Università di Roma, in the 1990's and early 2000's, each course had a main lecturer and possibly an assistant instructor. The assistant instructor prepared and delivered 20%-25% of the lectures, and prepared and marked assignments and exams.

7.5 Thesis Supervision and Evaluation

7.5.1 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; currently researcher at Google, New York, USA.

2006–2010: PhD supervisor of Camilo Thorne on the topic *Query Answering over Ontologies Using Controlled Natural Languages*; graduated March 2010; currently Senior Scientist Data at Elsevier, Frankfurt, Germany.

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; currently tenured Full Professor at Technical University of Vienna, Austria.

2009–2013: PhD supervisor of Babak Bagheri-Hariri on the topic *Borders of Decidability in Verification of Data-Centric Dynamic Systems*; graduated in May 2013; currently Manager, Teheran, Iran.

2010–2013: PhD supervisor of Dmitriy Zheleznyakov on the topic *Logic-Based Evolution of Knowledge Bases: The Case of Lightweight DLs*; graduated in April 2013; currently Software Engineer at Meta, London, UK.

2010–2014: PhD supervisor of Elena Botoeva on the topic *Description Logic Knowledge-Base Exchange*; graduated in April 2014; currently Lecturer at University of Kent, UK.

2012–2016: PhD supervisor of Ario Santoso on the topic *Verification of Data-Aware Processes in the Presence of Ontologies*; graduated in May 2016.

2014–2018: PhD supervisor of Davide Lanti on the topic *Benchmarking and Optimization of OBDA Systems*; graduated in February 2018; currently Assistant Professor at the Free University of Bozen-Bolzano.

2016–2019: PhD supervisor of Elem Güzel Kalayci on the topic *Ontology-Based Access to Temporal Data*; graduated in March 2019; currently Research Scientist at Virtual Vehicle, Graz, Austria.

2020–2024: PhD supervisor of Francesco di Cosmo on the topic *Decidability Boundaries in Formal Verification of Declarative Distributed Systems*; graduated in October 2024; currently postdoctoral researcher at the Free University of Bozen-Bolzano.

2021–2023: PhD supervisor of Muhammad Adnan on the topic *Virtual Knowledge Graphs over Temporally Extended Data*.

2021–2025: PhD supervisor of Elena Romanenko on the topic *Abstraction and Explanation of Ontology-Driven Conceptual Models*; graduated in July 2025; currently postdoctoral researcher at the Free University of Bozen-Bolzano.

2022–today: PhD supervisor of Rikayan Chaki on the topic *Generation of Timelines from Event Knowledge Graphs using Domain Knowledge*.

2022–today: PhD supervisor of Divya Baura on the topic *Privacy in Virtual Knowledge Graphs*.

2022–today: PhD supervisor of Arka Ghosh on the topic *Query Processing over Geo-enriched Virtual Knowledge Graphs*.

2022–today: PhD supervisor of Romuald Esdras Wandji on the topic *Ontology-based Update and Evolution in Virtual Knowledge Graphs*.

2023–today: PhD supervisor of Marco Di Panfilo on the topic *Mapping Generation in Virtual Knowledge Graphs*.

7.5.2 PhD Thesis Evaluation

2001: Member of the Ph.D. Award Committee of Jan Hidders, defending the thesis *"A Graph-based Update Language for Object-Oriented Data Models"*, at *Technische Universiteit Eindhoven*, Belgium; supervisor Prof. Jan Paredaens.

2002: External evaluator of the Ph.D. thesis *"A New Method for Query Containment Checking in Deductive Databases"* by Carles Farré, at *Universitat Politecnica de Catalunya*, Spain; supervisors Prof. 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 *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 *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 *Universitat Politecnica de Catalunya*, Spain; supervisor Dr. Alberto Abello.

2012: Reviewer and member of the examination panel for the defense of the Ph.D. Thesis *"Static Analysis of Semantic Web Queries"* by Melisachew Wudage Chekol, at *University of Grenoble*, France; supervisor Prof. Jérôme Euzenat.

2014: Reviewer and member of the examination panel for the defense of the Ph.D. Thesis *"Inline Evaluation of Hybrid Knowledge Bases"* by Guohui Xiao, at *Vienna PhD School of Informatics*, Austria; supervisor Prof. Thomas Eiter.

2014: External reviewer of the Ph.D. Thesis *"Behavior Composition Optimization"* by Nitin Kumar Yadav, at *RMIT University*, Melbourne, Victoria, Australia; supervisor Dr. Sebastian Sardina.

2014: Reviewer and member of the examination panel for the defense of the Ph.D. Thesis *"Reasoning in Many Dimensions: Uncertainty and Products of Modal Logics"* by Jean Christoph Jung, at *Universität Bremen*, Germany; supervisor Prof. Carsten Lutz.

2016: Member of the examination panel for the defense of the Ph.D. Thesis *"Holistic Security Requirements Engineering for Socio-Technical Systems"* by Tong Li, at *University of Trento*, Italy; supervisor Prof. John Mylopoulos.

2016: Reviewer and member of the examination panel for the defense of the Ph.D. Thesis *"Personalised Search for the Social Semantic Web"* by Oana Tifrea-Marciuska, at *University of Oxford*, United Kingdom; supervisor Prof. Thomas Lukasiewicz.

2016: Member of the examination panel for the defense of the Ph.D. Thesis *"Efficient Big Data query answering in the presence of constraints"* by Damian Bursztyn, at *Université Paris-Saclay*, France; supervisors Prof. Ioana Manolescu and Prof. Francois Goasdoué.

2017: Member of the examination panel for the defense of the Ph.D. Thesis *"Incremental Checking and Maintenance of UML/OCL Integrity Constraints"* by Xavier Oriol Hilari, at *Universitat Politècnica de Catalunya*, Spain; supervisor Prof. Ernest Teniente.

2019: Member of the examination panel for the defense of the Ph.D. Thesis *"Efficient Management for Geospatial and Temporal Data using Ontology-based Data Access Techniques"* by Konstantina Ch. Bereta, at *National and Kapodistrian University of Athens*, Greece; supervisor Prof. Manolis Koubarakis.

2019: Member of the examination panel for the defense of the Ph.D. Thesis *"Accessing Manufacturing Data Through Virtual Knowledge Graphs On the Value and Semantic Peculiarities of Time Series Data"* by Benjamin Moörzinger, at *Technical University of Vienna*, Austria; supervisor Prof. Burkhard Kittl.

2021: Member of the examination panel for the defense of the Ph.D. Thesis *"Best Trees Extraction and Contextual Grammars for Language Processing"* by Anna Jonsson, at *Umeå University*, Sweden; supervisor Prof. Johanna Björklund.

2022: Reviewer and member of the examination panel for the defense of the Ph.D. Thesis *"*WICKR *– A Joint Semantics for Flexible Business Processes and Data"* by Stephan Haarmann, at *University of Potsdam*, Germany; supervisor Prof. Mathias Weske.

2024: Reviewer of the Ph.D. Thesis *"Estimating Function Points through Conceptuals Models"* by Emiliano Di Reto, at *Sapienza Università di Roma*, Italy; supervisor Prof. Giuseppe Santucci.

2024: Reviewer of the Ph.D. Thesis *"Learning Queries under Description Logic Ontologies"* by Maurice Funk, at *Universität Leipzig*, Germany; supervisor Prof. Carsten Lutz.

7.5.3 Master Thesis Supervision

Jul. 2006: Magdalena Ortiz, *Answering Conjunctive Queries in Expressive Description Logics.* The thesis obtained the prize for the best thesis of the European Master in Computational Logic in the Academic Year 2005/06. Moreover, the publications [WI-41, CI-51, JI-22], 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.

Oct. 2006: Evgeny Kharlamov, *Model Theory and Calculus for the Description Logic DL-Lite$_F$.* The publication [WI-51] is based on the results obtained in the thesis.

Mar. 2009: Abhinav Kumar, *Practical Reasoning in Expressive Description Logics using Alternating Automata.*

Oct. 2009: Elena Botoeva, *Query Rewriting for DL-Lite with Number Restrictions.* The publication [WI-66] is based on the results obtained in the thesis.

Oct. 2009: Yazmin Angelica Ibanez Garcia, *Complexity Boundaries for Full Satisfiability of Restricted UML Class Diagrams.* The publications [WI-63, WI-65, CI-67], are based on the results obtained in the thesis.

Oct. 2009: Alejandra Lorenzo, *Enhancing a Hybrid Tableaux Algorithm.*

Oct. 2009: Dmitriy Zheleznyakov, *Updating Description Logic Knowledge Bases.*

Oct. 2010: Domenico Carbotta, *A Practical Automata-Based Technique For Reasoning in Expressive Description Logics.* The publication [CI-72] is based on the results obtained in the thesis.

July 2011: Giorgio Stefanoni, *Explaining Query Answers in Lightweight Ontologies: The DL-Lite Case.* The publications [WI-73, CI-76] are based on the results obtained in the thesis.

Oct. 2011: Ario Santoso, *Automated Service Synthesis in a Weighted Framework.* The publication [WI-75] is based on the results obtained in the thesis.

Oct. 2011: Ognjen Savkovic, *Managing Data Types in Ontology-Based Data Access.* The publication [CI-78] is based on the results obtained in the thesis.

Oct. 2013: Sarah Seyenam Adjoa Komla-Ebri, *DL-Lite Reasoning using Directed Acyclic Graphs.*

Oct. 2013: Shqiponja Ahmetaj, *Planning in Graph Databases under Description Logic Constraints.* The publications [WI-94, WI-95, CI-92] are based on the results obtained in the thesis.

Aug. 2015: Alifah Syamsiyah, *Ontology-Driven Extraction of Event Logs from Relational Databases.* The publication [WI-107] is based on the results obtained in the thesis.

Mar. 2022: Lukas Sundqvist, *Extending VKG Systems with RDF-star Support.*

7.5.4 Bachelor Thesis Supervision

Jul. 2006: Lorenzo Angeli, *Realization and Test of an OLAP Application Based on Open Source Systems.*

Jul. 2007: Reinstadler Martin, *OntoJob: A Tool Providing Automatic Taxonomy Upgrading.*

Mar. 2009: Gerstgrasser Manfred, *Optimizing Query Evaluation for Ontology-based Data Access.*

Jul. 2011: Seravalli Marco, *A Web Based Tool for the Management of Bibliographic Data.*

Oct. 2012: Julian Prenner, *A Graphical Programming Language Based on Graph Transformation for the JVM.*

Dec. 2020: Gabriele De Candido, *Analysis of Database Structure for Data Mapping and Integration.*

7.6 Professional Teaching

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.

Jan. 2020: Module on *Big Data and Artificial Intelligence* (in German), as part of the *Course on Digital Transformation* offered by lvh.apa, Bolzano (Italy).

May 2021: Course on *An Introduction to Artificial Intelligence*, as part of the LevelUP professional training program offered at NOI Techpark; Bolzano (Italy); together with Daniela D'Auria.

8 Other Academic Responsibilities and Memberships

8.1 Internal Appointments to Faculty and University Boards

I have been appointed to various boards of the universities to which I was affiliated, among which:

8.1.1 Boards of Sapienza Università di Roma

2000: *Member of the Commission for the State Exam for Engineers*, as computer science expert for the Faculty of Engineering.

2000–2002: *Member of the Consiglio d'Area* (Board of Studies) for the Corso di Laurea in Electronic Engineering at the Faculty of Engineering.

2001–2003: *Responsible for evaluating and processing student requests for transfer to the Corso di Laurea in Computer Engineering* at the Faculty of Engineering.

2002–2003: *Member of the Consiglio d'Area* (Board of Studies) for the Corso di Laurea in Computer Engineering at the Faculty of Engineering.

2003: *Member of the Giunta del Consiglio d'Area* (Operative Committee) for the Corso di Laurea in Computer Engineering at the Faculty of Engineering.

8.1.2 Boards of the Free University of Bozen-Bolzano

2004–2007: Director of the *Master Degree Committee* (Presidente del *Consiglio di Corso di Laurea Magistrale*) of the MSc in Computer Science at the Faculty of Computer Science.

Oct. 2004 – Feb. 2009: Member of the *committee for the selection of lecturers* at the Faculty of Computer Science.

Mar. 2009 – Feb. 2013: President of the *committee for the selection of lecturers* at the Faculty of Computer Science.

Set. 2008 – Dec. 2010: President of the *selection committee for the admission to the PhD Program in Computer Science* at the Faculty of Computer Science.

Oct. 2010 – Dec. 2013: Internal Member for the Faculty of Computer Science of the *Central Research Committee*.

Jan. 2014 – Oct. 2018: Director of the *PhD Program in Computer Science* at the Faculty of Computer Science.

Feb. 2015 – Sep. 2019: *Vice-dean for Research* of the Faculty of Computer Science.

Feb. 2015 – Sep. 2019: Internal Member for the Faculty of Computer Science of the *Central Research Committee*.

Apr. 2015 – Jan. 2018: President of the *committee for the selection of lecturers* at the Faculty of Computer Science.

Nov. 2018 – Oct. 2021: Member of the *PhD Committee of the PhD Program in Computer Science* at the Faculty of Computer Science.

Dec. 2018 – Dec. 2025: *Substitute Member of the Disciplinary Board*.

Nov. 2023 – today: Member of the *PhD Committee of the PhD Program in Computer Science* at the Faculty of Engineering.

Jun. 2024 – today: Head of the *Institute of Computer Science and Artificial Intelligence* at the Faculty of Engineering.

8.1.3 Other Boards

Nov. 2021 – Oct. 2024: *Member of the PhD Committee of the National PhD Program in Artificial Intelligence – Cybersecurity* at Sapienza Università di Roma.

8.2 Program Committee Membership

Before 2003

- *4th IFCIS Conference on Cooperative Information Systems* (CoopIS 1999), Edinburgh (U.K.), Sep. 1999.
- *6th International Workshop on Knowledge Representation meets Databases* (KRDB 1999), Linköping (Sweden), Jul. 1999.
- *13th 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.
- *17th 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.
- *13º 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 (USA), 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 (USA), 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

- *24nd International Conference on Data Engineering* (ICDE 2008), Cancun (Mexico), Apr. 2008.
- *21st International Workshop on Description Logics* (DL 2008), Dresden (Germany), May 2008.
- *5th European Semantic Web Conference* (ESWC 2008), June 2008, Tenerife (Spain), June 2008,.
- *23nd 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 Joint 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 (USA), 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, USA), 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 Joint Conference on Artificial Intelligence* (IJCAI 2011), Barcelona (Spain), Jul. 2011 (Senior Program Committee).
- *25th AAAI Conference on Artificial Intelligence* (AAAI 2011), San Francisco (CA, USA), Aug. 2011.
- *5th International Conference on Web Reasoning and Rule Systems* (RR 2011), Galway (Ireland), Aug. 2011.
- *1st International Workshop on Data, Logic, and Inconsistency* (DALI 2011), Toulouse (France), Aug. 2011.

2012

- *3rd International Workshop on Data Engineering Meets the Semantic Web* (DESWEB 2012), Washington (DC, USA), Apr. 2012.
- *31st ACM Symposium on Principles of Database Systems* (PODS 2012), Scottsdale (Arizona, USA), May 2012.
- *25th International Workshop on Description Logics* (DL 2012), Rome (Italy), June 2012.
- *1st International Workshop on Knowledge-intensive Business Processes* (KiBP 2012), Rome (Italy), June 2012.
- *26th AAAI Conference on Artificial Intelligence* (AAAI 2012), Toronto (Canada), July 2012 (Senior Program Committee).
- *7th Conference on Prestigious Applications of Intelligent Systems* (PAIS 2012), Montpellier (France), Aug. 2012.
- *1st Workshop on Data and Artifact-centric BPM* (DAB 2012), Tallin (Estonia), September 2012.
- *6th International Conference on Web Reasoning and Rule Systems* (RR 2012), Vienna (Austria), Sep. 2012.
- *2nd Workshop on the Resurgence of Datalog in Academia and Industry* (Datalog 2.0 2012), Vienna (Austria), Sep. 2012.
- *11th International Semantic Web Conference* (ISWC 2012), Boston (USA), Nov. 2012.

2013

- *32nd ACM Symposium on Principles of Database Systems* (PODS 2013), New York (USA), May 2013.
- *23rd International Joint Conference on Artificial Intelligence* (IJCAI 2013), Beijing (China), Aug. 2013 (Senior Program Committee).
- *26th International Workshop on Description Logics* (DL 2013), Ulm (Germany), July 2013.
- *12th International Semantic Web Conference* (ISWC 2013), Sydney (Australia), Oct. 2013.

2014

- *27th International Workshop on Description Logics* (DL 2014), Vienna (Austria), Jul. 2014.
- *14th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2014), Vienna (Austria), Jul. 2014.
- *21st European Conference on Artificial Intelligence* (ECAI 2014), Prague (Czech Republic), Aug. 2014 (Senior Program Committee).
- *3rd Workshop on Data and Artifact-centric BPM* (DAB 2014), Eindhoven (Netherlands), Sep. 2014.
- *16th International Conference on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2014), Varna (Bulgaria), Sep. 2014.
- *13th International Semantic Web Conference* (ISWC 2014), Riva del Garda, Trentino (Italy), Oct. 2014.

2015

- *24th International Joint Conference on Artificial Intelligence* (IJCAI 2015), Buenos Aires (Argentina), Jul. 2015.
- *11th Reasoning Web Summer School* (RW 2015), Berlin (Germany), Aug. 2015 (Scientific Advisory Board).
- *14th International Conference of the Italian Association for Artificial Intelligence* (AI*IA 2015), Ferrara (Italy), Sep. 2015.
- *14th International Semantic Web Conference* (ISWC 2015), Bethlehem, Pennsylvania (USA), Oct. 2015.
- *24th ACM International Conference on Information and Knowledge Management* (CIKM 2015), Melbourne (Australia), Oct. 2015 (Senior Program Committee).

2016

- *10th Alberto Mendelzon International Workshop on Foundations of Data Management* (AMW 2016), Panama City (Panama), June 2016.
- *25th International Joint Conference on Artificial Intelligence* (IJCAI 2016), New York City (USA), Jul. 2016 (Senior Program Committee).
- *17th International Conference on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2016), Varna (Bulgaria), Sep. 2016.
- *12th Reasoning Web Summer School* (RW 2016), Aberdeen (UK), Sep. 2016 (Scientific Advisory Board).
- *15th International Semantic Web Conference* (ISWC 2016), Kobe (Japan), Oct. 2016.

2017

- *13th Italian Research Conference on Digital Libraries* (IRCDL 2017), Modena (Italy), Jan. 2017.
- *31st AAAI Conference on Artificial Intelligence* (AAAI 2017), San Francisco (USA), Feb. 2017.
- *14th Extended Semantic Web Conference* (ESWC 2017), Portoroz (Slovenia), May 2017.
- *International Joint Conference on Rules and Reasoning* (RuleML+RR 2017), London (U.K.), July 2017.
- *16th International Semantic Web Conference* (ISWC 2017), Kobe (Japan), Oct. 2016.
- *36th International Conference on Conceptual Modeling* (ER 2017), Valencia (Spain), Nov. 2017.
- *1st International Workshop of Handling IMPlicit and EXplicit Knowledge in Formal System Development* (IMPEX 2017), Nov. 2017.
- *16th International Conference of the Italian Association for Artificial Intelligence* (AI*IA 2017), Bari (Italy), Nov. 2017.

2018

- *14th Italian Research Conference on Digital Libraries* (IRCDL 2018), Udine (Italy), Jan. 2018.
- *32nd AAAI Conference on Artificial Intelligence* (AAAI 2018), New Orleans, Louisiana (U.S.A.), Feb. 2018.
- *27th International Joint Conference on Artificial Intelligence* and *23rd European Conference on Artificial Intelligence* (IJCAI-ECAI 2018), Stockholm (Sweden), July 2018 (Senior Program Committee).
- *18th International Conference on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2018), Varna (Bulgaria), Sep. 2018.
- *2nd International Joint Conference on Rules and Reasoning* (RuleML+RR 2018), Luxembourg, Sep. 2018.
- *37th International Conference on Conceptual Modeling* (ER 2018), Xi'an (China), Oct. 2018.
- *16th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2018), Tempe, Arizona (U.S.A.), Nov. 2018.
- *17th International Conference of the Italian Association for Artificial Intelligence* (AI*IA 2018), Trento (Italy), Nov. 2018.

2019

- *38th ACM Symposium on Principles of Database Systems* (PODS 2019), Amsterdam (The Netherlands), July 2019.
- *32nd International Workshop on Description Logics* (DL 2019), Oslo (Norway), Jun. 2014.
- *28th International Joint Conference on Artificial Intelligence* (IJCAI 2019), Macao (China), Aug. 2019 (Senior Program Committee).
- *OnTheMove 2019 Federated Conferences & Workshops* (OTM 2019), Rhodes (Greece), Oct. 2019.
- *Strategic Modeling and Reasoning meets Process Mining Workshop* (SMRPM 2019), Paris (France), Oct. 2019.
- *38th International Conference on Conceptual Modeling* (ER 2019), Salvador, Bahia (Brasil), Nov. 2019 (Senior Program Committee).
- *18th International Conference of the Italian Association for Artificial Intelligence* (AI*IA 2019), Rende (Italy), Nov. 2019.

2020

- *4th International Joint Conference on Rules and Reasoning* (RuleML+RR 2020), online Jul. 2020.
- *33rd International Workshop on Description Logics* (DL 2020), online, Sep. 2020.

2021

- *35th AAAI Conference on Artificial Intelligence* (AAAI 2021), online, Feb. 2021 (Senior Program Committee).
- *19th International Conference on Business Process Management* (BPM 2021), Rome (Italy), Sep. 2021.
- *34th International Workshop on Description Logics* (DL 2021), Bratislava (Slovakia), Sep. 2021.
- *18th International Conference on Principles of Knowledge Representation and Reasoning* (KR 2021), online, Nov. 2021.
- *20th International Conference of the Italian Association for Artificial Intelligence* (AIxIA 2021), online Dec. 2021.

2022

- *36th AAAI Conference on Artificial Intelligence* (AAAI 2022), online, Feb. 2022 (Senior Program Committee).
- *Forum of the 34th International Conference on Advanced Information Systems Engineering* (CAiSE 2022 Forum), Leuven (Belgium), June 2022.
- *International Symposium on Open Data and Knowledge for a Post-Pandemic Era* (ODAK 2022), Brighton (U.K.), June 2022.
- *31st International Joint Conference on Artificial Intelligence* (IJCAI 2022), Vienna (Austria), July 2022.
- *35th International Workshop on Description Logics* (DL 2022), Haifa (Israle), Aug. 2022.
- *19th International Conference on Artificial Intelligence: Methodology, Systems, Applications* (AIMSA 2022), Varna (Bulgaria), Sep. 2022.

2023

- *49th International Conference on Very Large Data Bases* (VLDB 2023), Sydney (Australia), Sep. 2023 (Member of the PVLDB Volume 16 Review Board).

8.3 Reviewing Activity

Reviewer 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; IEEE Transactions on Knowledge and Data Engineering; Information Processing Letters; Theory of Computing Systems; Journal of Web Semantics; International Journal of Cooperative Information Systems; Journal of Data Semantics; International Journal of Semantic Web and Information Systems; Communications of the ACM.

Reviewer activity for conferences (excluding workshops, and conferences for which I have been a member of the Program Committee): ACM Symposium on Principles of Database Systems (PODS), 2000, 2002, 2007, 2008, 2009, 2010, 2011, 2018; ACM SIGMOD Conference on Management of Data (SIGMOD), 2001, 2002; International Conference on Database Theory (ICDT), 1997, 1999, 2001, 2005, 2010, 2012, 2013; International Conference on Very Large Data Bases (VLDB), 1998, 2004; Conference on Advanced Information Systems Engineering (CAiSE), 2003; International Conference on Cooperative Information Systems (CoopIS), 2003; International Conference on Conceptual Modeling (ER), 1999, 2000, 2002; International Conference on Extending Database Technology (EDBT), 2004, 2006; IEEE International Conference on Scientific and Statistical Databases (SSDBM), 2000; 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, 2017, 2022; International Conference on Principles of Knowledge Representation and Reasoning (KR), 1998, 2000, 2002, 2016; 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), 2002, 2005, 2014; International Conference on Automated Deduction (CADE), 1999, 2003, 2011; International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), 2012; 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.

8.4 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 the Price of the Italian Association for Artificial Intelligence for the best MSc Thesis in Artificial Intelligence.

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).

2011: Participation as an expert to the selection process for project proposals submitted to the *Netherlands Organisation for Scientific Research* (NWO).

2012: Participation as an expert to the selection process for project proposals submitted to the *Austrian Science Fund* (FWF).

2013: Participation as an expert to the selection process for project proposals submitted to the Italian call of *Programmi di Ricerca di Rilevante Interesse Nazionale* (PRIN) for year 2012.

2014: Participation as an expert to the selection process for project proposals submitted to the *French National Research Agency* (ANR).

2017: Participation as an expert to the selection process for project proposals submitted to the *European Research Council* (ERC).

2018: Member of the evaluation panel for the DFG Collaborative Research Centre "Foundations of Perspicuous Systems" proposal by the Universities of Saarbrücken and Dresden.

2020–2023: Member of the Selection Committee for the ACM Heidelberg Laureate Forum.

2022: Member of the evaluation panel for the 2nd period of the DFG Collaborative Research Centre "Foundations of Perspicuous Systems" proposal by the Universities of Saarbrücken and Dresden.

2023: Participation as an expert to the selection process for project proposals submitted to the *Deutsche Forschungsgemeinschaft* (DFG).

2023: Participation as an expert to the selection process for project proposals submitted to the *European Research Council* (ERC).

2024–2027: Member of the Scientific and Ethics Advisory Board of the HEU project *HetERogeneous semantic data integration for the guT-bRain interplay* (HEREDITARY).)

2024–2025: Member of the *EurAI Fellows Selection Committee*.

2024–2025: Member of the *IJCAI Awards Committee*, which decides on the assignment of the *IJCAI Computers and Thought Award*, the *IJCAI John McCarthy Award*, and the *IJCAI Award for Research Excellence*.

2024: Member of the selection committee for the *KR Early Career Award*.

2024–2029: Member of the *Ethics Review Board* in Eurac Research.

2025: Chair of the ACM PODS Alberto O. Mendelzon Test-of-Time Award Committee.

8.5 Academic Training

I have attended the following courses, seminars, and workshops within the *Academic Training* program at the Free University of Bozen-Bolzano:

Jan. 2017: Seminar on *Docimologia: fare valutazione all'Università* (in Italian, 2 hours), by Luciano Cecconi.

May 2017: Seminar on *Maximising Research Value: an Introduction to Patents, Trademarks and Designs* (3 hours), by Dr. Valentina Predazzi and Dr. Mauro Delluniversità, Società Italiana Brevetti (SIB), Rome.

Feb. 2019: Workshop on *Assessment for learning* (3 hours), by Anna Dipace, University of Modena Reggio Emilia.

Sep. 2021: Seminar on *Inclusive Teaching* (2 hours), by Laura Levaggi, Heidrun Demo, Nadia Vicari, Free University of Bozen-Bolzano.

Sep. 2021: Course on *Media Proficiency in Video and Radio* (4 hours), by Paolo Mazzucato, RAI.

May 2022: Course on *Safety in the Workplace* (*Corso preposti aggiornamento sicurezza sul lavoro*, in Italian, 6 hours).

Nov. 2022: Course on *Introduction to Privacy in Research* and *Presentation of the New Questionnaire for the Analysis of Personal Data Processing in Research Projects* (*Introduzione alla privacy nell'ambito della Ricerca* and *Presentazione del nuovo questionario per l'analisi del trattamento dei dati personali nei progetti di ricerca*, in Italian, 3 hours), by Dr. Federico Bottacin and Dr. Ute Andergassen.

May 2023: Workshop on *Voice Training in German* (in German, 4 hours), by Alfred Mair.

Jun. 2023: Workshop on *Fairness and Anti-Bias in Hiring Procedures for Professorships*, by Prof. Maria Mucke, University of Klagenfurt (Austria).

9 Media Presence

Jul.-Aug. 2005 *Mondolavoro*: Web semantico. TONES rivoluziona la società dell'informazione.

16/11/2006 *Dolomiten*: Freie Software gemeinsam entwickeln.

31/03/2010 *Südtirol On Line* (`www.stol.it`): Uni Bozen an europäischem Projekt mit IBM beteiligt.

07/04/2010 *Dolomiten*: Europäisches Projekt mit IBM. Fakultät für Informatik beteiligt sich an einem wichtigen EU-finanzierten Projekt.

Apr.-Mai 2010 *WIA*: IT-Forschung. Prof. Diego Calvanese, Freie Universität Bozen.

26/05/2010 *Dolomiten*: Informatikstudenten aus Indonesien.

19/12/2012 *Dolomiten*: Automatisierung im Krankenhaus. Stiftung: Förderung des Projekts VeriCliG der Fakultät für Informatik für klinische Zwecke.

09/01/2013 *Südtirol On Line* (`www.stol.it`): Uni Bozen: 870.000 Euro für "Optique".

09/01/2013 *Controcampus* (`www.controcampus.it`): Gestione banche dati – progetto Optique.

10/01/2013 *Corriere dell'Alto Adige*: Progetto Optique, finanziata l'università. Svilupperà sistemi per gestire banche dati di grandi dimensioni.

10/01/2013 *Dolomiten*: "Optique" hilft durch Datendschungel. Uni Bozen: Mit 870.000 Euro bisher größte Forschungsfinanzierung für ein einzelnes Projekt.

29/01/2013 *Radio NBC Bolzano, Scienzazionale*: 10 minutes interview about data management and the Optique project.

31/01/2013 *ff Wochenmagazin*: Effizient suchen. Informatikprofessor Diego Calvanese hat die bislang größte Einzelforschungsfinanzierung der Uni Bozen an Land gezogen. Er und sein Team arbeiten an einem vernetzten Such-System für Datenbanken.

01/03/2013 *Tiroler Tageszeitung*: Im europäischen Forschungsverbund. Die Forschung wird von zehn Partnern (in Bozen von Diego Calvanese) vorangetrieben.

20/06/2013 *Corriere Alto Adige*: Research Day, idee all'avanguardia. Università: Porte aperte alla Lub per una giornate di divulgazione sui propri progetti.

10/12/2013 *Alto Adige*: Ricerca scientifica under 40, 2 premiati.

17/12/2013 *Controcampus* (`www.controcampus.it`): All'Università di Bolzano: il paper più influente degli ultimi 10 anni.

17/12/2013 *Data Manager Online* (`www.datamanager.it`): Università di Bolzano: il paper più influente degli ultimi 10 anni.

18/12/2013 *Dolomiten*: Ausgezeichneter Wissenschaftsartikel. Informatik: Artikel über Serviceorientierte Verarbeitung zum einflussreichsten Artikel der Branche gewählt.

21/12/2013 *Salto.bz* (`www.salto.bz`): ... and the winner is: Diego Calvanese. Internet, la ricerca scientifica e il futuro della Lub. Intervista al vincitore del "Premio scientifico Alto Adige" e del premio assegnato dall'"International Conference on Service Oriented Computing" per "il lavoro più influente degli ultimi 10 anni".

05/01/2014 *Alto Adige*: Dalla Provincia 2 premi scientifici per la ricerca.

07/01/2014 *Corriere dell'Alto Adige*: La Provincia premia i ricercatori.

08/01/2014 *Alto Adige*: La Provincia premia la ricerca.

08/01/2014 *Corriere dell'Alto Adige*: Beikircher e Calvanese Ricercatori di spicco insigniti dalla Provincia.

08/01/2014 *Dolomiten*: Premiere zum Abschied. Forschungs- und Wissenschaftspreis: Barbara Beikircher und Diego Calvanese erste Preisträger.

08/01/2014 *Dolomiten*: Drei Fragen an ...: Preisträger Prof. Diego Calvanese.

08/01/2014 *Südtirol On Line* (`www.stol.it`): Südtiroler Forschungs- und Wissenschaftspreis vergeben.

08/01/2014 *Südtirolnews* (`www.suedtirolnews.it`): Wissenschaftspreis für Barbara Beikircher und Diego Calvanese.

06/02/2014 *Provincia Autonoma BZ*: Premi per la ricerca scientifica.

06/02/2014 *Das Land Südtirol*: Forschende ausgezeichnet.

14/05/2014 *Dolomiten*: Best paper.

30/09/2014 *Alto Adige*: Un ponte per il business tra Italia e Paesi tedeschi.

30/09/2014 *Corriere dell'Alto Adige*: Settore smart energy. Network italotedesco lanciato dalla BLS.

29/01/2015 *Südtirolnews* (`www.suedtirolnews.it`): Uni Bozen: Nationaler Kongress zu digitalen Bibliotheken.

09/02/2015 *Südtirolnews* (`www.suedtirolnews.it`): Zugang zu Big Data: Hohe Bewertung für Projekt Optique.

10/02/2015 *Alto Adige*: Optique, l'Ue promuove gli informatici Lub.

10/02/2015 *Dolomiten*: "Projekt Optique": EU sagt "hervorragend".

10/02/2015 *Controcampus* (`www.controcampus.it`): Optique, progetto per Big Data con la Libera Università di Bolzano.

25/02/2015 *BitMAT* (`www.bitmat.it`): Gestione dei Big Data: il progetto Optique è già un successo.

01/07/2015 *Academia*: Spot on Science – Subaquatic Semantics.

27/08/2015 *RAI Radio 3 Bolzano, Zeppelin*: 10 minutes interview about Semantic Technologies.

16/09/2015 *Dolomiten*: "Wie stelle ich Wissen umfassend dar?" Informatik: Entwicklung restriktiver kleiner Sprachen durch Informatiker-Team der unibz rund um Prof. Franconi und Prof. Calvanese.

30/09/2015 *Corriere dell'Alto Adige*: Intelligenza artificiale made in Suüdtirol. Montali: "Gruppo di ricerca eccellente".

29/07/2016 *Alto Adige* and *Trentino*: Dal 15 al 26 agosto informatici e linguisti si incontrano a ESSLLI.

14/08/2016 *Corriere dell'Alto Adige*: Intelligenza artificiale, nuove frontiere Alla Lub le menti di Facebook e Google.

14/08/2016 *Corriere del Trentino*: Alla Lub le menti di Facebook e Google.

17/08/2016 *Südtirolnews* (`www.suedtirolnews.it`): 400 Doktoranden and der unibz. Mensch und Maschine im Gespräch.

18/08/2016 *Dolomiten*: Mensch und Maschine. Uni Bozen: 400 Doktoranden befassen sich mit kuünstlicher Intelligenz.

18/08/2016 *Die Neue Südtiroler Tageszeitung*: Mensch und Maschine. 400 Doktoranden und Lehrende befassen sich im August an der Universitaät Bozen mit der Interaktion zwischen Mensch und Maschine.

19/08/2016 *RTTR Alto Adige*: video interview about Artificial Intelligence and the ESSLLI 2016 Summer School on Logic, Language, and Information.

22/08/2016 *Alto Adige*: Workshop estivo all'università di Bolzano. Il dialogo macchina-uomo sarà presto una chiacchierata.

28/08/2016 *Salto.bz* (`www.salto.bz`): Auf a Ratscherle" mit meinem Laptop. Wie die Universität Bozen künstliche Intelligenz erforscht. Vom 15. bis 26. August findet hier die 28. Summer School ESSLLI statt.

01/09/2016 *ff Wochenmagazin*: Diego Calvanese beantwortet den ff-Fragebogen.

27/09/2016 *Dolomiten*: BPM: Preis an Forscher der Uni Bozen.

28/09/2016 *BitMAT* (`www.bitmat.it`): Convegno mondiale BPM a Rio De Janeiro: informatici unibz conquistano il podio.

28/09/2016 *Südtirolnews* (`www.suedtirolnews.it`): Renommierter "Best Paper Award" geht (erneut) an unibz.

30/08/2017 *Salto.bz* (`www.salto.bz`): Der Computer als Unternehmensberater.

15/12/2017 *Südtiroler Wirtschaftszeitung*: Die Welt verstehen.

19/12/2017 *Academia*: Attenti a quei nerd (`http://www.academia.bz.it/articles/attenti-a-quei-nerd`).

09/01/2018 *Salto.bz* (`www.salto.bz`): Attenti a quei nerd.

18/01/2018 *RAI Radio 3 Bolzano, Zeppelin*: 10 minutes interview about the Smart Data Factory lab at NOI Techpark.

06/12/2018 *Dolomiten*: Auszeichnung für Diego Calvanese. Künstliche Intelligenz: Paper der Fakultät für Informatik ausgezeichnet.

06/05/2019 *Südtirolnews* (`www.suedtirolnews.it`): Das A-Z der Digitalisierung für kleine und mittlere Unternehmen – Erster Lehrgang für Digitale Transformation in Südtirol am Start.

06/06/2019 *RAI Radio 3 Bolzano, Terza Missione*: Mini lecture of 15 minutes on Artificial Intelligence.

12/07/2019 *Südtiroler Wirtschaftszeitung*: Komplexes einfach machen. Ontopic ist das erste Spin-off der Universität Bozen.

12/07/2019 *Südtiroler Wirtschaftszeitung*: Ein schwieriger Weg, den nur wenige schaffen. Interview mit Diego Calvanese und Benjamin Cogrel, co-founder von Ontopic.

12/07/2019 *Südtirolnews* (`www.suedtirolnews.it`): unibz hat ihr erstes Spin-off.

12/07/2019 *Die Neue Südtiroler Tageszeitung Online* (`www.tageszeitung.it`): Premiere an der Freien Universität Bozen: Mit der Gründung des IT-Unternehmens Ontopic hat die junge Universität ihre erste offizielle Spin-off-Firma.

12/07/2019 *der Vinschger* (`dervinschger.it`): unibz hat ihr erstes Spin-off.

12/07/2019 *Unsertirol.com* (`unsertirol.com`): unibz hat ihr erstes Spin-off.

12/07/2019 *Villaggio Tecnologico* (`villaggiotecnologico.it`): Nasce il primo spin-off della Libera Università di Bolzano.

12/07/2019 *Digital Voice* (`digitalvoice.it`): Nasce Ontopic, il primo spin-off della Libera Università di Bolzano.

13/07/2019 *Corriere dell'Alto Adige*: Ontopic, il primo spin-off di Lub.

15/07/2019 *altoadigeinnovazione.it*: Ecco Ontopic, il primo spin-off ufficiale dell'unibz.

15/07/2019 *BitMAT* (`bitmat.it`): Ontopic: lo spin-off della Libera Università di Bolzano.

16/07/2019 *Daily deal net* (`globaluniversityventuring.com`): Free University of Bozen-Bolzano (UniBZ) has unveiled its first-ever official spinout, Italy-based data integration service provider Ontopic.

17/07/2019 *Rai Tre TGR* and *Rainews.it* (`www.rainews.it`): L'Università di Bolzano lancia il suo primo "spin-off".

17/07/2019 *Wiku*: Uni bekommt ihr erstes Spin-off.

25/07/2019 *Salto.bz* (`www.salto.bz`): "Vogliamo essere leader globali". Diego Calvanese racconta la sfida di Ontopic, il primo spin off dell'ateneo, che si occupa di integrazione dei dati: "La tecnologia semantica semplifica le ricerche".

03/09/2019 *Tecnogazzetta* (`Tecnogazzetta.it`): Data Integration. Nasce Ontopic, il primo spin-off della Libera Università di Bolzano.

16/09/2019 *Südtirol On Line* (`www.stol.it`) and *Südtirolnews* (`www.suedtirolnews.it`): 200 Forschende aus aller Welt bei Tagung BRAIN an unibz.

16/09/2019 *Die Neue Südtiroler Tageszeitung Online* (`www.tageszeitung.it`): Künstliche Intelligenz.

16/09/2019 *der Vinschger* (`dervinschger.it`): Kuünstliche Intelligenz, regelbasierte Systeme und maschinelles Lernen: 200 Forschende aus aller Welt bei Tagung BRAIN an unibz.

16/09/2019 *Radio 2000* (`radio2000.it`) Kuünstliche Intelligenz: Tagung an der unibz.

18/09/2019 *RAI Südtirol Radio*: Tagung BRAIN über das Thema "künstliche Intelligenz"; Interview mit Diego Calvanese von der Fakultät für Informatik.

23/09/2019 *ORF Südtirol Heute*: Vorteile und Risiken der künstlichen Intelligenz.

31/10/2019 *RAI Südtirol Radio Mittagsmagazin Spezial*: Südtirol forscht zum Thema "Die digitale Welt"; Interview mit Prof. Diego Calvanese.

11/12/2019 *ACM Media Center* (`https://www.acm.org/media-center/`): 2019 ACM Fellows Recognized for Far-Reaching Accomplishments that Define the Digital Age.

11/12/2019 *Science Magazine* (`scienmag.com`): Worlds largest computing society announces 2019 Fellows.

12/12/2019 *SDF*: Diego Calvanese bekommt Anerkennung für seine besonderen Leistungen im Bereich der Informatik.

12/12/2019 *Video33*: Diego Calvanese tra i maggiori esperti di Intelligenza Artificiale al mondo.

12/12/2019 *video33.it* (`www.video33.it`): Intelligenza artificiale: docente LUB tra i big mondiali.

12/12/2019 *ansa.it*: Docente UniBz tra guru dell'informatica.

12/12/2019 *01net.it*: Diego Calvanese nel Gotha dell'informatica mondiale.

12/12/2019 *Südtirol On Line* (`www.stol.it`): Uni Bozen: Calvanese einer der Top-Experten für Künstliche Intelligenz weltweit.

12/12/2019 *der Vinschger* (`dervinschger.it`): Diego Calvanese unter den weltweit besten Experten für Künstliche Intelligenz.

13/12/2019 *Dolomiten*: Professor der Uni Bozen weltweit unter den Besten.

13/12/2019 *Die Neue Südtiroler Tageszeitung*: KI-Experte Diego Calvanese unter Topforschern.

13/12/2019 *Rai Tre TGR* and *Rainews.it* (`www.rainews.it`): Lub: Diego Calvanese tra gli esperti mondiali di intelligenza artificiale.

13/12/2019 *www.altoadigeinnovazione.it*: Unibz, Diego Calvanese tra i maggiori esperti di IA al mondo.

13/12/2019 *Südtirolnews* (`www.suedtirolnews.it`): Diego Calvanese: Weltweit Top-Experte für Künstliche Intelligenz.

13/12/2019 *Markup.it* (`www.mark-up.it`): Diego Calvanese tra i maggiori esperti di Intelligenza Artificiale al mondo.

14/12/2019 *Die Neue Südtiroler Tageszeitung Online* (`www.tageszeitung.it`): Hohe Auszeichnung. Diego Calvanese, Professor an der Fakultät für Informatik der unibz, ist seit Mittwoch Fellow der Association for Computing Machinery (ACM).

25/12/2019 *Rai 3 TGR* and *Rainews.it* (`www.rainews.it`): Iniziamo a preoccuparci degli aspetti etici dell'intelligenza artificiale.

30/12/2019 *Alto Adige*: Intelligenza Artificiale, al top Diego Calvanese.

31/12/2019 *BitMAT* (`www.bitmat.it`): Diego Calvanese tra i maggiori esperti di Intelligenza Artificiale al mondo.

29/02/2020 *La Subfornitura*: L'informatico che sta contribuendo a plasmare l'era digitale.

29/04/2020 *Buongiorno Südtirol* (`www.buongiornosuedtirol.it`): Merano. Comune pilota per l'efficientamento energetico.

30/04/2020 *Alto Adige*: Politica energetica, Merano laboratorio del progetto Alperia.

08/10/2020 *Alto Adige*: Intelligenza artificiale, un seminario affascinante.

12/10/2020 *Alto Adige*: L'intelligenza artificiale tra rischi e opportunità.

12/10/2020 *dolomiti.it*: Seminario: Intelligenza Artificiale.

16/10/2020 *Südtirolnews* (`www.suedtirolnews.it`): Künstliche Intelligenz im Medizinbereich.

18/10/2020 *Alto Adige*: Workshop Noi – Intelligenza artificiale al servizio della sanitá.

05/11/2020 *agoranews.it*, *imgpress.it*, *sanita-digitale.com*: Monitorare la salute dei pazienti Covid-19? Non serve l'ospedale se c'è ReCOVeryaID.

05/11/2020 *insalutenews.it*: Come monitorare la salute dei pazienti Covid. Ecco la app che controlla da remoto il decorso dell'infezione.

05/11/2020 *tecnomedicina.it*: reCOVeryaID: monitorare la salute dei pazienti Covid-19.

06/11/2020 *Vanity Fair* (`www.vanityfair.it`): Telemedicina, ecco la piattaforma per aiutare i medici di base ai tempi del Covid.

08/11/2020 *Alto Adige*: Software libero, risposte digitali alle sfide legate alla pandemia.

08/11/2020 *impresasanita.it*: Assistenza medica da remoto con reCOVeryaID.

09/11/2020 *Südtirolnews* (`www.suedtirolnews.it`): Gesundheitsüberwachung von Covid-19-Patienten. App der Uni Bozen könnte Krankenhäuser entlasten.

09/11/2020 *Der Vinschger* (`dervinschger.it`), *sunshine.it*: Gesundheitsüberwachung von Covid-19-Patienten: Applikation reCOVeryaID der unibz könnte Krankenhäuser entlasten.

09/11/2020 *Salto.bz* (`www.salto.bz`): L'app che aiuta i medici.

09/11/2020 *Il Fatto Nisseno* (`ilfattonisseno.it`): Covid, reCOVeryaID: l'app per monitorare i pazienti a casa.

10/11/2020 *Video33*: Pazienti Covid a casa monitorati da una app.

10/11/2020 *SDF*: App der Uni Bozen könnte Krankenhäuser entlasten.

10/11/2020 *Dolomiten*: ENERGIE: Diego Calvanese.

11/11/2020 *Corriere dell'Alto Adige*: Al Noi Techpark nasce l'app"Recoveryaid". D'Auria: "Monitoriamo le condizioni dei malati".

11/11/2020 *Rai Südtirol Radio*: BZ: Unibz, un'app per monitorare i pazienti covid da casa.

11/11/2020 *Rai Tre TGR* and *Rainews.it* (`www.rainews.it`): Un'app per assistere a distanza i malati Covid.

11/11/2020 *Südtirol On Line* (`www.stol.it`): SFScon 2020: Mit Datenintegration zu mehr Energieeffizienz.

11/11/2020 *Südtirolnews* (`www.suedtirolnews.it`): Projekt IDEE bei der SFScon 2020 – Mit Datenintegration mehr Energieeffizienz.

11/11/2020 *Buongiorno Südtirol* (`www.buongiornosuedtirol.it`): Integrare i dati per aumentare l'efficienza energetica.

11/11/2020 *sunshine.it*: Mit Datenintegration zu mehr Energieeffizienz – Vorstellung des Projekts IDEE bei der SFScon 2020.

12/11/2020 *Rai Südtirol Radio*: Unibz – Gespräch mit Diego Calvanese; Thema: Recovery Aid.

12/11/2020 *Rai Südtirol Video*: App der Uni Bozen könnte Krankenhäuser entlasten.

12/11/2020 *altoadigeinnovazione.it*: Merano, la piattaforma Open Source che integra i dati per aumentare l'efficienza energetica.

13/11/2020 *Alto Adige*: Un'applicazione per monitorare la salute dei pazienti Covid-19.

13/11/2020 *Südtiroler Wirtschaftszeitung*: Entlastung. Coronakrise – Gesundheitsüberwachung von Covid-19-Patienten: Applikation reCOVeryaID der unibz könnte Krankenhäuser entlasten.

14/11/2020 *Alto Adige*: Efficienza energetica, ecco la nuova piattaforma.

16/11/2020 *Dolomiten*: Covid-Patienten aus Ferne im Blick.

16/11/2020 *Südtirol On Line* (`www.stol.it`): Covid-Patienten aus Ferne im Blick.

17/11/2020 *Salto.bz* (`www.salto.bz`): E l'Asl ignora l'app aiuta-medici.

18/11/2020 *RTTR*: ReCOVeryaID. Una App per monitorare il decorso del COVID-19.

19/11/2020 *Pustertaler Zeitung*: Dank Datenintegration zum Erfolg.

21/11/2020 *Sky TG24*: ReCOVeryaID, l'app per le visite da remoto.

24/11/2020 *altoadige.it*: Università, otto docenti di Unibz tra gli scienziati più citati.

24/11/2020 *altoadigeinnovazione.it*: Unibz, otto professori nel 2% degli scienziati più citati al mondo.

24/11/2020 *Die Neue Südtiroler Tageszeitung Online* (`www.tageszeitung.it`): Die Top-Professoren.

24/11/2020 *Südtirolnews* (`www.suedtirolnews.it`): Acht Professoren der unibz unter Top zwei Prozent der Wissenschaftler weltweit.

25/11/2020 *Alto Adige*: Otto professori di Unibz nel 2% degli scienziati più citati al mondo.

25/11/2020 *Dolomiten*: Unibz: Gleich 8 Professoren unter "Top 2 Prozent".

19/12/2020 *Rai Südtirol Radio Morgenmagazin*: Interview mit Universitätsprofessor Diego Calvanese.

19/12/2020 *Rai Südtirol Radiouni*: Gespräch mit Professor Diego Calvanese über Datenbanken.

16/01/2021 *La Protezione Civile Italia*: Monitorare la salute dei pazienti CoViD-19? Non serve l'ospedale se c'è reCOVeryaID.

28/01/2021 *Pustertaler Zeitung*: Ein intensives Forschungsjahr.

05/02/2021 *altoadigeinnovazione.it*: Anche un docente Unibz nel team premiato per il paper più influente nell'AI degli ultimi 15 anni.

06/02/2021 *Südtirolnews* (`www.suedtirolnews.it`): Italienisches Forschungsteam gewinnt Award.

08/02/2021 *Alto Adige*: È del prof Calvanese il "paper" più influente.

08/02/2021 *BitMAT* (`www.bitmat.it`): A una ricerca italiana il premio della comunità scientifica dell'IA per il paper più influente degli ultimi 15 anni.

09/02/2021 *Die Neue Südtiroler Tageszeitung*: AI Scientific Community Award für Diego Calvanese.

10/02/2021 *media2000.it*: A una ricerca italiana il premio della comunità scientifica dell'IA per il paper più influente degli ultimi 15 anni.

26/02/2021 *Südtiroler Wirtschaftszeitung*: Auszeichnungen.

30/06/2021 *Südtirol Panorama*: reCOVeryaID – Digitales Gesundheitstool – Entwickelt von Daniela D'Auria.

28/07/2021 *altoadigeinnovazione.it*: Il futuro dell'intelligenza artificiale passa per Bolzano.

30/07/2021 *ansa.it*: Scuola estiva europea su ricerca in intelligenza artificiale.

06/10/2021 *altoadigeinnovazione.it*: Leggere i dati per essere più green.

17/02/2022 *Alto Adige*: Startup, le giovani imprese crescono al Noi Techpark.

17/02/2022 *Economia e Innovazione (settimanale dell'Alto Adige)*: Integrazione dei dati, il futuro con Ontopic.

21/02/2022 *L'Economia del Corriere della Sera*: Il software legge gli open data su meteo e traffico.

01/05/2022 *Rai Tre – Trentino Alto Adige*: Master UP - Acqua, energia e dati. Peter Hopfgartner presenta il progetto Ontopic.

02/05/2022 *altoadigeinnovazione.it*: Ontopic e l'importanza della raccolta dati nei sistemi di Digital Identity.

17/05/2022 *Alto Adige*: Energia, il progetto per case più efficienti.

19/05/2022 *lavocedibolzano.it*: Efficienza energetica: presentazione del progetto IDEE.

20/05/2022 *altoadigeinnovazione.it*: Progetto "IDEE": sfruttare i dati per nuove strategie di efficientamento energetico.

20/05/2022 *buongiornosuedtirol.it*: Progetto IDEE, integrazione Dati per l'Efficientamento Energetico per le pubbliche amministrazioni.

20/05/2022 *Südtiroler Wirtschaftszeitung*: Forschung wird Business – START-UPS – Ontopic und AIAQUA, zwei Spin-offs der Freien Universität Bozen im NOI Start-up Incubator.

24/05/2022 *Dolomiten*: Energiefresser identifizieren mittels Datenfluss.

05/10/2022 *Dolomiten*: Forschung an unibz.

28/10/2022 *ORF1, Südtirol Heute*: Im Noi Techpark wird eine Waage durch Mensch-Maschine-Interaktion gebaut.

15/12/2022 *30Science.com*: Ricerca Italiana: lotta contro la leucemia e riparazione del genoma, la ricerca di Unibz e dell'Università di Verona.

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