



**Association for
Computing Machinery**

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Margo Seltzer Named ACM Athena Lecturer for Technical and Mentoring Contributions

*University of British Columbia Professor Developed Software
That Enabled Many First-Generation Web Services*

New York, NY, April 26, 2023 – ACM, the Association for Computing Machinery, today named Margo Seltzer, a Professor at the University of British Columbia, as the 2023-2024 ACM Athena Lecturer. Seltzer is recognized for foundational research in file and storage systems, pioneering research in data provenance, impactful software contributions in Berkeley DB, and tireless dedication to service and mentoring. Initiated in 2006, the [ACM Athena Lecturer Award](#) celebrates women researchers who have made fundamental contributions to computer science.

Database Software

In 1992, while studying at the University of California at Berkeley, Seltzer, along with Keith Bostic and Mike Olson, introduced BerkeleyDB, a database software library. Berkeley DB underpinned a range of first-generation Internet services including account management, mail servers, and online trading platforms. This software has been a part of many popular operating systems including Linux, FreeBSD, Apple's OSX, and the GNU standard C library (glibc). Originally developed as an open-source library, Seltzer and Bostic founded Sleepycat Software in 1996 to continue the development of Berkeley DB and provide commercial support. Berkeley DB was an early and influential example of the NoSQL movement and pioneered the "dual license" approach to software licensing.

Data Provenance and Log-Structured File Systems

Seltzer later pioneered whole-system data provenance, a paradigm that provides system support for assessing the quality of information by understanding where the data comes from, who is using the data, and how it was obtained. Her research demonstrated how provenance could be practically supported at the system level to implement important applications in security and compliance. Her subsequent work focused on applications of provenance, including intrusion detection, data loss

prevention and attack attribution, and computational reproducibility.

She is also known for her careful and nuanced work in log-structured file systems, where she adapted various approaches for use in the UNIX file systems and updates of file system metadata.

Teaching and Service

Seltzer has received several awards for excellence in teaching and leadership for her work broadening participation in computer science. She is deeply involved in mentoring, and several of her former students have become leaders in academia and industry. She has served as program chair for conferences in systems and databases and serves on numerous advisory boards for scientific and national boards.

“To be selected for the ACM Athena Award, a candidate must pass a very high bar,” said ACM President Yannis Ioannidis. “She must be a person who has both made fundamental technical contributions and impacted the computing community through service. Margo Seltzer not only meets these criteria but sets the bar extremely high. Regarding the former, her work on Berkeley DB and data provenance has broken new ground and has been very impactful in the data management and systems communities, both in academia and industry. Regarding the latter, in addition to her teaching and mentoring awards, she is known for her efforts to broaden participation in computer science among traditionally underrepresented groups. When considering all that Margo is involved in, one question that comes to mind is ‘Where does she find the time?’ Having overlapped with her at Harvard for a year, I think I have the answer: ‘She doesn’t find it. She creates it!’ We congratulate Margo Seltzer on being named the ACM Athena Lecturer and we look forward to celebrating her work at the ACM Awards Banquet.”

Seltzer will be formally presented with the ACM Athena Lecturer Award at the annual ACM Awards Banquet, which will be held this year on Saturday, June 10 at the Palace Hotel in San Francisco. The ACM Athena Lecturer Award carries a cash prize of \$25,000, with financial support provided by Two Sigma.

Biographical Background

Margo Seltzer is the Canada 150 Research Chair and the Cheriton Family Chair in Computer Science at the University of British Columbia. She is also the Director of the Berkman Center for Internet and Society at Harvard University.

Seltzer earned a PhD degree in Computer Science from the University of California at Berkeley, and an AB degree in Applied Mathematics from Harvard/Radcliffe College. She has authored more than 194 publications on a wide range of topics related to computer systems including systems for capturing and accessing data provenance, file systems, databases, and storage.

Her honors include receiving the UBC CS Awesome Instructor Award, the ACM SIGMOD Systems Award, the USENIX Lifetime Achievement Award, the CRA-E Undergraduate Research Mentoring Award, and the ACM Software System Award (for BerkeleyDB), among many others. She is a Fellow of ACM, the American Academy of Arts and Sciences, and the National Academy of Engineering.

About the ACM Athena Lecturer Award

The [ACM Athena Lecturer Award](#) celebrates women researchers who have made fundamental contributions to computer science. It includes a \$25,000 honorarium provided by Two Sigma. The Athena Lecturer is invited to present a lecture at an ACM event. Each year, the Athena Lecturer honors a preeminent woman computer scientist. Athena is the Greek goddess of wisdom; with her knowledge and sense of purpose, she epitomizes the strength, determination, and intelligence of the “Athena Lecturers.” The Athena Lecturer gives an invited talk at a major ACM conference of her choice.

About ACM

ACM, [the Association for Computing Machinery](#), is the world’s largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field’s challenges. ACM strengthens the computing profession’s collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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