

Curriculum Vitae – Juan L. Reutter

CONTACT INFORMATION

Asistant Professor,
Departamento de Ciencia de la Computación,
Pontificia Universidad Católica de Chile,
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EDUCATION

- Edinburgh University**, Edinburgh, Scotland, United Kingdom
- *Doctor of Philosophy* 2009– 2013
• Advisor: Leonid Libkin
- Pontificia Universidad Católica de Chile**, Santiago, Chile
- *Master in Engineering Sciences* 2007–2009
- *Industrial Engineer, Major in Computer Science* 2003–2007
- *Licentiate in Engineering Sciences* 2003–2006
- *Bachelor in Science* 2001–2002

PUBLICATIONS

Journals

- “*Querying Regular Graph Patterns*”,
Pablo Barceló, Leonid Libkin and Juan Reutter.
Journal of Association for Computing Machinery (JACM), Vol. 61, No. 1, 2014.
- “*Classification of Annotation Semirings over Query Containment*”,
Egor Kostlyev, Juan Reutter and Andras Salamon.
ACM Trans. Database Syst. (TODS), Vol. 39, No. 1, 2014.
- “*Data Exchange Beyond Complete Data*”,
Marcelo Arenas, Jorge Pérez and Juan Reutter.
Journal of Association for Computing Machinery (JACM), Vol. 60, No. 4, 2013.
- “*The language of plain SO-tgds: composition, inversion and structural properties*”,
Marcelo Arenas, Jorge Pérez, Juan Reutter and Cristian Riveros.
Journal of Computing Systems and Science (JCSS), Vol. 79, No. 6, pp. 763-784, 2013.
- “*Parameterized regular expressions and their languages*”,
Pablo Barceló, Leonid Libkin and Juan Reutter.
Theoretical Computer Science (TCS), Vol. 474, pp. 21-45, 2013.
- “*Query Language based Inverses of Schema Mappings: Semantics, Computation, and Closure Properties*”,
Marcelo Arenas, Jorge Pérez, Juan Reutter and Cristian Riveros.
VLDB Journal, Vol. 21, No. 6, pp. 823-842, 2012.
- “*Tractable XML Data Exchange via Relations*”,
Rada Chirkova, Leonid Libkin and Juan Reutter.
Frontiers of Computer Science (FCS), Vol. 6, No. 3, pp. 243-263, 2012.
- “*Query Languages for Data Exchange: Beyond Union of Conjunctive Queries*”,
Marcelo Arenas, Pablo Barceló and Juan Reutter.
Theory of Computing Systems, Vol. 49, No. 2, pp. 489-564, 2011.
- “*Composition and Inversion of Schema Mappings*”,
Marcelo Arenas, Jorge Pérez, Juan Reutter and Cristian Riveros.
SIGMOD Record, Vol. 38, No. 3, pp. 17-28, 2009.

Conferences

- “*Answering Counting Aggregate Queries over Ontologies of the DL-Lite Family*”,
Egor Kostlyev and Juan Reutter.
Proceedings of the Twenty-Seventh AAAI Conference on Artificial Intelligence Bellevue, USA, 2013.

- “*Schema mappings and data exchange for graph databases*”,
Pablo Barceló, Jorge Perez and Juan Reutter.
In Proceedings of the 16th International Conference on Database Theory (ICDT’13), Genoa, Italy, pages 189-200, 2013.
- “*Trial for RDF: adapting graph query languages for RDF data*”,
Leonid Libkin, Juan Reutter and Domagoj Vrgoc.
In proceedings of the 32th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS’13), New York, USA, pages 201-212, 2013.
- “*Classification of Annotation Semirings over Query Containment*”,
Egor Kostlyev, Juan Reutter and Andras Salamon.
In proceedings of the 31th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS’12), Scottsdale, USA, pages 237-248, 2012.
- “*Parameterized Regular Expressions and Their Languages*”,
Pablo Barceló, Leonid Libkin and Juan Reutter.
In Proceedings of the IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2011), Mumbai, India, pages 351-362, 2011.
- “*Tractable XML Data Exchange via Relations*”,
Rada Chirkova, Leonid Libkin and Juan Reutter.
In Proceedings of the 20th ACM Conference on Information and Knowledge Management (CIKM 2011), Glasgow, United Kingdom, pages 1629-1638, 2011.
- “*Querying Graph Patterns* ”,
Pablo Barceló, Leonid Libkin and Juan Reutter.
In Proceedings of the 30th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS’11), Athens, Greece, pages 199-210, 2011.
- “*Data Exchange Beyond Complete Data*”,
Marcelo Arenas, Jorge Perez and Juan Reutter.
In Proceedings of the 30th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS’11), Athens, Greece, pages 83-94, 2011.
- “*Foundations of Schema Mapping Management*”,
Marcelo Arenas, Jorge Perez, Juan Reutter and Cristian Riveros.
In Proceedings of the 29th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS’10), Indianapolis, USA, pages 227-238, 2010.
- “*Query Languages for Data Exchange: Beyond Unions of Conjunctive Queries*”,
Marcelo Arenas, Pablo Barceló and Juan Reutter.
In Proceedings of the 12th International Conference on Database Theory (ICDT’09), Saint-Petersburg, Russia, pages 73-83, 2009.
- “*Inverting Schema Mappings: Bridging the Gap between Theory and Practice*”,
Marcelo Arenas, Jorge Perez, Juan Reutter and Cristian Riveros.
In Proceedings of the 35th International Conference on Very Large Data Bases (VLDB’09), Lyon, France, pages 1018-1029, 2009.

Book Chapters

- “*Static Analysis and Query Answering for Incomplete Data Trees with Constraints*”,
Amélie Gheerbrant, Leonid Libkin Juan Reutter.
In Search of Elegance in the Theory and Practice of Computation - Essays Dedicated to Peter Buneman,
Val Tannen, Limsoon Wong, Leonid Libkin, Wenfei Fan, Wang-Chiew Tan and Michael P. Fourman, editors. Lecture Notes in Computer Science 8000 Springer 2013
- “*Datalog as a Query Language for Data Exchange Systems*”,
Marcelo Arenas, Pablo Barceló and Juan Reutter.
Datalog Reloaded,
Oege de Moor, Georg Gottlob, Tim Furche, Andrew Jon Sellers, editors. Lecture Notes in Computer Science 6702 Springer 2011

Workshops

- “Complexity of Answering Counting Aggregate Queries over DL-Lite”, Egor Kostlyev and Juan Reutter. *Description Logics 2013*, Ulm, Germany, 2013.
- “Relative Expressiveness of Nested Regular Expressions”, Pablo Barceló, Jorge Pérez and Juan Reutter. *in Proceedings of the 6th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2012)*, Ouro Preto, Brazil, 2012.
- “A Formalism for Graph Databases and its Model of Computation”, Juan Reutter and Tony Tan. *In Proceedings of the 5th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2011)*, Santiago, Chile, 2011.
- “On Incomplete XML Documents with Integrity Constraints”, Pablo Barceló, Leonid Libkin and Juan Reutter. *In Proceedings of the 4th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2010)*, Buenos Aires, Argentina, 2010.

PARTICIPATION IN PROJECTS

- Principal Investigator, Fondecyt Initiation grant: “Query Languages and Views for Graphs with Data”. 2013-2016.
- Associated Investigator, Millenium Nucleus Initiative: “Center for Semantic Web Research”. 2013-2016.

ACADEMIC HONOURS

Awards

- Ramn Salas Award: “Data exchange beyond complete data”. Best Chilean Research Work of 2011, Instituto de Ingenieros de Chile, Santiago, Chile.
- Best Paper Award: “Data exchange beyond complete data”. 30th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS’11), Athens, Greece, 2011.
- Invited Paper: “Data Exchange Beyond Complete Data”. *Journal of the Association for Computing Machinery (JACM)*, selected papers from PODS’11.
- Invited Paper: “Querying Graph Patterns”. *Journal of the Association for Computing Machinery (JACM)*, selected papers from PODS’11.
- Invited Paper: “Datalog as a Query Language for Data Exchange Systems”. *Datalog Reloaded, LNCS 6702 Springer 2011*, selected papers from DATALOG 2.0 Workshop, Oxford, 2010.
- Invited Paper: “Composition and Inversion of Schema Mappings”. *Sigmod Record*, invited by the Editor of Database Principles column, 2009.
- Invited Paper: “Query Languages for Data Exchange: Beyond Unions of Conjunctive Queries”. *Theory of Computing Systems (ToCS)*, selected papers from ICDT’09.
- Best Master Thesis: “Extending Query Languages for Data Exchange”. Department of Computer Science, Pontificia Universidad Católica de Chile, 2009.

Scholarships

- ESPRC Scholarship, 2009-2013, Engineering and Physical Sciences Research Council, Scotland, United Kingdom.
- Becas Chile Scholarship, 2009-2013, Programa de Capital Humano Avanzado, Chile.
- Student Academic Excellence Scholarship, 2001, Pontificia Universidad Católica de Chile.

TEACHING

Pontificia Universidad Católica de Chile, Santiago, Chile

- Bases de Datos (1'2014, 2'2013).
- Tópicos Avanzados en Bases de Datos I (1'2009) (As part time junior faculty member).

University of Edinburgh, Edinburgh, Scotland, United Kingdom

- *Tutor, Msc students* **2011**
 - *Teaching Assistant* **2010–2011**
- Courses taught: Data Integration and Exchange (Fall 2010, Fall 2011).

SOME TALKS

- “*A Recursive Approach for Defining Reachability Queries over Graph Databases*”, NCSU Taming the Data speaker series, North Carolina, USA, 2014.
- “*Classification of Annotation Semirings over Query Containment*”, 31th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS'12), Scottsdale, USA, 2012.
- “*Parameterized Regular Expressions and Their Languages*”, IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2011), Mumbai, India, 2011.
Also presented in Foundations of distributed data management, Schloss Dagstuhl, Germany, 2011.
- “*Tractable XML Data Exchange via Relations*”, 20th ACM Conference on Information and Knowledge Management (CIKM 2011), Glasgow, United Kingdom, 2011.
Also presented in FOX - Foundations of XML Annual Meeting, Amsterdam, Netherlands, 2010.
- “*Querying Graph Patterns*”, 30th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS'11), Athens, Greece, 2011.
- “*Implementing XML data exchange by relational DBMS's*”. FOX - Foundations of XML Second Workshop, Warsaw, Poland, 2010.
- “*Query Languages for Data Exchange*” Students Workshop in 3rd Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2009), Arequipa, Perú, 2009.
Also presented in Chilean PhD. Workshop, Punta Arenas, Chile, 2008.
- “*Query Languages for Data Exchange: Beyond Unions of Conjunctive Queries*”, 12th International Conference on Database Theory (ICDT'09), Saint-Petersburg, Russia, 2009.