

CURRICULUM VITAE
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EDUCATION:

Ph. D. in Computer Science, December 1982, Virginia Tech, Advisor: Richard E. Nance

M.S. in Computer Science, June 1975, Virginia Tech

M.S. in Mathematics, June 1968, Idaho State University

B.S. in Mathematics, philosophy minor, August 1966, University of Tennessee

RESEARCH INTERESTS:

Analysis of Simulation Models, static code analysis techniques

AWARDS:

College of Sciences Old Dominion University Distinguished Service Award, 2010-12.

Nominated by Old Dominion University for Carnegie Foundation for the Advancement of Teaching 1997 U.S. Professors of the Year Program.

University Finalist, Old Dominion University SCHEV Outstanding Faculty Awards, 1997.

Nominated by Old Dominion University for 1996 SCHEV Outstanding Faculty Award

Instructional Technology Teaching Award, April 25, 1996, Old Dominion University

EXPERIENCE:

2007-2011: Associate Dean, College of Sciences, Old Dominion University.

2007-2010: Interim Chair, Department of Computer Science, Old Dominion University.

2006-2007: Interim Associate Dean, College of Sciences, Old Dominion University, Sept.—August.

2003: Interim Associate Dean, College of Sciences, Old Dominion University, Jan.--June.

1984--2011: Associate Professor of Computer Science, Old Dominion University, Norfolk, Virginia, (promoted from Assistant, August, 1988).

Summer 2000, Visiting Professor, Fachhochschule für Technik und Wirtschaft, Berlin, Germany.

1989-1994: Graduate Program Director, Department of Computer Science, Old Dominion University.

Summer 1991: Visiting Professor, Kyushu Institute of Technology, Iizuka, Japan.

Summers, 1983, 1984, 1985: Research Associate, Department of Computer Science, Virginia Tech, Blacksburg, Virginia.

1981--1984: Assistant Professor of Computer Science, The University of Alabama, Tuscaloosa, Alabama.

1975--1981: Assistant Director, Office of Institutional Research, Virginia Tech, Blacksburg, Virginia.

1973--1975: Instructor, Department of Computer Science, Virginia Tech, Blacksburg, Virginia.

1968--1973: Instructor, Department of Mathematics and Statistics, Radford University, Radford, Virginia.

1966--1968: Graduate Teaching Assistant, Department of Mathematics, Idaho State University, Pocatello, Idaho.

REFEREED JOURNALS AND BOOKS:

20. "Introduction to Special Issue: "Modeling and Simulation in Teaching and Training," C. Michael Overstreet and Alke Martens, *Simulation*, Vol. 82, No. 11, pp. 681-683, Nov. 2006.

19. "Telemedicine For Disaster Relief: A Novel Architecture," (with S. Olariu, K. Maly, E. C. Foudriat, S. Yamani, T. Luckenbach), *Journal Of Mobile Multimedia, Special Issue On Telemedicine*, 2006.

- 18: "The Essential Elements of Interactive Multimedia Distance Learning Systems," *Journal of Distance Education Technologies*, K. Maly, H. Abdel-Wahab, J. C. Wild, C. M. Overstreet, A. Abdel-Hamid, S. Ghanem, W. Farag, Vol. 1, No. 2, pp. 17-36, Apr-June 2003.
17. "IRI-h, A Java-based Distance Education System: Architecture and Performance", K. Maly, H. Abdel-Wahab, C. Wild, C.M. Overstreet, A. Gupta, A. Abdel-Hamid, S. Ghanem, A. Gonzalez, and X. Zhu, *ACM Journal of Educational Resources in Computing (JERIC)*, Vol. 1, No. 1, Spring 2001.
16. "An Architecture and Initial Performance Data for a JAVA-based Distance Education System", (with K. Maly, H. Abdel-Wahab, C. Wild, A. Gupta, A. Abdel Hamid, S. Ghanem, A. González, X. Zhu), *ACM Journal of Educational Resources in Computing*, to appear, 2001.
15. "Redundancy in Model Specification for Discrete Event Simulation," (with R. E. Nance and E. Page), *Transactions on Modeling and Computer Simulation*, Vol. 9, No. 3, pp. 254-281, July 1999.
14. "Use of Web Technology for Interactive Remote Instruction," (with K. Maly, A. González, M. Denbar, R. Cutaran, N. Karunaratne, and C. J. Srinivas), *Computer Networks and ISDN Systems*, Vol. 30, No. 1-7, April 1998, pp. 660-662.
13. "Distance Learning and Training over Intranets," (with K. Maly, H. Abdel-Wahab, C. Wild, A. Gupta, A. Youssef, E. Stoica, and E. Al-Shear), *IEEE Internet Computing*, Vol. 1, No. 1, pp. 60-71, Jan. 1997.
12. "Virtual Classrooms and Interactive Remote Instruction," (with K. Maly, C. Wild, H. Abdel-Wahab, G. Gupta, A. Youssef, E. Stocia, R. Talla, A. Prabhu), *International Journal of Innovations in Education and Training*, Vol. 34, No. 1, pp. 44-51, 1997.
11. "Interactive Remote Instruction: Lessons Learned," (with K. Maly, C. Wild, H. Abdel-Wahab, A. Gupta, A. Youssef, E. Stocia, R. Talla, and A. Prabhu), *Journal of Network and Computer Applications*, Vol. 19, pp. 395-404, Oct. 1996.
10. "Modeling and Distributed Simulation Techniques for Synthetic Training Environments," *State-of-the-Art on Performance Modeling and Simulation: Advanced Computer Systems*, Gordon and Breach, edited by Kallol Bagchi, (with D. Cavitt and K. Maly), pp. 194-218, 1996.
9. "Issues in Scaling Multimedia Collaboration Tools for Remote Instruction," *High Performance Networking VI*, Chapman & Hall, edited by Ramon Puigjaner, (with K. Maly, H. Abdel-Wahab, A. Gupta, Muthu Kumar, and R. Srivastava), pp. 181-195, 1995.
8. "Reconstructing a Binary Tree from Its Traversals in Double Logarithmic CREW TIME," (with Stephan Olariu and Zhaofang Wen), *Journal of Parallel and Distributed Computing*, vol. 27, pp. 100-105, 1995.

7. "Dynamic Allocation of Bandwidth in Multichannel Metropolitan Area Networks," (with K. Maly, E. C. Foudriat, D. Game, and R. Mukkamala), *Computer Networks & ISDN*, vol. 25, pp. 203-223, 1992.
6. "A Mergeable Double-Ended Priority Queue," (with S. Olariu and Z. Wen), *The Computer Journal*, Vol. 34, No. 5, 1991, pp. 423-427.
5. "A Carrier Sensed Multiple Access Protocol for High Data Rate Ring Networks," (with E. C. Foudriat, K. Maly, S. Khanna, and F. Paterra), *Computer Communications Review*, Vol. 21, No. 2, April 1991, pp. 59-70.
4. "Traffic Placement Policies for a Multi-Band Network," (with Kurt Maly, E. C. Foudriat, D. Game, and R. Mukkamala), *ISIGCOMM '89*, pp. 94-105, Sept. 1989.
3. "Diagnostic Assistance Using Digraph Representations of Discrete Event Simulation Model Specifications," (with Richard E. Nance), *Transactions of the Society for Computer Simulation*, Jan. 1987, Vol. 4, No. 1, pp. 59-76.
2. "World View Based Discrete Event Model Simplification," (with Richard E. Nance), in *Modelling and Simulation Methodology in the Artificial Intelligence Era*, North-Holland Publishing Co., Amsterdam, The Netherlands, M. Elzas, T. Oren, B. Zeigler, editors, pp. 165-179, 1986.
1. "A Specification Language to Assist in Analysis of Discrete Event Simulation Models," (with Richard E. Nance), *Communications of the ACM*, Vol. 22, No. 2, February 1985, pp. 190-201.

REFEREED CONFERENCE PROCEEDINGS:

79. "Enhancing Understanding of Models Through Analysis," 1st International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Noordwijkerhout, The Netherlands, July 29–31, 2011; with Kara Olson; in *Proceedings of SIMULTECH 2011--International Conference on Simulation and Modeling Methodologies, Technologies and Applications*, J. Kacprzyk, N. Pina and J. Filipe, eds., pp. 321–326.
78. "Enhancing System Understanding Through Model Analysis," Culture and Computer Science VII – Serious Games, Berlin, Germany, May 14-15, 2009, with Kara Olson and E. Joseph Derrick, in *Kultur und Informatik: Serious Games*, J. Sieck and M. A. Herzog, eds., pp 271-283.
77. "CS-XML and Model Understanding," session "Modeling & Simulation in Engineering," "Emerging M&S Applications in Industry and Academic Symposium, 2009 Spring Simulation Multiconference, San Diego, CS, March 22-27, 2009, with Kara Olson, and E. Joseph Derrick, to be published in the ACM Digital Library.

76. "Enhancing Model Understanding Using the CS-XML," Operation Research Society 4th Simulation Workshop, Worcestershire, England, Aprils 1-2, 2008, with Kara Olson and E. Joseph Derrick in *OR Society SW08 Proceedings 2008*, pp. 337-339.
75. "Code Analysis and CS-XML," 2007 Winter Simulation Conference, Washington, DC, December 9-12, 2007; with Kara Olson and E. Joseph Derrick; in *Proceedings of the 2007 Winter Simulation Conference*, S. G. Henderson, B. Biller, M.-H. Hsieh, J. Shortle, J. D. Tew, and R. R. Barton, eds., pp. 756-761.
74. "IRI-Easy: A Distance Education Software System", Y. Wang, K. Maly, C. M. Overstreet, International Conference on Interactive Computer Aided Blended Learning, Florianopolis, Brazil, May 7-9, 2007.
73. "The Simulation Project Lifecycle: Models and Realities," Robert G. Sargent, Richard E. Nance, C. Michael Overstreet, Stewart Robinson, Jayne Talbot, *Proceedings of the 2006 Winter Simulation Conference*, pp. 863-870, Dec. 2006.
72. "Characterizations and Relationships of World Views," C. Michael Overstreet and Richard E. Nance, *Proceedings of the 2004 Winter Simulation Conference*, pp. 279-287. Dec. 2004.
71. "Tracking Functionality Changes In IRI: A Distance Education Software System," *Proceedings of the IADIS International Conference, e-Society 2004*, C. Michael Overstreet, Kurt Maly, Ayman Abdel-Hamid, Ye Wang, Avila, Spain, July 16-19, 2004.
70. "Enhancing Understanding of Model Behavior Through Collaborative Interactions," C. M. Overstreet & Irwin Levinstein, Operational Research Society (UK) Simulation Study Group 2nd Two Day Workshop, pp. 23-24, March 2004.
69. "Multiple-mode Communication Environments With IRI-h", Kurt Maly, C. Michael Overstreet, Hussein Abdel-Wahab, Ayman Abdel-Hamid, Sahar Ghanem, Ye Wang, Ankit Kothari), *Proceedings, ICNEE 03*, Lucerne, Switzerland, pp. 303-309, May 2003.
68. "Model Testing: Is it Only a Special Case of Software Testing," *Proceedings of the 2002 Winter Simulation Conference*, pp. 641-647, Dec. 2002.
67. "Recording and Replay Support for Asynchronous Learning Modes within a Distance Learning System", Farag, W., H. Abdel-Wahab, K. Maly, C. M. Overstreet, C. Wild, A. Abdel-Hamid, S. Ghanem, B. Koodallur, NLT 2002, Berlin, Germany, May 2002.
66. "An Application Level Gateway for Interactive Remote Instruction," Hamid A., S. Ghanem, K. Maly, H. Abdel-Wahab, C. M. Overstreet, J. C. Wild, A. Gupta, W. Farag, B. Koodallur, pp. 3-6, ICNEE, Lugano, Switzerland, May, 2002.

65. "Issues in Enhancing Model Reuse, " C. Michael Overstreet, Richard E. Nance and Osman Balci, International Conference on Grand Challenges For Modeling and Simulation, Jan. 27-31, 2002, San Antonio, Texas, USA.
64. "Model Composability As a Research Investment: Responses to the Featured Paper," (with Paul C. Davis, Paul A. Fishwick, and Dennis Pegden), *Proceedings of the 2000 Winter Simulation Conference*," pp. 1585-1591, Dec. 2000.
63. "A Multi-Faceted Evaluation of IRI," (with K. Maly, J. Brunelle, Y. Park and M. Ireland), to appear, *IFIP World Computer Congress 2000*, pp, 433-435, Beijing, August, 2000.
62. "Testing and Validating Mission-Critical COTS Systems," (with R. Cherinka, C. Wild, and J. Ricci), 2000 European Conference on Object-oriented Programming: International Workshop on Component-based Programming (WCOP '00), June 2000.
61. "Issues and Approaches in Testing Mission-Critical COTS Systems," (with R. Cherinka, C. Wild, and J. Ricci), *2000 International Conference on Software Testing (TCS2000)*, June 2000.
60. "A Multidisciplinary Graduate Program in Modeling and Simulation," (with J. W. Stoughton, J. F. Leathrum, R. A. Rogers, M. W. Scerbo, D. L. Netherton, and I. B. Levinstein), *Proceedings International Conference on Simulation and Multimedia in Engineering Education*, San Diego, CA, Jan. 23-27, 2000.
59. "Experiences with Structured Recording and Replay in Interactive Remote Instruction", (with K. Maly, A. González, M. Ireland, N. Karunaratne), 2nd International Conference on New Learning Technologies, pp. 94-101, Bern, Switzerland, Aug. 1999.
58. "Automated Content Synthesis for Interactive Remote Instruction," (with Kurt Maly, Agustin González, Melissa Denbar, Roland Cutaran, and Nilan Karunaratne), ED-MEDIA/ED-TELECOM 98, CD-ROM, June 20-25th, Freiburg, Germany, 1998.
57. "Learning Paradigms and Web Technologies for Interactive Remote Instruction," (with K. Maly, A. González, M. Denbar, R. Cutaran, N. Karunaratne), *IFIP '98*, Vienna, Austria, pp. 685-694, August 1998.
56. "Maintaining A COTS Component-Based Solution—Can Traditional Static Analysis Techniques Be Useful For This New Programming Paradigm?" (with R. D. Cherinka and J. A. Ricci), *Proceedings of COPS98*, Brussels, July 1998.
55. "Automated Content Synthesis for Interactive Remote Instruction," (with K. Maly, Agustin González, Melissa Denbar, Roland Cutaran and Nilan Karunaratne, *ED-MEDIA/ED-TELEcom '98*, Freiberg, Germany June 20-25, 1998.

54. "Use of Web Technology for Interactive Remote Instruction", (with C.M. Overstreet, A. González, M. Denbar, R. Cutaran, N. Karunaratne), WWW7, pp. 660-662, Brisbane, Australia, April 1998.
53. "Maintaining a COTS Integrated Solution--Are Tradition Static Analysis Techniques Sufficient for This New Programming Methodology?," (with R. D. Cherinka and J. A. Ricci), *Proceedings International Conference on Software Maintenance*, March 30, 1998.
52. "Performance Monitoring for the Design, Configuration, and Control of DIS/HLA Exercises," (with David B. Cavitt, John E. Bell, Mark Checchio and Kurt Maly), 1998 *Spring Simulation Interoperability Workshop*, <http://siso.sc.ist.ucf.edu/siw/97spring/index.htm>, Ref. No. 98S-SIW-066, March 3-7, 1998.
51. "A Performance Monitoring Application for Distributed Interactive Simulations (DIS)," (with D. Cavitt and K. Maly), *Proceedings of the Winter Simulation Conference 1997*, pp. 421-427, December 1997.
50. "IRI, A System for Interactive Remote Instruction; An Assessment After Two Year's Use," (with K. Maly, H. Abdel-Wahab, can C. Wild), *Proceedings of the 5th Annual Conference on the Teaching of Computing*, pp. 190-194, August 26-29, 1997, Dublin, Ireland.
49. "Reliability, Scalability and Robustness Issues in IRI," (with K. Maly, E. Shaer, A. Youssef, and H. Abdel-Wahab), *WETICE'97*, Cambridge, pp. 320-327, June 18-20, 1997.
48. "Redundancy in Model Representation: A Blessing or a Curse," (with Richard E. Nance and Ernest H. Page), *Proceedings of the Winter Simulation Conference 1996*, pp. 701-707, December 1996.
47. "A Performance Analysis Model for Distributed Simulations," (with David B. Cavitt and Kurt J. Maly), *Proceedings of the Winter Simulation Conference 1996*, pp. 629-636, December 1996.
46. "Interactive Remote Instruction: Initial Experiences," (with K. Maly, C. Wild, and Abdel-Wahab), *SIGCSE BULLETIN*, vol. 28, pp. 153-155, June 1996.
45. "Interactive Remote Instruction: Lessons Learned," (with K. Maly, C. Wild, H. Abdel-Wahab, A. Gupta, S. Purcell, A. Youssef, E. Stoica, R. Talla, and A. Prabhu), *WEBNET'96*, (awarded best paper, also appeared in Oct. '96 *Journal of Networks and Computer Applications*.)
44. "The Software Architecture and Interprocess Communications of IRI: an Internet-based Interactive Distance Learning System," (with H. Abdel-Wahab, K. Maly, A. Youssef, E. Stoica, C. Wild, and A. Gupta), *Proceedings of the IEEE Fifth Workshop*

on Enabling Technologies: Infrastructure for Collaborative Enterprises, Stanford University, pp. 34-37, June 1996.

43. "Telelearning: A New Paradigm for Interactive Remote Instruction," (with K. Maly, H. Abdel-Wahab, and C. Wild), *International Distributed Conference on Teleteaching*, Madeira, Portugal, pp. 1-14, Nov. 1995.
42. "Performance Trade-Offs for a Multimedia Distributed Application," (with K. Maly, H. Abdel-Wahab, Ajay Gupta, Muthu Kumar and Rahul Srivastava), *Sixth IFIP International Conference on High Performance Computing, HPN'95*, Palma de Mallorca, pp. 181-195, Sept. 1995.
41. "Providing Predictable Performance to a Network-Based Application Over ATM," (with K. Maly, S. Dharanikota, B. Kvande, and R. Mukkamala), *HPCS '95*, Mystic, Conn. pp. 177-184, Aug. 1995.
40. "Computer Simulation: Achieving Credible Experimental Results in Virtual Environments," (with Richard E. Nance), *America in the Age of Information: A Forum on Federal Information and Communications R&D*, Washington, D.C., July 6 & 7, pp. 215-230, 1995.
39. "Issues in Scaling Multimedia Collaboration Tools for Remote Instruction," (with K. Maly, H. Abdel-Wahab, A. Gupta, M. Kumar, and R. Srivastava), *IEEE International Symposium on Advances in Computers and Communications*, Alexandria, Egypt, pp. 42-48, June 27-29, 1995.
38. "Computer Productivity Initiative: Past, Present and Future," (with Kurt J. Maly, Dennis E. Ray, J. Christian Wild, Irwin B. Levinstein, Stephan Olariu, Nagaswara S. V. Rao, Deane Sibol and George Panayides), Eighth Conference on Software Engineering Education, and in *Lecture Notes on Computer Science*, Springer-Verlag, Berlin, March 1995.
37. "An Approach To Predict Software Maintenance Cost Based on Ripple Complexity," (with Toyohiko Hirota, Masaharu Tohki, Masaaki Hashimoto, and Robert Cherinka), Asian-Pacific Software Engineering Conference, pp. 439-444, Jan. 1995.
36. "Model Diagnosis Using the Condition Specification: From Conceptualization to Implementation," (with Ernest Page and Richard E. Nance), in *Proceedings Winter Simulation Conference '94*, pp. 566-573, Dec. 1994.
35. "An Application-Oriented Analysis of TCP/IP in High Speed LANS," (with K. Maly, and D. Sudheer), *Australian Telecommunication Network and Applications Conference (ATNAC)*, Victoria, Australia, pp. 561-566, Dec. 1994.

34. "Issues in Scaling Multimedia Collaboration Tools for Remote Instructions," (with K. Maly, H. Abdel-Wahab, Ajay Gupta, Muthur Kumar and Rahul Srivastava), *The Second International WWW Conference '94*, Oct. 1994.
33. "A New Paradigm for Distance Learning: Interactive Remote Instruction," (with K. Maly), *IFIP Transactions 13th World Computer Congress*, Hamburg, pp. 682-689, Aug. 30, 1994.
32. "RAIN (Redundant Array of Inexpensive Networks): Expanding Existing Networks to Support Multi-Traffic Performance," (with E. C. Foudriat, K. Maly, R. Mukkamala, L. Mathews, S. Balay), *HPN'94 5th IFIP Conference on High Performance Networking*, pp. 612-75, July 1994.
31. "A Decision-Based Hyper-Multimedia Case Environment for the Computer Productivity Initiative, a Large Undergraduate Project," (with K. Maly, C. Wild, C. Zhang, D. Ray, I. Levinstein, S. Olariu, N. Rao, D. Rosca, T. Taylor, T. Ireland, D. Sibol), *World Conference on Educational Multimedia on Hypermedia*, Vancouver, Canada, pp. 691, June 1994.
30. "Melding Television, Networking, and Computing for Interactive Remote Instruction," (with K. Maly, H. A. Wahab, A. K. Gupta), *World Conference on Educational Multimedia on Hypermedia '94*, Vancouver, June 1994, pp. 367-372.
29. "Issues in Software Process Automation - From a Practical Perspective," (with R. Cherinka, A. Cadwell, and J. Ricci), *Proceedings 1994 Conference on Software Maintenance*, March 24, 1994.
28. "Computer Productivity Initiative," (with K. Maly, D. Ray, C. Wild, I. Levinstein, S. Olariu, N. Rao, T. Ireland, and G. Kantsios), *Seventh SEI Conference on Software Engineering Education*, and in *Lecture Notes on Computer Science*, Springer-Verlag, Berlin, Oct. 1993, pp. 441-459.
27. "Parallel Networking: Improving Capacity and Multi-Traffic Performance Together," (with K. Maly, E. C. Foudriat, R. Mukkamala), *First International Conference on LAN Interconnection*, pp. 297-312, North Carolina, Oct. 1993.
26. "A Prototype for Parallel Ethernets," (with K. Maly, S. Khanna, E. C. Foudriat, R. Mukkamala, M. Zubair, R. Yerraballi, and D. Sudheer), *Second Workshop on High Performance Communications Subsystems*, Section 3.4, pp. 1-8, Williamsburg, Virginia. Sept. 1993.
25. "Building an Integrated Software Maintenance Environment -- From a Maintainer's Perspective," (with R. Cherinka), *IEEE Conference on Software Maintenance*, Sept. 1993, pp. 31-40.

24. "Parallel Communications: An Experimental Study," (with K. Maly, S. Khanna, E. C. Foudriat, R. Mukkamala, M. Zubair, R. Yerraballi, D. Sudheer), *Second International Conference on Computer Communications and Networks*, pp. 138-145, San Diego, June 1993.
23. "Parallel TCP/IP for Multiprocessor Workstations" (with K. Maly, S. Khanna, R. Mukkamala), *HPN '92*, pp. C1-1 - C1-16, Liege, Dec. 1992.
22. "Support for PC/Workstation Interconnection to High Speed Data Networks," (with E. C. Foudriat, K. Maly, L. Zhang, W. Sun), *IFIP '92*, pp. 122-125 Sept. 1992.
21. "Multiprocessor Architectures for High Speed Networks, A Performance Study," (with K. Maly, S. Khanna, R. Mukkamala, M. Zubair, and Y. S. Sekhar), *Proceedings of the 12th World IFIP '92 Congress*, pp. 645-652, Sept. 1992.
20. "Concurrent Use of Parallel Communication to Enable Remote Visualization," (with F. Pattera, K. Maly, R. Mukkamala, S. Khanna), *ICCI '92*, pp. 449-453, May 1992.
19. "Concurrent Use of Parallel Communication to Enable Remote Visualization," (with K. Maly, F. Pattera, R. Mukkamala, and S. Khanna), *Proceedings of the 4th International Conference on Computing and Information*, pp. 449-453, May 1992.
18. "Remote Visualization Using Parallelism in the Context of Existing Networks," (with F. Pattera, K. Maly, R. Mukkamala, and S. Khanna), *Proceedings of the International Phoenix Conference on Computers and Communications*, pp. 706-714, April 1992.
17. "User Response Time Optimization in a Metropolitan Area Network Concept," (with K. Maly, L. Pate, R. Radhakrishnan, S. Khanna), *Proceedings of IWACA '92*, pp. 199-209, March 1992.
16. "User Response Time Optimization in a Metropolitan Area Network: A Concept," (with K. Maly, L. Pate, R. Radhakrishnan, and S. Khanna), *Proceedings of IWACA '92*, pp. 199-210, March 1992.
15. "High Performance Interconnection Between High Data Rate Networks," (with E. C. Foudriat, K. Maly, L. Zhang, W. Sun), *Proceedings of IWACA '92*, pp. 441-449, March 1992.
14. "Parallelism for High Speed Networks," (with K. Maly, R. Mukkamala, M. Zubair, F. Pattera, S. Khanna, Y. S. Sekhar, and R. Yerraballi), *Proceedings of the IEEE Workshop on the Architecture and Implementation of High Performance Communications Subsystems*, 6 pgs. Feb. 1992.
13. "Combining Two Media Access Protocols to Support Integrated Traffic", (with K. Maly, E. Foudriat, S. Khanna, L. Zhang), *Proceedings of the 16th Local Computer Networks Conference*, Minneapolis. October 1991.

12. "Parallel Reconstruction of a Binary Tree," (with S. Olariu and Wen Zhaofang), *ICCI '91 (International Conference on Computing and Information)*, Ottawa Canada, May 27-29, 1991, also in *Lecture Notes in Computer Science*, Springer-Verlag, 1991.
11. "Utilization of Special Architectures in Support of Parallel Discrete Event Simulation," (with F. Pattera, K. Maly, R. Mukkamala, and C. Hajzak), *Proceedings IEEE South-EastCon 1991*, April 1991.
10. "A Mergeable Double-Ended Priority Queue," (with S. Olariu and Wen Zhaofang), *Proceedings 29th ACM Southeast Regional Conference*, 1991.
9. "Distributed Simulation, No Special Tools Required," (with K. Maly and F. Pattera), *Proceedings Winter Simulation Conference 1990*, pp. 423-427, Dec. 1990.
8. "Distributed Simulation of Network Protocols," (with K. Maly and F. Pattera), *Twenty-First Annual Pittsburgh Conference on Modeling and Simulation*, pp. 1525-1530, May 1990.
7. "Modelling High Data Rate Communication Network Access Protocol," (with E. C. Foudriat, K. Maly, S. Khanna and F. Pattera), *Twenty-First Annual Pittsburgh Conference on Modeling and Simulation*, pp. 1543-1547, May 1990.
6. "Program Maintenance by Safe Transformations," (with Ji Chen and Frank Byrum), *Proceedings Conference on Software Maintenance 1988*, Phoenix, Arizona, October 24-27, 1988, pp. 118-123.
5. "Model Analysis and Simplification Using Graph-Based Representations," invited paper, *Proceedings 12th World Congress on Scientific Computation*, July 18-22, 1988, Paris, France, pp. 467-469.
4. "Dynamic Resource Allocation in a Metropolitan Area Network," (with K. Maly, Xia-Ping Qiu, and Deqing Tang), *Computer Communications Review*, Vol. 16, No. 4, pp. 12-24, same as *Proceedings SIGCOMM-88*, August, 1988.
3. "Exploring the Forms of Model Diagnosis in a Simulation Support Environment," (with Richard E. Nance), *Proceedings 1987 Winter Simulation Conference*, Dec. 14-16, 1987, Atlanta, GA., pp. 590-596.
2. "Using Graphs to Translate Between World Views," *Proceedings 1987 Winter Simulation Conference*, Dec. 14-16, 1987, Atlanta, GA., pp. 582-589.
1. "Simulation Model Management: Resolving the Technological Gaps," (with R. E. Nance, and Ahmed L. Mazaache), *Proceedings Winter Simulation Conference 1981*, Atlanta, Georgia, December 9-11, 1981, pp. 173-179.

PATENTS:

Control Access Through Local Carrier Sensing for High Data Rate Networks and Control of Access of Synchronous Messages Through Circulating Reservation Packets, 1993, (with E. Foudriat, K. Maly, F. Paterra, and S. Khanna).

RESEARCH PAPERS/POSTERS PRESENTED AT PROFESSIONAL MEETINGS:

- 20: Poster, "A Forthcoming Useful Tool: Enhancing Understanding of Models Through Analysis," 2012 Winter Simulation Conference, Berlin, Germany, December 9–12, 2012; with Kara Olson.
- 19: Poster, "Using Locality to Aid Model Understanding," 2009 Winter Simulation Conference, Austin, TX, Dec. 13-16, 2009, with Kara Olson.
- 18: Poster, "Techniques for Enhancing System Understanding Through Simulationsk" 2008 Winter Simulation Conference, Miami, FL, Dec. 7-10, 2008, with Kara Olson, and E. Joseph Derrick.
- 17: Contributed Paper and Poster, "Enhancing System Understanding Through Model Analysis," Culture and Computer Science VII – Serious Games, Berlin, Germany, May 14–15, 2009; with Kara Olson and E. Joseph Derrick; in Kultur und Informatik: Serious Games, J. Sieck and M. A. Herzog, eds., pp. 271-283.
- 16: Contributed Paper and Presentation, and Contributed Ph.D. Poster and Presentation, "CS–XML and Model Understanding," Session "Modeling & Simulation in Engineering," "Emerging M&S Applications in Industry and Academia Symposium," 2009 Spring Simulation Multiconference, San Diego, CA, March 22–27, 2009; with Kara Olson and E. Joseph Derrick; to be published in the ACM Digital Library.
- 15: Contributed Ph.D. Poster, "Techniques for Enhancing System Understanding Through Simulation," 2008 Winter Simulation Conference, Miami, FL, December 7–10, 2008; with Kara Olson and E. Joseph Derrick.
- 14: Paper Presentation, "CS–XML and Model Understanding," Virginia Space Grant Consortium Student Research Conference, Norfolk, VA, April 21, 2008; with Kara Olson and E. Joseph Derrick; published electronically at <http://vsgc.odu.edu/src/Conf08/index.shtml>.
- 13: Poster Paper, "Enhancing Model Understanding Using CS–XML," Operational Research Society 4th Simulation Workshop, Worcestershire, England, April 1–2, 2008; with Kara Olson and E. Joseph Derrick; in OR Society SW08 Proceedings 2008, K. Kotiadis, C. Currie, S. Robinson, and S. Taylor, eds., pp. 337-339.
- 12: Contributed Paper, "Code Analysis and the CS–XML," Virginia Modeling, Analysis and Simulation Center 2007 Modeling, Simulation & Gaming Student Capstone Confer-

ence, Norfolk, VA, April 19, 2007; with C. Michael Overstreet and E. Joseph Derrick; published electronically at <http://www.vmasc.odu.edu/capstoneconference/capstone07.php>.

11. "Multimedia Communication Systems," (with K. Maly and Y. Wang), Medienzeitreise workshop, Berlin, Germany, July 20, 2005.
10. "Interactive Remote Instruction: A Teleteaching System, A Review After 7+ Years of Use," Image and Video Coding and its Applications Workshop, Berlin, Germany, April 2003.
9. "The Entity Editor: the Development of a Flexible ModSaf Vehicle Editor," (with C. Roberts, K. Maly, D. Cavitt, M. McCorristin, and D. Karpeev), DIS '95 Conference Florida, Sept. 1995.
8. "Future Trends in Software Development," Invited presentation, Spring Conference of the North American Honeywell Users Association, March 9, 1988, Norfolk, Virginia.
7. "A Distributed Project Support Environment for CS Students," a presentation to the Virginia Software Productivity Workshop, Washington-Dulles, April 9-10, 1987.
6. "Program Analysis Using Parse Trees," a presentation to the Virginia Software Productivity Workshop, Washington-Dulles, April 9-10, 1987.
5. "Discrete Event Simulation World Views: Characterization, Transformation, and Analysis," (with Richard E. Nance), presentation at Conference on Knowledge-Based Modeling and Simulation Methodologies, Arnhem, The Netherlands, July 4, 1985.
4. "Graph-Based Analysis of Discrete Event Model Specifications," Invited Computer Science Seminar presentation, Virginia Tech, May 29, 1985.
3. "Model Specification with Respect to Analysis," *Proceedings Winter Simulation Conference 1983*, Arlington, Virginia, December 12-14, 1983.
2. "Graph-Based Analysis of Discrete Event Model Specifications," ORSA/TIMS, Orlando, Florida, November 7-9, 1983.
1. "A Survey Perspective on Computer Simulation Course Content," (with Richard E. Nance), presented at the Winter Simulation Conference, December 1976.

PUBLISHED ABSTRACTS:

Presentation and abstract, "Redundancy in Model Specification for Discrete Event Simulation," (with R. E. Nance and F. A. Puthoff), *17th IFIP TC7 Conference on System Modelling and Optimization*, July 10-14, 1995.

Presentation and abstract, "Graph-Based Analysis of Discrete Event Model Specifications," *Proceedings ORSA/TIMS*, Orlando, Florida, November 7-9, 1983.

TECHNICAL REPORTS & OTHER PUBLICATIONS:

48. "Recording and Replay Support for Asynchronous Learning Modes in a Distance Education System," (with W. Farag, H. Abdel-Wahab, K. Maly, C. Wild, A. Abdel-Hamid, S. Ghanem), submitted to the World Congress on Networked Learning in a Global Environment, September, 2001.
47. "Automated Analysis of Component-Based Systems to Support Component Users in Development, Testing, and Maintenance," (with R. D. Cherinka, J. A. Ricci, and C. Wild), submitted to the Workshop on Object Oriented Programming, March 2000.
46. "Extending Traditional Static Analysis Techniques to Maintain COTS Component-Based Solutions," (with R. D. Cherinka and J. A. Ricci), submitted to ICSE '99.
45. "Faster, Better Model Specifications," (with Irwin B. Levinstein), VMASC technical report, Dec. 15, 1998.
44. "Remote Animation of Behavior in a Distributed Simulation," (with Irwin B. Levinstein), VMASC technical report, Dec. 29, 1998.
43. "Teaching of PSP at Old Dominion University," *Forum for Advancing Software Engineering Education*, (an electronic newsletter), Vol. 8, No. 2, Feb. 15, 1998.
42. "Computer Simulation: Achieving Credible Experimental Results in Virtual Environments," (with Richard E. Nance), *Simulation Digest*, Vol. 24, No. 3, Spring 1995, pp. 40-50.
41. "CPI: CS Undergraduate Curriculum Enhancement Through Multi-Year Coordinated Projects," (with K. Maly, D. Ray, C. Wild, I. Levinstein, S. Olariu, N. Ral, D. Sibol, and G. Panayides), Dec. 1994.
40. "Support of Requirements Analysis Using Static Code Analysis and Rule-Based Knowledge Systems," (with R. Cherinka, R. Sparks, and H. Reubenstein), Oct. 1994.
39. "Melding Television, Networking, and Computing for Interactive Remote Instruction: Exploiting Potentials," (with K. Maly, H.A. Wahab, A.K. Gupta), Tech. Rep. 94-06, Department of Computer Science, Old Dominion University, Norfolk, Virginia, June 3, 1994.
38. "Collaborative and Remote Teaching of Project, Team Oriented Courses", (with K. Maly), Tech. Rep. 94-04, Department of Computer Science, Old Dominion University, Norfolk, Virginia, February 11, 1994.

37. "Using Bidirectional Data Flow Analysis to Support Software Reuse," (with R. Cherinka, and S. Sparks), Jan. 31, 1994.
36. "TSME: Maintaining Legacy Systems with Process Driven Software Engineering Technology," (with R. Cherinka, R. Sparks), Jan. 31, 1994.
35. "Using Data Flow Analysis to Determine Bi-Directional Ripple Effects During Software Maintenance," (with Robert Cherinka and R. Sparks), August 1993.
34. "A Prototype for Parallel Networks," (with K. Maly, S. Khanna, E. C. Foudriat, R. Mukkamala, M. Zubair, R. Yerraballi, D. Sudheer), Tech. Rep. 93-22, Department of Computer Science, Old Dominion University, Norfolk, Virginia, August 16, 1993.
33. "Network Management Through User Response Time Optimization," (with K. Maly, L. R. Pate, and D. Bianco), March 15, 1993.
32. "Parallel Communications: An Experimental Study," (with K. Maly, S. Khanna, E. C. Foudriat, R. Mukkamala, M. Zubair, R. Yerraballi and D. Suhdeer, March 19, 1993.
31. "Support for PC/Workstation Interconnection to High Speed Data Network," (with K. Maly, E. Foudriat, L. Zhang, W. Sun), Tech. Rep. 92-12, Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, Apr. 20, 1992.
30. "High Performance Interconnection Between High Data Rate Networks," (with K. Maly, E. Foudriat, W. Sun), Tech. Rep. 92-11, Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, Mar. 24, 1992.
29. "A Simple, Effective Media Access Protocol System for Integrated High Speed Networks", (with K. Maly, E. Foudriat, S. Khanna, L. Zhang), Tech. Rep. 92-10, Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, Feb. 27, 1992.
28. "Scalable Parallel Communications," (with K. Maly, S. Khanna, R. Mukkamala, R. Zubair, Y. Sekhar), Tech. Rep. 92-15, Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, Feb. 4, 1992.
27. "Remote Visualization Using Parallelism in the Context of Existing Networks", (with K. Maly, F. Paterra, R. Mukkamala, M. Zubair, S. Khanna, J. Wiencko, and H. Srivatsan), Tech. Rep. 91-28, Computer Science Department, Old Dominion University, Norfolk, VA, July 1991.
26. "A Shared Memory Implementation of Time Warp" (with P. Holben, K. Maly, and D. Cavitt), Tech. Rep. 91-29, Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, July 1991.
25. "Overhead in Parallel Communication" (with K. Maly, F. Paterra, R. Mukkamala, M. Zubair, S. Khanna, J. Wiencko and H. Srivatsan), Tech. Rep. 91-26, Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, July 1991.

24. "A Reliable Gigabit Network Based on Parallelism," (with K. Maly, I. Jacobs, R. Mukkamala, M. Zubair, E. Foudriat, J. Wiencko, and S. Midkiff, Technical Report 89-46, Computer Science Department, Old Dominion University, 1991.
23. "Parallel Communications: A Performance Evaluation" (with K. Maly, F. Pattera, R. Mukkamala, M. Zubair, S. Khanna, J. Wiencko and H. Srivatsan), Technical Report 91-25, Computer Science Department, Old Dominion University, Norfolk, VA, April 1991.
22. "Overhead in Parallel Communications: A Case Study" (with K. Maly, F. Pattera, R. Mukkamala, M. Zubair, S. Khanna, J. Wiencko and H. Srivatsan), Technical Report, Computer Science Department, Old Dominion University, Norfolk, VA, April 1991.
21. "Combining Two Media Access Protocols to Support Integrated Traffic on High Data Rate Networks," (with E. C. Foudriat, K. Maly, S. Khanna, and LiPing Zhang), Local Area Networks Conference, Minneapolis, pp. 442-451, Oct. 1991.
20. "A Carrier Sensed Multiple Access Ring Protocol for Gigabit Networks," (with E. C. Foudriat, K. Maly, F. Pattera, and S. Khanna), Computer Science Department, Old Dominion University, Technical Report 90-8, Jan. 1990.
19. "A Carrier Sensed Multiple Access Protocol for High Data Rate Ring Networks" (with K. Maly, E. C. Foudriat, S. Khanna, and F. Pattera), Technical Report 90-16, 22p., Computer Science Department, Old Dominion University, Norfolk, VA, March 1990.
18. "A Carrier Sensed Multiple Access Ring Protocol for Gigabit Networks," (with E. C. Foudriat, K. Maly, F. Pattera, and S. Khanna), Computer Science Department, Old Dominion University, Technical Report 90-8, Jan. 1990.
17. "The Min-Max-Mair Heap and its Variations," (with S. Olariu and Z. Wen), TR-89-033, Computer Science Department, Old Dominion University, Norfolk, VA, 1989.
16. "Data Flow Anomaly Detection in the Presence of Procedure Calls," (with Zhaofang Wen), Computer Science Department, Computer Science Department, TR-89-41, Old Dominion University, Dec. 1, 1989.
15. "A Fast Algorithm to Determine Control Dependencies in Control Flow Graph Graphs," (with Zhaofang Wen), Computer Science Department, TR-89-41, Old Dominion University, Dec. 1, 1989.
14. "Traffic Placement Policies for a Multi-Band Network," (with K. Maly, E. C. Foudriat, D. Game, and R. Mukkamala), Tech. Rep. 89-09, 28p., Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, March 1989.
13. "A Generic Look At Software Transformation," (with Frank Byrum), Department of Computer Science, Old Dominion University, Jan. 15, 1990.

12. "Dynamic Resource Allocation in a Metropolitan Area Network," with K. Maly, X. Qiu, D. Tang), Tech. Rep. 87-16, 27 pp., Dept. of Comp. Sc., Old Dominion University, Norfolk, VA, Aug. 1987.
11. "Applications of Parse Trees in a Software Development Environment," (with Leigh Anne Bishop), Computer Science Department, TR-87-12, Old Dominion University, July 1, 1987.
10. "A Software Engineering Bibliography," Computer Science Department, TR-87-13, Old Dominion University, July 17, 1987, 88 pp. This is an update of TR-86-02.
9. "The World Views of Discrete Event Simulation: Characterization and Transformation," Computer Science Department, TR-87-17, Old Dominion University, August 20, 1987.
8. "A Review of COBOL-Oriented Software Tools," (with Kalpana Venkatakrisnan), Technical Report, Computer Science Department, Old Dominion University, April 13, 1987, 19 pages.
7. "Specification Languages: Understanding Their Role in Simulation Model Development," (with Osman Balci, Richard E. Nance, and Lynne F. Barger), December 1986, Technical Report TR-86-26.
6. "A Listing of Tools for Software Development," (with Leigh Anne Bishop), Technical Report, Computer Science Department, Old Dominion University, May 15, 1986, 15 pages.
5. "A (Mostly) Annotated Bibliography on Software Engineering," TR-86-002, Computer Science Department, Old Dominion University, January 17, 1986.
4. "A Style Manual for Pascal," TR-86-001, Computer Science Department, Old Dominion University, January 9, 1986.
3. "A Draft Syntax for a Simulation Model Specification and Documentation Language," TR-85-005, Computer Science Department, Old Dominion University, Norfolk, VA, April 23, 1985, 23 pages.
2. "Graph-Based Diagnosis of Discrete Event Model Specifications," (with Richard E. Nance), TR-85-004, Computer Science Department, Old Dominion University, Norfolk, VA, April 17, 1985, 32 pages, 27 references, 6 tables, 6 figures.
1. "A Survey Perspective on Computer Simulation Course Content," (with R. E. Nance), Technical Report CS76011-E, Department of Computer Science, Virginia Tech, Blacksburg, September, 1976.

GRANTS AWARDED:

43. Co-principal investigator with K. Maly, H. Abdel-Wahab, C. Wild and A. Gupta, "Undergraduate Research: Collaborative Interactive Remote Instruction," National Science Foundation, \$17,768, 2000.
42. Co-principal investigator with K. Maly, H. Abdel-Wahab, C. Wild and A. Gupta, "Interactive Remote Instruction," National Science Foundation, \$157,198, 1999.
41. Co-principal investigator with K. Maly, H. Abdel-Wahab, C. Wild, and A. Gupta, Automated Content Synthesis for Interactive Remote Instruction, Sun Microsystems, \$105,385, 1998.
40. Focus Travel Grant to IFIP World Computer Congress 1998, Vienna, Budapest, August 1998, \$1,200.
39. Co-principal investigator with K. Maly, H. Abdel-Wahab and C. Wild, "Undergraduate Research: Collaborative Interactive Remote Instruction," National Science Foundation, \$34,997, 1998-9.
38. Principal investigator with I. Levinstein and K. Maly, "Requirements Representations for Semi-automated Forces," Lockheed Martin Corp. \$54,000, 1998.
37. Co-principal investigator with K. Maly, H. Abdel-Wahab and C. Wild, "Undergraduate Research: Collaborative Interactive Remote Instruction," National Science Foundation, \$17,768, 1997-98.
36. Co-principal investigator with K. Maly, "A Prototype Simulation for Air-Traffic Management," NASA Langley Research Center, \$18,200, 1997-98.
35. Principal investigator, "Technologies for Web-based Instruction," Old Dominion University, \$5,000, 1997-98.
34. Co-principal investigator with K. Maly, H. Abdel-Wahab and C. Wild, "Collaborative Remote Instruction," National Science Foundation, \$566,507, 1997-98.
33. Principal investigator with I. Levinstein and K. Maly, "Requirements Representations for Semi-automated Forces," Lockheed Martin Corp., \$38,000, 1997-98.
32. Principal investigator with K. Maly, "Support of Simulation Activities," Naval Doctrine Command, \$5607, 1997.
31. Principal investigator with K. Maly, "Technologies in Support of Distributed Simulation for Training and Instruction," ARPA and BMH, \$50,000, 1997.

30. Co-principal investigator with K. Maly, M. Zubair, A. Gupta, "Parallel And Distributed Computing Environment for Scientific Applications," NASA Langley Research Center, \$72,327, 1996-97.
29. Principal investigator with K. Maly, "Technologies in Support of Distributed Simulation for Training and Instruction," ARPA, BMH, \$150,000, 1996-97.
28. Co-principal investigator with K. Maly, "A Prototype Simulation for Air-Traffic Management," NASA Langley Research Center, \$18,200, 1996-97.
27. Co-principal investigator with K. Maly, H. Abdel-Wahab, and C. Wild, "Interactive Remote Instruction - Undergraduate Research," National Science Foundation, \$17,768, 1996-97.
26. Co-principal investigator with K. Maly, H. Abdel-Wahab, C. Wild, "Admin-IRI: A Virtual Classroom," Sun Microsystems, \$99,980, 1996.
25. Co-principal investigator with K. Maly, H. Abdel-Wahab, and C. Wild, "Interactive Remote Instruction," National Science Foundation, \$242,916 (with \$200,035 match from ODU), 1996-97.
24. Co-principal investigator with K. Maly, "A Parallel and Distributed Computing Environment for Scientific Applications," NASA Langley, \$135,170, 1995-96.
23. Principal investigator with K. Maly, "Technologies in Support of Distributed Simulation for Training and Instruction," ARPA, BMH, Norfolk, VA, \$262,000, 1995-1996.
22. Co-principal investigator with K. Maly, "Support for TCP/IP over ATM LANs," NASA Langley, \$18,000, 1995.
21. Co-principal investigator with K. Maly and H. Abdel-Wahab, "Collaborative Interactive Remote Instruction," Sun Microsystems, \$78,560, 1995.
20. Principal investigator with K. Maly, "Technologies in Support of Distributed Simulation for Training and Instruction," BMH, Norfolk, VA, \$50,000, 1994-1995.
19. Co-principal investigator with K. Maly, "A Testbed for Interactive Remote Instruction," National Science Foundation, \$100,065, Jan 1, 1995 - Dec. 31, 1995.
18. Co-principal investigator with K. Maly, M. Zubair, "A Parallel and Distributed Computing Environment for Scientific Applications," NASA Langley, \$69,569, 1994-95.
17. Co-principal investigator with K. Maly, C. Wild, D. Ray, "Computer Productivity Initiative," National Science Foundation, \$215,522, with local match of \$279,137, 1992-94.

16. Co-principal investigator with Larry Wilson, "Evaluation and Development of Technologies for Creation of Reliable Software," NASA Langley, Aug. 16, 1991 - Aug 15, 1992, \$8,600. This is a NASA funded Ph.D. Fellowship.
15. Co-principal investigator with K. Maly, R. Mukkamala, J. Wiencko, and S. Midkiff, "A Reliable Gigabit Network Based on Parallelism," DARPA, \$162,400, 1991.
14. Co-principal investigator with K. Maly, R. Mukkamala, and E. Foudriat, "Reliable High Performance Network Systems," Center for Innovative Technology, \$51,400, 1991.
13. Co-principal investigator with Kurt Maly, "Distributed Simulation," Taurus Technologies, July 1, 1990 through June 31, 1992, \$32,000.
12. Co-principal investigator with K. Maly, "Parallel Communications," NASA Langley, July 1, 1991 through June 31, 1992, \$20,000.
11. Co-principal investigator with Kurt Maly, "Distributed Simulation," Center for Innovative Technology and Taurus Technologies, July 1, 1990 through June 31, 1991, \$19,997.
10. Principal investigator, "Evaluation and Development of Technologies for Creation of Reliable Software," NASA Langley, Aug. 16, 1990 - Aug 15, 1991, \$12,000. This is a NASA funded Ph.D. Fellowship.
9. Co-principal investigator with Kurt Maly, "High Speed Long Distance Networks," NASA Langley, October 1, 1989 through September 30, 1991. \$50,915.
8. Co-principal investigator with Larry Wilson, "Evaluation and Development of Technologies for Creation of Reliable Software," NASA Langley, Aug. 16, 1988 through Aug. 15, 1991, \$59,000.
7. Co-principal investigator with Larry Wilson, "Software Reliability Studies," NASA Langley, Aug. 16, 1989 through Aug. 15, 1991, \$19,208.
6. Principal investigator, "Development of a Prototype Software Analysis Tool for COBOL and Ada Programs," NAVMASSO and NASA Langley, Jan. 1, 1989 through March. 31, 1990. \$39,998.
5. Co-principal investigator with Christian Wild, Equipment grant from Sun Microsystems, Graduate Software Engineering Laboratories, 1989, \$52,000.
4. Co-principal investigator with Kurt Maly, Christian Wild, Dennis Ray, David Harnage, "An Integrated Research/Instructional Facility to Evaluate and Transfer Software Production Technologies," Equipment grant from AT&T Information Systems, 1988, \$728,000.

3. Principal investigator, "Development of a Prototype Software Analysis Tool for COBOL and Ada," NAVMASSO and NASA Langley, Jan. 1, 1987 through Dec. 31, 1987. \$71,009.
2. Principal investigator, "Evaluation of a Methodology and the Derived Environment for Embedded Systems Software," Systems Research Center, Virginia Tech, August 15, 1985 through May 15, 1986 and August 15, 1986 through March 15, 1986. \$26,630. This is a subcontract of the grant shown below.
1. Co-principal investigator, (with Richard E. Nance), "Evaluation of a Methodology and the Derived Environment for Embedded Systems Software," Naval Weapons Research Center, Dahlgren, Virginia. July 15, 1985 through March 15, 1986. \$160,000.

PhD STUDENTS:

Kara Olson, in progress.

David B. Cavitt, "Performance Analysis for the Design, Configuration and Control of DIS/HLA Simulation, Dec. 2000, BMH, Norfolk, VA.

Robert D. Cherinka, "Extending Traditional Static Analysis Techniques to Maintain Component-Based Solutions," Dec., 2000, Mitre Corp., Hampton, VA.

Pattera, Frank, "Parallel Transport Protocols in Support of Remote Visualization," Dec. 1991, (with Kurt Maly) Rational, Seattle, WA.

Wen Zhaofang, "Parallel Algorithms for Basic Problems" Aug. 1991, (with Stephen Olariu), Convex, Dallas, Texas.

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

Association for Computing Machinery (including SIGSIM and SIGSOFT)

Institute for Electrical and Electronics Engineers

IEEE Computer Society

PROFESSIONAL ACTIVITIES, SERVICE:

Chair, SIGSIM Special Committee on Student Travel Scholarships to SIGSIM Conferences, 2012 - present.

Steering Committee, Tidewater Science Council, 2009 – present.

Program Committee, Simultech 2011, Noordwijkerhout, The Netherlands, <http://www.simultech.org>, July 29-31, 2011.

Member, Hampton Roads Blue Planet Forum Steering Committee, 2009 – 2012.

Program Committee: Operational Research Society (UK) Simulation Study Group, Two Day Workshop, Worcestershire, England, March 2008.

Member, university simulation steering committee, 2007-2011.

Invited Keynote, "Simulation is Insight!", Spring Simulation Multiconference 2007, Norfolk, VA, March 25-29, 2007.

Member, university simulation curriculum committee, Old Dominion University, 2007.
Program Committee: Operational Research Society (UK) Simulation Study Group, Two Day Workshop, Royal Leamington Spa, March 2006.

Guest co-editor, Special issue on education and simulation, in the journal *SIMULATION: Transactions of the Society for Modeling and Simulation International*.

College of Sciences Undergraduate Scholarship Committee, 2001, 2002.

Member, international program committee, First International Conference on Grand Challenges for Modeling and Simulation, Jan. 2002.

Nominating Committee, ACM Special Interest Group on Simulation, 2001.

Chair, IFIP Technical Committee 7, Working Group on Discrete Event Simulation, 1999-2000.

Member, university simulation curriculum committee, Old Dominion University, 1997-2000.

Member, search committee College of Engineering simulation faculty, Old Dominion University, 1999-2000.

Member, university planning committee, TeachTech curriculum, 1999-2000.

Member, Computer Science Graduate Studies Committee, Old Dominion University, 1984-2011.

Presentation, "America in the Year 2000: How Safe Are Our Systems," to the ODU Institute for Learning in Retirement, July 14, 1999.

Presentation, "Should We Be Frightened of Computers," to retired military group, March 20, 1999.

Nominated by the ACM Special Group on Simulation as the ACM representative to IFIP Technical Committee 7, Jan. 1999.

Mentor, Summer Apprenticeship NASA SHARP PLUS Research Program, summers, 1997, 1998, 1999.

Judge, Computer Science Division, Virginia Junior Academy of Sciences, 1999.

Judge in programming contest sponsored by WHRO and Old Dominion University, March 1987, May 1988, May 1989, April 1990, April 1991, April 1992, April 1993, April 1994, April 1995, May 1996, May 1997, April 1998, April 1999, April 2000, April 2001, April 2002.

Reviewer, *Journal of Operations Research and Computer Science*, *Computing Reviews*, *Management Science*, *Communications of the ACM*, *ACM Transactions On Modeling and Computer Simulation*, Winter Simulation Conference, Parallel and Distributed Simulation Conference.

Invited presentation, "Quicker Better Model Specifications," Virginia Modeling Analysis and Simulation Center, Oct. 1, 1998.

Invited presentation, "An Architecture for Gathering Impact Data about Model Behaviors in a Distributed Simulation Environment," Brunel University, London, August 21, 1997.

Invited presentation, "IRI, A System for Interactive Remote Instruction: An Assessment After Two Year's Use," Fachhochschule für Technik und Wirtschaft, Berlin, August 19, 1997.

Member, steering committee, Hampton Roads Software Process Improvement Network, 1994-1998.

Member, faculty search committee, Department of Psychology, Old Dominion University, 1997-1998.

Chair, nominations committee, ACM Special Interest Group on Simulation, 1997.

Member, faculty search committee, Center for Learning Technologies, Old Dominion University, 1997.

Member, university distance education curriculum committee, Old Dominion University, 1997-1998.

Chair, nominations committee, Special Interest Group on Computer Simulation (SIGSIM), Association for Computing Machinery, 1998.

Executive committee, Special Interest Group on Computer Simulation (SIGSIM), Association for Computing Machinery, 1995-1996.

Chair, Special Interest Group on Computer Simulation (SIGSIM), Association for Computing Machinery, 1991-1995.

Member, steering committee, Parallel and Distributed Simulation Conference, 1994-1996.

Associate Editor, areas of simulation and software engineering, *Journal of Operations Research and Computer Science*, 1987-1994.

Presentation to Hampton Roads Software Process Improvement Network, "Software Engineering Education and Research at Old Dominion University," November 16, 1994.

Departmental Colloquium, Radford University, "Applications of Data Flow Analysis to Software Maintenance," March 26, 1993.

External reviewer, Computer Science Graduate Program, University of Minnesota at Duluth, October 1992.

Guest Lecturer on software engineering, Berlin Deutsche Telekom Fachhochschule, November 1992.

Vice-Chair, Special Interest Group on Computer Simulation (SIGSIM), Association for Computing Machinery, 1987-1991.

University Ad Hoc Committee on Patent and Copyright Policy, 1987-1991.

Presentation, Norfolk Chapter of Daughters of the American Revolution, "Software Risks in SDI," April 2, 1991, Norfolk, VA.

Track coordinator, "Simulation Modelware," Winter Simulation Conference, New Orleans, LA, Dec. 9-12, 1990.

Judge in ACM student chapter programming contest, each semester since fall 1988.

Member, Old Dominion University Research Foundation Advisory Council, 1987-1989.

Panel member, "Software Engineering Education", Virginia Software Productivity Workshop, Washington-Dulles, April 9-10, 1987.

Session organizer, "Simulation and the Object-Oriented Paradigm", Winter Simulation Conference, Washington, D.C., Dec. 8-10, 1986.

Faculty sponsor and editor, Computer Science Department student newsletter, 1986.

Session chairperson, "Simulation Support Systems," Winter Simulation Conference, Dallas, Texas, November 28-30, 1984.

Session co-chairman, "Simulation Software: Current capabilities and Future Directions," ORSA/TIMS, Orlando, Florida, November 7-9, 1983.

Member, selection committee for replacement of central academic and administrative computer mainframe, Virginia Military Institute, 1978.

Session chairperson, "Simulation Languages, Systems Concepts," Winter Simulation Conference, Gaithersburg, Maryland, 1977.

Session co-chairperson, "The Teaching of Simulation," Winter Simulation Conference, Gaithersburg, Maryland, 1976.