# Marilyn Claire Wolf

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## Education

**April, 1984** *Doctor of Philosophy, Electrical Engineering, Stanford University*. Thesis title: *Two-Dimensional Compaction Strategies*. Advisor: Prof. Robert W. Dutton.

**June, 1981** *Master of Science, Electrical Engineering, Stanford University.*

**June, 1980** *Bachelor of Science, Electrical Engineering, Stanford University.* Graduated with distinction.

## Employment

**August, 2024—present** *Elmer E. Koch Professor of Engineering, University of Nebraska – Lincoln, Lincoln NE.* Responsible for projects and proposals in semiconductors, research and teaching.

**August, 2023—August 2024** *Elmer E. Koch Professor of Engineering and Director for ORED Engineering and Technology Initiatives, University of Nebraska – Lincoln, Lincoln NE.* Responsible for large CHIPS Act-related projects and proposals, both research and workforce development.

**August, 2021—August 2023** *Elmer E. Koch Professor of Engineering and Director, School of Computing, University of Nebraska – Lincoln, Lincoln NE.* Led the formation of the School of Computing. Hired nine new tenure-track faculty and one professor of practice.

**August, 2019—August 2021** *Elmer E. Koch Professor of Engineering and Chair, Department of Computer Science and Engineering, University of Nebraska – Lincoln, Lincoln NE.* Led the development of the proposal to create the School of Computing. Led CSE through the COVID-19 pandemic.

**July, 2007—August, 2019** *Professor, Rhesa "Ray" S. Farmer Distinguished Chair in Embedded Computer Systems, Georgia Research Alliance Eminent Scholar, School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta GA.* Research and teaching in embedded computing and electrical and computer engineering. Led several large proposals. Organized special issue of *Proceedings of the IEEE*. Created ECE 3030 and wrote *The Physics of Computing*. Courtesy appointments in the School of Computer Science, School of Computational Science and Engineering, College of Management, and Bioengineering Program.

**July, 1998—June, 2007** *Professor of Electrical Engineering, Princeton University, Princeton NJ.* Teach classes in embedded computing, VLSI design, computer architecture, and multimedia. Led New Jersey Center for Multimedia Research, NSF Small-Scale Infrastructure Center, IUCRC. Also Associated Faculty, Department of Computer Science.

**March 2003—October 2013** *Director/Secretary/Vice President, Verificon Corporation.* Develop and license smart camera technology for surveillance and industrial applications. System was deployed by Japan Rail East.

**October 2001—July 2002** *Chief Technical Officer, MediaWorks Technology, Schaumburg IL*. Responsible for product definition, technology development, and chip design.

**July 2001—October 2001** *Chief Scientist and Principal SoC Architect, MediaWorks Technology, Schaumburg IL*. Responsible for product definition and technology development.

**July, 1995—June, 1998** *Associate Professor of Electrical Engineering, Princeton University, Princeton NJ.* Taught classes in embedded system design, computer architecture, computer-aided design of digital systems, and digital video. Conducted and supervised research in computer-aided design of digital systems, VLSI systems, embedded computing systems, digital video architectures, multimedia computing systems, and digital video libraries.

**September, 1989—June, 1995** *Assistant Professor of Electrical Engineering, Princeton University, Princeton NJ.* Taught classes in VLSI design, embedded system design, computer architecture, computer-aided design of digital systems, and digital video. Conducted and supervised research in embedded systems, digital video architectures and algorithms, and computer-aided design of digital systems.

**September, 1988—June, 1989** *Visiting Lecturer in Computer Science, Princeton University, Princeton NJ.* Taught CS/EE 420, "Design of VLSI Systems," and CS 598C, "Advanced Topics in Computer Science: Computer-Aided Design."

**August, 1984—September, 1989** *Member of Technical Staff, AT&T Bell Laboratories, Murray Hill NJ*. Conducted research in computer-aided design of digital systems: automatic layout, design representation, register-transfer synthesis. Supervised work of co-op and summer students. Supervisors: Dr. Alfred E. Dunlop, Dr. Wolfgang Fichtner.

**March, 1984—June, 1984** *Lecturer, Stanford University, Stanford CA*. Taught EE 271, "Introduction to VLSI Systems," and EE 272B, "Testing and Simulation for VLSI."

**January, 1984—March, 1984** *Teaching Associate, Stanford University, Stanford CA*. Taught EE 272A, "VLSI Design Project," with Prof. Manolis Katevenis.

**March 1978—March, 1984** *Research Assistant, Stanford University, Stanford CA*. Conducted research in VLSI design, maintained computer systems. Supervisor: Prof. Robert W. Dutton.

**various times** *Consultant*. Held consultancy or summer student positions at Silvar-Lisco, Valid, Digital Equipment Corporation, Hewlett-Packard, NEC C&C Research Lab, AT&T, Intel, Quickturn, Mentor Graphics, Advance, Inc., Clever Systems, WABTEC, Synopsys, NextSierra, Eastman Kodak, Nokia, Sonics, Enterprise Systems Technologies, TSMC, Santa Clara County CA Assessor, Affinity Labs of Texas, Kodak Alaris, Broadcom, San Luis Obispo County CA Assessor, ZF, Pekosoft, NexStep, MediaTek, Samsung, Uniloc, Siemens, WAC Lighting.

**visiting positions** Visiting Professor, De Montfort University, Leicester, England (1999-2002). Visiting Professor, Stanford University (2001-2002 academic year.)

## Selected Professional Activities

General Chair, ACM/IEEE IPSN 2022. Program Co-Chair, ACM/IEEE IPSN 2020. General Co-Chair, IEEE/ACM MLCAD Workshop. Member of board, ACM SIGDA, 2015-2016. Chair, ACM SIGBED, 2009-2011. Chair, IFIP Working Group 10.2, 2007-2012. Vice President of Finance, IEEE Council on Electronic Design Automation, 2005-2007. General co-chair, IEEE CASES conference, 2006. Chair, ACM EMSOFT Conference, 2005. Co-Chair, IEEE MPSOC Workshop. Program co-chair, CASES conference, 2002. Board of Governors, IEEE Circuits and Systems Society, 1998-2000. Editor-in-chief, *ACM Transactions on Embedded Computing Systems*, 2001-2007. Editor-in-chief, *IEEE Transactions on VLSI Systems*, 1999-2000. Co-Editor-in-Chief, *Design Automation for Embedded Systems*, 1996-2005. General chair, ICCD '96. Workshops Chair, ACM MultiMedia '96. Technical program chair, ICCD '95. Program committee, CODES/CASHE 1996. Technical program chair, 1992 IFIP/IEEE/ACM International Workshop on Hardware-Software Co-Design (CODES). General chair, 1993 IEEE/ACM International Workshop on Hardware-Software Co-Design. Chair, Embedded Systems Track, ICCD '93. Program chair, 1992 IEEE/ACM International Workshop on Hardware-Software Co-Design. Vice Chair, Computer-Based Systems Track, IEEE ICCD '92. Program committee, ICCAD '99, '95, '94, '93, '92. Program committee, ACM International Workshop/Symposium on High-Level Synthesis 1994, 1992, 1989, 1988. Program committee, International Symposium on System Synthesis, 1995, 1996, 1998, 1999. US Vice Chair, IEEE VLSI Skills Assessment Inventory committee. Program committee, 1989 ACM/IEEE Module Generation and Silicon Compilation Workshop.

## Awards

IEEE Leon K. Kirchmayer Graduate Teaching Award, 2022.

IEEE Computer Society Harry H. Goode Memorial Award, 2019.

IEEE Circuits and Systems Society Education Award, 2006.

ASEE Frederick E. Terman Award, 2003.

IEEE Computer Society Golden Core Award, 2002.

Fellow, Association for Computing Machinery, 2001.

Fellow, Institute of Electrical and Electronics Engineers, 1998.

Elected to Phi Beta Kappa and Tau Beta Pi.

## Dissertations and theses supervised

Mark Reichelt, *An Improved Cell Model for Hierarchical Layout Compaction*, S. M. Thesis, Massachusetts Institute of Technology, May, 1987 (with Prof. Jonathan Allen).

Andres Takach, *An Automata Model for the High-Level Specification and Synthesis of Digital Circuits and Systems*, Ph.D. dissertation, Princeton University, August, 1993.

Tien-Chien Lee, *Behavioral Synthesis of Highly Testable Data Paths in VLSI Digital Circuits*, Ph.D. dissertation, Princeton University, September, 1993 (with Prof. Niraj Jha).

Chun-Yao Huang, *Joint Datapath/Controller Performance Optimization of VLSI Systems*, Ph.D. dissertation, Princeton University, August, 1994.

Ti-Yen Yen, *Hardware-Software Co-Synthesis of Distributed Embedded Systems*, Ph.D. dissertation, Princeton University, June, 1996.

Santanu Dutta, *VLSI Issues and Architectural Trade-offs in Advanced Video Signal Processors*, Ph.D. dissertation, Princeton University, July, 1996.

Michael Kozuch, *Video Service Systems for Networked Video Libraries*, Ph.D. dissertation, Princeton University, July, 1997 (with Prof. Andrew Wolfe).

Yanbing Li, *Hardware-Software Co-Synthesis of Embedded Real-Time Multiprocessors*, Ph.D. dissertation, Princeton University, August, 1998.

Hong Heather Yu, *Digital Multimedia Library Indexing and Retrieval*, Ph.D. dissertation, Princeton University, August, 1998.

Zhao Wu, *Architectural Evaluation of Multi-Cluster Wide-Issue Video Signal Processors*, Ph.D. dissertation, Princeton University, August, 1999.

David Rhodes, *Real-Analysis, ALAP-Guided Synthesis of Real-Time Embedded Systems*, Ph.D. dissertation, Princeton University, August 1999.

Jason Fritts, *Architecture and Compiler Design Issues in Programmable Media Processors*, Ph.D. dissertation, Princeton University, January 2000.

Haris Lekatsas, *Code Compression for Embedded Processors*, Ph.D. dissertation, Princeton University, August 2000.

Yuanlong Wang, *A Distributed Architecture and Crossbar Scheduling Algorithm for High Performance Switch Fabrics*, Ph.D. dissertation, Princeton University, May 2002.

Yuan Xie, *Code Compression Architectures and Algorithms for Embedded Systems*, Ph.D. dissertation, Princeton University, August 2002.

Tiehan Lv, *Design and Analysis of a Real-Time Video Human Gesture Recognition System*, Ph.D. dissertation, Princeton University, August 2004.

Shengqi Yang, *Low-Power System Design: Considering Reliability and Security*, Ph.D. dissertation, Princeton University, March 2006.

Senem Velipasalar, *Multi-Camera Systems: Tracking on Peer-to-Peer Systems, Patio-Temporal Event Detection, and Video Synchronization*, Ph.D. dissertation, Princeton University, November 2006.



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Changhong Lin, *Design and Implementation of Distributed Real-Time Camera Systems*, Ph.D. dissertation, Princeton University, January 2007.

Jiang Xu, *Design, Modeling, and Analysis of Networks-on-Chips for Systems-on-Chip*, Ph.D. dissertation, Princeton University, January 2007.

Cheng-Yao Chen, *Distributed Multi-Modeal Human Activity Analysis: From Algorithms to Systems*, Ph.D. dissertation, Princeton University, November 2007.

Chia-Han Lee, *Power-Efficient Integrated Cognitive and Software Radio System*, Ph.D. dissertation, Princeton University, 2008.

Ahmed Abdallah, *Design of Experiments and the Empirical Development of Embedded System Platforms*, Ph.D. dissertation, Princeton University, September 2008.

Dongwon Lee, *High-Performance Computer System Architectures for Embedded Computing*, Ph.D. dissertation, Georgia Institute of Technology, August 2011.

Se Hun Kim, *Accuracy-Energy Tradeoffs in Digital Image Processing using Embedded Computing Platform*, Ph.D. dissertation, Georgia Institute of Technology, October 2011.

Chung-Ching Lin, *Detecting and Tracking Moving Objects From a Moving Platform*, Ph.D. dissertation, Georgia Institute of Technology, April 2012.

Muhammed Umer Tariq, *Service-Oriented Reference Model for Cyber-Physical Systems*, Ph.D. dissertation, Georgia Institute of Technology, April 2016.

Kruttidipta Samal, *Closed Loop Perception for Resource Efficient Autonomous Systems*, Ph.D. dissertation, Georgia Institute of Technology, January 2022. (with Prof. Saibal Mukhopadhyay)

## Patents

U. S. Patent #5,708,767, Jan. 13, 1998, "Method and apparatus for video browsing based on content and structure," B. L. Yeo, M. M. Yeung, W. Wolf, and B. Liu.

U. S. Patent #5,821,945, October 13, 1998, "Method and apparatus for video browsing based on content and structure," B. L. Yeo, M. M. Yeung, W. Wolf, and B. Liu.

U. S. Patent #6,678,413, January 13, 2004, "System and method for object identification and behavior characterization using video analysis," Yiqing Liang, Linda Crnic, Vikrant Kobla, and Wayne Wolf

U. S. Patent #6,691,305, February 10, 2004, "Object code compression using different schemes for different instruction types," Jorg Henkel, Wayne Wolf, Haris Lekatsas.

U. S. Patent #6,732,256, May 4, 2004, "Method and apparatus for object code compression and decompression for computer systems," Jorg Henkel, Wayne Wolf, Haris Lekatsas.

U. S. Patent #7,068,842, June 27, 2006, "System and method for object identification and behavior characterization using video analysis," Yiqing Liang, Linda Crnic, Vikrant Kobla, and Wayne Wolf

U. S. Patent #7,095,343, August 22, 2006, "Code compression algorithms and architectures for embedded systems," Yuan Xie, Wayne H. Wolf.

U. S. Patent #7,200,266, April 3, 2007, "Method and apparatus for automated video activity analysis," I. Burak Ozer, Wayne H. Wolf, Tiehan Lu.

U. S. Patent #7,660,439 February 9, 2010, "Method and system for flow detection and motion analysis," Tiehan Lu, I. Burak Ozer, Wayne H. Wolf

## Licenses and Certifications

Federal Aviation Administration: Private pilot, instrument, single engine, land.

Federal Communications Commission: Amateur radio, Amateur Extra Class.

## Cases in Which Dr. Wolf Testified as an Expert Witness

Case Name: Mentor Graphics Corp. v. Quickturn Design Sys.
Docket Number: CV 96-342-RE
Court: United States District Court for the District of Oregon

Case Name: Quickturn Design Systems, Inc. vs. Meta Systems and Mentor Graphics, Inc.
Docket Number: C-96-0881 MHP
Court: United States District Court for the Northern District of California

Case Name: Faiveley Transp. Malmo AB v. Wabtec Corp.
Docket Number: 08 Civ. 3330 (JSR)
Court: United States District Court for the Southern District of New York

Case Name: In re Papst Licensing GmbH & Co. KG Litig.
Docket Number: Misc. Action No. 07-493 (RMC); MDL Docket No. 1880
Court: United States District Court for the District of Columbia

Case Name: Assemblyman Reed Gusciora, Stephanie Harris, Coalition for Peace Action, and New Jersey Peace Action v. Jon Corzine, Governor of the State of New Jersey (in his official capacity) and Nina Mitchell Wells, Secretary of State of the State of New Jersey (in her official capacity)
Docket Number: MER-L-2691-04
Court:Superior Court, Law Division, Mercer County, New Jersey

Case name: Nexstep Inc v. Comcast Cable Communications LLC
Docket number: C. A. No. 19-1031 (RGA)(SRF)
Court: United States District Court for the District of Delaware

Siemens: Northern District of California, Case No. 3:20-cv-04151-WHO

## Agency Testimony Offered by Dr. Wolf

Agency: United States International Trade Commission
Investigation Number: 337-TA-383
Complainant: Quickturn Design Systems, Inc.

Agency: United States International Trade Commission
Investigation Number: 337-TA-1119

Agency: United States International Trade Commission
Investigation Number: 337-TA-925
Parties: Enterprise System Technologies vs. Apple

Agency: United States International Trade Commission
Complainant: Broadcom

San Luis Obispo CA County Assessor, tax assessment case

WAC Lighting: International Trade Commission, Investigation No. 337-TA-1374

## Inter Partes Reviews

Affinity Labs of Texas LLC vs. Samsung Electronics Co, Samsung Electronics America, Samsung Tele-Communications America
Canon Inc, Canon USA, Axis Communications AB vs. Avigilon Fortress Corporation
Renasas Electronics Corporation vs. Broadcom Corporation

## Publications

***Journal Articles***

T. J. Kowalski, D. J. Geiger, W. H. Wolf, and W. Fichtner, "The VLSI Design Automation Assistant: From Algorithms to Silicon,", *IEEE Design & Test*, August, 1985, pp. 33-43.

Wayne Wolf, "Sticks Compaction and Assembly," *IEEE Design & Test*, June, 1986, pp. 57-63.

Wayne H. Wolf, Robert G. Mathews, John A. Newkirk, and Robert W. Dutton, "Algorithms for Optimizing, Two-Dimensional Symbolic Layout Compaction," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 7(CAD-4), April, 1988, pp 451-466.

Wayne Wolf, "How to build a hardware description and measurement system on an object-oriented programming language," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 8(3), March, 1989, pp. 288-301 .

Wayne Wolf, Kurt Keutzer, and Janaki Akella, "Addendum to `A kernel-finding state assignment algorithm for multi-level logic'," *IEEE Transactions on CAD/ICAS*, 8(8), August, 1989, pp. 925-927.

Wayne Wolf, "A practical comparison of two object-oriented programming languages," *IEEE Software*, September, 1989, pp. 61-68.

Wayne Wolf, "Recoding-derived bounds for input encoding," *Computers and Electrical Engineering*, 16(4), 1990, pp. 193-201.

Wayne Wolf, "Object-oriented programming for CAD," *IEEE Design & Test*, March, 1991, pp. 35-42.

Wayne Bower, Carl Seaquist, and Wayne Wolf, "A framework for industrial layout generators," *IEEE Transactions on CAD/ICAS*, 10(5), May, 1991, pp. 596-603.

Wayne Wolf, "Synthesis tools help teach systems concepts in VLSI design," *IEEE Transactions on Education*, 35(1), February, 1992, pp. 11--17.

Wayne Wolf, "Object-Oriented Implementation Issues in an Experimental CAD System," *Software: Practice and Experience*, 22(4), April, 1992, pp. 287-304.

R. J. Lipton, D. N. Serpanos, and W. H. Wolf, "PDL++: an optimizing generator language for register-transfer design," *Journal of Computer and Software Engineering*, 1, 1993, pp. 1-16.

Wayne Wolf and Richard Manno, "High-level synthesis from communicating VHDL processes," *IEICE Transactions on Information and Systems*, E76-D(9), September, 1993.

Wayne Wolf, "Partitioning algorithms for complex controllers,"*Integration*, 15, 1993, pp. 117-131.

Nam S. Woo, Alfred E. Dunlop, and Wayne Wolf, "Codesign from cospecification," *IEEE Computer*, January, 1994, pp. 42-47.

Steve C.-Y. Huang and Wayne H. Wolf, "Resynthesis for cycle time in controller-datapath systems," *IEEE Transactions on VLSI Systems*, 2(1), March, 1994, pp. 68-80.

Wayne H. Wolf, "Hardware-software co-design of embedded systems," *Proceedings of the IEEE*, 82(7), July, 1994, pp. 967-989.

Andres Takach, Wayne Wolf, and Miriam Leeser, "An automaton model for scheduling constraints in synchronous machines," *IEEE Transactions on Computers*, 44(1), January, 1995, pp. 1-12.

Andres Takach and Wayne Wolf, "Scheduling constraint generation for communicating processes," *IEEE Transactions on VLSI Systems*, 3(2), June, 1995, pp. 215-230.

Santanu Dutta and Wayne Wolf, "Asymptotic limits on video signal processor architectures," *IEEE Transactions on Circuits and Systems for Video Technology*, 5(6), December, 1995, pp. 545-561.

Santanu Dutta and Wayne Wolf, "A flexible motion estimation architecture," *IEEE Transactions on Circuits and Systems for Video Technology*, 6(1), February, 1996.

Ti-Yen Yen and Wayne Wolf, "An efficient graph-based algorithm for FSM scheduling," *IEEE Transactions on VLSI Systems*, 4(1), March, 1996, pp. 98-112.

Wayne Wolf, "Object-oriented co-specification for embedded systems," *Microprocessors and Microsystems*, 20, 1996, pp. 141-147.

Wayne Wolf, Andrew Wolfe, Steve Chinatti, Ravi Koshy, Gary Slater, and Spencer Sun, "Lessons from the design of a PC-based private branch exchange," *Design Automation for Embedded Systems*, 1(4), 1996, pp. 297-314.



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Wayne Wolf, "Object-oriented co-synthesis of distributed embedded systems," *ACM Transactions on Design Automation of Electronic Systems,* 1(3), July, 1996.

Steve C.-Y. Huang and Wayne Wolf, "Unifiable scheduling and allocation for minimizing system cycle time," *IEEE Transactions on VLSI Systems,* 5(2), June, 1997, pp. 197-210.

Wayne Wolf, "An architectural co-synthesis algorithm for distributed, embedded computing systems," *IEEE Transactions on VLSI Systems,* 5(2), June, 1997, pp. 218-229.

Wayne Wolf, "Redundancy removal during high-level synthesis using scheduling don't-cares," *Journal of Electronic Testing: Theory and Applications*, 11(3), December, 1997, pp. 211-226.

Santanu Dutta, Wayne Wolf, and Andrew Wolfe, "A methodology to evaluate memory architecture design tradeoffs for video signal processors," *IEEE Transactions on Circuits and Systems for Video Technology*, 8(1), February, 1998, pp. 36-53.

Ti-Yen Yen, Alex Ishii, Al Casavant, and Wayne Wolf, "Efficient algorithms for interface timing verification," *Journal of Formal Methods,* 12(3), April, 1998, pp. 241-265.

J. Hou and W. Wolf, "Presynthesis partitioning for hardware-software cosynthesis," *IEE Proceedings—Computers and Digital Techniques*, 145(3), May, 1998.

Santanu Dutta, Kevin J. O'Connor, Wayne Wolf, and Andrew Wolfe, "A design study of a 0.25 μm video signal processor," *IEEE Transactions on Circuits and Systems for Video Technology,* 8(4), August, 1998, pp. 501-519.

Michael Philips and Wayne Wolf, "A multi-attribute shot segmentation algorithm for video programs," *Telecommunication Systems,* 9, 1998, pp. 393-402.

Ti-Yen Yen and Wayne Wolf, "Performance estimation for real-time distributed embedded systems," *IEEE Transactions on Parallel and Distributed Systems,* 9(11), November 1998, pp. 1125-1136.

Santanu Dutta and Wayne Wolf, "A circuit-driven design methodology for video signal-processing datapath elements," *IEEE Transactions on VLSI Systems,* 7(2), June 1999, pp. 229-240.

Chunho Lee, Miodrag Potkonjak and Wayne Wolf, "Synthesis of hard real-time application specific systems," *Design Automation for Embedded Systems,* 4(4), 1999, pp. 215-242.

Miodrag Potkonjak and Wayne Wolf, "Cost optimization in ASIC implementation of periodic hard-real time systems using behavioral synthesis techniques," *ACM Transactions on Design Automation of Electronic Systems,* 4(4), October 1999, pp. 430-459.

Hong-Heather Yu and Wayne Wolf, "A hierarchical multi-resolution video shot transition detection scheme," *Computer Vision and Image Understanding,* 75(1/2), July/August 1999, pp. 196-213.

Yanbing Li and Wayne Wolf, "Hardware/software cosynthesis with memory hierarchies," *IEEE Transactions on CAD,* 18(10), October 1999, pp. 1405-1417.

Haris Lekatsas and Wayne Wolf, "SAMC: a code compression algorithm for embedded processors," *IEEE Transactions on CAD,* 18(12), December 1999, pp. 1689-1701.

Wayne Wolf and Jan Madsen, "Embedded systems education for the future," *Proceedings of the IEEE,* 88(1), January 2000, pp. 23-30.

Michael Kozuch, Wayne Wolf, and Andrew Wolfe, "An experimental analysis of digital video library servers," *Multimedia Systems,* 8(2), 2000, pp. 135-145.

David Rhodes and Wayne Wolf, "Two co-NP complete schedule analysis problems," *International Journal of Foundations of Computer Science,* 12(5), 2001, pp. 565-580.

David L. Rhodes and Wayne Wolf, "RAGS: real-analysis, ALAP guided synthesis," *IEEE Transactions on CAD,* 20(8), August 2001, pp. 931-941.

Heather Yu, Xiangyang Kong, and Wayne Wolf, "Techniques for content-based graph authentication," *IEEE Multimedia,* 8(4), October-December 2001, pp. 38-45.

I. Burak Ozer and Wayne Wolf, "A hierarchical human detection system in (un)compressed domains," *IEEE Transactions on Multimedia,* 4(2), June 2002, pp. 283-300.

Wayne Wolf, Burak Ozer, and Tiehan Lv, "Smart cameras as embedded systems," *IEEE Computer,* 35(9) September 2002, pp. 48-53.

G. Chen, M. Kandemir, V. Narayanan, M. J. Irwin, and W. Wolf, "Using memory compression for energy reduction in an embedded Java system," *Journal of Circuits, Systems, and Computers,* 11(5), October 2002, pp. 537-556.



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Wayne Wolf, "Introduction to the inaugural issue," *ACM Transactions on Embedded Computing Systems,* 1(1), November 2002, p. 1.

I. Burak Ozer, Wayne Wolf, and Ali N. Akansu, "A graph-based object description for information retrieval in digital image and video libraries," *Journal of Visual Communication and Image Representation*, 13(4), December 2002, pp. 425-459.

Wayne Wolf and Mahmut Kandemir, "Memory system optimization of embedded software," *Proceedings of the IEEE*, 91(1), January 2003, pp. 165-182.

Wayne Wolf, "A decade of hardware/software codesign," *IEEE Computer*, 36(4), April 2003, pp. 38-43.

Yuan Xie, Jiang Xu, and Wayne Wolf, "Augmenting platform-based design with synthesis tools," *Journal of Circuits, Systems, and Computers*, 12(2), 2003, pp. 1-18.

Tiehan Lv, Joerg Henkel. Haris Lekatsas, and Wayne Wolf, "A dictionary-based en/decoding scheme for low-power data busses," *IEEE Transactions on VLSI Systems*, 11(5), October 2003, pp. 943-951.

Nourridene Chabini and Wayne Wolf, "Reducing dynamic power consumption in synchronous sequential digital designs using retiming and supply voltage scaling," *IEEE Transactions on VLSI Systems*, 12(6), June 2004, pp. 573-589.

Tiehan Lv, Jiang Xu, Wayne Wolf, I. Burak Ozer, Joerg Henkel, and Srimat T. Chakradhar, "A methodology for architectural design of multimedia multiprocessor SoCs," in *IEEE Design & Test of Computers*, 22(1), January-February 2005, pp. 18-26.

I. Burak Ozer, Tiehan Lu, and Wayne Wolf, "Design of a real-time gesture recognition system," *IEEE Signal Processing Magazine*, 22(3), May 2005, pp. 57-64.

Haris Lekatsas, Joerg Henkel, and Wayne Wolf, "Approximate arithmetic coding for bus transition reduction in low power designs," *IEEE Transactions on VLSI Systems*, 13(6), June 2005, pp. 696-707.

Shengqi Yang, Wayne Wolf and Narayanan Vijaykrishnan, "Power and performance analysis of motion estimation based on hardware and software realizations," *IEEE Transactions on Computers*, 54(6), June 2005, pp. 714-726.

Chia-Han Lee and Wayne Wolf, "Implementation-efficient reliability ratio based weighted bit-flipping decoding for LDPC codes," *Electronics Letters*, 41(13), 23 June 2005, pp. 755-757.

Chabini, N.; Wolf, W., "Unification of scheduling, binding, and retiming to reduce power consumption under timings and resources constraints," *Very Large Scale Integration (VLSI) Systems, IEEE Transactions on* , vol.13, no.10, pp.1113,1126, Oct. 2005

Jooheung Lee, N. Vijaykrishnan, Mary Jane Irwin, and Wayne Wolf, "An efficient architecture for motion estimation and compensation in the transform domain," *IEEE Transactions on Circuits and Systems for Video Technology*, 16(2), February 2006.

Yuan Xie, Wayne Wolf, and Haris Lekatsas, "Code compression for embedded VLIW processors using variable-to-fixed coding," *IEEE Transactions on VLSI Systems*, 14(5), May 2006, pp. 525-536.

Jiang Xu, Wayne Wolf, Joerg Henkel, and Srimat Chakradhar, "A design methodology for application-specific networks-on-chip," *ACM Transactions on Embedded Computing Systems*, 5(2), May 2006, pp. 263-280.

Chia-Han Lee and Wayne Wolf, "Architectures and platforms of software (defined) radio systems," *International Journal of Computers and Their Applications*, 13(3), September 2006, pp. 106-117.

Yuan Xie, Wayne Wolf, and Haris Lekatsas, "Code decompression unit design for VLIW embedded processors," *IEEE Transactions on VLSI Systems*, 15(8), August 2007, pp. 975-980.

Changhong Lin, Yuan Xie, and Wayne Wolf, "Code compression for VLIW embedded systems using a self-generating table," *IEEE Transactions on VLSI Systems*, 15(10), October 2007, pp. 1160-1171.

Senem Velipasalar and Wayne H. Wolf, "Frame-level temporal calibration of video sequences from unsynchronized cameras," *Machine Vision and Applications Journal*, DOI 10.1007/s00138-008-0122-6, January 24, 2008.

Wayne Wolf, Ahmed A. Jerraya, and Grant Martin, "Multiprocessor System-on-Chip (MPSoC) Technology," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 27(10), October 2008, pp. 1701-1713.



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Senem Velipasalar and Wayne Wolf, "Lessons from a distributed peer-to-peer smart tracker," *Elektrotechnik and Informationstechnik*, 2008, 125/10, 1-7.

Shengqi Yang, Wenping Wang, Tiehan Lu, Wayne Wolf, N. Vijaykrishnan, and Yuan Xie. 2008. Case study of reliability-aware and low-power design. *IEEE Trans. Very Large Scale Integr. Syst.* 16(7), July 2008, PP. 861-873.

Cheng-Yao Chen, Tai-Ming Lin, and Wayne H. Wolf, "A visible/infrared fusion algorithm for distributed smart cameras," *IEEE Journal of Selected Topics in Signal Processing*, 2(4), August 2008, pp. 514-525.

Bernard Rinner and Wayne Wolf, "An introduction to distributed smart cameras," *Proceedings of the IEEE*, 96(10), October 2008, pp. 1565-1575.

S. Saha, S. Puthenpurayil, J. Schlessman, S. S. Bhattacharyya, and W. Wolf, "The signal passing interface and its application to embedded implementation of smart camera applications," *Proceedings of the IEEE*, 96(10), October 2008, pp. 1576-1587.

Jiang Xu, Wayne Wolf, Sei Zhang, "Double-data-rate, wave-pipelined interconnect for asynchronous NoCs," *IEEE Micro*, 29(3), May 2009, pp. 20-30.

S. Saha, V. Kianzad, J.Schlessman, G.Aggarwal, S. S. Bhattacharyya, W.Wolf, and R.Chellappa. An architectural level design methodology for smart camera applications. *International Journal of Embedded Systems*, 4(1):83-97, 2009.

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