

# Jennie Rogers

---

Northwestern University EECS      *E-mail:* [jennie@northwestern.edu](mailto:jennie@northwestern.edu)  
2133 Sheridan Rd, Room 3.221      *Web:* <http://users.eecs.northwestern.edu/~jennie/>  
Evanston, IL 60208

RESEARCH INTERESTS      Secure query processing, large-scale data management, cloud computing, core database internals, scientific data management, database performance, big data, data science

EDUCATION      **Massachusetts Institute of Technology**      2013–2015  
Postdoctoral Associate  
• Advisor: Michael Stonebraker

**Brown University**      2006–2012  
Ph.D., Computer Science  
• Thesis: “Query Performance Prediction for Analytical Workloads”  
• Advisor: Uğur Çetintemel  
Sci.M., Computer Science  
• 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**      September 2015–Present  
Lisa Wissner–Slivka and Benjamin Slivka  
Junior Professor in Computer Science

**Northwestern University**      January 2015–Present  
Assistant Professor

INDUSTRIAL EXPERIENCE      **Qatar Computing Research Institute**      October–November 2013  
Visiting Scholar

**NEC Labs of America**      2012  
Research Intern

**Paradigm4, Inc.**      2011  
Research Intern

**Naval Undersea Warfare Center**      2003–2006  
Scientist

**Naval Research Enterprise Internship Program**      2002  
Research Intern

TEACHING  
EXPERIENCE

**Assistant Professor** 2015–Present  
Northwestern University  
EECS 339–Introduction to Database Systems–Winter 2015, Winter 2016, Fall 2016, Spring 2017  
EECS 395/495–46–Data Science–Fall 2015  
EECS 395/495–46–Readings in Database Systems–Spring 2017

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

**Guest Lecturer**

- “Lock Picking for Dummies,” Brown University CSCI1660–2007, 2008, 2010
- “Amazon Web Services Tutorial,” Brown University CSCI 2950T–2008, 2009, 2011, and Brandeis University COSI 12B–2011

CONFERENCE  
PAPERS

Johes Bater, Gregory Elliott, Craig Eggen, Satyender Goel, Abel Kho, and Jennie Rogers. SMCQL: Secure Query Processing for Private Data Networks. In *PVLDB*, 10(6), pages 673–684, 2017.

Rebecca Taft, Willis Lang, Jennie Duggan, Aaron J. Elmore, Michael Stonebraker, and David DeWitt. STeP: Scalable Tenant Placement for Managing Database-as-a-Service Deployments. In *SoCC*, pages 388–400, 2016.

Aaron J. Elmore, Jennie Duggan, Michael Stonebraker, Magdalena Balazinska, Ugur Cetintemel, 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. In *PVLDB*, 8(12), pages 1908–1919, 2015.

Jennie Duggan, Olga Papaemmanouil, Leilani Battle, and Michael Stonebraker. Skew-Aware Join Execution for Array Databases. In *SIGMOD*, pages 123–135, 2015.

Jennie Duggan and Michael L. Brodie. Hephaestus: Data Reuse for Accelerating Scientific Discovery. In *CIDR* 2015.

Jennie Duggan, Aaron Elmore, Tim Kraska, Sam Madden, Tim Mattson, and Michael Stonebraker. The BigDawg Architecture and Reference Implementation. In *NEDB* 2015.

Rebecca Taft, Essam Mansour, Marco Serafini, Jennie Duggan, Aaron J. Elmore, Ashraf Aboulmaga, Andrew Pavlo, and Michael Stonebraker. E-Store: Fine-Grained Elastic Partitioning for Distributed Transaction Processing Systems. In *PVLDB*, 8(3), pages 245–256, 2014.

Jennie Duggan. The Case for Personal Data-Driven Decision Making. In *PVLDB*, 7(11), pages 943–946, 2014.

Jennie Duggan and Michael Stonebraker. Incremental Elasticity for Array Databases. In *SIGMOD*, pages 409–420, 2014.

Jennie Duggan, Olga Papaemmanouil, Uğur Çetintemel, and Eli Upfal. Contender: A Resource Modeling Approach for Concurrent Query Performance Prediction. In *EDBT*, pages 109–120, 2014.

Jennie Duggan, Yun Chi, Hakan Hacigümüs, Shenghuo Zhu, and Uğur Çetintemel. Packing Light: Portable Workload Performance Prediction for the Cloud. In *DMC*, ICDE Workshops, pages 258–265, 2013.

Jennie Duggan, Uğur Çetintemel, Olga Papaemmanouil, and Eli Upfal. Performance Prediction for Concurrent Database Workloads. In *SIGMOD*, pages 337–348, 2011.

Jennie Rogers, Roman Simakov, Emad Soroush, Pavel Velikhov, Magdalena Balazinska, David DeWitt, Bobbi Heath, David Maier, Samuel Madden, Jignesh Patel, Michael Stonebraker, Stanley Zdonik, Artyom Smirnov, Konstantin Knizhnik, and Paul Brown. Overview of SciDB: Large Scale Array Storage, Processing, and Analysis. In *SIGMOD*, pages 963–968, 2010.

Jennie Rogers, Olga Papaemmanouil, and Uğur Çetintemel. A Generic Auto-Provisioning Framework for Cloud Databases. In *SMDB*, ICDE Workshops, pages 63–68, 2010.

Philippe Cudre-Mauroux, Hideaki Kimura, Kian-Tat Lim, Jennie Rogers, Roman Simakov, Emad Soroush, Pavel Velikhov, Daniel Wang, Magdalena Balazinska, Jacek Becla, David DeWitt, Bobbi Heath, David Maier, Samuel Madden, Jignesh Patel, Michael Stonebraker, and Stanley Zdonik. A Demonstration of SciDB: A Science-Oriented DBMS. In *PVLDB*, 2(2), pages 1534–1537, 2009.

Philippe Cudre-Mauroux, Hideaki Kimura, Kian-Tat Lim, Jennie Rogers, Sam Madden, Michael Stonebraker, Stan Zdonik, Paul Brown: SS-DB: A Standard Science DBMS Benchmark. In *XLDB 2010*.

Yanif Ahmad, Olga Papaemmanouil, Uğur Çetintemel, and Jennie Rogers. Simultaneous Equation Systems for Query Processing on Continuous-Time Data Streams. In *ICDE*, pages 666–675, 2008.

Michael Stonebraker, Chuck Bear, Uğur Çetintemel, Mitch Cherniack, Tingjian Ge, Nabil Hachem, Stavros Harizopoulos, John Lifter, Jennie Rogers, and Stanley Zdonik. One Size Fits All? Part 2: Benchmarking Studies. In *CIDR*, pages 173–184, 2007.

JOURNAL  
ARTICLES

Jennie Duggan, Aaron J. Elmore, Michael Stonebraker, Magdalena Balazinska, Bill Howe, Jeremy Kepner, Sam Madden, Dave Maier, Timothy Mattson, and Stan Zdonik. The BigDAWG Polystore System. In *Sigmod Record*, 44(2), pages 11–16, 2015.

Michael Stonebraker, Jennie Duggan, Leilani Battle, and Olga Papaemmanouil. SciDB DBMS Research at M.I.T. In *IEEE Data Engineering Bulletin*, 36(4), pages 21–30, 2013.

ACADEMIC SERVICE

- Program Committee–ACM Special Interest Group on Management of Data Conference, June 2018
- Co-Chair, local arrangements–ACM Special Interest Group on Management of Data Conference, May 2017
- Co-Chair, mentorship–ACM Special Interest Group on Management of Data Conference, May 2017
- Program Committee–ACM Special Interest Group on Management of Data Conference, May 2017
- Program Committee–International Conference on Very Large Databases, August 2017
- Program Committee–Conference on Innovative Data Systems Research, January 2017
- Program Committee–International Conference on Data Engineering, October 2016
- Co-Chair, Demo Committee–ACM Special Interest Group on Management of Data Conference, June 2016
- Program Committee–ACM Special Interest Group on Management of Data Conference, June 2016
- Journal Reviewer–The International Journal on Very Large Databases, February 2016
- Co-Chair, Ph.D. Workshop–International Conference on Very Large Databases, August 2015
- Program Committee–International Conference on Very Large Databases, August 2015

- Program Committee–Symposium on Cloud Computing, August 2015
- Best Paper Award Committee–Symposium on Cloud Computing, August 2015
- Panelist–Northwestern University Postdoctoral Forum, “Academic Careers”, June 2015
- Journal Reviewer–ACM Sigmod Record, June 2015
- Journal Reviewer–Transactions on Knowledge and Data Engineering, May 2015
- Reviewer–Netherlands Organisation for Scientific Research, March 2015
- Proceedings Chair–Business Intelligence for the Real Time Enterprise, International Conference on Very Large Databases Workshop, September 2014
- Panelist–National Science Foundation, Computer & Information Science & Engineering, 2014
- Program Committee–Symposium on Cloud Computing, October 2014
- Panelist–Brown University Women in Computer Science, “Applying to Graduate School,” December 2012
- External Reviewer–International Conference on Very Large Databases, August 2009
- Student Volunteer Coordinator–ACM Special Interest Group on Management of Data Conference, June 2009
- External Reviewer–Extending Database Technology, March 2009
- Mentor–Brown University Women in Computer Science, 2006–2007
- Mentor–Naval Research Enterprise Internship Program, Summer 2004, 2005
- Mentor–Women in Computing at Rensselaer Polytechnic Institute, 2001–2003

#### INVITED TALKS

- “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,” *Conference on Innovative Data Systems Research*, January 2015.
- “The Last Mile: Engaging People with Data Management,” *University of Massachusetts, 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*, January 2010.

ADDITIONAL  
WRITINGS

Jennie Duggan. Query Modeling and Optimization in the BigDAWG Polystore System. ISTC Big Data Blog, February 2016.

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

Michael Goodrich and Roberto Tamassia. Introduction to Computer Security. Addison Wesley, October 2010. Contributor to “Chapter 2: Physical Security”

Jennie Duggan. “Tunnels, Bunkers and Nukes: My Underground Vacation.” *Conduit!* 20(1), Brown Computer Science.