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PUBLICATIONS (authors in alphabetical order)

Journal Papers

- [1] Georg Gottlob, Giorgio Orsi and Andreas Pieris. Query Rewriting and Optimization for Ontological Databases. *ACM Transactions on Database Systems*, 39(3): 25:1-25:46, 2014
- [2] Georg Gottlob, Marco Manna and Andreas Pieris. Combining Decidability Paradigms for Existential Rules. *Theory and Practice of Logic Programming*, 13(4-5):877-892, 2013
- [3] Andrea Calì, Georg Gottlob and Andreas Pieris. Towards More Expressive Ontology Languages: The Query Answering Problem. *Artificial Intelligence*, 193:87-128, 2012
- [4] Andrea Calì, Georg Gottlob and Andreas Pieris. Ontological Query Answering under Expressive Entity-Relationship Schemata. *Information Systems*, 37(4):320-335, 2012
- [5] Giorgio Orsi and Andreas Pieris. Optimizing Query Answering under Ontological Constraints. Proceedings of the VLDB Endowment (PVLDB), 4(11):1004-1015, 2011
- [6] Andrea Calì, Georg Gottlob and Andreas Pieris. A Logical Toolbox for Ontological Reasoning. *SIGMOD Record*, 40(3): 5-14, 2011
- [7] Andrea Calì, Georg Gottlob and Andreas Pieris. Advanced Processing for Ontological Queries. Proceedings of the VLDB Endowment (PVLDB), 3(1):554-565, 2010
- [8] Rainer Feldmann, Marios Mavronicolas and Andreas Pieris. Facets of the Fully Mixed Nash Equilibrium Conjecture. *Theory of Computing Systems*, 47(1):60-112, 2010

Conference Papers

- [9] Pablo Barceló, Georg Gottlob and Andreas Pieris. Semantic Acyclicity Under Constraints. In *Proceeding* of the 35th Symposium on Principles of Database Systems (PODS 2016). To appear
- [10] Mario Alviano and Andreas Pieris. Default Negation for Non-Guarded Existential Rules. In *Proceeding of the 34th Symposium on Principles of Database Systems (PODS 2015)*, pages 79-90, 2015
- [11] Marco Calautti, Georg Gottlob and Andreas Pieris. Chase Termination for Guarded Existential Rules. In *Proceeding of the 34th Symposium on Principles of Database Systems (PODS 2015)*, pages 91-103, 2015
- [12] Marco Manna, Georg Gottlob and Andreas Pieris. Polynomial Rewritings for Linear Existential Rules. In *Proceedings of the 24th International Joint Conference on Artificial Intelligence (IJCAI 2015)*, pages 2992-2998, 2015
- [13] Georg Gottlob and Andreas Pieris. Beyond SPARQL under OWL 2 QL Entailment Regimes: Rules to the Rescue. In *Proceedings of the 24th International Joint Conference on Artificial Intelligence (IJCAI 2015)*, pages 2999-3007, 2015
- [14] Thomas Lukasiewicz, Maria Vanina Martinez, Andreas Pieris and Gerardo I. Simari. From Classical to Consistent Query Answering under Existential Rules. In *Proceedings of the 29th Conference on Artificial Intelligence (AAAI 2015)*, pages 1546-1552, 2015

- [15] Georg Gottlob, Giorgio Orsi and Andreas Pieris. Consistency Checking of Re-Engineered UML Class Diagrams via Datalog+/-. In *Proceedings of the 9th International Web Rule Symposium (RuleML 2015)*, pages 35-53, 2015
- [16] Marcelo Arenas, Georg Gottlob and Andreas Pieris. Expressive Languages for Querying the Semantic Web. In Proceeding of the 33rd Symposium on Principles of Database Systems (PODS 2014), pages 14-26, 2014
- [17] Georg Gottlob, Marco Manna and Andreas Pieris. Polynomial Combined Rewritings for Existential Rules. In *Proceedings of the 14th International Conference on Principles of Knowledge Representation and Reasoning (KR 2014)*, 2014
- [18] Pierre Bourhis, Michael Morak and Andreas Pieris. Towards Efficient Reasoning under Guarded-based Disjunctive Existential Rules. In *Proceedings of the 39th International Symposium on Mathematical Foundations of Computer Science (MFCS 2014)*, volume 8364 (Part I) of *Lecture Notes in Computer Science*, pages 99-110, 2014
- [19] Georg Gottlob, Andreas Pieris and Lidia Tendera. Querying the Guarded Fragment with Transitivity. In *Proceedings of the 40th International Colloquium on Automata, Languages and Programming (ICALP 2013)*, volume 7966 of *Lecture Notes in Computer Science*, pages 287-298, 2013
- [20] Pierre Bourhis, Michael Morak and Andreas Pieris. The Impact of Disjunction on Query Answering Under Guarded-based Existential Rules. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)*, pages 796-802, 2013
- [21] Andrea Calì, Georg Gottlob, Giorgio Orsi and Andreas Pieris. Querying UML Class Diagrams. In *Proceedings of the 15th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS 2012)*, volume 7213 of *Lecture Notes in Computer Science*, pages 1-25, 2012
- [22] Georg Gottlob, Marco Manna, Michael Morak and Andreas Pieris. On the Complexity of Ontological Reasoning under Disjunctive Existential Rules. In *Proceedings of the 37th International Symposium on Mathematical Foundations of Computer Science (MFCS 2012)*, volume 7464 of *Lecture Notes in Computer Science*, pages 1-18, 2012
- [23] Georg Gottlob, Giorgio Orsi and Andreas Pieris. Ontological Queries: Rewriting and Optimization. In *Proceedings of the 27th International Conference on Data Engineering (ICDE 2011)*, pages 2-13, 2011
- [24] Andrea Calì, Georg Gottlob and Andreas Pieris. New Expressive Languages for Ontological Query Answering. In *Proceedings of the 25th Conference on Artificial Intelligence (AAAI 2011)*, pages 1541-1446, 2011
- [25] Andrea Calì, Georg Gottlob and Andreas Pieris. Querying Conceptual Schemata with Expressive Equality Constraints. In *Proceedings of the 30th International Conference on Conceptual Modeling (ER 2011)*, volume 6998 of *Lecture Notes in Computer Science*, pages 161-174, 2011
- [26] Andrea Calì and Andreas Pieris. On Equality-Generating Dependencies in Ontology Querying (Extended Abstract). In *Proceedings of the 19th Italian Symposium on Advanced Database Systems (SEBD 2011)*, pages 95-102, 2011
- [27] Andrea Calì, Georg Gottlob, Thomas Lukasiewicz, Bruno Marnette and Andreas Pieris. Datalog+/-: A Family of Logical Knowledge Representation and Query Languages for New Applications. In *Proceedings* of the 25th Annual IEEE Symposium on Logic in Computer Science (LICS 2010), pages 228-242, 2010
- [28] Andrea Calì, Georg Gottlob, Michael Kifer, Thomas Lukasiewicz and Andreas Pieris. Ontological Reasoning with F-Logic Lite and its Extensions. In *Proceedings of the 24th Conference on Artificial Intelligence (AAAI 2010)*, pages 1660-1665, 2010
- [29] Andrea Calì, Georg Gottlob and Andreas Pieris. Query Answering under Expressive Entity-Relationship Schemata. In *Proceedings of the 29th International Conference on Conceptual Modeling (ER 2010)*,

- [30] Andrea Calì, Georg Gottlob and Andreas Pieris. Query Answering under Non-Guarded Rules in Datalog+/-. In *Proceedings of the 4th International Conference on Web Reasoning and Rule Systems (RR 2010)*, volume 6333 of *Lecture Notes in Computer Science*, pages 1-17, 2010
- [31] Georg Gottlob, Giorgio Orsi and Andreas Pieris. Ontological Query Answering via Rewriting. In *Proceedings of the 14th East European Conference on Advances in Databases and Information Systems* (ADBIS 2011), volume 6909 of Lecture Notes in Computer Science, pages 1-18, 2011
- [32] Andrea Calì, Georg Gottlob and Andreas Pieris. Tractable Query Answering over Conceptual Schemata (Extended Abstract). In *Proceedings of the 18th Italian Symposium on Advanced Database Systems (SEBD 2010)*, pages 454-461, 2010
- [33] Andrea Calì, Georg Gottlob and Andreas Pieris. Tractable Query Answering over Conceptual Schemata. In *Proceedings of the 28th International Conference on Conceptual Modeling (ER 2009)*, volume 5829 of *Lecture Notes in Computer Science*, pages 175-190, 2009
- [34] Rainer Feldmann, Marios Mavronicolas and Andreas Pieris. Facets of the Fully Mixed Nash Equilibrium Conjecture. In *Proceedings of the 1st International Symposium on Algorithmic Game Theory (SAGT 2008)*, volume 4997 of *Lecture Notes in Computer Science*, pages 145-157, 2008

Workshop Papers

- [35] Marco Calautti, Georg Gottlob and Andreas Pieris. Chase Termination for Guarded Existential Rules. In *Proceeding of the 9th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2015)*, volume 1378 of CEUR Workshop Proceedings, 2015
- [36] Thomas Lukasiewicz, Maria Vanina Martinez, Andreas Pieris and Gerardo I. Simari. From Classical to Consistent Query Answering under Existential Rules. In *Proceeding of the 9th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2015)*, volume 1378 of CEUR Workshop Proceedings, 2015
- [37] Marco Manna, Georg Gottlob and Andreas Pieris. Polynomial Combined Rewritings for Linear Existential Rules and DL-Lite with n-ary Relations. In *Proceedings of the 28th International Workshop on Description Logics (DL 2015)*, volume 1350 of *CEUR Workshop Proceedings*, 2015
- [38] Marcelo Arenas, Georg Gottlob and Andreas Pieris. Expressive Languages for Querying the Semantic Web. In *Proceeding of the 8th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2014)*, volume 1189 of CEUR Workshop Proceedings, 2014
- [39] Pierre Bourhis, Michael Morak and Andreas Pieris. Acyclic Query Answering Under Guarded Disjunctive Existential Rules and Consequences to DLs. In *Proceedings of the 27th International Workshop on Description Logics (DL 2014)*, volume 1193 of *CEUR Workshop Proceedings*, pages 100-111, 2014
- [40] Pierre Bourhis, Michael Morak and Andreas Pieris. The Impact of Disjunction on Query Answering Under Guarded-based Existential Rules. In *Proceedings of the 26th International Workshop on Description Logics (DL 2013)*, volume 1014 of *CEUR Workshop Proceedings*, pages 539-551, 2013
- [41] Andrea Calì and Andreas Pieris. On Equality-Generating Dependencies in Ontology Querying Preliminary Report. In *Proceedings of the 5th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2011)*, volume 749 of *CEUR Workshop Proceedings*, 2011
- [42] Andrea Calì, Georg Gottlob and Andreas Pieris. Query Rewriting under Non-Guarded Rules. In Proceedings of the 4th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2010), volume 619 of CEUR Workshop Proceedings, 2010
- [43] Andrea Calì, Georg Gottlob, Thomas Lukasiewicz and Andreas Pieris. Datalog+/-: A Family of Languages for Ontology Querying. In *Proceedings of the 1st Datalog 2.0 International Workshop (Datalog 2010)*,

Book Chapters

[44] Andrea Calì, Georg Gottlob and Andreas Pieris. The Return of the Entity-Relationship Model: Ontological Query Answering. In *Semantic Search over the Web*, Roberto de Virgilio, Francesco Guerra, and Yannis Velegrakis eds., Springer-Verlag, 2012

Miscellaneous

- [45] Georg Gottlob, Michael Morak and Andreas Pieris. Recent Advances in Datalog+/-. In *Proceedings of the* 11th Reasoning Web Summer School, volume 9203 of Lecture Notes in Computer Science, pages 193-217, 2015
- [46] Andrea Calì, Georg Gottlob and Andreas Pieris. Tractable Reasoning in Description Logics with Functionality Constraints. In Search of Elegance in the Theory and Practice of Computation Essays Dedicated to Peter Buneman, volume 8000 of Lecture Notes in Computer Science, pages 174-192, 2013
- [47] Georg Gottlob, Giorgio Orsi, Andreas Pieris and Mantas Šimkus. Datalog and Its Extensions for Semantic Web Databases. In *Proceedings of the 8th Reasoning Web Summer School*, volume 5829 of *Lecture Notes in Computer Science*, pages 54-77, 2012
- [48] Andrea Calì, Georg Gottlob, Giorgio Orsi and Andreas Pieris. On the Interaction of Existential Rules and Equality Constraints in Ontology Querying. In *Proceedings of Correct Reasoning Essays on Logic-Based AI in Honour of Vladimir Lifschitz*, volume 7265 of *Lecture Notes in Computer Science*, pages 117-133, 2012
- [49] Georg Gottlob, Nicola Leone, Marco Manna and Andreas Pieris. A DLV-based Reasoner for Datalog+/Languages. From Philosophy to Computational Logic: Festschrift in honour of David Pearce's first 60
 years, pages 111-128, 2012

Theses

- [50] Andreas Pieris. *Ontological Query Answering: New Languages, Algorithms and Complexity*. Doctoral thesis, Department of Computer Science, University of Oxford, 2011
- [51] Andreas Pieris. *Data Exchange and Schema Mappings*. Master's thesis, Mathematical Institute, University of Oxford, 2007
- [52] Andreas Pieris. *The Fully Mixed Nash Equilibrium Conjecture*. Bachelor's thesis, Department of Computer Science, University of Cyprus, 2006