Lefteris (Eleftherios) Sidirourgos

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HOMEPAGE: http://lsidir.github.io

Born: August 5, 1980—Athens, Greece
Nationality: Greek

Current position

Senior Researcher (Post-Doctoral)
Systems Group, Department of Computer Science, ETH Zürich

Research areas of interest

Database Architecture • Big Data Analytics and Column Stores • Data Management on New Hardware • Scientific and Graph Databases • Query Optimization and Processing • Adaptive and Partial Indexing • Sampling

Education

2014	PHD in Computer Science, University of Amsterdam Thesis: *"Space Efficient Indexes for the Big Data Era."* Promoter and Adviser: prof. Dr. Martin Kersten. Co-adviser: prof. Dr. Peter Boncz
2005	MSc in Computer Science, University Of Crete Thesis: *"Indexing Views to Route and Plan Queries in a Peer Data Management System."* Adviser: prof. Dr. Vassilis Christophides
2003	BSc in Mathematics, University Of Crete

Grants, honors & awards

2009	*Open Competition Award for PhD funding.* Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO).
2003-2005	*Graduate Scholarship.* Institute of Computer Science, Foundation for Research and Technology–Hellas (ICS-FORTH).
2001-2003	*Undergraduate Scholarship.* Institute of Computer Science, Foundation for Research and Technology–Hellas (ICS-FORTH).

Academic & Industry Positions

03.2017-	*Senior Researcher (Post-Doctoral)* Systems Group, Department of Computer Science, ETH Zürich
12.2015-02.2017	*Scientific Researcher (Post-Doctoral)* Centrum Wiskunde & Informatica (CWI), Amsterdam
03.2016-06.2016	*Scientific Consultant* Blazegraph (formerly SYSTAP, LLC), Washington, D.C., USA
03.2015-12.2015	*Scientific Consultant* MonetDB Solutions b.v., Amsterdam
06.2014-02.2015	*Computer Scientist* LogicBlox/Predictix Inc., Atlanta, GA, USA
10.2009-12.2013	*Ph.D. Researcher* Centrum Wiskunde & Informatica (CWI), Amsterdam
05.2012-07.2012	*Research Intern* Microsoft Research, Redmond, WA, USA
10.2007-09.2009	*Scientific staff* Centrum Wiskunde & Informatica (CWI), Amsterdam
03.2007-05.2007	*Java Developer and Database Designer* MobileMedia Ltd., Athens
10.2003-09.2005	*Research Assistant* ICS-FORTH, Heraklion, Crete
10.2001-09.2003	*Research Assistant* ICS-FORTH, Heraklion, Crete
08.2002-11.2002	*Software Engineer* Cytech-ltd I.T. Solutions, Heraklion, Crete
05.2000-04.2001	*Unix System Administrator* University of Crete, Heraklion

Funded Research/Project Participation

2007-	Core developer for the open source project *MonetDB: The column-store pioneer.*
2015-2017	The Commit Project (NL): *"TimeTrials: Spatiogtemporal Datawarehouses for Trajectory Exploitation."*
2010-2014	NWO Open Competition (NL): *"Querying while Transforming Large Graph Databases."*
2007-2009	Netherlands Forensic Institute (NL): *"XIRAF: An XML-IR Approach to Digital Forensics."*
2003-2005	C-Web (IST-1999-13479), MesMuses (IST-2001-26074), and QUESTION-HOW (IST-2000-28767) (FP5-IST EU): *"The ICS-FORTH RDFSuite: High-level Scalable Tools for the Semantic Web."*
2003-2005	Network of Excellence in Digital Libraries (Delos NoE-6038-507618) (EU): *ICS-FORTH SQPeer Middleware.*
2001-2003	ARION (IST-2000-25289) (FP5-IST EU): *"ARION: An advanced lightweight architecture for accessing scientific collections."*

Publications

Citations indices: Up-to-date 478 citations, h-index 9, i10-index 8 (from Google scholar).

Conference & Workshop Proceedings

[c10] *Sidirourgos, Lefteris,* and Hannes Mühleisen. *"Scaling Column Imprints using Advanced Vectorization."* 13th International Workshop on Data Management on New Hardware (**DaMoN 2017**). In proceedings of the 2017 ACM SIGMOD/PODS International Conference on Management of Data (SIGMOD'17). ACM, 2017.

[c9] Kersten, Martin, and *Lefteris Sidirourgos.* *"A Database System with Amnesia."* In Proceedings of the biennial Conference on Innovative Data Systems Research (**CIDR'17**), 2017.

[c8] *Sidirourgos, Lefteris,* Martin Kersten, and Peter Boncz. *"Scientific discovery through weighted sampling."* In Proceedings of the 2013 IEEE International Conference on Big Data (**IEEE BigData 2013**), pp. 300-306. IEEE, 2013.

[c7] *Sidirourgos, Lefteris,* and Martin Kersten. *"Column imprints: a secondary index structure."* In Proceedings of the 2013 ACM SIGMOD International Conference on Management of Data (**SIGMOD'13**), pp. 893-904. ACM, 2013.

[c6] Tsialiamanis, Petros, *Lefteris Sidirourgos,* Irini Fundulaki, Vassilis Christophides, and Peter Boncz. *"Heuristics-based query optimisation for SPARQL."* In Proceedings of the 15th International Conference on Extending Database Technology (**EDBT/ICDT '12**), pp. 324-335, 2012.

[c5] *Sidirourgos, Lefteris,* Martin L. Kersten, and Peter A. Boncz. *"SciBORQ: Scientific data management with Bounds On Runtime and Quality."* In Proceedings of the biennial Conference on Innovative Data Systems Research (**CIDR'11**), pp. 296-301. 2011.

[c4] Héman, Sándor, Marcin Zukowski, Niels J. Nes, *Lefteris Sidirourgos,* and Peter Boncz. *"Positional update handling in column stores."* In Proceedings of the 2010 ACM SIGMOD International Conference on Management of Data (**SIGMOD'10**), pp. 543-554. ACM, 2010.

[c3] *Sidirourgos, Lefteris,* and Peter Boncz. *"Generic and updatable XML value indices covering equality and range lookups."* Fourth International workshop on Database Technologies for Handling XML Information on the Web (**DataX'09**). In Proceedings of the 12th International Conference on Extending Database Technology (EDBT/ICDT) Workshops, pp. 65-73, 2009.

[c2] Tang, Nan, *Lefteris Sidirourgos,* and Peter Boncz. *"Space-economical partial gram indices for exact substring matching."* In Proceedings of the 18th ACM conference on Information and Knowledge Management (**CIKM'09**), pp. 285-294. ACM, 2009.

[c1] Kokkinidis, George, *Lefteris Sidirourgos,* Theodore Dalamagas, and Vassilis Christophides. *"Semantic Query Routing and Processing in P2P Digital Libraries."* In Proceedings of the 8th International Workshop of the DELOS Network of Excellence on Digital Libraries. 2005.

Journal articles

[j2] *Sidirourgos, Lefteris,* Romulo Goncalves, Martin Kersten, Niels Nes, and Stefan Manegold. *"Column-store support for RDF data management: not all swans are white."* Proceedings of the VLDB Endowment (**PVLDB**) 1, no. 2, pp. 1553-1563. 2008.

[j1]   *Sidirourgos, Lefteris*, George Kokkinidis, Theodore Dalamagas, Vassilis Christophides, and Timos Sellis. *"Indexing views to route queries in a PDMS."* Distributed and Parallel Databases 23, no. 1, pp. 45-68. 2008.

BOOKS

[p1]   Kokkinidis, George, *Lefteris Sidirourgos*, and Vassilis Christophides. *"Query processing in RDF/S-based P2P database systems."* In Semantic Web and Peer-to-Peer, pp. 59-81. Springer Berlin Heidelberg, 2006.

DISSERTATIONS

[d2]   *Sidirourgos, Lefteris.* *"Space Efficient Indexes for the Big Data Era."* Doctor of Philosophy dissertation. UvA-DARE (Digital Academic Repository). Faculty of Natuurwetenschappen, Wiskunde en Informatica, University of Amsterdam, 2014.

[d1]   *Sidirourgos, Lefteris.* *"Indexing Views to Route and Plan Queries in a Peer Data Management System."* Master of Science dissertation. Computer Science Department, University of Crete, 2005.

NATIONAL CONFERENCES

[n3]   Heman, Sandor, Marcin Zukowski, Niels Nes, *Lefteris Sidirourgos*, Peter Boncz. *"Positional update handling in column stores."* In Proceedings of the 9th Hellenic Data Management Symposium (HDMS'10), Ayia Napa, Cyprus. 2010.

[n2]   *Sidirourgos, Lefteris.* *"Column-Store Support for RDF Data Management: not all swans are white.".* In Dutch-Belgian Database Day (DBDBD'08). Namur, Belgium, Oct 10, 2008.

[n1]   *Sidirourgos, Lefteris*, George Kokkinidis, and Theodore Dalamagas. *"Efficient query routing in RDF/S schema-based P2P systems."* In Proceedings of the 4th Hellenic Data Management Symposium (HDMS'05), Athens, Greece. 2005.

Invited Talks

11.2016   *"A Nexus of Indexes."* Systems Group, ETH Zürich.

09.2016   *"A Database System with Amnesia."* CWI Scientific Meeting, Amsterdam.

06.2013   *"Bits are Valuable: making a Frugal Database Kernel."* LogicBlox, Atlanta, GA, USA.

04.2013   *"Column Imprints: A Secondary Index Structure."* DIAS Lab, EPFL, Lausanne.

01.2011   *"SciBORQ: Scientific data management with Bounds On Runtime and Quality."* HP Labs, Palo Alto, CA, USA.

01.2011   *"SciBORQ: Scientific data management with Bounds On Runtime and Quality."* IBM Research Almaden, San Jose, CA, USA.

Teaching Assistant

Spring 2017	*Data Modelling and Databases* Department of Computer Science, ETH Zürich Lecturers: prof. Dr. Gustavo Alonso, prof. Dr. Ce Zhang
Fall 2009	*Advance Database Technologies* Informatics Institute, University of Amsterdam Lecturer: prof. Dr. Martin Kersten
Fall 2008	*Advance Database Technologies* Informatics Institute, University of Amsterdam Lecturer: prof. Dr. Martin Kersten
Fall 2005	*Web Data Management* Computer Science Department, University of Crete Lecturer: prof. Dr. Vassilis Christophides
Spring 2004	*Object Oriented Programming* Computer Science Department, University of Crete Lecturer: prof. Dr. Vassilis Christophides
Fall 2004	*Object Oriented Programming* Computer Science Department, University of Crete Lecturer: prof. Dr. Vassilis Christophides
Fall 2003	*Data Structure* Computer Science Department, University of Crete Lecturer: prof. Dr. Georgios Georgakopoulos
Spring 2003	*Numerical Analysis* Department of Mathematics, University of Crete Lecturer: prof. Dr. Emmanuel Vavalis
Spring 2002	*Numerical Analysis* Department of Mathematics, University of Crete Lecturer: prof. Dr. Emmanuel Vavalis
Fall 2000	*Introduction to Programming* Department of Mathematics, University of Crete Lecturer: prof. Dr. Emmanuel Vavalis

Service to the profession

Program Committee Member

2017	Research Track – 43rd International Conference on *Very Large Data Bases (VLDB)* 2017.
2016	Demo Track – 42nd International Conference on *Very Large Data Bases (VLDB)* 2016.
2014	2nd International workshop on *Benchmarking RDF Systems* (BeRSys 2014), co-located with VLDB.

Journal Reviewer

2010, 2015	*IEEE Transactions on Knowledge and Data Engineering* (IEEE TDKE).
2010, 2011, 2012, 2014	*Elsevier Journal of Web Semantics* (JWS).
2008	*Springer Journal of Computer Science and Technology* (JCST).

External Conference/Journal Reviewer

2009, 2010, 2011	ACM SIG International Conference on *Management of Data* (SIGMOD).
2009, 2010, 2011	International Conference on *Extending Database Technology* (EDBT).
2011	International Workshop on *Data Warehousing and OLAP* (DOLAP), co-located with CIKM.
2005, 2009, 2010, 2011, 2013	International Conference on *Very Large Data Bases (VLDB)*.
2009	*International Journal on Semantic Web and Information Systems* (IJSWIS).
2008	International *World Wide Web* conference (WWW).