

Philip A. Wilsey

Dept of ECECS
PO Box 210030
University of Cincinnati
Cincinnati, OH 45221-0030

Voice: (513) 556-4779
Fax: (513) 556-7326
philip.wilsey@ieee.org
<http://www.ececs.uc.edu/~paw>

Education

- PhD, Computer Science, University of Louisiana at Lafayette, 1987.
- M.S., Computer Science, University of Louisiana at Lafayette, 1985.
- B.S., Mathematics, Illinois State University, 1981.

Employment History

- 2003– *Professor*, Department of Electrical & Computer Engineering, University of Cincinnati, Cincinnati, OH.
- 2000–03 *Associate Professor*, Department of Electrical & Computer Engineering and Computer Science, University of Cincinnati, Cincinnati, OH.
- 1987–00 *Assistant Professor* (tenured 9/93), Department of Electrical & Computer Engineering and Computer Science, University of Cincinnati, Cincinnati, OH.
- 1982–87 *Research Assistant*, The Center for Advanced Computer Studies, University of Southwestern Louisiana, Lafayette, LA.
- 1982 *Teaching Assistant*, Department of Computer Science, University of Southwestern Louisiana, Lafayette, LA.
- 1981–82 *Computer Programmer*, Bob White Computing and Software, Bloomington, Illinois.
- 1980–81 *Computer Programmer*, Union Insurance Group, Bloomington, Illinois.

Current Research Interests

I am an experimentalist working in distributed systems and CAD. For the past 5 years, I have been studying the application of feedback control to optimize distributed system operation. The focus of my investigations has been Parallel and Distributed Simulation (PADS) with applications to: Networks, Mixed-Technology (continuous/discrete) Systems, and Digital Systems. Initially my studies have been with synchronizing parallel simulation of mixed-signal electronic systems. I am now attempting to adapt our techniques for mixing discrete and continuous simulation models to the biological domain. In addition, I have also been actively involved in: VHDL-CAD, the computer system design process, and formal modeling and mechanized reasoning. Finally, I am initiating investigations into web-based, collaborative design and analysis activities.

Teaching Experience

1. Graduate courses on High Performance Distributed Computing, Parallel Discrete Event-Driven Simulation, Parallel Processing, Computer Architecture, SIMD/MIMD Multiprocessors, and Formal Semantic Models of Computer Languages.
2. Undergraduate courses on Computer System Organization, Assembler Language Programming, and Compiler Theory.

Patents

- US Patent #6321376, “Apparatus and method for semi-automated generation and application of language conformity tests,” November 20, 2001 (inventors: J. C. Willis, R. N. Newshutz, and P. A. Wilsey).

Publications

Book and Book Chapters

1. N. B. Abu-Ghazaleh and P. A. Wilsey, “Managing Control Asynchrony on SIMD Machines — A Survey,” *Advances in Computers*, Academic Press, M. Zelkowitz (ed), Volume 49, 239–302, 1999.
2. K. Umamageswaran, S. Pandey, and P. A. Wilsey, *Formal Semantics and Proof Techniques for Optimizing VHDL Models*, Kluwer Academic Publishers, Boston, MA, 1999. (ISBN 0–7923–8375–3).
3. P. A. Wilsey, “Modeling, Analysis and Simulation of Computer and Telecommunication Systems,” *Encyclopedia of Computer Science and Technology*, Marcel Dekker, A. Kent and J. G. Williams (eds), Volume 41, 147–160, 1999.
4. P. A. Wilsey, R. Vemuri, P. J. Ashenden, and N. Mause, “Programmed Monitoring and Digital System Simulation,” *Current Issues in Electronic Modeling*, Volume 8: Hardware/Software Co-Design and Co-Verification, 145–162, December 1996.
5. P. A. Wilsey, N. Mause, and P. J. Ashenden, “Abstract Data Types and the Digital System Description and Simulation Environments,” *Current Issues in Electronic Modeling*, Volume 5: Hardware Component Modeling, 33–53, March 1996.
6. P. A. Wilsey, “Developing a Formal Semantic Definition of VHDL,” in *VHDL for Simulation, Synthesis and Formal Proofs of Hardware*, J. Mermet (ed), Kluwer Academic Publishers, 245–256, 1992.

Refereed Journal

1. D. A. Gorodetsky and P. A. Wilsey, “Large scale parallel FDTD computations aided by modal decomposition,” *International Journal of Numerical Modeling: Electronic Networks, Devices, and Fields*, (under review).

2. D. A. Gorodetsky and P. A. Wilsey, "Generation of 3-D finite-difference time-domain macromodels for faster simulation," *International Journal of RF and Microwave Computer-Aided Engineering*, 2006, in press.
3. D. M. Rao and P. A. Wilsey, "Accelerating ATM Simulations using Dynamic Component Substitution (DCS) *SCS Transactions: Simulation Journal*. (revised and resubmitted).
4. D. M. Rao and P. A. Wilsey, "An Active Networks Simulation Environment," *SCS Transactions: Simulation Journal*. (in press).
5. D. M. Rao and P. A. Wilsey, "An Ultra-large Scale Simulation Framework," *Journal of Parallel and Distributed Computing*, Volume 62, 1670–1693, 2002.
6. D. E. Martin, R. Radhakrishnan, D. M. Rao, M. Chetlur, K. Subramani, and P. A. Wilsey, "Analysis and Simulation of Mixed-Technology VLSI Systems," *Journal of Parallel and Distributed Computing*, Volume 62, Number 3, 468–493, March 2002.
7. P. Frey, R. Radhakrishnan, H. W. Carter, P. Alexander, and P. A. Wilsey, "A Formal Specification and Verification Framework for Time Warp based Parallel Simulation," *IEEE Transactions on Software Engineering*, Volume 28, Number 1, 58–78, January 2002.
8. V. Balakrishnan, R. Radhakrishnan, D. M. Rao, N. B. Abu-Ghazaleh, and P. A. Wilsey, "A Performance and Scalability Analysis Framework for Parallel Discrete Event Simulators," *Simulation Practice and Theory*, Volume 8, 529–553, 2001.
9. S. Subramanian, D. M. Rao, and P. A. Wilsey, "Applying Multilevel Partitioning to Parallel Logic Simulation," *Parallel and Distributed Computing Practices*, Volume 4, Number 1, 37–59, March 2001.
10. N. B. Abu-Ghazaleh and P. A. Wilsey, "The Shared Control Parallel Architecture Model," *Journal of Parallel and Distributed Computing*, Volume 61, Number 6, 767–783, June 2001.
11. D. M. Rao, R. Radhakrishnan, and P. A. Wilsey, "Web-based Network Analysis and Design," *ACM Transactions on Modeling and Computer Simulation*, Volume 10, Number 1, 18–38, January 2000.
12. P. J. Ashenden and P. A. Wilsey, "Principles for Language Extensions to VHDL to Support High-Level Modeling," *VLSI Design*. Volume 10, Number 2, 217–236, 1999.
13. P. J. Ashenden and P. A. Wilsey, "Protected Shared Variables in VHDL: IEEE Std 1076a," *IEEE Design and Test of Computers*, Volume 16, Number 4, 74–83, October–December 1999.
14. S. Pandey, K. Umamageswaran, and P. A. Wilsey, "VHDL Semantics and Validating Transformations," *IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems*, Volume 18, Number 7, 936–955, July 1999.
15. R. Rajan, R. Radhakrishnan, and P. A. Wilsey, "Dynamic Cancellation: Selecting Time Warp Cancellation Strategies at Runtime," *VLSI Design*, Volume 9, Number 3, 237–251, 1999.

16. N. B. Abu-Ghazaleh and P. A. Wilsey, "Models for Control Unit Synchronization on Shared Control Architectures," *Journal of Parallel and Distributed Computing*, Volume 52, Number 1, 69–81, July 1998.
17. P. J. Ashenden, P. A. Wilsey, and D. E. Martin, "SUAVE: Extending VHDL to Improve Modeling Support," *IEEE Design and Test of Computers*, Volume 15, Number 2, 34–44, April–June 1998.
18. K. Umamageswaran, K. Subramani, P. A. Wilsey, and P. Alexander, "Formal Verification and Empirical Analysis of Rollback Relaxation," *Journal of Systems Architecture* (formerly published as *Microprocessing and Microprogramming: the Euromicro Journal*), Volume 44, 473–495, 1998
19. N. B. Abu-Ghazaleh, P. A. Wilsey, X. Fan, and D. A. Hensgen, "Synthesizing Variable Instruction Issue Interpreters for Implementing Functional Parallelism on SIMD Computers," *IEEE Transactions on Parallel and Distributed Systems*, Volume 8, Number 4, 412–423, April 1997.
20. N. B. Abu-Ghazaleh and P. A. Wilsey, "Variable Instruction Scheduling for MIMD Interpretation on Pipelined SIMD Machines and for Compositional Instruction Sets," *Concurrency—Practice and Experience*, Volume 9, Number 1, 21–39, January 1997.
21. A. C. Palaniswamy and P. A. Wilsey, "Parameterized Time Warp (PTW): An Integrated Adaptive Solution to Optimistic PDES," *Journal of Parallel and Distributed Computing*, Volume 37, Number 2, 134–145, September 1996.
22. C. Young and P. A. Wilsey, "A Distributed Method to Bound Rollback Lengths for Fossil Collection in Time Warp Simulators," *Information Processing Letters*, Volume 59, Number 4, 191–196, August 1996.
23. X. Fan, N. B. Abu-Ghazaleh, and P. A. Wilsey, "On the Complexity of Scheduling MIMD Operations for SIMD Interpretation," *Journal of Parallel and Distributed Computing*, Volume 29, Number 1, 91–95, August 1995.
24. P. A. Wilsey and S. Dasgupta, "A Formal Model of Computer Architectures for Digital System Design Environments," *IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems*, Volume 9, Number 5, 473–486, May 1990.
25. S. Dasgupta, P. A. Wilsey, and J. Heinanen, "Axiomatic Specifications in Firmware Development Systems," *IEEE Software*, Volume 3, Number 4, 49–58, July 1986.

Refereed Conference

1. M. Chetlur and P. A. Wilsey, "Causality Information and Fossil Collection in Time Warp Simulations," *Proceedings of the 2006 Winter Simulation Conference*, December 2006.
2. D. M. Rao and P. A. Wilsey, "Applying Parallel, Dynamic-Resolution Simulations to Accelerate VLSI Power Estimation," *Proceedings of the 2006 Winter Simulation Conference*, December 2006.

3. M. Chetlur and P. A. Wilsey, "Causality and Proactive Cancellation," *10th IEEE/ACM International Symposium on Distributed Simulation (DS-RT 2006)*, October 2006.
4. D. M. Rao and P. A. Wilsey, "Predicting Performance of Resolution Changes in Parallel Simulations," *20th Workshop on Principles of Advanced and Distributed Simulation (PADS 2006)*, May 2006.
5. D. R. Hickey, P. A. Wilsey, R. J. Hoekstra, E. R. Keiter, S. A. Hutchinson, and T. V. Russo, "Mixed-Signal Simulation with the Simbus Backplane," *Proc. of the 39th Annual Simulation Symposium*, April 2006.
6. D. A. Gorodetsky and P. A. Wilsey, "Reducing the setup time of a one-step FDTD method," *International Conference on Parallel and Distributed Processing Techniques and Applications*, 2006.
7. D. A. Gorodetsky and P. A. Wilsey, "Interfacing multiple macromodels constructed with the FDTD method," *IEEE Northeast Workshop on Circuits and Systems*, 2006.
8. D. A. Gorodetsky and P. A. Wilsey, "Rapid evaluation of macromodel response with the FDTD method," *International Conference on Scientific Computing*, 2006.
9. D. A. Gorodetsky and P. A. Wilsey, "Innovative approaches to parallelizing finite-difference time-domain computations," *IEEE Workshop on Direct and Inverse Problems in Electrodynamics*, 2005.
10. D. A. Gorodetsky and P. A. Wilsey, "A signal processing approach to finite-difference time-domain computations," *IEEE International Midwest Symposium on Circuits and Systems*, 2005.
11. D. M. Rao and P. A. Wilsey, "Accelerating Spatially Explicit Simulations of Spread of Lyme Disease," *Proc. of the 38th Annual Simulation Symposium*, April 2005
12. D. E. Martin, P. A. Wilsey, R. J. Hoekstra, E. R. Keiter, S. A. Hutchinson, T. V. Russo, and L. J. Waters, "Scheduling Optimization on the Simbus Backplane," *Proc. of the 37th Annual Simulation Symposium*, April 2004.
13. D. E. Martin, P. A. Wilsey, R. J. Hoekstra, E. R. Keiter, S. A. Hutchinson, T. V. Russo, and L. J. Waters, "Redesigning the WARPED Simulation Kernel for Analysis and Application Development," *Proc. of the 36th Annual Simulation Symposium*, April 2003.
14. D. M. Rao and P. A. Wilsey, "Performance Prediction of Dynamic Component Substitutions," *Proceedings of the 2002 Winter Simulation Conference*, December 2002.
15. R. Radhakrishnan and P. A. Wilsey, "Software Control Systems for Parallel Simulation," *16th Workshop on Parallel and Distributed Simulation (PADS 2002)*, May 2002.
16. D. E. Martin, P. A. Wilsey, R. J. Hoekstra, E. R. Keiter, S. A. Hutchinson, and L. J. Waters, "Integrating Multiple Parallel Simulation Engines for Mixed-Technology Parallel Simulation", *Proc. of the 35th Annual Simulation Symposium*, April 2002.
17. N. B. Abu-Ghazaleh and P. A. Wilsey, "On the Organization of Concurrent Interpreters," *Second Workshop on Massively Parallel Processing (WMPP '02)*, April 2002.

18. K. K. Rangan, N. B. Abu-Ghazaleh, and P. A. Wilsey, "A Distributed Multiple-SIMD Intelligent Memory," *2001 International Conference on Parallel Processing (ICPP)*, 507–516, September 2001.
19. J. Dahl, M. Chetlur, and P. A. Wilsey, "Event List Management In Distributed Simulation," *European Parallel Computing Conference (Euro-Par '01)*, August 2001.
20. D. M. Rao and P. A. Wilsey, "Improving Efficiency of Network Simulations through Dynamic Component Substitution," *Proceedings of the Ninth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2001)*, August 2001.
21. M. Chetlur and P. A. Wilsey, "Causality Representation and Cancellation Mechanism in Time Warp Simulations," *15th Workshop on Parallel and Distributed Simulation (PADS 2001)*, May 2001.
22. K. K. Rangan, N. Pisolkar, N. B. Abu-Ghazaleh, and P. A. Wilsey, "PPIM-SIM: An Efficient Simulator for a Parallel Processor in Memory," *Proc. of the 34th Annual Simulation Symposium*, 117–124, April 2001.
23. D. M. Rao and P. A. Wilsey, "Modeling and Simulation of Active Networks," *Proc. of the 34th Annual Simulation Symposium*, 177–184, April 2001.
24. K. K. Rangan, N. Pisolkar, N. B. Abu-Ghazaleh, and P. A. Wilsey, "Architectural Support for Data-Intensive Applications," *Workshop on Massively Parallel Processing (WMPP '01)*, April 2001.
25. D. M. Rao, H. W. Carter, and P. A. Wilsey, "Optimizing Costs of Web-based Modeling and Simulation," *International Workshop on Internet Computing and E-Commerce (ICEC'01)*, April 2001.
26. D. M. Rao and P. A. Wilsey, "Dynamic Component Substitution in Web-Based Simulation," *Proceedings of the 2000 Winter Simulation Conference*, December 2000.
27. D. M. Rao and P. A. Wilsey, "Parallel Co-simulation of Conventional and Active Networks," *Proceedings of the Eighth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2000)*, 291-298, August 2000.
28. P. Frey, R. Radhakrishnan, H. W. Carter, and P. A. Wilsey, "Parallel Mixed-Technology Simulation," *14th Workshop on Parallel and Distributed Simulation (PADS 2000)*, 7–14, May 2000.
29. S. Subramanian, D. M. Rao, and P. A. Wilsey, "Study of a Multilevel Approach to Partitioning for Parallel Logic Simulation," *International Parallel and Distributed Processing Symposium (IPDPS 2000)*, 833–838, May 2000.
30. D. M. Rao, V. Chernyakhovsky, and P. A. Wilsey, "WESE: A Web-based Environment for Systems Engineering," *2000 International Conference On Web-Based Modeling & Simulation (WEBSIM 2000)*, January 2000.
31. P. A. Wilsey, "Web-Based Analysis and Distributed IP," *Proceedings of the 1999 Winter Simulation Conference*, P. A. Farrington, H. B. Nembhard, D. T. Sturrock, and G. W. Evans (eds), 1445–1453, December 1999.

32. D. M. Rao, and P. A. Wilsey, "An Object Oriented Framework for Parallel Simulation of Ultra-large Communication Networks," *The Third International Symposium on Computing in Object-Oriented Parallel Environments* (ISCOPE '99), (LNCS 1732), S. Matsuoka, R. R. Oldehoeft, and M. Tholburn (eds), 37–48, December 1999.
33. R. Radhakrishnan and P. A. Wilsey, "Ruminations on the Implications of Multi-Resolution Modeling on DIS/HLA," *Third International Workshop on Distributed Interactive Simulation and Real Time Applications* (DiS-RT '99), October 1999.
34. D. M. Rao and P. A. Wilsey, "Simulation of Ultra-large Communication Networks," *Proceedings of the Seventh International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS '99), 112–119, October 1999.
35. G. D. Sharma, N. B. Abu-Ghazaleh, U. K. V. Rajasekaran, and P. A. Wilsey, "Optimizing Message Delivery in Asynchronous Distributed Applications," *European Parallel Computing Conference* (Euro-Par '99), (LNCS 1685), P Amestoy *et al* (eds), 1204–1208, September 1999.
36. G. D. Sharma, R. Radhakrishnan, U. K. V. Rajasekaran, N. B. Abu-Ghazaleh, and P. A. Wilsey, "Time Warp Simulation on Clumps," *13th Workshop on Parallel and Distributed Simulation* (PADS '99), 174–181, May 1999.
37. C. H. Young, R. Radhakrishnan, and P. A. Wilsey, "Optimism: Not Just for Event Execution Anymore," *13th Workshop on Parallel and Distributed Simulation* (PADS '99), 136–143, May 1999.
38. V. Chernyakhovsky, P. Frey, R. Radhakrishnan, P. A. Wilsey, P. Alexander, and H. W. Carter, "A Formal Framework for Specifying and Verifying Time Warp Optimizations," *Workshop on Formal Methods for Parallel Programming: Theory and Applications*, (LNCS 1586), J. Rolim *et al* (eds), 1228–1242, April 1999.
39. U. K. V. Rajasekaran, M. Chetlur, G. D. Sharma, R. Radhakrishnan, and P. A. Wilsey, "Addressing Communication Latency Issues on Clusters for Fine Grained Asynchronous Applications — A Case Study," *International Workshop on Personal Computer based Networks Of Workstations* (PC-NOW '99), (LNCS 1586), J. Rolim *et al* (eds), 1145–1162, April 1999.
40. N. V. Thondugulam, D. M. Rao, and P. A. Wilsey, "Relaxing Causal Constraints in PDES," *13th International Parallel Processing Symposium* (IPPS/SPDP '99), 696–700, April 1999.
41. P. J. Ashenden, Robert Esser, and P. A. Wilsey, "Communication and Synchronization Using Bounded Channels in SUAVE," *Proceedings of International Hardware Description Languages Conference* (HDLCON '99), 111–118, April 1999.
42. D. M. Rao, R. Radhakrishnan, and P. A. Wilsey, "FWNS: Framework for Web-based Network Simulation," *1999 International Conference On Web-Based Modeling & Simulation* (WEBSIM 99), A. G. Bruzzone, A. Uhrmacher, E. H. Page (eds), Volume 31, Number 3, 9–14, January 1999.
43. C. H. Young, N. B. Abu-Ghazaleh, R. Radhakrishnan, and P. A. Wilsey, "Performance Benefits of Optimism in Fossil Collection," *32th Hawaii International Conference on System Sciences* (HICSS-32), January 1999.

44. P. Frey, R. Radhakrishnan, P. A. Wilsey, P. Alexander, and H. W. Carter, "An Extensible Formal Framework for the Specification and Verification of an Optimistic Simulation Protocol," *32th Hawaii International Conference on System Sciences (HICSS-32)*, January 1999.
45. R. Radhakrishnan, D. E. Martin, M. Chetlur, D. M. Rao, and P. A. Wilsey, "An Object-Oriented Time Warp Simulation Kernel," *The Second International Symposium on Computing in Object-Oriented Parallel Environments (ISCOPE '98)*, (LNCS 1505), D. Caromel, R. R. Oldehoeft, and M. Tholburn (eds), 13–23, December 1998.
46. D. M. Rao, N. V. Thondugulam, R. Radhakrishnan, and P. A. Wilsey, "Unsynchronized Parallel Discrete Event Simulation," *Proceedings of the 1998 Winter Simulation Conference*, D. J. Medeiros, E. F. Watson, J. S. Carson, and M. S. Manivannan (eds), 1563–1570, December 1998.
47. D. M. Rao, K. Swaminathan, R. Radhakrishnan, P. A. Wilsey, and P. Alexander, "ANSE: An Active Networks Simulation Environment," *Workshop on Distributed and Parallel Systems (DAPSYS 98)*, 127–131, September 1998.
48. C. H. Young, N. B. Abu-Ghazaleh, and P. A. Wilsey, "OFC: A Distributed Fossil-Collection Algorithm for Time-Warp," *12th International Symposium on Distributed Computing (DISC 98)*, (LNCS 1499), S. Kutten (ed), 408–418, September 1998.
49. M. Chetlur, G. D. Sharma, N. Abu-Ghazaleh, U. Rajasekaran, and P. A. Wilsey, "An Active Layer Extension to MPI," *EuroPVM/MPI '98*, (LNCS 1497), V. Alexandrov and J. Dongarra (eds), 97–104, September 1998.
50. P. J. Ashenden and P. A. Wilsey and D. E. Martin, "SUAVE: Object-Oriented and Genericity Extensions to VHDL for High-Level Modeling," *Proceedings of Forum on Design Languages (FDL98)*, 109–118, September 1998.
51. N. B. Abu-Ghazaleh and P. A. Wilsey, "Shared Control — Supporting Control Parallelism using SIMD-like Architectures," *European Parallel Computing Conference (Euro-Par '98)*, (LNCS 1470), D. Pritchard and J. Reeve (eds), 1089–1099, September 1998.
52. R. Radhakrishnan, N. Abu-Ghazaleh, M. Chetlur, and P. A. Wilsey, "On-line Configuration of a Time Warp Parallel Discrete Event Simulator," *1998 International Conference on Parallel Processing*, 28–35, August 1998.
53. P. J. Ashenden and P. A. Wilsey, "Extensions to VHDL for Abstraction of Concurrency and Communication," *Proceedings of the Sixth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS '98)*, 301–308, July 1998.
54. Dieckman, D., P. Alexander, and P. A. Wilsey, "ACTIVESPEC: A Framework for the Specification and Verification of Active Network Services and Security Policies," *Formal Methods in Security Protocols*, June 1998.
55. K. Swaminathan, R. Radhakrishnan, P. A. Wilsey, and P. Alexander, "Large Scale Active Networks Simulation," *International Workshop on Applied Parallel Computing (PARA 98)*, (LNCS 1541), B. Kagstrom J. Dongarra, E. Elmroth, and J. Wasniewski (eds), 537–542, June 1998.

56. M. Chetlur, N. B. Abu-Ghazaleh, R. Radhakrishnan, and P. A. Wilsey, "Optimizing Communication in Time Warp Simulators," *12th Workshop on Parallel and Distributed Simulation (PADS '98)*, 64–71, May 1998.
57. P. Frey, R. Radhakrishnan, H. W. Carter, and P. A. Wilsey, "Optimistic Synchronization of Mixed-Mode Simulator," *12th International Parallel Processing Symposium (IPPS/SPDP '98)*, 694–699, April 1998.
58. J. Penix, D. E. Martin, P. Frey, R. Radhakrishnan, P. Alexander and P. A. Wilsey, "Experiences in Verifying Parallel Simulation Algorithms," *Workshop on Formal Methods in Software Practice (FMSP-98)*, M. Ardis (ed), 16–23, March 1998.
59. P. J. Ashenden and P. A. Wilsey, "A Comparison of Alternative Extensions for Data Modeling in VHDL," *31th Hawaii International Conference on System Sciences (HICSS-31)*, January 1998.
60. V. Balakrishnan, P. Frey, N. Abu-Ghazaleh, and P. A. Wilsey, "A Framework for Performance Analysis of Parallel Discrete Event Simulators," *Proceedings of the 1997 Winter Simulation Conference*, S. Andradottir, K. J. Healy, D. H. Withers, and B. L. Nelson (eds), 429–436, December 1997.
61. L. M. D'Souza, X. Fan, and P. A. Wilsey, "Modifications to the pGVT Algorithm to Eliminate Acknowledgment Messages and Improve the GVT Broadcast Frequency," *World Congress on Systems Simulation: Conference on Parallel & Distributed Simulation*, 288–292, September 1997.
62. P. Frey, H. W. Carter, and P. A. Wilsey, "Parallel Synchronization of Continuous Time and Discrete Event Simulators," *1997 International Conference on Parallel Processing*, 227–231, August 1997.
63. M. Rangarajan, J. Penix, P. Alexander, and P. A. Wilsey, "Gravity: An Object-Oriented Framework for Hardware/Software Tool Integration," *Proc. of the 30th Annual Simulation Symposium*, 24–30, April 1997.
64. R. Radhakrishnan, L. Moore, and P. A. Wilsey, "External Adjustment of Runtime Parameters in Time Warp Synchronized Parallel Simulators," *11th International Parallel Processing Symposium (IPPS '97)*, 260–266, April 1997.
65. P. A. Wilsey, "Feedback Control in Time Warp Synchronized Parallel Simulators," *First International Workshop on Distributed Interactive Simulation and Real Time Applications*, 31–38, January 1997.
66. S. L. Pandey, K. R. Subramanian, and P. A. Wilsey, "A Semantic Model of VHDL for Validating Rewriting Algebras," *Proceedings of the 22nd EUROMICRO Conference (Beyond 2000: Hardware and Software Design Strategies)*, 167–176, September 1996.
67. N. B. Abu-Ghazaleh and P. A. Wilsey, "A Shared Control Parallel Architecture Model," *Massively Parallel Computing Systems (MPCS '96)*, 332–337, May 1996.
68. R. Radhakrishnan, T. J. McBrayer, K. Subramani, M. Chetlur, V. Balakrishnan, and P. A. Wilsey, "A Comparative Analysis of Various Time Warp Algorithms Implemented in the WARPED Simulation Kernel," *Proc. of the 29th Annual Simulation Symposium*, 107–116, March 1996.

69. B. Kannikeswaran, R. Radhakrishnan, P. Frey, P. Alexander, and P. A. Wilsey, "Formal Specification and Verification of the pGVT Algorithm," *FME '96: Industrial Benefit and Advances in Formal Methods*, (LNCS 1051), M-C. Gaudel and J. Woodcock (eds), 405–424, March 1996.
70. C. Young and P. A. Wilsey, "Optimistic Fossil Collection for Time Warp Simulation," *29th Hawaii International Conference on System Sciences (HICSS-29)*, H. El-Rewini and B. D. Shriver (eds), Volume I, 364–372, January 1996.
71. D. E. Martin, T. J. McBrayer, and P. A. Wilsey, "WARPED: A Time Warp Simulation Kernel for Analysis and Application Development," *29th Hawaii International Conference on System Sciences (HICSS-29)*, H. El-Rewini and B. D. Shriver (eds), Volume I, 383–386, January 1996.
72. S. Mohanty and P. A. Wilsey, "System Modeling, Hardware-Software Codesign, and Mixed Modeling with Hardware Description Languages," *1995 EURO-DAC Conference*, 322–327, September 1995.
73. P. A. Wilsey, D. M. Benz, and S. L. Pandey, "A Model of VHDL for the Analysis, Transformation, and Optimization of Digital System Designs," *Conference on Hardware Description Languages (CHDL'95)*, 611–616, August 1995.
74. L. Moore, D. A. Hensgen, D. Charley, V. Krishnaswamy, T. McBrayer, D. E. Martin, and P. A. Wilsey, "graze: A Tool for Performance Visualization and Analysis," *1995 International Conference on Parallel Processing*, Volume II Software, C. Polychronopoulos (ed), II-135–II-138, August 1995.
75. S. Mohanty and P. A. Wilsey, "Rapid System Prototyping, System Modeling, and Analysis in a Hardware-Software Codesign Environment," *IEEE Rapid Systems Prototyping Workshop*, R. Lauwereins (ed), 154–160, June 1995.
76. J. Fleischmann and P. A. Wilsey, "Comparative Analysis of Periodic State Saving Techniques in Time Warp Simulators," *Proc. of the 9th Workshop on Parallel and Distributed Simulation (PADS '95)*, 50–58, June 1995.
77. T. McBrayer and P. A. Wilsey, "Process Combination to Increase Event Granularity in Parallel Logic Simulation," *9th International Parallel Processing Symposium (IPPS '95)*, 572–578, April 1995.
78. R. Rajan and P. A. Wilsey, "Dynamically Switching between Lazy and Aggressive Cancellation in a Time Warp Parallel Simulator," *Proc. of the 28th Annual Simulation Symposium*, 22–30, April 1995.
79. S. Mohanty, V. Krishnaswamy, and P. A. Wilsey, "System Modeling, Performance Analysis, and Evolutionary Prototyping with Hardware Description Languages," *Proceedings of the Third International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS '95)*, P. Dowd and E. Gelenbe (eds), 312–318, January 1995.
80. V. Krishnaswamy and P. A. Wilsey, "A Framework for Visualizing Performance Data in a Graphical Design Environment," *International Conference on Electronic Hardware Description Languages (ICEHDL)*, 29–34 January 1995.
81. P. J. Ashenden and P. A. Wilsey, "Polymorphic Abstract Data Types in VHDL," *International Conference on Electronic Hardware Description Languages (ICEHDL)*, 35–40, January 1995.

82. A. C. Palaniswamy, and P. A. Wilsey, "Scheduling Time Warp Processes using Adaptive Control Techniques," *Proceedings of the 1994 Winter Simulation Conference*, J. D. Tew, S. Manivannan, D. A. Sadowski, and A. F. Seila (eds), 731–738, December 1994.
83. R. A. Bagley, P. A. Wilsey, and N. B. Abu-Ghazaleh, "Composing Functional Unit Blocks for Efficient Interpretation of MIMD Code Sequences on SIMD Processors," *Parallel Processing: CONPAR 94 – VAPP VI*, (LNCS 854), B. Buchberger and J. Volkert (eds), 616–627, September 1994.
84. L. M. D'Souza, X. Fan, and P. A. Wilsey, "pGVT: An Algorithm for Accurate GVT Estimation," *Proc. of the 8th Workshop on Parallel and Distributed Simulation (PADS '94)*, 102–109, July 1994.
85. N. B. Abu-Ghazaleh, P. A. Wilsey, X. Fan, and D. A. Hensgen, "Variable Instruction Issue for Efficient MIMD Interpretation on SIMD Machines," *8th International Parallel Processing Symposium (IPPS '94)*, 304–310, April 1994.
86. P. A. Wilsey, A. C. Palaniswamy, and S. Aji, "Rollback Relaxation: A Technique for Reducing Rollback Costs in an Optimistically Synchronized Simulation," *International Conference on Simulation and Hardware Description Languages*, 143–148, January 1994.
87. A. C. Palaniswamy and P. A. Wilsey, "Adaptive Checkpoint Intervals in an Optimistically Synchronized Parallel Digital System Simulator," *VLSI 93*, 353–362, (*IFIP Transactions A: Computer Science and Technology*, Volume A-42), September 1993.
88. A. C. Palaniswamy and P. A. Wilsey, "An Analytical Comparison of Periodic Checkpointing and Incremental State Saving," *Proc. of the 7th Workshop on Parallel and Distributed Simulation (PADS '93)*, Society for Computer Simulation, 127–134, July 1993.
89. N. L. Rethman and P. A. Wilsey, "RAPID: A Tool for Hardware/Software Tradeoff Analysis," *Proc. of the Spring 1993 VHDL Int. Users' Forum*, 91–99, April 1993.
90. A. C. Palaniswamy, S. Aji, and P. A. Wilsey, "Performance Measures for Several Optimizations to a Distributed Digital System Simulator," *Proc. of the 26th Annual Simulation Symposium*, 21–29, April 1993.
91. P. A. Wilsey, D. A. Hensgen, N. B. Abu-Ghazaleh, C. E. Slusher, and D. Y. Hollinden, "The Concurrent Execution of Non-communicating Programs on SIMD Processors," *Proc. of the 4th Symposium on the Frontiers of Massively Parallel Computation*, 29–36, October 1992.
92. C. E. Slusher, P. A. Wilsey, D. A. Hensgen, and D. Y. Hollinden, "The Efficient Compilation, Loading, and Execution of Mutated Programs on SIMD Computers," *5th ISMM International Conference on Parallel and Distributed Computing and Systems*, R. Melhem (ed), 100–103, October 1992.
93. D. Charley, T. McBrayer, D. Hensgen, P. A. Wilsey, and M. Ankola, "Distributed Simulation on a Reconfigurable Network using Non-Uniform Message Passing," *5th ISMM International Conference on Parallel and Distributed Computing and Systems*, R. Melhem (ed), 247–250, October 1992.

94. D. A. Hensgen and P. A. Wilsey, "MINTABS: Early Experiences with a New Paradigm for Programming SIMD Computers," *12th International Conference on Distributed Computing Systems*, 110–117, June 1992.
95. A. C. Palaniswamy, S. Aji, and P. A. Wilsey, "An Efficient Implementation of Lazy Reevaluation," *Proc. of the 25th Annual Simulation Symposium*, 140–146, April 1992.
96. D. Y. Hollinden, D. A. Hensgen, and P. A. Wilsey, "Experiences Implementing the MINTABS System on a MasPar MP-1," *Proc. 3rd Symposium on Experiences with Distributed and Multiprocessor Systems (SEDMS III)*, 43–58, March 1992.
97. P. A. Wilsey and D. A. Hensgen, "Exploiting SIMD Computers for General Purpose Computation," *6th International Parallel Processing Symposium (IPPS '92)*, 675–679, March 1992.
98. N. Mause and P. A. Wilsey, "The Impact of Abstract Data Types on the Digital System Description and Simulation Environments," *European Conference on Design Automation*, 88–96, March 1992.
99. P. A. Wilsey and N. Mause, "The Use of Abstract Data Types in Hardware Description Languages," *Proc. of the 1992 Western Simulation Multiconference on Simulation in Engineering Education*, 101–105, January 1992.
100. P. A. Wilsey, T. McBrayer, and D. Sims, "Towards A Formal Model of VLSI Systems Compatible with VHDL," *VLSI 91*, 225–236, (*IFIP Transactions A: Computer Science and Technology*, Volume A-1), August 1991.
101. H. Carter, R. Vemuri, P. A. Wilsey, J. Aylor, R. Waxman, and T. Hartrum, "High Speed Acceleration of VHDL Simulation, Synthesis, and ATPG: Overview of the QUEST Project," *Spring 1991 VHDL Users' Group*, 85–90, April 1991.
102. P. A. Wilsey, "Introducing the Notion of Clocks into the VHDL Description Environment," *Spring 1991 VHDL Users' Group*, 97–104, April 1991.
103. P. A. Wilsey, "Developing a Formal Semantic Definition of VHDL," *The First European Working Conf. on VHDL Methods*, September 1990.
104. P. A. Wilsey, "The Use of Interval Temporal Logic in Specifying Relationships Between Clock Phases," *Int. Workshop on Timing Issues in the Specification and Synthesis of Digital Systems*, August 1990.
105. P. Chawla, H. W. Carter, and P. A. Wilsey, "An Investigation of the Performance of a Distributed Functional Digital Simulator," *Proc. of the 32nd Midwest Symposium on Circuits and Systems*, 470–476, August 1989.
106. P. A. Wilsey, "Computer Architecture Specification with Interval Temporal Logic," *Proc. 9th International Symp. on Computer Hardware Description Languages*, J. A. Darringer & Franz J. Ramming (Ed.), 35–45, June 1989.

107. P. A. Wilsey and S. Dasgupta, "Functional and Operational Specifications of Computer Architectures," *Proc. 9th International Symp. on Computer Hardware Description Languages*, J. A. Darringer & Franz J. Ramming (Ed.), 209–223, June 1989.
108. P. A. Wilsey and S. Dasgupta, "A Formal Model of Computer Architectures for Computer System Design Environments," in *Design Methodologies for VLSI and Computer Architecture*, D. A. Edwards (Ed.), 263–278, Sept. 1988.

Other Articles & Technical Reports

1. D. A. Gorodetsky and P. A. Wilsey, "Parallel finite-difference time-domain computations aided by modal decomposition," *SIAM Conference on Parallel Processing for Scientific Computing*, 2006.
2. D. A. Gorodetsky and P. A. Wilsey, "Reduction of FDTD simulation time with modal methods," *Progress in Electromagnetics Research Symposium*, 2006.
3. C. Fearing, D. Hickey, P. A. Wilsey, and K. Tomko, "Performance Issues in the Implementation of the M-VIA Communication Software," *PARCO 2003*, Sept 2003.
4. G. D. Peterson and P. A. Wilsey, "Requirements for Object-Oriented Systems Modeling with STEAMS," *2001 IEEE International Workshop on Behavioral Modeling and Simulation (BMAS)*, pp 45–52, Oct 2001.
5. R. Radhakrishnan and P. A. Wilsey, "Fine-tuning Optimistic Simulation," *IEEE Potentials*, 30–33, Vol 19, No 2, April/May 2000.
6. R. Radhakrishnan and P. A. Wilsey, "Parallel Simulation of Mixed-Technology Electronic Systems," TR 250–10–99–ECECS, Dept. of Electrical and Computer Engineering and Computer Science, University of Cincinnati, Cincinnati, OH, October 1999.
7. P. J. Ashenden, P. A. Wilsey and D. E. Martin, "SUAVE Language Description", Technical Report 99/04, Dept Computer Science, The University of Adelaide, July 1999.
8. D. Dieckman, D. E. Martin, and P. A. Wilsey, "Distributed Web-Based Simulation for Protecting Intellectual Property," *Proceedings of SPIE's 13th Annual International Symposium on Aerospace/Defense Sensing, Simulation, and Controls*, April 1999.
9. N. B. Abu-Ghazaleh, P. A. Wilsey, J. Potter, R. Walker, and J. Baker, "Flexible Parallel Processing in Memory: Architecture + Programming Model," *The Third PetaFlop Workshop*, held in conjunction with Frontiers on Massively Parallel Computing, February 1999.
10. D. Dieckman, D. E. Martin, and P. A. Wilsey, "DISCOE: Distributed Design & Analysis to Preserve Intellectual Property," *IEEE Information Technology Conference*, 57–60, September 1998.
11. P. J. Ashenden, Philip A. Wilsey, and Dale E. Martin, "SUAVE: Object-Oriented and Genericity Extensions to VHDL for High-Level Modeling," *Forum on Design Languages*, September 1998.

12. P. A. Wilsey, D. E. Martin, and H. Hirsch, "The SAVANT Project," *NAECON '98*, June 1998.
13. P. A. Wilsey, D. E. Martin, and K. Subramani, "SAVANT/TyVIS/WARPED: Components for the Analysis and Simulation of VHDL," *VHDL Users' Group Spring 1998 Conference*, 195–201, March 1998.
14. P. J. Ashenden and P. A. Wilsey, "Considerations on System-Level Behavioural and Structural Modeling Extensions to VHDL," *VHDL Users' Group Spring 1998 Conference*, 42–50, March 1998. (best paper).
15. P. J. Ashenden, P. A. Wilsey, and D. E. Martin, "Reuse Through Genericity in SUAVE," *VHDL Users' Group Fall 1997 Conference*, 170–177, October 1997.
16. P. J. Ashenden, P. A. Wilsey, and D. E. Martin, "SUAVE: Painless Extension for an Object-Oriented VHDL," *VHDL Users' Group Fall 1997 Conference*, 60–67, October 1997.
17. P. J. Ashenden, P. A. Wilsey, and D. E. Martin, "SUAVE: A Proposal for Extensions to VHDL for High-Level Modeling," Joint Technical Report, TR—7/97, Dept. Computer Science, University of Adelaide and TR–207/08/97/ECECS, Department of Electrical & Computer Engineering and Computer Science, University of Cincinnati, August 1997.
18. P. J. Ashenden and P. A. Wilsey, "Principles for Language Extension to VHDL to Support High-Level Modeling," Joint Technical Report TR–03/97, Dept. Computer Science, University of Adelaide and TR–204/05/97/ECECS, Department of Electrical & Computer Engineering and Computer Science, University of Cincinnati, May 1997.
19. P. J. Ashenden and P. A. Wilsey, "A Comparison of Alternative Extensions for Data Modeling in VHDL," Joint Technical Report TR–02/97, Dept. Computer Science, University of Adelaide and TR–203/05/97/ECECS, Department of Electrical & Computer Engineering and Computer Science, University of Cincinnati, May 1997.
20. P. J. Ashenden and P. A. Wilsey, "Considerations on Object-Oriented Extensions to VHDL," *VHDL Users' Group Spring 1997 Conference*, 109–118, March 1997.
21. L. M. D'Souza, X. Fan, and P. A. Wilsey, "Modifications to the pGVT Algorithm to Eliminate Acknowledgment Messages and Improve the GVT Broadcast Frequency," Tech. Rept. TR 201–12–96–ECECS, Dept. of Electrical & Computer Engineering and Computer Science, University of Cincinnati, November 1996.
22. D. E. Martin and P. A. Wilsey, "SIMD Processors: Expanding its Horizons by Emulating Others," *IEEE Potentials*, 26–28, October/November 1996.
23. J. C. Willis, P. A. Wilsey, G. D. Peterson, J. Hines, W. H. Dashiell, "Semi-Automated Validation of VHDL and Related Languages," *VHDL Users' Group Fall 1996 Conference*, 335–342, October 1996.
24. J. C. Willis, P. A. Wilsey, G. D. Peterson, J. Hines, A. Zamfirescu, D. E. Martin, and R. N. Newshutz, "Advanced Intermediate Representation with Extensibility (AIRE)," *VHDL Users' Group Fall 1996 Conference*, 33–40, October 1996.

25. P. A. Wilsey, S. L. Pandey, and K. Umamageswaran, "A Formal Model of Digital Systems Compatible with VHDL," *RASSP Digest*, Volume 3, 46–48, September 1996.
26. D. E. Martin, P. A. Wilsey, and P. Chawla, "SAVANT: An Extensible Object-Oriented Intermediate for VHDL," *VHDL Users' Group Spring 1996 Conference*, 275–281, March 1996.
27. P. A. Wilsey and D. E. Martin, "Coordinating Joint Cost/No-Cost Rights for Software Developed with SBIR Funding," *First Conference on Freely Redistributable Software*, 89–94, February 1996.
28. S. Mohanty, S. Gunning, and P. A. Wilsey, "Abstract Modeling and Performance Analysis with HDLs," *Third Asia Pacific Conference on Hardware Description Languages (APCHDL'96)*, 13–17, January 1996.
29. D. E. Martin, T. J. McBrayer, and P. A. Wilsey, "Time Warp Parallel Simulation of VHDL Descriptions and the need for Dynamic Parameter Adjustment," *VHDL Users' Group Fall 1995 Conference*, 7.1–7.10, October, 1995.
30. N. B. Abu-Ghazaleh, P. A. Wilsey, and R. A. Bagley, "Shared Control Multiprocessors," TR 179–12–94–ECECS, Dept. of Electrical and Computer Engineering and Computer Science, University of Cincinnati, Cincinnati, OH, December 1994.
31. T. McBrayer, V. Krishnaswamy, S. Mohanty, L. Moore, X. Liu, J. Carter, D. Charley, P. A. Wilsey, D. A. Hensgen, H. W. Carter, P. Chawla, J. Collier and S. Bilik, "VAST: Time Warp Simulation of VHDL on SMP Workstations," *VHDL Users' Group Fall 1994 Conference*, 4.7–4.16, November, 1994.
32. L. Moore, D. A. Hensgen, V. Krishnaswamy, and P. A. Wilsey, "The Importance of Dynamic Memory Allocation in Threaded Applications," Tech. Rept. TR 171–6–94–ECE, Dept. of Electrical & Computer Engineering, University of Cincinnati, June 1994.
33. X. Fan, P. A. Wilsey, and N. B. Abu-Ghazaleh, "On the Complexity of Optimizing Instruction Issue Cycles for SIMD Interpretation of MIMD," Tech. Rept. TR 170–6–94–ECE, Dept. of Electrical & Computer Engineering, University of Cincinnati, June 20, 1994.
34. P. A. Wilsey, "Post-conference Report: 1994 Simulation MultiConference," *Simulation*, Volume 62, Number 6, 392–393, June 1994.
35. P. A. Wilsey and S. Mohanty, "VHDL Design Libraries for Rapid System Prototyping," *Proc. of the 1994 Western Simulation Multiconference on Simulation in Engineering Education*, Society for Computer Simulation, 35–40, January 1994.
36. P. A. Wilsey, "Post-conference Report: 1993 Western Multiconference on Computer Simulation," *Robotica*, Volume 11, Part 5, pg 483, September–October, 1993.
37. S. Aji, A. C. Palaniswamy, and P. A. Wilsey, "Interactions of Optimizations to a Time Warp Synchronized Digital System Simulator," *Modeling and Simulation (FSM 93)*, 593–597, June 1993.
38. A. C. Palaniswamy and P. A. Wilsey, "Adaptive Bounded Time Windows in an Optimistically Synchronized Simulator," *Third Great Lakes Symposium on VLSI*, 114–118, March 1993.

39. N. B. Abu-Ghazaleh, T. Diciaro, P. A. Wilsey, D. A. Hensgen, and M. M. Cahay, "Parallel Execution of Monte Carlo Simulations on SIMD Processors," Tech. Rept. TR 146-2-93-ECE, Dept. of Electrical & Computer Engineering, University of Cincinnati, February 1993.
40. P. A. Wilsey, R. Vemuri, and N. Mause, "Instrumenting the Digital System Simulation Environment" *Proc. of the 1993 Western Simulation Multiconference on Simulation in Engineering Education*, 224-229, January 1993.
41. D. Charley, D. A. Hensgen, T. McBrayer, P. A. Wilsey, and M. Ankola, "High Speed Communication for Simulation of Large VHDL Models," *Proc. of the Fall 1992 VHDL Int. Users' Forum*, 212-216, October 1992.
42. T. McBrayer, D. Charley, P. A. Wilsey, and D. A. Hensgen, "A Parallel, Optimistically Synchronized VHDL Simulator Executing on a Network of Workstations," *Proc. of the Fall 1992 VHDL Int. Users' Forum*, 218-222, October 1992.
43. P. A. Wilsey and A. C. Palaniswamy, "Rollback Relaxation," Tech. Rept. TR 135-2-92-ECE, Dept. of Electrical & Computer Engineering, University of Cincinnati, February 1992.
44. P. A. Wilsey, "Book Review of *The Art of Computer Systems Performance Analysis Techniques for Experimental Design, Measurement, Simulation, and Modeling*, by R. Jain," *International Journal in Computer Simulation*, Volume 1, Number 4, pg 427, 1991.
45. P. A. Wilsey, D. A. Hensgen, C. E. Slusher, N. B. Abu-Ghazaleh, and D. Y. Hollinden, "Exploiting SIMD Computers for Mutant Program Execution," Tech. Rept. TR 133-11-91-ECE, Dept. of Electrical & Computer Engineering, University of Cincinnati, November 1991.
46. P. Chawla and P.A. Wilsey, "Synchronizing Distributed VHDL Simulation," Tech. Rept. TR 131-4-91-ECE, Dept. of Electrical & Computer Engineering, University of Cincinnati, April 1991.
47. P. A. Wilsey and S. Dasgupta, "Compiling Axiomatic Descriptions for Imperative Execution," Tech. Rept. TR87-5-1, The Center for Advanced Computer Studies, University of Southwestern Louisiana, July 1987.
48. P. A. Wilsey, M. T. Wright, S. Dasgupta, J. Heinanen, and J. Wang, "An S*M Execution Environment," Tech. Rept. TR87-3-1, The Center for Advanced Computer Studies, University of Southwestern Louisiana, February 1987.

Awards

- William H. Middendorf Research Excellence Award, Dept. of Electrical & Computer Engineering and Computer Science, 1995-96.
- Distinguished Progress in Teaching Excellence Award, Dept. of Electrical and Computer Engineering, 1987-88.

Honors

- Listed in Dictionary of International Biography, 1999.
- Listed in Who's Who in America, 199–2007.
- Listed in Who's Who in Science and Engineering, 1994–2007.
- Listed in Who's Who in the World, 1998–2007.
- Listed in Who's Who in American Education, 2004–2007.
- Listed in International Who's Who of Information Technology, 1999.
- Listed in Who's Who in the Midwest, 1994–95, 95–96, 97–98.
- Listed in Who's Who in the Media and Communications, 1998–99.
- Listed in Who's Who in Finance and Industry, 1997–98, 98–99.
- Listed in 5000 Personalities of the World, 1996.

Activities

Professional Activities

1. Referee for *Computer Languages* 2001, *ACM Transactions on Design Automation of Electronic Systems* (1999), *ACM Transactions on Modeling and Computer Simulation (TOMACS)* (1996–98, 2001, 2005, 2006), *IEEE Computer* (1987–98), *IEEE Journal on Selected Areas in Communications* (2000), *IEEE Parallel and Distributed Technology* (1992, 1994, 1995), *IEEE Software* (1985–89), *IEEE Transactions on Computers* (1990–94, 2000–01), *IEEE Transactions on Computer Aided Design* (2001), *IEEE Transactions on Software Engineering* (1996), *IEEE Transactions on Parallel and Distributed Systems* (1995, 1996), *International Journal in Computer Simulation* (1990–96), *Journal of Computer & Software Engineering* (1994), *Journal of Parallel and Distributed Computing (JPDC)* (1992, 1994–96, 1999, 2000, 2005, 2006), *Transactions of The Society for Computer Simulation* (1995–97, 200–2003), *VLSI Design* (1992, 1995, 1996), Annual Simulation Symposia (1992–06), Annual Workshop on Microprogramming and Microarchitecture (1990–93), Annual International Conference on Parallel Processing (ICPP) (1989, 1990, 1995), Annual Workshop on Microprogramming (1986–1987), GLOBECOM '95, Hawaii International Conference on System Sciences (HICSS) (1992, 1996, 1998), IEEE Symposium on Parallel and Distributed Processing (SPDP) (1995), International Parallel Processing Symposium (IPPS) (1994–99), International Symposium on Computer Architecture (1992), International Symposia on Computer Hardware Description Languages (1986), ISMM International Conference on Parallel and Distributed Computing and Systems (1992, 1995), Winter Simulation Conference (1994, 1996), Workshop on Parallel and Distributed Simulation (PADS) (1994–06), and World Congress on Systems Simulation, Conference on Parallel & Distributed Simulation (1997).
2. Member, CSAB evaluation teams (1998–2003).

3. Reviewer of grant proposals: NSF (1991,1994,2000,2001); NSF Panelist 2001, 2002.
4. Opponent, PhD theses: M. Liljenstam, Royal Institute of Technology (2000). External reviewer, PhD theses: A. Santoro, University of Rome (2002); P. Ashenden, University of Adelaide (1997); H. Avril, McGill University (1996); R. Singh, Wright State University (1996–97).
5. Book Reviewer for *Wiley* (2006), *Addison-Wesley* (2000), *Kluwer Academic Publishers* (1997), *McGraw-Hill, Inc* (1993–1996), *West Educational Publishing* (1993, 1994), *Morgan Kaufmann* (1991, 1992, 1994, 1996), and *Prentice Hall* (1990).
6. Editor-in-Chief: *IEEE Potentials Magazine*, 1999–03; Area Editor: *Transactions of the Society for Modeling and Simulation International*, 2003–; Associate Editor: *International Journal of Simulation and Process Modeling (IJSPM)* 2004–; *Transactions of the Society for Modeling and Simulation International*, 2001–2003; *IEEE Potentials Magazine*, 1992–99, 03–; Member, Editorial Advisory Board, *VLSI Design*, Gordon and Breach Science Publishers, 1993–2002.
7. IEEE Committees: Publications Products and Services Board (1999–2002); Regional Activities Board (non-voting) (1999–2002); and Student Activities Committee (1999–2002).
8. Steering Committees: Chair, Workshop on Parallel and Distributed Simulation (PADS), 2000–2003.
9. General Chair: Workshop on Parallel and Distributed Simulation (PADS), 2002 (Co-Chair); The 29th Annual Simulation Symposium, 1996; The International Conference on Electronic Hardware Description Languages (ICEHDL), 1995; The International Conference on Simulation and Hardware Description Languages, 1994. Associate General Chair: The SCS Winter Simulation Multiconference, (1993, 1994);
10. Program Chair: Workshop on Parallel and Distributed Simulation (PADS), 2001, 2003 (Co-Chair); Workshop on Massively Parallel Processing (WMPP), 2001-2002, 2003-2004 (Co-Chair); Workshop on Distributed Simulation and Real-Time Applications (DS-RT), 2001 (Co-Chair); International Conference On Web-Based Modeling & Simulation, WEBSIM 2000; MASCOTS '98 (Co-Chair); Fall 1997 VHDL International Users' Forum, 1997; The 26th Annual Simulation Symposium, 1993; The 25th Annual Simulation Symposium, 1992.
11. Tutorials Chair: MASCOTS 2001.
12. Program Committees: Parallel Computing (ParCo) 2005; Modeling and Simulation of Multi-Agent Systems (AAMAS 04); DIS-RT (2004-06); Communications Networks and Distributed Systems Modeling and Simulation Conference (2002); International Performance, Computing and Communications Conference (2002); International Conference on Grand Challenges for Modeling and Simulation (2002); Asian-Pacific Symposium on Cluster Computing (2000); International Conference On Web-Based Modeling & Simulation, WEBSIM (1999–2000); MASCOTS, (1998–2001); VLSI Design '98; World Congress on Systems Simulation, Conference on Parallel & Distributed Simulation (1997); Workshop on Parallel and Distributed Simulation (PADS), (1996–06); Spring VHDL Int. Users' Forum, (1994, 1995, 1998); Fall VHDL Int. Users' Forum, (1993, 1995, 1997, 1998); Annual Simulation Symposia, (1992–97, 2000–06); Annual Workshop on Microprogramming and Microarchitecture (1990, 1991).

13. Session Chair: International Conference On Web-Based Modeling & Simulation, WEBSIM 1999; Distributed Interactive Simulation and Real-Time Applications, 1997; Workshop on Parallel and Distributed Simulation (PADS), (1993, 1996, 1998); Winter Simulation Conference, 1994; Annual Simulation Symposia, (1992, 1994–97, 2004-06); 23rd Annual Workshop on Microprogramming and Microarchitecture (MICRO-23), 1990.
14. Panels: Winter Simulation Conference (Moderator), 2002; International Conference On Web-Based Modeling & Simulation, 1999; Distributed Interactive Simulation and Real-Time Applications, 1997; VIUF, Durham, NC, Oct. 1996 (moderator); Workshop on Parallel and Distributed Simulation (PADS), Lake Placid, NY, 1995; SIGCSE, Washington, D.C., Feb. 1990.
15. Lecture/Seminars: Iowa State University, Ames IA, February 2002; University of Connecticut, Storrs CT, November 2001; University of Texas, Dallas TX, May 2001; University of Georgia, Athens, GA, March 2000; University of Kansas, Lawrence, KS, March 2000; University of Louisville, Louisville, KY, October 1998; Honeywell, Minneapolis, MN, August 1998; Washington University, St Louis, MO, September 1997; University of Missouri at Rolla, Rolla, MO, September 1997; CMU, Pittsburgh, PA, March 1995; SUNY at Buffalo, Buffalo, NY, March 1995; University of Missouri at Rolla, Rolla, MO, September 1994; Technical University of Munich, Munich Germany, September 1994; Ohio Advanced Technology Center, Dayton, OH, June 1994; University of Minnesota, Minneapolis/St. Paul MN, January 1994; IBM, Rochester, MN, January 1994; MasPar Computer Corp., Sunnyvale, CA, Jan. 1992; Columbus State Community College, Columbus, OH, Nov. 1988; University of Cincinnati, Cincinnati, OH, Jan. 1988; University of Cincinnati, Cincinnati, OH, June 1987; Marquette University, Milwaukee, WI, May 1987; Colorado State University, Fort Collins, CO, April 1987.
16. Society Memberships: Association for Computing Machinery (ACM) (1982–): ACM Special Interest Group on Microprogramming (SIGMICRO), ACM Special Interest Group on Computer Architecture (SIGARCH), ACM Special Interest Group on Programming Languages (SIGPLAN), ACM Special Interest Group on Design Automation (SIGDA); IEEE (Member 1982–98, Senior Member 98–): IEEE Computer Society; American Association for the Advancement of Science (AAAS) (1990–96); Design Automation Standards Committee (DASC) (1996–); Issues Screening and Analysis Committee (ISAC) (1997–); VHDL Parallel Simulation Working Group (1995–); Object-Oriented VHDL Study Group (1996–).

Academic Committees

1. Participant, Effective Teaching Institute (93-94).
2. Member, All-University Graduate Faculty, University of Cincinnati (1991–); Member, Science & Engineering Research Building Planning Committee, University of Cincinnati (1990–93); Member, Information Technology Academic Advisory Committee, University of Cincinnati (1990–98); Member, Instructional Computing Sub-Committee, University of Cincinnati (1989).
3. Member, Graduate Center for Computing Disciplines (GCCD), University of Cincinnati (1988–90); Member, Hardware/Software Committee, Graduate Center for Computing Disciplines, University of

- Cincinnati (1988–90).
4. Member, Academic Standards Committee, College of Engineering, University of Cincinnati (2005–2006); Member, Committee to Establish the Academy of Engineering Scholars, College of Engineering, University of Cincinnati (1989); Member, Computer Director Search Committee, College of Engineering, University of Cincinnati (1989); Member, College of Engineering Computer Committee, University of Cincinnati (1988–1989); Member, College of Engineering Awards Committee, University of Cincinnati (1988, 1989).
 5. Coordinator, Experimental Systems Group (01/03–), Member, VLSI Design Group (01/03–), Dept of Electrical and Computer Engineering & Computer Science, University of Cincinnati.
 6. Co-Director, Center for Digital Systems Engineering, Department of Electrical and Computer Engineering, University of Cincinnati (1988–1989).
 7. Group Leader, Computer Systems Design Group, Department of Electrical and Computer Engineering, University of Cincinnati (1989–93).
 8. Director, Departmental Computer Operations, Department of Electrical and Computer Engineering, University of Cincinnati (1988–1989).
 9. Faculty Advisor, IEEE, Department of Electrical and Computer Engineering & Computer Science, University of Cincinnati (1998–).
 10. Faculty Advisor, Eta Kappa Nu, Department of Electrical and Computer Engineering, University of Cincinnati (1987–91).
 11. Member, Computer Engineering Faculty Advisors for class of 2003, Department of Electrical and Computer Engineering & Computer Science, University of Cincinnati (1999–03); Member, Faculty Search Committee, Department of Electrical and Computer Engineering & Computer Science, University of Cincinnati (1998–99); Member, Faculty Search Committee, Computer Engineering, Department of Electrical and Computer Engineering, University of Cincinnati (1996–97); Member, Evaluating Real World Impact of Research, Department of Electrical and Computer Engineering, University of Cincinnati (1995); Member, Graduate Student Awards Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1992); Member, Undergraduate Awards Selection, Department of Electrical and Computer Engineering, University of Cincinnati (1991); Member, Dept Head Review Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1990); Member, Academic Leave Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1990); Member, Mission/Vision Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1989–90); Member, Ad Hoc CS & ECE Merger Feasibility Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1989–90); Member, Departmental Awards Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1989, 1997); Chairman, Departmental Local Area Networking Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1988); Chairman, System Administrator Search Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1988); Member, Faculty Search Committee, Computer Systems

Design Group, Department of Electrical and Computer Engineering, University of Cincinnati (1987–96); Member, Graduate Computer Engineering Curriculum Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1987–02); Member, Undergraduate Computer Engineering Curriculum Committee, Department of Electrical and Computer Engineering, University of Cincinnati (1987–);

12. Member, Graduate Council, University of Southwestern Louisiana, (1986–1987); Member, Student Appeals Committee (Graduate School), University of Southwestern Louisiana, (1986–1987).

Community Service

1. Member 2004–2006, (Member-at-Large 2004–2005, Treasurer 2005-2006) Board of Trustees, Carpenters Creek Civic Association.
2. Editor 2003–, Newsletter, Carpenters Creek Civic Association.
3. Member 1998–2000, (Secretary 1998–1999, Vice-President 1999-2000) Board of Trustees, Carpenters Creek Civic Association.

Research Grants

1. Co-Investigator, “Acquisition of Research Instrumentation for Electronic Systems Emulation, Prototyping and Testing,” National Science Foundation, 2004-2007, \$280,085, with R. Vemuri (PI), H. Carter, K. Tomko, W-B. Jone, C. Purdy, and F. Beyette.
2. Co-Principal Investigator, “Collaborative Research: Parallel Reduced Order Modeling with In-Situ Error Mitigation and Performance Optimization,” National Science Foundation, 7/1/03–06/30/04, \$61,830, with K. Tomko,
3. Principal Investigator, “Improving Efficiency of Simulations using Dynamic Component Substitution”, Ohio Board of Regents, 2002-2003, \$22,500.
4. Principal Investigator, “Study of Dynamic Component Substitution”, Ohio Board of Regents, 2001-2002, \$19,200.
5. Co-Investigator, “Mixed Signal Modeling for System Level Simulation,” Joint AFRL/DAGSI Research Program, 2001–2003, \$398,113, (R. Vemuri, PI).
6. Principal Investigator, “Distributed Simulation of Mixed-Technology for Joint Battlespace Infosphere,” Air Force, 2000–2002, \$50,000.
7. Co-Investigator, “ELASTIC: A Framework for Constructing Self-Adaptive Software Systems,” DARPA, 1999 \$98,308 (D. Martin, PI).
8. Principal Investigator, “Control-Parallel Data-Parallel Computer,” Ohio Board of Regents, 1998–2000, \$34,797. (joint award with Kent State University, total award \$79,594).
9. Principal Investigator, “Technology & Software for Semi-Automated, High-Fidelity Validation of VHDL-Related Tools,” Air Force (Wright Laboratory), 1996–99, \$301,020. (joint award with FTL Systems, Inc., total award \$634,830).
10. Co-Principal Investigator, “A Verification Environment for High Assurance Network Performance Prediction,” DARPA, 1996–2000, \$929,009, with P. Alexander.
11. Principal Investigator, “Standard Analyzer of VHDL Applications for Next-Generation Technology (SAVANT),” Air Force (Wright Laboratory), 1995–98, \$436,351. (an SBIR with extensions subcontracted to UC from MTL Systems, Inc., total award \$1.4M).
12. Principal Investigator, “Data Paths for MIMD Interpretation,” UC Research Challenge, 1994–1995, \$37,099.
13. Principal Investigator, “A Formal Model of Digital Systems Compatible with VHDL,” ARPA, 1993–97, \$361,948.
14. Co-Investigator, “QUEST II: Integrated Simulation, Synthesis and ATPG of Large Scale VHDL Descriptions,” ARPA, 1993–98, \$2,700,000. (H. Carter, PI).

15. Co-Principal Investigator, "Distributed Simulation of VHDL," MTL Systems, Inc, Dayton, OH (sub-contracting an SBIR from the Air-Force), 1993–95, \$250,000, with D. Hensgen and H. Carter.
16. Co-Investigator, "Ultra-High-Speed Acceleration of Digital Systems Simulation, Synthesis, and Test Vector Generation," DARPA, 1989–93, \$2,600,000. (H. Carter, PI).
17. Co-Principal Investigator, "Simulation of VHDL Design and Prototype Software on Multiple Silicon Graphics Workstations," Air-Force, 1991–92, \$74,603, with D. Hensgen.
18. Principal Investigator, "Computational Aspects of Design Verification," SUN Microsystems Inc., 1991–93, \$107,650. (equipment grant).
19. Principal Investigator, "Ada Compiler Evaluation: A Quantitative Analysis," University Research Council, University of Cincinnati, 1990-91, \$8,553.
20. Principal Investigator, "Ada Compiler Evaluation for Embedded Controller Applications," General Electric Corporation, 1989–90, \$44,137
21. Principal Investigator, "Reasoning About Computer Architectures with Interval Temporal Logic," Battelle, 1989, \$18,000. (equipment grant).
22. Principal Investigator, "Tools and Techniques for Automating the Computer System Design Process," University Research Council, University of Cincinnati, 1988-89, \$2,300.
23. Principal Investigator, "Program Verification with Temporal Logic," Herman Schneider Laboratory, University of Cincinnati, 1987-88, \$1,850.