

Mahmoud Abo Khamis

Associate Professor of Computer Science, University of Oxford
Room 307, Wolfson Building, Parks Road – Oxford OX1 3QD, UK

✉ mahmoud.abokhamis@cs.ox.ac.uk

🌐 cs.ox.ac.uk/people/mahmoud.abokhamis

Education

University at Buffalo (The State University of New York)

Ph.D. in Computer Science and Engineering, GPA – 3.9/4.0

Spring 2013 - Spring 2016

Best CSE Dissertation Award 2016 from UB

Thesis: “FAQ: Questions Asked Frequently” [45]

Advisor: Prof. Hung Q. Ngo

University at Buffalo (The State University of New York)

M.S. in Computer Science and Engineering, GPA – 3.9/4.0

Fall 2011 - Fall 2012

Damascus University

B.Eng. in Computer Science

Fall 2005 - Spring 2010

Work Experience

University of Oxford

Associate Professor of Computer Science

Tutorial Fellow at Wadham College

Oxford, UK

Sep 2026 - Present

Relational AI, Inc. [\[link\]](#)

Senior Computer Scientist

Responsibilities:

- Contributing to the design and implementation of a new database engine with built-in support for knowledge graph processing and machine learning. [20, 19, 44, 36]
- Designing and implementing query optimization and evaluation algorithms. [14, 7, 25, 15, 26]

Berkeley, CA

Nov 2017 - Jul 2026

Simons Institute for the Theory of Computing, UC Berkeley [\[link\]](#)

Visiting Research Scientist

Research topics:

- Query Optimization and Evaluation: Instance Optimality [\[recorded talk\]](#)
- Relational Algorithms for Machine Learning [\[recorded talk\]](#)

Berkeley, CA

Aug 2023 - Dec 2023

Infor (US), Inc. [\[link\]](#)

Senior Database Engineer

Berkeley, CA

June 2015 - Oct 2017

Responsibilities:

- Contributing to the design and implementation of the LogicBlox database engine that is being used by Infor. [\[LogicBlox link\]](#)
- Writing, debugging, and tuning high-performance C++ systems code.
- Doing research in database theory and applications.
 - Selected publications: [40, 41, 21, 39].

SUNY RF (Research Foundation for The State University of New York)

Buffalo, NY

Research Assistant

Sept 2013 - May 2015

Research topics:

- Designing efficient algorithms for various database query processing operations [42, 22].
- Designing a general-purpose query language for database and machine learning queries [40].

University at Buffalo (SUNY)

Buffalo, NY

(Primary) Instructor

May 2013 - Aug 2013

Taught "Discrete Structures" (CSE 191) for the Summer 2013 semester. [\[Course link\]](#)

University at Buffalo (SUNY)

Buffalo, NY

Teaching Assistant

Jan 2013 - May 2013

Taught "Data Structures and Algorithms" (CSE 250) for the Spring 2013 semester. [\[Course link\]](#)

SyriaTel Mobile Telecom

Damascus, Syria

Intern, Software Development

Sept 2009 - July 2010

Awards, Honors and Recognitions

- **ACM PODS 2026 Test-of-Time Award** [40] at ACM SIGMOD/PODS 2026 Conference, May 31-June 5, 2026, Bengaluru, India. [\[link\]](#)
- **Invited Tutorial** [23] at ACM SIGMOD/PODS 2026. [\[link\]](#)
- **ACM PODS 2026 Distinguished Paper Award** [2]. [\[link\]](#)
- **Invited Paper** [2] to the **Journal of the ACM**. To appear.
- **ICDT 2026 Outstanding Reviewer Award**. [\[link\]](#)
- **ACM SIGMOD 2025 Best Paper Award** [7] at ACM SIGMOD/PODS 2025 Conference, June 22-27, 2025, Berlin, Germany. [\[link\]](#)
- **ACM PODS 2025 Test-of-Time Award** [42] at ACM SIGMOD/PODS 2025 Conference, June 22-27, 2025, Berlin, Germany. [\[link\]](#)
- **ACM PODS 2025 Distinguished PC Member Award**. [\[link\]](#)
- **ACM PODS 2025 Distinguished Paper Award** [8].
- **Invited Paper** [8] to **TheoretiCS**. To appear.
- **ACM SIGMOD Research Highlight Award 2024** [11]. [\[link\]](#)
- **ACM PODS 2024 Distinguished Paper Award** [14]
- **Invited Paper** [14] to **ACM TODS**. To appear.
- **ACM PODS 2022 Best Paper Award** [25] at ACM SIGMOD/PODS 2022 Conference, June 12-17, 2022, Philadelphia, PA. [\[link\]](#)
- **ACM SIGMOD Research Highlight Award 2022** [16]. [\[link\]](#)

- **Invited Paper [25] to the Journal of the ACM.** Published [15].
- **Invited Article to ACM SIGMOD Record [17].** [\[link\]](#)
- **Invited Paper [33] to ACM TODS.** Published [18].
- **Invited Paper [34] to ACM TODS.** Published [19].
- **Invited Paper [38] to ACM TODS.** Published [20].
- PODS 2016 Paper [41] invited for a **Plenary Talk at ACM STOC 2018 Theory Fest**, June 25-29, 2018, Los Angeles, CA. [\[link\]](#)
- PODS 2017 Paper [39] **invited to the Journal of the ACM** [46].
- **ACM PODS 2016 Best Paper Award** [40] at ACM SIGMOD/PODS 2016 Conference, June 26 - July 1, 2016, San Francisco, CA. [\[link\]](#)
- **ACM SIGMOD Research Highlight Award 2016** [21]. [\[link\]](#)
- PODS 2016 Paper [40] invited for a **Plenary Talk at ACM STOC 2017 Theory Fest**, June 19-23, 2017, Montreal, Canada. [\[link\]](#)
- PODS 2016 Paper [40] **invited to the Journal of the ACM** [47].
- **Best CSE (Computer Science and Engineering) Dissertation Award 2016** [45] presented by University at Buffalo (SUNY). [\[link\]](#)
- **Honorable Mention in ACM SIGACT News** for PODS 2016 Paper [40]. [\[link\]](#)
- Paper [39] invited for a **Keynote Talk in the Highlights Conference** (Highlights of Logic, Games and Automata), September 12-15, 2017, London, UK.
- Paper [39] invited for a **Keynote Talk in AMW 2017**, June 5-9, 2017, Montevideo, Uruguay. [\[link\]](#)
- **Invited Paper to ACM TODS** for PODS 2015 Paper [42]. Published [22].

Older Recognitions.....

- Ranked 1st in the 4th Syrian Olympiad in Informatics (SOI 2007), July 31 - August 2, 2007, Damascus, Syria.
- Represented Syria in the 19th International Olympiad in Informatics (IOI 2007), August 15-22, 2007, Zagreb, Croatia. [\[link\]](#)
- Ranked 4th in CodeCup 2008 International Programming Competition. [\[link\]](#)

Publications

[\[Google Scholar\]](#) [\[DBLP\]](#) [\[ORCID\]](#)

Journals.....

- [1] Christoph Mayer, Haozhe Zhang, Mahmoud Abo Khamis, Kyle Deeds, Dan Olteanu, and Dan Suciu. CorrBound: Cardinality Estimation Accounting for Inter- and Intra-relation Correlations. *Proc. ACM Manag. Data*, 4(1), April 2026. [\[link\]](#).
- [2] Mahmoud Abo Khamis, Hung Q. Ngo, and Dan Suciu. PANDAExpress: A Simpler and Faster PANDA Algorithm. *Proc. ACM Manag. Data*, 4(2), May 2026. [\[link\]](#). **Distinguished Paper**

Award. Invited to the Journal of the ACM.

- [3] Mahmoud Abo Khamis, Alexandru-Mihai Hurjui, Ahmet Kara, Dan Olteanu, and Dan Suciu. Acyclic Conjunctive Regular Path Queries are no Harder than Corresponding Conjunctive Queries. *Proc. ACM Manag. Data*, 4(2), May 2026. [\[link\]](#).
- [4] Mahmoud Abo Khamis and Hubie Chen. Jaguar: A Primal Algorithm for Conjunctive Query Evaluation in Submodular-Width Time. *Proc. ACM Manag. Data*, 4(2), May 2026. [\[link\]](#).
- [5] Mahmoud Abo Khamis, Eden Chmielewski, Andrei Draghici, Ahmet Kara, and Dan Olteanu. Maintaining Queries under Updates Using Heavy-Light Partitioning of the Input Relations. 4(2), May 2026. [\[link\]](#).
- [6] Mahmoud Abo Khamis, Jesse Comer, Phokion G. Kolaitis, Sudeepa Roy, and Val Tannen. A unifying algorithm for hierarchical queries. *Proc. ACM Manag. Data*, 3(5), November 2025. [\[link\]](#).
- [7] Haozhe Zhang, Christoph Mayer, Mahmoud Abo Khamis, Dan Olteanu, and Dan Suciu. LpBound: Pessimistic Cardinality Estimation Using Lp-Norms of Degree Sequences. *Proc. ACM Manag. Data*, 3(3), June 2025. [\[link\]](#). **Best Paper Award.**
- [8] Mahmoud Abo Khamis, Xiao Hu, and Dan Suciu. Fast Matrix Multiplication meets the Submodular Width. *Proc. ACM Manag. Data*, 3(2), June 2025. [\[link\]](#). **Distinguished Paper Award. Invited to TheoretiCS.**
- [9] Mahmoud Abo Khamis, Ahmet Kara, Dan Olteanu, and Dan Suciu. Output-Sensitive Evaluation of Regular Path Queries. 3(2), June 2025. [\[link\]](#).
- [10] Mahmoud Abo Khamis, Hung Q. Ngo, and Dan Suciu. PANDA: Query Evaluation in Submodular Width. *TheoretiCS*, Volume 4, Apr 2025. [\[link\]](#).
- [11] Mahmoud Abo Khamis, Vasileios Nakos, Dan Olteanu, and Dan Suciu. Information Theory Strikes Back: New Development in the Theory of Cardinality Estimation. *SIGMOD Rec.*, 54(1):7–15, April 2025. [\[link\]](#). **Invited Article [14].**
- [12] Mahmoud Abo Khamis, Kyle Deeds, Dan Olteanu, and Dan Suciu. Pessimistic Cardinality Estimation. *SIGMOD Rec.*, 53(4):1–17, January 2025. [\[link\]](#). **Invited Article.**
- [13] Mahmoud Abo Khamis, Ahmet Kara, Dan Olteanu, and Dan Suciu. Insert-Only versus Insert-Delete in Dynamic Query Evaluation. *Proc. ACM Manag. Data*, 2(5), November 2024. [\[link\]](#).
- [14] Mahmoud Abo Khamis, Vasileios Nakos, Dan Olteanu, and Dan Suciu. Join Size Bounds using lp-Norms on Degree Sequences. *Proc. ACM Manag. Data*, 2(2), May 2024. [\[link\]](#). **Distinguished Paper Award. ACM SIGMOD Research Highlight Award 2024. Invited to ACM TODS.**

- [15] Mahmoud Abo Khamis, Hung Q. Ngo, Reinhard Pichler, Dan Suciu, and Yisu Remy Wang. Convergence of datalog over (Pre-) Semirings. *Journal of the ACM (J. ACM)*, 71(2), Apr 2024. [\[link\]](#). **Invited Paper [25]**.
- [16] Mahmoud Abo Khamis, Hung Q. Ngo, Reinhard Pichler, Dan Suciu, and Yisu Remy Wang. Convergence of Datalog over (Pre-) Semirings. *SIGMOD Rec.*, 52(1):75–82, Jun 2023. [\[link\]](#). **Invited Paper [25]**.
- [17] Mahmoud Abo Khamis, Hung Q. Ngo, Reinhard Pichler, Dan Suciu, and Yisu Remy Wang. Datalog in Wonderland. *SIGMOD Rec.*, 51(2):6–17, Jul 2022. [\[link\]](#). **Invited Article**.
- [18] Mahmoud Abo Khamis, Phokion G. Kolaitis, Hung Q. Ngo, and Dan Suciu. Bag Query Containment and Information Theory. *ACM Transactions on Database Systems (ACM TODS)*, 46(3), Sep 2021. [\[link\]](#). **Invited Paper [33]**.
- [19] Mahmoud Abo Khamis, Ryan R. Curtin, Benjamin Moseley, Hung Q. Ngo, Xuanlong Nguyen, Dan Olteanu, and Maximilian Schleich. Functional Aggregate Queries with Additive Inequalities. *ACM Transactions on Database Systems (ACM TODS)*, 45(4), Dec 2020. [\[link\]](#). **Invited Paper [34]**.
- [20] Mahmoud Abo Khamis, Hung Q. Ngo, Xuanlong Nguyen, Dan Olteanu, and Maximilian Schleich. Learning Models over Relational Data Using Sparse Tensors and Functional Dependencies. *ACM Transactions on Database Systems (ACM TODS)*, 45(2), Jun 2020. [\[link\]](#). **Invited Paper [38]**.
- [21] Mahmoud Abo Khamis, Hung Q. Ngo, and Atri Rudra. Juggling Functions Inside a Database. *ACM SIGMOD Record, Research Highlights Issue*, 46(1):6–13, May 2017. [\[link\]](#).
- [22] Mahmoud Abo Khamis, Hung Q. Ngo, Christopher Ré, and Atri Rudra. Joins via Geometric Resolutions: Worst Case and Beyond. *ACM Transactions on Database Systems (ACM TODS)*, 41(4):22:1–22:45, November 2016. [\[link\]](#). **Invited Paper [42]**.

Conference Papers.....

- [23] Mahmoud Abo Khamis, Hung Q. Ngo, and Dan Suciu. Query Optimization and Evaluation via Information Theory. In *Companion of the 45th Symposium on Principles of Database Systems, PODS Companion '26*, page 2–17, New York, NY, USA, 2026. Association for Computing Machinery. [\[link\]](#).
- [24] Mahmoud Abo Khamis, Alexandru-Mihai Hurjui, Ahmet Kara, Dan Olteanu, Dan Suciu, and Zilu Tian. Output-Sensitive Evaluation of Acyclic Conjunctive Regular Path Queries. In Balder ten Cate and Maurice Funk, editors, *29th International Conference on Database Theory (ICDT 2026)*, volume 365 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 18:1–18:20, Dagstuhl, Germany, 2026. Schloss Dagstuhl – Leibniz-Zentrum für Informatik. [\[link\]](#).
- [25] Mahmoud Abo Khamis, Hung Q. Ngo, Reinhard Pichler, Dan Suciu, and Yisu Remy Wang. Convergence of Datalog over (Pre-) Semirings. *PODS '22*, page 105–117, New York, NY, USA, 2022. ACM. [\[link\]](#) **Best Paper Award. ACM SIGMOD Research Highlight Award 2022 [16]. Invited to the Journal of the ACM [15]**.

- [26] Yisu Remy Wang, Mahmoud Abo Khamis, Hung Q. Ngo, Reinhard Pichler, and Dan Suciu. Optimizing Recursive Queries with Program Synthesis. In *Proceedings of the 2022 International Conference on Management of Data, SIGMOD '22*, page 79–93, New York, NY, USA, 2022. ACM. [\[link\]](#).
- [27] Mahmoud Abo Khamis, George Chichirim, Antonia Kormpa, and Dan Olteanu. The Complexity of Boolean Conjunctive Queries with Intersection Joins. PODS '22, page 53–65, New York, NY, USA, 2022. ACM. [\[link\]](#).
- [28] Mahmoud Abo Khamis, Ryan Curtin, Sungjin Im, Benjamin Moseley, Hung Ngo, Kirk Pruhs, and Alireza Samadian. An Approximation Algorithm for the Matrix Tree Multiplication Problem. In *46th International Symposium on Mathematical Foundations of Computer Science (MFCS 2021)*, volume 202 of *LIPICs*, pages 6:1–6:14, Dagstuhl, Germany, 2021. Schloss Dagstuhl – Leibniz-Zentrum für Informatik. [\[link\]](#).
- [29] Mahmoud Abo Khamis, Sungjin Im, Benjamin Moseley, Kirk Pruhs, and Alireza Samadian. A Relational Gradient Descent Algorithm For Support Vector Machine Training. In *APOCS*, 2021. [\[link\]](#).
- [30] Mahmoud Abo Khamis, Sungjin Im, Benjamin Moseley, Kirk Pruhs, and Alireza Samadian. Approximate Aggregate Queries Under Additive Inequalities. In *APOCS*, 2021. [\[link\]](#).
- [31] Mahmoud Abo Khamis, Sungjin Im, Benjamin Moseley, Kirk Pruhs, and Alireza Samadian. Instance Optimal Join Size Estimation. *Procedia Computer Science*, 195:135–144, 2021. [\[link\]](#).
- [32] Mahmoud Abo Khamis, Phokion G. Kolaitis, Hung Q. Ngo, and Dan Suciu. Decision Problems in Information Theory. In *47th International Colloquium on Automata, Languages, and Programming (ICALP 2020)*, volume 168 of *LIPICs*, pages 106:1–106:20, Dagstuhl, Germany, 2020. Schloss Dagstuhl–Leibniz-Zentrum für Informatik. [\[link\]](#).
- [33] Mahmoud Abo Khamis, Phokion G. Kolaitis, Hung Q. Ngo, and Dan Suciu. Bag Query Containment and Information Theory. PODS'20, page 95–112, New York, NY, USA, 2020. ACM. [\[link\]](#). **Invited to ACM TODS [18]**.
- [34] Mahmoud Abo Khamis, Ryan R. Curtin, Benjamin Moseley, Hung Q. Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich. On Functional Aggregate Queries with Additive Inequalities. In *Proceedings of the 38th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems*, PODS '19, page 414–431, New York, NY, USA, 2019. ACM. [\[link\]](#). **Invited to ACM TODS [19]**.
- [35] Maximilian Schleich, Dan Olteanu, Mahmoud Abo Khamis, Hung Q. Ngo, and XuanLong Nguyen. Learning Models over Relational Data: A Brief Tutorial. In Nahla Ben Amor, Benjamin Quost, and Martin Theobald, editors, *Scalable Uncertainty Management*, pages 423–432, Cham, 2019. Springer International Publishing. [\[link\]](#).
- [36] Maximilian Schleich, Dan Olteanu, Mahmoud Abo Khamis, Hung Q. Ngo, and XuanLong Nguyen. A Layered Aggregate Engine for Analytics Workloads. SIGMOD '19, page 1642–1659, New York, NY, USA, 2019. ACM. [\[link\]](#).

- [37] Mahmoud Abo Khamis, Hung Q. Ngo, Dan Olteanu, and Dan Suciu. Boolean Tensor Decomposition for Conjunctive Queries with Negation. In *22nd International Conference on Database Theory, ICDT 2019, March 26-28, 2019, Lisbon, Portugal*, pages 21:1–21:19, 2019. [\[link\]](#).
- [38] Mahmoud Abo Khamis, Hung Q. Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich. In-Database Learning with Sparse Tensors. In *Proceedings of the 37th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems*, SIGMOD/PODS '18, pages 325–340, New York, NY, USA, 2018. ACM. [\[link\]](#). **Invited to ACM TODS [20]**.
- [39] Mahmoud Abo Khamis, Hung Q. Ngo, and Dan Suciu. What Do Shannon-type Inequalities, Submodular Width, and Disjunctive Datalog Have to Do with One Another? In *Proceedings of the 36th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems*, PODS '17, pages 429–444, New York, NY, USA, 2017. ACM. [\[link\]](#). **Invited to the Journal of the ACM**.
- [40] Mahmoud Abo Khamis, Hung Q. Ngo, and Atri Rudra. FAQ: Questions Asked Frequently. In *Proceedings of the 35th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems*, PODS '16, pages 13–28, New York, NY, USA, 2016. ACM. [\[link\]](#). **Best Paper Award. ACM PODS 2026 Test-of-Time Award. ACM SIGMOD Research Highlight Award [21]. Invited to the Journal of the ACM**.
- [41] Mahmoud Abo Khamis, Hung Q. Ngo, and Dan Suciu. Computing Join Queries with Functional Dependencies. In *Proceedings of the 35th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems*, PODS '16, pages 327–342, New York, NY, USA, 2016. ACM. [\[link\]](#).
- [42] Mahmoud Abo Khamis, Hung Q. Ngo, Christopher Ré, and Atri Rudra. Joins via Geometric Resolutions: Worst-case and Beyond. In *Proceedings of the 34th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems*, PODS '15, pages 213–228, New York, NY, USA, 2015. ACM. [\[link\]](#). **ACM PODS 2026 Test-of-Time Award. ACM PODS 2026 Test-of-Time Award. Invited to ACM TODS [22]**.

Workshop Papers.....

- [43] Christoph Mayer, Haozhe Zhang, Mahmoud Abo Khamis, Dan Olteanu, and Dan Suciu. LpBound in Action: Cardinality Estimation with One-Sided Guarantees. In *Companion of the 2025 International Conference on Management of Data*, SIGMOD/PODS '25, page 187–190, New York, NY, USA, 2025. [\[link\]](#).
- [44] Mahmoud Abo Khamis, Hung Q. Ngo, XuanLong Nguyen, Dan Olteanu, and Maximilian Schleich. AC/DC: In-Database Learning Thunderstruck. In *Proceedings of the Second Workshop on Data Management for End-To-End Machine Learning*, DEEM'18, pages 8:1–8:10, New York, NY, USA, 2018. ACM. [\[link\]](#).

Thesis.....

- [45] Mahmoud Abo Khamis. *FAQ: Questions Asked Frequently*. ProQuest LLC, Ann Arbor, MI, 2016. Thesis (Ph.D.)—State University of New York at Buffalo. [\[link\]](#). **Best CSE Dissertation Award**.

Technical Reports.....

- [46] Mahmoud Abo Khamis, Hung Q. Ngo, and Dan Suciu. What do Shannon-type Inequalities, Submodular Width, and Disjunctive Datalog have to do with one another? *arXiv e-prints*, page arXiv:1612.02503, December 2016. [\[link\]](#). Invited to the Journal of the ACM 2017.
- [47] Mahmoud Abo Khamis, Hung Q. Ngo, and Atri Rudra. FAQ: Questions Asked Frequently. *arXiv e-prints*, page arXiv:1504.04044, April 2015. [\[link\]](#). Invited to the Journal of the ACM 2016.
- [48] Mahmoud Abo Khamis, Anna C. Gilbert, Hung Q. Ngo, and Atri Rudra. Sparse Approximation, List Decoding, and Uncertainty Principles. *arXiv e-prints*, page arXiv:1404.5190, April 2014. [\[link\]](#).

Selected Talks

- *Query Optimization and Evaluation via Information Theory*. Invited Tutorial at ACM PODS 2026, Bengaluru, India, June, 2026. [\[link\]](#)
- *Query Evaluation: From Static to Dynamic*. Invited talk at University of Washington, Paul G. Allen School of Computer Science & Engineering, Seattle, WA, October, 2025. [\[link\]](#) [\[recording\]](#)
- *Relational ML*. Invited keynote at the International Research and Industry Symposium on AI (IRIS-AI), Montefiascone, Italy, August, 2025. [\[link\]](#) [\[recording\]](#)
- *Hypergraph Pattern Detection using Matrix Multiplication: A General Framework*. Workshop talk at the Simons Institute for the Theory of Computing, Berkeley, CA, January 2025. [\[link\]](#)
- *Sum-Product Queries*. Invited guest lecture at the University of Waterloo, ON, Canada, June 2024. [\[link\]](#)
- *Introduction to Relational Algorithms*. Workshop lecture at the Simons Institute for the Theory of Computing, Berkeley, CA, September 2023. [\[link\]](#)
- *Query Optimization and Evaluation: Instance Optimality*. Workshop lecture at the Simons Institute for the Theory of Computing, Berkeley, CA, August 2023. [\[link\]](#)
- *The Polymatroid Bound: Extensions and Applications in Database Query Evaluation*. Invited two-part talk at the Online Seminar on Algorithmic Aspects of Information Theory (AAIT), May-June 2023. [\[link\]](#)
- *Overview of the Relational AI Query Optimizer*. Invited talk at the Database Seminar, University of California, San Diego, May 2023. [\[link\]](#)
- *Relational AutoDiff*. Invited talk at the International Workshop on Databases and Machine Learning (DBML 2023), Anaheim, CA, April 2023. [\[link\]](#)
- *Relational AutoDiff*. The Factorized Databases Workshop, University of Zurich, Switzerland, August 2022. [\[link\]](#)
- *Open Problems on Information-Theoretic Bounds for Database Query Answers*. Dagstuhl Seminar 22301 on Algorithmic Aspects of Information Theory, Germany, July 2022. [\[link\]](#)
- *Computational Geometry and Database Query Answering: Selected Connections*. Online seminar talk at the University of Science and Technology of China, August, 2021. [\[link\]](#)

Service

Editorial Board Member.....

- ACM TODS (Transactions on Database Systems) [\[link\]](#)

Program Committee Member.....

- ACM PODS 2027 [\[link\]](#)
- ICDT 2027 [\[link\]](#)
- ICALP 2026 [\[link\]](#)
- ICDT 2026 [\[link\]](#)
 - **Outstanding Reviewer Award.** [\[link\]](#)
- ACM PODS 2025 [\[link\]](#)
 - **Distinguished PC Member Award.** [\[link\]](#)
- ICDT 2024 [\[link\]](#)
- AMW 2024 [\[link\]](#)
- AMW 2023 [\[link\]](#)
- ICDT 2022 [\[link\]](#)
- ACM PODS 2021 [\[link\]](#)
- ACM PODS 2019 [\[link\]](#)
 - *"Gems of PODS"* Award Committee Member, 2019.
- AMW 2018 [\[link\]](#)

Journal Reviewer.....

- Journal of the ACM [\[link\]](#)
- ACM TODS [\[link\]](#)
- VLDB (The International Journal on Very Large Data Bases) [\[link\]](#)
- IEEE TKDE (Transactions on Knowledge and Data Engineering) [\[link\]](#)
- JCSS (Journal of Computer and System Sciences) [\[link\]](#)
- LMCS (Logical Methods in Computer Science) [\[link\]](#)
- DMTCS (Discrete Mathematics and Theoretical Computer Science) [\[link\]](#)