

Alexandra Meliou

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Research Interests

My research augments data management with user-facing functionality that helps people make sense of their data and use it effectively, at a time when data becomes increasingly unpredictable, unwieldy, and unmanageable. I focus on issues of provenance, causality, explanations, data quality, usability, and data and algorithmic bias. In the past, I have worked on a variety of topics spanning data management, machine learning, and sensor networks.

Education

UNIVERSITY OF CALIFORNIA, BERKELEY: Berkeley, CA, USA
2009 **Doctor of Philosophy in Computer Science**
Dissertation: Querying uncertain data in resource-constrained settings
Advisors: Joseph Hellerstein, Carlos Guestrin
2005 **Master of Science in Computer Science**
Thesis: Data gathering tours in sensor networks
Advisors: Joseph Hellerstein, Carlos Guestrin
NATIONAL TECHNICAL UNIVERSITY OF ATHENS: Athens, Greece
2003 **Diploma in Electrical and Computer Engineering (5-year degree)**
Thesis: Modeling and exploring the algebraic properties of hierarchical structures
Advisor: Timos Sellis

Employment History

UNIVERSITY OF MASSACHUSETTS: Amherst, MA, USA
9/2019 – present Associate Professor
9/2012 – 8/2019 Assistant Professor
UNIVERSITY OF WASHINGTON: Seattle, WA, USA
9/2009 – 8/2012 Postdoctoral Research Associate
Advisor: Dan Suciu
UNIVERSITY OF CALIFORNIA, BERKELEY: Berkeley, CA, USA
8/2003 – 12/2003 Teaching Assistant
1/2004 – 6/2009 Research Assistant
IBM RESEARCH: Almaden, CA, USA
5/2005 – 8/2005 Extreme Blue Intern
GO-ONLINE PROGRAM: Athens, Greece
6/2002 – 12/2002 Networking Consultant
INTRACOM CORP.: Athens, Greece
6/2000 – 8/2000 Software Developer

Honors, Awards, Fellowships

2019	SIGMOD Distinguished Core PC Member
2019	Communications of the ACM (CACM) Research Highlight
2018	VLDB Distinguished Reviewer
2018	SIGMOD Distinguished PC Member
2017	ACM SIGSOFT Distinguished Paper Award
2017	ACM SIGMOD Research Highlight Award
2016	Best papers of VLDB 2016
2016	Lilly Fellowship for Teaching Excellence
2015	NSF CAREER Award
2013	Google Faculty Research Award
2012	SIGMOD Best Demonstration Award
2008	Siebel Scholarship, awarded by the Siebel Foundation

Research Grants

- EAGER: In-Database Prescriptive Analytics under Uncertainty
NSF: The National Science Foundation
duration: Oct 1, 2019 – Sep 30, 2021
PIs: Peter Haas
Alexandra Meliou
\$299,317
- SHF: Medium: Fairness in Software Systems
NSF: The National Science Foundation
duration: Sep 15, 2018 – Aug 31, 2022
PIs: Yuriy Brun
Alexandra Meliou
\$1,050,000
- EAGER: Exploring the Feasibility of Software Testing Techniques to Evaluate Fairness Algorithms in Software Systems
NSF: The National Science Foundation
duration: Sep 1, 2017 – Aug 31, 2018
PIs: Yuriy Brun
Alexandra Meliou
\$131,230
- CAREER: Reverse Data Management:
Reverse-Engineering Data Transformations to Understand, Diagnose, and Manipulate Data
NSF: The National Science Foundation
duration: Aug 15, 2015 – July 31, 2020
PI: Alexandra Meliou
\$576,092
- III: Small: Collaborative research: The package query paradigm

NSF: The National Science Foundation
duration: Sept 1, 2014 – Aug 31, 2017
PIs : Alexandra Meliou
Azza Abouzied (New York University, Abu Dhabi)
\$ 498,530; UMass portion **\$249,927**

- EAGER: Data debugging
NSF: The National Science Foundation
duration: Sept 1, 2013 – Feb 28, 2015
PIs: Emery Berger
Alexandra Meliou
\$150,000
- Bidirectional data cleaning
Google: Google Faculty Research Award
duration: Aug 16, 2013 – Aug 16, 2039
PIs: Alexandra Meliou
\$56,403

Publications

Journal and Conference Publications

- [1] C. Freire, W. Gatterbauer, N. Immerman, and A. Meliou. The complexity of resilience for binary conjunctive queries with self joins. In *Symposium on Principles of Database Systems (PODS)*, 2020
- [2] A. Fariha and A. Meliou. Example-Driven Query Intent Discovery: Abductive Reasoning using Semantic Similarity. *PVLDB*, 12(11):1262–1275, 2019
- [3] X. Wang and A. Meliou. Explain3D: Explaining disagreements in disjoint datasets. *PVLDB*, 12(7):779–792, 2019
- [4] X. Wang, L. Dong, Y. Li, and A. Meliou. MIDAS: Finding the right web sources to fill knowledge gaps. In *35th IEEE International Conference on Data Engineering*, Apr. 2019
- [5] M. Brucato, A. Abouzied, and A. Meliou. Scalable computation of high-order optimization queries. *Communications of the ACM*, 2019. [\[Research Highlight\]](#)
- [6] X. Wang, L. Haas, and A. Meliou. Explaining Data Integration. *IEEE Data Engineering Bulletin*, 41(2):47–58, June 2018
- [7] Y. Wang, A. Meliou, and G. Miklau. RC-Index: Diversifying Answers to Range Queries. *PVLDB*, 11(7):773–786, Sept. 2018
- [8] M. Brucato, A. Abouzied, and A. Meliou. Package queries: efficient and scalable computation of high-order constraints. *The VLDB Journal*, 27(1), 2018. [\[Special Issue on Best Papers of VLDB 2016\]](#)
- [9] S. Galhotra, Y. Brun, and A. Meliou. Fairness testing: Testing software for discrimination. In *Proceedings of 2017 11th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 498–510, 2017. [\[ACM SIGSOFT Distinguished Paper Award\]](#)

- [10] M. Brucato, A. Abouzied, and A. Meliou. A Scalable Execution Engine for Package Queries. *SIGMOD Record*, 46(1):24–31, 2017. [\[ACM SIGMOD Research Highlight Award\]](#)
- [11] X. Wang, A. Meliou, and E. Wu. QFix: Diagnosing errors through query histories. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 1369–1384, 2017
- [12] H. Zhang, Y. Diao, and A. Meliou. Exstream: Explaining anomalies in event stream monitoring. In *20th International Conference on Extending Database Technology (EDBT)*, pages 156–167, 2017
- [13] Y. Wang, A. Meliou, and G. Miklau. Lifting the Haze off the Cloud: A Consumer-Centric Market for Database Computation in the Cloud. *PVLDB*, 10(4):373–384, 2016
- [14] M. Brucato, J. F. Beltran, A. Abouzied, and A. Meliou. Scalable Package Queries in Relational Database Systems. *PVLDB*, 9(7):575–587, 2016. [\[Best Papers of VLDB 2016\]](#)
- [15] C. Freire, W. Gatterbauer, N. Immerman, and A. Meliou. A characterization of the complexity of resilience and responsibility for self-join-free conjunctive queries. *PVLDB*, 9(3):180–191, 2015
- [16] X. Wang, X. L. Dong, and A. Meliou. Data X-Ray: A Diagnostic Tool for Data Errors. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, 2015
- [17] K. Muşlu, Y. Brun, and A. Meliou. Preventing Data Errors with Continuous Testing. In *Proceedings of the ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA)*, Baltimore, MD, USA, July 2015
- [18] R. Pochampally, A. Das Sarma, X. L. Dong, A. Meliou, and D. Srivastava. Fusing Data with Correlations. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 433–444, Snowbird, Utah, June 2014
- [19] A. Meliou and D. Suciu. Tiresias: The Database Oracle for How-To Queries. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 337–348, Scottsdale, AZ, May 2012
- [20] A. Meliou, W. Gatterbauer, S. Nath, and D. Suciu. Tracing Data Errors with View-Conditioned Causality. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 505–516, Athens, Greece, June 2011
- [21] A. Meliou, W. Gatterbauer, K. F. Moore, and D. Suciu. The Complexity of Causality and Responsibility for Query Answers and non-Answers. *PVLDB*, 4(1):34–45, 2010
- [22] A. Jha, V. Gogate, A. Meliou, and D. Suciu. Lifted Inference Seen from the Other Side: The Tractable Features. In *24th Annual Conference on Neural Information Processing Systems (NIPS)*, pages 973–981, Vancouver, Canada, Dec. 2010
- [23] A. Meliou, W. Gatterbauer, J. Y. Halpern, C. Koch, K. F. Moore, and D. Suciu. Causality in Databases. *IEEE Data Engineering Bulletin*, 33(3):59–67, 2010
- [24] A. Meliou, C. Guestrin, and J. M. Hellerstein. Approximating Sensor Network Queries using In-Network Summaries. In *Proceedings of the 8th International Conference on Information Processing in Sensor Networks (IPSN)*, pages 229–240, San Francisco, CA, Apr. 2009
- [25] T. Dalamagas, A. Meliou, and T. K. Sellis. Modeling and Manipulating the Structure of Hierarchical Schemas for the Web. *Information Sciences, Elsevier*, 178(4):985–1010, 2008

- [26] A. Meliou, A. Krause, C. Guestrin, and J. M. Hellerstein. Nonmyopic Informative Path Planning in Spatio-Temporal Models. In *Proceedings of the 22nd National Conference on Artificial Intelligence (AAAI)*, pages 602–607, Vancouver, Canada, July 2007
- [27] A. Meliou, D. Chu, J. M. Hellerstein, C. Guestrin, and W. Hong. Data Gathering Tours in Sensor Networks. In *Proceedings of the 5th International Conference on Information Processing in Sensor Networks (IPSN)*, pages 43–50, Nashville, TN, Apr. 2006

Short Conference and Workshop papers

- [28] Y. Brun and A. Meliou. Software Fairness. In *Proceedings of the New Ideas and Emerging Results Track at the 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)*, pages 754–759, Lake Buena Vista, FL, USA, November 2018
- [29] R. Angell, B. Johnson, Y. Brun, and A. Meliou. Themis: Automatically Testing Software for Discrimination. In *Proceedings of the Demonstrations Track at the The 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)*, pages 871–875, Lake Buena Vista, FL, USA, Nov. 2018. (demonstration paper)
- [30] A. Fariha, S. M. Sarwar, and A. Meliou. SQuID: Semantic similarity-aware query intent discovery. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 1745–1748, 2018. (demonstration paper)
- [31] X. Wang, A. Meliou, and E. Wu. QFix: Demonstrating error diagnosis in query histories. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 2177–2180, 2016. (demonstration paper)
- [32] X. Wang, M. Feng, Y. Wang, L. Dong, and A. Meliou. Error Diagnosis and Data Profiling with Data X-Ray. *PVLDB*, 8(12), 2015. (demonstration paper)
- [33] M. Brucato, A. Abouzied, and A. Meliou. Improving package recommendations through query relaxation. In *Proceedings of the 1st International DATA4U Workshop, in conjunction with VLDB*, Hangzhou, China, 2014
- [34] M. Brucato, R. Ramakrishna, A. Abouzied, and A. Meliou. PackageBuilder: From tuples to packages. *PVLDB*, 7(13):1593–1596, 2014. (demonstration paper)
- [35] A. Meliou, S. Roy, and D. Suciu. Causality and explanations in databases. *PVLDB*, 7(13):1715–1716, 2014. (tutorial presentation)
- [36] K. Fernandes, M. Brucato, R. Ramakrishna, A. Abouzied, and A. Meliou. PackageBuilder: querying for packages of tuples. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 1613–1614, Snowbird, Utah, 2014. (undergraduate research poster)
- [37] K. Muşlu, Y. Brun, and A. Meliou. Data Debugging with Continuous Testing. In *Proceedings of the New Ideas Track at the 9th Joint Meeting of the European Software Engineering Conference and ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE)*, pages 631–634, Saint Petersburg, Russia, Aug. 2013

- [38] A. Meliou, Y. Song, and D. Suciu. Tiresias: A Demonstration of How-To Queries. In *Proceedings of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pages 709–712, Scottsdale, AZ, May 2012. (demonstration paper) **[Best Demonstration Award]**
- [39] A. Meliou, W. Gatterbauer, and D. Suciu. Reverse Data Management. *PVLDB*, 4(11):1490–1493, 2011
- [40] A. Meliou, W. Gatterbauer, and D. Suciu. Bringing Provenance to its Full Potential Using Causal Reasoning. In *3rd USENIX Workshop on the Theory and Practice of Provenance (TaPP)*, Heraklion, Greece, June 2011
- [41] W. Gatterbauer, A. Meliou, and D. Suciu. Default-all is Dangerous! In *3rd USENIX Workshop on the Theory and Practice of Provenance (TaPP)*, Heraklion, Greece, June 2011
- [42] A. Meliou, W. Gatterbauer, K. F. Moore, and D. Suciu. Why So? or Why No? Functional Causality for Explaining Query Answers. In *Proceedings of the 4th International VLDB workshop on Management of Uncertain Data (MUD) in conjunction with VLDB*, pages 3–17, Singapore, Sept. 2010
- [43] A. Meliou, C. Guestrin, and J. M. Hellerstein. Multiresolution Cube Estimators for Sensor Network Aggregate Queries. In *Proceedings of the 4th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)*, Buenos Aires, Argentina, May 2010

Theses

- [44] A. Meliou. *Querying Uncertain Data in Resource Constrained Settings*. PhD thesis, University of California, Berkeley, Berkeley, CA, Dec. 2009
- [45] A. Meliou. *Data Gathering Tours in Sensor Networks*. Master’s thesis, University of California, Berkeley, Berkeley, CA, Dec. 2005
- [46] A. Meliou. *Modeling and Exploring the Algebraic Properties of Hierarchical Structures*. Diploma thesis, National Technical University of Athens, May 2003

Edited Proceedings and Special Issues

- [47] A. Meliou and H. Wang, editors. *IEEE Data Engineering Bulletin, Special Issue on Fairness, Diversity, and Transparency in Data Systems*, volume 42, no. 3. IEEE, Sept. 2019
- [48] A. Meliou and D. Lomet, editors. *IEEE Data Engineering Bulletin, Special Issue on Insights and Explanations in Data Analysis*, volume 41, no. 3. IEEE, Sept. 2018
- [49] Y. Brun, B. Johnson, and A. Meliou, editors. *Proceedings of the International Workshop on Software Fairness, FairWare 2018, Gothenburg, Sweden, May 29, 2018*, New York, NY, USA, 2018. ACM
- [50] A. Meliou and P. Senellart, editors. *Proceedings of the 20th International Workshop on the Web and Databases, WebDB 2017, Chicago, IL, USA, May 14-19, 2017*. ACM, 2017
- [51] A. Szalay, T. Budavari, M. Balazinska, A. Meliou, and A. Sacan, editors. *Conference on Scientific and Statistical Database Management, SSDBM ’13, Baltimore, MD, USA, July 29-31, 2013*. ACM, 2013
- [52] A. Meliou and V. Tannen, editors. *5th Workshop on the Theory and Practice of Provenance, TaPP’13, Lombard, IL, USA, April 2-3, 2013*. USENIX Association, 2013

Invited talks

Navigating an imperfect, messy data world

- University of California San Diego, August 23, 2019

Improving Knowledge Quality: Diagnosing Errors and Filling Gaps

- Automated Knowledge Base Construction conference, May 20, 2019

A Data Management Perspective on Fairness and Diversity in Learning Systems

- Keynote. New England Database Day, January 24, 2019

Software fairness and the role of data

- SIGMOD Special Session on Data Ethics and Responsible Data Management, June 14, 2018

Fairness testing: A systems' perspective to algorithmic bias

- New England Machine Learning Day, May 7, 2018

Diagnoses and Explanations: Creating a Higher-Quality Data World

- University of Nebraska, February 7, 2019
- State University of New York at Buffalo, May 17, 2018
- University of California, Berkeley, RISE Seminar, March 15, 2018

Understanding data: diagnosis, diversity, and fairness

- Dagstuhl Seminar: Connecting Visualization and Data Management Research, November 13, 2017

Data X-Ray: explanations, diagnoses, and insights into data-driven processes

- Computer Science colloquium, Worcester Polytechnic Institute (WPI), October 30, 2015

Reverse Data Management: deriving explanations, diagnoses, and desirable outcomes

- Research colloquium, Williams College, April 10, 2015

Fusing data with correlations

- Database Seminar, Brown University, May 7, 2014

From 'what-if' to 'how-to': A Reverse Perspective on Data Management

- CSIT Seminar, RMIT University, Apr 2, 2014

Why and How: A Reverse Perspective on Data Management

- School of Computer Science, Carnegie Mellon University, Jan 27, 2014

Data-Guided Decisions with How-To Queries

- Business Technology/Information Systems Seminar, Tepper School of Business, CMU, Jan 24, 2014

Reverse-Engineering Data Transformations: A New Perspective on Data Management

- INRIA, France, May 13, 2013

Why and How: A Reverse Perspective on Data Management

- Computer Science colloquium, University of Massachusetts, Lowell, April 22, 2013

The Power of How-to Queries

- NEDB Summit, Feb 1, 2013

Reverse Engineering Data Transformations

- Massachusetts Institute of Technology, October 5, 2012

Reverse Data Analytics: Answering Hard Questions on Big Data

- Duke University, Big Data workshop, June 14, 2012

Why and How: A Reverse Perspective on Data Management

- Virginia Polytechnic Institute and State University, April 9, 2012
- University of Massachusetts, Amherst, April 4, 2012
- University of Rochester, April 2, 2012
- Cornell University, March 27, 2012
- Oregon State University, March 19, 2012
- University of California, Irvine, March 14, 2012
- University of Michigan, Mar 6, 2012
- Max Planck Institute for Software Systems, Feb 27, 2012
- Northeastern University, Feb 14, 2012
- University of California, Berkeley, Feb 7, 2012

The Complexity of Causality and Responsibility for Query Answers and non-Answers

- University of Pennsylvania, August 8, 2011

Tracing Data Errors Using View-Conditioned Causality

- Microsoft Research, Redmond, May 18, 2011

Errors and Explanations in Data Transformations: When Provenance is not Enough

- Tufts University, April 19, 2011
- Boston University Computer Science Colloquium, April 15, 2011
- Massachusetts Institute of Technology, April 15, 2011

Why No and Why So? Causality in Databases

- Institute for the Management of Information Systems, Athens, September 3, 2010
- University of California, Berkeley, April 29, 2010

Panelist:

- VLDB PhD Workshop 2015
- Data4U VLDB workshop 2014
- SIGMOD New Researcher Symposium 2013
- VLDB PhD workshop 2010

Teaching Activities

Instructor	University of Massachusetts Amherst	
..... 2019		
CMPSCI 345	Practice and Applications of Data Management (undergraduate)	Fall
CMPSCI H345	Honors Colloquium (undergraduate)	Fall
CMPSCI 692E	Equitable Algorithms and Systems (graduate seminar)	Fall
CMPSCI 345	Practice and Applications of Data Management (undergraduate)	Spring
..... 2018		
CMPSCI 345	Practice and Applications of Data Management (undergraduate)	Fall
CMPSCI 645	Database Design and Implementation (graduate)	Spring
..... 2017		
CMPSCI 345	Practice and Applications of Data Management (undergraduate)	Fall
CMPSCI H345	Honors Colloquium (undergraduate)	Fall
CMPSCI 645	Database Design and Implementation (graduate)	Spring
..... 2015		
CMPSCI 345	Practice and Applications of Data Management (undergraduate)	Fall
CMPSCI 645	Database Design and Implementation (graduate)	Spring

..... 2014		
CMPSCI 345	Practice and Applications of Data Management (undergraduate)	Fall
CMPSCI H345	Honors Colloquium (undergraduate)	Fall
..... 2013		
CMPSCI 390DB	Practice and Applications of Data Management (undergraduate)	Fall
CMPSCI H390DB	Honors Colloquium (undergraduate)	Fall
CMPSCI 390DB	Practice and Applications of Data Management (undergraduate)	Spring
..... 2012		
CMPSCI 645	Database Design and Implementation (graduate)	Fall

Instructor **University of Washington**

..... 2011		
CSE 444	Introduction to Databases (undergraduate) co-taught with Wolfgang Gatterbauer	Winter
..... 2010		
CSE 590Q	Positive and negative provenance in database systems (graduate seminar) co-taught with Wolfgang Gatterbauer	Winter

Teaching Assistant **University of California, Berkeley**

..... 2013		
CS 186	Introduction to Databases (undergraduate)	Fall

Teaching Grants

2015	Amazon Web Services in Education Coursework grant — \$3,900.
2014	Amazon Web Services in Education Coursework grant — \$4,500.
2013	Amazon Web Services in Education Coursework grant — \$6,700.
2012	Amazon Web Services in Education Coursework grant — \$3,200.
2011	Amazon Web Services teaching grant — \$5,600.

Student Supervision

PhD Advisor

current	Matteo Brucato (co-advised with Peter Haas and Azza Abouzied)	expected graduation: 2019
	Anna Fariha	expected graduation: 2021
	Zafeiria Moumoulidou	expected graduation: 2023
	Maliha Islam	expected graduation: 2024
2018	Xiaolan Wang (recipient of a 2015 Google PhD Fellowship)	currently: Megagon Labs
2017	Yue Wang (co-advised with Gerome Miklau)	currently: Microsoft Research

Masters

2015	Sainyam Galhotra	currently: PhD student at UMass Amherst
2013	Ravali Pochampally	currently: Software Engineer at Google
	Rahul Ramakrishna	

Thesis committee member

	Dan Barowy (PhD, advised by Emery Berger)
	Cibele Freire (PhD, advised by Neil Immerman)
	Haopeng Zhang (PhD, advised by Yanlei Diao)
	Nicolas Scarci (MS, advised by Robbie Moll)

Undergraduate		
current	Armand Asnani Nishad Ranade Tina Liu Lucy Cousins Kyaw Htet	
2019	Merritt Kowaleski (REU) Aisiri Murulidhar (Honors) Nischal Dave (Honors)	
2018	Zoey (Jingyi) Sun	currently: software engineer at Google
2017	Lauren Beryl Larson (REU)	currently: undergraduate at Wellesley College
2015	Mary Feng (REU)	currently: graduate student at UW Madison
2014	Linda Yeboah Kevin Fernandes	currently: analyst at Morgan Stanley currently: M.D. Candidate at the Albert Einstein College of Medicine
2013	Joseph Scherr (REU) Hridya Turlapati Jeffrey Pezzone	currently: software engineer at Cisco Systems
2012	Yisong Song	currently: software engineer at Facebook

Professional Service

Journal Editorial Service

.....	2020
VLDBJ	Associate Editor	
PVLDB	Associate Editor, Editorial Board for volume 13 of PVLDB	
.....	2019
VLDBJ	Associate Editor	
PVLDB	Associate Editor, Editorial Board for volume 12 of PVLDB	
DE-Bulletin	Associate Editor, Data Engineering Bulletin, IEEE TCDE	
.....	2018
DE-Bulletin	Associate Editor, Data Engineering Bulletin, IEEE TCDE	

Conference and Other Organizational Roles

.....	2021
VLDB	Workshop Chair	
.....	2019
Jim Gray	The SIGMOD Jim Gray Dissertation Award committee	
ACM-force	ACM Publications Board Task Force on Improving Peer-Reviewer Incentives	
.....	2018
ICDE-PhD	PC Chair, ICDE PhD Symposium	
Fairware	PC Chair, International Workshop on Software Fairness	
.....	2017
WebDB	PC Chair, 20th International Workshop on the Web and Databases	
TaPP	Steering Committee member, Workshop on the Theory and Practice of Provenance	

	2016
SIGMOD	PC Track Chair, ACM SIGMOD International Conference on Management of Data
TaPP	Steering Committee member, Workshop on the Theory and Practice of Provenance
	2015
SIGMOD	New Researcher Symposium co-Chair, ACM SIGMOD International Conference on Management of Data
SIGMOD	Travel awards program co-Chair, ACM SIGMOD International Conference on Management of Data
TaPP	Steering Committee member, Workshop on the Theory and Practice of Provenance
	2014
VLDB demo	Excellent Demonstration Awards Selection Committee
SIGMOD	New Researcher Symposium co-Chair, ACM SIGMOD International Conference on Management of Data
SIGMOD	Travel awards program co-Chair, ACM SIGMOD International Conference on Management of Data
TaPP	Steering Committee member, Workshop on the Theory and Practice of Provenance
	2013
TaPP	Program Committee co-Chair, Workshop on the Theory and Practice of Provenance
TaPP	Steering Committee member, Workshop on the Theory and Practice of Provenance
SIGMOD	Undergraduate Research Program co-Chair, ACM SIGMOD International Conference on Management of Data
SSDBM	Demonstration Chair, 25 th International Conference on Scientific and Statistical Database Management

Program Committee Membership

	2020
SIGMOD	ACM SIGMOD International Conference on Management of Data
	2019
SIGMOD	ACM SIGMOD International Conference on Management of Data (Core PC)
AMW	Alberto Mendelzon International Workshop on Foundations of Data Management
HDMS	The Hellenic Data Management Symposium
	2018
SIGMOD	ACM SIGMOD International Conference on Management of Data
PVLDB	44 th International Conference of Very Large Databases
	2017
SIGMOD	ACM SIGMOD International Conference on Management of Data
AMW	Alberto Mendelzon International Workshop on Foundations of Data Management
	2016
ICDE	IEEE International Conference on Data Engineering
	2015
SIGMOD	ACM SIGMOD International Conference on Management of Data
PVLDB	41 st International Conference of Very Large Databases
VLDB PhD	VLDB PhD Workshop

..... 2014	
SIGMOD demo	ACM SIGMOD International Conference on Management of Data, demonstration track
PVLDB	40 th International Conference of Very Large Databases
SSDBM	26 th International Conference on Scientific and Statistical Database Management
..... 2013	
SIGMOD	ACM SIGMOD International Conference on Management of Data
PVLDB demo	39 th International Conference of Very Large Databases, demonstration track
ICDE	29 th IEEE International Conference on Data Engineering
NEDB	New England Database Summit
..... 2012	
SIGMOD demo	ACM SIGMOD International Conference on Management of Data, demonstration track
CIKM	International Conference on Information and Knowledge Management
ICDE	28 th IEEE International Conference on Data Engineering
TaPP	Workshop on the Theory and Practice of Provenance
WebDB	Workshop on the Web and Databases
..... 2011	
SIGMOD	ACM SIGMOD International Conference on Management of Data
PVLDB	37 th International Conference of Very Large Databases
MUD	Workshop on Management of Uncertain Data

Other reviewing service

InfSci	Ad hoc reviewer for Information Sciences, Special Issue on AMW 2018
NSF	Panelist in the Information and Intelligent Systems division (IIS), 2017
PLDI	Ad hoc reviewer for PLDI, 2016
NSF	Panelist in the Information and Intelligent Systems division (IIS), 2015
TKDE	IEEE Transactions on Knowledge and Data Engineering, 2015
RECORD	ACM SIGMOD Record, 2015
NSF	Panelist in the Information and Intelligent Systems division (IIS), twice in 2014
TODS	Transactions on Database Systems, 2014
TODS	Transactions on Database Systems, 2013
TODS	Transactions on Database Systems, 2012
ICDT	International Conference on Database Theory, 2012
TaPP	Workshop on the Theory and Practice of Provenance, 2011
PODS	Principles of Database Systems, 2010
MONET	Mobile Networks and Applications, 2010
TKDE	Transactions on Knowledge & Data Engineering, 2009
IPSN	Information Processing in Sensor Networks, 2007
TOSN	Transactions on Sensor Networks, 2007
Elsev	Elsevier Computer Communications, 2006
TMC	IEEE Transactions on Mobile Computing, 2006

Internal Service

- 2019–2020 Faculty Recruiting: Robotics
 CS Women Faculty Liaison
 Undergraduate Awards and Scholarships (chair)
- 2018–2019 Annual Faculty Review Committee
 CS Women Faculty Liaison
 Executive Committee
- 2017–2018 Faculty Recruiting: Informatics
 CS Women Faculty Liaison
 Diversity Committee
- 2016–2017 Faculty Recruiting: Data Science Systems
 Executive Committee
 Diversity Committee
- 2015–2016 Graduate Program Committee
 Awards Committee
- 2014–2015 Computer Science Director Search Committee
 Computer Science Executive Committee
 CS Women’s advisor
- 2013–2014 Annual Faculty Review Committee
 Computer Science Distinguished Lecture Series chair
- 2012–2013 Computer Science Graduate Admissions Committee