

Curriculum Vitae

Notarization. I have read the following and certify that to the best of my knowledge this curriculum vitae is a current and accurate statement of my professional record.

Signature:

Date:

Personal Information

Adam A. Porter

Professor of Computer Science

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Education

B.S.	CSU Dominguez Hills	1986	Computer Science
M.S.	UC Irvine	1988	Computer Science
Ph.D.	UC Irvine	1991	Computer Science

University Experience

9/86–6/87	Teaching Assistant	Department of Information and Computer Science, UC Irvine
6/87–6/91	Research Assistant	Department of Information and Computer Science, UC Irvine
8/91–12/91	Lecturer	Department of Computer Science, University of Maryland University of Maryland Institute for Advanced Computer Studies
12/91–8/98	Assistant Professor	Department of Computer Science, University of Maryland University of Maryland Institute for Advanced Computer Studies
9/98–9/99	Visiting Professor	Dipartimento di Elettronica e Informazione, Politecnico di Milano
2/99–6/99	Visiting Professor	Dipartimento di Scienze della Comunicazione, Università della Svizzera Italiana
8/98–7/07	Associate Professor	Department of Computer Science, University of Maryland University of Maryland Institute for Advanced Computer Studies
8/07 - present	Full professor	Department of Computer Science, University of Maryland University of Maryland Institute for Advanced Computer Studies
7/07 – present	Associate Director	University of Maryland Institute for Advanced Computer Studies

Other Experience

Technical Consultant: Sun Microsystems, Lucent Bell Laboratories, Software Productivity Consortium, Motorola, MCC

Member of Technical Staff, Hughes Aircraft Co., Fullerton, CA

Member of Technical Staff, Contel Co., Fairfax, VA

Research, Scholarly and Creative Activities^{1 2}

Books Edited

1. Adam Porter and Janos Sztipanovits Eds. *New Visions for Software Design & Productivity: Research & Applications Workshop of the Interagency Working Group for Information Technology Research and Development (ITRD) Software Design and Productivity (SDP) Coordinating Group*. 2002.
2. Alessandro Orso and Adam Porter, Eds. *1st ICSE Workshop on Remote Analysis and Measurement of Software Systems (RAMSS)*. 2003.
3. Alessandro Orso and Adam Porter, Eds. *2nd ICSE Workshop on Remote Analysis and Measurement of Software Systems (RAMSS)*. 2004.

Book Chapters

1. Adam A. Porter and Richard W. Selby. Empirically guided software development using metric-based classification trees. In “Applying Software Metrics”, edited by Paul Oman and Shari Lawrence Pfleeger. IEEE Computer Society Press, October 1996.

Refereed Journals

1. Richard W. Selby and Adam A. Porter. Learning from examples: Generation and evaluation of decision trees for software resource analysis. *IEEE Transactions on Software Engineering*, SE-14 (12): 1743–1757, December 1988.
2. Adam A. Porter and Richard W. Selby. Empirically guided software development using metric-based classification trees. *IEEE Software*, 7(2): 46–54, March 1990.
3. Adam A. Porter and Richard W. Selby. Evaluating techniques for generating metric-based classification trees. *Journal of Systems and Software*, 12(3): 209–218, July 1990.
4. Adam A. Porter. Using measurement-driven modeling to provide empirical feedback to software developers. *Journal of Systems and Software*, 20(3): 237–254 March 1993.
5. Adam A. Porter, Lawrence G. Votta, and Victor R. Basili. Comparing Detection Methods for Software Requirements Inspections: A Replicated Experiment. *IEEE Transactions on Software Engineering*, 21(6): 563–575, June 1995. (Early version appears as University of Maryland Technical Report, CS-TR-3327, July 1994).
6. Adam Porter, Harvey Siy[†], and Lawrence Votta. A Survey of Software Inspections, *Advances in Computers*, vol. 42:39–76, 1996. (Early version appears as University of Maryland Technical Report, UMCP-CSD CS-TR-3552, October 1995).
7. Adam A. Porter and Philip M. Johnson. Assessing Software Review Meetings: Results of a Comparative Analysis of Two Experimental Studies. *IEEE Transactions on Software Engineering*, 23(3): 129–145, March 1997. (Early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3755, February 1997).

¹ Student co-authors for whom I was a primary advisor are indicated with the [†] symbol.

² Student co-authors for whom I was not a primary advisor, but on whose thesis committees I sat are indicated with the [‡] symbol.

8. Adam A. Porter, C. A. Toman, Harvey Siy[†] and L. G. Votta. An Experiment to Assess the Cost-Benefits of Code Inspections in Large Scale Software Development, *IEEE Transactions on Software Engineering*, 23(6): 329–346, June 1997.
9. Adam A. Porter. Fundamental Laws and Assumptions of Software Maintenance, *Empirical Software Engineering*, 2(2): 119-131 June 1997. (invited) (Early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3761, February, 1997).
10. Lalita Jategaonkar Jagadeesan, Adam Porter, Carlos Puchol, J. Christopher Ramming, and Lawrence G. Votta. Specification-based Testing of Reactive Software: A Case Study in Technology Transfer, *Journal of Systems and Software*, 40(3): 249-262, January 1998. (Early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3756, February 1997).
11. Adam A. Porter, Harvey P. Siy[†], Audris Mockus, and Lawrence G. Votta. Sources of Variation in Large-Scale Software Development, *ACM Transactions on Software Engineering and Methodology*, January 1998 7(1): p. 41–79. (Early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3762, February, 1997).
12. Adam A. Porter and Lawrence G. Votta. Comparing Detection Methods for Software Requirements Inspections: A Replication Using Professional Subjects, *Empirical Software Engineering*, 1998. 3(4): p. 355–379.
13. T.L. Graves, Mary Jean Harrold, Jung-Min Kim[†], Adam Porter, and Gregg Rothermel, an Empirical Study of Regression Test Selection Techniques. *ACM Transactions on Software Engineering Methodology*, 10(2): pp. 184-208 (2001).
14. D. E. Perry, A. Porter, M. Wade, L. Votta and J. Perpich, Reducing inspection interval in large-scale software development. *IEEE Transactions on Software Engineering*. 28(7): 695 – 705, July 2002.
15. Stuart Faulk, John Gustafson, Philip Johnson, Adam Porter, Walter Tichy and Lawrence Votta. Measuring HPC Productivity. *Journal of High Performance Computing Applications*. 18(4): 459-473, Dec. 2004.
16. Arvind S. Krishna[‡], Cemal Yilmaz[†], Atif Memon, Adam Porter, Douglas C. Schmidt, Aniruddha Gokhale, and Balachandran Natarajan, Applying Model-based Distributed Continuous Quality Assurance Processes to Enhance Persistent Software Attributes, *IEEE Software*, 21(6): 32-40, Nov/Dec 2004.
17. Arvind S. Krishna[‡], Douglas C. Schmidt, Atif Memon, Adam Porter, Cemal Yilmaz[†], A Distributed Continuous Quality Assurance Process to Manage Variability in Performance-intensive Software. *Studia Informatica Universalis*, 4(1): 53-72, March 2005.
18. Jung-Min Kim[†], Adam Porter, and Gregg Rothermel. An Empirical Study of Regression Test Application Frequency. *The Journal of Software Testing, Verification & Reliability*. Volume 15, Issue 4, pp. 257-279, December 2005.
19. Cemal Yilmaz[†], Myra Cohen, Adam Porter, Covering Arrays for Efficient Fault Characterization in Complex Configuration Spaces. *IEEE Transactions on Software Engineering*. January 2006, 32(1), pp. 20-34.
20. Cemal Yilmaz[†], Atif Memon, Adam Porter, Arvind Krishna[‡], Douglas C. Schmidt and Aniruddha Gokhale, Techniques and Processes for Improving the Quality and Performance of Open-Source Software. *The Software Practice and Improvement Journal*, 11(2), pp. 163-176, May 2006.
21. Cemal Yilmaz[†], Adam Porter, Arvind Krishna[‡], Atif Memon, Douglas C. Schmidt, Aniruddha Gokhale, and Bala Natarajan, Reliable Effects Screening: A Distributed Continuous Quality Assurance Process for Monitoring Performance Degradation in Evolving Software Systems. *IEEE Transactions on Software Engineering*. February 2007, 33(2), pp. 124-141.
22. Murali Haran, Alan Karr, Michael Last, Alessandro Orso, Adam Porter, Ashish Sanil and Sandro Fouche[†], Techniques for Classifying Executions of Deployed Software to Support Software Engineering Tasks, *IEEE Transactions on Software Engineering*. May 2007, 33(5), pp. 287-304.
23. Adam Porter, Atif Memon, Cemal Yilmaz[†], Douglas C. Schmidt and Bala Natarajan, Skoll: A Process and Infrastructure for Distributed Continuous Quality Assurance. *IEEE Transactions on Software Engineering*. August 2007, 33(8), pp. 510-525.

Refereed Journals in Submission

1. NA

Talk, Abstracts, and Other Professional Papers Presented

Invited Talks

1. Contel Technology Center, Chantilly, VA, June 22, 1990.
2. University of Washington, Seattle, WA, April 4, 1991.
3. Georgia Institute of Technology, Atlanta, GA, April 9, 1991.
4. University of Maryland, College Park, College Park, .MD, April 11, 1991.
5. Portland State University, Portland, OR, April 17, 1991.
6. Textronics Corp., Beaverton, OR, April 18, 1991.
7. Purdue University, West Lafayette, IN, April 23, 1991.
8. AT&T Bell Laboratories, Naperville, IL, June 17, 1991.
9. Fourteenth International Conference on Software Engineering, Melbourne, Australia, May 1992. (Poster session).
10. Mitre Corporation, McClean, VA, June 1992.
11. Workshop on Experimental Software Engineering Issues, Dagstuhl, Germany September 11, 1992.
12. Software Productivity Consortium, Herndon, VA, June 1993
13. Hughes Aircraft Corp., Landover, MD, Feb. 1994.
14. University of Bari, Italy, May 21, 1994.
15. University of Karlsruhe, Karlsruhe, Germany, Oct. 21, 1994
16. The Second Symposium on the Foundations of Software Engineering, New Orleans, LA, Dec. 1994, Panelist, "Making Software Engineering More Scientific".
17. Mini-Tutorial Session: The International Symposium on Software Metrics, Berlin, Germany, Mar. 1996, "What makes inspections work? Understanding how and why different inspection methods impact effectiveness and cost".
18. Georgia Institute of Technology, Atlanta, GA, May 1996.
19. Washington University at St. Louis, November 15 1996.
20. University of Virginia, November 18 1996.
21. National Institute of Statistical Sciences, November 19 1996.
22. University of California, Irvine, 1996.
23. University of Washington, May 1997.
24. Politecnico di Milano, Sep. 1998.
25. Università della Svizzera, Mar. 1999.
26. University of Texas at Austin, May 2000.
27. Workshop on New Visions for Software Design and Productivity, National Science Foundation, Arlington, VA. April 18-19, 2001.
28. Workshop on New Visions for Software Design and Productivity: Research and Applications. Vanderbilt University. December 12-15 2001.
29. Workshop on Remote Analysis and Measurement of Software Systems (RAMSS) at ICSE-2003, Portland, Oregon, May 9, 2003.
30. Georgia Institute of Technology, Atlanta. GA. June 2003.

31. Vanderbilt University, Nashville, TN. June 2003.
32. Keynote address. 2nd Workshop on Remote Analysis and Measurement of Software Systems (RAMSS) at ICSE-2004, Edinburgh, Scotland, UK. May 2004.
33. Dagstuhl Seminar on Multi-Version Program Analysis, Wadern, Germany June 2005.
34. Politecnico di Milano, Milan, Italy. March 2006.
35. Université catholique de Louvain, Louvain-la-Neuve, Belgium. April 2006.
36. University College London, London, UK. April 2006.
37. University of Lugano, Lugano, Switzerland. June 2006.
38. Politecnico di Torino, Torino, Italy. June 2006.
39. Free University Of Bozen – Bolzano, Bolzano, Italy. July 2006.
40. Selected Speaker, 1st Google Conference on Test Automation. September 2006.
41. University of Massachusetts, Amherst. Amherst, MA. September 2006.
42. Microsoft Research, Redmond, WA. November 2006.
43. Selected Speaker, 2nd Google Conference on Test Automation. August 2007.
44. IBM TJ Watson Research Center, Hawthorne, NY. September 2007.
45. Keynote address: 21st BRAZILIAN SYMPOSIUM ON SOFTWARE ENGINEERING, Campinas, SP, Brazil, October 2008.

Refereed Conference Proceedings

1. Richard W. Selby and Adam A. Porter. Software Metric Classification Trees Help Guide the Maintenance of Large-Scale Systems. In Proceedings of the Conference on Software Maintenance, Miami, FL, October 1989.
2. Richard W. Selby, Greg James, Kent Madsen, Joan Mahoney, Adam Porter, and Doug Schmidt. Classification Tree Analysis Using the Amadeus Measurement and Empirical Analysis System. In Proceedings of the Fourteenth Annual Software Engineering Workshop, NASA/GSFC, Greenbelt, MD, November 1989.
3. Joseph C. Fitzgerald Shari Lawrence Pfleeger and Adam A. Porter. The Contel Software Metrics Program. In Proceedings of the International Conference on Applications of Software Measurement, San Diego, CA, November 1990.
4. Richard W. Selby, Adam A. Porter, and R. Kent Madsen. Metric-Driven Classification Models. In Proceedings of the Thirteenth Minnowbrook Software Engineering Workshop, Blue Mountain Lake, NY, July 1990.
5. Richard W. Selby, Adam A. Porter, Doug C. Schmidt, and James Berney. Metric-driven analysis and feedback systems for enabling empirically guided software development. In Proceedings of the Thirteenth International Conference on Software Engineering, Austin, TX, May 1991. (An early version appears as Arcadia Technical Report UCI-90-19, University of California, September 1990.)
6. Adam A. Porter and Lionel Briand. Optimized Set Reduction for Empirically Guided Software Development. In Proceedings of the Sixteenth Annual Software Engineering Workshop, NASA/GSFC, Greenbelt, MD, December 1991.
7. Adam A. Porter. Using Measurement-Driven Modeling to Provide Empirical Feedback to Software Developers. In Proceedings of the Fourth Annual Oregon Workshop on Software Metrics, Silver Falls, OR, March 1992.
8. Lionel C. Briand and Adam A. Porter. An Alternative Modeling Approach for Predicting Error Profiles in Ada Systems. In Proceedings of the Eurometrics '92 Conference Brussels, Belgium, April 1992.
9. Jianhui Tian[‡], Adam A. Porter and Marvin Zelkowitz. An Improved Classification Tree Analysis of High Cost Modules Based upon an Axiomatic Definition of Complexity. In Proceedings of the Third

International Symposium on Software Reliability Engineering. Research Triangle Park, NC, October 1992.

10. Adam A. Porter. Classification Rules for Predicting Faulty Software Components. Fifth International Conference on Software Engineering and Knowledge Engineering. San Francisco, CA, June 1993.
11. Adam A. Porter and Larry G. Votta. An Experiment to Assess Different Defect Detection Methods for Software Requirements Inspections. In Proceedings of the Sixteenth International Conference on Software Engineering, Sorrento, Italy, May 1994. Approx. acceptance ratio 27/245. (An early version appears as University of Maryland Technical Report, CS-TR-3130. September 1993.)
12. Chen Chen[†], Adam Porter, and James Purtilo. Tool Support for Tailored Prototyping. In Proceedings of the Quality Software Development Tools Conference, July 1994, Washington D.C. (An early version appears as University of Maryland Technical Report, CS-TR-3242. April, 1994.)
13. Adam A. Porter, Harvey Siy[†], Carol Toman, and Lawrence G. Votta, An Experiment to Assess the Cost-Benefits of Code Inspection in Large Scale Software Development: A Preliminary Report. In the Nineteenth Annual Software Engineering Laboratory Workshop, NASA/GSFC Greenbelt, MD, November 1994.
14. Lawrence Votta, Adam Porter, and Dewayne Perry. Experimental Software Engineering: A Report on the State of the Art. In Proceedings of the Seventeenth International Conference on Software Engineering, Seattle, Washington, April 1995. (Invited.)
15. Adam A. Porter, Harvey Siy[†], Carol Toman, and Lawrence G. Votta. An Experiment to Assess the Cost-Benefits of Code Inspection in Large Scale Software Development, In Proceedings of the Third Symposium on the Foundations of Software Engineering, Washington, D.C. Nov, 1995. Approx. acceptance ratio 14/90. (An early version appears as University of Maryland Technical Report, CS-TR-3410 and UMIACS-TR-95-14. February, 1995.)
16. Patricia McCarthy[†], Adam A. Porter, Harvey Siy[†] and Lawrence G. Votta Jr. An Experiment to Assess Cost-Benefits of Inspection Meetings and their Alternatives, In Proceedings of the International Symposium on Software Metrics, Berlin, Germany, March, 1996. (An early version appears as University of Maryland Technical Report, UMCP-CSD CS-TR-3520. September, 1995.)
17. Dewayne E. Perry, Adam A. Porter, Lawrence G. Votta and Michael W. Wade, Evaluating Workflow and Process Automation in Wide-Area Software Development, In Proceedings of the Fifth European Workshop on Software Process Technology, October, 1996.
18. Alan F. Karr, Adam A. Porter, and Lawrence Votta, An Empirical Exploration of Code Evolution, In Proceedings of the International Workshop on Empirical Studies of Software Maintenance, Monterey, CA, November, 1996.
19. M. Perpich, D. E. Perry, A. A. Porter, L. G. Votta and M. W. Wade, Anywhere, Anytime Code Inspections: Using the Web to Remove Inspection Bottlenecks in Large-Scale Software Development, In Proceedings of the Nineteenth International Conference on Software Engineering", Boston, MA, May 1997. Approx. acceptance ratio 49/252. (An early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3757, February, 1997.)
20. Adam A. Porter, Harvey P. Siy[†], and Lawrence G. Votta, Understanding the Effects of Developer Activities on Inspection Interval, In Proceedings of the Nineteenth International Conference on Software Engineering", Boston, MA, May 1997. Approx. acceptance ratio 49/252. (An early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3759.)
21. Lalita Jategaonkar Jagadeesan, Adam Porter, Carlos Puchol, J. Christopher Ramming, and Lawrence G. Votta, Specification-based Testing of Reactive Software: Tools and Experiments, In Proceedings of the Nineteenth International Conference on Software Engineering", Boston, MA, May 1997. Approx. acceptance ratio 49/252. (An early version appears as University of Maryland Technical Report, UMCP-CSD: CS-TR-3759, February, 1997.)
22. Thomas Ball, Jung-Min Kim[†], Adam Porter, and Harvey Siy[†], If Your Version Control System Could Talk, In Proceedings of the Workshop on Process Modeling and Empirical Studies of Software Evolution, Boston, MA, May, 1997.
23. Mary Jean Harrold, Renee Miller, Gregg Roethermel, and Adam Porter, A Collaborative Investigation of Program-Analysis-Based Testing and Maintenance, In Proceedings of the International Workshop on Empirical Studies of Software Maintenance, Bari, Italy, October, 1997.

24. Todd Graves, Mary Jean Harrold, Jung-Min Kim[†], Adam Porter, and Gregg Rothermel, An Empirical Study of Regression Test Selection Techniques, in Proceedings of the Twentieth International Conference on Software Engineering, Kyoto, Japan, April 1998.
25. Jung-Min Kim[†], Adam Porter, and Gregg Rothermel, An Empirical Study of Regression Test Application Frequency, Proceedings of the Twenty-second International Conference on Software Engineering, Limerick, Ireland, June 2000. Approx. acceptance ratio 50/353.
26. Dewayne Perry, Adam Porter and Lawrence Votta, Empirical Studies of Software Engineering: a Roadmap, in The Future of Software Engineering, Proceedings of the Twenty-second International Conference on Software Engineering, Limerick, Ireland, June 2000. (invited).
27. Douglas Schmidt and Adam Porter, Leveraging Open-Source Communities To Improve the Quality & Performance of Open-Source Software 1st Workshop on Open Source Software Engineering, Toronto, Canada, May 2001.
28. Jung-Min Kim[†] and Adam Porter, A History-Based Test Prioritization Technique for Regression Testing in Resource Constrained Environments. Proceedings of the Twenty-fourth International Conference on Software Engineering. Orlando, FL. May 2002.
29. Alessandro Orso and Adam Porter, ICSE Workshop on Remote Analysis and Measurement of Software Systems (RAMSS). In Proceedings of the International Conference on Software Engineering 2003. Portland OR. May 2003. (Invited).
30. Cemal Yilmaz[†], Adam Porter, and Douglas C. Schmidt, Distributed Continuous Quality Assurance: The Skoll Project, Workshop on Remote Analysis and Measurement of Software Systems (RAMSS) at ICSE-2003, Portland, Oregon, May 9, 2003.
31. Kenny C. Gross, Scott McMaster[†], Adam Porter, Aleksey Urmanov, and Lawrence G. Votta, Proactive System Maintenance Using Software Telemetry. Workshop on Remote Analysis and Measurement of Software Systems (RAMSS) at ICSE-2003, Portland, Oregon, May 9, 2003.
32. Stuart Faulk, John Gustafson, Adam Porter and Lawrence Votta. "Measuring HPCS Productivity." Proceedings of the Seventh Annual High Performance Embedded Computing Workshop, MIT Lincoln Laboratory, September 2003, pp 53-54.
33. Atif Memon, Adam Porter and Doug Schmidt. Feedback-driven Design of Distributed Real-time & Embedded Component Middleware Via Model-Integrated Computing & Distributed Continuous Quality Assurance', Science of Design: Software-Intensive Systems, A National Science Foundation Invitational Workshop, November 2-4, 2003, Airlie, Virginia
34. A. Memon, A. Porter, C. Yilmaz[†], A. Nagarajan[†], D. Schmidt and B. Natarajan. Skoll: Distributed Continuous Quality Assurance, in Proceedings of the International Conference on Software Engineering, May 2004, Edinburgh, Scotland, UK. Approx. acceptance ratio 59/436.
35. Stuart Faulk, Adam Porter, Walter Tichy, Philip Johnson, John Gustafson and Larry Votta. Toward Accurate HPC Productivity Measurement, In Proceedings of the 1st International Workshop on Software Engineering for High Performance Computing System Applications, Edinburgh, Scotland, UK. May 2004.
36. C. Yilmaz[†], A. S. Krishna[‡], A. Memon, A. Porter, D. C. Schmidt, A. Gokhale, and B. Natarajan. A Model-based Distributed Continuous Quality Assurance Process to Enhance the Quality of Service of Evolving Performance-intensive Software Systems, In proceedings of the 2nd ICSE Workshop on Remote Analysis and Measurement of Software Systems, Edinburgh, Scotland, UK. May 2004.
37. Cemal Yilmaz[†], Myra Cohen, and Adam Porter. Covering Arrays for Efficient Fault Characterization in Complex Configuration Spaces. In Proceedings of the International Symposium on Software Testing and Analysis. July 2004. Boston, MA. Approx. acceptance ratio 28/100.
38. A. S. Krishna[‡], D. C. Schmidt, A. Memon, A. Porter and D. Sevilla, Improving the Quality of Reusable and Reconfigurable Performance-intensive Software using Model-Integrated Distributed Continuous Quality Assurance. In Proceedings of the International Conference on Software Reuse. July 2004, Madrid, Spain.
39. Emre Turkay, Arvind S. Krishna[‡], Aniruddha Gokhale, Douglas Schmidt, Bala Natarajan, Adam Porter, Cemal Yilmaz[†], and Atif Memon, Model-Driven Quality Assurance Techniques for Distributed Real-time and Embedded Systems. In the Proceedings of the OMG Workshop on Distributed Object Computing for Real-time and Embedded Systems. July 12-15, 2004, Reston, VA.

40. Adam Porter, Atif Memon, and Cemal Yilmaz[†], Don Hinton, Arvind Krishna[‡], and Douglas C. Schmidt Distributed Continuous Quality Assurance for Distributed and Real-time Systems. In Proceedings of the 4th Annual Workshop on TAO and CIAO. July 2004, Alexandria, VA.
41. Arvind S. Krishna[‡], Cemal Yilmaz[†], Atif Memon, Adam Porter, Douglas C. Schmidt, Aniruddha Gokhale and Balachandran Natarajan, A Distributed Continuous Quality Assurance Process to Manage Variability in Performance-intensive Software. In Proceedings of the OOPSLA 2004 Workshop on Component & Middleware Performance, Vancouver, BC, Canada, October 2004.
42. Cemal Yilmaz[†], Arvind Krishna[‡], Atif Memon, Adam Porter, Douglas C. Schmidt, Aniruddha Gokhale, and Bala Natarajan, Main Effects Screening: A Distributed Continuous Quality Assurance Process for Monitoring Performance Degradation in Evolving Software Systems, in Proceedings of the 27th International Conference on Software Engineering, St. Louis, MO, May 15-21, 2005. Approx. acceptance ratio 44/313.
43. Il-Chul Yoon[†], Alan Sussman and Adam Porter, Improving Productivity by Effectively Launching Complex HPC Applications. In Proceedings of the 2nd International Workshop on Software Engineering for High Performance Computing System Applications. St Louis, Mo, May 2005.
44. Alan F. Karr and Adam A. Porter, Distributed Performance Testing using Statistical Modeling, 1st International Workshop on Advances in Model-Based Software Testing, St Louis, Mo, May 2005.
45. Murali Haran, Alan Karr, Alessandro Orso, Adam Porter and Ashish Sanil, Applying Classification Techniques to Remotely-Collected Program Execution Data. In the Proceedings of the Joint 10th European Software Engineering Conference and 13th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2005). Sept. 2005, Lisbon, Portugal. Approx. acceptance ratio 32/200.
46. Cemal Yilmaz[†], Cagatay Catal, Oya Kalipsiz and Adam Porter, Dagitik Kalite Guvencesi, (Distributed Quality Assurance) Turkish International Symposium on Software Engineering (UYMS), September 2005, Ankara, Turkey.
47. Kenny C. Gross, Scott McMaster[†], Adam Porter, Aleksey Urmanov and Lawrence G. Votta, Towards Dependability in Everyday Software Using Software Telemetry, In the Proceedings of the 3rd IEEE Workshop on Engineering of Autonomic Systems. Potsdam, Germany. March 2006.
48. Adam Porter and Douglas Schmidt, Distributed Continuous Quality Assurance for Ultra-Large-Scale (ULS) Distributed Real-Time and Embedded Systems, Ultra-Large-Scale Systems Workshop at OOPSLA 2006, Portland , OR. October 2006.
49. Sandro Fouche[‡], Myra Cohen and Adam Porter. Incremental Adaptive Covering Arrays for Efficient Fault Detection. In the Proceedings of the Joint 12th European Software Engineering Conference and 15th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2007). Dubrovnik, Croatia. September 2007. Approx. acceptance ratio 43 full, 20 short /251. (To appear as a short paper).
50. Il-Chul Yoon[†], Alan Sussman, Atif Memon and Adam Porter, Direct-Dependency-based Software Compatibility Testing, In the Proceedings of the Conference on Automated Software Engineering Nov. 2007, Atlanta, Georgia. Approx. acceptance ratio 37 full, 40 short /312. (To appear as a short paper).
51. James Hill, Douglas C. Schmidt, John Slaby, and Adam Porter, CiCUTS: Combining System Execution Modeling Tools with Continuous Integration Environments,, Proceedings of the 15th Annual IEEE International Conference and Workshops on the Engineering of Computer Based Systems (ECBS), March 31st - 4th April, 2008 Belfast, Northern Ireland.
52. Il-Chul Yoon, Alan Sussman, Atif Memon and Adam Porter, Effective and Scalable Software Compatibility Testing, in Proceedings of the International Symposium on Software Testing and Analysis, Seattle, WA, July 2008. Approx. acceptance ratio 26/100.

Refereed Conference Proceedings Submitted

Unrefereed Conference Proceedings

1. Dewayne Perry, Adam Porter and Lawrence Votta, Evaluating Workflow and Process Automation in Wide-Area Software Development, NSF Workshop on Workflow and Process Automation in Information Systems: State-of-the-Art and Future Directions, Athens, GA, May 1996. (unrefereed).

2. Dewayne Perry, Adam Porter, and Lawrence Votta, A Primer on Empirical Studies, In Proceedings of the Nineteenth International Conference on Software Engineering, Boston, MA, May 1997. (unrefereed tutorial summary).
3. Adam Porter. Leveraging Program Multiplicities to Support (Distributed Continuous) Quality Assurance. In Dagstuhl Seminar Proceedings 05261 Multi-Version Program Analysis. Wadern, Germany. June 2005, (unrefereed abstract).
4. Adam Porter. Towards a Distributed Continuous Certification Process. In Proceedings of the 2007 Workshop on Distributed and Parallel Realtime Systems: Special Session on Certification of Dynamic and Adaptive Systems. March 2007, Long Beach, CA, (unrefereed abstract).

Patents

- Detecting and correcting a failure sequence in a computer system before a failure occurs. United States Patent #7,181,651. With Gross, Kenny C. and Votta, Lawrence G. Jr. Awarded Feb. 2007.

Grants and Contracts

- International Travel Award, National Science Foundation CCR-921410, \$1000, February 1992, PI.
- Measurement-Driven Modeling to Direct Software Maintenance, General Research Board, University of Maryland, \$5400, July 1992-June 1993, PI.
- Forecasting Software Error Classes, IBM, \$23,500 July 1992-December 1992, PI.
- Formal Requirements Inspections IBM, \$23,500 July 1993-December 1994, PI.
- Empirical Investigation of Software Inspections, General Research Board, University of Maryland, \$6500, July 1995-June 1996, PI.
- Faculty Early Career Development Award: Empirical Investigation of Software Inspections, National Science Foundation, CCR-9501354, \$128,000 Aug. 1995-Aug 1998, PI.
- The Cycle-time Reduction Laboratory, AT&T Foundation, \$55,000, January 1996, PI.
- Code Decay in Legacy Software Systems: Measurement, Models and Statistical Strategies, National Science Foundation, SBR-9529926, \$255,000 (\$7400 to UMd), Jan. 1996- March 31, 2000, with Stephen Eick and Alan Karr. (PI on subcontract).
- Scalable Program-Analysis-Based Testing and Maintenance: Infrastructure and Experimentation National Science Foundation, CCR-9707792, \$1,612,531 (\$456407 to UMd), September 1997-Aug. 2002, Co-PI with Mary Jean Harrold, Renee Miller, and Gregg Rothermel.
- Empirical Investigations of Large-Scale Regression Testing, National Science Foundation, CCR-0098158, \$275,000, Sep. 2001 – Aug. 2005, PI.
- Workshop on New Visions for Software Design and Productivity, National Science Foundation, CCR-0138554, \$20,000, Jan. 2002 – Dec. 2002, Co-PI with Janos Sztipanovitz.
- Collaborative Research: ITR: Acquiring Accurate Dynamic Field Data Using Lightweight Instrumentation, National Science Foundation CCR-0205265, CCR-0205118, CCR-0205429, CCR-0205627, and CCR-0205422, \$2,250,000 (\$606,000 to UMd), PI with Alan Karr, Douglas Schmidt, David Notkin, Mary Jean Harrold, Alessandro Orso, and Richard Lipton. Sept. 2002 – Aug 2007.
- Lightweight, Distributed Dynamic Analysis Techniques, DARPA, \$50,000. Oct. 2002 – March 2003, PI.
- Sun Microsystems, Gift. \$20,000 + ~\$20,000 in equipment. 2004, PI.
- ONR-DURIP: A Testbed for Distributed, Continuous Quality Assurance of DoD Combat Systems, Office of Naval Research N00014-05-1-0421, \$206,136 (\$103,086 to UMd) for equipment. Co-PI with Aniruddha Gokhale, Atif Memon, Douglas Schmidt and Balachandran Natarajan. May 1, 2005 – April 30, 2006.
- Sun Microsystems Contributory Grant# EDU-Q206-176A, \$10,048.07 for equipment. Nov. 2005, Co-PI with Atif Memon.
- Around-the-World, Around-the-Clock Software Performance Testing, General Research Board, University of Maryland, \$8750, Summer 2006, PI.

- REU Supplement to Collaborative Research: ITR: Acquiring Accurate Dynamic Field Data Using Lightweight Instrumentation, National Science Foundation, CCF-0630831, \$6000. June 2006 – August 2006, PI.
- Software Wind Tunnel (SWiT) Capabilities, Lockheed Martin ATL, \$25,000, 10/12/2006 – 1/31/2007, PI.
- Using Distributed Continuous Quality Assurance to Support Certification of Dynamic Systems, Raytheon Inc., \$10,000. 12/2006-1/2007, PI.
- Rapid Design-Time Certification of Discrete System Configurations for DARPA IXO Seedling, Raytheon Inc., \$50,000, 2/2007 – 6/2007. PI.
- CPA-SEL: Testing Systems with Large and Complex Test Spaces: Techniques, Tools and Empirical Studies, National Science Foundation, CCF-0811284, \$350,000, 6/1/08-5/31/2011, PI.

Grants and Contracts in Submission

- NA

Fellowships, Prizes and Awards

- University of California Regents Fellow, UC/Irvine, CA, 1986–87.
- Faculty Mentor Program Fellow, UC/Irvine, CA, 1987–88.
- Patricia Roberts Harris Fellow, UC/Irvine, CA, 1988–89.
- Howard Hughes Ph.D. Fellow, Hughes Aircraft Co., Fullerton, CA, 1990–91.
- UMD Graduate Research Board Summer Award, 1993
- Dean's Award for Excellence in Teaching, University of Maryland, CMPS, 1995.
- NSF Faculty Early Career Development Award, 1995–1998.
- Senior Member, IEEE, 2003.
- UMD Graduate Research Board Summer Award, 2006
- Senior Member, ACM, 2006.

Editorial Boards

- 1997 – 2003: Associate editor, ACM Transactions on Software Engineering Methodology.
- 2006 – present: Associate editor, IEEE Transactions on Software Engineering.

Teaching and Advising

Courses Taught

- Spring 1992: CMSC 330: Organization of Programming Languages, 100 students
- CMSC 838P: Special Topics in Software Engineering, 25 students
- Fall 1992: CMSC 330: Organization of Programming Languages, 90 students
- Spring 1993: CMSC 630: Theory of Programming Languages, 25 students
- Fall 1993: CMSC 630: Theory of Programming Languages, 30 students
- Spring 1994: CMSC 435: Software Design and Development, 40 students
- Fall 1994: CMSC 330: Organization of Programming Languages, 60 students
- Spring 1995: CMSC 435: Software Design and Development, 45 students
- Fall 1995: CMSC 330: Organization of Programming Languages, 130 students
- Spring 1996: CMSC 838P: Wide-Area Software Development, 25 students
- Fall 1996: MSWE 607: Software Life Cycle Methods and Techniques, 27 students
- Spring 1997: Fall 1999: CMSC 435 Software Design and Development, 40 students
- Fall 1997: CMSC 435: Software Design and Development, 40 students
- Spring 1998: CMSC 330: Organization of Programming Languages, 100 students
- Fall 1999: CMSC 435: Software Design and Development, 40 students
- Spring 2000: CMSC 838P: CMSC 838Q - Object-Oriented Design Patterns for Distributed and Concurrent Systems, 5 students
- Fall 2000: CMSC 435: Software Design and Development, 45 students
- Spring 2001: CMSC 435: Software Design and Development, 45 students

- Fall 2001: CMSC 433: Programming Language Technologies and Paradigms, 40 students
- Spring 2002: CMSC 433: Programming Language Technologies and Paradigms, 50 students
- Fall 2002: CMSC 433: Programming Language Technologies and Paradigms, 45 students
- Spring 2003: CMSC 838P: Internet-Scale Software Engineering: Leveraging Fielded Resources, 10 students.
- Fall 2003: CMSC 433: Programming Language Technologies and Paradigms, 40 students
- Spring 2004: CMSC 838P: Software Engineering: Remote Analysis and Measurement of Software Systems, 5 students.
- Fall 2004: CMSC 433: Programming Language Technologies and Paradigms, 52 students
- Spring 2005: CMSC 838P: Research in Software Engineering, 15 students
- Fall 2006: CMSC 838P: Research in Software Engineering, 8 students
- Fall 2007: CMSC 634: Empirical Research Methods for Computer Science, 18 students
- Spring 2008: CMSC 433: Programming Language Technologies and Paradigms, 34 students
- Fall 2008: CMSC 433: Programming Language Technologies and Paradigms, 32 students

Teaching Innovations

- **Experimental Laboratory Exercises:** Developed classroom laboratory exercises in which students experimentally test hypotheses about software engineering processes. The students also receive instruction on statistics which they use to analyze the data from their experiments in the classroom. I have developed four such laboratories which are currently being used by several professors around the world.
- **Very-Large Scale Software Development.** Redesigned CMSC 435 so that students must work together to develop one very large-scale software package. Projects have been on the order of 50,000 lines of code (with J. Purtilo).
- **The Cycle-Time Reduction Laboratory** - Won funding to create an educational lab for developing computer-supported cooperative work applications. This lab is used in conjunction with the CMSC 435 course.
- **Revising Graduate Software Engineering course.** Redeveloped course materials and changed teaching style to stress a “conversational” learning approach in which students take a greater role in the classroom learning process.

Advising: Research Direction

High School Projects

- Chimeziri Oneywa, 2006

Undergraduate Projects

- Jacob Goodrich (U. of Washington with David Notkin), 2000
- Daniel Allen (U. of Washington with David Notkin), 2000
- Shannon Hoffswell (U. of Washington with David Notkin), 2000
- Hilena Hailu, 2001
- Vidhi Bhansali, 2002
- Lee Ellis, NSF-REU summer 2006, independent study Fall 2006

Doctoral Committee

- William Thomas
- Jianhui Tian
- Eduardo Ostertag Jenkins
- William Martschenko
- Christine Hofmeister
- Salwa Abdel-Hafiz

- Elizabeth White
- Chen Chen
- Carolyn Seamans
- Jim Bowman
- Jim Welch
- Kritchalach Thitikamol
- Mehrdad Hassani
- Daniel Yankelovich
- Manuel Rodriguez
- Daniel Savarese
- Hyeonsang Eom – 5/2003
- Hyunmo Kang - 12/2003
- Lance Good – 12/2003
- Jeremy Mason – 12/2004
- Jamie Spacco – 8/2006
- Arvind Krishna – 11/2005 Vanderbilt University
- Qing Xie - 8/2006
- Ankush Varma – 4/2007
- Amy Karlson - 11/2007
- Christian Halaschek-Wiener - 11/2007
- Scott McMaster – 4/2008
- Xun Yuan – 8/2008

Doctoral Students: Primary Advisor

- Harvey Siy, Ph.D. 1996, (First position Bell Laboratories)
- Jung Min Kim, Ph.D. 2001. (First position Hyundai Inc.)
- Cemal Yilmaz, Ph.D. 2005. (First position IBM TJ Watson Research Center)
- Sandro Fouche'
- Il-Chul Yoon (with Alan Sussman)
- Charles Song

Service

Professional

Conferences

- Program Committee, Conference on Computer Assurance, Gaithersburg, MD, 1993.
- Session Chair, NASA - SEL Workshop. Greenbelt, MD, 1993.
- Program Committee and Session Chair, NASA - SEL Workshop. Greenbelt, MD, 1994.
- Program Committee, International Symposium on Software Metrics, Berlin, Germany, 1995.
- Program Committee and Session Chair, International Workshop on Empirical Studies of Software Maintenance, Monterey, CA, 1996.
- Program Committee and Session Chair, International Conference on Software Engineering, Boston, MA, 1997.
- Program Committee, Conference on Domain-Specific Languages, Santa Barbara, CA, 1997.
- Program Committee, International Workshop on Empirical Studies of Software Maintenance, Bari, Italy, 1997.
- Program Committee, International Conference on Software Engineering, Kyoto, Japan, 1998.
- Program Committee, International Conference on Software Engineering, Los Angeles, CA, 1999.
- Program Committee, Symposium on the Foundations of Software Engineering, San Diego, Nov. 2000.
- Program Committee, International Conference on Software Engineering, Toronto, Canada, May 2001.
- Program Committee, Symposium on the Foundations of Software Engineering, Charleston, SC, Nov. 2002.
- Program Committee, International Conference on Software Engineering, Portland, OR, May 2003.

- Co-organizer, Workshop on Remote Analysis and Measurement of Software Systems (RAMSS) at ICSE-2003, Portland, Oregon, May 9, 2003.
- Co-organizer, 2nd Workshop on Remote Analysis and Measurement of Software Systems (RAMSS) at ICSE-2004, Edinburgh, Scotland, UK, May 2004.
- Co-organizer, International Workshop on Software Engineering for High Performance Computing System (HPCS) Applications, Monday, May 2004.
- Co-organizer, 2nd International Workshop on Software Engineering for High Performance Computing System (HPCS) Applications at ICSE-2005, St. Louis, MO, May 2005.
- Program Committee, 11th International Software Metrics Symposium. September 2005, Como, Italy.
- Program Committee, 13th Asia Pacific Software Engineering Conference, Bangalore, India, Dec. 2006.
- Program Committee, International Conference on Empirical Software Engineering and Measurement (ESEM 2007), Madrid, Spain, September 2007.
- Co-organizer, Special Session on: Certification of Dynamic and Adaptive Systems at The International Workshop on Parallel and Distributed Real-Time Systems, Long Beach, CA, March 2007.
- Program Committee, 3rd International Workshop on Software Engineering for High Performance Computing Applications, Minneapolis, MN, May 2007.
- Program Committee, Workshop on Automating Service Quality, Atlanta, Georgia, USA, Nov. 2007.
- Program Committee, First India Software Engineering Conference (ISEC2008), Hyderabad, Feb. 2008
- Program Committee, First International Workshop on Multicore Software Engineering, Liepzig, Germany, March 2008.
- Program Committee Sixth International Workshop on Dynamic Analysis (WODA 2008), Seattle, WA, July 2008.
- Committee: ACM SIGSOFT 2008 / FSE 16 Doctoral Symposium, Atlanta, GA, Nov. 2008.
- Program Committee, Second International Workshop on Multicore Software Engineering, Victoria, BC, Canada, March 2009.

Funding Review Panels

- National Science Foundation 1997
- National Science Foundation 2001

Professional Service

University

- 2008-2009 - Search Committee Office of Information Technology Director of Software Development

Department

- 1991-1992 - Comprehensive exam development
- 1992-1993 - Comprehensive exam development
- 1992-1993 - Graduate Student Orientation
- 1992-1993 - Graduate Student Admissions Committee
- 1992-1993 - Faculty advisor: Student Chapter Association for Computing Machinery
- 1993-1994 - Faculty advisor: Student Chapter Association for Computing Machinery
- 1993-1994 - Directed comprehensive exams for SE/PL field committee
- 1994-1995 - Faculty advisor: Student Chapter Association for Computing Machinery
- 1994-1995 - Comprehensive exam development
- 1995-1996 - Faculty advisor: Student Chapter Association for Computing Machinery
- 1995-1996 - Teaching Evaluation Committee
- 1996-1997 - Department Council
- 1999-2001 - Department Council
- 2000-2001 - Department Council
- 2000-2001 - Hiring Committee

- 2000-2001 - Proposal development for information technology degree program
- 2000-2001 - Committee for Hinman CEO's program
- 2000-2001 - Committee for professional masters degree in computer science
- 2000-2001 - Department Council
- 2001-2002 - Department Council
- 2001-2002 - Salary Committee
- 2001-2002 - Faculty Retreat presentation on limiting enrollment
- 2001-2002 - APT review
- 2002-2003 - Committee on revising undergraduate curriculum
- 2002-2003 - APT Review
- 2003-2004 - Lab committee
- 2003-2004 - Teaching Evaluation Committee
- 2004-2005 - Lab committee
- 2004-2005 - Dean's Fellowship for Outstanding Graduate Student selection committee
- 2006-2008 - Chaired committee to evaluate changes to undergraduate curriculum
- 2007-2008 - Host/Mentor to Prof. Mei Hong of Sichuan University, PRC
- 2007-2008 - APT committee for Michael Hicks
- 2007-2008 - APT review
- 2008-2009 UMIACS APT committee
- 2008-2009 CS Salary Committee
- 2008-2009 Review Committee ACM Dissertation Award

External

- 2007-2008 APT Committee Georgetown University
- 2008-2009 APT Committee Georgetown University

Community Outreach

- 1995. Organized Summer Educational Lab for local Hispanic high school students.
- 1997. Organized 2-day course on technical writing for local Hispanic college students.
- 2002. Served as mentor for the Ronald E. McNair Post-Baccalaureate Achievement program.
- 2005. Discussant for Gemstone thesis project.
- 2006: Faculty mentor: UMD Leaders for Tomorrow Program
- 2006: Faculty mentor: STAND Internship Research Program

Panels and Workshops

- Panelist, National Academy of Sciences, "Toward and Every-Citizen Interface to the National Information Infrastructure, 1996.
- Panelist, NSF/DARPA Workshop on New Visions for Software Design and Productivity, 2001.
- Co-organizer: NSF Workshop on New Visions for Software Design and Productivity: Research and Applications. Vanderbilt University. December 12-15 2001.
- Co-organizer: 1st International Workshop on Remote Analysis and Measurement of Software Systems, May 2004.
- Co-organizer: 2nd International Workshop on Remote Analysis and Measurement of Software Systems, May 2005.
- Co-organizer, 1st International Workshop on Software Engineering for High Performance Computing System (HPCS) Applications, May 2004.
- Co-organizer, 2nd International Workshop on Software Engineering for High Performance Computing System (HPCS) Applications, May 2005.
- Co-organizer, Workshop on Distributed and Parallel Real Time Systems: Special Session on Certification of Dynamic and Adaptive Systems. March 2007.
- Co-organizer, Second International Workshop on Multicore Software Engineering, Victoria, BC, Canada, March 2009.