

# Paraschos Koutris

## Curriculum Vitae

Computer Sciences, University of Wisconsin-Madison  
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### Education

- 2010-2015 **PhD in Computer Science & Engineering**, UNIVERSITY OF WASHINGTON, Seattle WA.
  - *Dissertation*: "Query Processing for Massively Parallel Systems", *Advisor*: Prof. Dan Suciu
- 2010-2012 **MS in Computer Science & Engineering**, UNIVERSITY OF WASHINGTON, Seattle WA.
- 2009-2010 **MS in Logic, Algorithms and Computation**, UNIVERSITY OF ATHENS, Athens - Greece.
  - *GPA*: 9.6/10
  - *Thesis*: "Infrastructure Leasing Problems", *Advisor*: Prof. Dimitris Fotakis
- 2004-2009 **Diploma in Electrical and Computer Engineering**, NATIONAL TECHNICAL UNIVERSITY OF ATHENS, Athens - Greece.
  - *GPA*: 9.7/10 (3rd out of 530 students)
  - *Thesis*: "Broadcasting and gossiping in radio networks", *Advisor*: Prof. Stathis Zachos
- Fall 2006 **Erasmus exchange student**, TECHNISCHE UNIVERSITÄT MÜNCHEN, Munich - Germany.

### Employment

- 2015-now **Assistant Professor in Computer Sciences**, UNIVERSITY OF WISCONSIN-MADISON, Madison WI.
- Summer 2013 **Research Intern**, MICROSOFT RESEARCH, Redmond WA.
- Summer 2012 **Summer Intern**, FACEBOOK, Menlo Park CA.
- 2005-2006 **Tutor**, GREEK MINISTRY OF EDUCATION, Athens - Greece.

### Refereed Conference Papers

- CP 2017 **Constraint-Based Synthesis of Datalog Programs**, Aws Albarghouthi, [Paraschos Koutris](#), Mayur Naik, and Calvin Smith.  
Principles and Practice of Constraint Programming, Melbourne, VIC, Australia, 2017
- SIGMOD 2017 **QIRANA: a Framework for Scalable Query Pricing**, [Paraschos Koutris](#), and Shaleen Deep.  
International Conference on Management of Data, Chicago, IL, USA, 2017
- ICDT 2017 **m-tables: Representing Missing Data**, Bruhathi Sundarmurthy, [Paraschos Koutris](#), Willis Lang, Jeffrey Naughton, and Val Tannen.  
20th International Conference on Database Theory, Venice, Italy, 2017
- ICDT 2017 **The Design of Arbitrage-Free Data Pricing Schemes**, Shaleen Deep, and [Paraschos Koutris](#).  
20th International Conference on Database Theory, Venice, Italy, 2017
- VLDB 2016 **Distributed Data Deduplication**, Xu Chu, Ihab F. Ilyas, and [Paraschos Koutris](#).  
PVLDB 9(11): 864-875 (2016)
- ICDT 2016 **Worst-Case Optimal Algorithms for Parallel Query Processing**, [Paraschos Koutris](#), Paul Beame, and Dan Suciu.  
19th International Conference on Database Theory, Bordeaux, France, 2016

- PODS 2015 **The Data Complexity of Consistent Query Answering for Self-Join-Free Conjunctive Queries under Primary Key Constraints**, [Paraschos Koutris](#), and Jef Wijsen.  
34th ACM Symposium on Principles of Database Systems, Melbourne, Victoria, Australia, 2015
- ICDT 2015 **Answering Conjunctive Queries with Inequalities**, [Paraschos Koutris](#), Dan Suciu, Sudeepa Roy, and Tova Milo.  
18th International Conference on Database Theory, Brussels, Belgium, 2015
- ICDT 2014 **A Dichotomy on the Complexity of Consistent Query Answering for Atoms with Simple Keys**, [Paraschos Koutris](#), and Dan Suciu.  
17th International Conference on Database Theory, Athens, Greece, 2014
- PODS 2014 **Skew in parallel query processing**, Paul Beame, [Paraschos Koutris](#), and Dan Suciu.  
33rd ACM Symposium on Principles of Database Systems, Snowbird, UT, USA, 2014
- SIGMOD 2013 **Toward practical query pricing with QueryMarket**, [Paraschos Koutris](#), Prasang Upadhyaya, Magdalena Balazinska, Bill Howe, and Dan Suciu.  
International Conference on Management of Data, New York, NY, USA, 2013
- PODS 2013 **Counting Communication Steps for Parallel Query Processing**, Paul Beame, [Paraschos Koutris](#), and Dan Suciu.  
32nd ACM Symposium on Principles of Database Systems, New York, NY, USA, 2013
- MFCS 2012 **Online Sum-Radii Clustering**, Dimitris Fotakis, and [Paraschos Koutris](#).  
37th International Symposium on Mathematical Foundations of Computer Science, Bratislava, Slovakia, 2012
- PODS 2012 **Query-based Data Pricing**, [Paraschos Koutris](#), Prasang Upadhyaya, Magdalena Balazinska, Bill Howe, and Dan Suciu.  
31st ACM Symposium on Principles of Database Systems, Scottsdale, AZ, USA, 2012
- ICDT 2012 **Parallel Skyline Queries**, Foto N. Afrati, [Paraschos Koutris](#), Dan Suciu, and Jeffrey D. Ullman.  
15th International Conference on Database Theory, Berlin, Germany, 2012
- SSDBM 2011 **Database-as-a-Service for Long-Tail Science**, Bill Howe, Garrett Cole, Emad Souroush, [Paraschos Koutris](#), Alicia Key, Nodira Khousainova, and Leilani Battle.  
23rd International Conference on Scientific and Statistical Database Management, Portland, OR, USA, 2011
- PODS 2011 **Parallel Evaluation of Conjunctive Queries**, [Paraschos Koutris](#), and Dan Suciu.  
30th ACM Symposium on Principles of Database Systems, Athens, Greece, 2011
- CATS 2011 **Oblivious k-shot Broadcasting in Ad Hoc Radio Networks**, [Paraschos Koutris](#), and Aris Pagourtzis.  
Seventeenth Computing: The Australasian Theory Symposium, Perth, Australia, 2011
- PODC 2010 **Brief announcement: k-shot distributed broadcasting in radio networks**, [Paraschos Koutris](#), and Aris Pagourtzis.  
29th Annual ACM Symposium on Principles of Distributed Computing, Zurich, Switzerland, 2010

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## Refereed Journal Papers

- JDA 2017 **Energy-efficient broadcasting in ad hoc wireless networks**, Sushanta Karmakar, [Paraschos Koutris](#), Aris Pagourtzis, and Dimitris Sakavalas.  
Journal of Discrete Algorithms 42 (2-13) 2017
- TODS 2017 **Consistent Query Answering for Self-Join-Free Conjunctive Queries Under Primary Key Constraints**, [Paraschos Koutris](#), and Jef Wijsen.  
ACM Transactions on Database Systems 42(2) 2017

- ToCS 2017 **Answering Conjunctive Queries with Inequalities**, [Paraschos Koutris](#), Tova Milo, Sudeepa Roy, and Dan Suciu.  
Theory of Computing Systems 61(1) 2017
- SIGMOD Record 2016 **A Guide to Formal Analysis of Join Processing in Massively Parallel Systems**, [Paraschos Koutris](#), and Dan Suciu.  
SIGMOD Record (December 2016)
- SIGMOD Record 2015 **Consistent Query Answering for Primary Keys**, [Paraschos Koutris](#), and Jef Wijsen.  
SIGMOD Record 45(1) (2015 Research Highlights)
- PhD Dissertation **Query Processing for Massively Parallel Systems**, [Paraschos Koutris](#).  
University of Washington, Seattle, WA, 2015
- JACM 2015 **Query-Based Data Pricing**, [Paraschos Koutris](#), Prasang Upadhyaya, Magdalena Balazinska, Bill Howe, and Dan Suciu.  
Journal of the ACM 62(5) 2015
- TOCS 2015 **Parallel Skyline Queries**, Foto N. Afrati, [Paraschos Koutris](#), Dan Suciu, and Jeffrey D. Ullman.  
Theory of Computing Systems (April 2015)
- TCS 2014 **Online Sum-Radii Clustering**, Dimitris Fotakis, and [Paraschos Koutris](#).  
Theoretical Computer Science 540 (2014)
- ISETPC 2013 **A Discussion on Pricing Relational Data**, Magdalena Balazinska, Bill Howe, [Paraschos Koutris](#), Dan Suciu, and Prasang Upadhyaya.  
In Search of Elegance in the Theory and Practice of Computation 2013 - Essays Dedicated to Peter Buneman

## Refereed Conference Demo Papers

- VLDB 2017 **QIRANA Demonstration: Real time Scalable Query Pricing**, Shaleen Deep, [Paraschos Koutris](#), and Yash Bidasaria.  
PVLDB 10(12), 2017
- SIGMOD 2014 **Demonstration of the Myria big data management service**, Daniel Halperin, Victor Teixeira de Almeida, Lee Lee Choo, Shumo Chu, [Paraschos Koutris](#), Dominik Moritz, Jennifer Ortiz, Vaspoul Roumboonuk, Jingjing Wang, Andrew Whitaker, Shengliang Xu, Magdalena Balazinska, Bill Howe, and Dan Suciu.  
International Conference on Management of Data, Snowbird, UT, USA, 2014
- VLDB 2012 **QueryMarket Demonstration: Pricing for Online Data Markets**, [Paraschos Koutris](#), Prasang Upadhyaya, Magdalena Balazinska, Bill Howe, and Dan Suciu.  
PVLDB 5(12), 2012

## Refereed Workshop Papers

- DEEM 2017 **Model-based Pricing: Do Not Pay for More than What You Learn!**, Lingjiao Chen, [Paraschos Koutris](#), and Arun Kumar.  
1st Workshop on Data Management for End-to-End Machine Learning, 2017
- BeyondMR 2016 **Deterministic Load Balancing for Parallel Joins**, Nivetha Singara Vadivelu, and [Paraschos Koutris](#).  
3rd ACM SIGMOD Workshop on Algorithms and Systems for MapReduce and Beyond, San Francisco, CA, USA, 2016
- Datalog 2.0 **Optimizing Large-Scale Semi-Naive Datalog Evaluation in Hadoop**, Marianne Shaw, [Paraschos Koutris](#), Bill Howe, and Dan Suciu.  
Second International Workshop, Datalog 2.0, Vienna, Austria, 2012

## Invited Talks

- Jan 2017 Pricing Relational Data with Guarantees, *NTUA, Athens - Greece*
- Sept 2016 Pricing Relational Data with Guarantees, *Midwest Big Data Workshop, Chicago*
- July 2016 Query Processing for Massively Parallel Systems, *NTUA, Athens - Greece*
- Feb 2016 Worst-Case Optimal Algorithms for Parallel Query Processing, *Institut Henri Poincare*

## Professional Service

**Program Chair:** BeyondMR 2017

**Proceedings and Publicity Chair:** PODS 2016

**PC member:** BeyondMR (2016,2018), VLDB (2017), SIGMOD (2017,2018), PODS (2017,2018), ICDE (2017), ICDT (2018)

**Journal Reviewer:** Transactions on Knowledge and Data Engineering, Theory of Computing Systems, Transactions on Database Systems

**Reviewer:** ICALP (2011), ICDT (2012, 2014, 2015, 2017), MFCS (2014, 2015), PODS (2012, 2016), SIGMOD (2014), STOC (2012), SWAT (2012), WebDB (2015)

## Honors and Awards

- 2016 SIGMOD Jim Gray Doctoral Dissertation Award

### Paper Awards

- 2014 "Skew in parallel query processing", PODS: invited to the Journal of ACM
- 2012 "Query-Based Data Pricing", PODS: invited to the Journal of ACM

### Graduate Research Fellowships

- 2012 Facebook Fellowship Finalist
- 2010-2011 Jeff Dean/Heidi Hopper Endowed Regental Fellowship, *University of Washington*

### Undergraduate Awards

- 2008 Award for excellence in academic studies, *State Scholarship Foundation - Greece*
- 2006 Award for excellence in academic studies, *State Scholarship Foundation - Greece*
- 2005 "Papakyriakopoulos" award for excellence in Mathematics in the School of Electrical and Computer Engineering, *National Technical University of Athens*
- 2005 Award for excellence in academic studies, *State Scholarship Foundation - Greece*

### Other Awards

- 2004 Bronze Metal in the 7th Mediterranean Mathematical Olympiad
- 2004 2nd prize in the Panhellenic Mathematical Contest "Archimedes"
- 2003 3rd prize in the Panhellenic Mathematical Contest "Euclid"