

BRUCE W. WEIDE

Curriculum Vitae
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PERSONAL DATA

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RESUME OF CAREER

- July 2013 - present Professor Emeritus, Computer Science and Engineering, The Ohio State University; director, OSU CSE Resolve/Reusable Software Research Group (RSRG)
- Oct 1996 - Jun 2013 Professor (and Associate Chair February 2006 - December 2012), Computer Science and Engineering (formerly Computer and Information Science), The Ohio State University; director, OSU CSE Resolve/Reusable Software Research Group (RSRG); teaching and research in component-based software engineering.
- Oct 1983 - Sep 1996 Associate Professor with tenure, Computer and Information Science, The Ohio State University, Columbus, Ohio; teaching and research in analysis of algorithms, data structures, software engineering, and computer systems.
- Sep 1978 - Sep 1983 Assistant Professor, Computer and Information Science, The Ohio State University, Columbus, Ohio; teaching and research in analysis of algorithms, data structures, software engineering, and computer systems.
- May 1975 - Aug 1975 Research Assistant, Medical College of Ohio, Toledo, Ohio; digital processing of EEG and nuclear camera data.
- Sep 1974 - Aug 1978 Graduate Research Assistant, Carnegie Mellon University, Pittsburgh, PA; multiprocessor algorithms, analysis of algorithms.

Jun 1973 - Apr 1974 Engineering Assistant, Toledo Edison Co., Toledo, Ohio; development of a fuel budget model and simulation.

EDUCATION

Sep 1974 - Sep 1978: Ph.D., Computer Science, Carnegie Mellon University, Pittsburgh, PA; thesis advisor, Michael I. Shamos; thesis, "Statistical Methods in Algorithm Design and Analysis."

Sep 1970 - Jun 1974: B.S.E.E., University of Toledo, Toledo, Ohio; summa cum laude.

RESEARCH INTERESTS

Component-based software engineering, data structures and algorithms, formal specification and verification of software, software components, software engineering.

PUBLICATIONS

Key: *** refereed journal or refereed book chapter
 ** refereed conference proceedings
 * invited paper

1. *** WEIDE, B.W., "A Survey of Analysis Techniques for Discrete Algorithms," *Computing Surveys* 9, 4 (December 1977), 291-313.
2. * WEIDE, B.W., "Space-Efficient On-Line Selection Algorithms," *Proceedings Computer Science and Statistics: 11th Annual Symposium on the Interface*, Institute of Statistics, N.C. State University, Raleigh, N.C., March 1978, 308-312; invited paper.
3. *** FREDMAN, M.L., AND WEIDE, B.W., "On the Complexity of Computing the Measure of $\cup[a_i, b_i]$," *Communications of the ACM* 21, 7 (July 1978), 540-544.
4. WEIDE, B.W., "Statistical Methods in Algorithm Design and Analysis," Ph.D. thesis, Department of Computer Science, Carnegie-Mellon University, Pittsburgh, PA, CMU-CS-78-142, August 1978, 175 pp.
5. BENTLEY, J.L., WEIDE, B.W., AND YAO, A.C. "Optimal Expected-Time Algorithms for Closest Point Problems," *Proceedings 16th Annual Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, IL, October 1978, 843-851.
6. *** WEIDE, B.W., ANDREWS, L.T., AND IANNONE, A.M., "Real-Time Analysis of EEG Using Walsh Transforms," *Computers in Biology and Medicine* 8, (1978), 255-263.

7. ** WOLF, J.J, LIU, M.T., WEIDE, B.W., AND TSAY, D.P., “Design of a Distributed Fault-Tolerant Loop Network,” *Digest 9th Annual International Symposium on Fault-Tolerant Computing*, University of Wisconsin, Madison, WI, June 1979, 17-24.
8. ** LIU, M.T., PARDO, R., TSAY, D., WOLF, J.J., WEIDE, B.W., AND CHOU, C., “System Design of the Distributed Double-Loop Computer Network (DDL CN),” *Proceedings 1st Annual Conference on Distributed Computing Systems*, Huntsville, AL, October 1979, 95-105.
9. WEIDE, B.W., “Very Fast Information Update and Retrieval Using Cells,” *Proceedings 17th Annual Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, IL, October 1979, 245-254.
10. ** WOLF, J.J, WEIDE, B.W., AND LIU, M.T., “Analysis and Simulation of the Distributed Double-Loop Computer Network (DDL CN),” *Proceedings 1979 Computer Networking Symposium*, National Bureau of Standards, Gaithersburg, MD, December 1979, 82-89.
11. *** WEIDE, B.W., “Random Graphs and Graph Optimization Problems,” *SIAM Journal on Computing* 9, 3 (August 1980), 552-557.
12. BROWN, M.E., AND WEIDE, B.W., “Preliminary Design of a Highly Parallel Architecture for Real-Time Applications,” *Proceedings 18th Annual Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, IL, October 1980, 534-543.
13. HOGAN, D.J, AND WEIDE, B.W., “External Sorting Revisited: Application of Distributive Methods,” *Proceedings 18th Annual Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, IL, October 1980, 260-266.
14. *** BENTLEY, J.L., WEIDE, B.W., AND YAO, A.C., “Optimal Expected-Time Algorithms for Closest Point Problems,” *ACM Transactions on Mathematical Software* 6, 4 (December 1980), 563-580.
15. ** WEIDE, B.W., “Analytical Models to Explain Anomalous Behavior of Parallel Algorithms,” *Proceedings 1981 International Conference on Parallel Processing*, Bellaire, MI, August 1981, 183-187.
16. BROWN, M.E., AND WEIDE, B.W., “A Flexible Packet-Switching Chip Set and Its Applications,” *Proceedings 19th Annual Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, IL, October 1981, 534-541.
17. ** AGUILAR, L., AND WEIDE, B.W., “Efficient Broadcast Acknowledgment for Store-and-Forward Packet Switching,” *Proceedings 15th Hawaii International Conference on System Sciences*, Honolulu, HA, January 1982, 499-508.

18. * WEIDE, B.W., AND HOGAN, D.J., "Mapping to Cells: Extensions of a Data Structure for Fast Storage and Retrieval," *Proceedings Computer Science and Statistics: 14th Annual Symposium on the Interface*, Rensselaer Polytechnic Institute, Troy, NY, July 1982, 37-41; invited paper.
19. ** OZSU, M.T., AND WEIDE, B.W., "Modeling of Distributed Database Concurrency Control Mechanisms Using an Extended Petri Net Formalism," *Proceedings 3rd International Conference on Distributed Computing Systems*, Ft. Lauderdale, FL, October 1982, 660-665.
20. * WEIDE, B.W., "NP-Hard Problems and What You Can Do About Them," *Proceedings 10th Annual Mathematics and Statistics Conference: Mathematics and Computing*, Miami University, Oxford, OH, October 1982; invited paper, abstract only.
21. * BROWN, M.E., AND WEIDE, B.W., "Computer Communications Networks: an Overview," *Proceedings ASIS '82*, Columbus, OH, October 1982; invited paper, abstract only.
22. WEIDE, B.W., BROWN, M.E., ALEGRIA, J.A.S., AND MEYER, G.R., "A Graphical Interconnection Language and Its Application to Concurrent and Real-Time Programming," *Proceedings 20th Annual Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, IL, October 1982, 567-576.
23. *** WEIDE, B.W., "Modeling Unusual Behavior of Parallel Algorithms," *IEEE Transactions on Computers C-31*, 11 (November 1982), 1126-1130.
24. WEIDE, B.W., "Graphical Programming of Process Control Software Using STILE: A Progress Report and Future Directions," technical memorandum, Dept. of Computer and Information Science, The Ohio State University, Columbus, OH, September 1983, 18 pp.
25. ** WEIDE, B.W., BROWN, M.E., RAMANATHAN, J., AND SCHWAN, K., "Integration and Design Methodology Support for Process Control: Issues and Approaches," *Proceedings 1983 Real-Time Systems Symposium*, IEEE, Arlington, VA, December 1983, 172-181.
26. *** WEIDE, B.W., BROWN, M.E., RAMANATHAN, J., AND SCHWAN, K., "Process Control: Integration and Design Methodology Support," *Computer* 17, 2 (February 1984), 27-32.
27. * WEIDE, B.W., "Views on Introductory Computing Instruction," *ACM SIGCAS/SIGCUE Computer Literacy Symposium*, Dayton, OH, June 1984; invited paper, abstract only.
28. WEIDE, B.W., "Computer-Based Support for Design with Standard Modules: Proposed Studies," technical memorandum, AT&T Bell Laboratories, Columbus, Ohio, 55212-841109.01IM, November 1984, 18 pp.

29. ** BROWN, M.E., AND WEIDE, B.W., “Automating Process-to-Processor Mapping under Real-Time Constraints,” *Proceedings 1984 Real-Time Systems Symposium*, IEEE, Austin, TX, December 1984, 145-150.
30. WEIDE, B.W., “Functional Classification and Retrieval of Component Information for Design,” technical memorandum, AT&T Bell Laboratories, Columbus, Ohio, 55212-841230.01TM, December 1984, 15 pp.
31. ** SCHWAN, K., BIHARI, T., WEIDE, B.W., AND TAULBEE, G., “GEM: Operating System Primitives for Robots and Real-Time Control Systems,” *International Conference on Robotics and Automation*, IEEE, St. Louis, Missouri, March 1985, 807-813; extended version available as technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-TR-85-4, February 1985, 32 pp.
32. ** TANEJA, S., AND WEIDE, B.W., “Graphical Description and Run-Time Environments for Real-Time Software,” *ACM Computer Science Conference*, ACM, Cincinnati, Ohio, February 1986, 205-211.
33. WEIDE, B.W., “Design and Specification of Abstract Data Types Using OWL,” technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-TR-86-1, January 1986, 22 pp.
34. WEIDE, B.W., “A Catalog of OWL Conceptual Modules,” technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-TR-86-2, January 1986, 37 pp.
35. WEIDE, B.W., “A New ADT and Its Applications in Implementing ‘Linked’ Structures,” technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-TR-86-3, January 1986, 33 pp.
36. WEIDE, B.W., “OWL Programming in C,” technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-TR-86-9, March 1986, 43 pp.
37. WEIDE, B.W., *Software Reuse Through Data Structures and Algorithms*, AT&T Kelly Education and Training Center, Middletown, NJ, 1986 (first edition), 1988 (second edition), 1990 (third edition), 408 pp.
38. ** AYKANAT, C., DORAIVELU, S.M., ERCAL, F., SADAYAPPAN, P., SCHWAN, K., AND WEIDE, B.W., “Parallel Computers for Finite Element Analysis,” *1986 ASME International Conference on Computers in Engineering*, Vol. 2, Aug. 1986, 43-50.

39. ** STOVSKY, M.P. AND WEIDE, B.W., “STILE: A Graphical Design and Development Environment (Extended Abstract),” *Digest of Papers of COMPCON '87*, IEEE, San Francisco, Feb. 1987, 247-250; full paper available as technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-86TR1BWW, October 1986, 31 pp.
40. *** SCHWAN, K., BIHARI, T., WEIDE, B.W., AND TAULBEE, G., “High-Performance Operating System Primitives for Robotics and Real-Time Control,” *ACM Transactions on Computer Systems* 5, 3 (August 1987), 189-231.
41. ** STOVSKY, M.P., AND WEIDE, B.W., “Building Interprocess Communication Models Using STILE,” *Proceedings 21st Hawaii International Conference on Systems Sciences*, January 1988, Vol. 2, 639-647; reprinted in *Visual Programming Environments: Paradigms and Systems*, E.P. Glinert, ed., IEEE Press, 1990, 566-574.
42. HARMS, D.E., AND WEIDE, B.W., “Swapping — A Desirable Alternative to Copying,” technical report, Department of Computer and Information Science, The Ohio State University, Columbus, Ohio, OSU-CISRC-1/88-TR2, January 1988, 16 pp.
43. MURALIDHARAN, S., AND WEIDE, B.W., “On Distributing Programs Built from Reusable Software Components,” technical report, Dept. of Computer and Information Science, The Ohio State University, OSU-CISRC-11/88-TR36, November 1988, 32 pp.
44. HARMS, D.E., AND WEIDE, B.W., “Efficient Initialization and Finalization of Data Structures: Why and How,” technical report, Dept. of Computer and Information Science, The Ohio State University, OSU-CISRC-3/89-TR11, March 1989, 33 pp.
45. HARMS, D.E., AND WEIDE, B.W., “Types, Copying, and Swapping: Their Influences on the Design of Reusable Software Components,” technical report, Dept. of Computer and Information Science, The Ohio State University, OSU-CISRC-3/89-TR13, March 1989, 22 pp.
46. STOVSKY, M.P., AND WEIDE, B.W., “The Separation of Specification from Implementation and Its Effect on Software Maintenance,” technical report, Dept. of Computer and Information Science, The Ohio State University, OSU-CISRC-4/89-TR17, April 1989, 13 pp.
47. * WEIDE, B.W., AND DEFAZIO, S., “Conceptualizing the Software Engineering Process (Extended Abstract),” *Proceedings International Conference on Software Engineering and Knowledge Engineering*, KSI, Chicago, June 1989, 172-176, invited paper; full paper available as technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-7/89-TR33, July 1989, 31 pp.

48. ** KLINGLER, J.W., ANDREWS, L.T., VAUGHAN, C.L., BEHRENDT, B.C., AND WEIDE, B.W., “An Image Processing Software Development Environment Based on Dataflow, Reusability and Visual Programming,” *Proceedings of 7th Electronic Imaging West*, Pasadena, CA, February 1990, 961-966; see also “A Visual Programming System for Development of Image Processing Applications,” *Journal of Electronic Imaging* 1, 2 (April 1992), 192-202.
49. ** MURALIDHARAN, S., AND WEIDE, B.W., “Should Data Abstraction be Violated to Enhance Software Reuse?”, *Proceedings 8th Annual National Conference on Ada Technology*, ANCOST, March 1990, 515-524.
50. ** WELCH, L., AND WEIDE, B.W., “Architectural Support for Efficient Execution of Reusable Software Components,” *Proceedings Fifth Distributed Memory Computing Conference*, IEEE, Charleston, SC, April 1990, 1082-1087.
51. ** STOVSKY, M., AND WEIDE, B.W., “The Role of Traditional Engineering Design Techniques in Software Engineering,” *Proceedings Second International Conference on Software Engineering and Knowledge Engineering*, KSI, Chicago, June 1990, 84-89.
52. MURALIDHARAN, S., AND WEIDE, B.W., “Reusable Software Component = Formal Specification + Object Code: Some Implications,” *Proceedings 3rd Annual Workshop on Methods and Tools for Reuse*, Syracuse University CASE Center, June 1990.
53. ** WELCH, L., AND WEIDE, B.W., “Mapping Reusable Software Components onto the ARC Parallel Processor,” *Proceedings Frontiers '90: Third Symposium on Massively Parallel Computing*, October 1990, 499-502.
54. ** WELCH, L., AND WEIDE, B.W., “Avoiding Deadlock When Mapping Reusable Software Components onto the ARC Parallel Processor,” *Proceedings of the ISSM International Conference on Parallel and Distributed Computing and Systems*, October 1990.
55. *** STOVSKY, M.P., AND WEIDE, B.W., “Access Control Strategies for Coordinating Teams of Software Engineers,” *International Journal of Software Engineering and Knowledge Engineering* 1, 1 (March 1991), 57-73.
56. *** HARMS, D.E., AND WEIDE, B.W., “Copying and Swapping: Influences on the Design of Reusable Software Components,” *IEEE Transactions on Software Engineering* 17, 5 (May 1991), 424-435.
57. HOLLINGSWORTH, J.E., WEIDE, B.W., AND ZWEBEN, S.H., “Abstraction Leaks in Ada (Extended Abstract),” *Proceedings 14th Minnowbrook Workshop on Software Engineering*, Syracuse University, July 1991, 1 page.

58. * WEIDE, B.W., OGDEN, W.F., AND ZWEBEN, S.H., “Reusable Software Components,” in *Advances in Computers*, vol. 33, M.C.Yovits, ed., Academic Press, 1991, 1-65; invited chapter.
59. ** HOLLINGSWORTH, J.E., WEIDE, B.W., AND ZWEBEN, S.H., “Confessions of Some Used-Program Clients,” *Proceedings 4th Annual Workshop on Software Reuse*, Herndon, VA, November 1991, 6 pp.
60. ** HOLLINGSWORTH, J.E., AND WEIDE, B.W., “Engineering ‘Unbounded’ Reusable Ada Generics,” *Proceedings 10th Annual National Conference on Ada Technology*, Arlington, VA, February 1992, 82-97.
61. WEIDE, B.W., EDWARDS, S.H., HARMS, D.E., AND LAMB, D.A., “Design and Specification of Iterators Using the Swapping Paradigm,” technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-9/92-TR24, September 1992, 30 pp.
62. ** WEIDE, B.W., AND HOLLINGSWORTH, J.E., “Scalability of Reuse Technology to Large Systems Requires Local Certifiability,” *Proceedings 5th Annual Workshop on Software Reuse*, Palo Alto, CA, October 1992, 7 pp.
63. ** BYRNES, D.D., AND WEIDE, B.W., “Static Scheduling of Hard Real-Time Control Software Using a Complex Periodic Execution Model,” *Proceedings IEEE Workshop on Parallel and Distributed Real-Time Systems*, IEEE, Newport Beach, CA, April 1993, 10 pp.
64. *** WEIDE, B.W., AND DEFAZIO, S., “A Framework for Modeling Software Engineering Processes,” *International Journal of Software Engineering and Knowledge Engineering* 3, 3 (September 1993), 351-368.
65. ** WEIDE, B.W., HEYM, W.D., AND OGDEN, W.F., “Procedure Calls and Local Certifiability of Component Correctness,” *Proceedings 6th Annual Workshop on Software Reuse*, Owego, NY, November 1993, 5 pp.
66. WEIDE, B.W., OGDEN, W.F., AND SITARAMAN, M., “Improving Reusability by Recasting Algorithms as Objects,” technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-11/93-TR40, November 1993, 31 pp.
67. WEIDE, B.W., “Submittal for a New Year’s Resolution,” *Computer* 27, 1 (January 1994), 128.
68. WEIDE, B.W., AND HOLLINGSWORTH, J.E., *On Local Certifiability of Software Components*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-1/94-TR04, January 1994, 11 pp.

69. ZWEBEN, S.H., EDWARDS, S.H., WEIDE, B.W., AND HOLLINGSWORTH, J.E., “The Effects of Layering and Encapsulation on Software Development Cost and Quality,” technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-4/94-TR21, April 1994, 16 pp.
70. *** WEIDE, B.W., EDWARDS, S.H., HARMS, D.E., AND LAMB, D.A., “Design and Specification of Iterators Using the Swapping Paradigm,” *IEEE Transactions on Software Engineering* 20, 8 (August 1994), 631-643.
71. HEYM, W.D., LONG, T.J., OGDEN, W.F., AND WEIDE, B.W., *Mathematical Foundations and Notation of RESOLVE*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-8/94-TR45, August 1994, 21 pp.
72. *** WEIDE, B.W., OGDEN, W.F., AND SITARAMAN, M., “Recasting Algorithms to Encourage Reuse,” *IEEE Software* 11, 5 (September 1994), 80-88.
73. WEIDE, B.W., HEYM, W.D., AND HOLLINGSWORTH, J.E., *Reverse Engineering of Legacy Code is Intractable*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-10/94-TR55, October 1994, 18 pp.
74. * SITARAMAN, M., AND WEIDE, B.W., “Component-Based Software Using RESOLVE,” *Software Engineering Notes* 19, 4 (October 1994), 21-22.
75. * OGDEN, W.F., SITARAMAN, M., WEIDE, B.W., AND ZWEBEN, S.H., “The RESOLVE Framework and Discipline— A Research Synopsis,” *Software Engineering Notes* 19, 4 (October 1994), 23-28.
76. * EDWARDS, S.H., HEYM, W.D., LONG, T.J., SITARAMAN, M., AND WEIDE, B.W., “Specifying Components in RESOLVE,” *Software Engineering Notes* 19, 4 (October 1994), 29-39.
77. * BUCCI, P., HOLLINGSWORTH, J.E., KRONE, J., AND WEIDE, B.W., “Implementing Components in RESOLVE,” *Software Engineering Notes* 19, 4 (October 1994), 40-52.
78. * HOLLINGSWORTH, J.E., SREERAMA, S., WEIDE, B.W., AND ZHUPANOV, S., “RESOLVE Components in Ada and C++,” *Software Engineering Notes* 19, 4 (October 1994), 53-63.
79. * WEIDE, B.W., “Educating Software Engineers: Position Statement,” *Proceedings TRI-Ada '94*, ACM, Baltimore, MD, November 1994, p. 225.
80. HOLLINGSWORTH, J.E., AND WEIDE, B.W., *Micro-Architecture vs. Macro-Architecture*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-11/94-TR57, November 1994, 5 pp.

81. *** ZWEBEN, S.H., EDWARDS, S.H., WEIDE, B.W., AND HOLLINGSWORTH, J.E., “The Effects of Layering and Encapsulation on Software Development Cost and Quality,” *IEEE Transactions on Software Engineering* 21, 3 (March 1995), 200-208.
82. ** WEIDE, B.W., HEYM, W.D., AND HOLLINGSWORTH, J.E., “Reverse Engineering of Legacy Code Exposed,” *Proceedings 17th International Conference on Software Engineering*, ACM, Seattle, WA, April 1995, 327-331.
83. ** HOLLINGSWORTH, J.E., AND WEIDE, B.W., “One Architecture Does Not Fit All: Micro-Architecture Is As Important As Macro-Architecture,” *Proceedings 7th Annual Workshop on Software Reuse*, St. Charles, IL, August 1995, 5 pp.
84. WEIDE, B.W., “Where is Software Headed? Challenges of Software Design and the Undergraduate Computing Curriculum,” *Computer* 28, 8 (August 1995), 31-32.
85. WEIDE, B.W., EDWARDS, S.H., HEYM, W.D., LONG, T.J., AND OGDEN, W.F., *Characterizing Observability and Controllability of Software Components*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-9/95-TR37, September 1995, 20 pp.
86. SITARAMAN, M., WEIDE, B.W., AND OGDEN, W.F., *Using Abstraction Relations to Verify Abstract Data Type Representations*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-9/95-TR39, September 1995, 30 pp.
87. ** WEIDE, B.W., EDWARDS, S.H., HEYM, W.D., LONG, T.J., AND OGDEN, W.F., “Characterizing Observability and Controllability of Software Components,” *Proceedings 4th International Conference on Software Reuse*, IEEE, Orlando, FL, April 1996, 62-71.
88. EDWARDS, S.H., GIBSON, D.S., WEIDE, B.W., and ZHUPANOV, S., “Software Component Relationships,” *Proceedings 8th Annual Workshop on Software Reuse*, Columbus, OH, March 1997, 6 pp.
89. *** SITARAMAN, M., WEIDE, B.W., AND OGDEN, W.F., “On the Practical Need for Abstraction Relations to Verify Abstract Data Type Representations,” *IEEE Transactions on Software Engineering* 23, 3 (March 1997), 157-170.
90. ** LONG, T.J., AND WEIDE, B.W., “Weaving Software Engineering Into the Fabric of CS1 and CS2,” *Proceedings 4th International Workshop on Software Engineering Education*, Boston, MA, May 1997, 66-69.
91. ** GIBSON, D.S., AND WEIDE, B.W., “Semantic Spaces for Specifications and Templates,” *Proceedings Workshop on Foundations of Component-Based Systems*, Zurich, Switzerland, September 1997, 111-120.

92. LONG, T.J., WEIDE, B.W., BUCCI, P., GIBSON, D.S., HOLLINGSWORTH, J.E., SITARAMAN, M., AND EDWARDS, S.H., *Providing Intellectual Focus to CS1/CS2*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-9/97-TR42, September 1997, 6 pp.
93. SITARAMAN, M., WEIDE, B.W., LONG, T.J., AND HEYM, W.D., *Teaching the Essential Role of Mathematical Modeling in Understanding and Reasoning About Objects*, technical report, Department of Computer and Information Science, The Ohio State University, OSU-CISRC-9/97-TR43, September 1997, 6 pp.
94. * EDWARDS, S.H., AND WEIDE, B.W., eds., “WISR8: 8th Annual Workshop on Software Reuse Summary and Working Group Reports,” *ACM SIGSOFT Software Engineering Notes* 22, 5 (September 1997), 17-32.
95. **LONG, T.J., WEIDE, B.W., BUCCI, P., GIBSON, D.S., HOLLINGSWORTH, J.E., SITARAMAN, M., AND EDWARDS, S.H., “Providing Intellectual Focus to CS1/CS2,” *Proceedings 29th SIGCSE Technical Symposium on Computer Science Education*, ACM, February 1998, 252-256.
96. **EDWARDS, S.H., SHAKIR, G., SITARAMAN, M., WEIDE, B.W., AND HOLLINGSWORTH, J.E., “A Framework for Detecting Interface Violations in Component-Based Software,” *Proceedings 5th International Conference on Software Reuse*, IEEE, June 1998, 46-55.
97. **BUCCI, P., LONG, T.J., AND WEIDE, B.W., “Teaching Software Architecture Principles in CS1/CS2,” *Proceedings 3rd International Software Architecture Workshop*, ACM, November 1998, 9-12.
98. **WEIDE, B.W., “‘Modular Regression Testing’: Connections to Component-Based Software,” *Proceedings 9th Annual Workshop on Software Reuse*, Austin, TX, January 1999, 6 pp.; a somewhat revised version of this work, also refereed, appears in *Proceedings Fourth ICSE Workshop on Component-Based Software Engineering*, IEEE, May 2001, 47-51.
99. **LONG, T.J., WEIDE, B.W., BUCCI, P., AND SITARAMAN, M., “Client View First: An Exodus From Implementation-Biased Teaching,” *Proceedings 30th SIGCSE Technical Symposium on Computer Science Education*, ACM, March 1999, 136-140.
100. **PIKE, S.M., WEIDE, B.W., AND HOLLINGSWORTH, J.E., “Checkmate: Cornering C++ Dynamic Memory Errors With Checked Pointers,” *Proceedings 31st SIGCSE Technical Symposium on Computer Science Education*, ACM, March 2000, 352-356.
101. ***GIBSON, D.S., WEIDE, B.W., PIKE, S.M., AND EDWARDS, S.H., “Toward a Normative Theory for Component-Based System Design and Analysis,” in Leavens, G., and Sitaraman, M., eds., *Foundations of Component-Based Systems*, Cambridge University Press, 2000, 211-230.

102. ***SITARAMAN, M., WEIDE, B.W., LONG, T.J., AND OGDEN, W.F., “A Data Abstraction Alternative to Data Structure/Algorithm Modularization,” in Jazayeri, M., Loos, R.G.K., and Musser, D.R., eds., *Generic Programming*, Springer-Verlag LNCS 1766, 2000, 102-113.
103. **SITARAMAN, M., ATKINSON, S., KULCZYCKI, G., WEIDE, B.W., LONG, T.J., BUCCI, P., PIKE, S., HEYM, W.D., AND HOLLINGSWORTH, J.E., “Reasoning About Software-Component Behavior,” in Frakes, W.B., ed., *Software Reuse: Advances in Software Reusability (Proceedings Sixth International Conference on Software Reuse)*, Springer-Verlag LNCS 1844, 2000, 266-283.
104. **BUCCI, P., LONG, T.J., WEIDE, B.W., AND HOLLINGSWORTH, J.E., “Toys Are Us: Presenting Mathematical Concepts in CS1/CS2,” *Proceedings 30th ASEE/IEEE Frontiers in Education Conference*, IEEE Computer Society Press, 2000, CD-ROM, 6 pp.
105. **HOLLINGSWORTH, J.E., BLANKENSHIP, L., AND WEIDE, B.W., “Experience Report: Using RESOLVE/C++ for Commercial Software,” *Proceedings ACM SIGSOFT Eighth International Symposium on the Foundations of Software Engineering*, ACM Press, 2000, 11-19.
106. **BUCCI, P., LONG, T.J., AND WEIDE, B.W., “Do We Really Teach Abstraction?,” *Proceedings 32nd SIGCSE Technical Symposium on Computer Science Education*, ACM, 2001, 26-30.
107. **SITARAMAN, M., LONG, T.J., WEIDE, B.W., HARNER, J., AND WANG, C., “A Formal Approach to Component-Based Software Engineering: Education and Evaluation”, *Proceedings 2001 International Conference on Software Engineering*, IEEE, 2001, 601-609.
108. **WEIDE, B.W., AND HEYM, W.D., “Specification and Verification with References”, *Proceedings OOPSLA Workshop on Specification and Verification of Component-Based Systems*, ACM, October 2001, <http://www.cs.iastate.edu/~leavens/SAVCBS/papers-2001>. Also OSU-CISRC-08/01-TR10, August 2001, 11 pp.
109. */***WEIDE, B.W., “Component-Based Systems”, in Marciniak, J.J., ed., *Encyclopedia of Software Engineering*, John Wiley and Sons, 2001, 9 pp.
110. **BUCCI, P., HEYM, W., LONG, T.J., AND WEIDE, B.W., “Algorithms and Object-Oriented Programming: Bridging the Gap”, *Proceedings 33rd SIGCSE Technical Symposium on Computer Science Education*, ACM Press, 2002, 302-306.
111. ***SITARAMAN, M., LONG, T.J., WEIDE, B.W., HARNER, J., AND WANG, C., “Teaching Component-Based Software Engineering: A Formal Approach and Its Evaluation”, *Computer Science Education* 12, 1-2 (2002), 11-36.

112. **SRIDHAR, N., WEIDE, B.W., AND BUCCI, P., “Service Facilities: Extending Abstract Factories to Decouple Advanced Dependencies”, *Software Reuse: Methods, Techniques, and Tools (Proceedings Seventh International Conference on Software Reuse)*, C. Gacek, ed., LNCS 2319, Springer-Verlag, Berlin, 2002, pp. 309-326.
113. WEIDE, B.W., “Good News and Bad News About Software Engineering Practice”, *Proceedings of the RESOLVE Workshop 2002*, <http://people.cs.vt.edu/~edwards/RESOLVE2002/proceedings>.
114. WEIDE, B.W., PIKE, S.M., AND HEYM, W.D., “Why Swapping?”, *Proceedings of the RESOLVE Workshop 2002*, <http://people.cs.vt.edu/~edwards/RESOLVE2002/proceedings>.
115. **WEIDE, B.W., OGDEN, W.F., AND SITARAMAN, M., “Expressiveness Issues in Compositional Performance Reasoning”, *Proceedings 6th ICSE Workshop on Component-Based Software Engineering: Automated Reasoning and Prediction*, May 2003, 85-90.
116. **SRIDHAR, N., PIKE, S.M., AND WEIDE, B.W., “Dynamic Module Replacement in Distributed Protocols”, *Proceedings 23rd International Conference on Distributed Computing Systems*, IEEE, May 2003, 620-627.
117. **SRIDHAR, N., AND WEIDE, B.W., “Reasoning About Parameterized Components with Dynamic Binding”, *FSE Workshop on Specification and Verification of Component-Based Systems*, September 2003, <http://www.cs.iastate.edu/~leavens/SAVCBS/2003/papers>.
118. **BOHN, C.A., SIVILOTTI, P.A.G., AND WEIDE, B.W., “Using a Model Checker to Find a Hidden Evader”, *Workshop on Agent/Swarm Programming '03*, October 2003, 1-7.
119. **HOWE, E., THORNTON, M., AND WEIDE, B.W., “Components-First Approaches to CS1/CS2: Principles and Practice”, *Proceedings 2004 SIGCSE Technical Symposium on Computer Science Education*, ACM, March 2004, 291-295.
120. **SIVILOTTI, P.A.G., AND WEIDE, B.W., “Research, Teaching, and Service: The Miniconference Model for CS Graduate Seminar Courses”, *Proceedings 2004 SIGCSE Technical Symposium on Computer Science Education*, ACM, March 2004, 487-491.
121. **KUMAR, S., WEIDE, B.W., SIVILOTTI, P.A.G., SRIDHAR, N., HALLSTROM, J.O., AND PIKE, S.M., “Encapsulating Concurrency as an Approach to Unification”, *FSE Workshop on Specification and Verification of Component-Based Systems*, October 2004, <http://www.cs.iastate.edu/~leavens/SAVCBS/2004/papers>.
122. **SITARAMAN, M., GANDI, D.P., KUECHLIN, W., SINZ, C., AND WEIDE, B.W., “DEET for Component-Based Software”, *FSE Workshop on Specification and Verification of Component-Based Systems*, October 2004, <http://www.cs.iastate.edu/~leavens/SAVCBS/2004/papers>.

123. ***EDWARDS, S.H., SITARAMAN, M., WEIDE, B.W., AND HOLLINGSWORTH, J.E., “Contract-checking Wrappers for C++ Classes”, *IEEE Transactions on Software Engineering* 30, 11 (November 2004), 794-810.
124. ***BOHN, C.A., SIVILOTTI, P.A.G., AND WEIDE, B.W., “Designing the Control of a UAV Fleet with Model Checking”, in Murphey, R., Pardalos, P., and Grundel, D., eds., *Theory and Algorithms for Cooperative Systems*, World Scientific Press, 2004, 27-44.
125. *SAIEDIAN, H., AND WEIDE, B.W., “The New Context for Software Engineering Education and Training”, *Journal of Systems and Software* 74, 2 (15 January 2005), 109-111; guest editors’ introduction to special issue of journal.
126. **WEIDE, B.W., BUCCI, P., HEYM, W.D., SITARAMAN, M., AND RIZZONI, G., “Issues in Performance Certification for Automotive Control Software”, *ICSE 2005 Workshop on Software Engineering for Automotive Systems (ACM SIGSOFT Software Engineering Notes 30 (4), July 2005)*, ACM Press, 2005, 1-6.
127. **BUEHRER, G., WEIDE, B.W., AND SIVILOTTI, P.A.G., “Using Parse Tree Validation to Prevent SQL Injection Attacks”, *Proceedings of the Fifth International Workshop on Software Engineering and Middleware*, ACM Press, September 2005, 106-113.
128. **KULCZYCKI, G.W., SITARAMAN, M., WEIDE, B.W., AND ROUNTEV, A., “A Specification-Based Approach to Reasoning about Pointers”, *Proceedings of SAVCBS '05: FSE Workshop on Specification and Verification of Component-Based Systems*, Lisbon, Portugal, 2005, <http://www.cs.iastate.edu/~leavens/SAVCBS/2005/SAVCBS05.pdf>, 55-62.
129. HOLLINGSWORTH, J.E., AND WEIDE, B.W., “Some Preliminary Rules of Engagement for Java”, *Proceedings of Resolve Workshop 2006*, Blacksburg, VA, 2006, <http://people.cs.vt.edu/~edwards/Resolve-2006-papers/Hollingsworth-Weide.html>.
130. BUCCI, P., HEYM, W.D., HOLLINGSWORTH, J.E., LONG, T.J., AND WEIDE, B.W., “An Infrastructure to Study and Address Students’ Difficulties with Pointers”, *Proceedings of Resolve Workshop 2006*, Blacksburg, VA, 2006, <http://people.cs.vt.edu/~edwards/Resolve-2006-papers/Bucci.pdf>.
131. **WEIDE, B.W., “SAVCBS 2006 Challenge: Specification of Iterators”, *Proceedings of SAVCBS 2006: FSE Workshop on Specification and Verification of Component-Based Systems*, Portland, OR, November 2006, <http://www.cs.iastate.edu/~leavens/SAVCBS/2006/SAVCBS06-proceedings.pdf>, 75-77.
132. **ADCOCK, B., BUCCI, P., HEYM, W.D., HOLLINGSWORTH, J.E., LONG, T.J., AND WEIDE, B.W., “Which Pointer Errors Do Students Make?”, *Proceedings of the 38th SIGCSE Technical Symposium on Computer Science Education*, ACM Press, March 2007, 9-13.

133. ** KULCZYCKI, G., KEOWN, H., SITARAMAN, M., AND WEIDE, B.W., “Abstracting Pointers for a Verifying Compiler”, *Proceedings 31st IEEE Software Engineering Workshop*, IEEE, March 2007, 204-213.
134. OGDEN, W.F., HOLLINGSWORTH, J.E., KRONE, J., SITARAMAN, M., AND WEIDE, B.W., “The Resolve Software Verification Vision”, *Proceedings of Resolve Workshop 2007*, Clemson, SC, June 2007, http://dsrg.cs.clemson.edu/resolve_2007/proceedings.html, 1-3.
135. WEIDE, B.W., FRIEDMAN, H.M., AND MINTERN, B., “Building Skills with Logic and Proof Argument”, *Proceedings of Resolve Workshop 2007*, Clemson, SC, June 2007, http://dsrg.cs.clemson.edu/resolve_2007/proceedings.html, 38-41.
136. WEIDE, B.W., *On an Incompatibility of Functional Programming and Functional Semantics*, technical report, Department of Computer Science and Engineering, The Ohio State University, OSU-CISRC-3/08-TR13, March 2008, 5 pp.
137. BRONISH, D., ADCOCK, B., KIRSCHENBAUM, J., AND WEIDE, B.W., *On Soundness of Verification for Software with Functional Semantics and Abstract Data Types*, technical report, Department of Computer Science and Engineering, The Ohio State University, OSU-CISRC-5/08-TR26, May 2008, 15 pp.
138. **WEIDE, B.W., SITARAMAN, M., HARTON, H.K., ADCOCK, B., BUCCI, P., BRONISH, D., HEYM, W.D., KIRSCHENBAUM, J., AND FRAZIER, D., “Incremental Benchmarks for Software Verification Tools and Techniques”, *Proceedings of VSTTE 2008 (Verified Software: Tools, Techniques, and Experiments)*, Springer-Verlag LNCS 5295, October 2008, 84-98.
139. **KIRSCHENBAUM, J., ADCOCK, B., BRONISH, D., BUCCI, P., AND WEIDE, B.W., “Adapting Isabelle Theories to Help Verify Code That Uses Abstract Data Types”, *Proceedings 7th International Workshop on Specification and Verification of Component-Based Software (SAVCBS 2008)*, University of Central Florida, November 2008, 67-74.
140. **KIRSCHENBAUM, J., ADCOCK, B., BRONISH, B., SMITH, H., HARTON, H., SITARAMAN, M., AND WEIDE, B.W., “Verifying Component-Based Software: Deep Mathematics or Simple Bookkeeping?”, *Proceedings 11th International Conference on Software Reuse*, Springer-Verlag LNCS 5791, September 2009, 31-40.
141. **PIKE, S.M., HEYM, W.D., WEIDE, B.W., BRONISH, D., KIRSCHENBAUM, J., AND ADCOCK, B., “Traditional Assignment Considered Harmful”, *Proceeding of the 24th ACM SIGPLAN Conference Companion on Object Oriented Programming Systems Languages and Applications*, ACM, New York, 2009, 909-916.
142. **BRONISH, D. AND WEIDE, B.W., “A Review of Verification Benchmark Solutions Using Dafny”, *Proceedings of VSTTE 2010 (Verified Software: Theories, Tools, and Experiments) Workshops*, August 2010.

143. **KIRSCHENBAUM, J., AND WEIDE, B.W., “Restrictions: Help in Documenting Client Code Under a Verified Software Paradigm”, *Proceedings International Workshop on Specification and Verification of Component-Based Software (SAVCBS 2010)*, November 2010.
144. ***SITARAMAN, M., ADCOCK, B., AVIGAD, J., BRONISH, D., BUCCI, B., FRAZIER, D., FRIEDMAN, H.M., HARTON, HEYM, W., KIRSCHENBAUM, J., KRONE, J., SMITH, H., AND WEIDE, B.W., “Building a Push-Button RESOLVE Verifier: Progress and Challenges”, *Formal Aspects of Computing* 23, 5 (2011), 607-626.
145. TAGORE, A. AND WEIDE, B.W., *To Expand or Not to Expand: Automatically Verifying Software Specified with Complex Mathematical Definitions*, Technical Report OSU-CISRC-5/11-TR18, Department of Computer Science and Engineering, The Ohio State University, May 2011 (revised September 2011), 8 pp.
146. PAVLIC, T.P., SIVILOTTI, P.A.G., WEIDE, A.D., AND WEIDE, B.W., *Comments on “Adaptive Cruise Control: Hybrid, Distributed, and Now Formally Verified”*, Technical Report, Department of Computer Science and Engineering, The Ohio State University, OSU-CISRC-7/11-TR22, July 2011, 4 pp.
147. * WEIDE, B.W., “Software Verification with Towers of Abstractions”, in Neil Tennant, ed., *Foundational Adventures: Essays in Honor of Harvey M. Friedman*, Templeton Press (Online) and College Publications, London, 2011.
148. ** TAGORE, A., ZACCAI, D., AND WEIDE, B.W., “Automatically Proving Thousands of Verification Conditions Using an SMT Solver: An Empirical Study”, *NASA Formal Methods 4th International Symposium*, Springer LNCS 7226, April 2012, 195-209.
149. ** TAGORE, A., AND WEIDE, B.W., “Automatically Detecting Inconsistencies in Program Specifications”, *NASA Formal Methods 5th International Symposium*, Springer LNCS 7871, May 2013, 261-275.
150. ** KULCZYCKI, G., SITARAMAN, M., KRONE, J., HOLLINGSWORTH, J.E., OGDEN, W.F., WEIDE, B.W., BUCCI, P., COOK, C.T., DRACHOVA, S., DURKEE, B., HARTON, H., HEYM, W., HOFFMAN, D., SMITH, H., SUN, Y., TAGORE, A., YASMIN, N., AND ZACCAI, D., “A Language for Building Verified Software Components”, *Proceedings 2013 International Conference on Software Reuse*, Springer LNCS 7925, June 2013, 308-314.

FINANCIAL SUPPORT

Sep 1974 - Aug 1977: National Science Foundation Graduate Fellowship.

Sep 1977 - Aug 1978: IBM Graduate Fellowship.

- Jul 1979 - Aug 1979: The Ohio State University Small Research Grant Program; “Design of Linear Expected-Time Algorithms Using Cell Techniques,” #221268, \$4,419.
- Oct 1979 - Sep 1981: National Science Foundation; “Statistical Methods for Algorithm Design and Analysis,” MCS-79-12688, \$29,996.
- Jul 1981 - Jun 1982: The Ohio State University Small Research Grant Program; “Computer-Aided Design of Real-Time Control Systems,” #221455, \$4,960.
- Oct 1983 - Sep 1984: Defense Advanced Research Projects Agency; “Software Issues in Real-Time Control of ASV-84,” Bruce W. Weide and Karsten Schwan, \$32,948; part of the larger contract “An Experimental Study of an Ultra-Mobile Vehicle for Off-Road Transportation,” MDA903-82-K-0058, Robert B. McGhee, Principal Investigator.
- Jul 1984 - Jan 1985: Defense Small Business Innovation Research Program; “Advanced Simulation Language for Process Modeling and Process Control in Metal-Working,” Bruce W. Weide, Karsten Schwan, and P. Sadayappan, \$16,670; subcontract from Universal Energy Systems, Inc.
- Jul 1984 - Jun 1985: The Ohio State University Seed Grant Program; “Operating Software for Industrial Manufacturing Systems,” Karsten Schwan and Bruce W. Weide, \$14,800.
- Jul 1984 - Jun 1985: National Science Foundation; “Computer Research Equipment,” Bruce W. Weide, Charles Csuri, and Karsten Schwan, \$65,960.
- Oct 1984 - Sep 1986: Defense Advanced Research Projects Agency; “Software Issues in Real-Time Control of ASV-84,” Bruce W. Weide and Karsten Schwan, \$147,784; part of the larger contract “Autonomous Agile Vehicle Program,” DAAE07-84-K-R001, Robert B. McGhee, Principal Investigator.
- Apr 1985 - Oct 1985: Hewlett-Packard Corporation; “Computer Equipment,” Bruce W. Weide (PI), Sandra A. Mamrak, V. Ashok, P. Sadayappan, and Stuart H. Zweben, \$285,779.
- Jul 1985 - Jun 1986: The Ohio State University Graduate School; “Real-Time Computing for Robotics and Manufacturing,” David Orin, Fusun Ozguner, Karsten Schwan, and Bruce W. Weide, \$50,000.

- Aug 1985 - Sep 1987: Thomas A. Edison Partnership Program and Universal Energy Systems, Inc.; “Advanced Simulation Language and Multicomputer Design for Improving the Performance of Modeling and Control of Metal-Forming Processes,” Fusun E. Ozguner, P. Sadayappan, Karsten Schwan, and Bruce W. Weide, \$416,946.
- Oct 1986 - Sep 1989: Universal Energy Systems, Inc.; “Demonstration of Parallel Computation for a 3D-Rigid Viscoplastic Finite Element Method,” Fusun E. Ozguner, P. Sadayappan, Karsten Schwan, and Bruce W. Weide, \$120,000.
- Aug 1988 - Jul 1990: National Science Foundation; “Design, Specification, and Implementation of Reusable Software Components,” William F. Ogden, Bruce W. Weide, and S.H. Zweben, CCR-8802312, \$74,926.
- Jul 1989 - Sept 1990: Applied Information Technologies Research Center; “Implementation and Evaluation of Reusable Software Modules,” Bruce W. Weide and Stuart H. Zweben, \$56,528.
- Sep 1991 - Aug 1993: National Science Foundation; “Practical New-Generation Reusable Software Components,” Bruce W. Weide, William F. Ogden, and Stuart H. Zweben, CCR-9111892, \$246,917.
- May 1993 - Aug 1993: National Science Foundation; “Teaching Reusable Software Components Using Ada in a CS2 Course,” Timothy J. Long, Bruce W. Weide, and Stuart H. Zweben, CCR-9111892 instructional supplement, \$24,822.
- Sep 1993 - Aug 1997: National Science Foundation; “Toward Scalable Software Engineering Disciplines,” Bruce W. Weide, William F. Ogden, and Stuart H. Zweben, CCR-9311702, \$324,437.
- Oct 1993 - Sep 1996: Advanced Research Projects Agency; “Functional Representation of Software Systems and Component-Based Software Technology,” B. Chandrasekaran, Bruce W. Weide, USAF Materiel Command F30602-93-C-0243, \$686,303.
- Jul 1996 - Jun 1998: National Science Foundation; “Addressing Software’s Chronic Crisis in the Undergraduate Computer Science Curriculum,” Timothy J. Long, Murali Sitaraman, and Bruce W. Weide, DUE-9555062, \$124,989.
- Aug 1996 - Jul 1999: National Science Foundation; “Development and Dissemination of a New Undergraduate Course Sequence,” Timothy J. Long, Bruce W. Weide, and Murali Sitaraman, CDA-9634425, \$199,023.

- Sep 1996 - Aug 1999: U.S. Department of Education, Fund for the Improvement of Post-Secondary Education; “Development of a New Undergraduate Course Sequence in Software Design and Development,” Timothy J. Long, Bruce W. Weide, and Murali Sitaraman, P116B60717, \$149,353.
- Feb 1998 - Jul 1999: National Science Foundation; “Development and Dissemination of a New Undergraduate Course Sequence,” Timothy J. Long and Bruce W. Weide, instructional supplement EIA-9840747, \$19,958.
- Jun 1998 - May 2000: Microsoft Research; gift to RSRG to promote common research on RESOLVE and COM, \$25,000 plus contributed software.
- Jul 1999 - Jul 2000: U.S. Department of Energy; “Stackable Middleware Service for Advanced Video Networking Applications,” Wu-chi Feng, Roger Crawfis, and Bruce W. Weide, \$245,424.
- Sep 1999 - Aug 2000: West Virginia University (subcontract); “Software Composition Workbench,” Bruce W. Weide and Timothy J. Long, \$53,502.
- Oct 1999 - Sep 2000: Lucent Technologies; gift to RSRG to promote research in component-based software engineering, \$25,000.
- Sep 2000 - Aug 2003: National Science Foundation; “ITR/SW: Principles of Distributed Component-Based Software,” Bruce W. Weide, Paolo Bucci, Timothy J. Long, William F. Ogden, and Paolo A.G. Sivilotti, CCR-0081596, \$499,809.
- Sep 2000 - Aug 2001: Lucent Technologies; “Applied Software Engineering Fellowships”, Furrukh Khan, Paolo A.G. Sivilotti, and Bruce W. Weide, \$27,000.
- Dec 2000 - Sep 2002: Lucent Technologies; “Applied Software Engineering Course Sequence”, Furrukh Khan, Paolo A.G. Sivilotti, and Bruce W. Weide, \$115,963.
- Sep 2001 - Aug 2003: National Science Foundation; “ITR/SW: Principles of Distributed Component-Based Software,” Bruce W. Weide, Paolo Bucci, Timothy J. Long, William F. Ogden, and Paolo A.G. Sivilotti, REU supplement, \$13,781.
- Oct 2001 - Sep 2004: Air Force Research Lab; “Collaborative Center of Control Science”, K. Passino, et al., F33615-01-2-3154, \$91,640 share.
- Aug 2005 - Jul 2006: National Science Foundation; “ICER Midwest Workshop: Preparing IT Graduates for 2010 and Beyond”, Lee, D., Weide, B.W., and Zweben, S.H., \$99,584.

- Jul 2007 - Jun 2012: National Science Foundation; “CPATH-T: NEWPATH: Nurturing, Through Entrepreneurship, IT World Leaders”, Lee, D., Camp, S.M., Ramnath, R., Soundarajan, N., and Weide, B.W., \$606,822.
- Sep 2007 - Aug 2010: National Science Foundation; “Collaborative Research: Logical Support for Formal Verification”, Weide, B.W., and Friedman, H.M., \$75,000.
- Sep 2008 - Feb 2012: National Science Foundation; “Collaborative Research: Continuing Progress Toward Verified Software”, Weide, B.W., and Friedman, H.M., \$279,107.
- May 2009 - Aug 2010: National Science Foundation; “Collaborative Research: Continuing Progress Toward Verified Software”, Weide, B.W., and Friedman, H.M., REU supplement, \$15,999.
- Sep 2009 - Aug 2013: National Science Foundation; “CPS: Medium: Autonomous Driving in Mixed-Traffic Urban Environments”, Ozguner, U., Krishnamurthy, A., Ozguner, F., Sivilotti, P.A.G., and Weide, B.W., \$1,499,883.
- Mar 2010 - Feb 2012: National Science Foundation; “Automated Support for Developing Logical Reasoning Skills in Discrete Mathematics Courses”, Weide, B.W., Friedman, H.M., and Pearl, D., \$199,775.
- Aug 2011 - Feb 2013: National Science Foundation; “Collaborative Research: Continuing Progress Toward Verified Software”, Weide, B.W., and Friedman, H.M., research supplement, \$46,516.
- Jul 2012 - Jun 2015: National Science Foundation; “SFH Medium: Collaborative Research: Specification and Mathematics Engineering for the Verified Software End-Game”, Weide, B.W., and Friedman, H.M., \$476,066.

HONORS AND AWARDS

- Sep 1974: National Science Foundation Graduate Fellowship.
- Sep 1977: IBM Graduate Fellowship.
- Apr 1983: The Ohio State University College of Engineering, Junior Faculty Research Award.
- Apr 1998: The Ohio State University Department of Computer and Information Science, Excellence in Teaching Award.
- May 2000: The Ohio State University College of Engineering Ralph L. Boyer Award for Excellence in Teaching Innovation (with Prof. Timothy J. Long).

- Sep 2000: IEEE Computer Society 2000 Computer Science and Engineering Undergraduate Teaching Award (with Prof. Timothy J. Long).
- May 2003: The Ohio State University Department of Computer and Information Science, Outstanding Service Award.
- Mar 2009: University System of Ohio Textbook Faculty Innovator Award (with Prof. Timothy J. Long)
- May 2011: The Ohio State University Department of Computer Science and Engineering, Outstanding Service Award.
- Apr 2013: The Ohio State University Department of Computer Science and Engineering, Excellence in Teaching Award.
- Apr 2013: Joel and Ruth Spira Excellence in Teaching Award.
- May 2013: The Ohio State University Chapter of the American Association of University Professors, Louis Nemzer Award “for service in defending the principles of academic freedom from all challenges”.

UNIVERSITY AND PROFESSIONAL LEADERSHIP ACTIVITIES (HIGHLIGHTS)

Activities not listed include student organization advising at OSU, service on various departmental committees in non-leadership roles, membership on various citizen committees in the Worthington, OH, City School District, and a variety of consulting projects.

- Sep 1978 - Dec 1984: Associate Editor, *ACM Computing Surveys*.
- Oct 1981 - Sep 1982: OSU CIS Department representative, OSU College of Engineering Committee on Academic Affairs.
- Jun 1982 - Sep 1985: Elected member, OSU CIS Department Steering Committee.
- Oct 1982 - Sep 1985: Chair, OSU CIS Department Computer Committee.
- Oct 1982 - Jun 1985: OSU CIS Department representative, OSU College of Engineering Computer Coordinating Committee.
- Oct 1982 - Sep 1985: OSU CIS Department representative, University Advisory Committee on Academic Computing; elected to chair the Committee for 1983-1984; re-elected chair for 1984-85.
- Feb 1984 - Apr 1985: Member, OSU Task Force on Computers and the Future of the University.

- Feb 1984 - Apr 1985: Member, OSU College of Engineering CIS Chair Search Committee.
- Sep 1986 - Jun 1987: Member, OSU College of Engineering Professional Leave Committee.
- Sep 1986 - Jun 1990: Chair, OSU CIS Department Computer Committee.
- Sep 1987 - Aug 1990: Member, OSU College of Engineering Research Committee.
- Dec 1987 - Jan 1989: Chair, Information Environment Research Committee, Applied Information Technologies Research Center (AITRC), Columbus, Ohio.
- Feb 1988 - May 1991: Member, OSU Mershon Center, Science and Technology Advisory Group.
- Oct 1988 - Feb 1990: Member, *Computing Surveys* Review Committee of ACM.
- Oct 1990 - Nov 2004: Associate Editor, *International Journal of Software Engineering and Knowledge Engineering*.
- Oct 1990 - May 1993: Member, OSU Instructional Computing Advisory Committee.
- Oct 1990 - May 1993: Member, OSU CIS Department Advisory Committee.
- Oct 1991 - Oct 1992: Member, Program Committee, 5th Annual Workshop on Software Reuse.
- Oct 1991 - Feb 1993: Guest Editor, special issue on “Software Components,” *International Journal of Software Engineering and Knowledge Engineering*.
- Sep 1994 - Sep 1996: Chair, OSU CIS Department Curriculum Committee.
- Sep 1994 - Jun 2001: OSU CIS Department representative, OSU College of Engineering Committee on Academic Affairs.
- Apr 1995 - Apr 1996: Member, Program Committee, 4th International Conference on Software Reuse.
- Sep 1995 - Sep 1999: Member, OSU CIS Department Advisory Committee.
- Apr 1996 - Aug 1997: Co-chair, 8th Workshop on Software Reuse.
- Sep 1996 - Sep 1998: Chair, OSU CIS Department Promotion and Tenure Committee.
- Nov 1996 - Jun 1998: Member, Program Committee, 5th International Conference on Software Reuse.

- Jun 1997 - Sep 1997: Member, Program Committee, Workshop on Foundations of Component-Based Systems, ESEC/FSE 1997.
- Apr 1998 - Jan 1999: Member, Program Committee, 9th Annual Workshop on Software Reuse.
- Apr 1999 - Jun 2000: Member, Program Committee, 6th International Conference on Software Reuse.
- Sep 2000 - Sep 2001: Member, OSU CIS Department Advisory Committee.
- Nov 2000 - Jun 2001: Member, OSU College of Engineering Promotion and Tenure Advisory Committee.
- Apr 2001 - Apr 2002: Member, Program Committee, 7th International Conference on Software Reuse.
- Jun 2001 - Jul 2003: Co-chair, Program Committee, ICSE '03 (International Conference on Software Engineering) Education Track.
- Mar 2002 - Nov 2002: Member, Program Committee, 2nd OOPSLA Workshop on Specification and Verification of Component-Based Systems.
- Sep 2002 - Aug 2004: Chair, OSU CSE Department Promotion and Tenure Committee.
- Sep 2002 - Jun 2011: Chair, OSU CSE Department Curriculum Committee.
- Sep 2002 - Jun 2012: OSU CSE Department representative, OSU College of Engineering Committee on Academic Affairs (CCAA chair, Oct 2005 - Jun 2007).
- Oct 2003 - May 2004: Member, OSU College of Engineering Promotion and Tenure Advisory Committee.
- Oct 2004 - Jun 2005: Chair, OSU College of Engineering Promotion and Tenure Advisory Committee.
- Sep 2005 - Dec 2005: Interim Chair, OSU CSE Department.
- Sep 2005 - Mar 2006: Member, Organizing Committee, NSF ICER (Integrated Computing Education and Research) Midwest Workshop.
- Feb 2006 - Dec 2012: Associate Chair (responsible for undergraduate programs and curricula), OSU CSE Department.

- Apr 2007 - Apr 2008: Member, Program Committee, 21st IEEE-CS Conference on Software Engineering Education and Training.
- Apr 2007 - Mar 2009: Member, ACM/IEEE-CS Review Task Force, Interim Review of the Computer Science Curriculum Volume.
- May 2009 - Jun 2012: Member, Semester Task Force, OSU College of Engineering.
- Sep 2011 - Jun 2013: Elected representative from OSU College of Engineering to OSU Faculty Council and OSU Senate; member of Senate Fiscal Committee.
- Oct 2011 - May 2012: Member, OSU Parking Advisory Group (responsible for advising administration on proposed parking privatization).
- Nov 2011 - Aug 2012: Member, OSU College of Engineering Enrollment Management Planning Group (responsible for developing a more stable control policy to manage enrollments in Engineering).