

CURRICULUM VITAE

VLADISLAV RYZHIKOV

Born: March 16, 1983 in Ufa, Russia. Citizenship: Russia

CONTACT INFO

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EDUCATION

- 23/04/2010 PhD Degree in Computer Science from the Free University of Bozen-Bolzano, Italy. Thesis: “DL-Lite for Static and Dynamic Conceptual Modeling”.
- 12/2005–04/2010 PhD Student at the Faculty of Computer Science, Free University of Bozen-Bolzano, Italy.
- 08/2005 Degree with Distinction in Computer Science equivalent to MSc from the Ufa State Aviation Technical University, Russia. Thesis: “Extracting protein mutation annotations from full-text biological literature”.
- 09/2000–08/2005 BSc and MSc studies at the Faculty of Computer Science, Ufa State Aviation Technical University, Russia.
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EMPLOYMENT

- 4/2011–now Assistant Professor with fixed-term contract, Faculty of Computer Science, Free University of Bozen-Bolzano, Italy. Member of the KRDB Research Centre for Knowledge and Data.
- 4/2010–4/2011 Research Assistant, Faculty of Computer Science, Free University of Bozen-Bolzano, Italy.
- 8/2001–2/2002 Software Engineer at an IT company (half-time)
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VISITS

- 12/2015–1/2016 Pontificia Universidad Catolica de Chile, Santiago, Chile: Visiting Professor
- 10/2015 Birkbeck College, London, UK: Research Visitor

12/2014–1/2015	Pontificia Universidad Catolica de Chile, Santiago, Chile: Research Visitor
12/2013	Birkbeck College, London, UK: Research Visitor
02/2013	CSIR Meraka Institute, Pretoria, South Africa: Research Visitor
11/2011–01/2012	Pontificia Universidad Catolica de Chile, Santiago, Chile: Research Visitor
1/2011–2/2011	Pontificia Universidad Catolica de Chile, Santiago, Chile: Research Visitor
11/2010	Shanghai Jiao Tong University, China, APEX Data & Knowledge Management Lab: Research Visitor
9/2007–3/2008	Birkbeck College, London, UK: Internship
10/2004–4/2005	Technical University of Karlsruhe, Germany: Internship

TEACHING

MSc:

2014–2016, 3 tms.	“Advanced Logic” at Free University of Bozen-Bolzano, Italy: Module Development + Lectures (48hrs) + Exercises (24hrs) + Project Supervision
2012–2013, twice	“Formal Methods” at Free University of Bozen-Bolzano, Italy: Lectures (24hrs) + Exercises (24hrs) + Project Supervision
2012–2013, twice	“Non-Classical Logics” at Free University of Bozen-Bolzano, Italy: Exercises (12hrs)
2011–2012, twice	“Human-Computer Interaction” at Free University of Bozen-Bolzano, Italy: Exercises (12hrs)

BSc:

2016–now	“Discrete Mathematics” at Free University of Bozen-Bolzano, Italy: Exercises (24hrs)
2016–now	“Intelligent Systems” at Free University of Bozen-Bolzano, Italy: Exercises (18hrs)

Invited Lectures:

1/2016	Short course “OWL 2: First-Order Logic Perspective” in CIWS Summer School 2016, Santiago, Chile
11/2010	Short course “Foundations of Knowledge Bases and Ontologies” at Shanghai Jiao Tong University, China

Other:

09/2013–now	Study Plan Advisor for three MSc curricula at Free University of Bozen-Bolzano, Italy.
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COMMITTEES AND REVIEWS

- 9/2015-8/2016 Organizing committee of European Summer School for Logic, Language, and Information (ESSLLI) 2016: Member
- 04/2011-now PhD Committee of Computer Science Faculty of Free University of Bolzano, Italy: Member
- PC Member: RR (2016), KR (2016), IJCAI (2016, 2015, 2013), JELIA (2016, 2014), ECAI (2014), AAI (2013), Description Logics Workshop (2016, 2015, 2014, 2013), Workshop on Logics and Reasoning for Conceptual Models (2016, 2013)
- Journal Reviews: ACM TOCS 2016, AIJ 2015, JWC 2014, JLC 2012, JAL 2011, JARS 2010, JWS 2008

RESEARCH ACTIVITY AND PROJECTS

Principal Investigator:

- 11/2013–04/2015 Description Logic Knowledge Base Exchange (DLKEx). Funded by the Free University of Bozen-Bolzano with €20 K.

Coordinator:

- 01/2016–12/2017 Ontology Mediated Temporal Queries to temporal databases (OMTEQ). Funded by the Free University of Bozen-Bolzano with €50 K.

Participant/Collaborator:

- 09/2015–10/2016 Scalable End-User Access to Big Data (Optique). Coordinator: Diego Calvanese. Funded by European Commission with €873 K for Free University of Bozen-Bolzano.
- 07/2015–07/2018 Islands of Tractability in Ontology-Based Data Access (iTract). Principal investigators: Michael Zakharyashev (Birkbeck, Univ. of London), Frank Wolter (Univ. of Liverpool). Funded by UK EPSRC grant with £696 K.

Supervision:

- 02/2013-now Co-supervisor of one PhD student.

AWARDS

- 2014 The 2014 Marco Cadoli Student Paper Prize 14th International Conference on Principles of Knowledge Representation and Reasoning (KR), Vienna, Austria, 2014

PHD THESIS

PhD degree obtained 23/04/2010 from Free University of Bolzano, Italy. Thesis “DL-Lite for Static and Dynamic Conceptual Modeling” investigates low-complexity ontology languages of DL-Lite family and their application to formalizing UML/ER Conceptual Models. Temporal extensions of DL-Lite and Conceptual Models are investigated as well.

Publications

BOOK CHAPTERS

- [1] Elena Botoeva, Boris Konev, Carsten Lutz, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. *Inseparability and Conservative Extensions of Description Logic Ontologies: A Survey*. In Jeff Z. Pan, Diego Calvanese, Thomas Eiter, Ian Horrocks, Michael Kifer, and Yuting Lin, Fangzhen Sand Zhao, editors, **Reasoning Web: Logical Foundation of Knowledge Graph Construction and Query Answering: 12th International Summer School 2016, Aberdeen, UK, September 5-9, 2016, Tutorial Lectures**, pages 27–89. Springer International Publishing, Cham, 2017, http://dx.doi.org/10.1007/978-3-319-49493-7_2.

JOURNALS

- [2] Marcelo Arenas, Elena Botoeva, Diego Calvanese, and Vladislav Ryzhikov. Knowledge Base Exchange: The Case of OWL 2 QL. **Artificial Intelligence Journal (AIJ, Artif. Intell.)**, Elsevier, 238C:11–62, 2016, DOI [10.1016/j.artint.2016.05.002](https://doi.org/10.1016/j.artint.2016.05.002).
- [3] Elena Botoeva, Roman Kontchakov, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. Games for Query Inseparability of Description Logic Knowledge Bases. **Artificial Intelligence Journal (AIJ, Artif. Intell.)**, Elsevier, 234:78–119, 2016, DOI [10.1016/j.artint.2016.01.010](https://doi.org/10.1016/j.artint.2016.01.010).
- [4] Davide Bresolin, Agi Kurucz, Emilio Munoz-Velasco, Vladislav Ryzhikov, Guido Sciavicco, and Michael Zakharyashev. Horn Fragments of the Halpern-Shoham Interval Temporal Logic. **Submitted**, 2016, <https://arxiv.org/abs/1604.03515>.
- [5] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. A Cookbook for Temporal Conceptual Data Modelling with Description Logics. **ACM Transactions on Computational Logic (ACM Trans. Comput. Log., TOCL)**, 15(3):25, 2014, <http://doi.acm.org/10.1145/2629565>.

PEER-REVIEWED CONFERENCES

- [6] Meghyn Bienvenue, Stanislav Kikot, Roman Kontchakov, Vladimir Podolskii, Vladislav Ryzhikov, and Michael Zakharyashev. The Complexity of Ontology-Based Data Access with OWL 2 QL and Bounded Treewidth Queries. In *Symposium on Principles of Database Systems PODS – To appear*, 2017, <http://www.dcs.bbk.ac.uk/michael/PODS.pdf>.
- [7] Sebastian Brandt, Elem Güzel Kalayci, Roman Kontchakov, Vladislav Ryzhikov, Guohui Xiao, and Michael Zakharyashev. Ontology-Based Data Access with a Horn Fragment of Metric Temporal Logic. In *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence, February 4-9, 2017, San Francisco, California, USA.*, pages 1070–1076, 2017, <http://aaai.org/ocs/index.php/AAAI/AAAI17/paper/view/14881>.
- [8] Diego Calvanese, Elem Güzel Kalayci, Vladislav Ryzhikov, and Guohui Xiao. Towards Practical OBDA with Temporal Ontologies - (Position Paper). In *Web Reasoning and Rule Systems - 10th International Conference, RR 2016, Aberdeen, UK, September 9-11, 2016, Proceedings*, pages 18–24, 2016, http://dx.doi.org/10.1007/978-3-319-45276-0_2, DOI [10.1007/978-3-319-45276-0_2](https://doi.org/10.1007/978-3-319-45276-0_2).
- [9] Roman Kontchakov, Laura Pandolfo, Luca Pulina, Vladislav Ryzhikov, and Michael Zakharyashev. Temporal and Spatial OBDA with Many-Dimensional Halpern-Shoham Logic.

- In *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence, IJCAI 2016, New York, NY, USA, 9-15 July 2016*, pages 1160–1166, 2016, <http://www.ijcai.org/Abstract/16/168>.
- [10] Elena Botoeva, Carsten Lutz, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. Query-Based Entailment and Inseparability for ALC Ontologies. In *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence, IJCAI 2016, New York, NY, USA, 9-15 July 2016*, pages 1001–1007, 2016, <http://www.ijcai.org/Abstract/16/146>.
- [11] Alessandro Artale, Roman Kontchakov, Alisa Kovtunova, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. First-Order Rewritability of Temporal Ontology-Mediated Queries. In *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence, IJCAI 2015, Buenos Aires, Argentina, July 25-31, 2015*, pages 2706–2712, 2015, <http://ijcai.org/Abstract/15/383>.
- [12] Elena Botoeva, Roman Kontchakov, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. When Are Description Logic Knowledge Bases Indistinguishable? In *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence, IJCAI 2015, Buenos Aires, Argentina, July 25-31, 2015*, pages 4240–4246, 2015, <http://ijcai.org/papers15/Abstracts/IJCAI15-603.html>.
- [13] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Tractable Interval Temporal Propositional and Description Logics. In *Proceedings of the Twenty-Ninth AAAI Conference on Artificial Intelligence, January 25-30, 2015, Austin, Texas, USA.*, pages 1417–1423, 2015, <http://www.aaai.org/ocs/index.php/AAAI/AAAI15/paper/view/9638>.
- [14] Elena Botoeva, Roman Kontchakov, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. Query Inseparability for Description Logic Knowledge Bases. In *Principles of Knowledge Representation and Reasoning: Proceedings of the Fourteenth International Conference, KR 2014, Vienna, Austria, July 20-24, 2014*, 2014, <http://www.aaai.org/ocs/index.php/KR/KR14/paper/view/7962>.
- [15] Alessandro Artale, Davide Bresolin, Angelo Montanari, Guido Sciavicco, and Vladislav Ryzhikov. DL-Lite and Interval Temporal Logics: a Marriage Proposal. In *ECAI 2014 - 21st European Conference on Artificial Intelligence, 18-22 August 2014, Prague, Czech Republic - Including Prestigious Applications of Intelligent Systems (PAIS 2014)*, pages 957–958, 2014, <http://dx.doi.org/10.3233/978-1-61499-419-0-957>, DOI 10.3233/978-1-61499-419-0-957.
- [16] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. The Complexity of Clausal Fragments of LTL. In *Logic for Programming, Artificial Intelligence, and Reasoning - 19th International Conference, LPAR-19, Stellenbosch, South Africa, December 14-19, 2013. Proceedings*, pages 35–52, 2013, http://dx.doi.org/10.1007/978-3-642-45221-5_3, DOI 10.1007/978-3-642-45221-5_3.
- [17] Marcelo Arenas, Elena Botoeva, Diego Calvanese, and Vladislav Ryzhikov. Exchanging OWL 2 QL Knowledge Bases. In *IJCAI 2013, Proceedings of the 23rd International Joint Conference on Artificial Intelligence, Beijing, China, August 3-9, 2013*, 2013, <http://www.aaai.org/ocs/index.php/IJCAI/IJCAI13/paper/view/6939>.
- [18] Marcelo Arenas, Elena Botoeva, Diego Calvanese, Vladislav Ryzhikov, and Evgeny Sherkhonov. Exchanging Description Logic Knowledge Bases. In *Principles of Knowledge Representation and Reasoning: Proceedings of the Thirteenth International Conference, KR 2012, Rome, Italy, June 10-14, 2012*, 2012, <http://www.aaai.org/ocs/index.php/KR/KR12/paper/view/4527>.

- [19] Alessandro Artale, Vladislav Ryzhikov, and Roman Kontchakov. DL-Lite with Attributes and Datatypes. In *ECAI 2012 - 20th European Conference on Artificial Intelligence. Including Prestigious Applications of Artificial Intelligence (PAIS-2012) System Demonstrations Track, Montpellier, France, August 27-31, 2012*, pages 61–66, 2012, <http://dx.doi.org/10.3233/978-1-61499-098-7-61>, DOI 10.3233/978-1-61499-098-7-61.
- [20] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Tailoring Temporal Description Logics for Reasoning over Temporal Conceptual Models. In *Frontiers of Combining Systems, 8th International Symposium, FroCoS 2011, Saarbrücken, Germany, October 5-7, 2011. Proceedings*, pages 1–11, 2011, http://dx.doi.org/10.1007/978-3-642-24364-6_1, DOI 10.1007/978-3-642-24364-6_1.
- [21] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Complexity of Reasoning over Temporal Data Models. In *Conceptual Modeling - ER 2010, 29th International Conference on Conceptual Modeling, Vancouver, BC, Canada, November 1-4, 2010. Proceedings*, pages 174–187, 2010, http://dx.doi.org/10.1007/978-3-642-16373-9_13, DOI 10.1007/978-3-642-16373-9_13.
- [22] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Past and Future of DL-Lite. In *Proceedings of the Twenty-Fourth AAI Conference on Artificial Intelligence, AAAI 2010, Atlanta, Georgia, USA, July 11-15, 2010*, 2010, <http://www.aaai.org/ocs/index.php/AAAI/AAAI10/paper/view/1608>.
- [23] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. DL-Lite with Temporalised Concepts, Rigid Axioms and Roles. In *Frontiers of Combining Systems, 7th International Symposium, FroCoS 2009, Trento, Italy, September 16-18, 2009. Proceedings*, pages 133–148, 2009, http://dx.doi.org/10.1007/978-3-642-04222-5_8, DOI 10.1007/978-3-642-04222-5_8.
- [24] Alessandro Artale, Diego Calvanese, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Reasoning over Extended ER Models. In *Conceptual Modeling - ER 2007, 26th International Conference on Conceptual Modeling, Auckland, New Zealand, November 5-9, 2007. Proceedings*, pages 277–292, 2007, http://dx.doi.org/10.1007/978-3-540-75563-0_20, DOI 10.1007/978-3-540-75563-0_20.

PEER-REVIEWED WORKSHOPS

- [25] Diego Calvanese, Elem Güzel Kalaycı, Vladislav Ryzhikov, Guohui Xiao, and Michael Zakharyashev. Metric Temporal Logic for Ontology-Based Data Access over Log Data. In *To appear in Proceedings of the Workshop on Ontologies and Logic Programming for Query Answering, ONTOLP 2016.*, 2016.
- [26] Elena Botoeva, Carsten Lutz, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. When is Query Inseparability for ALC Ontologies Decidable? In *Proceedings of the 29th International Workshop on Description Logics, Cape Town, South Africa, April 22-25, 2016.*, 2016, http://ceur-ws.org/Vol-1577/paper_18.pdf.
- [27] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Interval Temporal Description Logics. In *Proceedings of the 28th International Workshop on Description Logics, Athens, Greece, June 7-10, 2015.*, 2015, <http://ceur-ws.org/Vol-1350/paper-06.pdf>.
- [28] Alessandro Artale, Roman Kontchakov, Alisa Kovtunova, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. Temporal OBDA with LTL and DL-Lite. In *Informal Proceedings of the 27th International Workshop on Description Logics, Vienna, Austria, July 17-20, 2014.*, pages 21–32, 2014, http://ceur-ws.org/Vol-1193/paper_60.pdf.

- [29] Elena Botoeva, Roman Kontchakov, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. Query Inseparability by Games. In *Informal Proceedings of the 27th International Workshop on Description Logics, Vienna, Austria, July 17-20, 2014.*, pages 83–95, 2014, http://ceur-ws.org/Vol-1193/paper_86.pdf.
- [30] Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Conjunctive Query Inseparability in OWL 2 QL is ExpTime-hard. In *Informal Proceedings of the 26th International Workshop on Description Logics, Ulm, Germany, July 23 - 26, 2013*, pages 353–363, 2013, http://ceur-ws.org/Vol-1014/paper_44.pdf.
- [31] Marcelo Arenas, Elena Botoeva, Diego Calvanese, and Vladislav Ryzhikov. Computing Solutions in OWL 2 QL Knowledge Exchange. In *Informal Proceedings of the 26th International Workshop on Description Logics, Ulm, Germany, July 23 - 26, 2013*, pages 4–16, 2013, http://ceur-ws.org/Vol-1014/paper_87.pdf.
- [32] Marcelo Arenas, Elena Botoeva, Diego Calvanese, Vladislav Ryzhikov, and Evgeny Sherkhonov. Representability in DL-Lite_R Knowledge Base Exchange. In *Proceedings of the 2012 International Workshop on Description Logics, DL-2012, Rome, Italy, June 7-10, 2012*, 2012, http://ceur-ws.org/Vol-846/paper_60.pdf.
- [33] Alessandro Artale, Yazmin Angélica Ibáñez-García, Roman Kontchakov, and Vladislav Ryzhikov. DL-Lite with Attributes and Sub-Roles (Extended Abstract). In *Proceedings of the 24th International Workshop on Description Logics (DL 2011), Barcelona, Spain, July 13-16, 2011*, 2011, http://ceur-ws.org/Vol-745/paper_42.pdf.
- [34] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Temporal Conceptual Modelling with DL-Lite. In *Proceedings of the 23rd International Workshop on Description Logics (DL 2010), Waterloo, Ontario, Canada, May 4-7, 2010*, 2010, http://ceur-ws.org/Vol-573/paper_28.pdf.
- [35] Alessandro Artale, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Extending DL-Lite Sometime in the Future. In *Proceedings of the 22nd International Workshop on Description Logics (DL 2009), Oxford, UK, July 27-30, 2009*, 2009, http://ceur-ws.org/Vol-477/paper_53.pdf.
- [36] Roman Kontchakov, Vladislav Ryzhikov, Frank Wolter, and Michael Zakharyashev. Checking DL-Lite Modularity with QBF Solvers. In *Proceedings of the 21st International Workshop on Description Logics (DL2008), Dresden, Germany, May 13-16, 2008*, 2008, <http://ceur-ws.org/Vol-353/KontchakovRyzhikovWolterZakharyashev.pdf>.
- [37] Alessandro Artale, Diego Calvanese, Roman Kontchakov, Vladislav Ryzhikov, and Michael Zakharyashev. Complexity of Reasoning in Entity Relationship Models. In *Proceedings of the 2007 International Workshop on Description Logics (DL2007), Brixen-Bressanone, near Bozen-Bolzano, Italy, 8-10 June, 2007*, 2007, http://ceur-ws.org/Vol-250/paper_82.pdf.

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