

# Paraschos Koutris

## Curriculum Vitae

☎ +1-608-263-5489

✉ [paris@cs.wisc.edu](mailto:paris@cs.wisc.edu)

📁 [pages.cs.wisc.edu/~paris](http://pages.cs.wisc.edu/~paris)

### Research Interests

My research interests lie in the field of databases, with a focus on the theoretical aspects of data management. I am particularly interested in applying formal methods to various problems of modern data management systems: data processing in massively parallel systems, data pricing, and managing data with uncertainty.

### Education

- 2010-2015 **PhD in Computer Science & Engineering**, *University of Washington*, Seattle WA - USA.
  - *Dissertation*: "Query Processing for Massively Parallel Systems"  
*Advisor*: Prof. Dan Suciu
- 2010-2012 **MS in Computer Science & Engineering**, *University of Washington*, Seattle WA - USA.
- 2009-2010 **MS in Logic, Algorithms and Computation**, *University of Athens*, Athens - Greece.
  - *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 - top 1%)
  - *Thesis*: "Broadcasting and gossiping in radio networks"  
*Advisor*: Prof. Stathis Zachos
- Fall 2006 **Erasmus exchange student**, *Technische Universität München*, Munich - Germany.

### Work Experience

- 2015-now **Assistant Professor**, UNIVERSITY OF WISCONSIN-MADISON, Madison WI - USA.
- 2013 **Summer Intern**, MICROSOFT RESEARCH, Redmond WA - USA.  
Designing models and algorithms for efficiently processing streaming data (Mentor: Jonathan Goldstein).
- 2012 **Summer Intern**, FACEBOOK, Menlo Park CA - USA.  
Member of the Entities group. Developing algorithms for information extraction from crowdsourcing.
- 2005-2006 **Tutor**, GREEK MINISTRY OF EDUCATION, Athens - Greece.  
Training small and medium enterprises on e-business practices ("Go-online" project).

## ■ Honors and Awards

### 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 Substitute member of the Greek national team for the International Mathematical Olympiad
- 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"

## ■ Publications

- **Worst-Case Optimal Algorithms for Parallel Query Processing**  
Paraschos Koutris, Paul Beame, Dan Suciu, *submitted*
- **The Data Complexity of Consistent Query Answering for Self-Join-Free Conjunctive Queries under Primary Key Constraints**  
Paraschos Koutris and Jef Wijsen, *PODS 2015*
- **Parallel Skyline Queries**  
Foto N. Afrati, Paraschos Koutris, Dan Suciu and Jeffrey D. Ullman, *Theory of Computing Systems (April 2015)*
- **Answering Conjunctive Queries with Inequalities**  
Paraschos Koutris, Dan Suciu, Sudeepa Roy and Tova Milo, *ICDT 2015*
- **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, Vaspol Ruamviboonsuk, Jingjing Wang, Andrew Whitaker, Shengliang Xu, Magdalena Balazinska, Bill Howe and Dan Suciu, *SIGMOD 2014*
- **Online Sum-Radii Clustering**  
Dimitris Fotakis and Paraschos Koutris, *Theoretical Computer Science 540 (2014)*

- **A Dichotomy on the Complexity of Consistent Query Answering for Atoms with Simple Keys**  
Paraschos Koutris and Dan Suciu, *ICDT 2014*
- **Skew in parallel query processing**  
Paul Beame, Paraschos Koutris and Dan Suciu, *PODS 2014*
- **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*
- **Toward practical query pricing with QueryMarket**  
Paraschos Koutris, Prasang Upadhyaya, Magdalena Balazinska, Bill Howe and Dan Suciu, *SIGMOD 2013*
- **Counting Communication Steps for Parallel Query Processing**  
Paul Beame, Paraschos Koutris and Dan Suciu, *PODS 2013*
- **QueryMarket Demonstration: Pricing for Online Data Markets**  
Paraschos Koutris, Prasang Upadhyaya, Magdalena Balazinska, Bill Howe and Dan Suciu, *PVLDB 5(2012)*
- **Optimizing Large-Scale Semi-Naïve Datalog Evaluation in Hadoop**  
Marianne Shaw, Paraschos Koutris, Bill Howe and Dan Suciu, *Datalog 2012*
- **Online Sum-Radii Clustering**  
Dimitris Fotakis and Paraschos Koutris, *MFCSS 2012*
- **Query-based Data Pricing**  
Paraschos Koutris, Prasang Upadhyaya, Magdalena Balazinska, Bill Howe and Dan Suciu, *PODS 2012*
- **Parallel Skyline Queries**  
Foto N. Afrati, Paraschos Koutris, Dan Suciu and Jeffrey D. Ullman, *ICDT 2012*
- **Database-as-a-Service for Long-Tail Science**  
Bill Howe, Garrett Cole, Emad Souroush, Paraschos Koutris, Alicia Key, Nodira Khoussainova and Leilani Battle, *SSDBM 2011*
- **Parallel Evaluation of Conjunctive Queries**  
Paraschos Koutris and Dan Suciu, *PODS 2011*
- **Oblivious k-shot Broadcasting in Ad Hoc Radio Networks**  
Paraschos Koutris and Aris Pagourtzis, *CATS 2011*
- **Brief announcement: k-shot distributed broadcasting in radio networks**  
Paraschos Koutris and Aris Pagourtzis, *PODC 2010*

## Invited Talks

- Query Processing for Massively Parallel Systems, *University of California San Diego* (May 2015)
- Query-Based Data Pricing, *University of Edinburgh* (March 2012)
- Parallel Evaluation of Conjunctive Queries, *National Technical University of Athens* (June 2011)

## ■ Teaching Experience

### **University of Washington, Seattle WA - USA**

- TA for *Randomized Algorithms and Probabilistic Analysis* (Spring 2013)
- TA for *Introduction to Data Management* (Winter 2012)
- TA for *Principles of Database Management Systems* (Spring 2012)

### **National Technical University of Athens, Athens - Greece**

- TA for *Algorithms and Complexity* (Fall 2008, Fall 2009)
- TA for *Introduction to Programming* (Fall 2005, Fall 2008)

## ■ Professional Service

**Subreviewer:** ICALP 2011, STOC 2012, SWAT 2012, PODS 2012, ICDT 2012/2014/2015, MFCS 2014, SIGMOD 2014

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

## ■ Languages

Greek, English, German