Jennie Rogers

Northwestern University
Computer Science Department
Mudd Hall, Room 3123
Evanston, IL 60208

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Research Interests

privacy-preserving analytics, oblivious query processing, private data federations, management of science data, query optimization, data science, database performance modeling, polystores

Education

Massachusetts Institute of Technology 2013–2015
Postdoctoral Associate
- Advisor: Michael Stonebraker

Brown University 2006–2013
Ph.D., Computer Science
- Thesis: "Query Performance Prediction for Analytical Workloads"
- Advisor: Uğur Çetintemel

Sci.M., Computer Science 2004–2006
- Thesis: "Towards a Generic Compression Advisor"
- Advisor: Uğur Çetintemel

Rensselaer Polytechnic Institute 1999–2003
B.S., Computer Science
- Minor: Brain & Brain Behavior

Academic Appointments

Northwestern University
Associate Professor 2021–Present
Computer Science Department

Affiliate 2020–2023
Center for Native American and Indigenous Research

Assistant Professor 2019–2021
Computer Science Department

Lisa Wissner–Slivka and Benjamin Slivka Junior Professor in Computer Science 2015–2018
Electrical Engineering and Computer Science Department

Assistant Professor 2015–2019
Electrical Engineering and Computer Science Department

Industry Roles

Qatar Computing Research Institute October–November 2013
Visiting Scholar

NEC Labs of America Summer 2012
Research Intern

Paradigm4, Inc. Summer 2011
Research Intern

Naval Undersea Warfare Center 2003–2006
Civilian Scientist

Awards & Honors

- VLDB Distinguished Reviewer Award, 2021
- SIGMOD Distinguished Program Committee Member Award, 2021
- Northwestern CS Faculty Service Award, 2020
- NSF CAREER Award, 2019
- Selected for 2016 Searle Teaching Fellowship
- Selected for 2015 NSF CAREER Workshop
- Selected for 2009 Google Workshop for Women Engineers
- 2006–2007 US Navy Long Term Training Award
- 2005 Society of Women Engineers Helen Martha Sternberg Award

Research Funding

"Bringing Auditability to Privacy Preserving Electronic Health Record Aggregation using Zero Knowledge Proofs" from DARPA. Subcontract from Stealth Software Technologies, with Abel Kho and Xiao Wang. 2023–2024. Total award to NU : $411K. My share: $8K.
Most of funding used for real-world MPC deployment at Feinberg School of Medicine.

"RESCU Cloud: Secure and Verifiable SQL for the Zero-Trust Cloud" from AFRL. With Xiao Wang. 2022-2024. Total award: $660,000. My share: $330,000.

"CNS-Collaborative: Quicksilver: a Write-oriented, Private, Outsourced Database Management System" from NSF. With Ashwin Machanavajjhala, Kartik Nayak, and Xiao Wang. 2020-2024. Total award: $1.2M. My share: $300,000.

"CAREER: Efficient Query Processing for Private Data Federations" from NSF. 2019-2024. Award: $546,000.

"Convergence Accelerator Phase I (RAISE): Northwestern Open Access to Court Records Initiative" from NSF. With Luis Amaral and team. 2019-2021. Total award: $1M. My share: $25,000.

Intel Science & Technology Center for Big Data. With Michael Stonebraker, Sam Madden, and team. 2015-2019. My share: $115,000.

Consulting

- Member–Ocient Technical Advisory Board, 2017–
- Consultant–`sanity.io`, 2019
- Consultant–Decis.io, 2015

Teaching

Co-Director and Co-Founder 2021–2022
Data Science and Engineering Minor, McCormick School of Engineering and Applied Science
Northwestern University

Instructor 2015–Present
Northwestern University

- COMP_SCI 339 (EECS 339): Introduction to Database Systems–Winter 2015, Winter 2016, Fall 2016, Spring 2017, Fall 2017, Winter 2018, Fall 2018, Spring 2019, Spring 2020, Winter 2021, Spring 2021, Winter 2022, Spring 2022, Winter 2023, Spring 2023, and Fall 2023
- COMP_SCI 396/496 (EECS 396/496, MSAI 339): Data Science Seminar–Fall 2015, Spring 2017, Spring 2018, Fall 2018, Fall 2019, Fall 2020, Fall 2021, and Fall 2022
- COMP_SCI (EECS) 396/496–Data Management Seminar–Spring 2017, and Winter 2024

Teaching Assistant Spring 2008, 2010
Brown University
CSCI 1660–Introduction to Computer Security

Guest Lecturer

- "Intro to Databases and Data Science", Northwestern University, COMP_SCI 101, 2019
- "Lock Picking for Dummies," Brown University CSCI 1660–2007, 2008, 2010
- "Amazon Web Services Tutorial," Brown University CSCI 2950T, 2008, 2009, 2011.
- "Amazon Web Services Tutorial," Brandeis University COSI 12B, 2011.

Conference & Journal Publications

Convention: [**J**] for journal papers, [**C**] for conference papers, [**T**] for tutorials, and [**D**] for demos.

[**J**] Xiling Li, Chenkai Weng, Yongxin Xu, Xiao Wang, and Jennie Rogers. ZKSQL: Verifiable and Efficient Query Evaluation with Zero-Knowledge Proofs. *Proceedings of the VLDB Endowment*, 16(8), 2023

[**D**] Xiling Li, Gefei Tan, Xiao Wang, Jennie Rogers, and Soamar Homsi. RESCU-SQL: Oblivious Querying for the Zero Trust Cloud. *Proceedings of the VLDB Endowment*, 16(12):4086–4089, 2023

[**J**] Kimberly R. Marion Suiseeya, Margaret G. O'Connell, Edith Leoso, Marvin Shingwe Biness Neme Defoe, Alexandra Anderson, Megan Bang, Pete Beckman, Anne Marie Boyer, Jennifer Dunn, Jonathan Gilbert, Josiah Hester, Daniel E. Horton, Dylan Bizhikiins Jennings, Philomena Kebec, Nancy C. Loeb, Patricia Loew, William M. Miller, Katie Moffitt, Aaron I. Packman, Michael Waasegiizhig Price, Beth Redbird, Jennie Rogers, Rajesh Sankaran, James Schwoch, Pamala Silas, Weston Twardowski, and Nyree Zerega. Waking from paralysis: Revitalizing conceptions of climate knowledge and justice for more effective climate action. *The Annals of the American Academy of Political and Social Science*, 700(1):166–182, 2022

[**C**] Priyanka Nanayakkara, Johes Bater, Xi He, Jessica Hullman, and Jennie Rogers. Visualizing Privacy-Utility Trade-Offs in Differentially Private Data Releases. *Proceedings on Privacy Enhancing Technologies*, 2022(2):601–618, 2022

[**T**] Xi He, Jennie Rogers, Johes Bater, Ashwin Machanvajjhala, Chenghong Wang, and Xiao Wang. Practical security and privacy for database systems. *Proceedings of the 2021 ACM International Conference on Management of Data*, 2021

[**C**] Xiao Dong, David Randolph, Chenkai Weng, Abel Kho, Jennie Rogers, and Xiao Wang. Developing High Performance Secure Multi-Party Computation Protocols in Healthcare: A Case Study of Patient Risk Stratification. *Proceedings of 2021 AMIA Informatics Summit*, 2021

[**J**] Johes Bater, Yongjoo Park, Xi He, Xiao Wang, and Jennie Rogers. SAQE: Practical Privacy-preserving Approximate Query Processing for Data Federations. *Proceedings of the VLDB Endowment*, 13(12):2691–2705, 2020

[**J**] Johes Bater, Xi He, William Ehrich, Ashwin Machanavajjhala, and Jennie Rogers. Shrinkwrap: Efficient SQL Query Processing in Differentially Private Data Federations. *Proceedings of the VLDB Endowment*, 12(3):307–320, 2018

[**J**] Johes Bater, Gregory Elliott, Craig Eggen, Satyender Goel, Abel Kho, and Jennie Rogers. SMCQL: secure querying for federated databases. *Proceedings of the VLDB Endowment*, 10(6):673–684, 2017

[**C**] Rebecca Taft, Willis Lang, Jennie Duggan, Aaron Elmore, Mike Stonebraker, and David DeWitt. STeP: scalable tenant placement for managing database-as-a-service deployments. In *Proceedings of Symposium on Cloud Computing*, pages 388–400. ACM, 2016

[**C**] Jennie Duggan, Olga Papaemmanouil, Leilani Battle, and Michael Stonebraker. Skew-aware Join Optimization for Array Databases. *Proceedings of the ACM SIGMOD International Conference on Management of Data*, pages 123–135, 2015

[**J**] Jennie Duggan, Stan Zdonik, Aaron Elmore, Michael Stonebraker, Magdalena Balazinska, Bill Howe, Jeremy Kepner, Sam Madden, Dave Maier, Timothy Mattson, and Stan Zdonik. The BigDAWG Polystore System. *Sigmod Record*, 44(3):11–16, 2015

[**C**] Jennie Duggan and Michael Brodie. Hephaestus: Data Reuse for Accelerating Scientific Discovery. In *Conference on Innovative Data Systems Research (CIDR)*, 2015

[**D**] Aaron Elmore, Jennie Duggan, Michael Stonebraker, Magdalena Balazinska, Ugur Çetintemel, Vijay Gadepally, Jeffrey Heer, Bill Howe, Jeremy Kepner, Tim Kraska, Sam Madden, Dave Maier, Timothy Mattson, Stavros Papadopoulos, Jeff Parkhurst, Nesime Tatbul, Manasi Vartak, and Stan Zdonik. A Demonstration of the BigDAWG Polystore System. *Proceedings of the VLDB Endowment*, 8(12):1908–1911, 2015

[**C**] Jennie Duggan and Michael Stonebraker. Incremental elasticity for array databases. In *Proceedings of the ACM SIGMOD International Conference on Management of Data*, pages 409–420, 2014

[**C**] Jennie Duggan. The case for Personal Data-driven Decision Making. *Proceedings of the VLDB Endowment*, 7(11):943–946, 2014

[**C**] Jennie Duggan, Olga Papaemmanouil, Ugur Çetintemel, and Eli Upfal. Contender: A Resource Modeling Approach for Concurrent Query Performance Prediction. In *Proceedings of Extending Database Technology (EDBT)*, pages 109–120, 2014

[**J**] Rebecca Taft, Essam Mansour, Marco Serafini, Jennie Duggan, Aaron Elmore, Ashraf Aboulnaga, Andrew Pavlo, and Michael Stonebraker. E-store: Fine-Grained Elastic Partitioning for Distributed Transaction Processing Systems. *Proceedings of the VLDB Endowment*, 8(3):245–256, 2014

[**J**] Michael Stonebraker, Jennie Duggan, Leilani Battle, and Olga Papaemmanouil. SciDB DBMS Research at MIT. *IEEE Data Engineering Bulletin*, 36(4):21–30, 2013

[**C**] Jennie Duggan, Ugur Çetintemel, Olga Papaemmanouil, and Eli Upfal. Performance prediction for concurrent database workloads. In *Proceedings of the ACM SIGMOD International Conference on Management of Data*, pages 337–348, 2011

[**C**] Jennie Rogers, Roman Simakov, Emad Soroush, Pavel Velikhov, Magdalena Balazinska, David DeWitt, Bobbi Heath, Dave Maier, Sam Madden, Jignesh Patel, Mike Stonebraker, Stan Zdonik, Artyom Smirnov, Konstantin Knizhnik, and Paul G. Brown. Overview of SciDB: Large scale array storage, processing, and analysis. In *Proceedings of the ACM SIGMOD International Conference on Management of Data*, pages 963–968, 2010

[**D**] Philippe Cudré-Mauroux, Hideaki Kimura, K-T Lim, Jennie Rogers, Roman Simakov, Emad Soroush, Pavel Velikhov, Daniel Wang, Magdalena Balazinska, Jacek Becla, David DeWitt, Bobbi Heath, Dave Maier, Sam Madden, Jignesh Patel, Mike Stonebraker, and Stan Zdonik. A Demonstration of SciDB: A Science-oriented DBMS. *Proceedings of the VLDB Endowment*, 2(2):1534–1537, 2009

[**C**] Yanif Ahmad, Olga Papaemmanouil, Ugur Çetintemel, and Jennie Rogers. Simultaneous equation systems for query processing on continuous-time data streams. In *International Conference on Data Engineering (ICDE)*, pages 666–675. IEEE, 2008

[**C**] Michael Stonebraker, Chuck Bear, Ugur Çetintemel, Mitch Cherniack, Tingjian Ge, Nabil Hachem, Stavros Harizopoulos, John Lifter, Jennie Rogers, and Stan Zdonik. One Size Fits All? Part 2: Benchmarking Results. In *Conference on Innovative Data Systems Research (CIDR)*, pages 173–184, 2007

Workshop Papers

Xiao Wang and Jennie Rogers. VaultDB: Facilitating Secure Analytics over Multiple Private Data Sources. In *Workshop on Privacy Enhancing Technologies for the Homeland Security Enterprise*, pages 18–19, 2022

Jennie Rogers, Johes Bater, Xi He, Ashwin Machanavajjhala, Madhav Suresh, and Xiao Wang. Privacy Changes Everything. In *Heterogeneous Data Management, Polystores, and Analytics for Healthcare*, pages 96–111. Springer, 2019

Vijay Gadepally, Kyle O'Brien, Adam Dziedzic, Aaron Elmore, Jeremy Kepner, Samuel Madden, Tim Mattson, Jennie Rogers, Zuohao She, and Michael Stonebraker. BigDAWG version 0.1. In *High Performance Extreme Computing (HPEC)*, pages 1–7. IEEE, 2017

Zuohao She, Surabhi Ravishankar, and Jennie Duggan. BigDAWG polystore query optimization through semantic equivalences. In *High Performance Extreme Computing (HPEC)*. IEEE, 2016

Adam Dziedzic, Jennie Duggan, Aaron Elmore, Vijay Gadepally, and Michael Stonebraker. BigDAWG: a Polystore for Diverse Interactive Applications. In *Workshop on Data Systems for Interactive Analysis (DSIA) at IEEE VIS*, 2015

Jennie Duggan, Yun Chi, Hakan Hacigumus, Shenghuo Zhu, and Ugur Çetintemel. Packing Light: Portable Workload Performance Prediction for the Cloud. In *Data Management in the Cloud Workshop at ICDE*, pages 258–265. IEEE, 2013

Jennie Rogers, Olga Papaemmanouil, and Ugur Çetintemel. A Generic Auto-provisioning Framework for Cloud Databases. In *Self-Managing Database Systems Workshop at ICDE*, pages 63–68, 2010

Book Chapters

Tim Mattson, Jennie Rogers, and Aaron Elmore. The BigDAWG Polystore System. In *Making Databases Work: The Pragmatic Wisdom of Michael Stonebraker*, pages 279–289. ACM and Morgan & Claypool, 2018

Michael Goodrich and Roberto Tamassia. *Introduction to Computer Security*. Pearson, 2011. Contributor to "Chapter 2: Physical Security"

Research Artifacts

Patent

Jennie Rogers and Abel Kho. System and Method for Secure Query Processing for Private Data Networks, U.S. Patent 10,614,242, April 2020

Preprints

Jennie Rogers, Elizabeth Adetoro, Johes Bater, Talia Canter, Dong Fu, Andrew Hamilton, Amro Hassan, Ashley Martinez, Erick Michalski, Vesna Mitrovic, Fred Rachman, Raj Shah, Matt Sterling, Kyra VanDoren, Theresa L. Walunas, Xiao Wang, and Abel Kho. VaultDB: A Real-World Pilot of Secure Multi-Party Computation within a Clinical Research Network. *arXiv preprint arXiv:2203.00146*, 2022

Madhav Suresh, Zuohao She, William Wallace, Adel Lahlou, and Jennie Rogers. KloakDB: A platform for analyzing sensitive data with k-anonymous query processing. *arXiv preprint arXiv:1904.00411*, 2019

Kyle O'Brien, Vijay Gadepally, Jennie Duggan, Adam Dziedzic, Aaron Elmore, Jeremy Kepner, Samuel Madden, Tim Mattson, Zuohao She, and Michael Stonebraker. BigDAWG polystore release and demonstration, 2017

Vijay Gadepally, Jennie Duggan, Aaron Elmore, Jeremy Kepner, Samuel Madden, Tim Mattson, and Michael Stonebraker. The BigDAWG architecture, 2016

Open Source Software

Donghyun Sohn, Kelly Jiang, Nicolas Hammer, Crystal Gong, Salome Kariuki, and Jennie Rogers. Alchemy: An optimizer for oblivious SQL queries. `https://github.com/vaultdb/alchemy`, 2023

Xiling Li, Chenkai Weng, Yongxin Xu, Xiao Wang, and Jennie Rogers. ZKSQL: Verifiable and efficient query evaluation with zero-knowledge proofs. `https://github.com/vaultdb/zksql`, 2023

Johes Bater, Gregory Elliott, Craig Eggen, Satyender Goel, Abel Kho, and Jennie Rogers. SMCQL: Secure querying for federated databases. `https://github.com/smcql/smcql`, 2017

Kyle O'Brien, Vijay Gadepally, Jennie Duggan, Adam Dziedzic, Aaron Elmore, Jeremy Kepner, Samuel Madden, Tim Mattson, Zuohao She, and Michael Stonebraker. The BigDAWG polystore. `https://github.com/bigdawg-istc/bigdawg`, 2017

Paradigm4 Labs. SciDB: An open-source DBMS for science data. `https://github.com/paradigm4`, 2011 (contributor)

Research Posters

Jennie Rogers. VaultDB: Efficient Query Processing for Private Data Federations. NSF SaTC PI Meeting, 2019

Johes Bater, Xi He, William Ehrich, Ashwin Machanavajjhala, and Jennie Rogers. Shrinkwrap: Differentially Private Query Processing in Private Data Federations. Theory and Practice of Differential Privacy Workshop at ACM CCS, 2019

Zuohao She, Adel Lahlou, and Jennie Rogers. VaultDB: Secure Multiparty Federated Database Query Execution With Secure Enclaves. Greater Chicago Area Systems Research Workshop, 2017

Johes Bater, Gregory Elliott, Craig Eggen, Satyender Goel, Abel Kho, and Jennie Rogers. SMCQL: Secure Querying for Federated Databases. Greater Chicago Area Systems Research Workshop, 2017

Zuohao She and Jennie Duggan. Query Optimization for Polystore Systems. Greater Chicago Area Systems Research Workshop, 2016

Students

Ph.D.: Donghyon Sohn (2022–), Xiling Li (2021–), Johes Bater (2015–2020)

M.S.: Yihang Du (2024), Heidi Duan (2024–), YaNing Wang (2023), Kelly Jiang (2022–2023), Yongxin Xu (2022), Zheng Zhang (2021–2023), Patrick Pei (2021), Shashank Damodaran (2019-2021), Chenxi Yuan (2019-2020), Zhili Wang (2019-2020), Lianke Qin (2019-2020), Rhett D'souza (2019), Keith Pallo (2018-2019), William Wallace (2018), Madhav Suresh, (2017–2022), William Ehrich (2017-2018), Adel Lahlou (2016-2017), Surabhi Ravishankar (2015-2016), Zuohao She (2015-2018), Kirti Maharwal (2015-2016), Haomin Hu (2015),

Undergraduate: Neel Keswani (2023–), Ethan Chan (2023–2024), Nicolas Hammer (2020–2021), Crystal Gong (2019–2020), Salome Kariuki (2020), May Li (2018–2019), George Malty (2018–2019), Brandon Fujii (2018), Mark Jung (2018)

High School: Nisha Pant (2018-2019), Emily Kang (2019), Satya Rayudu(2019), Shreyas Khati (2020), Srikrishna Sorna (2020), and Leora Kurtz (2021)

Research Supervision

Advisor

Johes Bater. *Building a Private Data Federation: Security and Privacy Guarantees for Distributed Analytics*. PhD thesis, 2020

William Ehrich. *Cost Estimation for Query Optimization in Distrustful Data Federations*. Master's thesis, 2018

Adel Lahlou. *VaultDB: an Oblivious Federated Database using Secure Enclaves*. Master's project, 2017

Committee Member

Chenkai Weng. *Efficient and Affordable Zero-Knowledge Proofs for Circuits and Polynomials*. PhD thesis, 2022–

Olive Franzese. *Efficient Zero-Knowledge Proofs of RAM Programs and Their Applications Towards Privacy-Preserving Accountability In Machine Learning*. PhD thesis, 2022–

Wenhao Zhang. TBA. 2024–

Peter K. Chan. *Giving Voice to the Silenced: Secure Reporting of Sexual Misconduct NDAs*. Master's thesis, 2024.

Gefei Tan. *Privacy-Preserving Data Structures for Secure Multiparty Computation*. Master's project. 2022–2023

Joseph Mazich. A Summary of NewHope: A Short History of Key-Exchange Protocols. Master's thesis, 2021

Vamsi Bandi. *Context-Driven, Keyword-Agnostic Information Retrieval.* MSAI project, 2020

Bing Zhang. *Spatial-temporal Data Mining for Traffic Speed Clustering and Prediction.* PhD thesis, 2017

Professional Service

Conference Organization

- Associate Editor, SIGMOD 2025
- Associate Editor, VLDB 2025
- Co-Chair, Demonstration Program Committee–VLDB 2023
- Chair, Finance–SIGMOD 2020
- Co-Chair, Local Arrangements–SIGMOD 2017
- Co-Chair, Mentorship–SIGMOD 2017
- Co-Chair, Demonstration Program Committee–SIGMOD 2016
- Co-Chair, Ph.D. Workshop–VLDB 2015
- Chair, Proceedings–BIRTE 2014, VLDB Workshop
- Coordinator, Student Volunteers–SIGMOD 2009

Peer Review

- Program Committee–VLDB 2024
- Program Committee–SIGMOD 2024
- Program Committee–CIDR 2024
- Program Committee–SIGMOD 2023
- Program Committee–CCS 2022
- Program Committee–HPTS 2022
- Program Committee–ICDE 2022
- Program Committee–CIDR 2021
- Program Committee–SIGMOD 2021
- Program Committee–VLDB 2021
- Program Committee–VLDB 2020
- Program Committee–CIDR 2020
- Program Committee–SIGMOD 2020
- Program Committee–CIDR 2019
- Program Committee–VLDB 2019
- Program Committee–SIGMOD 2018
- Review Panel–NSF CISE 2018
- Program Committee–SIGMOD 2017
- Program Committee–VLDB 2017
- Program Committee–CIDR 2017
- Program Committee–SIGMOD 2016
- Program Committee–ICDE 2016
- Journal Reviewer–VLDB Journal 2016
- Program Committee–VLDB 2015
- Program Committee–SoCC 2015

- Best Paper Award Committee–SoCC 2015
- Journal Reviewer–Sigmod Record 2015
- Journal Reviewer–TKDE 2015
- Proposal Reviewer–Netherlands Organisation for Scientific Research, 2015
- Review Panel–NSF CISE, 2014
- Program Committee–SoCC 2014
- External Reviewer–VLDB 2009
- External Reviewer–EDBT March 2009

University Service

- Chair, Executive Committee–Data Science and Engineering Minor, McCormick, 2022–present
- Member, Executive Committee–Data Science and Engineering Minor, McCormick, 2021–2022

Departmental Service

- Self Study Committee, 2023
- Diversity Committee, 2020–present
- Annual Awards Committee, 2021
- Faculty Search Committee, 2016–2020
- Curriculum Committee, 2015–2019
- Strategy and Planning Committee, 2016–2019
- Barris Chair Search Committee, 2016–2018

Outreach

- Participant, AVID (Advancement via Individual Determination) Field Day, Evanston Township High School, college prep workshop for historically marginalized students, April 2023
- Facilitator, "Data at the Intersection: A Discussion with McCormick Faculty", Panel, Northwestern University, March 2022.
- Faculty Advisor, Northwestern University, Graduate Women in Computer Science, 2019–2021
- Participant, Joint NSF-NIST Workshop To Develop a Roadmap for Greater Public Use of Privacy-Sensitive Government Data, May 2021.
- Participant, Northwestern Computer Science Equity Series, 2021.
- Panelist, Northwestern University, Buffett Idea Dialogue: Global Health Data and Privacy, 2020.
- Mentor, SPARK Program at Stevenson High School, Lincolnshire, IL. 2019–2020
- Panelist, Northwestern University, Computer Science, "Pursuing a Career in Research", 2019.
- Panelist, Brown University, Computer Science, "Navigating the Ph.D.", 2019.
- Panelist, Northwestern University, McCormick School, "NSF CAREER Proposals", 2019.
- Panelist, Northwestern University Postdoctoral Forum, "Careers in Academia", 2015
- Panelist, Brown University Women in Computer Science, "Applying to Graduate School," 2012
- Mentor, Brown University Women in Computer Science, 2006–2007
- Naval Research Enterprise Internship Program, Summer 2004, 2005
- Mentor, Women in Computing at Rensselaer Polytechnic Institute, 2001–2003

Research Presentations

Invited Talks

- "Sharing Data (without Data Movement)", Data Science in Medicine Event at Northwestern's Feinberg School of Medicine, October 2022.
- "VaultDB: An Update on the CDM Pilot," CAPriCORN Clinical Research Network Steering Committee, February 2022.
- "Privacy-Preserving Querying for Data Federations," UMass Amherst Database Group, October 2020.
- "Privacy-Preserving Querying for Data Federations," Northwestern University Computer Science, October 2020.
- "Privacy-Preserving Querying for Data Federations," University of Waterloo Database Group, October 2020.
- "Privacy Changes Everything," *High Performance Transaction Processing Systems*, November 2019.
- "Privacy-Preserving Query Processing for Data Federations," Brown University, September 2019.
- "VaultDB: Privacy-Preserving Analytics for Clinical Research Networks," CAPriCORN Clinical Research Network Steering Committee, April 2019.
- "VaultDB: Privacy-Preserving Analytics for Data Federations," Kairos Ventures Strategy Team, April 2019.
- "Privacy-Preserving Analytics for Biopharmaceutical Research," AbbVie Business Technical Solutions Team, April 2019.
- "VaultDB for Data Integration," Exelon Corporate Strategy Team, July 2018.
- "SMCQL: Secure Query Processing for Private Data Networks," *VLDB*, August 2017.
- "VaultDB: Secure Querying for Database Federations," Exelon Corporate Strategy Team, June 2017.
- "SMCQL: Secure Query Processing for Private Data Networks," *Intel Corporation*, August 2016.
- "Virtual Experiments for Distributed Research Networks," University of Wisconsin Database Group, October 2015.
- "Virtual Experiments for Distributed Research Networks," Stanford University Database Group, October 2015.
- "Virtual Experiments for Distributed Research Networks," University of Washington Database Group, October 2015.
- "Virtual Experiments for Distributed Research Networks," IBM Research, September 2015.
- "Polystore Optimization and Data Placement," Intel Corporation, September, 2015.
- "Hephaestus: Data Reuse for Accelerating Scientific Discovery," Greater Chicago Area Systems Research Workshop, April 2015.
- "Bridging the Gap: Multi-Database Systems for Data Science," DePaul University, April 2015.
- "Bridging the Gap: Multi-Database Systems for Data Science," Northwestern University, February 2015.
- "Hephaestus: Data Reuse for Accelerating Scientific Discovery," *CIDR*, January 2015.
- "The Last Mile: Engaging People with Data Management," University of Massachusetts Database Group, Amherst, September 2014.
- "The Case for Personal Data-Driven Decision Making," *VLDB*, September 2014.
- "Incremental Elasticity for Array Databases," *SIGMOD*, June 2014.
- "Managing Arrays for Science Applications at Scale," Cornell University, April 2014.
- "Managing Arrays for Science Applications at Scale," Microsoft Research, April 2014.
- "Managing Arrays for Science Applications at Scale," University of Maryland, April 2014.
- "Managing Arrays for Science Applications at Scale," Northeastern University, March 2014.
- "Contender: A Resource Modeling Approach for Concurrent Query Performance Prediction," *EDBT*, March 2014.
- "Managing Arrays for Science Applications at Scale," IBM Research, March 2014.
- "Managing Arrays for Science Applications at Scale," Tufts University, March 2014.

- "Managing Arrays for Science Applications at Scale," Northwestern University, March 2014.
- "Managing Arrays for Science Applications at Scale," University of Chicago, March 2014.
- "Incremental Data Placement for Array Databases," Qatar Computing Research Institute, October 2013.
- "Incremental Elasticity for Scientific Databases," University of Massachusetts Lowell, August 2013.
- "Performance Prediction for Concurrent Database Workloads," *SIGMOD*, June 2011.
- "A Generic Auto-Provisioning Framework for Cloud Databases," *SMDB Workshop* at ICDE, January 2010.

Presentations Without Proceedings

Johes Bater, Xi He, William Ehrich, Ashwin Machanavajjhala, and Jennie Rogers. Shrinkwrap: Efficient SQL Query Processing in Differentially Private Data Federations. Privacy and the Science of Data Analysis, Simons Institute Workshop, April 2019

Johes Bater, Xi He, William Ehrich, Ashwin Machanavajjhala, and Jennie Rogers. Shrinkwrap: Efficient SQL Query Processing in Differentially Private Data Federations. Theory and Practice of Differential Privacy Workshop at CCS, October 2018

Jennie M Duggan, Aaron J. Elmore, Tim Kraska, Sam Madden, Tim Mattson, and Michael Stonebraker. The BigDAWG architecture and reference implementation. Eighth Annual New England Database Day, January 2015

Philippe Cudre-Mauroux, Hideaki Kimura, Kian-Tat Lim, Jennie Rogers, Samuel Madden, Michael Stonebraker, Stanley B Zdonik, and Paul G Brown. SS-DB: A Standard Science DBMS Benchmark. *Extremely Large Databases (XLDB)*, October 2010

Miscellaneous Writings

Jennie Rogers. Teaching the Principles of Data Cleaning at Northwestern University with Chicago Police Misconduct Data, Blog@Trifacta, 2020

Jennie Duggan. Query modeling and optimization in the BigDAWG polystore system. ISTC-Big Data Blog, 2016

Michael Brodie and Jennie Duggan. What versus Why: Towards Computing Reality. Operational Database Management Systems Blog, 2014

Michael Brodie and Jennie Duggan. Big Data Is Opening the Door To Revolutions: Databases Should Be Next. SIGMOD Blog, 2014

Jennie Duggan. Tunnels, bunkers and nukes: my underground vacation. *Conduit!*, 20(1), Brown Computer Science, 2011