



Borko Furht, Ph.D.

Chairman & Professor

Department of Computer Science & Engineering

COLLEGE OF ENGINEERING & COMPUTER SCIENCE

777 Glades Road, Boca Raton, FL 33431

Tel: 561.297.3486, Fax: 561.297.2800

Email: borko@cse.fau.edu URL: <http://www.cse.fau.edu/~borko>

Dr. Furht has over twenty five years of academic and industry experience in the field computer science and engineering. He is Professor and Chairman of the Department of Computer Science at Florida Atlantic University (FAU) in Boca Raton, Florida. He has been a PI or Co-PI of a number of large projects funded by various government agencies such as NSF, ONR, NASA, and from industrial corporations, including IBM, Motorola, Hewlett Packard, Xerox, and others. He is an author of more than 250 technical and scientific publications, including 28 books.

Fields of Specialization

Multimedia Systems, Multimedia Networking and Communications, Multimedia Compression and Coding, Video Processing, Video Over the Internet, Multimedia Security, Wireless Multimedia, Internet Engineering

Employment History

1992-present Chairman and Professor, Dept. of Computer Science and Engineering
1992-present: Professor of Computer Science and Engineering
2002: Appointed to Chairman of the CSE Department
2003-2006: Senior Advisor to VP for Research and Graduate Study
2006-2008: Senior Asst. VP for Engineering & Technology at FAU
1994-2001: Director of Multimedia Laboratory
Florida Atlantic University, Boca Raton, Florida.

Major Achievements (as a Chair and Senior Asst. VP for Engineering & Technology)

Research:

- Increased the Department's sponsored research from \$800,000 in 2002 to \$2+ millions (in 2007).
- Increased the participation of the CSE faculty in sponsored research by providing leadership and motivation, from 20% of faculty in 2002 to 80% of faculty in 2007.
- Initiated and/or led several large department's, university, and inter-university research projects:
 - Global Living Laboratory for Cyber Infrastructure Application Enablement, Joint proposal with FIU to NSF (\$2.3M over 5 years), Co-PI, (PI for FAU).
 - Center for Coastline Security Technology, Department of Navy, (\$6M, 2004-07), Co-PI.
 - One Pass to Production, Motorola (Plantation), (\$1.5M, 2003-08), PI and Co-PI,
 - Center for High Performance Computing, NSF (\$450,000, 2005-07), Co-PI. The HPC Center has been established within the CSE Department
 - One of the leaders in involving FAU in LA Grid, multi-university consortium and IBM. Initiated eight LA Grid projects at FAU.

- Consortium on Bioinformatics, one of the initiators of the proposal for the multi-university consortium including Scripps and IBM, \$20M, pending, 2007.
- Initiator and creator of the Faculty Research Incentive Program for best researchers at FAU. The program was implemented in 2005 and proved to be effective in increasing sponsored research at FAU, which grew from \$45M to \$70M per year.
- Member of the University Intellectual Property Committee. Encouraged the CSE Department's faculty to submit patent proposals, which number has been significantly increased: more than 20 patent proposals from the Department have been submitted in the last 4 years.

Academic:

- Initiated several new academic programs:
 - Bachelor in Information Engineering Technology (started in Fall 2006).
 - Weekend Master Program in CS with specialization in Internet and Web Technologies for working professionals (started in Fall 2004, so far more than 30 students graduated from the program).
 - Master Program in Information Technology and Management (jointly with College of Business), to start in Fall 2008.
 - Interdisciplinary programs in Computer Science and Engineering.
- Initiated several international programs and research collaborations with universities in Asia, Europe, and South America.
- Hired ten top-notch tenure-track assistant professors from prestigious universities.

Other:

- Established a strong Industry Advisory Board consisting of 25+ executives from local high-tech companies (2002-present) with major objectives to advise the Department on educational and research issues, assist in curriculum development and improvement, and help to identify areas of opportunity for education and research.
- Established the Industry Affiliates Program (2002-present) with a goal to provide an effective partnership between the CSE Department and members of the IT industry. Received more than \$250,000 in industry memberships from companies such as Motorola, Citrix, LexisNexis, Avocent, and M2sys.
- Effectively managed the significantly reduced academic budget by generating additional revenues from creative programs:
 - Generated \$1,000,000+ revenues from the Weekend Master Program (over 4 years).
 - Received \$250,000+ in industry memberships from the Industry Affiliates Program.
 - Received \$60,000+ for the industry training programs (Citrix, PaceMicro).
 - Received \$45,000 from Nirma University, India for graduate seminars.

1988-1992 Senior Director of Advanced Development and Vice-President of Research Modular Computer Systems (MODCOMP), Computer Division of Daimler Benz (Germany), Fort Lauderdale, Florida.

Major Achievements:

- Managed a staff of over 100 computer engineers and scientists with over \$12M annual budget and \$3M capital budget in developing high-performance real-time computers for time-critical applications in aerospace, defense, process control, simulation, and communications.
- One of the inventors of the first Tri-Dimensional real-time computer systems for the open system industry. The systems are based on real-time UNIX operating system and RISC multiprocessor architectures.
- For this development and successful introduction of this line of computer systems, promoted from a Director of Advanced Technology to Senior Director of Research and Advanced Development (1989), and Vice President of Research (1990) and Senior Director of Strategic Marketing (1991).
- The company sold 350 units of the Tri-Dimensional computers in USA, Germany, France, UK, Sweden, Singapore, and Venezuela. The prestigious customers included NASA, Jet Propulsion Laboratory, MIT, Boeing, Krupp, Hoechst, Thyssen, and Renault. The company revenues increased from \$50M in 1987 to \$75M in 1990.
- Contributed to this success of the company through the invention of a tightly-coupled multiprocessor architecture and the first real-time benchmarks in the industry.
- Presented more than 30 seminars at customer sites. These visits always resulted in a sale or created new customers. Wrote the book on “Real-Time UNIX Systems: Design and Application Guide” (Kluwer, 1991), which has been successfully used as a marketing and sales tool. More than 3000 copies of the book were sold and the book has also been translated to Japanese.
- As the executive responsible for the Advisory Board, established valuable business contacts with 15+ executives of major corporations including Motorola, Computer Products, Lockheed, NASA, and others.
- Negotiated and signed technology partnerships with several high-tech companies including Flavors Technology, IntelligenceWare, Multiflow, and Telesoft.
- Author of 2 patent inventions, 3 invention disclosures, several books, and numerous papers and technical articles.

1982-1988 Associate Professor of Electrical and Computer Engineering
University of Miami, Coral Gables, Florida
1983: Promoted from Visiting Assistant Professor to Assistant Professor
1984: Promoted from Assistant Professor to Associate Professor

1970-1982 Project Leader and Senior Scientist
Computer Systems Department, Institute “Boris Kidric”-Vinca,
Belgrade, Yugoslavia

Educational Background

- Ph.D. in Electrical and Computer Engineering
University of Belgrade, Yugoslavia, 1978.
- M.Sc. in Electrical and Computer Engineering
University of Belgrade, Yugoslavia, 1973.
- B.S.E.E. (Dipl. Eng.) in Electrical Engineering
University of Belgrade, Yugoslavia, 1970.

Instructional Experience

Graduate courses:

- Advanced Internet Engineering (developed in 2002, FAU)
- Multimedia Systems (developed in 1993, FAU)
- Multimedia System Design (developed in 1995, FAU)
- Video and Image Processing in Multimedia Systems (developed in 1995, FAU)
- Real-Time Systems (developed in 1989, University of Miami (UM))
- Parallel Computers
- Advanced Computer Architecture (developed in 1987, UM)
- Parallel Computers and Programming (developed in 1987, UM)
- Software Engineering
- Expert Systems

Undergraduate courses:

- Logic Design
- Introduction to Microcomputers
- Operating Systems
- Computer Architecture
- Microprocessor Systems
- Computer Organization and Design
- Interfacing and Communications
- Introduction to Computer Technology
- Programming Languages
- Numerical Analysis
- Assembly Language Programming

Thesis and Dissertations Supervised

Supervised 11 Ph.D. Dissertations and 16 M.Sc. theses to completion. Member of 19 Ph.D. Dissertation committees.

Ph.D. Dissertations Supervised:

- Hatim Aboalsamh, "A LISP-Oriented Computer Architecture", University of Miami, 1987.
- Lynnae Ehley, "Feedback-Based Multimedia Synchronization Technique for Distributed Systems", Florida Atlantic University, 1994.

- Raymond Westwater, "Real-Time Video Compression Using the Three-Dimensional Discrete Cosine Transform", Florida Atlantic University, 1996.
- Joe Celi, "The Interlaced Pixel Delta Video Codec for Videoconferencing on Very Low Bit Rate Transmission Lines", Florida Atlantic University, 1998.
- Oge Marques, "Content-Based Image Retrieval using Relevance Feedback," Florida Atlantic University, 2001.
- Pavani Chilamakuri, "Enhancing Video Quality Based on Psychophysical Studies of Smooth Pursuit Eye Movements," Florida Atlantic University, 2003.
- Edin Muharemagic, "Adaptive Two-Level Watermarking for Binary Document Images," Florida Atlantic University, 2004.
- Praveen Sanigepalli, "Innovative Error Resilient Techniques for MBMS Systems," Florida Atlantic University, 2005.
- Daniel Socek, "Permutation-Based Transformations for Digital Multimedia Encryption and Steganography," 2006.
- Dubravko Culibrk, "Neural Network Approach to Bayesian Background Modeling for Video Object Segmentation," 2006.
- Thomas Fernandez, "Innovative Techniques in Genetic Programming," 2006.

Major Professional Contributions

- Received as Co-PI (PI for FAU) a NSF PIRE grant for Global Living Laboratory for Cyber Infrastructure Application Enablement, in the amount of \$2.3M over 5 years, jointly with FIU (2007-2012).
- Received as Co-PI a prestigious NSF grant for creating a High-Performance Supercomputing Center at FAU in the amount of \$450,000. Leader of the research team relating to using supercomputers in video and image processing (2005-07).
- Received as a Co-PI a grant for "Center for Coastline Security Technologies," (\$6M over three years) from the Office for Naval Research (government earmark project).
- Initiated and served as a PI and Co-PI for "One Pass to Production" (Motorola's grant, \$1M over 5 years) with the major objective to reduce the product life cycle of the Motorola's phones. From 2003-07, the life cycle has been reduced from 24 months to 5 months.
- Developed a new technique for video and audio broadcasting over the Internet, referred as to IP Simulcast, which represents according to leading experts in the field, the basis for the future research in cooperative computing and peer-to-peer streaming (1997-99).
- Developed an innovative real-time video compression technique, based on adaptive 3D-DCT technique. In a number of publications, the results have showed that the technique is superior over the standard MPEG compression (1996-97).
- Performed a pioneering work in early interactive television systems, jointly with researchers from Scientific Atlanta and Hewlett Packard. Published one of the first papers in the field: B. Furht, D. Kalra, F. Kitson, A.A. Rodriguez, and W.E. Wall, "Design Issues for Interactive Television Systems", *IEEE Computer*, Vol. 28, No. 5, May 1995, pp. 25-39, which was selected by readers as one of the three best papers in 1994/95.
- Principal author of the book "Video and Image Processing in Multimedia Systems" (*Kluwer*, 1995), which is one of the first in the field, and was adapted by many universities including Stanford University as the textbook for graduate courses on multimedia.

- Founded and served as a Director of the Multimedia Laboratory at FAU, which was funded by National Science Foundation (1994).
- Founded research *Journal of Multimedia Tools and Applications*, published by Kluwer Academic Publishers (today Springer), where he currently serves as Editor-in-Chief (1994-present).
- One of the inventors of the first Tri-Dimensional real-time computer systems for the open system industry (at Modcomp, 1990). The company sold 350 units of the Tri-Dimensional computers in USA, Germany, France, UK, Sweden, Singapore, and Venezuela. The prestigious customers included NASA, Jet Propulsion Laboratory, MIT, Boeing, Krupp, Hoechst, Thyssen, and Renault.
- A principal author of the book on "Real-Time UNIX Systems: Design and Application Guide" (Kluwer, 1991), which has been successfully used as a marketing and sales tool at Modcomp. More than 3000 copies of the book were sold and the book has also been translated to Japanese.
- Co-edited the bestseller book on "Computer Architecture" published by IEEE Press (1987).
- Wrote the textbook on "Microprocessor Interfacing and Communications", published by Prentice-Hall (1986).

Publications

Summary: TOTAL: 250+ publications

Books

1. B. Furht, "Handbook of Multimedia for Digital Entertainment and Arts," *Springer Science and Business Media*, 2009.
2. B. Furht and S. Ahson, "Long Term Evolution: 3GPP LTE Radio and Cellular Technology," *CRC Press*, Boca Raton, Florida 2009.
3. B. Furht, Editor-in-Chief, "Encyclopedia of Wireless and Mobile Communications," *CRC Press*, Boca Raton, Florida, 2008.
4. B. Furht and S. Ahson, "Handbook of Media Broadcasting," *CRC Press*, Boca Raton, Florida, 2008.
5. B. Furht, Editor-in-Chief, "Encyclopedia of Multimedia," *Springer Science and Business Media*, 2006.; 2nd Edition, 2008.
6. B. Furht and D. Kirovski, "Multimedia Encryption and Authentication: Techniques and Applications," *Auerbach Publications*, 2006.
7. B. Furht and D. Kirovski, "Multimedia Watermarking Techniques and Applications," *Auerbach Publications*, 2006.
8. B. Furht, E. Muharemagic, and D. Socek, "Multimedia Encryption and Watermarking," *Springer*, 2005.
9. B. Furht and D. Kirovski, "Multimedia Security Handbook," *CRC Press*, Boca Raton, Florida, 2005.
10. B. Furht and O. Marques, Editors, "Handbook of Video Databases," *CRC Press*, Boca Raton, Florida, 2004.
11. B. Furht and M. Ilyas, Editors, "Wireless Internet Handbook," *CRC Press*, Boca Raton, Florida, 2003.

12. O. Marques and B. Furht, "Content-Based Video and Image Retrieval," *Kluwer Academic Publishers*, Norwell, MA, 2002.
13. B. Furht, "Application Service Providers – Current Status and Future Trends," *International Engineering Consortium*, Chicago, IL, 2001.
14. B. Furht, Author and Editor-in-Chief, "Handbook of Internet Computing," *CRC Press*, Boca Raton, Florida, 2000.
15. B. Furht, "The Future of Unified Messaging," *International Engineering Consortium*, Chicago, IL, 2000.
16. B. Furht, Editor-in-Chief, "Handbook of Internet and Multimedia Systems and Applications", *CRC Press and IEEE Press*, 1999.
17. B. Furht, Editor-in-Chief, "Handbook of Multimedia Computing", *CRC Press*, Boca Raton, Florida, 1999.
18. B. Furht, "Multimedia Technologies and Applications for the 21st Century", *Kluwer Academic Publishers*, Norwell, MA, 1998.
19. B. Furht, J. Greenberg, and R. Westwater, "Motion Estimation Techniques for Video Compression", *Kluwer Academic Publishers*, Norwell, MA, 1996.
20. R. Westwater and B. Furht, "Real-Time Video Compression: Techniques and Algorithms", *Kluwer Academic Publishers*, Norwell, MA, 1996.
21. B. Furht, editor, "Multimedia Systems and Techniques", *Kluwer Academic Publisher*, Norwell, MA, 1996.
22. B. Furht, editor, "Multimedia Tools and Applications", *Kluwer Academic Publisher*, Norwell, MA, 1996.
23. B. Furht and M. Milenkovic, "A Guided Tour of Multimedia Systems and Applications", Tutorial, *IEEE Computer Society Press*, 1995.
24. B. Furht, S. Smoliar, and HJ. Zhang, "Video and Image Processing in Multimedia Systems", *Kluwer Academic Publishers*, Norwell, MA, 1995.
25. B. Furht, D. Grostick, D. Gluch, G. Rabbat, J. Parker, and M. McRoberts, "Real-Time UNIX Systems: Design and Application Guide", *Kluwer Academic Publishers*, Norwell, MA, 1991, Translated in Japanese: *Nikkei Business Publications*, Tokyo, 1991.
26. B. Furht and G. Rabbat, "Handbook on Design and Applications of MODCOMP Computer Systems", *Modcomp Press*, Fort Lauderdale, Florida, 1989.
27. D.D. Gajski, V. Milutinovic, H.J. Siegel, and B. Furht, "Computer Architecture", *IEEE Tutorial*, *IEEE Computer Society Press*, 1987.
28. B. Furht and H. Parikh, "Microprocessor Interfacing and Communications with the Intel SDK-85", *Prentice-Hall*, Englewood Cliffs, New Jersey, 1986.
29. B. Furht, "The Application of Mathematical Models in Hot Strip Mill Computer Control", Monograph, *Institute Boris Kidric-Vinca*, Belgrade, Yugoslavia, 1977.
30. M. Carapic, Z. Pendic, B. Furht, and D. Veselinovic, "The Design of Computer Information Systems", *Technical Book*, Belgrade, Yugoslavia, 1974.

Journal Papers

1. D. Culibrk, O. Marques, D. Socek, H. Kalva, and B. Furht, "Neural Network Approach to Background Modeling for Video Object Segmentation, *IEEE Transactions on Neural Networks*, Vol. 18, No. 6, November 2007, pp. 1614-1627.
2. D. Socek, H. Kalva, S. Magliveras, O. Marques, D. Culibrk, and B. Furht, "New Approaches to Encryption and Steganography for Digital Videos," *Multimedia Systems*, Springer, May 2007.

3. S. Praveenkumar, H. Kalva, and B. Furht, "Error Resilient Video Over Multimedia Broadcast Multicast Services (MBNS), *Journal of Multimedia Tools and Applications*, Special Issue on Wireless Multimedia, Vol. 28, No. 2, February 2006, pp. 187-202.
4. H. Kalva and B. Furht, "Complexity Estimation of the H.264 Coded Video Bitstreams," *The Computer Journal*, Oxford University Press, June 2005.
5. B. Petljanski, H. Kalva, and B. Furht, "Complexity Reduction Tools for MPEG-2 to H.264 Video Transcoding," *WSEAS Transactions on Information Science and Applications*, Vol. 2, Issue 3, March 2005, pp. 295-300.
6. O. Marques and B. Furht, "MUSE: A Content-Based Image Search and Retrieval Using Relevance Feedback," *International Journal of Multimedia Tools and Applications*, Vol. 17, No. 1, May 2002, pp. 21-50.
7. B. Furht, J. Sheen, and Z. Aganovic, "Delivering Document Management Systems Through the ASP Approach," *Annual Review of Communications*, Vol. 54, International Engineering Consortium, Chicago, IL, Fall 2001.
8. B. Furht, "Security Issues in the ASP Systems," *Annual Review of Communications*, International Engineering Consortium, Vol. 54, Chicago, IL, Fall 2001.
9. B. Furht, R. Westwater, and J. Ice, "Multimedia Broadcasting Over the Internet: Part II - Video Compression", *IEEE Multimedia*, Vol. 6, No. 1, 1999.
10. B. Furht, R. Westwater, and J. Ice, "Video Broadcasting on the Internet," *1999 Annual Review of Communications*, Vol. 52, International Engineering Consortium, Chicago, IL, October 1999.
11. B. Furht, R. Westwater, and J. Ice, "Multimedia Broadcasting Over the Internet: Part I", *IEEE Multimedia*, Vol. 5, No. 4, 1998.
12. B. Furht, R. Westwater, and J. Ice, "A New Technique for Multimedia Broadcasting on the Internet", *Journal of Computing and Information Technology*, Special Issue on Emerging Technologies, 1998.
13. B. Furht, "Architecture and Performance Evaluation of the Mirror Memory Microprocessor", *Computer Architecture Newsletter*, March 1997, pp. 59-67.
14. R. Westwater and B. Furht, "A XYZ Algorithm for Real-Time Compression of Full-Motion Video", *Real-Time Imaging Journal*, Special Issue on Image and Video Processing in Multimedia Systems, Vol. 2, No. 1, February 1996, pp. 19-34.
15. B. Furht, "Where Are Information Superhighway Headed?" *ACM Computing Surveys*, invited paper, Vol. 27, No. 4, December 1995, pp. 552-556.
16. B. Furht, "A Survey of Multimedia Compression Techniques and Standards. Part II: Video Compression", *Real-Time Imaging Journal*, Vol. 1, No. 5, December 1995.
17. B. Furht, D. Kalra, F. Kitson, A.A. Rodriguez, and W.E. Wall, "Design Issues for Interactive Television Systems", *IEEE Computer*, Vol. 28, No. 5, May 1995, pp. 25-39.
18. B. Furht, "A Survey of Multimedia Compression Techniques and Standards. Part I: JPEG Standard", *Real-Time Imaging Journal*, Vol. 1, No. 1, April 1995, pp. 49-67.
19. B. Furht, "Are Distributed Multimedia Systems Real-Time?" *International Journal of Mini and Microcomputers*, Vol. 17, No. 2, 1995, pp. 71-76.
20. B. Furht, "Multimedia Systems: An Overview", *IEEE MultiMedia*, Vol. 1, No. 1, Spring 1994, pp. 47-59.
21. B. Furht, "Parallel Computing: Glory and Collapse", *IEEE Computer*, Vol. 27, No. 11, November 1994, pp. 74-75.
22. B. Furht and W. Halang, "A Survey of Real-Time Computing Systems", *International Journal of Mini and Microcomputers*, Vol. 16, No. 3, 1994, pp. 141-155.

23. B. Furht, "Real-Time Workstation Supports Both Development and Control", *Computer Technology Review*, Winter 1991, pp. 12-14.
24. B. Furht, "Suiting up RISC for Real-Time", *Computer Design*, September 1991, pp. 81.
25. P. Matthews and B. Furht, "Evaluating Real-Time UNIX", *Embedded Systems Programming*, Vol. 4, No. 7, July 1991, pp. 28-36.
26. P. Matthews and B. Furht, "Is a True Real-Time UNIX Finally Emerging?" *Computer Technology News*, June 1991, pp. 8.
27. D. Grostick, D.P. Gluch, and B. Furht, "REAL/IX: A Real-Time UNIX Operating System", *Nuclear Instruments and Methods*, North Holland, Vol. A293, 1990, pp. 271-275.
28. M. Hellstrom, J. Howard, M. Marschke, J. Wahlig, and B. Furht, "REAL/IX - A Unique Marriage Between UNIX and MAX 32 Operating Systems", *International Journal of Mini and Microcomputers*, Vol. 12, No. 2, 1990, pp. 42-53.
29. S. Geffin and B. Furht, "A Dataflow Multiprocessor System for Robot Arm Control," *International Journal of Robotics Research*, The MIT Press, Vol. 9, No. 3, June 1990, pp. 93-103.
30. B. Furht, J. Parker, D. Gluch, and D. Grostick, "Performance of REAL/IX - Fully Preemptive Real-Time UNIX", *ACM Operating Systems Review*, Vol. 23, No. 4, October 1989, pp. 45-52.
31. D. Gluch and B. Furht, "Fault Tolerance Strategies for High-Performance Real-Time Computers", *International Journal of Mini and Microcomputers*, Vol. 11, No. 2, 1989, pp. 24-30.
32. B. Furht and P.S. Liu, "An Advanced Laboratory for Microprocessor Interfacing and Communication", *IEEE Transactions on Education*, Vol. 32, No. 2, May 1989, pp. 124-128.
33. S. Geffin and B. Furht, "Transputer-Based Dataflow Multiprocessor for Robot Arm Control", *Microprocessors and Microsystems*, Vol. 13, No. 3, April 1989, pp. 219-226.
34. B. Furht, "A Contribution to Classification and Evaluation of Structures for Parallel Computers", *Journal of Microprocessing and Microprogramming*, March 1989, pp. 203-208.
35. G. Rabbat, B. Furht, and R. Kibler, "Three-Dimensional Computer Performance", *IEEE Computer*, Vol. 21, No. 7, July 1988, pp. 59-60.
36. B. Furht and A. Perez, "An Adaptive Real-Time ECG Compression Algorithm with Variable Threshold", *IEEE Transactions on Biomedical Engineering*, Vol. 35, No. 6, June 1988, pp. 489-494.
37. G. Rabbat, B. Furht, and R. Kibler, "Three-Dimensional Computers and Measuring Their Performance", *ACM Computer Architecture News*, Vol. 16, No. 3, June 1988, pp. 9-16.
38. B. Furht, H.A. Aboalsamh, W.H. Chia, and Y.N. Lai, "Multiple Register Window File for LISP-Oriented RISC Architectures", *Microprocessors and Microsystems*, Vol. 12, No. 4, May 1988, pp. 187-195.
39. B. Furht, "A RISC Architecture with Two-Size Overlapping Register Windows", *IEEE Micro*, Vol. 8, No. 4, April 1988, pp. 67-80.
40. B. Furht, "A Definition of Complex Instruction Set Computer (CISC) Architectures", *IEEE Computer*, Vol. 20, No. 5, May 1987, pp. 108.
41. B. Furht and V. Milutinovic, "A Survey of Microprocessor Architectures for Memory Management", *IEEE Computer*, Vol. 20, No. 3, March 1987, pp. 48-67.
42. B. Furht, M. Georgiu, and S. Cadambi, "Knowledge-Based System for Student Advising", *IEEE Technical Comm. on Computer Education*, Vol. 4, No. 2, Fall 1987.
43. S. Geffin, T. Burges, and B. Furht, "The Expert System for Career Planning: ACES", *Journal of Microcomputer Applications*, Vol. 6, No. 3, 1987, pp. 71-77.
44. B. Furht, "Evaluation and Selection of 16-Bit Microprocessors", *International Journal of Mini and Microcomputers*, Vol. 8, No. 1, January 1986, pp. 14-25.

45. V. Milutinovic, W. Venners, V. Eigle, and B. Furht, "A Test Package for Bit-Slice and Standard-Cell Microprocessor Design", *International Journal of Mini and Microcomputers*, Vol. 7, No. 3, 1985, pp. 60-66.
46. B. Furht and P. Lee, "Efficient Software Driver for 9511 Arithmetic Processor Implementation", *IEEE Micro*, Vol. 4, No. 3, June 1984, pp. 7-19.
47. B. Furht, "Software Engineering in Microprocessor's Environment", *International Journal of Mini and Microcomputers*, Vol. 4, No. 2, April 1982, pp. 33-39.
48. B. Furht, "The Application of the RMX/80 in Multimicroprocessor System for Digital Signal Processing", *Microprocessing and Microprogramming*, Vol. 9, No. 1, January 1982, pp. 7-15.
49. B. Furht and D. Petkovic, "A Procedure for Multimicroprocessor System Testing During Development", *Microprocessors and Microsystems*, Vol. 5, No. 7, September 1981, pp. 313-317.

Refereed Conference Proceedings

1. G. Leon, H. Kalva, and B. Furht, "Video Identification using Video Tomography," The IEEE International Conference on Multimedia & Expo, Cancun, Mexico, June 2009.
2. S.M. Sadjadi, S.-C. Chen, B. Furht, P. Martinez, S. Graham, S. Luis, J. Caraballo, and Y. Deng, "PIRE: A Global Living Laboratory for Cyberinfrastructure Application Enablement," Proceedings of the Tapia Celebration of Diversity in Computing (Tapia'09), Portland, Oregon, April 2009.
3. H. Kalva, G. Leon, and B. Furht, "3D Video Quality Evaluation with Depth Quality Variations," Proceedings of the 3DTV Conference, Istanbul, Turkey, May 2008, pp. 301-304.
4. H. Kalva, L. Christodoulou, and B. Furht, "Evaluation of 3DTV Service Using Asymmetric View Coding Based in MPEG-2," Proceedings of the IEEE 3DTV Conference, Kos Island, Greece, May 2007, pp. 1-4.
5. D. Socek, H. Kalva, S. Magliveras, O. Marques, D. Culibrk, and B. Furht, "A Permutation-Based Correlation Preserving Encryption Method for Digital Video," Proceedings of the International Conference on Image Analysis and Recognition ICIAR 2006, Povia De Varzim, Portugal, September 2006.
6. E. Muharemagic and B. Furht, "An Innovative Pixel Scoring Method for Watermarking of Binary Document Images," Proceedings of the IEEE International Conference on Multimedia & Expo, Toronto, Canada, July 2006, pp. 1589-1592.
7. H. Kalva, L. Christodoulou, L. Mayron, O. Marques, and B. Furht, "Challenges and Opportunities in Video Coding for 3D TV," Proceedings of the IEEE International Conference on Multimedia & Expo, Toronto, Canada, July 2006, pp. 1689-1692.
8. D. Socek, D. Culibrk, H. Kalva, O. Marques, and B. Furht, "Permutation-Based Low Complexity Alternate Coding in Multi-View H.265/AVC," Proceedings of the IEEE International Conference on Multimedia & Expo, Toronto, Canada, July 2006, pp. 2141-2144.
9. P. Sanigepalli, H. Kalva, and B. Furht, "Using P2P Networks for Error Recovery in MBMS Applications," Proceedings of the IEEE International Conference on Multimedia & Expo, Toronto, Canada, July 2006, pp. 1685-1688.
10. H. Kalva, L. Christodoulou, L. Mayron, O. Marques, and B. Furht, "Design and Evaluation of a 3D Video System Based on H.264 View Coding," Proceedings of the IEEE International Conference on Multimedia & Expo, Toronto, Canada, July 2006.
11. P. Sanigepalli, H. Kalva, and B. Furht, "Adaptive Group Based Interblock Refresh Technique for MBMS Systems," Proceedings of the International IEEE Conference on Consumer Electronics, January 2006, pp. 451-452.

12. D. Culibrk, O. Marques, D. Socek, H. Kalva, and B. Furht, "A Neural Network Approach to Bayesian Background Modeling for Video Object Segmentation," Proceedings of the International Conference on Computer Vision Theory and Applications, VISAAP 2006, Setubal, Portugal, February 2006.
13. H. Kalva and B. Furht, "Hypercube Based Interview Prediction for Multi-view Coding," Proceedings of the 2nd Workshop on Immersive Communication and Broadcast Systems, ICOB 2005, Berlin, Germany, October 2005.
14. D. Socek, S. Li, S. Magliveras, and B. Furht, "Enhanced 1-D Chaotic Key-Based Algorithm for Image Encryption", Proceedings of the First International Conference on Security and Privacy for Emerging Areas in Communication Networks - SecureComm2005, Athens, Greece, September 2005., pp. 406-407.
15. D. Culibrk, O. Marques, H. Kalva, and B. Furht, "A Hybrid Color-Based Foreground Object Detection Method for Automated Marine Surveillance", Proceedings of the International Conference on Advanced Concepts for Intelligent Vision Systems, Antwerp, Belgium, September 2005.
16. P. Sanigepalli, H. Kalva, and B. Furht, "An Improved Video Codec Supporting Error Resilience and Resource Adaptation," Proceedings of the International IEEE Conference on Consumer Electronics, January 2005, pp. 311-312.
17. P. Sanigepalli, H. Kalva, and B. Furht, "Application of Video Error Resilience Techniques in MBMS Systems," Workshop on Wireless Multimedia, Proceedings of the IEEE Int. Symposium on Multimedia Software Engineering, December 2004, pp. 507-512.
18. A. Asaduzzaman, I. Mahgoub, P. Sanigepalli, H. Kalva, R. Shankar, and B. Furht, "Cache Optimization for Mobile Devices Running Multimedia Applications," Workshop on Wireless Multimedia, Proc. of the IEEE Int. Symposium on Multimedia Software Engineering, December 2004, pp. 499-506.
19. J.H. Greenberg, D. Dankel, and B. Furht, "A Content Oriented Architecture for Consumer-to-Business E-Commerce," Proceedings of the 6th Int. Conference on Enterprise Information Systems, Porto, Portugal, April 2004.
20. X. Li and B. Furht, "An Approach to Image and Video Compression using Three-Dimensional DCT," Proceedings of the Visual 2003 Conference, Miami, Florida, September 2003.
21. B. Furht, K. Gustafson, H. Huang, and O. Marques, "An Adaptive Three-Dimensional DCT Compression Based on Motion Analysis", ACM Symposium on Applied Computing SAC 2003, March 2003.
22. X. Li, S.-C. Chen, M.-L. Shyu, and B. Furht, "Image Retrieval by Color, Texture, and Spatial Information," Proceedings of the 8th International Conference on Distributed Multimedia Systems (DMS'2002), San Francisco, September 2002.
23. X. Li, S.-C. Chen, M.-L. Chyu, and B. Furht, "A Novel Hierarchical Approach for Image Retrieval Using Color and Spatial Information," *International Symposium on Information Systems and Engineering (ISE'2002)*, San Diego, California, July 2002.
24. X. Li, S.-C. Chen, M.-L. Chyu, and B. Furht, "An Effective Content-Based Visual Image Retrieval System," Proceedings of *IEEE Compsac*, August 2002, pp. 914-919.
25. F. M. Costa, O. Marques, and B. Furht, "Improving the Performance of Content-Based Image Retrieval Systems with Color Image Processing Tools," *IASTED International Conference on Signal and Image Processing (SIP 2002)*, Kauai, Hawaii. August 2002.

26. O. Marques, and B. Furht, "Combining Clustering and Relevance Feedback Techniques in Content-Based Image Retrieval", *IASTED International Conference on Internet and Multimedia Systems and Applications (IMSA2002)*, Kauai, Hawaii. August 2002.
27. B. Furht, J. Shin, and Z. Aganovic, "Internet-Based Delivery and Deployment of Document Management Systems," *Proc. of the 34th IEEE Int. Hawaii Conference on System Sciences*, January 2001.
28. O. Marques, F. Costa, and B. Furht, "Content-Based Image Search and Retrieval Using Relevance Feedback," *Proc. of the IASTED Int. Conference on Internet and Multimedia Systems and Applications*, Las Vegas, Nevada, November 2000.
29. B. Furht, C. Phoenix, J. Yin, and Z. Aganovic, "An Innovative Architecture for Application Service Providers," *Proc. of the 33th IEEE Int. Hawaii Conference on System Sciences*, January 2000.
30. B. Furht, R. Westwater, and J. Ice, "A New Approach for Radio and Television Broadcasting Over the Internet," *Proceedings of IEEE Conference on Multimedia Systems*, Florence, Italy, June 1999. pp. 553-558.
31. O. Marques and B. Furht, "Issues in Designing Video Databases," *Third Int. Conference on Internet and Multimedia Systems and Applications*, Nassau, Bahamas, October 1999.
32. X. Li and b. Furht, "Design of Digital Libraries," *Third Int. Conference on Internet and Multimedia Systems and Applications*, Nassau, Bahamas, October 1999.
33. B. Furht, Y. Weng, and J. Celi, "Interactive Progressive Encoding System for Transmission of Complex Images", *Proc. of SPIE Symposium on Multimedia Storage and Archiving Systems*, Boston, MA, November 1998.
34. B. Furht and P. Saksobhavit, "A Fast Content-Based Video and Image Retrieval Technique Over Communication Channels," *Proc. of SPIE Symposium on Multimedia Storage and Archiving Systems*, Boston, MA, November 1998.
35. B. Furht, R. Westwater, and J. Ice, "An Innovative Technique for Multimedia Broadcasting on the Internet", *Proc. of the IEEE Conference on Software in Telecommunications and Computer Networks SoftCOM'98*, Split, October 1998.
36. B. Furht, "Processor Architectures for Multimedia: A Survey", invited paper, *Proceedings of Multimedia Modeling Conference*, World Scientific, Singapore, November 1997, pp. 89-109.
37. B. Furht, "Multimedia Applications on the Internet", *Proceedings of the International Engineering Consortium*, Chicago, IL, October 1997, also the chapter in the book "The Internet and Telecommunications: Architectures, Technologies, and Business Development", 1998.
38. R. Westwater and B. Furht, "Three-Dimensional DCT Video Compression Technique Based on Adaptive Quantizers", *Second IEEE Int. Conference on Engineering of Complex Computer Systems*, Montreal, Canada, October 1996, pp. 189-198.
39. B. Furht, "Interactive Television Systems", *Workshop on Multimedia Applications, ACM CSE/SAC Conference*, Philadelphia, PA, February 1996.
40. H. Kalva and B. Furht, "Techniques for Improving the Capacity of Video-On-Demand Systems", *29th Hawaii Int. Conference on System Sciences*, Wailea, Hawaii, January 1996, pp. 308-315.
41. R. Westwater and B. Furht, "The Design of an Object-Oriented Multimedia Kernel, *Proc. of the IASTED/ISMM Conference on Distributed Multimedia Systems and Applications*, Honolulu, Hawaii, August 1994, pp. 176-179.
42. L. Ehley, B. Furht, and M. Ilyas, "Evaluation of Multimedia Synchronization Techniques", *Proc. of the IEEE Conference on Multimedia Computing and Systems*, Boston, MA, May 1994, pp. 514-519.

43. P. Monnes and B. Furht, "Parallel JPEG Compression Algorithms", *Proc. of the IEEE Southeastcon*, Miami, Florida, April 1994. pp. 375-379.
44. B. Furht, "Real-Time Issues in Distributed Multimedia Systems", *Proc. of Second Workshop on Parallel and Distributed Real-Time Systems*, Cancun, Mexico, April 1994, pp. 88-97.
45. B. Furht, "Real-Time Computer Systems: Current and Future Trends", invited plenary paper, *Proceedings of the First IEEE Workshop on Real-Time Applications*, New York, May 1993, pp. 1-6.
46. B. Furht, "The Design of a Real-Time System for Simulators and Trainers", *Proceedings of the First IEEE Workshop on Real-Time Applications*, New York, May 1993, pp. 18-24.
47. B. Furht, "Performance Evaluation of REAL/IX, a Real-Time UNIX Operating System", *Proceedings of the Tenth IEEE Workshop on Real-Time Operating Systems and Software*, New York, May 1993.
48. B. Furht, "A Reconfigurable Real-Time System for Parallel Processing", *Proceedings of the IEEE Workshop on Parallel and Distributed Real-Time Systems*, Newport Beach, CA, April 1993, pp. 159-167.
49. B. Furht, "The Reality of a Real-Time UNIX Operating System", *Proceedings of the NATO Advanced Study Institute on Real-Time Computing*, Sent Marteen, October 1992.
50. B. Furht, "The Design of a RISC-Based Real-Time Multiprocessor System for Real-Time Applications", *Proceedings of the RealTime92 Symposium*, Stuttgart, Germany, June 1992.
51. B. Furht, "Designing RISC-Based Real-Time Multiprocessors", *Proceedings of the First International Conference on the Design of RISC-Based Systems RISC'92*, San Jose, CA, February 1992.
52. B. Furht, "Choosing a RISC Processor for Real-Time Applications", *Proceedings of the First International Conference on the Design of RISC-Based Systems RISC'92*, San Jose, CA, February 1992.
53. B. Furht and R. Luken, "The Space Shuttle Launch Computer Control System at NASA Kennedy Space Center", *Proceedings of Euromicro 91 Workshop on Real-Time Systems*, Paris, France, June 1991, pp. 184-192.
54. B. Furht, D. Gluch, J. Parker, P. Matthews, and D. Joseph, "The Real/Star 2000: A High-Performance Multiprocessor Computer for Telemetry Applications", *Proceedings of the 1991 International Telemetry Conference*, Las Vegas, Nevada, November 1991.
55. B. Furht et al. "A Tool for Performance Evaluation of Real-Time UNIX Operating Systems", *Proceedings of the 1991 International Telemetry Conference*, Las Vegas, Nevada, November 1991.
56. B. Furht, D. Joseph, D. Gluch, and J. Parker, "Open Systems for Time-Critical Applications", *Proceedings of the 1990 International Telemetry Conference*, Las Vegas, Nevada, October 1990.
57. B. Furht, D. Gluch, and D. Joseph, "Performance Measurements of Real-Time Computer Systems", *Proceedings of the 1990 International Telemetry Conference*, Las Vegas, Nevada, October 1990.
58. B. Furht, D. Grostick, D. Gluch, J. Parker, and W. Pastucha, "Issues in the Design of an Industry Standard Operating System for Time-Critical Applications", *Proceedings of the RealTime90 Symposium*, Stuttgart, Germany, May 1990.
59. D. Gluch, B. Furht, et al., "A Reconfigurable Real-Time RISC Computer System", *Proceedings of the IEEE International Conference on Databases, Parallel Architectures, and their Applications*, Miami Beach, Florida, March 1990, pp. 120-122.

60. D. Grostick, D. Gluch, and B. Furht, "REAL/IX: A Real-Time UNIX Operating System", *Proceedings of the International Conference on Accelerator and Large Equipment Physics Control Systems*, Vancouver, Canada, October 1989.
61. B. Furht, R. Kibler, J. Parker, G. Rabbat, and S. Sanchez, "The Role of VLSI Chips in Designing High-Performance Real-Time Computers", *Proceedings of the First Florida Microelectronics Conference*, Boca Raton, Florida, May 1989.
62. B. Furht, G. Rabbat, R. Kibler, J. Parker, and D. Gluch, "The Design of Tri-D Real-Time Computer Systems", *Proceedings of the Euromicro Workshop on Real-Time*, Como, Italy, June 1989.
63. B. Furht, "Real-Time Computing = Tri-Dimensional Computing", Chairman's Introduction to the Minitrack on "Real-Time Systems: Hardware and Architecture Issues", *Proceedings of the 22nd Hawaii Conference on System Sciences*, Kona, Hawaii, January 1989.
64. D. Gluch and B. Furht, "Strategies for Fault Tolerance in Real-Time Computer Systems: A Survey", *Proceedings of the International Conference on Mini and Microcomputers: From Micros to Supercomputers*, Miami Beach, Florida, December 1988.
65. B. Furht, G. Rabbat, and R. Kibler, "New Generation of Real-Time Computers: Three-Dimensional Super Minicomputers", *Proceedings of the International Conference on Mini and Microcomputers: From Micros to Supercomputers*, Miami Beach, Florida, December 1988.
66. B. Furht, "A Survey of Parallel Computers and Multiprocessors", *Session Records, Wescon'88*, Anaheim, California, November 1988.
67. G. Spicker, B. Furht, and M. Tapia, "Simulation and Modeling of Tightly-Coupled Multiprocessors", *Session Records, Wescon'88*, Anaheim, California, November 1988.
68. B. Furht, M. Krishnamurthy, W. Shomar, and L. Llorens, "A Compiler Directed Cache Strategy for GaAs Microprocessor Architectures", *Proceedings of the IEEE Southeastcon*, April 1988, pp. 186-192.
69. B. Furht, H. Aboalsamh, C. Wang Hong, and L. Ying Nan, "Organization and management of a Multiple Register Window File for LISP-Oriented Architectures", *Proceedings of the 21st Hawaii International Conference on System Sciences*, Kona, Hawaii, January 1988, pp. 238-247.
70. S. Geffin, B. Furht, and A. Katbab, "A Massively Parallel Architecture for Robot Arm Control", *Proceedings of the IEEE Technicon*, Miami, Florida, October 1987.
71. H. Aboalsamh and B. Furht, "A Multiple Register Window File for LISP-Oriented Architectures", *Proceedings of the IEEE Technicon*, Miami, Florida, October 1987.
72. B. Furht and M. Krishnamurthy, "Optimizing Compilers for RISC Architectures", *Proceedings of the IEEE Technicon*, Miami, Florida, October 1987.
73. B. Furht, A. Aquart, S. Masson, and R. Dandia, "Quality Control and Reliability of Critical Biomedical Software Products", *Proceedings of the IASTED International Conference on Quality Control and Reliability*, UCLA, Los Angeles, California, May 1987.
74. B. Furht, M. Vainstein, and E. Rodriguez, "The UM-RISC Central Processing Unit", *Proceedings of the 19th Southeast Symposium on System Theory*, Clemson, SC, March 1987, pp. 415-422.
75. H. Aboalsamh and B. Furht, "A Software Tool for Dynamic Measurements of LISP Interpreters", *Proceedings of the 31st International Symposium of Mini and Microcomputers*, Austin, Texas, November 1986, pp. 72-76.
76. S. Geffin, T. Burges, and B. Furht, "The Expert System for Career Planning", *Proceedings of the 31st International Symposium of Mini and Microcomputers*, Austin, Texas, November 1986, pp. 95-99.

77. B. Furht, "RISC Architectures with Multiple Overlapping Windows", *Proceedings of Midcon'85*, Chicago, Ill., September 1985, paper 23/2.
78. B. Furht, "Reduced Instruction Set Computers Versus Complex Instruction Set Computers", *Proceedings of Midcon'85*, Chicago, Ill., September 1985, paper 24/0.
79. R. Ralston, G. Spicker, and B. Furht, "Comparison of Three Advanced RISC/CISC Computer Architectures", *Proceedings of Midcon'85*, Chicago, Ill., September 1985, paper 24/1.
80. V. Milutinovic, B. Furht, K. Hwang, N. Lopez-Benitez, and K. Waldsmith, "The VM Architecture: a HLL Microprocessor Architecture for Dedicated Real-Time Applications", *Proceedings of the International Workshop on High-Level Language Computer Architecture*, Los Angeles, California, May 1984.
81. B. Furht and P. Lee, "The Implementation of Am9511 Arithmetic Processor in Multiprocessor Systems", *Proceedings of the 21 ISMM Symposium on Mini and Microcomputers and Their Applications*, Lugano, Switzerland, June 1983.
82. B. Furht, R. Millas, O. Ortega, and P. Barcello, "Two Microprocessor-Based Integrated Circuit Tester", *Proceedings of the IEEE Southeastcon'83*, Orlando, Florida, April 1983, pp. 5-9.
83. B. Furht, "The Design of a System for the Surveillance of Telegraph Messages", *Conference Records of the IEEE Global telecommunications Conference GLOBCOM'92*, Miami, Florida, November/December 1982, pp. E8.5.1-E8.5.5.
84. B. Furht, "Software Engineering in Microprocessor Environment", *Proceedings of the 20th ISMM International Symposium on Mini and Microcomputers and Their Applications*, Cambridge, MA, July 1982.
85. Zavaljevski and B. Furht, "Application of Tape Cartridge Storage System in a Multiprocessor System", *Proceedings of the ISMM International Symposium on Mini and Microcomputers and Their Applications*, Paris, France, June 1982.
86. Furht, "Evolution of Microcomputer System Strategy in Instrumentation", *Proceedings of the International Symposium IMECO*, Dubrovnik, Yugoslavia, September 1981.
87. Furht and D. Petkovic, "Design of a Multimicroprocessor System and Its Application in Digital Signal Processing", *Proceedings of the International Symposium on Mini and Microcomputers*, Mexico City, Mexico, April 1981.
88. B. Furht and D. Petkovic, "Development of Multimicroprocessor Systems", *Proceedings of the International Symposium Informatica '81*, Sarajevo, Yugoslavia, January 1981.
89. D. Petkovic and B. Furht, "Program Package for Microcomputer System Testing", *Proceedings of the Yugoslav Symposium on Electronics and Computers ETAN'80*, Pristina, Yugoslavia, June 1980.
90. B. Furht, M. Carapic, and M. Jevtovic, "Telegraph Speed Measurement in Highly Noisy Environment", *Proceedings of the Military Electronics Defense Conference*, Wiesbaden, Germany, September 1979.
91. B. Furht, S. Matic, and M. Carapic, "Realization of Error-Free Transmission Using Microprocessors", *Proceedings of the IEEE Symposium on Information Theory*, Grignano, Italy, June 1979.
92. B. Furht, S. Matic, M. Carapic, D. Petkovic, and D. Jankovic, "Universal Microcomputer System for Automatic Error Correction", *Proceedings of the International Symposium on Microcomputers IMMM'79*, Geneva, Switzerland, May 1979.
93. M. Carapic, B. Furht, and M. Jevtovic, "Microcomputer System for Telegraph Speed Measurement", *Proceedings of the International Symposium Informatica'79*, Bled, Yugoslavia, January 1979.

94. M. Carapic, B. Furht, R. Rodic, and P. Veljkovic, "Microcomputer Application to Clock Frequency Measurement of NRZ Signals", *Proceedings of the International Symposium on Mini and Microcomputers and Their Applications*, Zurich, Switzerland, September 1977.
95. M. Carapic, B. Furht, D. Radovanovic, M. Rakic, and S. Stankovic, "Hierarchical Computer Control System in Hot Strip Mill", *Proceedings of the IFAC Workshop on Hot Strip Mill Computer Control*, Dubrovnik, Yugoslavia, June 1977.
96. B. Furht and M. Carapic, "Comparison of Two On-Line Algorithms for Finishing Mill Temperature Control", *Proceedings of the 5th IFAC/IFIP Symposium on Digital Computer Applications to Processes Control*, Hague, The Netherlands, June 1977.
97. M. Carapic, B. Furht, and D. Radovanovic, "On-Line Hot Strip Mill Control Algorithms", *Proceedings of the 3rd Conference on Automation*, Varna, Bulgaria, September 1976.
98. B. Furht and M. Carapic, "On-Line Maximum Likelihood Algorithm for the Identification of Dynamic Processes", *Proceedings of the 4th IFAC Symposium on Identification and Process Parameter Estimation*, Tbilisi, USSR, June 1976.
99. M. Carapic and B. Furht, "Integrated Hot Strip Mill Computer Control System at Smederevo Plant", *Proceedings of the International Symposium on Information Processing*, Bled, Yugoslavia, September 1975.
100. B. Furht, "Maximum Likelihood Identification of Astrom Model by Quazilinearization", *Proceedings of the 34th IFAC Symposium on Identification and System Parameter Estimation*, Hague, The Netherlands, September 1973.

Book Chapters and Other Publications

1. B. Furht, D. Socek, and A.M. Eskicioglu, "Fundamentals of Multimedia Encryption Techniques," a chapter in *Multimedia Security Handbook*, CRC Press, 2005.
2. E. Muharemagic and B. Furht, "A Survey of Multimedia Watermarking Techniques," a chapter in *Multimedia Security Handbook*, CRC Press, 2005.
3. B. Furht, R. Westwater, and J. Ice, "Multimedia Broadcasting Techniques: Present Approaches and New Trends," a chapter in *Intelligent Virtual World*, T.K. Shih and P.P. Wang, Eds., World Scientific Publishing Co., Singapore, 2004.
4. B. Furht and D. Socek, "Multimedia Security: Encryption Techniques," in *Comprehensive Report on Information Security*, International Engineering Consortium, Chicago, IL, 2004.
5. E. Muharemagic and B. Furht, "Multimedia Security: Watermarking Techniques," in *Comprehensive Report on Information Security*, International Engineering Consortium, Chicago, IL, 2004.
6. O. Marques and B. Furht, "Introduction to Video Databases," a chapter in the "Handbook of Video Databases," *CRC Press*, Boca Raton, Florida, 2004.
7. B. Furht and M. Ilyas, "Fundamentals of Wireless Internet, " a chapter in the book "Handbook of Wireless Internet," *CRC Press*, Boca Raton, Florida, 2003.
8. B. Furht and O. Marques, "Interactive Multimedia on the Web", a chapter in *The Internet Encyclopedia*, Editor-in-Chief: Hossein Bidgoli, *Wiley*, 2003.
9. B. Furht, "Challenges in Wireless Multimedia," *The IEEE International Symposium on Circuit and Systems, Tutorial Guide*, ISCAS 2003, May 2003, pp. 425-520.
10. B. Furht, "Multimedia Broadcasting Techniques: Present Approaches and New Trends," a chapter in the book "Intelligent Virtual World," edited by T.K. Shih, *WSP*, Singapore, 2002.
11. O. Marques and B. Furht, "Content-Based Visual Information Retrieval," a chapter in the book "Distributed Multimedia Databases: Techniques and Applications," edited by T.K. Shih, *Idea Group Publishing*, Hershey, PA, 2001.

12. B. Furht, "Internet Architectures," a chapter in the "Handbook of Computer Engineering," edited by V. Oklobdjija, *CRC Press*, Boca Raton, Florida, 2001.
13. C. Law and B. Furht, "The MPEG-4 Standard for Internet-based Multimedia Applications," a chapter in the "Handbook of Internet Computing", *CRC Press*, Boca Raton, FL, 2000.
14. O. Marques, S. Fallon, and B. Furht, "Content-Based Multimedia Retrieval on the Internet," a chapter in the "Handbook of Internet Computing", *CRC Press*, Boca Raton, FL, 2000.
15. B. Furht, "Internet-Based Unified Messaging Systems," a chapter in the "Handbook of Internet Computing", *CRC Press*, Boca Raton, FL, 2000.
16. X. Li and B. Furht, "Design and Implementation of Digital Libraries," a chapter in the "Handbook of Internet Computing", *CRC Press*, Boca Raton, FL, 2000.
17. S. Brey and B. Furht, "Videoconferencing Systems and Applications," a chapter in the "Handbook of Internet Computing", *CRC Press*, Boca Raton, FL, 2000.
18. B. Furht, R. Westwater, and J. Ice, "Multimedia Broadcasting on the Internet", a chapter in the "Handbook of Internet Computing", *CRC Press*, Boca Raton, FL, 2000.
19. B. Furht, R. Westwater, and J. Ice, "A New Approach to Radio and Television Broadcasting over the Internet", a chapter in the book on "Interactive Television", by J. Jensen and C. Toscan (Eds.), *Aalborg University Press*, Denmark, 1999.
20. B. Furht, C. Phoenix, J. Yin, and Z. Aganovic, "Internet-Based Architectures for Application Service Providers," Chapter in the "Handbook of Internet Computing", Ed. B. Furht, *CRC Press*, Boca Raton, FL, 2000.
21. B. Furht, "Parallel Computing: Glory and Collapse," a chapter in the book "Computing Calamities" by R.L. Glass, *Prentice-Hall*, 1999.
22. B. Furht, "Multimedia Applications on the Internet", a chapter in the book "The Internet and Telecommunications: Architectures, Technologies, and Business Development", *International Engineering Consortium*, Chicago, IL, October 1998.
23. B. Furht, "Image Presentation and Compression", a chapter in the "Handbook of Multimedia Computing", *CRC Press*, Boca Raton, FL, 1999.
24. B. Furht and R. Westwater, "Video Presentation and Compression", a chapter in the "Handbook of Multimedia Computing", *CRC Press*, Boca Raton, FL, 1999.
25. J. Celli and B. Furht "Java Support for Multimedia", a chapter in the "Handbook of Multimedia Computing", *CRC Press*, Boca Raton, FL, 1999.
26. M. Kessler and B. Furht, "Hypermedia Techniques for Distributed Systems", a chapter in the "Handbook of Multimedia Computing", *CRC Press*, Boca Raton, FL, 1999.
27. B. Furht, "Processor Architectures for Multimedia", a chapter in the "Handbook of Multimedia Computing", *CRC Press*, Boca Raton, FL, 1999.
28. B. Furht, R. Westwater, and J. Ice, "Multimedia Broadcasting Over the Internet", a chapter in the Handbook of Internet and Multimedia Systems and Applications, *CRC Press*, Boca Raton, FL, 1999.
29. B. Furht, "Fifty Years of Computing", *International Journal of Computers and Applications*, Vol. 19, No. 1, 1997, pp. 1-3.
30. B. Furht, "Multimedia Compression Techniques and Standards", a chapter in the book "Real-Time Imaging: Theory, Techniques, and Applications", edited by P.A. Laplante and A.D. Stoyenko, *IEEE Press*, Piscataway, NJ, 1996, pp. 117-160.
31. B. Furht, D. Kalra, and A. Rodriguez, "Interactive Television Systems", a chapter in the book "Multimedia Tools and Applications", edited by B. Furht, *Kluwer Academic Publishers*, 1996.
32. H. Kalva and B. Furht, "Multimedia Networks", a chapter in the book "Multimedia Systems and Techniques", edited by B. Furht, *Kluwer Academic Publishers*, 1996.

33. B. Furht, "Where are Information Superhighways Headed?", Editorial, *Journal of Multimedia Systems and Applications*, Vol. 2, No. 1, January 1996, pp. 1-5.
34. B. Furht, "Compression Techniques and Standards", a chapter in the book "Multimedia Systems and Techniques", edited by B. Furht, *Kluwer Academic Publishers*, 1996.
35. B. Furht, "Multimedia Information Systems - A Survey", chapter in "Encyclopedia of Telecommunications", edited by F.E. Froehlich and A. Kent, *Marcel Dekker*, New York, 1996, pp. 117-146.
36. B. Furht, "Are Microprocessor Designers Finally Poised for Multimedia?" Editorial, *Journal of Multimedia Systems and Applications*, Vol. 1, No. 3, September 1995, pp. 215-216.
37. B. Furht, D. Kalra, F. Kitson, A.A. Rodriguez, and W.E. Wall, "Design Issues for Interactive Television Systems", in "Multimedia Networking Handbook", by J. Cavanagh, *Auerbach Publishers*, New York, 1995.
38. L. Ehley, M. Ilyas, and B. Furht, "A Survey of Multimedia Synchronization Techniques", in the book "A Guided Tour of Multimedia Systems and Applications", by B. Furht and M. Milenkovic, *IEEE Computer Society Press*, 1995, pp. 230-256.
39. B. Furht, "Where is Multimedia Headed?", Editorial, *Journal of Multimedia Systems and Applications*, Vol. 1, No. 1, March 1995, pp. 5-8.
40. B. Furht and H. Kalva, "Network Architectures for Interactive Television", abstract, *Proc. of the Third INFORMS Telecommunications Conference*, Boca Raton, Florida, March 1995, pp. 257.
41. B. Furht and W. Halang, "The Future of Real-Time and Embedded Computing Systems", in the book "Computer-Aided Control Systems Design", edited by M. Brdys and K. Malinowski, *Singapore: World Scientific Publishers*, 1994.
42. B. Furht, "Real-Time Systems Theory and Practice: Can We Bridge the Gap?" *Proceedings of the NATO Advanced Study Institute on Real-Time Computing*, Sent Martin, October 1992. (abstract)
43. B. Furht, "Next Generation of Real-Time Operating Systems", *Proceedings of the NATO Advanced Study Institute on Real-Time Computing*, Sent Martin, October 1992. (abstract)
44. B. Furht, "Language Directed Complex Instruction Set Computer Architectures", in the book *High-Level Language Computer Architecture*, edited by V. Milutinovic, *Computer Science Press*, Rockville, Maryland, 1989.
45. B. Furht and V. Milutinovic, "Microprocessor Architectures for Virtual Memory Management", in the book "Computer Architecture", edited by Gajski, Milutinovic, Siegel, and Furht, *IEEE Computer Society Press*, 1987, pp. 191-209.
46. A. Kabakibo, V. Milutinovic, A. Silbey, and B. Furht, "A Survey of Cache Memories in Modern Mini and Micro Computer Systems", in the book "Computer Architecture", edited by Gajski, Milutinovic, Siegel, and Furht, *IEEE Computer Society Press*, 1987, pp. 210-227.
47. B. Furht and S. Matic, "Realization of Error-Free Transmission Using Microprocessors", in the book *Algebraic Coding - Theory and Applications*, edited by J. Longo, *Springer Verlag*, Vienna-New York, 1979.

Technical Reports

Department of Computer Science and Engineering, Florida Atlantic University, Boca Raton, Florida

1. B. Furht, J. Hu, and P. Benichou, "Creating and Retrieving Retail Catalogs Using IBM's Ultimedia Manager", *Report TR-CSE-96-19*, 1996.
2. R. Westwater and B. Furht, "A New Video Compression Algorithm Based on Three-Dimensional Discrete Cosine Transform", *Report TR-CSE-95-36*, 1995.

3. B. Furht, J. Greenberg, T.W. Gresham, Y. Liao, D. Schenker, and D. Sommers, "Color JPEG Compression Experiments", *Report TR-CSE-95-33*, 1995.
4. H. Kalva and B. Furht, "Analysis of Scheduling Schemes for Video-On-Demand Services", *Report TR-CSE-95-04*, 1995.
5. B. Furht, "Parallel Computing: Glory and Collapse - and Beyond", *Report TR-CSE-94-59*, December 1994.
6. H. Kalva and B. Furht, "Techniques for Improving the Capacity of Video On-Demand Systems", *Report TR-CSE-94-53*, 1994.
7. M. Kessler and B. Furht, "Hypermedia Techniques for Distributed Systems", *Report TR-CSE-94-41*, 1994.
8. H. Kalva, R. Mohammad, and B. Furht, "A Survey of Multimedia Networks", *Report TR-CSE-94-42*, 1994.
9. P. Chilamakuri, D.R. Hawthorne, and B. Furht, "Evaluation of Image and Video Compression Techniques", *Report TR-CSE-94-44*, 1994.
10. B. Furht, D. Kalra, and F. Kitson, "Issues in Designing Interactive Television Systems", *Report TR-CSE-94-29*, 1994.
11. B. Furht, "A Survey of Compression Techniques and Standards", *Report TR-CSE-94-36*, 1994.
12. A. Thirupathi, S. Nayar, S. Chitturi, and B. Furht, "Real-Time Audio and Text Conferencing System", *Report TR-CSE-94-13*, 1994.
13. P. Monnes and B. Furht, "Parallel JPEG Algorithms for Still Image Compression", *Report TR-CSE-93-52*, 1993.
14. M. Kessler, J. Alexander, and B. Furht, "JPEG Still Image Compression Algorithm: Analysis and Implementation", *Report TR-CSE-94-07*, 1994.
15. H. Kalva, A. Vasnadu, R. Mohammad, S.K. Raghupathy, and B. Furht, "Parallel JPEG Image Compression Algorithm for MasPar Parallel Computer", *Report TR-CSE-94-05*, 1994.
16. G. Morse and B. Furht, "Issues in Designing an Interactive TV Set Top Box", *Report TR-CSE-94-06*, 1994.
17. P. Monnes and B. Furht, "Parallel JPEG Algorithms for Still Image Compression", *Report TR-CSE-93-52*, 1993.
18. S Murali and B. Furht, "High-Performance I/O Systems for Parallel Computers", *Report TR-CSE-93-50*, 1993.
19. L. Ehley, M. Ilyas, and B. Furht, "Evaluation of Multimedia Synchronization Techniques", *Report TR-CSE-93-34*, 1993.
20. B. Furht, "Multimedia Systems: A Guided Tour", *Report TR-CSE-93-42*, 1993.
21. P. Pinter and B. Furht, "Emulation of a CISC Processor on a RISC System", *Report TR-CSE-93-27*, 1993.
22. B. Furht, "A Reconfigurable Real-Time Multiprocessor System for Parallel Processing", *Report TR-CSE-93-06*, 1993.
23. B. Furht, "The Design of a New Generation of Real-Time Computers Based on Industry Standards", *Report TR-CSE-93-07*, 1993.
24. B. Furht and W. Halang, "The Future of Real-Time and Embedded Computing Systems", *Report TR-CSE-92-30*, 1992.
25. B. Furht, "The Reality of a Real-Time UNIX Operating System", *Report TR-CSE-92-29*, 1992.
26. B. Furht, Editor, Proceedings of MODCOMP Papers 1990, *Modcomp Press*, Fort Lauderdale, January 1991.
27. B. Furht, Editor, Proceedings of MODCOMP Papers 1989, *Modcomp Press*, Fort Lauderdale, January 1990.

28. B. Furht, Editor, Proceedings of MODCOMP Papers 1988, *Modcomp Press*, Fort Lauderdale, January 1989.
29. B. Furht, A. Aquart, R. Dandia, S. Masson, and H. Sanchez, "Handbook on Cordis Software Life Cycle", *Cordis Corporation*, Miami, Florida, December 1986.
30. B. Furht, "How to Select a 16-Bit Microprocessor", *Proceedings of the IEEE Southcon'84*, Orlando, Florida, January 1984, pp. 8/2.1-8.2.20.

Patents

1. B. Furht, "Interactive System for Visualization and Retrieval of Video Data," Provisional Patent Application, 2007.
2. H. Kalva and B. Furht, "A Method and Apparatus for Multi-View Video Coding," Provisional Patent Application, 2005, Provisional Patent #2005-18.
3. B. Furht and G. Rabbat, "Method for Measuring Three-Dimensional Computer Performance", European Patent, 1989.
4. W. Earnshow, B. Furht, R. Kibler, J. Parker, H. Ohel, G. Rabbat, and P. Ripy, "Three-Dimensional Computer Architecture", European Patent No. 89112824.1, 1989.

Research and Industrial Projects

- "Global Living Laboratory for Cyber Infrastructure Application Enablement", NSF PIRE Grant (jointly with FIU), Co-PI, \$2.3M over 5 years, (2007-2012).
- "Center for the Coastline Security Technologies", Federal Earmark Grant, Office for Naval Research, \$6 millions over 3 years (2004-07), Co-principal Investigator for the Project on Video and Image Processing Techniques for Coastline Security.
- "High Performance Computer Equipment Grant," National Science Foundation, Co-PI, 2005-07 (\$455,000).
- "The Development of Algorithms for Automatic Mouse Acceleration and KVM Benchmarking," Avocent Corporation, Fort Lauderdale, PI, 2004, (\$50,000).
- "One Pass to Production," Motorola Corporation, PI, 2004-05 (\$250,000), Co-PI, 2005-07 (total \$1M over 5 years).
- "Java-Based System for Radio Communications," *Motorola*, Plantation, Service Grant, 1999, (\$8,600).
- "Multimedia-Based Healthcare System - Case Study," *Racal Datacom*, Fort Lauderdale, Florida, 1997-98, (\$30,000).
- "Development of Multimedia Presentations," *Rank Xerox*, London, 1995-96. (\$15,000)
- "Development of Query by Image Content Applications Using Ultimedia Manager," *IBM Almaden Research Center*, San Jose, CA, 1995-96, (\$5,000).
- "Multimedia Laboratory," Equipment grant, *National Science Foundation*, 1994-95. (\$64,000).
- Multimedia-Based Computer Aided-Systems for Time to Market, *Rank Xerox*, London, 1994, (\$10,000).
- "Multimedia Development Tools," *Apple Computer*, Cupertino, CA, (\$10,000).
- "Multimedia Technology in Computer-Aided Management Systems," *Rank Xerox*, London, 1992-93, (\$20,000).
- "Modeling of High-Performance Real-Time Computers for Aerospace Applications," *NASA, Florida Space Grant Consortium*, 1993, (\$5,000).

- Techniques and Tools for Evaluation of Real-Time Systems, Project leader, *MODCOMP Corporation*, 1990-91, (\$400,000)
- Development of a Standard Real-Time Graphical User Interface, Project leader, *MODCOMP Corporation*, 1990-91, (\$720,000).
- Development of a Real-Time UNIX Operating System, Project leader, *MODCOMP Corporation*, 1989-90, (\$560,000).
- Development of a RISC-Based High-Availability Real-Time System, Project leader, *MODCOMP Corporation*, 1988-89, (\$1,5 million).
- The Applicability of Neural Networks in Real-Time Applications, Project leader, *MODCOMP Corporation*, 1988-89, (\$200,000).
- Multiprocessor Architectures for Real-Time Applications, Project leader, *MODCOMP Corporation*, 1987-88, (\$250,000).
- Design of a Parallel Tree Structured Machine for Expert Systems - Umachine, General Research Support Award, *University of Miami*, Coral Gables, Florida, 1985-86, (\$5,000).
- Arithmetic Coprocessors, Computer grant, *Advanced Micro Devices*, 198. (\$4,000).
- Multiprocessor System for Digital Signal Processing, *National Science Foundation*, Belgrade, Yugoslavia, 1979-81, (equivalent to \$95,000).
- Error Correction and Detection Methods for Microprocessor Systems, *National Science Foundation & Military Technical Institute*, Belgrade, Yugoslavia, 1976-79, (equivalent to \$75,000).
- Computer System for Process Control of a Hot Strip Mill, *Metallurgical Plant Smederevo and National Science Foundation*, Belgrade, 1972-76, (equivalent to \$140,000).
- Methods for Process Identification and Control, *National Science Foundation*, Belgrade, Yugoslavia, 1970-72, (equivalent to \$35,000).

Research - Consulting Projects

- "The Future of Virtual Private Networks," Research Study for the International Engineering Consortium, Chicago, IL, January 2001 - December 2001.
- "Application Service Providers," Research Study for the International Engineering Consortium, Chicago, IL, November 1999 - November 2000.
- "The Future of Unified Messaging", Research Study for the International Engineering Consortium, Chicago, IL, November 1998 - November 1999.

Professional Service

Membership in Professional Societies

- IEEE and IEEE Computer Society
Chairman of the Miami Chapter (1984-86)
Senior Member
- BlueKey Wireless Systems, Inc. Boca Raton, Florida
Member of the Advisory Board (2004-06)
- Cylex Systems, Inc., Boca Raton, Florida
Director at the Board of Directors (2001-2002)
Member of the Industry Advisory Board (1995-1998)

- Pipe Dream, Inc., West Palm Beach Florida
Director at the Board of Directors (1996-98)
- Wiznet, Inc., Delray Beach, Florida
Director at the Board of Directors (1994-1995)
- Tau Beta Pi and Upsilon Pi Epsilon
Member
- Reviewer of research proposals for
 - Italian Ministry of Science
 - Ministry of Science – Singapore
 - British National Science Foundation
 - Research Grants Council of Hong Kong
 - The Netherlands Organization for Scientific Research

University Service

Florida Atlantic University

Chairman of the CSE Department (2002-present)
 Senior Assistant Vice President for Engineering and Technology (2006- 2008)
 Senior Advisor to Vice President for Research and Graduate Studies (2003-2006)
 Director of CSE Graduate Programs (1993-1997)
 Member of the CSE Dept. Executive Committee (1992-1997)
 Chairman of the CSE Research Committee (1998-1999)
 Member of the CSE Dept. Personnel Committee (1995-present)
 Member of the CSE Dept. Budget Committee (1992-1993)
 Member of the CSE Dept. Undergraduate Committee (1992-1993, 1998-present)
 Chairman of the CSE Dept. Lab/Equipment Committee (1992-1993)
 Chairman of the CSE Faculty Search Committee (1993)
 Member of the Associate Dean Search Committee (1999)
 Member of the CSE Chairman Search Committee (1999)

University of Miami

Member of the Graduate Faculty (1983-1988)
 Member of the College of Engineering Council (1984-1986)
 Member of the Computer Engineering Curriculum Committee (1982-1988)
 Member of the Programming Languages Committee (1984-1985)

Principal Consultancies

- Expert Witness for Qualcomm vs. Broadcom (2006)
- Expert Witness for Cisco adverse Vox2Vox Communications (2002-2003)
- International Engineering Consortium, Chicago, IL (1998-2001)
- Cylex Systems, Boca Raton, Florida (1999-2000)
- General Electric, Milwaukee, WI (1996-1997)
- Samsung Data Systems, Seoul, Korea (1995)
- Rank Xerox, London, England (1993-1995)
- IBM Almaden Research Center, San Jose , California (1985-1986, 1992-1994)

- Hewlett-Packard, Denver, Colorado and Cupertino, California (1992)
- Modular Computer Systems, Fort Lauderdale, Florida (1987, 1992)
- Cordis Corporation, Miami, Florida (1983-1987)
- NASA Kennedy Space Center (1985)
- Honeywell, Clearwater, Florida (1985)
- RCA, Camden, New Jersey (1984)

Professional Recognition

Editorial Activities

- Editor-in-Chief of the *International Journal of Multimedia Tools and Applications*, Kluwer Academic Publishers, Norwell, MA, Springer Publisher from 2004, (1994 - present)
- Editor-in-Chief of the *International Journal of Computers and Applications*, Acta Press, (1984 - 2004)
- Member of the Editorial Board of *Real-Time Imaging Journal* (1995 - 2000)
- Associate Editor of *Real-Time Systems Journal* (1988 - 1996)
- Consulting Editor for the book series on *Multimedia Systems and Applications*, Kluwer Academic Publishers, Norwell, MA, (1995-present)
- Consulting Editor for the book series on *Internet and Communications*, CRC Press, Boca Raton, Florida (1999-present)

Conferences

- Member of the Advisory Committee of the 5th International Conference on Future Information Technology, Jeju, Korea, May 2010.
- General Co-Chair of the *International Conference on Multimedia Information Networking and Security (MINE2009)*, Wuhan, China, November 2009.
- Co-Chair of the *KES International Symposium on Intelligent Interactive Multimedia Systems*, (IIMSS 2009), Mogliano Veneto, Italy, July 2009.
- Member of the Program Committee of the *Multimedia Visualization and Human-Media Interaction Track* at the ACM SAC'09, Honolulu, Hawaii, March 2009.
- Co-Chair of the *Track on Multimedia Applications* at the IEEE International Conference on Multimedia & Expo, Toronto, Canada, July 2006.
- Co-Chair of the *Workshop on Wireless Multimedia* at the Sixth International Symposium on Multimedia Software Engineering, Miami, FL, December 2004.
- Member of the Program Committee for the *1st IEEE International Workshop on Networking Issues in Multimedia Entertainment* at GLOBECOM 2004, Dallas, TX, November 2004.
- Member of the Program Committee for the *Fifth International Workshop on Multimedia Data Mining* at the 10th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Seattle, Washington, August 2004.
- Organizer of the *Workshop on Image and Video Databases* at the ACM Symposium on Applied Computing SAC 2003, Melbourne, Florida, March 2003.
- Area Chair for *the ACM Multimedia Conference*, Juan-les-Pins, France, December 2002.

- Area Chairman and Member of the Program Committee for *the IEEE Int. Conference on Multimedia and Expo*, Tokyo, Japan, August 2001.
- Member of the Program Committee of the International Game Technology Conference and Idea Expo 2001 and 2002, Hong Kong, January 2001 and January 2002.
- Member of the Program Committee for the *2001 IEEE Workshop on Multimedia Signal Processing*, Cannes, France, October 2001.
- Member of the Program Committee of the *2nd and 3rd IEEE International Symposia on Video Processing and Multimedia Communications*, Zadar, Croatia, June 2000, June 2001, and June 2002.
- General Chairman of *Fourth IASTED Conference on Internet and Multimedia Systems and Applications*, Las Vegas, Nevada, November 2000.
- Member of the Program Committee of *the Fourth Int. Conference on Visual Information Systems*, Lyon, France, November 2000.
- Area Chairman and Member of the Program Committee for *the IEEE Int. Conference on Multimedia Systems and Expo*, New York, July 2000.
- Chairman of the Program Committee for America, *IEEE Int. Conference on Multimedia Computing and Systems*, Florence, Italy, June 1999.
- General Chairman, *Third Int. Conference on Internet and Multimedia Systems and Applications*, Nassau, Bahamas, October 1999.
- Member of the Program Committee of the Visual 2000 Conference
- Member of the Program Committee at the *IEEE SICON'98, SICON'99, and SICON'2000 Conferences*, Singapore.
- Member of the Program Committee at the *4th Int. Workshop on Multimedia Database Management Systems*, Dayton, Ohio, August 1998.
- Member of the Program Committees of the Int. Conferences on Information, Communication, and Signal Processing, ICICS'97 and ICICS'99, Singapore.
- Member of the Program Committee at the *IEEE Int. Conference on Multimedia Computing and Systems*, Ottawa, Canada, June 1997.
- Member of the Program Committee at the *European Workshop on Interactive Distributed Multimedia Systems and Telecommunication Services*, Darmstadt, Germany, September 1997.
- Member of the Program Committee at the *Fourth IEEE Workshop on Community Networking*, Atlanta, Georgia, September 1997.
- Member of the International Advisory Board at the *First International Conference on Information, Communications, and Signal Processing*, Singapore, September 1997.
- Member of the Program Committee at the *Third IEEE Int. Conference on Engineering of Complex Computer Systems*, Como, Italy, 1997.
- Member of the Program Committee at the *4th ACM Multimedia Conference*, Boston, Mass., November 1996.
- Member of the Program Committee at the *Second IEEE Int. Conference on Engineering of Complex Computer Systems*, Montreal, Canada, October 1996.
- Member of the Program Committee at the *Int. Workshop on Multimedia Database Management Systems*, Blue Mountain Lanke, New York, August 1996.
- Member of the Program Committee at the *IEEE Int. Conference on Multimedia Computing and Systems*, Hiroshima, Japan, June 1996.

- Vice-Chair of Multimedia Track at the *IEEE Workshop on Parallel and Distributed Real-Time Systems*, Honolulu, Hawaii, April 1996.
- Guest Editor of the *Special Issue of Real-Time Imaging Journal on Multimedia Systems and Applications*, February 1996 and August 1996.
- Member of the Program Committee at the *First Int. Conference on Visual Information Systems*, Melbourne, Australia, February 1996.
- Organizer and Co-Chairman of the *Workshop on Multimedia Applications at the ACM CSC/SAC Conference*, Philadelphia, PA, February 1996.
- Local Arrangements Chair and Member of the Program Committee at the *First IEEE Int. Conference on Engineering of Complex Computer Systems*, Fort Lauderdale, Florida, November 1995.
- Program Chairman of the *Second International Conference on Distributed Multimedia Systems and Applications*, Stanford, California, August 1995.
- Member of the Advisory Board for the *Conference on Electronic Publishing and the Information Superhighway DAGS95*, Boston, MA, May 1995.
- Organizer of the session on Video and Multimedia at the *INFORMS Telecommunications Conference*, Boca Raton, Florida, March 1995.
- Member of the Program Committee of the *IEEE Workshop on Parallel and Distributed Real-Time Systems*, Santa Barbara, CA, April 1995.
- General Chairman of the *First International Conference on Distributed Multimedia Systems and Applications*, Honolulu, Hawaii, August 1994.
- Tutorial Chairman and member of the Program Committee of *PARBASE'90 - International IEEE Conference on Databases, Parallel Architectures, and Their Applications*, Miami Beach, Florida, March 1990.
- Organizer of a Minitrack on Architectures for Real-Time Systems at *22nd Hawaii International IEEE Conference on System Sciences*, Kona, Hawaii, January 1989.
- Program Chairman of the *International Conference on Mini and Microcomputers: From Micros to Supercomputers*, Miami Beach, Florida, December 1988.
- Organizer of sessions on Computer Architecture at *WESCON '85*, Anaheim, CA, 1985, *MIDCON '85*, Chicago, IL, 1985, and *WESCON '88*, Anaheim, CA, 1988.

Invited Lectures and Presentations

- Keynote Address, "Visions of Engineering in the New Global Economy," presented at IPSI Montenegro Conference, Sveti Stefan, September 2005.
- Invited lecture on "Research and Education Challenges in the New Global Economy," presented at IPSI Conference, Barcelona, Spain, May 2005.
- Keynote Address, "Technological Challenges for Computer Science and the Internet," presented at IPSI Conferences, Toulouse, France, April 2005.
- Keynote Address, "Challenges in Wireless Multimedia," presented at the Computer Conference in Jinan, China, August 2004; also presented seminars at Microsoft Research in Beijing, and Shanghai, August 2004.
- Plenary Address: "Wireless Internet: Trends and Challenges," *Conference Yu-Info-2004*, Kopaonik, Yugoslavia, March 2004.

- Seminar on “Challenges in Wireless Multimedia,” presented at Asian Institute of Technology, Bangkok, Thailand, May 2003., and George Washington University, Washington DC, May 2003.
- Keynote Address, “Internet Glory, Collapse, and Beyond,” presented at *IASTED International Conference on Communications, Internet, and Information Technology*, St. Thomas, November 2002.
- Plenary Address: “Advances in Internet Engineering,” *Conference Yu-Info-2002*, Kopaonik, Yugoslavia, March 2002.
- Invited Lecture: “Real-Time Video on the Internet – Current Status and Future Trends,” *2001 IEEE Workshop on Multimedia Signal Processing*, Cannes, France, October 2001.
- Keynote Address: “Internet Revolution: Current Status and Future Challenges,” *International Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet – SGGR 2001*, L’Aquila, Italy, August 2001.
- Plenary Address: “Advances in Internet Engineering,” *Conference Yu-Info-2001*, Kopaonik, Yugoslavia, March 2001.
- Invited Lecture: “From Internet Service Providers to Application Service Providers,” *Advanced Internet Technology Series*, Florida Atlantic University, Boca Raton, Florida, October 2000.
- Keynote Address: “Application Service Providers”, *International Conference on Information Technology – Coding and Computing*, Las Vegas, Nevada, March 2000.
- Keynote Address: “Application Service Providers – A New Trend in Business on the Internet,” *International Conference on Applied Informatics*, Innsbruck, Austria, February 2000.
- Keynote Address: “Parallel Computing: Glory, Collapse, and Beyond”, *The 4th Australian Conference on Parallel and Real-Time Systems*, Newcastle, Australia, September 1997.
- Keynote lecture at *General Electric Conference*, Miami, Florida, January 1997. Topic: “Information Technologies for the 21st Century”.
- Invited graduate colloquium at *Northern Illinois University*, De Kalb, IL, October 1996. Topic: “Interactive Television Systems and Information Superhighways”.
- Invited seminar at *Rank Xerox*, London, England, November 1995. Topic: “Trends in Multimedia and Information Superhighways”.
- Invited lecture at the *Siggraph Meeting*, South Florida Chapter, Fort Lauderdale, October 1995, Topic: “Trends in Information Superhighways”.
- Invited lecture at the *Institute of Industrial Science, University of Tokyo*, Japan, August 1995, Topic: “Interactive Television Systems”.
- Invited lecture at the *Samsung Data Systems*, Seoul, Korea, August 1995. Topic: “Trends in Distributed Multimedia Systems and Applications”.
- Invited lecture at the *Institute of Systems Science, University of Singapore*, July 1995, Topic: “On-Demand Multimedia Services”.
- Invited lecture at the *Nanyang Technological University*, Singapore, July 1995, Topic: “Interactive Television Systems”.
- Invited speaker at the *Rank Xerox Customer Event - Showcase’95*, London, England, April 1995. Topic: “Productivity Through the Use of Multimedia”.
- Invited video-conferencing lecture presented at *the FOCUS Conference*, Amsterdam, The Netherlands, October 1995, Topic: “Information Superhighways: How to Get Finally the End User?”

- Invited speaker at the *International Interactive Communications Society Meeting*, Miami, Florida, January 1995, Topic: "Trends in Distributed Multimedia Systems".
- Invited lecture at *IBM Almaden Research Center*, San Jose, CA, March 1994, Topic: "On-Demand Multimedia Architectures and Applications".
- Keynote speaker on the *12th IASTED Int. Conference on Applied Informatics*, Annesy, France, May 1994, Topic: "Multimedia Systems and Applications".
- Invited plenary presentation at the *First IEEE Workshop on Real-Time Applications*, New York, May 1993, Topic: "Real-Time Computer Systems: Current and Future Trends".
- Invited lecturer, *NATO Advanced Study Institute on Real-Time Computing*, Sent Marteen, October 1992, Topic: "Real-Time UNIX Operating Systems".
- Invited lecturer, *NATO Advanced Study Institute on Computer Architecture*, L'Aquila, Italy, June 1988. Topic: "Trends in Parallel Computing".

Awards

- *Technical Achievement Award*, presented at YuInfo Conference, Kopaonik, Yugoslavia, March 2004.
- *Teaching award* (TIP: Teaching Incentive Program) - at Florida Atlantic University, 1996.
- *Publication award* - the paper on "Design Issues for Interactive Television Systems", IEEE Computer, April 1995, selected among the *ten best papers* in 1994/95 (3rd place).
- *Publication award*, Modular Computer Systems, Inc., Fort Lauderdale, Florida, for the book, "Real-Time UNIX Systems: Design and Application Guide", 1992.
- *Publication award*, Cordis Corporation, Miami, Florida, for the paper "Quality Control and Reliability of Critical Biomedical Software Products", 1987.
- *Annual Technical Award*, Institute Boris Kidric-Vinca, Belgrade, for the Development of a Multiprocessor System for Digital Signal Processing, 1982.