

CURRICULUM VITAE**CAROLYN B. SEAMAN****Education**

Ph.D.	1996	University of Maryland College Park, Computer Science
M.S.	1987	Georgia Institute of Technology, Information and Computer Science
B.A.	1986	College of Wooster (Ohio), Computer Science and Mathematics

Experience in Higher Education:

2020-present	UMBC, Professor, Information Systems
2020-present	UMBC, Director, Center for Women in Technology (CWIT)
2018-2020	UMBC, Interim Director, Center for Women in Technology (CWIT)
2016-2018	UMBC, Associate Director of Undergraduate Programs and Advising Coordinator, Information Systems
2012-2013	UFPE Center for Informatics, Visiting Researcher (Recife, Brazil)
2010-2016	UMBC, Director of Undergraduate Programs, Information Systems
2004-2020	UMBC, Associate Professor, Information Systems
1998-2004	UMBC, Assistant Professor, Information Systems
1996-1998	University of Maryland College Park, Faculty Research Assistant, Computer Science
1991-1996	University of Maryland College Park, Graduate Research Assistant, Computer Science
Summer 1995	University of Maryland College Park, Instructor, Computer Science
1986-1987	Georgia Institute of Technology, Graduate Research Assistant, Computer Science

Experience in other than Higher Education:

1998-2017	Fraunhofer USA Center for Experimental Software Engineering, College Park, MD, Research Fellow
1990-1991	Managua, Nicaragua, Consultant
1989	Municipal Management Systems, Pittsburgh, PA, Developer
1988	San Jose, Costa Rica, Consultant
1987-1988	Unisys Corporation, Paoli, PA, Research Programmer

Courses Taught

IS 125	Information Systems Logic and Structured Design
IS 202	Systems Analysis
IS 436	Structured Systems Analysis and Design (undergraduate)
IS 472	Software Security
IS 636	Structured Systems Analysis and Design (graduate)
IS 634	Structured Systems Analysis and Design (graduate distance)
IS 698	Special Topics: System Maintenance
IS 805	Advanced Field Research Methods

Recent teaching-related accomplishments:

- Student course evaluations average 4 on a scale of 5
- Developed and maintain online curriculum for IS 634
- Developed a real coordinated class research project for IS 805

- Developed a new course in Software Security

Research Support and/or Fellowships

2020-2023	\$457,351	National Science Foundation (software engineering research)
2016-2020	\$1,117,000	National Science Foundation (pedagogical research)
2015-2020	\$632,000	National Science Foundation (T-SITE Scholarships)
2015-2018	\$400,000	National Science Foundation (undergraduate cybersecurity)
2012-2017	\$600,000	National Science Foundation (T-SITE Scholarships)
2012-2014	\$154,000	National Science Foundation (pedagogical research)
2013-2014	\$18,000	National Science Foundation (travel grant)
2012-2013	\$35,000	Conselho Nacional de Desenvolvimento Científico e Tecnológico (Brazil)
2009-2013	\$500,000	National Science Foundation (software engineering research)
2006-2009	\$60,000	Xerox Corporation
2002-2003	\$76,000	Maryland Industrial Partnerships
2000-2004	\$230,000	National Science Foundation (CAREER)
1999	\$4,000	UMBC Summer Faculty Fellowship
1992-1994	\$75,000	IBM Canada Ltd.

Publications, Other Creative Efforts, and Professional Activities - Please see attached

University Service (current)

UMBC Chapter of Phi Beta Kappa, Chapter Historian
 IS Undergraduate Committee
 UMBC ADVANCE Leadership Alliance

List of Publications

Refereed Journal Publications

- “The Practitioners’ Point of View on the Concept of Technical Debt and its Causes and Consequences: A Design for a Global Family of Industrial Surveys and its First Results from Brazil”, Nicolli Rios, Rodrigo Oliveira Spinola, Manoel Mendonça, and Carolyn Seaman. *Empirical Software Engineering Journal*, in press, 2020.
- “Theoretical Conceptualization of TD: a Practical Perspective”, Claurton A. Siebra, Rebeka Oliveira, Carolyn B. Seaman, Fabio Q.B. da Silva, and Andre L.M. Santos. In *The Journal of Systems and Software*, v.120, 219-237, Special Issue on Technical Debt in Software Systems, 2016.
DOI: [10.1016/j.jss.2016.05.043](https://doi.org/10.1016/j.jss.2016.05.043)
- “Costs and obstacles encountered in technical debt management – A case study”, Yuepu Guo, Carolyn Seaman, and Fabio Q.B. da Silva. *Journal of Systems and Software*, Volume 120, pp. 156-169. October 2016. [doi:10.1016/j.jss.2016.07.008](https://doi.org/10.1016/j.jss.2016.07.008).
- “Could removal of project-level knowledge flow obstacles contribute to software process improvement? A study of software engineer perceptions”, Susan M. Mitchell, Carolyn B. Seaman. *Information and Software Technology*. Volume 72, pp. 151-170. April 2016. [doi:10.1016/j.infsof.2015.12.007](https://doi.org/10.1016/j.infsof.2015.12.007)
- “Exploring the costs of technical debt management – a case study”, Yuepu Guo, Rodrigo Oliveira Spinola, Carolyn Seaman. *Empirical Software Engineering*. 21(1):159-182, February 2016.
- “Identification and management of technical debt: A systematic mapping study”, Nicolli S.R. Alves, Thiago S. Mendes, Manoel G. de Mendonça, Rodrigo O. Spinola, Forrest Shull, Carolyn Seaman. *Information and Software Technology*. Volume 70, pp. 100-121. February 2016.
[doi:10.1016/j.infsof.2015.10.008](https://doi.org/10.1016/j.infsof.2015.10.008)
- “Reducing Friction in Software Development”, Paris Avgeriou, Philippe Kruchten, Robert L. Nord, Ipek Ozkaya, Carolyn Seaman. *IEEE Software*, January 2016, pp. 66-73.
- “Comparing four approaches for technical debt identification”, Nico Zazworka, Antonio Vetro’, Clemente Izurieta, Sunny Wong, Yuanfang Cai, Carolyn Seaman and Forrest Shull, *Software Quality Journal*, 21(2), June 2013. DOI: 10.1007/s11219-013-9200-8.
- “A Balancing Act: What Software Practitioners Have to Say about Technical Debt.” Erin Lim, Nitin Taksande, and Carolyn Seaman. *IEEE Software*, 29(6):22-27, DOI: 10.1109/MS.2012.130, 2012.
- “An empirical study of process knowledge: coherence as a static process property,” Carlton A. Crabtree, Anthony F. Norcio, and Carolyn B. Seaman. *Journal of Software Evolution and Process*, DOI: 10.1002/smr.1567, August 2012.
- “Linking Software Development and Business Strategy Through Measurement,” Victor Basili , Jens Heidrich, Mikael Lindvall, Jürgen Münch, Myrna Regardie, Dieter Rombach, Carolyn Seaman, Adam Trendowicz. *IEEE Computer*, 43:4(57-65), DOI: 10.1109/MC.2010.108. April 2010.
- “An Empirical Investigation into the Adoption of Open Source Software in Hospitals”, Gilberto Munoz-Cornejo, Carolyn B. Seaman, and A. Güneş Koru. *International Journal of Healthcare Information Systems and Informatics*. 3(3):16-37, July-September 2008.
- “Revealing actual documentation usage in software maintenance through war stories”, Wayne G. Lutters and Carolyn B. Seaman. *Information and Software Technology*. 49(6):576-587, January 2007.
- “User Interface Evaluation and Empirically-Based Evolution of a Prototype Experience Management Tool,” Carolyn B. Seaman, Manoel Mendonca, Victor Basili, Yong-Mi Kim. *IEEE Transactions on Software Engineering*, 29(9): 838-850, September 2003.

“COTS-Based Software Development: Processes and Open Issues”, M. Morisio, C.B. Seaman, V.R. Basili, A.T. Parra, S.E. Kraft, and S.E. Condon. *Journal of Systems and Software*, 61(3):189-199, April 2002.

“Qualitative Methods in Empirical Studies of Software Engineering,” Carolyn B. Seaman, *IEEE Transactions on Software Engineering*, 25(4):557-572, July/August 1999.

“Q-MOPP: Qualitative evaluation of Maintenance Organizations, Processes, and Products”, Lionel Briand, Yong-Mi Kim, Walcelio Melo, Carolyn Seaman, and Victor Basili, *Journal of Software Maintenance*, 10:249-278, 1998.

“Communication and Organization: An Empirical Study of Discussion in Inspection Meetings”, Carolyn B. Seaman and Victor R. Basili, *IEEE Transactions on Software Engineering*, 24(7):559-572, July 1998.

“The Study of Software Maintenance Organizations and Processes”, Carolyn B. Seaman and Victor R. Basili, a position paper presented at the *International Workshop on Empirical Studies of Software Maintenance (WESS)*, Monterey, CA, November 1996, and published in *Empirical Software Engineering*, 2:2(197-201).

“Communication and Organization in Software Development: An Empirical Study”, Carolyn B. Seaman and Victor R. Basili, *IBM Systems Journal*, 36(4), 1997.

Refereed Conference Publications

“Before and Beyond Transfer: Supporting Computing and Engineering Students From Community College to University”, Ireland, D. T., Seaman, C., Starobin, S. S., Laanan, F. S. & Hipshman, I. *AERA Annual Meeting* [Paper Session], San Francisco, CA, April 2020. <http://tinyurl.com/vw5w3fw> (Conference Canceled).

“Surveying Software Practitioners on Technical Debt Payment Practices and Reasons for not Paying off Debt Items”, Sávio Freire, Nicolli Rios, Boris Pérez, Darío Correal, Manoel Mendonça, Clemente Izurieta, Carolyn Seaman and Rodrigo Oliveira Spínola. *Proceedings of the Conference on Evaluation and Assessment in Software Engineering (EASE)*, April 2020.

“Investigating Variability-aware Smells in SPLs: An Exploratory Study”, Iuri Santos Souza, Ivan do Carmo Machado, Carolyn Seaman, Gecynalda Soares da Silva Gomes, Christina von Flach Garcia Chavez, Eduardo Santa de Almeida, and Paulo Cesar Masiero. *Proceedings of the Brazilian Symposium on Software Engineering (SBES)*, September 2019, Salvador, Brazil.

“The most common causes and effects of technical debt: first results from a global family of industrial surveys”, Nicolli Rios, Rodrigo Oliveira Spínola, Manoel Mendonça, and Carolyn Seaman. *Proceedings of the 12th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement*, October 2018, Oulu, Finland.

“From Lasagna to Spaghetti: A Decision Model to Manage Defect Debt”, Abdullah Aldaej and Carolyn Seaman. *2018 IEEE/ACM International Conference on Technical Debt (TechDebt)*. May 2018, Gothenberg, Sweden.

“A Study of Factors that Lead Development Teams to Incur Technical Debt in Software Projects”, Nicolli Rios, Rodrigo Oliveira Spínola, Manoel G. de Mendonça, and Carolyn Seaman. *The Euromicro Conference on Software Engineering and Advanced Applications (SEAA)*, August 2018, Prague.

“Enhancing Interest in Cybersecurity Careers: A Peer Mentoring Perspective”, Vandana Janeja, Abu Zaher Md Faridee, Aryya Gangopadhyay, Carolyn Seaman, and Amy Everhart. *Proceedings of the 49th ACM Technical Symposium on Computer Science Education (SIGCSE 18)*, February 2018, Baltimore, MD.

“Describing What Experimental Software Engineering Experts Do When They Design Their Experiments – A Qualitative Study”, Liliane Sheyla da Silva Fonseca, Carolyn Budinger Seaman, Sergio Castelo Branco Soares. *2017 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, November 2017, Toronto, Canada.

“Chasing the AHA! Moment: Exploring initial learnability of programming languages”, Brian Frey, Juliana Doddridge, and Carolyn Seaman. *2017 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*, October 2017, Raleigh, NC.

- “Effects of Technical Debt Awareness: A Classroom Study”, Graziela Simone Tonin, Alfredo Goldman, Carolyn Seaman, Diogo Pina. *18th International Conference on Agile Software Development (XP 2017)*, May 2017, Cologne, Germany.
- "Developing a Value-Based Methodology for Satisfying NASA Software Assurance Requirements", Daniel Port, Joel Wilf, Madeline Diep, Carolyn Seaman, Martin Feather. *49th Hawaii International Conference on System Sciences (HICSS)*, January 2016, pp. 5642-5651, doi:10.1109/HICSS.2016.698
- “A Mapping Study of Software Causal Factors for Improving Maintenance”, C. Carroll, D. Falessi, V. Forney, A. Frances, C. Izurieta, C. Seaman. *IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2015)*, Beijing, China, October 2015.
- “Scientists tell stories: About seeking help with programming”, Brian Frey and Carolyn Seaman. *2015 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*. October 2015. Atlanta, USA.
- “Ask the engineers: exploring repertory grids and personal constructs for software data analysis”, Lucas Layman, Carolyn Seaman, Davide Falessi, and Madeline Diep. *Proceedings of the 8th International Workshop on Cooperative and Human Aspects of Software Engineering*, pp. 81-84. May 2015, Florence, Italy.
- “Measuring Shared Understanding in Software Project Teams using Pathfinder Networks”, Brandt Braunschweig and Carolyn Seaman. *IEEE/ACM International Symposium on Empirical Software Engineering and Measurement (ESEM 2014)*, Torino, Italy, September 2014.
- “An Examination of Shared Understanding in Free/Libre Open Source Project Maintenance”, Brandt Braunschweig and Carolyn Seaman. *6th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 2013)*. San Francisco, USA, May 2013.
- “Investigating Technical Debt Folklore”, Rodrigo Spínola, Nico Zazworka, Antonio Vetro’, Carolyn Seaman, and Forrest Shull. *4th International Workshop on Managing Technical Debt*. San Francisco, USA, May 2013.
- “A Case Study on Effectively Identifying Technical Debt”, Nico Zazworka, Rodrigo Spínola, Antonio Vetro’, Forrest Shull, and Carolyn Seaman. *17th International Conference on Evaluation and Assessment in Software Engineering (EASE 2013)*, Porto de Galinhas, Brazil, April 2013.
- “Using technical debt data in decision making: Potential decision approaches.” Carolyn Seaman, Yuepu Guo, Clemente Izurieta, Yuanfang Cai, Nico Zazworka, Forrest Shull, and Antonio Vetro’. *Third International Workshop on Managing Technical Debt (MTD)*, pp. 45-48, DOI: 10.1109/MTD.2012.6225999, 2012.
- “Defining the decision factors for managing defects: A technical debt perspective.” Will Snipes, Brian Robinson, Yuepu Guo, and Carolyn Seaman. *Third International Workshop on Managing Technical Debt (MTD)*, pp. 54-60, DOI: 10.1109/MTD.2012.6226001, 2012.
- “Organizing the Technical Debt Landscape.” Clemente Izurieta, Antonio Vetro’, Nico Zazworka, Yuanfang Cai, Carolyn Seaman, and Forrest Shull. *Third International Workshop on Managing Technical Debt (MTD)*, pp. 23-26, DOI: 10.1109/MTD.2012.6225995, 2012.
- “Software Process Improvement through the Identification and Removal of Project-level Knowledge Flow Obstacles”. Susan M. Mitchell and Carolyn B. Seaman. *International Conference on Software Engineering (ICSE)*, Track on New Insights and Emerging Results (NIER), pp. 1265-68, DOI: 10.1109/ICSE.2012.6227103, 2012.
- “Using the ISO/IEC 9126 product quality model to classify defects: A controlled experiment.” Antonio Vetro’, Nico Zazworka, Carolyn Seaman, and Forrest Shull. *16th International Conference on Evaluation and Assessment in Software Engineering (EASE 2012)*, pp. 187-196, DOI: 10.1049/ic.2012.0025, 2012.
- “A Knowledge Mapping Technique for Project-level Knowledge Flow Analysis”. Susan M. Mitchell and Carolyn B. Seaman. *International Symposium on Empirical Software Engineering and Measurement*. Pp. 347-350. DOI: 10.1109/ESEM.2011.45, 2011.

- “Tracking Technical Debt – An Exploratory Case Study”, Yuepu Guo, Carolyn Seaman, Rebeka Gomes, Antonio Cavalcanti, Graziela Tonin, Fabio Q. B. Da Silva, André L. M. Santos, Claurton Siebra, *Proceedings of the 27th IEEE International Conference on Software Maintenance (ICSM' 11)*, 528-531, DOI: 10.1109/ICSM.2011.6080824. 2011
- “An Empirical Study of the Accuracy of Software Process Elicitation: The User Articulated Method (UAM)”, Carlton A. Crabtree, Anthony F. Norcio, & Carolyn B. Seaman. *International Conference on Systems and Software Process (ICSSP)*. Honolulu, Hawaii, May 2011.
- “Investigating the Impact of Design Debt on Software Quality”, Nico Zazworka, Michele A. Shaw, Forrest Shull, Carolyn Seaman, *Proceeding of the 2nd Workshop on Managing Technical Debt*, 17-23, 2011.
- “A Portfolio Approach to Technical Debt Management”, Yuepu Guo and Carolyn Seaman, *Proceeding of the 2nd Workshop on Managing Technical Debt*, 31-34, 2011.
- “Prioritizing Design Debt Investment Opportunities”, Nico Zazworka, Carolyn Seaman, Forrest Shull, *Proceeding of the 2nd Workshop on Managing Technical Debt*, 39-42, 2011.
- “Managing Technical Debt in Software-reliant Systems”, Nanette Brown, Yuanfang Cai, Yuepu Guo, Rick Kazman, Miryung Kim, Philippe Kruchten, Erin Lim, Alan MacCormack, Robert Nord, Ipek Ozkaya, Raghvinder Sangwan, Carolyn Seaman, Kevin Sullivan, Nico Zazworka, *Proceedings of the 18th FSE/SDP Workshop on Future of Software Engineering Research*, 47-52, DOI: 10.1145/1882362.1882373. 2010.
- “Building Empirical Support for Automated Code Smell Detection”, Jan Schumacher, Nico Zazworka, Forrest Shull, Carolyn Seaman, Michele Shaw, *Proceedings of the 4th International Symposium on Empirical Software Engineering and Measurement (ESEM '10)*, 67-76, DOI: 10.1145/1852786.1852797. 2010.
- “Domain-Specific Tailoring of Code Smells: An Empirical Study”, Yuepu Guo, Carolyn Seaman, Nico Zazworka, Forrest Shull, *Proceedings of the 32nd ACM/IEEE International Conference on Software Engineering (ICSE '10)*, 167-170, 10.1145/1810295.1810321. 2010.
- “Exploring Language in Software Process Elicitation: A Grounded Theory Approach,” Carlton Crabtree, Carolyn B. Seaman, Anthony F. Norcio, *International Symposium on Empirical Software Engineering and Measurement (ESEM09)*, Lake Buena Vista, USA, October 2009.
- “Gauging acceptance of software metrics: Comparing perspectives of managers and developers,” Medha Umarji and Carolyn Seaman, *International Symposium on Empirical Software Engineering and Measurement (ESEM09)*, Lake Buena Vista, USA, DOI: 10.1109/ESEM.2009.5315999. October 2009.
- “Software Engineering Education for Bioinformatics,” Umarji, M., Seaman, C., Koru, A.G., Liu, H. *22nd IEEE-CS Conference on Software Engineering Education and Training*, pp. 216-223, DOI: 10.1109/CSEET.2009.44. Feb 2009, Hyderabad, India.
- “Defect Categorization: Making Use of a Decade of Widely Varying Historical Data”, Carolyn Seaman, Forrest Shull, Myrna REGARDIE, Denis Elbert, Raimund Feldmann, Yuepu Guo, and Sally Godfrey. *International Symposium on Empirical Software Engineering and Measurement (ESEM08)*, Kaiserslautern, Germany, October 2008.
- “Why do Programmers Avoid Metrics?”, Medha Umarji and Carolyn Seaman. *International Symposium on Empirical Software Engineering and Measurement (ESEM08)*, Kaiserslautern, Germany, DOI: 10.1145/1414004.1414027. October 2008.
- “A Survey of Software Project Managers on Software Process Change”, Yuepu Guo and Carolyn Seaman. *International Symposium on Empirical Software Engineering and Measurement (ESEM08)*, Kaiserslautern, Germany, October 2008.
- “Going Beyond the Numbers – the Usefulness of Qualitative Data on Software Development Projects,” Linda Esker, Carolyn Seaman, Forrest Shull, and Kathleen Dangle, *Proceedings of the 20th Systems & Software Technology Conference*, Las Vegas, Nevada, May 2008.

“Bridging the Gap Between Business Strategy and Software Development”, Victor Basili, Mikael Lindvall, Myrna Regardie, Carolyn Seaman, Jens Heidrich, Jurgen Munch, Dieter Rombach, and Adam Trendowicz. *Proceedings of the International Conference on Information Systems (ICIS 2007)*, Montreal, December 2007.

“GQM+Strategies: A Comprehensive Methodology for Aligning Business Strategies with Software Measurement”, Victor Basili, Jens Heidrich, Mikael Lindvall, Jurgen Munch, Myrna Regardie, Dieter Rombach, Carolyn Seaman, and Adam Trendowicz. *Metrikon 2007*, Kaiserslautern, Germany, November 2007.

“Understanding Documentation Value in Software Maintenance”, Sumita Das, Wayne G. Lutters, and Carolyn B. Seaman. *ACM Symposium on Computer Human Interaction for Management of Information Technology (CHIMIT)*, Boston, March 2007 (poster).

“On the Impact of a Collaborative Pedagogy on African-American Millennial Students in Software Engineering”, Laurie Williams, Lucas Layman, Kelli M. Slaten, Sarah B. Berenson, and Carolyn Seaman. *Proceedings of the International Conference on Software Engineering (ICSE 2007) Education Track*, pp. 677-687, Minneapolis, USA, May 2007.

“Conceptualizing Software Engineering People issues”, M. Umarji and C. Seaman. *Workshop on Ontology, Conceptualizations and Epistemology for Software and Systems Engineering*, June 9-10, 2005, Madrid, Spain.

“Predicting Acceptance of Software Process Improvement”, M. Umarji and C. Seaman. *Workshop on Human and Social Factors in Software Engineering (HSSE'05)* – Co-located with *ICSE'05*, St. Louis, Missouri, May 2005.

“A Web Repository of Lessons Learned from COTS-Based Software Development”, I. Rus, C. Seaman, M. Lindvall, and V.R. Basili. In *Proceedings of The 27th Annual IEEE/NASA Software Engineering Workshop*, December 2002.

“The Information Gathering Strategies of Software Maintainers,” Carolyn B. Seaman. *International Conference on Software Maintenance*, October 2002.

“An Experience Management System for a Software Engineering Research Organization”, Victor Basili, Patricia Costa, Mikael Lindvall, Manoel Mendonca, Carolyn Seaman, Roseanne Tesoriero, and Marvin Zelkowitz. *Software Engineering Workshop*, NASA/Goddard Software Engineering Laboratory, Greenbelt, MD, November 2001.

“A Prototype Experience Management System for a Software Consulting Organization”, Manoel Mendonca, Carolyn Seaman, Victor Basili, and Yong-Mi Kim. *Proceedings of the International Conference on Software Engineering and Knowledge Engineering (SEKE01)*, Buenos Aires, Argentina, June 2001, pp. 29-36.

“Investigating and Improving a COTS-Based Software Development Process,” M. Morisio, C.B. Seaman, A. T. Parra, V.R. Basili, S.E. Kraft, S.E. Condon. *Proceedings of the International Conference on Software Engineering*, Ireland, May 2000, pp. 32-41.

“An Experience Management System for a Software Consulting Organization,” Carolyn Seaman, Manoel Mendonca, Victor Basili, and Yong-Mi Kim. *Software Engineering Workshop*, NASA/Goddard Software Engineering Laboratory, Greenbelt, MD, December 1999.

“The Package-Based Development Process in the Flight Dynamics Division”, A. Parra, C. Seaman, V. Basili, S. Kraft, S. Condon, S. Burke, D. Yakimovich, presented at the *Software Engineering Workshop*, NASA/Goddard Space Flight Center, Greenbelt, MD, December 1997.

“An Empirical Study of Communication in Code Inspections”, Carolyn B. Seaman and Victor R. Basili, in *Proceedings of the 1997 International Conference on Software Engineering*, Boston, MA, May 17-24, 1997.

“Communication Costs in Code and Design Reviews: An Empirical Study”, C.B. Seaman, *Proceedings of CASCON '96* (CD-ROM), IBM Centre for Advanced Studies, Toronto, November 1996.

“Characterizing and Assessing a Large-Scale Software Maintenance Organization”, L.C. Briand, W. Melo, C.B. Seaman, and V.R. Basili, *17th International Conference on Software Engineering*, Seattle, April 1995.

“Using the OPT Improvement Approach in the SQL/DS Development Environment”, C.B. Seaman, *Proceedings of CASCON '94* (CD-ROM), IBM Centre for Advanced Studies, Toronto, October 1994.

“OPT: Organization and Process Together”, C.B. Seaman, *Proceedings of CASCON '93*, IBM Centre for Advanced Studies, Toronto, October 1993.

“AAA: A Modeling Language for Software Production Environments”, C.B. Seaman, *Proceedings of CASCON '92*, IBM Centre for Advanced Studies, Toronto, October 1992.

“Data Modeling: Order Out of Chaos”, C.B. Seaman, *ACM Computer Science Conference*, Atlanta, February 1988.

Other Publications

“Technical Debt: A Research Roadmap Report on the Eighth Workshop on Managing Technical Debt (MTD 2016)”. Clemente Izurieta, Ipek Ozkaya, Carolyn Seaman, and Will Snipes. *ACM SIGSOFT Software Engineering Notes*, 42(1):28-31, January 2017.

“Technical Debt: Beyond Definition to Understanding, Report on the Sixth International Workshop on Managing Technical Debt”. Carolyn Seaman, Robert Nord, Philippe Kruchten, and Ipek Ozkaya. *ACM SIGSOFT Software Engineering Notes*, 40(2):32-4, March 2015.

Shull, F., Falessi, D., Carolyn, S., Diep, M., Layman, L. (2013). Technical Debt: Showing the Way for Better Transfer of Empirical Results. In J. Muench and K. Schmid (Ed.), *Perspectives on the Future of Software Engineering* (pp. 12). Berlin: Springer Verlag.

“Qualitative research in software engineering”. Tore Dybå, Rafael Prikladnicki, Kari Rönkkö, Carolyn B. Seaman, and Jonathan Sillito. Special Issue introduction. *Empirical Software Engineering* 16(4): 425-429, 2011.

“Measuring and Monitoring Technical Debt”. Seaman, C., and Guo, Yuepu. In *ADVANCES IN COMPUTERS* (Vol. 82, pp. 25–46). Elsevier. 2011.

“The potential role of ISERN in the promotion of qualitative research in software engineering,” Carolyn Seaman. *Qualitative Research in Software Engineering Workshop*, Vancouver, Canada, May 2009.

“STC and Software Defect Proneness,” Carolyn Seaman, A. Güneş Koru, and Sreedevi Sampath. *Workshop on Socio-Technical Congruence*, Vancouver, Canada, May 2009.

“An Empirical Characterization of Scientific Software Development Projects According to the Boehm and Turner Model: a Progress Report,” Carlton A. Crabtree, A. Güneş Koru, Carolyn Seaman, and Hakan Erdogmus. *Workshop on Software Engineering for Computational Science and Engineering (SECSE 09)*, Vancouver, Canada, May 2009.

“Discovering Determinants of High Volatility Software,” Carolyn Seaman, A. Güneş Koru, and Sreedevi Sampath. *Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 09)*, Vancouver, Canada, May 2009.

“Informing Design of a Search Tool for Bioinformatics,” Medha Umarji and Carolyn Seaman. *First International Workshop on Software Engineering for Computational Science and Engineering (SECSE)*, Leipzig, Germany, May 2008.

“Teaching Software Engineering to End Users,” Medha Umarji, Mark Pohl, Carolyn Seaman, , A. Güneş Koru, and Hongfang Liu. *Fourth Workshop on End-User Software Engineering (WEUSE IV)*, Leipzig, Germany, May 2008.

“Understanding Documentation Value in Software Maintenance,” Sumita Das, Wayne G. Lutters, and

Carolyn B. Seaman. UMBC Review, pp. 174-189, April 2008.

Review of *Software Maintenance: Concepts and Practice*, by Penny Grubb and Armstrong Takang, reviewed by Carolyn Seaman. *Journal of Software Maintenance and Evolution: Research and Practice*, [in press], 2008.

“Inspecting the History of Inspections: An Example of Evidence-Based Technology Diffusion”, Forrest Shull and Carolyn Seaman. *IEEE Software* (invited column), 25(1):88-90, January/February 2008.

“Chapter 2: Qualitative Methods”, Carolyn Seaman. In *Guide to Advanced Empirical Software Engineering*, Forrest Shull, Janice Singer, and Dag I.K. Sjoberg, eds. Springer 2008.

Review of *Managing Corporate Information Systems Evolution and Maintenance*, Edited by Khaled M. Khan and Yan Zhang, reviewed by Carolyn Seaman. *Journal of Software Maintenance and Evolution: Research and Practice*, 18:307-309, 2006.

“Software Maintenance and Support: Identifying Routine Work Artifacts as Boundary Objects Across Time”, Wayne G. Lutters and Carolyn Seaman. Workshop: Identifying Gaps between HCI, Software Engineering and Design, and Boundary Objects to Bridge Them, *ACM Conference on Human Factors in Computing Systems (CHI)*, 2004. [IFIP 7.2 hosted @ www.se-hci.org/bridging/chi2004/]

Review of *Advances in Software Maintenance Management: Technologies and Solutions*, edited by Macario Polo, Mario Piattini, and Francisco Ruiz, reviewed by Carolyn Seaman. *Journal of Software Maintenance: Research and Practice*, 15(5):375-377, September/October 2003.

“Lessons-Learned Repository for COTS-Based SW Development”, Victor Basili, Mikael Lindvall, Ioana Rus, Carolyn Seaman, and Barry Boehm. *Software Technology Newsletter*, 5(3), September 2002, available at <http://www.dacs.dtic.mil/awareness/newsletters/stn5-3/>.

“A Web Repository of Lessons Learned from COTS-based Software Development”, Ioana Rus, Carolyn Seaman, Mikael Lindvall, Victor Basili, and Barry Boehm. *Crosstalk*, 15(9):25, September 2002.

Review of *Software Maintenance: Concepts and Practice* by Armstrong A. Takang and Penny A. Grubb, reviewed by Carolyn Seaman. *Journal of Software Maintenance: Research and Practice*, 13(1):143-7, January 2001.

Review of *Practical Software Maintenance* by Thomas M. Pigoski, reviewed by Carolyn B. Seaman. *Journal of Software Maintenance: Research and Practice*, 12(3):249-253, May 2000.

Professional Activities

- Review papers regularly for *IEEE Transactions on Software Engineering*, *IEEE Software*, *ACM Transactions on Software Engineering and Methodology*, *Empirical Software Engineering Journal*, *Journal of Systems and Software*, and others.
- Serve regularly on proposal review panels for the National Science Foundation.
- Serve regularly on the program committees of the *TechDebt*, *ICSE*, *ESEM*, *Profes*, *ICSM*, *Agile*, *XP*, *EASE* conferences.
- Serve as an Associate Editor of the *IEEE Transactions on Software Engineering*.
- Serve on the Editorial Board of the *Information and Software Technology Journal*, published by Elsevier.
- Organized the Dagstuhl Seminar on Technical Debt Research, April 2016.
- Serve on the Steering Committee of the TechDebt conference.
- Serve on the Steering Committee of the International Software Engineering Research Network.
- Served as General Chair of the *International Workshop on Managing Technical Debt (MTD)*, Victoria, Canada, 2014.
- Served as co-General Chair of the *International Symposium on Empirical Software Engineering and Measurement (ESEM)*, Maryland, USA, 2013.
- Invited to give a keynote talk at the *Empirical Software Engineering Latin America Conference*, Montevideo, Uruguay, April 2013.
- Invited to give a keynote talk at the *Brazilian Software Quality Symposium*, Salvador, Brazil, July 2013.
- Served as Associate Editor of the *Information and Software Technology Journal*, published by Elsevier, 2008-2012.
- Served as guest editor of a special issue of the *Journal of Empirical Software Engineering* on Qualitative Research in Software Engineering, published 2011.
- Invited to give a keynote talk at the *Empirical Software Engineering Latin America Conference*, São Carlos, Brazil, November 2009.
- Organized the *International Doctoral Symposium on Empirical Software Engineering*, Lake Buena Vista, USA, October 2009.
- Served as Supervisor for the *International Doctoral Symposium on Empirical Software Engineering*, Kaiserslautern, Germany, October 2008.
- Invited participant in the Dagstuhl Seminars on Empirical Software Engineering, Dagstuhl, Germany, June 2006 and March 2010.
- Served as program co-chair for the *International Symposium on Software Metrics*, Italy, September 2005.
- Invited to be a panelist on “Empirical Validation – What, Why, When, and How” at the *International Conference on Software Engineering*, Portland, Oregon, May 2003.
- Served as guest editor of a special issue of the *Journal of Software Maintenance and Evolution* on “Process Diversity”, published December 2002.
- Served on the program committee for the *Metrics 2002* conference in Ottawa, Canada, June 2002.
- Invited to present on “The Validity of Qualitative Data” at the annual meeting of the *International Software Engineering Network (ISERN)*, Glasgow, Scotland, August 2001.
- Invited to chair a session on “Qualitative Research Methods” at the annual meeting of the *International Software Engineering Network (ISERN)*, Honolulu, Hawaii, October 2000.
- Invited to present on “Qualitative Methods in Empirical Studies of Software Engineering” at Linköping University, Sweden, June 2000.

- Served on the program committee for the *Beg, Borrow or Steal: Using Multidisciplinary Approaches in Empirical Software Engineering Research* workshop in Limerick, Ireland, June 2000.
- Invited to present on “Qualitative Methods in Empirical Studies of Software Engineering” at the *Workshop on Empirical Studies of Software Engineering*, National Research Council Canada, March 1999.
- Wrote the solutions manual for *Software Engineering: Theory and Practice* by Shari Lawrence Pfleeger.
- Served on the Program Committee for the *Software Engineering Workshop*, NASA/Goddard Space Flight Center, Greenbelt, MD, December 1997.
- Presented on “Qualitative Research Methods Borrowed from the Social Sciences” at the annual meeting of the *International Software Engineering Network (ISERN)*, Bari, Italy, October 1997.
- Served on the Program Committee for and participated in the *International Workshop on Empirical Studies of Software Maintenance (WESS)*, Bari, Italy, October 1997.
- Presented on “Integrating Realistic Metrics and Models” at the Workshop on *Process Modeling and Empirical Studies of Software Evolution (PMESSE)*, Boston, May 1997.
- Participated in the *International Workshop on Empirical Studies of Software Maintenance (WESS)*, Monterey, CA, September 1996.
- Participated in the annual meeting of the *International Software Engineering Network (ISERN)*, College Park, MD, October 1995.
- Participated in the *Int’l Workshop on Software Engineering Data (IWSED)*, College Park, MD, October 1995.
- Participated in the *International Software Process Workshop*, Airlie, VA, October 1994.
- Participated in the *AAAI Spring Symposium Series: Computational Organizational Design*, Palo Alto, March 1994.