

Curriculum Vitae

Professor Alfred C. Weaver, Ph.D.

1. EDUCATION, EMPLOYMENT, AND PROFESSIONAL ACTIVITIES

1.1 Education:

Ph. D. (computer science)	University of Illinois, 1976
M. S. (computer science)	University of Illinois, 1973
B. S. (engineering science)	University of Tennessee, 1971

1.2 Professional Employment History

University of Virginia, Charlottesville, Virginia

Professor of Computer Science Emeritus, June 2020-
Associate Chair, Department of Computer Science, 2015-
Director of the CS Graduate Program, 2015-
Director, Applied Research Institute, 2008-2013
Associate Director, Applied Research Institute, 2013-
Lucian Carr III Professor of Engineering and Applied Science, 2002-2004
Professor of Computer Science, 1992-
Associate Professor of Computer Science, 1983-92
Chairman, Department of Computer Science, 1984-85
Assistant Professor of Computer Science, 1977-1983

Virginia's Center for Innovative Technology, Herndon, VA

Program Consultant, 1996-97 (sabbatical)

NASA--Johnson Space Center, Houston, Texas

Computer scientist, August 1986--June 1987 (sabbatical)

Department of Computer Engineering, Lund University, Lund, Sweden

Visiting Associate Research Professor of Computer Science, May-June 1983

Technical University of Denmark, Lyngby, Denmark

Visiting Instructor, summer 1975

Department of Computer Science, University of Illinois, Urbana, Illinois

Graduate Teaching Assistant, 1971-1975

IBM Graduate Fellow in Computer Science, 1975-1976

Visiting Assistant Professor of Computer Science, 1976-1977

Tennessee Valley Authority, Knoxville, Tennessee

Engineer, Division of Research and Development, 1970-1971

Department of Computer Science, University of Tennessee, Knoxville, Tennessee

Undergraduate Teaching Assistant, 1969-1970

1.3 Consultant Positions

Sitara Networks, Inc. 1997-98

Design of high-speed Internet access protocols

Infocus Communications, Inc. 1996-97

Business plan development for web hosting services

MITRE Corporation, 1995

Design review of Pentagon ATM Communications Systems

Institute for Defense Analyses, 1990-95

Design of real-time distributed computing systems

Honeywell, Inc., Space Systems Division, 1990-91

Design of high-performance network interface unit

Honeywell, Inc., Sensor and Systems Development Division, 1988-92

Design of networked industrial automation systems

E-Systems, 1990-91

Design of very high-speed computer networks

Federal Emergency Management Agency, 1990

Computer network design for FEMA

Lockheed Engineering and Management Company, Houston, Texas, 1986-89

Local area network design for the NASA space station

Johnson Controls, Inc., Milwaukee, Wisconsin, 1986-87

Local area networks for building automation

Sperry Marine Inc., Charlottesville, Virginia, 1986--

Shipboard local area network design

Johnson & Johnson, New Brunswick, New Jersey, 1983-84

Industrial controls and computer networks

Dallas/Fort Worth Airport, 1982-83

Microprocessor-based environmental controls

Reliance Oil Company, Charlottesville, Virginia, 1981-83

Microcomputer-based financial management systems

Salley-Weissinger and Co., Charlottesville, Virginia, 1980-81

Microcomputer-based financial management/analysis systems

General Electric Company, Charlottesville, Virginia, 1980-82

Design of numerical and programmable controls

Struthers-Dunn, Inc., Bettendorf, Iowa, 1973-84

Microprocessor-based industrial process controller design

1.4 Professional Activities

1.4.1 Professional Societies and Activities

Institute of Electrical and Electronics Engineers (IEEE), 1973--, Fellow 1996--

Association for Computing Machinery, 1974—

Editorial Board, *IEEE Computer*, 2006—

Associate Editor, *IEEE Computer*, 2006--

Associate Editor, *IEEE Transactions on Industrial Electronics*

Area editor (networks and electronic commerce), *IEEE Computer*

Column editor, "How Things Work," *IEEE Computer*

Phi Eta Sigma

Tau Beta Pi
 Phi Kappa Phi
 Sigma Xi
 IEEE Industrial Electronics Society Administrative Committee
 Vice-President, IEEE Industrial Electronics Society (IES), 1992-93
 President, IEEE Industrial Electronics Society (IES), 1994-95
 Chairman, IEEE IES Technical Committee on Factory Communication
 U.S. Army Advisory Committee for Basic Research
 Chairman, Intel 432 University Users Group
 ACM (Association for Computing Machinery) National Lecturer
 Member, CSNet Executive Committee
 General Chairman, IEEE IES Workshop on Factory Communications, March 1987
 Tutorial Chairman, IEEE IES IECON, 1983-1988
 Program Committee, IEEE Workshop on Languages for Factory Automation, August 1987
 Technical Program Committee, IEEE Workshop on Local Area Networks, October 1987
 Technical Program Committee, 13th Local Computer Networks Conference, October 1988
 Technical Program Committee, 14th Local Computer Networks Conference, October 1989
 Technical Program Committee, 15th Local Computer Networks Conference, October 1990
 Organizing Committee, 16th Local Computer Networks Conference, October 1991
 Organizing Committee, 17th Local Computer Networks Conference, September 1992
 Organizing Committee, 18th Local Computer Networks Conference, September 1993
 Organizing Committee, 19th Local Computer Networks Conference, October 1994
 Technical Program Chairman, IEEE IECON'89, Philadelphia, Pennsylvania, November 1989
 Technical Program Chairman, IEEE IECON'90, Monterey, California, November 1990
 Technical Program Co-Chairman, IEEE IECON'91, Kobe, Japan, November 1991
 Technical Tours Chairman, IEEE IECON'92, San Diego, California, November 1992
 Technical Tutorials Chairman, IEEE IECON'93, Maui, Hawaii, November 1993
 Advisor, IEEE IECON'94, Bologna, Italy, September 1994.
 Tutorials Chairman, IEEE IECON'95, Orlando, Florida, November 1995.
 Technical Program Committee, IEEE IECON'96, Taipei, Taiwan
 Treasurer, IEEE IECON'97, New Orleans, LA, November 1997
 Technical Program Committee, Submissions Chairman for North and South America, IECON'98, Hamburg, Germany, November 1998
 Technical Program Committee, International Workshop on Advanced Communications and Applications for High Speed Networks, March 1992
 Vice-Chairman, Workshop on Emerging Technologies and Factory Automation, August 1992
 Advisory Committee, Industrial Electronics Symposium, June 1993
 Administration Chairman, ETFA'93 Emerging Technologies and Factory Automation, Cairns, Queensland, Australia, September 1993
 Vice-Chairman, ETFA'94 Emerging Technologies and Faculty Automation, Tokyo, Japan, November 1994.
 Technical Program Chairman, ETFA'95: Emerging Technologies and Factory Automation, Paris, France, October 1995.
 Organizing Committee, IWACA'92: International Workshop on Advanced Communications and Applications of High Speed Networks, Munich, Germany, March 1992.
 Organizing Committee, IWACA'94: International Workshop on High Speed Teleservices and Applications, Heidelberg, Germany, September 1994.
 Advisor, ISIE'94: International Symposium on Industrial Electronics, Santiago, Chile, May 1994.
 Advisor, ISIE'95: International Symposium on Industrial Electronics, Athens, Greece, July 1995.
 Advisor, ICIT'94: International Conference on Industrial Technology, Guangzhou, China.
 Steering Committee, ACCE: AFCEA Computing Conference and Exposition, Arlington, Virginia, February 1995.

Program Chairman, IEEE International Workshop on Factory Communications Systems, Leysin, Switzerland, October 1995.

Technical Program Committee, IEEE International Workshop on Emerging Technologies and Factory Communications, Paris, France, October 1995.

Co-Chairman, IEEE International Workshop on Factory Communications, Barcelona, Spain, September 1997.

Treasurer, IEEE IECON'97 International Conference on Industrial Electronics, Control, and Instrumentation, New Orleans, LA, November 10-14, 1997.

Program Chairman, IEEE IECON'98 International Conference on Industrial Electronics, Control, and Instrumentation, Aachen, Germany, November 1998.

Program Committee, IEEE International Conference on Industrial Electronics ICIE'98, People's Republic of China, 1998.

Program Co-Chair, Workshop on Factory Communications Systems WFCS'99, May 1999.

Steering Committee, 7th International Conference on Emerging Technologies and Factory Automation, October 18-22, 1999, Barcelona, Spain.

Technical Program Co-Chair, IEEE IECON'99 Industrial Electronics, Control, and Instrumentation, December 1999.

Co-organizer, A Totally Networked Industry Environment, special theme of IECON'99, December 1999.

Publicity Committee, IECON2000, Nagoya, Japan, October 2000.

Committee Chair, IEEE IES Industrial Information Technology Committee, 2001-2005.

Track Chair for Industrial Information Technology, IECON'03, Roanoke, Virginia, Nov. 2003

Organizer and Technical Program Chair, IEEE International Conference on Industrial Informatics (INDIN'03), Banff, Alberta, Canada, August 21-24, 2003

Organizer and Technical Program Co-Chair, IEEE International Conference on Industrial Informatics (INDIN'04), Berlin, Germany, June 24-26, 2004.

Industrial Electronics Society liaison to Workshop on Factory Communications, Vienna, Austria, September 2004.

Technical Program Co-Chair, Industrial Informatics track, IECON'05, Raleigh, NC, November 2005.

Technical Program Co-Chair, Industrial Informatics track, ICIT'05, Hong Kong, December 2005.

International Advisory Board, IECON 2008, Orlando, FL, November 2008.

Technical Program Committee, Wireless Health, San Diego, CA, October 2010.

International Advisory Committee, IECON 2010, Glendale, AZ, November 2010.

Technical Program Committee, International Workshop on Privacy, Security, and Trust for Mobile and Wireless Devices, Maui, HI, July 2011.

Technical Program Committee, 2nd International Workshop on Privacy, Security, and Trust in Mobile and Wireless Systems (MobiPST'12), Munich, Germany, July 30, 2012.

Session Chair, 21st International Conference on Computer Communications and Networks (ICCCN'12), Munich, Germany, July 30-August 2, 2012.

Technical Program Committee, 3rd International Workshop on Privacy, Security, and Trust in Mobile and Wireless Systems (MobiPST'13), Nassau, Bahamas, July 30, 2013.

Technical Program Committee, 2013 Frontiers in Education Conference, Oklahoma City, OK, October 23-29, 2013.

Technical Program Committee, 4th International Workshop on Privacy, Security, and Trust in Mobile and Wireless Systems (MobiPST'14), Shanghai, China, August 7, 2014.

Technical Program Committee, 2014 Frontiers in Education Conference, Madrid, Spain, October 22-25, 2014.

Technical Program Committee, 5th International Workshop on Privacy, Security, and Trust in Mobile and Wireless Systems (MobiPST'15), Las Vegas, NV, August 3-6, 2015.

1.4.2 Honors

Fellow of the IEEE, January 1996—

Life Member, IEEE, January 2015—

Keynote Speaker, “Providing Privacy and Security for Mobile Devices,” International Workshop on Privacy, Security, and Trust for Mobile Devices (MobiPST’11), Maui, Hawaii, July 2011.

2008 School of Engineering and Applied Science Distinguished Service Award

IEEE Dr. Ing. Eugene Mittelmann Research Achievement Award, 2001.

Keynote speaker, “Achieving Data Privacy and Security Using Web Services,” IEEE International Conference on Industrial Technology (ICIT’05), Hong Kong, December 2005.

Keynote speaker, “A Security Architecture for Distributed Data Security,” IEEE International Conference on Emerging Technologies and Factory Automation (ETFA’05), Catania, Sicily, Italy, September 2005.

Keynote Speaker, “Industrial Informatics,” IEEE Industrial Electronics Society Annual Conference (IECON’03), Roanoke, VA, November 2003.

Distinguished Lecturer, IEEE Industrial Electronics Society, 1999--2005.

Keynote Speaker, "Electronic Commerce on the Internet," IEEE Industrial Electronics Annual Conference IECON’96, Kauai, Hawaii, December 1996.

IEEE Anthony J. Hornfeck Service Award, IEEE Industrial Electronics Society, 1992.

American Men and Women of Science, 1988--

1.4.3 Reviewer for Professional Journals and Research Proposals

Associate Editor, IEEE *Computer*

Editorial Board, IEEE *Computer*

Column editor, "How Things Work," IEEE *Computer*

Area Editor (networks and electronic commerce), IEEE *Computer*

Associate Editor, *World Wide Web Journal*

Associate Editor, *IEEE Transactions on Industrial Electronics*

Journal of Internetworking Research and Experience

IEEE *Computer*

IEEE *Spectrum*

IEEE *Transactions on Industrial and Process Control*

IEEE *Micro*

IEEE Robotics and Automation

ACM *Computing Reviews*

SOFTWARE - Practice & Experience

National Science Foundation

U. S. Army Research Office
Office of Naval Research
Virginia's Center for Innovative Technology
Iranian Journal of Electrical and Computer Engineering

1.5 Patents and Copyrights:

Patents:

Process Control System That Controls Its Outputs According to the Results of Successive Analysis of the Vertical Columns of a Hypothetical Ladder Diagram, filed July 25, 1977, U. S. Patent Office, granted October 1980, number 4,217,658.

Copyrights:

A Graphically-Programmed, Microprocessor-Based Industrial Controller, published April 15, 1977, copyright registration no. A868730.

2. PUBLICATIONS AND LECTURES

2.1 Publications

2.1.1 Books and Book Chapters

1. Deborah Johnson, Priscilla Regan, Katherine Wesson, Siva Vaidhyanathan, Kent Wayland, Roberto Armongol, and Alfred C. Weaver, House of Mirrors: Surveillance and Transparency, Routledge Studies in Science, Technology and Society, 2014.
2. Zhengping Wu and Alfred C. Weaver, "Privacy-Preserving Trust Establishment with Web Service Enhancements," Innovations, Standards and Practices of Web Services: Emerging Research Topics, IGI Global, August 2011.
3. Zhengping Wu, Alfred C. Weaver, "Authentication Information Alignment for Cross-Domain Federations," Novel Algorithms and Techniques in Telecommunications and Networking, Springer, 2010.
4. Zhengping Wu and Weaver, Alfred C., "A Privacy Preserving Enhanced Trust Building Mechanism for Web Services, Trust Management, Icfai University Press, April 2008.
5. Dwyer III, S. J., Weaver, A. C., and Hughes, Kristen, "Health Insurance Portability and Accountability Act," chapter two of Security Issues in the Digital Medical Enterprise, Society for Computer Applications in Radiology, May 2004, pp. 9-18.
6. Weaver, A. C., "Xpress Transport Protocol," High Performance Cluster Computing, Prentice Hall, 1999, pp. 301-316.
7. Weaver, A. C., "Factory Communications" section editor, chapters 16-20 of CRC Handbook of Industrial Electronics, June 1997, pp. 385-438, ISBN 0-8493-8343-9.
8. Weaver, A. C., "Ethernet and IEEE 802.3 Contention Bus", CRC Handbook of Industrial Electronics, June 1997, pp. 394-396.
9. Weaver, A. C., "IEEE 802.4 Token Bus," CRC Handbook of Industrial Electronics, June 1997, pp. 400-403.
10. Strayer, W.T., Dempsey, B.J., and Weaver, A. C., XTP: the Xpress Transport Protocol, Japanese language edition, Addison Wesley, 1996, ISBN 4-8101-8071-9.
11. Sublett, J.W., Dempsey, B.J., and Weaver, A. C., "Design and Implementation of a Digital Teleultrasound System for Real-Time Remote Diagnosis," Computer-Based Medical Systems, IEEE Computer Society Press, 1995, pp. 292-298.
12. Dempsey, Bert J., Lucas, Matthew T., and Weaver, A. C., "Design and Implementation of a High-Quality Video Demonstration System using XTP Reliable Multicast, " Multimedia: Advanced Teleservices and High-Speed Communication Architectures, Ralf Steinmetz (Ed.), Springer-Verlag, 1994, pp. 376-387.
13. Weaver, A. C., "XTP: A New Communications Protocol for Factory Automation," in Modern Tools for Manufacturing Systems, Richard Zurawski, editor, Elsevier, 1993, pp. 439-450.

14. Strayer, W.T., Dempsey, B.J., and Weaver, A. C., XTP: The Xpress Transfer Protocol, Addison-Wesley, 1992, ISBN 0-201-56351-7, 272 pages.
15. Weaver, A. C., "XTP for the NASA Space Station," in Protocols for High Speed Networks, Harry Rudin and Robin Williamson, editors, North Holland, 1989, pp. 35-42.
16. Weaver, A. C., Intel 8085 Microprocessor Experiments, Lund University, Lund, Sweden, 1985.

2.1.2 Refereed Journal Publications

1. Liliya I. Besaleva and Alfred C. Weaver, "Applications of Social Networks and Crowdsourcing for Disaster Management Improvement," *IEEE Computer*, May 2016.
2. Alfred C. Weaver, Renee Bryce and Greg Byrd, "Computer Applications in Medicine," *IEEE Computer*, February 2015 (guest editor introduction).
3. Ron Vetter and Alfred C. Weaver, "Technology Transfer in the Innovation Economy," *IEEE Computer*, August 2014 (guest editor introduction).
4. Joel Coffman and Alfred C. Weaver, "An Empirical Performance Evaluation of Relational Keyword Search Techniques," *IEEE Transactions on Knowledge and Data Engineering*, vol. 26, issue 1, January 2014, pp. 30-42.
5. Jane Chu Prey and Alfred C. Weaver, "Fostering Gender Diversity in Computing," *IEEE Computer*, vol. 46, no. 3, March 2013 (guest editor introduction).
6. Wu, Zhengping, and Weaver, Alfred C., "Using Web Service Enhancements to Establish Trust Relationships with Privacy Protection," *International Journal of Web Services Research*, vol. 6, no. 1, 2009.
7. Jurik, Andrew D., and Weaver, Alfred C., "Body Area Networks: Wireless Access to Physiological Data," *IEEE Software*, vol. 26, no. 1, January/February 2009.
8. Andrew D. Jurik and Alfred C. Weaver, "Remote Medical Monitoring," *IEEE Computer*, vol. 41, no. 4, April 2008.
9. Alfred C. Weaver and Benjamin B. Morrison, "Social Networking," *IEEE Computer*, vol. 41, no. 2, February 2008.
10. Wu, Zhengping, and Weaver, Alfred C., "Requirements of Federated Trust Management for Service-Oriented Architectures," *International Journal of Information Security*, Vol. 6, No. 5, 2007.
11. Alfred C. Weaver, "Secure Sockets Layer," *IEEE Computer*, vol. 39, no. 4, April 2006.
12. Alfred C. Weaver, "Biometric Authentication," *IEEE Computer*, vol. 39, no. 2, February 2006.
13. Bassignani, M.J., Dwyer III, S.J., Ciambotti, J.M., Olazagasti, J.M., Moran, R., Moynihan, S., Weaver, A.C., Snyder, A.M., "Review of Technology: Planning for the Development of Telesonography," *Journal of Digital Imaging* 17(1), 18-27, 2004.

14. Weaver, Alfred C., and Condry, Michael W., "Distributing Internet Services to the Network's Edge," *IEEE Transactions on Industrial Electronics*, vol. 50, no. 3, pp. 404-411, June 2003.
15. Weaver, Alfred C., Vetter, R. J., Whinston, A. B. and Swigger, K, "The Future of E-Commerce," *IEEE Computer*, vol. 33, no. 10, October 2000.
16. DeAngelis, Gia A., Dempsey, Bert J., Berr, Stuart, Fajardo, Laurie L., Sublett, John W., Hillman, Bruce J., Weaver, Alfred C., Berbaum, Kevin, and Dwyer, Samuel J., "Diagnostic Efficacy of Compressed Digitized Real-time Sonography of Uterine Fibroids," *Academic Radiology*, Volume 4, 1997, pp. 83-89.
17. Dempsey, B.J, Liebeherr, J., and Weaver, A. C., "On Retransmission-Based Error Control for Continuous Media Traffic in Packet-Switching Networks", *Computer Networks and ISDN Systems*, Vol. 28, No. 5, March 1996, pp. 719-736.
18. DeAngelis, Gia A., Dempsey, Bert J., Berr, Stuart, Fajardo, Laurie L., Sublett, John W., Hillman, Bruce J., Weaver, Alfred C., Berbaum, Kevin, and Dwyer, Samuel J., "Digitized Real-Time Ultrasound: Signal Compression Experiment," *Radiology*, Vol. 197(P), November 1995, p. 336.
19. Sublett, J.W., Dempsey, B.J., and Weaver, A. C., "Design and Implementation of a Digital Teleultrasound System for Real-Time Remote Diagnosis," *Computer-Based Medical Systems*, IEEE Computer Society Press, 1995, pp. 292-298.
20. Weaver, A. C., "The Xpress Transfer Protocol," *Journal of Computer Communications*, Vol. 17, No. 1, January 1994.
21. Weaver, A. C., and Cerf, V., "Viewpoint: Computer Networks," *IEEE Computer*, September 1991 (invited).
22. Howes, N. R., and Weaver, A. C., "Performance Bounds on OSI Protocols When Implemented in Ada," *IEEE Transactions on Software Engineering*, December 1989.
23. Strayer, W. T., and Weaver, A. C., "Performance Measurement of Data Transfer Services in MAP," *IEEE Networks*, May 1988.
24. Peden, J. H., and Weaver, A. C., "Are Priorities Useful on an IEEE 802.5 Token Ring?," *IEEE Transactions on Industrial Electronics*, Vol. IE-35, No. 3, August 1988, pp. 361-365.
25. Gorur, R. M., and Weaver, A. C., "Setting Target_Rotation_Times in an IEEE 802.4 Network," *IEEE Transactions on Industrial Electronics*, Vol. IE-35, No. 3, August 1988, pp. 366-371.
26. Weaver, A. C., and Summers, C.F., "The IEEE 802.4 TokenBus -- A Performance Bound on GM MAP," *IEEE Transactions on Industrial Electronics*, Vol. IE-35, No. 1, February 1988.
27. Weaver, A. C., and Colvin, M. A., "A Real-Time Messaging System for Token Ring Networks," *SOFTWARE - Practice and Experience*, Vol. 17(12), December 1987, pp. 885-897.
28. Colvin, M. A., and Weaver, A. C., "Performance of Single Access Classes on the IEEE Token Bus," *IEEE Transactions on Communications*, Vol. COM-34, Number 12, December 1986, pp. 1253-1256.

29. Weaver, A. C., "A Highly Reliable LAN Protocol," *IEEE Journal on Selected Areas in Communications*, Vol. SAC-4, Number 7, October 1986, pp. 1181-1183.
30. Weaver, A. C., and Butler, D. W., "A Fault-Tolerant Network Protocol for Real-Time Communications," *IEEE Transactions on Industrial Electronics*, Vol. IE-33, No. 3, August 1986, pp. 207-211.
31. White, C. C., Wilson, E. C., and Weaver, A. C., "Decision Aid Development for Use in Ambulatory Health Care Settings," *Operations Research*, Vol. 30, No. 3, May-June 1982, pp. 446-463.
32. Faiman, M., Weaver, A. C., and Catlin, R. W., "MUMS--A Reconfigurable Microprocessor Architecture," *IEEE Computer*, Vol. 10, No. 1, January 1977, pp. 11-17.

2.1.3 Refereed Conference Publications

1. Liliya I. Besaleva and Alfred C. Weaver, "CrowdQuake: Social Networking for Crisis Management," The 15th International Conference on Foundations of Computer Science, Las Vegas, NV, July 29-August 1, 2019.
2. Sean Rastatter, Travis Moe, Amitava Gangopadhyay, Alfred C. Weaver, "A Combined Statistical Analytical, Machine Learning and Deep Learning Approach for Abnormal Traffic Pattern Detection in Real-Time Financial Transactions," Thirty-sixth International Conference on Machine Learning (ICML 2019), Long Beach, CA, June 10-15, 2019.
3. Sean Rastatter, Travis Moe, Amitava Gangopadhyay, Alfred C. Weaver, Abnormal Traffic Detection in Real-Time Financial Networks, International Big Data & Analytics Education Conference (BDEdCon 2019), College Park, MD, June 3-4, 2019.
4. Liliya I. Besaleva and Alfred C. Weaver, "Imbalanced Data Classification via Ensemble Oversampling," DataCom 2017, Orlando, Florida, November 6-10, 2017.
5. Liliya I. Besaleva and Alfred C. Weaver, "Imbalanced Data in e-Commerce Networks," Intelligent Systems Conference (IntelliSys 2017), London, United Kingdom, September 2017.
6. Liliya I. Besaleva and Alfred C. Weaver, "Imbalanced Data in e-Commerce Networks," Advanced Data Mining and Applications (ADMA 2016), Gold Coast, Australia, Dec. 12-15, 2016.
7. Liliya I. Besaleva and Alfred C. Weaver, "Imbalanced Data in e-Commerce Networks," Advances in Social Networks Analysis and Mining, San Francisco, CA, August 18-21, 2016.
8. Liliya I. Besaleva and Alfred C. Weaver, "Crowdsourcing for Emergency Response," Frontiers in Education: Computer Science and Computer Engineering, Las Vegas, NV, July 25-28, 2016.
9. Liliya I. Besaleva and Alfred C. Weaver, "Crowdsourcing for Emergency Response," Academy of Science and Engineering 8th International Conference on Social Computing (SocialCom'15), Stanford University, Stanford, CA, August 18-20, 2015.
10. Liliya I. Besaleva and Alfred C. Weaver, "Social Networks to the Rescue! The Power of Crowdsourced Data in Emergency Response," International Conference on Health Informatics and Medical Systems, Las Vegas, NV, July 27-30, 2015.

11. Liliya I. Besaleva and Alfred C. Weaver, "m-Health Application for Emergency Response Improvement through Crowdsourced Information," 2014 Wireless Telecommunications Symposium, Washington, DC, April 9-11, 2014.
12. Liliya I. Besaleva and Alfred C. Weaver, "Mobile Electronic Triage for Emergency Response Improvement through Crowdsourced and Sensor-Detected Information," ACM Wireless Health 2013, Baltimore, MD, November 1-3, 2013.
13. Liliya I. Besaleva and Alfred C. Weaver, "CrowdHelp: An Android Application for Emergency Response Improvement through Crowdsourced and Sensor-Detected Information," 2013 IEEE Global Humanitarian Technology Conference (GHTC'13), San Jose, CA, October 20-23, 2013.
14. Liliya I. Besaleva and Alfred C. Weaver, "Emergency Response Improvement through Crowdsourced e-Health Technologies", IEEE International Conference on E-Health Networking, Applications and Services (Healthcom'13), Lisbon, Portugal, October 9-12, 2013.
15. Liliya I. Besaleva and Alfred C. Weaver, "Applications of Social Networks and Crowdsourcing for Disaster Management," ASE/IEEE International Conference on Social Computing (SocialCom'13), Washington, DC, September 8-14, 2013.
16. Liliya I. Besaleva and Alfred C. Weaver, "Importance of Social Networking for Emergency Response," 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM '13), Niagara Falls, Canada, August 25-28, 2013.
17. Joel Coffman and Alfred C. Weaver, "What are We Searching for? Analyzing User Objectives when Searching Relational Data," Workshop on Web Search Click Data 2012 (WSCD'12), Seattle, WA, February 12, 2012.
18. Andrew Jurik and Alfred C. Weaver, "Bidirectional ECG Monitoring with an Event Detection Policy Engine," 21st International Conference on Computer Communications and Networks (ICCCN'12), Munich, Germany, July 30-August 2, 2012.
19. Alfred C. Weaver, Joseph P. Boyle, and Liliya I. Besaleva, "Applications and Trust Issues when Crowdsourcing a Crisis," 2nd International Workshop on Privacy, Security, and Trust in Mobile and Wireless Systems (MobiPST'12, in conjunction with ICCCN'12), Munich, Germany, July 30, 2012.
20. Alfred C. Weaver and Joseph P. Boyle, "Using Crowdsourcing to Enhance Crisis Management," International Conference on Frontiers in Education: Computer Science and Computer Engineering (FECS'12), Las Vegas, NV, July 16-19, 2012.
21. Joel Coffman and Alfred C. Weaver, "What Are We Searching for?—Analyzing User Objectives when Searching Relational Data," Second Workshop on Web Search Click Data (WSCD'12), Seattle, WA, February 2012.
22. Joel Coffman and Alfred C. Weaver, "Learning to Rank Results in Relational Keyword Search," 20th ACM Conference on Information and Knowledge Management (CIKM'11), Glasgow, Scotland, October 2011.
23. William Burns and Alfred C. Weaver, "An Interactive, Execution-safe System for Teaching e-Commerce using Real-time Feedback," FIE'11: IEEE Frontiers in Education 2011, Rapid City, SD, October 2011.

24. Jonathan F. Bolus, Andrew D. Jurik, Caroline J. Andrews, Alfred C. Weaver, Benton H. Calhoun, Travis N. Blalock, "Low-Power Wireless ECG Sensor Design with COTS Parts," IEEE SENSORS'11, Limerick, Ireland, October 2011.
25. Andrew D. Jurik and Alfred C. Weaver, "Securing Mobile Devices with Biotelemetry," International Workshop on Privacy, Security, and Trust in Mobile and Wireless Systems (MobiPST'11), Maui, HI, July, 2011.
26. William Burns and Alfred C. Weaver, "The e-Commerce Sandbox: An Interactive Learning Tool with Real-Time Feedback," International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government (EEE'11), Las Vegas, NV, July 2011.
27. Joel Coffman and Alfred C. Weaver, "A Framework for Evaluating Database Keyword Search Strategies," 19th ACM International Conference on Information and Knowledge Management (CIKM 2010), Toronto, Canada, October 2010.
28. Joel Coffman and Alfred C. Weaver, "Structured Data Retrieval using Cover Density Ranking," 2nd International Workshop on Keyword Search on Structured Data (KEYS 2010, in conjunction with ACM SIGMOD 2010), Indianapolis, IN, June, 2010.
29. Coffman, Joel M., and Weaver, Alfred C., "Electronic Commerce Virtual Laboratory," ACM SIGCSE, Milwaukee, WI, March 10-12, 2010.
30. Andrew D. Jurik and Alfred C. Weaver, "Mobile Health Monitoring Through Biotelemetry," BodyNets'09, Los Angeles, CA, April 1-3, 2009.
31. S.C. Jocke, J.F. Bolus, S.N. Wooters, A.D. Jurik, A.C. Weaver, T.N. Blalock, and B.H. Calhoun, "A 2.6- μ W Sub-threshold Mixed-signal ECG SoC," 2009 Symposium on VLSI Circuits, Kyoto, Japan, June 16-18, 2009.
32. Benton H. Calhoun, Jonathan Bolus, Sudhanshu Khanna, Andrew D. Jurik, Alfred C. Weaver, and Travis N. Blalock, "Sub-threshold Operation and Cross-Hierarchy Design for Ultra Low Power Wearable Sensors," 2009 IEEE International Symposium on Circuits and Systems (ISCAS 2009), Taipei, Taiwan, May 24-27, 2009.
33. Andrew D. Jurik and Alfred C. Weaver, "Control, Analysis, and Visualization of Body Sensor Streams," Third International Symposium on Medical Information and Communication Technology (ISMICT 2009), Montreal, Canada, February 24-26, 2009.
34. Zhengping Wu, Alfred C. Weaver, "Authentication Information Alignment for Cross-Domain Federations," 2008 International Joint Conferences on Computer, Information, and Systems Sciences and Engineering, University of Bridgeport, Bridgeport, Connecticut, December 5-13, 2008.
35. Wu, Zhengping, and Weaver, Alfred C., "Alignment of Authentication Information in Federated Systems," 11th IEEE International Enterprise Computing Conference, Annapolis, MD, October 15-19, 2007.
36. Wu, Zhengping, and Weaver, Alfred C., "Hybrid Trust Information Exchange for Federated Systems," IEEE International Symposium on Dependable, Autonomic, and Secure Computing 2007 (DASC'07), Loyola College Graduate Center, Columbia, MD, September 25-27, 2007.

37. Wu, Zhengping, and Weaver, Alfred C., "Using Web Services to Exchange Security Tokens for Federated Trust Management," Proceedings of the 2007 IEEE International Conference on Web Services, Salt Lake City, Utah, July 2007.
38. Wu, Zhengping, and Weaver, Alfred C., "Using Web Service Enhancements to Bridge Business Trust Relationships," Fourth International Conference on Privacy, Security, and Trust (PST'06), University of Toronto, Institute of Technology, Markham, Ontario, Canada, October 30-November 1, 2006.
39. Wu, Zhengping, and Weaver, Alfred C., "Requirements of Federated Trust Management for Service-Oriented Computing," Fourth International Conference on Privacy, Security, and Trust (PST'06), University of Toronto, Institute of Technology, Markham, Ontario, Canada, October 30-November 1, 2006.
40. Weaver, Alfred C., "Does Classroom Presenter Software Change Learning Outcomes?," IEEE Frontiers in Education (FIE 2006), San Diego, CA, October 28-31, 2006.
41. Wu, Zhengping, and Weaver, Alfred C., "Bridging Trust Relationships with Web Service Enhancements," 2006 IEEE International Conference on Web Services (ICWS2006), Chicago, September 18-22, 2006.
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73. Weaver, A. C., "Industrial Controller Software Meets Difficult Systems Needs," *Electronic Data News*, March 5, 1978, pp. 111-115.
74. Conn, R. L., and Weaver, A. C., eds., "The Monitor Command System User's Manual," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-78-912, February 1978.
75. Weaver, A. C., "A Graphically-programmed, Microprocessor-based Industrial Controller," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-77-865, May 1977.
76. Weaver, A. C., "On-line Character Recognition," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-74-660, August 1974.
77. Weaver, A. C., "Data Compression for Character Strings," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-74-659, July 1974.
78. Weaver, A. C., Tindall, M. H., and Danielson, R. L., "A BASIC Language Interpreter for the Intel 8008 Microprocessor," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-74-658, June 1974.
79. Weaver, A. C., "VIPTRAN2--An Improved Programming Language and Its Compiler for Process Control Equations," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-74-643, May 1974.
80. Weaver, A. C., "VIPTRAN--A Programming Language and Its Compiler for Boolean Systems of Process Control Equations," Department of Computer Science, University of Illinois, Report No. UIUCDCS-R-73-603, November 1973.

2.2 Invited Lectures

2.2.1 Meetings

1. Weaver, A.C., Microsoft Tablet PC Initiative, Seattle, WA, July 20-21, 2005.
2. Weaver, A.C., Microsoft Faculty Summit, Redmond, WA, July 18-20, 2005.
3. Weaver, A.C., Microsoft Trustworthy Computing Initiative, Redmond, WA, January 2005.

4. Weaver, A.C., Chen, X., and Van Dyke, J., DemoFest 2004, Microsoft Faculty Summit, August 2004.
5. Weaver, A.C., Hu, J., Snyder, A.M., and Van Dyke, J., DemoFest 2003, Microsoft Faculty Summit, August 2003.
6. Weaver, A. C., "Reliable Multicast and Reliable Group Management," Sun Microsystems, Palo Alto, California, July 20, 1999.
7. Weaver, A. C., Keynote Speaker, "Electronic Commerce on the Internet," IEEE Conference Emerging Technologies and Factory Automation, ETFA'96, Kauai, Hawaii, December 1996.
8. Weaver, A. C., "Xpress Transport Protocol," General Electric Research and Development Laboratory, Schenectady, New York, December 1996.
9. Weaver, A. C., "The Protocol Engine," MITRE Corporation, McLean, Virginia, May 26, 1988.
10. Weaver, A. C., "Computer Networks Research at the University of Virginia," Contel, Fairfax, Virginia, May 25, 1988.
11. Weaver, A. C., "Protocol Engine Project," TCP/IP Conference, Washington, D.C., December 1987.
12. Weaver, A. C., "An Experimental Real-Time Messaging System for Computer Networks," NASA-Johnson Space Center, December 12, 1986.
13. Weaver, A. C., "The IEEE Local Area Network Standards," Midwest Workshop on Communications Systems, Washington University, St. Louis, Missouri, November 20-21, 1986.
14. Weaver, A. C., "The ISO OSI Model for Computer Networks," Flight Data Systems, NASA-Johnson Space Center, August 23, 1986.
15. Weaver, A. C., "Computer Networking," ACM SIGMALL 81, Orlando, Florida, October 12-13, 1981.
16. Weaver, A. C., "Microcomputer Architecture for Distributed Processing," U. S. Army Research Office Symposium on Microcomputer Architecture, Wrightsville Beach, North Carolina, May 21-22, 1981.
17. Weaver, A. C., "Distributed Process Control Architectures Using Microprocessors," Rocky Mountain Symposium on Microcomputers, Fort Collins, Colorado, August 1979.
18. Weaver, A. C., "Teaching Computer Science with Microprocessors," East Central Region of the ACM Special Interest Group in Computer Science Education, University of Louisville, Louisville, Kentucky, May 1979.
19. Weaver, A. C., "The Impact of Microprocessors on Industrial Process Control," Republic of China - Republic of Korea Workshop on Microprocessor Devices and Applications, National Science Council of the Republic of China, Taipei, Taiwan, December 18-22, 1978.

2.2.2 Tutorials

1. Weaver, A. C., "Computer Applications to Medicine," National Science Foundation Research Experiences for Undergraduates, Charlottesville, VA, June 2005.
2. Weaver, A.C., "Industrial Informatics," IECON'03, Roanoke, VA, November 2003.
3. Weaver, A. C., "Factory Monitoring and Control Using the Internet," IECON'01, Denver, CO, December 2001.
4. Weaver, A.C., "Internet Commerce," NATO Fellowship, Bogazici University, Istanbul, Turkey, May 29, 2000.
5. Weaver, A.C., "Internet Privacy and Security," NATO Fellowship Lecture, Bogazici University, Istanbul, Turkey, May 30, 2000.
6. Weaver, A.C., "Critical Factors in Electronic Commerce," NATO Fellowship Lecture, Bogazici University, Istanbul, Turkey, June 1, 2000.
7. Weaver, A. C., "The Internet, Electronic Commerce, and Factory Automation," IECON2000, Nagoya, Japan, Oct/Nov 2000.
8. Weaver, A. C., "The Internet and Electronic Commerce," IECON2000, Nagoya, Japan, Oct/Nov 2000.
9. Weaver, A. C., "Profiting from the Internet and the World Wide Web," IECON'98, Aachen, Germany, September 1998.
10. Weaver, A. C., "The Internet and the World Wide Web," IECON'97, New Orleans, LA, November 1997.
11. Weaver, A. C., "Electronic Commerce on the Internet," IECON'96, Taipei, Taiwan, August 1996.
12. Weaver, A. C., "The Xpress Transport Protocol--Past, Present, and Future," Distributed Technology Exchange, NCCOSC RDT&E Division (NRaD), San Diego, CA, March 13-17, 1995.
13. Weaver, A. C., Simoncic, R., and McNabb, J., "Protocols for Multimedia Applications," IEEE International Conference on Advanced Teleservices and High Speed Communications Architectures," Heidelberg, Germany, September 26-28, 1994.
14. Weaver, A. C., Simoncic, R., and McNabb, J., "XTP: the Xpress Transfer Protocol," NCCOSC NRaD Workshop on Real-Time Distributed Systems," San Diego, CA, February 24, 1994.
15. Strayer, W.T., Dempsey, B.J., and Weaver, A. C., "XTP: The Xpress Transfer Protocol," Navy Distributed Command and Control Meeting, University of Virginia, Charlottesville, VA, December 7, 1992.
16. Strayer, W.T., Dempsey, B.J., and Weaver, A. C., "XTP: The Xpress Transfer Protocol," Local Computer Networks Conference, Minneapolis, MN, September 1992.

17. Weaver, A. C., "XTP: The Xpress Transfer Protocol, " Real Time Systems Symposium, Carnegie Mellon University, Pittsburgh, PA, August 1992.
18. Strayer, W.T., Dempsey, B.J., and Weaver, A. C., "XTP: The Xpress Transfer Protocol," IEEE International Workshop on Advanced Communications, Munich, Germany, March 1992.
19. Weaver, A. C., "High Speed Transfer Protocols," Wang Institute of Boston University, Boston, MA, May 17, 1991.
20. Weaver, A. C., "Local Area Networks," Society of Photo-Optic and Instrumentation Engineers, Dallas, TX, May 9, 1991.
21. Weaver, A. C., "Local Area Networks," IEEE Industrial Electronics Society IECON '89, Philadelphia, Pennsylvania, November 6, 1989.
22. Weaver, A. C., "Local Area Networks," Society of Photo-Optic Instrumentation Engineers, Boston, Massachusetts, September 5, 1989.
23. Weaver, A. C., "Local Area Networks," IEEE Industrial Electronics Society IECON '88, Singapore, October 24, 1988.
24. Weaver, A. C., "Local Area Networks," Society of Photo-optic Instrumentation Engineers, Boston, Massachusetts, September 6, 1988.
25. Weaver, A. C., "Local Area Networks," Society of Photo-optic Instrumentation Engineers, Detroit, Michigan, June 28, 1988.
26. Weaver, A. C., "Local Area Networks," IEEE Industrial Electronics Society IECON '87, Cambridge, Massachusetts, November 2-6, 1987.
27. Weaver, A. C., "Computer Networks," five Professional Development Seminars, Lockheed Engineering and Management Services Corporation, Houston, Texas, November-December 1986, and March-April, 1987.
28. Weaver, A. C., "Computer Networks," IEEE ENIX-ASIA, Singapore, October 21, 1986.
29. Weaver, A. C., "Computer Networks for Factory Communications," IEEE Industrial Electronics Society IECON '86, Milwaukee, Wisconsin, September 29, 1986.
30. Weaver, A. C., "The OSI Reference Model for Computer Networks," NASA--Johnson Space Center, Houston, Texas, August 5, 1986.
31. Weaver, A. C., "Local Area Networks," Sperry Corporation, Marine Systems Group, February 12-17, 1986.
32. Weaver, A. C., "ISO and IEEE Models for Local Area Networks," NASA-Lewis Research Center, December 13, 1985.
33. Weaver, A. C., "Local Area Computer Networks," IEEE Industrial Electronics Society IECON '85, San Francisco, California, November 18, 1985.

34. Weaver, A. C., "Advanced Computer Networking," NASA-Lewis Research Center, Cleveland, Ohio, October 7, 1985.
35. Weaver, A. C., "Computer Networks," NASA-Lewis Research Center, Cleveland, Ohio, July 24, 1985.
36. Weaver, A. C., "Computer Networks for Beginners," NASA-Lewis Research Center, Cleveland, Ohio, July 2, 1985.
37. Weaver, A. C., "Real-Time Local Area Networks," NASA-Lewis Research Center, Cleveland, Ohio, July 9, 1984.
38. Weaver, A. C., "Local Area Computer Networks," NASA-Lewis Research Center, Cleveland, Ohio, April 8, 1984.
39. Weaver, A. C., "Computer Networks," IEEE Industrial Electronics Society IECON '83, San Francisco, California, November 1983.
40. Weaver, A. C., "Microcomputer Interfaces for Process Control," IEEE Industrial Electronics Society IECON '82, Palo Alto, California, November 19, 1982.
41. Weaver, A. C., "Microcomputer Applications in Otolaryngology," Society of University Otolaryngologists, Washington, D. C., November 12, 1982.
42. Weaver, A. C., "Industrial Control Using Microprocessors," IEEE Industrial Electronics Society IECON '81, San Francisco, California, November 1981.

2.2.3 Colloquia

1. Weaver, A. C., "Distributed Computing at the Edge of the Internet," University of North Carolina at Wilmington, Wilmington, NC, April 12, 2002.
2. Weaver, A. C., "Building a Successful and Secure Enterprise," RRTC Seminar 2000.
3. Weaver, A. C., "Transitioning to Electronic Commerce: The EC Revolution," NATO Seminar, Istanbul, Turkey, June 2000.
4. Weaver, A. C., Allen, Brandt R., Simoncic, Robert, "Electronic Commerce on the Internet," CIT Headquarters, Herndon, VA, December 1, 1995.
5. Weaver, A. C., and Christie, R.W., "Design of an XTP-aware IP Router," Distributed Technology Exchange, NCCOSC, RDT&E Division (NRaD), San Diego, CA, March 13-17, 1995.
6. Weaver, A. C., Simoncic, R., and Dreke, C., "LynxOS and XTP Integration," Distributed Technology Exchange NCCOSC, RDT&E Division (NRaD), San Diego, CA, March 13-17, 1995.
7. Weaver, A. C., "Teleultrasound for the UVA Hospital," Department of telemedical Engineering, University of Virginia, Charlottesville, VA, February 24, 1995.
8. Weaver, A. C., "High Speed Transport Protocols," Department of Systems Engineering, University of Virginia, October 1992.

9. Weaver, A. C., "The Xpress Transfer Protocol," MCNC, Research Triangle Park, NC, September 16, 1991.
10. Weaver, A. C., "Local Area Networks for Real-time Systems," Department of Computer Science, Virginia Tech, Blacksburg, Virginia, November 9, 1988.
11. Weaver, A. C., "The IEEE Local Area Network Standards," Department of Computer Science, Washington University, St. Louis, Missouri, October 23, 1985.
12. Weaver, A. C., "Local Area Networks," Institute for Defense Analyses, Alexandria, Virginia, July 9, 1985.
13. Weaver, A. C., "Trends in Local Area Network Design," Distinguished Lecturer Series, Florida Atlantic University, Boca Raton, Florida, November 15, 1984.
14. Weaver, A. C., "Real-Time Computer Communication Networks," Department of Computer Science, Washington University St. Louis, Missouri, April 1983.
15. Weaver, A. C., Knight, J. C., Pratt, T. W., and Reynolds, P. F., "The Critical Real-Time Systems Laboratory," NASA-Langley Research Center, Hampton, Virginia, November 5, 1982.
16. Weaver, A. C., Knight, J. C., Pratt, T. W., and Reynolds, P. F., "The Critical Real-Time Systems Laboratory," General Electric Co., Charlottesville, Virginia, October 29, 1982.
17. Weaver, A. C., "Microcomputer Networks," Department of Biomedical Engineering, University of Virginia, Charlottesville, Virginia, October 1982.
18. Weaver, A. C., "Microcomputer Applications," Junior Science and Humanities Symposium, University of Virginia, Charlottesville, Virginia, March 1, 1982.
19. Weaver, A. C., "Issues in Computer Communication Network Design," General Instruments Corporation, Baltimore, Maryland, July 23, 1981.
20. Weaver, A. C., "Medical Decision Making Using Microcomputers," Department of Electrical Engineering and Computer Science, University of Santa Clara, Santa Clara, California, May 29, 1980.
21. Weaver, A. C., "Quantitative Medical Decision Aids Utilizing Microprocessors," Department of Computer Science, Washington University, St. Louis, Missouri, April 1979.
22. Weaver, A. C., "Fundamentals of Computer Science," Bath County Program for the Gifted, Hot Springs, Virginia, March 9-10, 1979.
23. Weaver, A. C., "Microprocessors and Industrial Process Control," NASA-Langley Research Center, Hampton, Virginia, February 1979.
24. Weaver, A. C., "Industrial Control and Microprocessor Technology," Department of Computer Science, Pennsylvania State University, University Park, Pennsylvania, January 1979.

25. Weaver, A. C., "Microprocessors and Microcomputers," Department of Management Analysis and Systems Development, Office of the Governor, Richmond, Virginia, December 1978.
26. Weaver, A. C., "Using Microcomputers to Teach Computer Science," Virginia Association of Educational Data Systems, Richmond, Virginia, September 1978.

2.2.4 ACM National Lectures -- 1986-1989

University of Houston
University of Houston at Clear Lake
Houston ACM Chapter
Old Dominion University
Milwaukee ACM Chapter
University of Wisconsin at Eau Claire
Chicago ACM Chapter
Cincinnati ACM Chapter
Columbus ACM Chapter
Dayton ACM Chapter
Tulane University
Louisiana State University
Vanderbilt University
Colorado State University
Pikes Peak Colorado Chapter
Wright State University
Indiana University
Purdue University
Central Indiana Chapter
Baltimore ACM Chapter
University of Wisconsin at La Crosse
University of Wisconsin at Platteville
Clarke College
College of William and Mary
Old Dominion University

3. UNIVERSITY SERVICE (University of Virginia)

3.1 Administrative

Chairman, Department of Computer Science, 1984-85
Associate Chair, Department of Computer Science, 2015-20
Co-Director of CS Graduate Program, 2015-20
Immediate Past Chair, UVA Faculty Senate, 2018-19
Chair, UVA Faculty Senate, 2017-18
Chair-elect, UVA Faculty Senate, 2016-17
Director, University of Virginia Applied Research Institute, 2007-14
Founding Director, UVA Applied Research Institute, 2007-
Founding Director and Faculty Liaison, UVa Applied Research Institute, 2014-
Director, Computer Science Corporate Partners Program, Department of Computer Science, 2000-06

3.2 Committees

Chair, CS Graduate Studies Committee
Member, CS Graduate Admissions Committee
Member, CS Teaching Evaluations Committee (evaluating ten faculty members)
Member, CS Operations Committee
Member, CS Chair's Advisory Committee
Member, SEAS Graduate Studies Committee
Member, SEAS Distinguished Fellowship Evaluation Committee
Member, UVA Cyber Innovation and Society Initiative (CISI)
Immediate Past Chair, Faculty Senate, 2018-19
Immediate Past Chair, Faculty Senate Executive Council, 2018-19
Chair, Faculty Senate Executive Council, 2017-18
Member, Faculty Senate Academic Affairs Committee, 2017-19
Member, Faculty Senate Diversity, Inclusion and Engagement Committee, 2017-19
Member, Faculty Senate Faculty Grievance Committee, 2017-19
Member, Faculty Senate Faculty Recruitment, Retention, Retirement and Welfare Committee, 2017-19
Member, Faculty Senate Finance Committee, 2017-19
Member, Faculty Senate Policy Committee, 2017-19
Member, Faculty Senate Research, Teaching and Scholarship Committee, 2017-19
Member, Deans Working Group, 2017-18
Member, UVA Bicentennial Commission, 2017-18
Member, UVA Athletics Advisory Board, 2016-18
Chair, SEAS Promotion and Tenure Committee, 2014-15
Member, SEAS Promotion and Tenure Committee, 2012-2015
University Committee on Promotion and Tenure, 2003-06
Chair, SEAS Promotion and Tenure Committee, 1998-99
Member, SEAS Promotion and Tenure Committee, 1996-1999
Member, Faculty Senate, 2003-
Member, Faculty Senate Executive Council, 2009-
Chair, SEAS Faculty Council, 2003-
Chair, CS Space and Infrastructure Committee, 2014-
Member, SEAS New Financial Model Committee, 2014-
Member, University Committee on Information Technology, 2014-
CS PhD Qualifying Exam Review Committee, 2013
UVa President's Committee on Privacy, 2013

Member, CS Chair Search Committee, 2012
Organizer, Faculty Senate New Senator Orientation, 2011-
Computing Equipment and Professional Staff, 2005-06
Chair, Computing Infrastructure Committee, 2005-06
Chair, CS Faculty Search Committee, 2004-05
Computer Science Program at the UVA-Wise, 2004-07
University Committee on Information Technology (UCIT), 1995-2000
Whitaker Executive Committee, Biomedical Engineering, 1998-2000
UVA Digital Directions Speaker's Series, 1997-2000
Biomedical Engineering Chair Review, 1997
University Committee on Information Technology (UCIT), 1995-2000.
UCIT Subcommittee Chair on Multimedia Technology, 1995-1996
Vice-President's Committee on UVA Networking, 1995-1999
Graduate Studies Committee, 1994-1997
Graduate Admissions Committee, 1991-1993
University Computer Policy Committee, 1988-1991
Computer Facilities Committee, 1989-1995
Chairman, Computer Science Computer Policy Committee, 1987-1988
Dean's Research Advisory Committee, 1986-1988
Research Director, Department of Computer Science, 1985-1987
Faculty Forum for Scientific Research, 1983-1984
SEAS Ad Hoc Committee on Computing, 1978-1981
SEAS Computers and Engineering Advisory Committee, 1978-1981
SEAS Open House Committee, 1978-1982
Academic Computing Center Committee for Hardware Evaluation, 1981-1982
Academic Computing Center Committee on Local Data Networks, 1980-1981
Vice-President's Committee on Office Automation, 1980
University Committee on Microcomputer Selection, 1982
University Committee on Computers, 1978-82

3.3 Instruction

Computer Science 101 - Introduction to C++ Program Design
Computer Science 120 - Introduction to Business Computing
Computer Science 270 - Pascal Programming
Computer Science 352 - Advanced Programming and Data Structures
Computer Science 361 - Computer Organization and Assembly Language Programming
Computer Science 384 - Microcomputer Laboratory
Computer Science 453 - Electronic Commerce Technologies
Computer Science 454 - Operating Systems
Computer Science 484 - Digital Computer Systems Laboratory
Computer Science 457 - Computer Networks
Computer Science 551 - Electronic Commerce
Computer Science 551 - Federated Trust Systems
Computer Science 551 - Trustworthy Computing
Computer Science 584 - Microcomputer Systems Design
Computer Science 651 - Federated Trust Systems
Computer Science 651 - Trustworthy Computing
Computer Science 656 - Operating Systems
Computer Science 755 - Operating Systems
Computer Science 757 - Computer Networks

Computer Science 851 - Local Area Networks
Computer Science 851 - Advanced Computer Networks
Computer Science 4753 – Electronic Commerce
Computer Science 2190 – Research Seminar
Computer Science 5501 – Electronic Commerce
Computer Science 6190 – Research Seminar
Computer Science 5501 – Special Topics in Computer Science (eCommerce)
Computer Science 6501- Special Topics in Computer Science (eCommerce)
ENGR 390 - Electronic Commerce (Rodman Scholars Seminar Series)

4. SPONSORED RESEARCH

4.1 Government- and Industry-Sponsored Research

1. Jack Davidson, Cody Fleming, Deborah Johnson, Mary Lou Soffa, Alfred Weaver, “The Future of an Informed Society,” Knight Foundation, 2018-2020, \$100,000 (submitted).
2. Jack Davidson, Cody Fleming, Deborah Johnson, Mary Lou Soffa, Alfred Weaver, “Institute for Cyber Innovation and Society (ICIS),” UVA Pan-University “Explore to Build” program, 2018-19, \$100,000.
3. Jack Davidson, Cody Fleming, Deborah Johnson, Mary Lou Soffa, Alfred Weaver, “Cyber Technology for the Benefit of Society,” SEAS Dean’s Office, 2017-18, \$50,000.
4. Stephen Turner (technical PI) and Alfred C. Weaver (administrative PI), “Bioinformatics,” \$100,000, Signature Science, 2013-14.
5. Alfred C. Weaver, Dwight Dart, Robert Weikle, Joan Bienvenue, Anthony Gadiant, “Creation and Detection of 3D Printed Firearms Components,” Army Research Office, \$49,000, 8/15/13-8/14/14.
6. Weaver, A.C., “A Scientometric Analysis of Literature from Eastern Europe,” Battelle Memorial Institute, \$14,668, 8/1/12—7/31/13.
7. Weaver, A.C. and Gadiant, A.J., “Eastern European Scientometric Analysis (Task 3),” Battelle Memorial Institute, \$125,000, 12/1/11—8/31/12.
8. Weaver, A.C. and Gadiant, A.J., “Eastern European Scientometric Analysis (Tasks 1 and 2),” Battelle Memorial Institute, \$50,636, 12/1/11—8/31/12.
9. Weaver, A.C., “Crowdsourcing the Crisis,” DoD Defense Energy Office, \$54, 273, 9/1/10—8/31/11.
10. Calhoun, B.H., Blalock, T.N., and Weaver, A.C., “Secure Mobile Computing,” National Science Foundation, (submitted through WICAT with Barry Horowitz as PI), \$200,000, 4/1/08—3/31/09.
11. Weaver, A.C., “Guaranteed Data Integrity in the GIG-NCES Environment,” Assett Inc., Manassas, VA, \$375,000, 2007-09.
12. Weaver, A.C., “Secure e-Commerce: A Modular Course Supported by Virtual Laboratories,” National Science Foundation, 9/1/07—8/31/10, \$498,291.
13. Calhoun, B.H., Blalock, T.N., and Weaver, A.C., “Secure Mobile Computing,” National Science Foundation, (submitted through WICAT with Barry Horowitz as PI), \$200,000, 4/17/07—4/16/08.
14. Weaver, A.C., “Crosspoint: Collaboration Tools for the 21st Century,” National Technology Alliance, \$150,000, 1/29/07—5/31/08.
15. Weaver, A.C., “Guaranteed Data Integrity in the GIG-NCES Environment,” Assett Inc., Manassas, VA, \$30,000, 4/15/06—10/15/06.

16. Sullivan, Kevin J., Horowitz, Barry M., Johnson, Deborah G., Jones, Anita K., Lorenz, David H., and Weaver, Alfred C. (senior personnel), "IGERT: End-To-End Trustworthy Computing Systems," National Science Foundation, \$2,000,000, 2007-2012.
17. Weaver, A.C., "Data Delivery Optimization and Security," Aerospace Corporation, \$100,000, 2006-07.
18. Weaver, A.C., "Trustworthy Computing: A Deep Dive into Medical Data Privacy and Security," Microsoft Research, \$50,000, 2006-07.
19. Weaver, A.C., "A Comparison of Learning Outcomes When Using the Tablet PC," Microsoft Research, \$50,000, 2004-06.
20. Weaver, A.C., "Trustworthy Computing," Microsoft Research, \$50,000, 2004-06.
21. Weaver, A.C., "Advancing Cyber Security via .NET," Microsoft Research, \$200,000, 2004-06.
22. Weaver, A.C., "REU Site: Creating Computer Applications for Medicine," National Science Foundation, Research Experience for Undergraduates, \$298,775, 2005-07.
23. Weaver, A.C., "Digital Government," Internet Technology Innovation Center, \$10,000, 2004.
24. Weaver, A.C., "IT Education in Virginia," National Science Foundation, subcontract to Virginia Community College System, \$33,113 (\$200,000 total), 2003-04, PI: Michael Peterson, VCCS.
25. Weaver, A. C., "Wireless Devices and Web Services in the CS Curriculum," Microsoft Research, \$30,000, 2003-04.
26. Weaver, A.C., "Federated, Secure Trust Networks for Distributed Healthcare IT Services," Microsoft Research, \$200,000, 2002-04.
27. Weaver, A.C., "A Virtual Laboratory for Electronic Commerce," UVa Teaching + Technology Initiative, 8/26/02—8/25/04, \$20,000.
28. Weaver, A. C., "Laboratory for Electronic Commerce," National Science Foundation, 12/1/01 - 11/30/03, \$75,000.
29. Weaver, A. C., "MatchMaker 2002," Virginia's Center for Innovative Technology, 12/1/01 - 11/30/02, \$30,000.
30. Weaver, A. C., French, J.C., "Internet Technology Innovation Center," Virginia's Center for Innovative Technology, 9/1/98—6/30/04, \$2,500,000.
31. Weaver, A. C., "Common Infrastructure Design and Benchmarking," Lockheed Martin, 3/1/01 - 2/28/02, \$50,000.
32. Weaver, A. C., "Web-based Employee Training," American Woodmark, 8/1/00 - 7/31/01, \$5,000.
33. Weaver, A. C., "Benchmarking Industry Best Practices," NetGuilds, Inc., 3/1/01 - 2/28/02, \$50,000.

34. Weaver, A. C., French, J.C., "Internet Visioning for Advance Auto," Advance Auto, 1/7/00 - 12/29/00, \$18,000.
35. Weaver, A. C., "Porting Matchmaker to SQL/ Matchmaker Enhancements," Virginia's Center for Innovative Technology, 12/1/00 -01/30/01, \$50,000.
36. Weaver, A. C., "Intelligent Internet Search Agent," Pete Brothers, 06/30/00 - 05/31/01, \$6,000.
37. Weaver, A. C., "Intelligent Internet Search Agent," Virginia's Center for Innovative Technology, 06/30/00 - 05/31/01, \$24,000.
38. Weaver, A. C., "Outreach Virginia," Office of the Vice-President for Research and Public Service, 7/26/99 - 6/30/00, \$12,000.
39. Weaver, A. C., "MatchMaker2000," Virginia's Center for Innovative Technology, 03/01/00 - 02/28/01, \$30,000.
40. Weaver, A. C., "MatchMaker," Virginia's Center for Innovative Technology, 7/1/99 - 6/30/00, \$30,000.
41. Weaver, A. C., "Virginia IT&T Resources Database," Virginia's Center for Innovative Technology, 7/1/99 - 12/31/00, \$30,000.
42. Weaver, A. C., "Brainpower for Business Market Study," Virginia's Center for Innovative Technology, 6/1/99--5/31/00, \$10,000.
43. Weaver, A. C., "Aerospace and Transportation Technologies Website," Virginia's Center for Innovative Technology, 12/1/98--11/30/99, \$6,000.
44. Weaver, A. C., "Web Enabled Corporate Database Design," Virginia's Center for Innovative Technology, 6/1/98--5/31/00, \$20,000.
45. Weaver, A. C., "Implementation of the CIT Corporate Database," Virginia's Center for Innovative Technology, 6/1/98--5/31/00, \$55,000.
46. Weaver, A. C., "Corporate Database Implementation on the WWW," Virginia's Center for Innovative Technology, 6/1/98--5/31/00, \$55,000.
47. Weaver, A. C., "Client Registration System," Virginia's Center for Innovative Technology, 6/1/98--12/31/99, \$30,000.
48. Weaver, A. C., "Internet Software Laboratory," Virginia's Center for Innovative Technology, 7/1/98--12/31/99, \$49,738.
49. Weaver, A. C., "Electronic Survey of CIT's Economic Impact," Virginia's Center for Innovative Technology, 5/1/98--4/30/99, \$21,985.
50. Weaver, A. C., "Expansion of Brainpower for Business," Virginia's Center for Innovative Technology, 5/1/97--12/31/98, \$13,700.

51. Weaver, A. C., "BusinessBuilder: Tools for Electronic Commerce," Virginia's Center for Innovative Technology, 7/1/97--6/30/99, \$95,000.
52. Weaver, A. C., "MatchMaker: Expanding the Technology Workforce," Virginia's Center for Innovative Technology, 7/1/97--6/30/99, \$95,000.
53. Weaver, A. C., "WWW Business Innovations Contest," Virginia's Center for Innovative Technology, 7/96--6/97, \$40,000.
54. Weaver, A. C., "Establishing a Regional IT&T Economy for Central Virginia," Virginia's Center for Innovative Technology, 11/1/96--5/31/97, \$1,200.
55. Weaver, A. C., "Focus Group on Workforce Education," Virginia's Center for Innovative Technology, 11/16/96--5/31/97, \$500.
56. Weaver, A. C., "CIT Technology Institute," Virginia's Center for Innovative Technology, 7/96--6/97, \$58,500.
57. Weaver, A. C., and Grimshaw, A.S., "Real-Time Communications for Distributed Systems," Office of Naval Research, 9/95--9/96, \$200,000.
58. Jokl, James A., Grimshaw, A.S., Liebeherr, J., and Weaver, A. C., "Networks, Middleware, and Applications for Next Generation Metasystems," National Science Foundation, 2/1/97--1/31/99, \$350,000.
59. Weaver, A. C., "Brainpower for Business," Virginia's Center for Innovative Technology, 5/1/97--4/30/98, \$40,000.
60. Weaver, A. C., "Information Powersource," Virginia's Center for Innovative Technology, 02/01/97-01/31/98, \$41,932.
61. Weaver, A. C., "InterCom - The Internet Commerce Project," Virginia's Center for Innovative Technology, 6/1/96-5/31/97, \$84,724.
62. Weaver, A. C., French, J.C., and Liebeherr, J., "Virginia Business Intellectual Resources Guide," Virginia's Center for Innovative Technology, 2/1/96--1/31/97, \$50,828.
63. Grimshaw, A.S., Wulf, W., Weaver, A. C., and French, J.C., "Legion: the Next Logical Step Toward a Nationwide Virtual Computer," Advanced Research Projects Agency, 7/1/96--6/30/99, \$2,414,473.
64. Weaver, A. C., and Grimshaw, A., "Distributed Computing and Communications," Office of Naval Research, 4/1/95--9/30/96, \$200,000.
65. Weaver, A. C., "Secure Electronic Commerce," Crutchfield Corporation, 2/8/96--2/7/97, \$27,500.
66. Weaver, A. C., "Institute of Information Technology and Telecommunications," Virginia's Center for Innovative Technology, 1/1/96--6/30/96, \$23,000.
67. Weaver, A. C., "Institute of Information Technology and Telecommunications," Virginia's Center for Innovative Technology, 7/1/95--12/31/95, \$20,000.

68. Weaver, A. C., "Developing a WWW Presence for CIT," Virginia's Center for Innovative Technology, 9/1/95--3/30/96, \$12,000.
69. Weaver, A. C., "Virginia Technology Resources," Virginia's Center for Innovative Technology, 9/1/95--3/30/96, \$6,500.
70. Weaver, A. C., "Communications Support for Telemedicine," Virginia's Center for Innovative Technology, 7/1/94--6/30/95, \$50,000.
71. Weaver, A. C., "Communications Support for Telemedicine," Mystech Inc. and U.S. Army, 5/1/94--8/30/95, \$263,000.
72. Weaver, A. C., "Real-Time Communications for Distributed Systems," NCCOSC NRad and Office of Naval Research, 6/1/94--9/30/95, \$330,000.
73. Weaver, A. C., "Video Mail System for Personal Computers," Virginia's Center for Innovative Technology, 1/1/93--12/31/93, \$40,000.
74. Weaver, A. C., "Developing the Xpress Transfer Protocol for the IBM RISC System 6000," Virginia's Center for Innovative Technology, 1/1/93--12/31/93, \$70,000.
75. Weaver, A. C., "Video Mail System," SAIC, 9/1/92--1/31/93, \$40,000.
76. Weaver, A. C., "Development of an Ada User Interface and the Xpress Transfer Protocol for DTC-2 and SAFENET II," Office of Naval Research, 9/1/91--9/30/93, \$368,500.
77. Weaver, A. C., "A Feasibility Study of Digitized Voice Distribution via the Xpress Transfer Protocol," Virginia Center for Innovative Technology, 11/1/91--10/31/92, \$29,025.
78. Weaver, A. C., "A Feasibility Study of Digitized Voice Distribution via the Xpress Transfer Protocol," E-Systems, Inc., 7/18/91--11/30/91, \$45,000.
79. Weaver, A. C., "Developing the Xpress Transfer Protocol for the IBM RISC System 6000," International Business Machines, 7/18/91--7/31/93, \$140,000.
80. Weaver, A. C., "Communications Services for Real-Time Systems," Office of Naval Research, 4/1/91--3/31/92, \$118,000.
81. Weaver, A. C., "Enhancing the Xpress Transfer Protocol for Use in SAFENET," Office of Naval Research, 10/1/90--9/30/91, \$50,000.
82. Jones, A. K., et al., "End-to-End Systems Design," National Science Foundation, 7/1/90--6/30/94, \$5,600,000.
83. Weaver, A. C., "SAFENET: A Real-Time Local Area Network for Military and Commercial Ships," Sperry Marine Inc., 4/1/90--3/31/91, \$40,000.
84. Weaver, A. C., "Design of a SeaNET-to-SAFENET Bridge," Virginia Center for Innovative Technology, 8/1/90--7/31/91, \$26,316.

85. Weaver, A. C., "Design, Implementation, and Performance Measurement of the Xpress Transfer Protocol for SAFENET," Office of Naval Research, 10/1/89--9/30/90, \$120,882.
86. Weaver, A. C., "SAFENET: A Real-Time Communications Network for Military Ships," Virginia Center for Innovative Technology, 6/1/89--5/30/90, \$71,858.
87. Weaver, A. C., "SAFENET: A Real-Time Communications Network for Military and Commercial Ships," Sperry Marine Inc., 4/1/89--3/31/90, \$99,859.
88. Cook, R. P., Son, S. H., and Weaver, A. C., "The Starlite Project: Prototyping Real-time Software - Operating Systems, Communications Networks, Database Systems," Office of Naval Research, 10/1/88--9/30/90, \$322,512.
89. Weaver, A. C., "Real-Time Communications Using Local Area Networks," Naval Surface Warfare Center, 5/1/89--9/30/89, \$25,900.
90. Weaver, A. C., "Evaluation of the Xpress Transfer Protocol," Naval Surface Warfare Center, 2/16/89--9/30/89, \$45,494.
91. Weaver, A. C., "High-Speed Local Area Networks," Proteon Corporation, equipment donation, \$10,000.
92. Brown, D. E., Weaver, A. C., and Wiener, D. F., "Data Fusion Systems," Virginia Center for Innovative Technology, 1/1/89--12/31/89, \$19,084.
93. Brown, D. E., Weaver, A. C., and Wiener, D. F., "Data Fusion Systems," Ford Aerospace, 1 /1/89--12/31/89, \$25,000.
94. Pausch, R. A., and Weaver, A. C., "Performance Analysis Tools for Local Area Networks, Virginia Center for Innovative Technology, 10/1/88--9/30/91, \$20,184.
95. Weaver, A. C., "Performance Analysis Tools for Local Area Networks, "Contel Federal Systems, Fairfax, Virginia, 10/1/88--9/30/91, \$30,074.
96. Weaver, A. C., "SHIPNET: Real-time Communications for Ships," Institute for Information Technology, Virginia Center for Innovative Technology, 6/1/88--5/31/89, \$64,000.
97. Weaver, A. C., "Performance Analysis of Intel MAP," Intel Corporation, equipment donation, 2/1/88--1/31/89, \$26,900.
98. Weaver, A. C., "A Fiber Optic Token Ring Local Area Network to Support Real-Time Control Systems for Aircraft," NASA-Lewis Research Center, 2/1/88--1/15/89, \$40,000.
99. Weaver, A. C., "A Prototype Network for Ships," Sperry Marine Inc., 1/1/88--3/31/89, \$54,868.
100. Weaver, A. C., "Requirements and Specifications for a Real-Time Transport Protocol," National Bureau of Standards, 12/1/87--12/31/88, \$50,000.
101. Weaver, A. C., "A Token Ring Network for Ships," Institute of Information Technology, Virginia Center for Innovative Technology, 9/1/87--12/31/88, \$27,030.

102. Pratt, T. W., Reynolds, P. F., Brown, D., Cohoon, J. P., Davidson, J. W., Ortega, J. M., Pfaltz, J. L., Richards, D. S., Wartik, S. P., and Weaver, A. C., "Development Plans for an Institute for Parallel Computation," Jet Propulsion Laboratory, 7/1/87--6/30/88, \$999,999.
103. Weaver, A. C., "A Prototype Network for Ships," Sperry Marine, Inc., 4/1/87--12/31/87, \$27,030.
104. Weaver, A. C., "Performance Measurement of the GM MAP Protocol," Intel Corporation, computer equipment, 11/1/86--10/30/88, \$78,000.
105. Pratt, T., Reynolds, P. F., Weaver, A. C., et al, "A Research Center for Parallel Computing at the University of Virginia," Joint Tactical Fusion Office, Department of Defense, 9/1/86--1/15/87, \$99,000.
106. Weaver, A. C., "Developing a Token Ring Network for Ships," Proteon, Inc., Natick, Massachusetts, 7/1/86--8/31/87, \$43,925.
107. Weaver, A. C., "A Shipboard Local Area Network," Institute of Information Technology, Virginia Center for Innovative Technology, 7/1/86--8/31/88, \$50,476.
108. Weaver, A. C., "A Prototype Network for Ships," Marine Systems Division, Sperry Corporation, 5/1/86--3/31/87, \$54,101.
109. Weaver, A. C., "A Computer Science Laboratory for Operating Systems Design," Academic Computing Center Support Program, University of Virginia, 7/1/86--6/30/87, \$60,709.
110. Cook, R. P., Cohoon, J. P., Davidson, J. W., Knight, J. C., Pratt, T. W., Reynolds, P. F., and Weaver, A. C., "Equipment for Computer Science," National Science Foundation, 9/1/85--8/31/86, \$315,910.
111. Weaver, A. C., "Experiments in Distributed Computing," Institute for Defense Analyses, 5/28/85--12/31/85, \$20,000.
112. Weaver, A. C., "Local Area Network Performance Modeling," Naval Surface Weapons Center, 4/1/85--5/31/86, \$37,231.
113. Weaver, A. C., "A Research Center for Automated Local Area Network Performance Measurement," Virginia Center for Innovative Technology, Institute for Information Technology, 7/1/85--12/31/86, \$136,604.
114. Weaver, A. C., "A Research Center for Automated Local Area Network Performance Measurement," computer equipment, Intel Corporation, 7/1/85--6/30/87, \$123,280.
115. Weaver, A. C., "Fault-Tolerant Real-Time Communications Systems," NASA-Lewis Research Center, 6/16/85--6/15/86, \$45,000.
116. Weaver, A. C., "Computer Communication Networks for Hierarchical Control," NASA-Lewis Research Center, 4/1/85--5/31/86, \$60,000.
117. Weaver, A. C., "Real-Time Computer Network Communications Protocols," Virginia Center for Innovative Technology, Institute for Information Technology, 12/1/84--5/31/86, \$60,600.

118. Weaver, A. C., "Modeling the IEEE 802.5 Token Ring," Fairchild Communications and Electronics Company, 3/1/85--12/31/85, \$50,000.
119. Weaver, A. C., "Real-Time Fault-Tolerant Local Area Networks," computer equipment, Intel Corporation, 1/1/85--12/31/85, \$20,000.
120. Weaver, A. C., "Real-Time Communications for Control Systems," Dynamics and Controls Branch, NASA-Lewis Research Center, 4/1/84--5/31/85, \$68,993.
121. Weaver, A. C., "Modeling the IEEE 802.4 Token Bus Protocol," General Electric Company, 1/1/84--12/31/84, \$50,000.
122. Weaver, A. C., "Fault-Tolerant Communications Protocols," Fairchild Communications and Electronics, 1/1/84--12/31/84, \$50,000.
123. Weaver, A. C., "Performance Measurement of Ada on the Intel 432," Fairchild Communications and Electronics Company, 7/1/83--12/31/83, \$14,500.
124. Weaver, A. C., "Real-time Computer Systems for Industrial Automation," General Electric Company, 1/1/83-12/31/83, \$25,000.
125. Weaver, A. C., "Intel iAPX 432 Research Equipment," computer equipment, Intel Corporation, March 1983, \$136,000.
126. Weaver, A. C., "Communications Protocols for Avionics Busses," Fairchild Space and Electronics Company, 1/1/83-12/31/83, \$67,500.
127. Weaver, A. C., "Microcomputer Architecture and Programming Languages for Industrial Process Controllers," General Electric Company, 5/1/82-12/31/82, \$25,000.
128. Weaver, A. C., "Data Communications for Avionics Buses," Fairchild Space and Electronics Company, 5/1/82-12/31/82, \$45,000.
129. Weaver, A. C., "Microcomputer Architectures for Industrial Control," General Electric Company, 6/15/81-5/31/82, \$25,000.
130. Weaver, A. C., "Data Communications for Multi-microprocessors," Fairchild Space and Electronics, 3/1/81-5/31/82, \$50,000.
131. Weaver, A. C., "Teaching Computer Organization and Assembly Language Programming with Microcomputers," National Science Foundation, 4/1/80-9/30/82, \$29,960.
132. Weaver, A. C., "Quantitative Medical Decision Analysis," National Center for Health Services Research, 9/1/79-8/31/80, \$8,959.
133. Weaver, A. C., "A Microcomputer-based Teaching Laboratory for Computer Science," National Science Foundation, 10/1/79-3/31/82, \$38,000.
134. White, C. C., and Weaver, A. C., "The Application of Quantitative Medical Decision Aids to Medicine," National Institute for Health Services Research, 8/1/78-8/31/79, \$10,000.

4.2 Industry Gifts

Weaver, A.C., HP tc4200 Tablet PC, Hewlett-Packard, \$2,000, summer 2005.

Weaver, A. C., "NetEdge Computing," Intel Corporation, \$60,000, fall 2002.

Weaver, A. C., computing equipment from Microsoft Corporation, \$10,000, fall 2002.

Weaver, A. C., IBM T23 laptop to support .NET computing, Microsoft Corporation, \$5,000, February 2002.

5. GRADUATE STUDENT DIRECTION

5.1 Ph.D. dissertations directed:

1. Besaleva, Liliya, *Smart eCommerce Using Personalized Algorithms*, December 2017.
2. Coffman, Joel M., *Toward Practical Relational Keyword Search Systems*, May 2012.
3. Wu, Zhengping, *Federated Trust Management for Service-oriented Computing*, August 2008.
4. Lucas, Matthew T., *Efficient Data Distribution in Large-Scale Multicast Networks*, May 1998.
5. Dempsey, Bert J., *Retransmission-Based Error Control for Continuous Media Traffic in Packet-Switched Networks*, May 1994.
6. Strayer, W. Timothy, *Function-based Scheduling Theory*, May 1992.
7. Peden, Jeffery H., *Queueing Models for Token and Slotting Ring Networks*, August 1991.
8. Schult, Nancy L. (co-advisor with T. M. Sigmon), *Analytic Models of Token Ring Networks*, January 1989.
9. Pennell, James, *Message Value Metrics: A Technique for Flow Control in Computer Networks*, January 1988.
10. Yancey, John, *Object Allocation in Distributed Real-Time Systems*, May 1986.

5.2 Master of Science theses directed:

1. Coffman, Joel M., *Effective Searching of Structured Data*, May 2009.
2. Jurik, Andrew D., *Biotelemetry and Body Sensors: Enabling ECG Monitoring*, May 2009.
3. Snyder, Andrew M., *Performance Measurement and Workflow Impact of Securing Medical Data Using HIPAA Compliant Encryption in a .NET Environment*, August 2003.
4. Sublett, John, *Design of a Teleultrasound System*, May 1996.
5. Michel, Jeffrey, *Off-Host Communications Architectures*, August 1993.
6. Dempsey, Bert J., *Design and Analysis of Reliable Transport Multicast*, January 1991.
7. Fenton, John C., *User Interface for the Xpress Transfer Protocol: Design and Analysis*, January 1991.
8. Harvey, James D., *An Implementation and Analysis of Abstract Syntax Notation One and Basic Encoding Rules*, August 1989.
9. Minnich, David W., *Performance Analysis of SAE AE-9B High Speed Ring Bus*, August 1988.
10. Simonson, Randy H., *Performance Analysis of FDDI*, May 1988.

11. Strayer, W. Timothy, *Performance Analysis of GM MAP*, January 1988.
12. Peden, Jeffery, *Performance Evaluation of the IEEE 802.5 Token Ring*, January 1987.
13. Gorur, R. Mangala, *Performance Analysis of the IEEE 802.4 Token Bus*, January 1987.
14. Summers, Catherine F., *Performance Analysis of the IEEE 802.4 Token Bus Protocol*, May 1985.
15. Scott, John, *A Testbed for Distributed Operating System Development*, September 1984.
16. Butler, David, *Fault-Tolerant Protocols for Real-Time Local Area Networks*, May 1984.
17. Colvin, M. Alex, *Modeling the IEEE Token Bus*, May 1984.
18. Smith, Mark J. A., *Microcomputer Network for Communications Protocol Experiments*, January 1984.
19. Holford, John P., *Optimal Compilation of Relay Ladder Diagrams*, June 1983.
20. Albrecht, David C., *Network Protocol Design - A Simulation Approach*, December 1982.
21. Hall, Kenneth B., *A Quantitative Medical Decision-Making Aid for the Prototypical Complaint Diarrhea*, December 1981.
22. Methvin, David W., *A Unified Network Operating System*, May 1981.
23. Carson, Scott D., *A Microcomputer STAR Network*, January 1981.
24. Wyatt, Joseph, R., *Computer Automation in the Nuclear Manufacturing Industry*, January 1980.
25. Greiner, Mark A., *Hardware/Software Tradeoffs in Industrial Process Controller Design*, University of Illinois, October 1979 (co-directed with T. A. Murrell).
26. Bryant, Robert M., *A Real-time, Multi-tasking Sequence Controller for Industrial Processes*, University of Illinois, May 1979 (co-directed with T. A. Murrell).
27. Beiser, Paul S., *Finite Segment P-adic Arithmetic*, December 1978.
28. Conn, Richard L., *ARIAN - An Operating System for Microcomputers*, University of Illinois, May 1978.
29. Blanton, Robert E., *A Cross-Assembler/Simulator for a Microprocessor-based Industrial Controller*, University of Illinois, July 1977.

5.3 Master of Computer Science projects directed:

1. Burns, William, *The e-Commerce Sandbox: An Interactive Learning Tool with Real-Time Feedback*, May 2011.
2. Hutton, Shaun, *An Architecture to Preserve and View Data Pedigree*, May 2008.

3. Kurtz, Ryan, JDELTA: Delta Compression in Diverse Environments, May 2006.
4. Bui, Paul, .NET SmartCard Personal Security Services, May 2006.
5. Garback, Brian, XACML for RBAC and CaDABRA: Constrained Delegation and Attribute-based Role Assignment, December 2005.
6. Calandrino, Joseph, *Private Resource Pairing*, August 2005.
7. Chen, Xiaohui, Identity Federation in Healthcare Networks, January 2005.
8. Hu, Junzhe, Dynamic, Context-Aware Access Control, August 2004.
9. Talbert, Scott, Performance of the Real-Time Event Channel of the TAO ORB for Combat Networks, May 2002.
10. Nguyen, Quang, Data Encryption Standard Animation, January 2000.
11. Viswanathan, Arvind, *Teleultrasound*, May 1997.
12. Lucas, Matthew T., An Empirical Study of Packetized Voice Distribution Over a Campus Network, May 1995.
13. Dreke, Christopher, *Xpress Transport Protocol*, August 1994.
14. Christie, Robert, *An XTP-Aware IP Router*, May 1994.
15. Hines, Robert, Telemedicine Workstation Using ATM Networks, August 1994.
16. Street, Fraser, Design and Implementation of a Video Mail System, May 1994.
17. Werme, Paul, Navy Combat Simulation System, May 1992.
18. Sanders, Robert, Performance Analysis of the Xpress Transfer Protocol, January 1990.
19. Davis, Timothy, Video Image Distribution Using Local Area Networks, August 1989.
20. Phillips, Kelly, Graphics Interface for the FDDI Simulation System, May 1989.
21. Mitchell, Melinda, Performance Measurements of MAP and TOP, May 1989.
22. Cain, Brendan G., A Real-Time Local Area Network for On-board Aircraft Control, August 1988.
23. Garland, Douglas, Analytic Models of Hierarchical Local Area Networks, August 1987.
24. Wilson, Patricia A., Performance Evaluation of the Intel iAPX 432, May 1984.
25. Ivie, Mark, A Parametric Study of Hybrid Communications Protocols, August 1983.
26. Fischer, Anna B., Analytic Models for Hybrid Communications Protocols, May 1983.

27. Schramm, D. M., A Graphic Compiler for Relay Ladder Diagrams, January 1983.
28. Hartley, J. B., A Retargetable Translator for a Virtual Process Control Computer, January 1983.
29. Stock, Donald B., A Survey of High-Level Languages for Process Control, January 1982.
30. Wellons, Steven O., A Microcomputer-based Accounting System, May 1980.

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