

Publications of Pablo Barceló by year

Year 2009

1. Marcelo Arenas, Pablo Barceló, Juan Reutter. Query Languages for Data Exchange: Beyond Unions of Conjunctive Queries. In Ronald Fagin (ed.), *Proc. 12th International Conference on Database Theory (ICDT)*, pp. 73-83, Mar 2009. Saint Petersburg, Russia. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series vol. 361. ISBN 978-1-60558-423-2.
2. Pablo Barceló. Logical Foundations of Relational Data Exchange. *SIGMOD Record* 38(1):49-58, Mar 2009. ACM Press, New York, NY, USA. ISSN 0163-5808.
3. Pablo Barceló, Leonid Libkin, Antonella Poggi, Cristina Sirangelo. XML with Incomplete Information: Models, Properties and Query Answering. In Jan Paredaens and Jianwen Su (ed.), *Proc. 28th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 237-246, Jun 2009. Providence, Rhode Island. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series. ISBN 978-1-60558-553-6.
4. Pablo Barceló. Locality of Queries. In Ling Liu and M. Tamer Özsu (ed.), *Encyclopedia of Database Systems*, pp. 1637-1638, 2009. Springer, New York, NY, USA. ISBN 978-0-387-49616-0.

Year 2010

1. Carlos Hurtado, Leonid Libkin, Peter Wood, Pablo Barceló. Expressive Languages for Path Queries over Graph-structured Data. In Jan Paredaens, Dirk van Gucht (ed.), *Proc. 29th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 3-14, Jun 2010. Indianapolis, IN, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series. ISBN 978-1-4503-0033-9.
2. Leonid Libkin, Juan Reutter, Pablo Barceló. On Incomplete XML Documents with Integrity Constraints. In Alberto Laender, Laks Lashmanan (ed.), *Proc. 4th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)*, pp. 8.1-8.12, May 2010. Buenos Aires, Argentina. CEUR Publications. CEUR Workshop Proceedings vol. 619. ISBN 1613-0073.
3. Marcelo Arenas, Pablo Barceló, Leonid Libkin, Filip Murlak. *Relational and XML Data Exchange*. 112 pages, 2010. Morgan & Claypool Publishers, San Francisco, CA, USA. ISBN 978-1608454112. Synthesis Lectures on Data Management vol. 2.
4. Leonid Libkin, Antonella Poggi, Cristina Sirangelo, Pablo Barceló. XML with Incomplete Information. *Journal of the ACM (JACM)* 58(1):article 4, Dec 2010. ACM Press, New York, NY, USA. ISSN 0004-5411.

Year 2011

1. Leonid Libkin, Juan Reutter, Pablo Barceló. Querying Graph Patterns. In Maurizio Lenzerini, Thomas Schwentick (ed.), *Proc. 30th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 199-210, Jun 2011. Athens, Greece. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series. ISBN 978-1-4503-0660-7.
2. Marcelo Arenas, Pablo Barceló, Juan Reutter. Query Languages for Data Exchange: Beyond Unions of Conjunctive Queries. *Theory of Computing Systems (ToCS)* 49(4):489-564, Jul 2011. Springer-Verlag, Berlin/Heidelberg, Germany. ISSN 1433-0490.
3. Val Tannen, Pablo Barceló, ed. *Proceedings of the 5th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)*, May 2011. Santiago, Chile. CEUR Publications. CEUR Workshop Proceedings.
4. Marcelo Arenas, Pablo Barceló, Leonid Libkin. Regular Languages of Nested Words: Fixed Points, Automata, and Synchronization. *Theory of Computing Systems (ToCS)* 49(3):639-670, 2011. Springer-Verlag, Berlin/Heidelberg, Germany. ISSN 1433-0490.
5. Pablo Barceló, Leonid Libkin, Juan Reutter. Parameterized Regular Expressions and their Languages. In Supratik Chakraborty, Amit Kumar (ed.), *Proc. 31st Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS)*, pp. 351-362, Dec 2011. Mumbai, India. IBFI Schloss Dagstuhl, Wadern, Germany. Leibniz International Proceedings in Informatics (LIPIcs) vol. 13. ISBN 978-3-939897-34-7.
6. Marcelo Arenas, Pablo Barceló, Juan Reutter. Datalog as a Query language for Data Exchange Systems. In Oege de Moor, Georg Gottlob, Tim Furche, Andrew Jon Sellers (ed.), *Proc. 1st International Workshop on Datalog (Datalog)*, pp. 302-320, Mar 2010. Oxford, UK. Springer-Verlag, Berlin/Heidelberg, Germany. LNCS. ISBN 978-3-642-24205-2.

Year 2012

1. Pablo Barceló, Leonid Libkin, Miguel Romero. Efficient Approximations of Conjunctive Queries. In *Proc. 31st ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 249-260, May 2012. Scottsdale, AZ, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
2. Pablo Barceló, Jorge Pérez, Juan Reutter. Relative Expressiveness of Nested Regular Expressions. In *Proc. 6th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)*, pp. 180-195, Jun 2012. Ouro Preto, Brazil. CEUR Publications. CEUR Workshop Proceedings.
3. Pablo Barceló, Leonid Libkin, Miguel Romero. On Low Treewidth Approximations of Conjunctive Queries. In *Proc. 6th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)*, pp. 91-101, Jun 2012. Ouro Preto, Brazil. CEUR Publications. CEUR Workshop Proceedings.

4. Pablo Barceló, Diego Figueira, Leonid Libkin. Graph Logics with Rational Relations and the Generalized Intersection Problem. In *Proc. 27th ACM/IEEE Symposium on Logic in Computer Science (LICS)*, pp. 115-124, Jun 2012. Dubrovnik, Croatia. IEEE Computer Society Press, Los Alamitos, CA, USA.
5. Pablo Barceló, Reinhard Pichler, ed. *Proceedings of the 2nd International Workshop on Datalog (Datalog)*, Sep 2012. Vienna, Austria. Springer-Verlag, Berlin/Heidelberg, Germany. LNCS.
6. Pablo Barceló, Anthony Widjaja Lin, Leonid Libkin, Peter Wood. Expressive Languages for Path Queries over Graph-structured Data. *Transactions on Database Systems (TODS)* 37(4):article 31, 2012. ACM Press, New York, NY, USA. ISSN 0362-5915.

Year 2013

1. Pablo Barceló, Leonid Libkin, Juan Reutter. Parameterized Regular Expressions and Their Languages. *Theoretical Computer Science (TCS)* 474:21-45, Feb 2013. Elsevier Science, Amsterdam, The Netherlands. ISSN 0304-3975.
2. Pablo Barceló, Jorge Pérez, Juan Reutter. Schema Mappings and Data Exchange for Graph Databases. In Wang-Chiew Tan (ed.), *Proc. 16th International Conference on Database Theory (ICDT)*, Mar 2013. Genoa, Italia. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series. ISBN 978-1-4503-1598-2.
3. Pablo Barceló, ed. Special Issue on Foundations of Data Management. *Journal of Computer and System Sciences (JCSS)* 79(6):265, Sep 2013. Elsevier Science, Amsterdam, The Netherlands. ISSN 0022-0000.
4. Pablo Barceló. Querying Graph Databases. In *Proc. 32nd ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 175-188, Jun 2013. New York, NY, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
5. Pablo Barceló, Miguel Romero, Moshe Vardi. Semantic Acyclicity on Graph Databases. In *Proc. 32nd ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 237-248, Jun 2013. New York, NY, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
6. Pablo Barceló, Diego Figueira, Leonid Libkin. Graph Logics with Rational Relations. *Logical Methods in Computer Science (LMCS)* 9(3):article 1, Jul 2013. ISSN 1860-5974.
7. Marcelo Arenas, Pablo Barceló, Leonid Libkin, Ronald Fagin. Solutions and Query Rewriting in Data Exchange. *Information and Computation* 228:28-61, Jul 2013. Elsevier Science, Amsterdam, The Netherlands. ISSN 0890-5401.

8. Renzo Angles, Pablo Barceló, Gonzalo Ríos. A Practical Query Language for Graph Databases. In Loreto Bravo, Mauricio Lenzerini (ed.), *Proc. 7th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)*, pp. article 12, May 2013. Puebla, Mexico. CEUR Publications. CEUR Workshop Proceedings.
9. Pablo Barceló, Gaelle Fontaine, Anthony Widjaja Lin. Expressive Languages for Path Queries over Graphs with Data. In *Proc. 19th Logic for Programming, Artificial Intelligence, and Reasoning (LPAR)*, pp. 71-85, Dec 2013. Springer, New York, NY, USA. Lecture Notes in Computer Science. ISBN 978-3-642-45220-8.
10. Rana Awada, Pablo Barceló, Iluju Kiringa. Sharing and Exchanging Data. In *Proc. 1st Declarative Programming and Knowledge Management (KDPD)*, pp. 17-32, Sep 2013. Kiel, Germany. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science.

Year 2014

1. Pablo Barceló, Juan Reutter, Leonid Libkin. Querying Regular Graph Patterns. *Journal of the ACM (JACM)* 61(1):article 8, Jan 2014. ACM Press, New York, NY, USA. ISSN 0004-5411.
2. Marcelo Arenas, Pablo Barceló, Leonid Libkin, Filip Murlak. *Foundations of Data Exchange*. 341 pages, Mar 2014. Cambridge University Press, Cambridge, UK. ISBN 9781107016163.
3. Pablo Barceló, Leonid Libkin, Miguel Romero. Efficient Approximations of Conjunctive Queries. *SIAM Journal on Computing (SICOMP)* 43(3):1085-1130, 2014. SIAM Press, Philadelphia, USA. ISSN 0097-5397.
4. Pablo Barceló, Miguel Romero, Moshe Vardi. Does Query Evaluation Tractability Help Query Containment?. In *Proc. 33th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 188-199, Jun 2014. Snowbird, Utah, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
5. Pablo Barceló, Pablo Muñoz. Graph Logics with Rational Relations: The Role of Word Combinatorics. In *Proc. 29th ACM/IEEE Symposium on Logic in Computer Science (LICS)*, pp. article 12, Jul 2014. Vienna, Austria. IEEE Computer Society Press, Los Alamitos, CA, USA.
6. Ulrich Kohlenbach, Pablo Barceló, Ruy de Queiroz, ed. *Proceedings of the 21th Workshop on Logic, Language, Information, and Computation (WOLLIC)*, 2014. Valparaíso, Chile. Springer, New York, NY, USA. Lecture Notes in Computer Science.
7. Pablo Barceló, Lei Chen, ed. *Proceedings of the 33th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, Jun 2014. Snowbird, Utah, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series. PhD Symposium.

Year 2015

1. Pablo Barceló, ed. *Proceedings of the 18th International Conference on Extending Database Technology (EDBT)*, Mar 2015. Brussels, Belgium. OpenProceedings.
2. Pablo Barceló, Gaelle Fontaine. On the Data Complexity of Consistent Query Answering over Graph Databases. In *Proc. 18th International Conference on Database Theory (ICDT)*, pp. 380-397, Mar 2015. Brussels, Belgium. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
3. Pablo Barceló, Reinhard Pichler, Sebastian Skritek. Efficient Evaluation and Approximation of Well-designed Pattern Trees. In *Proc. 34th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 131-144, 2015. Melbourne, Australia. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
4. Pablo Barceló, Heng Tao Shen, ed. *Proceedings of the 34th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, 2015. Melbourne, Australia. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series. PhD Symposium.
5. Pablo Barceló, Gaelle Fontaine, Anthony Widjaja Lin. Expressive Path Queries on Graph with Data. *Logical Methods in Computer Science (LMCS)* 11(4):paper 1, 2015. ISSN 1860-5974.

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1. Anthony Widjaja Lin, Pablo Barceló. String Solving with Word Equations and Transducers: Towards a Logic for Analysing Mutation XSS. In *Proc. 43rd ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL)*, pp. 123-136, 2016. ACM Press, New York, NY, USA.
2. Pablo Barceló, Leonid Libkin. Order-Invariant Types and Their Applications. *Logical Methods in Computer Science (LMCS)* 12(1):Article 9, Apr 2016. ISSN 1860-5974.
3. Sergio Abriola, Pablo Barceló, Diego Figueira, Santiago Figueira. Bisimulations on Data Graphs. In *Proc. 15th International Conference on Principles of Knowledge Representation and Reasoning (KR)*, pp. 309-318, 2016. Association for the Advancement of Artificial Intelligence, www.aaai.org.
4. Pablo Barceló, Georg Gottlob, Andreas Pieris. Semantic Acyclicity under Constraints. In *Proc. 35th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 343-354, 2016. San Francisco, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
5. Pablo Barceló, Miguel Romero, Moshe Vardi. Semantic Acyclicity on Graph Databases. *SIAM Journal on Computing (SICOMP)* 45(4):1339-1376, 2016. SIAM Press, Philadelphia, USA. ISSN 0097-5397.

6. Pablo Barceló. Semantic Acyclicity for Conjunctive Queries: Approximations and Constraints. In *Proc. 23rd Workshop on Logic, Language, Information, and Computation (WoLLIC)*, pp. 104-108, 2016. Springer, New York, NY, USA. Lecture Notes in Computer Science.

Year 2017

1. Pablo Barceló, Miguel Romero. The Complexity of Reverse Engineering Problems for Conjunctive Queries. In *Proc. 20th International Conference on Database Theory (ICDT)*, pp. article 7, 2017. Venice, Italy. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
2. Pablo Barceló, Pablo Muñoz. Graph Logics with Rational Relations: The Role of Word Combinatorics. *ACM Transactions on Computational Logic (TOCL)* 18(2):article 10, May 2017. ACM Press, New York, NY, USA. ISSN 1529-3785.
3. Pablo Barceló, Gaëlle Fontaine. On the Data Complexity of Consistent Query Answering over Graph Databases. *Journal of Computer and System Sciences (JCSS)* 88:164-194, Sep 2017. Elsevier Science, Amsterdam, The Netherlands. ISSN 0022-0000.
4. Pablo Barceló, Andreas Pieris, Miguel Romero. Semantic Optimization in Tractable Classes of Conjunctive Queries. *SIGMOD Record* 46(2):5-17, Jun 2017. ACM Press, New York, NY, USA. ISSN 0163-5808.
5. Pablo Barceló, Miguel Romero, Moshe Vardi. The Homomorphism Problem for Regular Graph Patterns. In *Proc. 32nd ACM/IEEE Symposium on Logic in Computer Science (LICS)*, pp. 1-12, Jun 2017. Reykjavik, Iceland. IEEE Computer Society Press, Los Alamitos, CA, USA.
6. Pablo Barceló, Ruy de Queiroz, Ulrich Kohlenbach, ed. 21st Workshop on Logic, Language, Information and Computation – WoLLIC 2014. *Information and Computation* 255(2):193-334, Aug 2017. Elsevier Science, Amsterdam, The Netherlands. ISSN 0890-5401.
7. Renzo Angles, Pablo Barceló, Marcelo Arenas, Aidan Hogan, Juan Reutter, Domagoj Vrgoc. Foundations of Modern Query Languages for Graph Databases. *ACM Computing Surveys (CSUR)* 50(5), Oct 2017. ACM Press, New York, NY, USA. ISSN 0360-0300.
8. Ulrich Kohlenbach, Pablo Barceló, Ruy de Queiroz, ed. Selected Papers from 21st Workshop on Logic, Language, Information and Computation (WoLLIC 2014). *Information and Computation* 255, Aug 2017. Elsevier Science, Amsterdam, The Netherlands. ISSN 0890-5401.

Year 2018

1. Sergio Abriola, Pablo Barceló, Diego Figueira, Santiago Figueira. Bisimulations on Data Graphs. *Journal of Artificial Intelligence Research (JAIR)* 61:171-213, Jan 2018. ISSN 1076-9757.

2. Pablo Barceló, Miguel Romero, Thomas Zeume. A More General Theory of Static Approximations for Conjunctive Queries. In *Proc. 21th International Conference on Database Theory (ICDT)*, pp. article 7, 2018. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
3. Pablo Barceló, Gerald Berger, Andreas Pieris. Containment for Rule-Based Ontology-Mediated Queries. In *Proc. 37th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*, pp. 267-279, 2018. Houston, USA. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
4. Renzo Angles, Marcelo Arenas, Pablo Barceló, Peter Boncz, George Fletcher, Claudio Gutierrez, Tobias Lindäker, Marcus Paradies, Stefan Plantikow, Juan Sequeda, Oskar van Rest, Hannes Voigt. G-CORE: A Core for Future Graph Query Languages. In *Proc. SIGMOD International Conference on Management of Data (SIGMOD)*, pp. 1421-1432, 2018. Houston, USA. ACM Press, New York, NY, USA.
5. Pablo Barceló, Gerald Berger, Carsten Lutz, Andreas Pieris. First-Order Rewritability of Frontier-Guarded Ontology-Mediated Queries. In *Proc. 27th International Joint Conferences on Artificial Intelligence (IJCAI)*, pp. 1707-1713, 2018.
6. Pablo Barceló, Markus Kroell, Reinhard Pichler, Sebastian Skritek. Efficient Evaluation and Static Analysis for Well-Designed Pattern Trees with Projection. *Transactions on Database Systems (TODS)* 43(2):article 8, 2018. ACM Press, New York, NY, USA. ISSN 0362-5915.

Year 2019

1. Marcelo Arenas, Pablo Barceló, Leonid Libkin. Graph Path Navigation. In *Encyclopedia of Big Data Technologies*, Jan 2019. Springer-Verlag, Berlin/Heidelberg, Germany.
2. Pablo Barceló, Marco Calautti, ed. *Proceedings of the 22nd International Conference on Database Theory (ICDT)*, Mar 2019. Lisbon, Portugal. ACM Press, New York, NY, USA. ACM International Conference Proceeding Series.
3. Jorge Pérez, Javier Marinkovic, Pablo Barceló. On the Turing Completeness of Modern Neural Network Architectures. In *Proc. 7th International Conference on Learning Representations (ICLR)*, 2019. New Orleans, USA.
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5. Pablo Barceló, Chi Duo-Hong, Xuan Back-Le, Anthony Widjaja Lin, Reino Niskanen. Monadic Decomposability of Regular Relations. In *Proc. 46th International Colloquium on Automata, Languages, and Programming (ICALP)*, pp. 103:1-103:14, 2019.

6. Pablo Barceló, Diego Figueira, Miguel Romero. Boundedness of Conjunctive Regular Path Queries. In *Proc. 46th International Colloquium on Automata, Languages, and Programming (ICALP)*, pp. 104:1-104:15, 2019.
7. Pablo Barceló, Nelson Higuera, Jorge Pérez, Bernardo Subercaseaux. Expressiveness of Matrix and Tensor Query Languages in terms of ML Operators. In *Proc. 3rd Data Management for end-to-end Machine Learning (DEEM)*, 2019.
8. Pablo Barceló, Carsten Lutz, Andreas Pieris, Cristina Feier. When is Ontology-Mediated Querying Efficient?. In *Proc. 34th ACM/IEEE Symposium on Logic in Computer Science (LICS)*, 2019. Vancouver, Canad. IEEE Computer Society Press, Los Alamitos, CA, USA.

Year 2020

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