

Reading List of Selected PASM-Related Publications

The list of PASM-related publications is divided into several categories: Architecture and Design Issues, Parallel Language and Compiling Topics, Operating System Aspects, Interconnection Networks, and Algorithms and Applications. When paper content involved multiple categories, the paper was listed in the “best-fit” category.

Architecture and Design Issues

1. Howard Jay Siegel, "Controlling the Active/Inactive Status of SIMD Machine Processors," 1977 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, p. 183, Bellaire, MI, Aug. 1977.
2. Howard Jay Siegel, Philip T. Mueller, Jr., and Harold E. Smalley, Jr., "Control of a Partitionable Multimicroprocessor System," 1978 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 9-17, Bellaire, MI, Aug. 1978.
3. Howard Jay Siegel, Frederick Kemmerer, and Mark Washburn, "Parallel Memory System for a Partitionable SIMD/MIMD Machine," 1979 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 212-221, Bellaire, MI, Aug. 1979.
4. Howard Jay Siegel, "PASM: A Reconfigurable Multi-microcomputer System for Image Processing," in *Languages and Architectures for Image Processing*, edited by Michael J.B. Duff and Stefano Levialdi, Academic Press, London, England, pp. 257-265, 1981.
5. James T. Kuehn and Howard Jay Siegel, "Simulation Studies of PASM in SIMD Mode," 1981 IEEE Computer Society Workshop on Computer Architecture for Pattern Analysis and Image Database Management, sponsor: IEEE Computer Society, pp. 43-50, Hot Springs, VA, Nov. 1981.
6. Howard Jay Siegel, Leah J. Siegel, Frederick Kemmerer, Philip T. Mueller, Jr., Harold E. Smalley, Jr., and S. Diane Smith, "PASM: A Partitionable SIMD/MIMD System for Image Processing and Pattern Recognition," *IEEE Transactions on Computers*, Vol. C-30, No. 12, pp. 934-947, Dec. 1981 (reprinted in *Advanced Computer Architecture*, edited by D. P. Agrawal, IEEE Computer Society Press, New York, NY, pp. 339-352, 1986).
7. James T. Kuehn, Howard Jay Siegel, and Peter D. Hallenbeck, "Design and Simulation of an MC68000-Based Multimicroprocessor System," 1982 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 353-362, Bellaire, MI, Aug. 1982.
8. James T. Kuehn, Howard Jay Siegel, and Martin Grosz, "A Distributed Memory Management System for PASM," 1983 IEEE Computer Society Workshop on Computer Architecture for Pattern Analysis and Image Database Management, sponsor: IEEE Computer Society, pp. 101-108, Pasadena, CA, Oct. 1983.

9. David G. Meyer, Howard Jay Siegel, Thomas Schwederski, Nathaniel J. Davis IV, and James T. Kuehn, "The PASM Parallel System Prototype," Digest of Papers Compcon Spring 85, sponsor: IEEE Computer Society, pp. 429-434, San Francisco, CA, Feb. 1985.
10. James T. Kuehn, Thomas Schwederski, and Howard Jay Siegel, "Design of a 1024-Processor PASM System," 1st International Conference on Supercomputing Systems, sponsor: IEEE Computer Society, pp. 603-612, St. Petersburg, FL, Dec. 1985.
11. Nathaniel J. Davis IV and Howard Jay Siegel, "The PASM Prototype Interconnection Network," AFIPS Conference Proceedings Volume 54: 1985 National Computer Conference, sponsor: AFIPS (American Federation of Information Processing Societies), pp. 183-190, Chicago, IL, July 1985.
12. James T. Kuehn and Howard Jay Siegel, "Multifunction Processing with PASM," in Intermediate-Level Image Processing, edited by Michael J.B. Duff, Academic Press, London, England, pp. 209-229, 1986.
13. Thomas Schwederski, Wayne G. Nation, Howard Jay Siegel, and David G. Meyer, "The Implementation of the PASM Prototype Control Hierarchy," 2nd International Conference on Supercomputing, Vol. I, sponsor: International Supercomputing Institute, pp. 418-427, Santa Clara, CA, May 1987.
14. Menkae Jeng and Howard Jay Siegel, "The Use of a Dynamic Redundancy Network to Enhance the Reliability of PASM," 2nd International Conference on Supercomputing, Vol. I, sponsor: International Supercomputing Institute, pp. 311-320, Santa Clara, CA, May 1987.
15. Howard Jay Siegel, Thomas Schwederski, James T. Kuehn, and Nathaniel J. Davis IV, "An Overview of the PASM Parallel Processing System," in Computer Architecture, edited by Daniel D. Gajski, Veljko M. Milutinovic, Howard Jay Siegel, and Borko P. Furht, IEEE Computer Society Press, Washington, D.C., pp. 387-407, 1987.
16. George B. Adams III, Dharma P. Agrawal, and Howard Jay Siegel, "A Survey and Comparison of Fault-Tolerant Multistage Interconnection Networks," Computer, Special Issue on Interconnection Networks for Parallel and Distributed Processing, Vol. 20, No. 6, pp. 14-27, June 1987 (reprinted in: (1) Interconnection Networks for Large-Scale Parallel Processing: Theory and Case Studies, 2nd Edition, by H. J. Siegel, McGraw-Hill, New York, NY, pp. 285-312, 1990; (2) Interconnection Networks for Multiprocessors and Multicomputers: Theory and Practice, edited by A. Varma and C. S. Raghavendra, IEEE Computer Society Press, Los Alamitos, CA, pp. 329-342, 1994; and (3) Interconnection Networks for High-Performance Parallel Computers, edited by I. D. Scherson and A. S. Youssef, IEEE Computer Society Press, Los Alamitos, CA, pp. 654-667, 1994).
17. Howard Jay Siegel, William Tsun-yuk Hsu, and Menkae Jeng, "An Introduction to the Multistage Cube Family of Interconnection Networks," The Journal of Supercomputing, Vol. 1, No. 1, pp. 13-42, 1987.

18. Menkae Jeng and Howard Jay Siegel, "Design and Analysis of Dynamic Redundancy Networks," IEEE Transactions on Computers, Vol. C-37, No. 9, pp. 1019-1029, Sep. 1988 (reprinted in Interconnection Networks for Large-Scale Parallel Processing: Theory and Case Studies, 2nd Edition, by H. J. Siegel, McGraw-Hill, New York, NY, pp. 257-284, 1990).
19. Henry G. Dietz, Thomas Schwederski, Matthew T. O'Keefe, and Abderrazek Zaafrani, "Static Synchronization Beyond VLIW," Supercomputing 1989, cosponsors: IEEE Computer Society and ACM, pp. 416-425, Reno, NV, Nov. 1989.
20. Howard Jay Siegel, Wayne G. Nation, Clyde P. Kruskal, and Leonard M. Napolitano, Jr., "Using the Multistage Cube Network Topology in Parallel Supercomputers," Proceedings of the IEEE, Special Issue on Supercomputer Technology, Vol. 77, No. 12, pp. 1932-1953, Dec. 1989 (reprinted in Interconnection Networks for Large-Scale Parallel Processing: Theory and Case Studies, 2nd Edition, by H. J. Siegel, McGraw-Hill, New York, NY, pp. 313-364, 1990).
21. Howard Jay Siegel, Wayne G. Nation, and Mark D. Allemang, "The Organization of the PASM Reconfigurable Parallel Processing System," 1990 Parallel Computing Workshop, sponsor: the Department of Computer and Information Science at The Ohio State University, pp. 1-12, Columbus, OH, Mar. 1990 (reprinted in the Kyoto International Software Symposium: KISS91, pp. 43-54, Sep. 1991). Invited - one of three "Featured Speakers."
22. Wayne G. Nation, Samuel A. Fineberg, Mark D. Allemang, Thomas Schwederski, Thomas L. Casavant, and Howard Jay Siegel, "Efficient Masking Techniques for Large-Scale SIMD Architectures," Frontiers '90: The 3rd Symposium on the Frontiers of Massively Parallel Computation, cosponsors: IEEE Computer Society and NASA Goddard Space Flight Center, pp. 259-264, College Park, MD, Oct. 1990.
23. Thomas Schwederski, Eduard Bernath, Gerhard Roos, Wayne G. Nation and Howard Jay Siegel, "Fault Side-Effects in Fault-Tolerant Multistage Interconnection Networks," 1991 International Conference on Parallel Processing (ICPP '91), Vol. I, sponsor: The Pennsylvania State University, pp. 313-317, St. Charles, IL, Aug. 1991.
24. Matthew T. O'Keefe and Henry G. Dietz, "Static Barrier MIMD: Architecture and Performance Analysis," Journal of Parallel and Distributed Computing, Vol. 25, No. 2, pp. 126-132, Mar. 1995.

Parallel Language and Compiling Topics

1. Philip T. Mueller, Jr., Leah J. Siegel, and Howard Jay Siegel, "A Parallel Language for Image and Speech Processing," COMPSAC '80: 4th International Computer Software and Applications Conference, sponsor: IEEE Computer Society, pp. 476-483, Chicago, IL, Oct. 1980.
2. Carolyn Cline and Howard Jay Siegel, "Extensions of Ada for SIMD Parallel Processing," COMPSAC '83: 7th International Computer Software and Applications Conference, sponsor:

IEEE Computer Society, pp. 366-372, Chicago, IL, Nov. 1983.

3. Carolyn Cline and Howard Jay Siegel, "A Comparison of Parallel Language Approaches to Data Representation and Data Transferral," Computer Data Engineering Conference (COMPDEC), sponsor: IEEE Computer Society, pp. 60-66, Los Angeles, CA, Apr. 1984.
4. James T. Kuehn and Howard Jay Siegel, "Extensions to the C Programming Language for SIMD/MIMD Parallelism," 1985 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 232-235, St. Charles, IL, Aug. 1985.
5. Carolyn Cline and Howard Jay Siegel, "Augmenting Ada for SIMD Parallel Processing," IEEE Transactions on Software Engineering, Vol. SE-11, No. 9, pp. 970-977, Sep. 1985.
6. Thomas L. Casavant, Henry G. Dietz, Thomas Schwederski, Phillip C.-Y. Sheu, and Howard Jay Siegel, "Software Plans for PASM," 2nd International Conference on Supercomputing, Vol. I, sponsor: International Supercomputing Institute, pp. 428-439, Santa Clara, CA, May 1987.
7. Thomas L. Casavant, Henry G. Dietz, Phillip C-Y. Sheu, and Howard Jay Siegel, "The PARSE Approach to Programming Non-Shared Memory, Reconfigurable, Parallel Computers," 4th International Conference on Supercomputing, Vol. I, sponsor: International Supercomputing Institute, pp. 380-389, Santa Clara, CA, May 1989.
8. M.J. Phillip and Henry G. Dietz, "Toward Semantic Self-Consistency in Explicitly Parallel Languages," 4th International Conference on Supercomputing, Vol. I, sponsor: International Supercomputing Institute, pp. 398-407, Santa Clara, CA, May 1989.
9. Mark A. Nichols, Howard Jay Siegel, Henry G. Dietz, Russell W. Quong, and Wayne G. Nation, "Eliminating Memory Fragmentation within Partitionable SIMD/SPMD Machines," IEEE Transactions on Parallel and Distributed Systems, Special Issue on Parallel Languages and Compilers, Vol. 2, No. 3, pp. 290-303, July 1991.
10. Mark A. Nichols, Howard Jay Siegel, and Henry G. Dietz, "Execution Mode Management and CU/PE Overlap in an SIMD/SPMD Parallel Language/Compiler," COMPSAC '91: 15th Annual International Computer Software and Applications Conference, cosponsors: IEEE Computer Society and the Information Processing Society of Japan, pp. 392-397, Tokyo, Japan, Sep. 1991.
11. Henry G. Dietz, Matthew T. O'Keefe, and Abderrazek Zaafrani, "Static Scheduling for Barrier MIMD Architectures," The Journal of Supercomputing, Vol. 5, pp. 263-289, 1992.
12. Matthew T. O'Keefe and Henry G. Dietz, "Loop Coalescing and Scheduling for Barrier MIMD Architectures," IEEE Transactions on Parallel and Distributed Systems, Vol. 4, pp. 1060-1064, 1993.
13. Mark A. Nichols, Howard Jay Siegel, and Henry G. Dietz, "Data Management and Control-Flow Aspects of an SIMD/SPMD Parallel Language/Compiler," IEEE Transactions on Parallel and Distributed Systems, Vol. 4, No. 2, pp. 222-234, Feb. 1993.

Operating System Aspects

1. Howard Jay Siegel, Leah J. Siegel, Robert J. McMillen, Philip T. Mueller, Jr., and S. Diane Smith, "An SIMD/MIMD Multimicroprocessor System for Image Processing and Pattern Recognition," 1979 IEEE Computer Society Conference on Pattern Recognition and Image Processing (PRIP 79), sponsor: IEEE Computer Society, pp. 214-224, Chicago, IL, Aug. 1979.
2. David L. Tuomenoksa and Howard Jay Siegel, "Application of Two-Dimensional Bin Packing Algorithms for Task Scheduling in the PASM Multimicrocomputer System," 19th Annual Allerton Conference on Communication, Control, and Computing, sponsor: University of Illinois-Urbana, p. 542, Monticello, IL, Oct. 1981.
3. David Lee Tuomenoksa and Howard Jay Siegel, "Analysis of the PASM Control System Memory Hierarchy," 1982 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 363-370, Bellaire, MI, Aug. 1982.
4. David Lee Tuomenoksa and Howard Jay Siegel, "Analysis of Multiple-Queue Task Scheduling Algorithms for Multiple-SIMD Machines," 3rd International Conference on Distributed Computing Systems, sponsor: IEEE Computer Society, pp. 114-121, Hollywood, FL, Oct. 1982.
5. David L. Tuomenoksa and Howard Jay Siegel, "A Distributed Operating System for PASM," 17th Hawaii International Conference on System Sciences, cosponsors: University of Hawaii and University of Southwestern Louisiana, pp. 69-77, Honolulu, HI, Jan. 1984. Received "best paper" award for Hardware (Computer Systems) Track.
6. David Lee Tuomenoksa and Howard Jay Siegel, "Task Preloading Schemes for the PASM Dynamically Reconfigurable Parallel Processing System," IEEE Transactions on Computers, Vol. C-32, No. 10, pp. 895-904, Oct. 1984.
7. David Lee Tuomenoksa and Howard Jay Siegel, "Task Scheduling on the PASM Parallel Processing System," IEEE Transactions on Software Engineering, Vol. SE-11, No. 2, pp. 145-157, Feb. 1985.
8. Edward J. Delp, Howard Jay Siegel, Andrew Whinston, and Leah H. Jamieson, "An Intelligent Operating System for Executing Image Understanding Tasks on a Reconfigurable Parallel Architecture," IEEE Computer Society Workshop on Computer Architecture for Pattern Analysis and Image Database Management, sponsor: IEEE Computer Society, pp. 217-224, Miami Beach, FL, Nov. 1985.
9. David Lee Tuomenoksa and Howard Jay Siegel, "Determining an Optimal Secondary Storage Service Rate for the PASM Control System," IEEE Transactions on Computers, Vol. C-35, No. 1, pp. 43-53, Jan. 1986.
10. Thomas Schwederski and Howard Jay Siegel, "Adaptable Software for Supercomputers," Computer, Special Issue on Design for Adaptability, Vol. 19, No. 2, pp. 40-48, Feb. 1986.

11. Thomas Schwederski, Howard Jay Siegel, Edward J. Delp, Andrew Whinston, and Leah H. Jamieson, "Modeling the PASM Parallel Processing System," SIAM 1986 National Meeting, sponsor: SIAM (Society for Industrial and Applied Mathematics), abstract, p. A86, Boston, MA, July 1986.
12. Thomas Schwederski and Howard Jay Siegel, "Performance Measurements on the PASM Prototype," Workshop on Instrumentation for Distributed Computing Systems, cosponsors: IEEE Computer Society and ACM, pp. 49-50, Sanibel Island, FL, Jan. 1987.
13. C. Henry Chu, Edward J. Delp, and Howard Jay Siegel, "Image Understanding on PASM: A User's Perspective," 2nd International Conference on Supercomputing, Vol. I, sponsor: International Supercomputing Institute, pp. 440-449, Santa Clara, CA, May 1987.
14. Francis J. Weil, Leah H. Jamieson, and Edward J. Delp, "An Algorithm Database for an Image Understanding Task Execution Environment," in *High-Level Vision with Multicomputers*, edited by Stefano Levialdi, Academic Press, London, pp. 25-51, 1988.
15. Thomas Schwederski, Howard Jay Siegel, and Thomas L. Casavant, "A Model of Task Migration in Partitionable Parallel Processing Systems," *Frontiers '88: The 2nd Symposium on the Frontiers of Massively Parallel Computation*, cosponsors: IEEE Computer Society and the NASA Goddard Space Flight Center, pp. 211-214, Fairfax, VA, Oct. 1988.
16. C. Henry Chu, Edward J. Delp, Leah H. Jamieson, Howard Jay Siegel, Francis J. Weil, and Andrew B. Whinston, "A Model for an Intelligent Operating System for Executing Image Understanding Tasks on a Reconfigurable Parallel Architecture," *Journal of Parallel and Distributed Computing*, Vol. 6, No. 3, pp. 598-622, June 1989.
17. Thomas Schwederski, Howard Jay Siegel, and Thomas L. Casavant, "Task Migration Transfers in Multistage Cube Based Parallel Systems," 1989 International Conference on Parallel Processing, Vol. I, sponsor: The Pennsylvania State University, pp. 296-305, St. Charles, IL, Aug. 1989.
18. Menkae Jeng and Howard Jay Siegel, "A Distributed Management Scheme for Partitionable Parallel Computers," 1989 International Conference on Parallel Processing, Vol. II, sponsor: The Pennsylvania State University, pp. 57-64, St. Charles, IL, Aug. 1989.
19. James E. Lumpp, Jr., Thomas L. Casavant, Howard Jay Siegel, and Dan C. Marinescu, "Specification and Identification of Events for Debugging and Performance Monitoring of Distributed Multiprocessor Systems," 10th International Conference on Distributed Computing Systems, sponsor: IEEE Computer Society, pp. 476-483, Paris, France, May 1990.
20. Dan C. Marinescu, James E. Lumpp, Jr., Thomas L. Casavant, and Howard Jay Siegel, "Models for Monitoring and Debugging Tools for Parallel and Distributed Software," *Journal of Parallel and Distributed Computing*, Special Issue on Software Tools for Parallel Programming and Visualization, Vol. 9, No. 2, pp. 171-184, June 1990 (reprinted in *Monitoring and Debugging of Distributed Real-Time Systems*, edited by J. J. P. Tsai and S. J. H. Yang, IEEE Computer

Society Press, Los Alamitos, CA, pp. 64-76, 1995).

21. Francis J. Weil, Leah H. Jamieson, and Edward J. Delp, "An Analysis of Fixed-Assignment Hypercube Partitioning," 1990 International Conference on Parallel Processing, Vol. I, sponsor: The Pennsylvania State University, pp. 222-225, St. Charles, IL, Aug. 1990
22. Thomas Schwederski, Howard Jay Siegel, and Thomas L. Casavant, "Optimizing Task Migration Transfers Using Multistage Cube Networks," 1990 International Conference on Parallel Processing, Vol. I, sponsor: The Pennsylvania State University, pp. 51-58, St. Charles, IL, Aug. 1990 (reprinted in *Interconnection Networks for High-Performance Parallel Computers*, edited by I. D. Scherson and A. S. Youssef, IEEE Computer Society Press, Los Alamitos, CA, pp. 636-643, 1994).
23. Henry G. Dietz, Matthew T. O'Keefe, and Abderrazek Zaafrani, "An Introduction to Static Scheduling for MIMD Architectures," in *Advances in Languages and Compilers for Parallel Processing*, edited by Alex Nicolau, David Gelernter, Thomas Gross, and David Padua, The MIT Press, Cambridge, MA, pp. 425-444, 1991.
24. Francis J. Weil, Leah H. Jamieson, and Edward J. Delp, "DISC: A Method for Dynamic Intelligent Scheduling and Control of Reconfigurable Parallel Architectures," *Journal of Parallel and Distributed Computing*, Vol. 13, No. 3, pp. 273-285, Nov. 1991.
25. James E. Lumpp, Samuel A. Fineberg, Wayne G. Nation, Thomas L. Casavant, Edward C. Bronson, Howard Jay Siegel, Pierre H. Pero, Thomas Schwederski, and Dan C. Marinescu, "CAPS – A Coding Aid Used with the PASM Parallel Processing System," *Communications of the ACM*, Vol. 34, No. 11, pp. 104-117, Nov. 1991.
26. Leah H. Jamieson, Edward J. Delp, Chao-Chun Wang, Juan Li, and Francis J. Weil, "A Software Environment for Parallel Computer Vision," *Computer*, Special Issue on Parallel Processing for Computer Vision and Image Understanding, Vol. 25, No. 2, pp. 73-77, Feb. 1992.
27. Gene Saghi, Howard Jay Siegel, and Jose A. B. Fortes, "On the Viability of a Quantitative Model of System Reconfiguration Due to a Fault," 1992 International Conference on Parallel Processing (ICPP '92), Vol. I, sponsor: The Pennsylvania State University, pp. 233-242, St. Charles, IL, Aug. 1992.

Interconnection Networks

1. Howard Jay Siegel and S. Diane Smith, "Study of Multistage SIMD Interconnection Networks," 5th Annual Symposium on Computer Architecture, cosponsors: IEEE Computer Society and ACM, pp. 223-229, Palo Alto, CA, Apr. 1978.
2. Howard Jay Siegel, "Interconnection Networks for SIMD Machines," *Computer*, Special Issue on Circuit Switching, Vol. 12, No. 6, pp. 57-65, June 1979 (reprinted in: (1) Tutorial:

Distributed Processor Communication Architecture, edited by K. J. Thurber, IEEE, New York, NY, pp. 379-387, 1979, and (2) Tutorial on Parallel Processing, edited by R. Kuhn and D. A. Padua, IEEE Computer Society Press, New York, NY, pp. 110-119, 1981).

3. Howard Jay Siegel, Robert J. McMillen, and Philip T. Mueller, Jr., "A Survey of Interconnection Methods for Reconfigurable Parallel Processing Systems," AFIPS Conference Proceedings Volume 48: 1979 National Computer Conference, sponsor: AFIPS (American Federation of Information Processing Societies), pp. 529-542, New York, NY, June 1979. (Translated into Japanese and reprinted in Nikkei Electronics, No. 228, pp. 49-83, Dec. 1979.)
4. S. Diane Smith, Howard Jay Siegel, Robert J. McMillen, and George B. Adams III, "Use of the Augmented Data Manipulator Multistage Network for SIMD Machines," 1980 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 75-78, Harbor Springs, MI, Aug. 1980.
5. Howard Jay Siegel, "The Theory Underlying the Partitioning of Permutation Networks," IEEE Transactions on Computers, Special Issue on Parallel Processing, Vol. C-29, No. 9, pp. 791-801, Sep. 1980 (reprinted in Interconnection Networks for Parallel and Distributed Processing, edited by C. L. Wu and T. Y. Feng, IEEE Computer Society Press, New York, NY, pp. 558-567, 1984).
6. Robert J. McMillen, George B. Adams III, and Howard Jay Siegel, "Permuting with the Augmented Data Manipulator Network," 18th Annual Allerton Conference on Communication, Control, and Computing, sponsor: University of Illinois-Urbana, pp. 544-553, Monticello, IL, Oct. 1980.
7. Robert J. McMillen and Howard Jay Siegel, "The Hybrid Cube Network," Distributed Data Acquisition, Computing, and Control Symposium, sponsor: IEEE Computer Society, pp. 11-22, Miami Beach, FL, Dec. 1980.
8. Howard Jay Siegel and Robert J. McMillen, "Using the Augmented Data Manipulator Network in PASM," Computer, Special Issue on Advances in Hardware - Chips to Systems, Vol. 14, No. 2, pp. 25-33, Feb. 1981.
9. Robert J. McMillen, George B. Adams III, and Howard Jay Siegel, "Performance and Implementation of 4x4 Switching Nodes in an Interconnection Network for PASM," 1981 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 229-233, Bellaire, MI, Aug. 1981.
10. Howard Jay Siegel and Robert J. McMillen, "The Multistage Cube: A Versatile Interconnection Network," Computer, Special Issue on Interconnection Networks, Vol. 14, No. 12, pp. 65-76, Dec. 1981.
11. Robert J. McMillen and Howard Jay Siegel, "Performance and Fault Tolerance Improvements in the Inverse Augmented Data Manipulator Network," 9th Annual International Symposium on Computer Architecture, cosponsors: IEEE Computer Society and ACM, pp. 63-72, Austin, TX,

Apr. 1982.

12. George B. Adams III and Howard Jay Siegel, "On the Number of Permutations Performable by the Augmented Data Manipulator Network," IEEE Transactions on Computers, Vol. C-31, No. 4, pp. 270-277, Apr. 1982.
13. George B. Adams III and Howard Jay Siegel, "The Extra Stage Cube: A Fault Tolerant Interconnection Network for Supersystems," IEEE Transactions on Computers, Special Issue on Supersystems, Vol. C-31, No. 5, pp. 443-454, May 1982 (reprinted in Interconnection Networks for Parallel and Distributed Processing, edited by C. L. Wu and T. Y. Feng, IEEE Computer Society Press, New York, NY, pp. 397-408, 1984).
14. Robert J. McMillen and Howard Jay Siegel, "Routing Schemes for the Augmented Data Manipulator Network in an MIMD System," IEEE Transactions on Computers, Vol. C-31, No. 12, pp. 1202-1214, Dec. 1982 (reprinted in Interconnection Networks for Parallel and Distributed Processing, edited by C. L. Wu and T. Y. Feng, IEEE Computer Society Press, New York, NY, pp. 184-196, 1984).
15. George B. Adams III and Howard Jay Siegel, "A Survey of Fault-Tolerant Multistage Networks and Comparison to the Extra Stage Cube," 17th Hawaii International Conference on System Sciences, cosponsors: University of Hawaii and University of Southwestern Louisiana, pp. 268-277, Honolulu, HI, Jan. 1984.
16. George B. Adams III and Howard Jay Siegel, "The Use of 4x4 Switching Elements in the Multistage Cube Network," 1st International Conference on Computers and Applications, cosponsors: CIE (Chinese Institute of Electronics) Computer Society and IEEE Computer Society, pp. 585-592, Beijing, China, June 1984.
17. George B. Adams III and Howard Jay Siegel, "A Modification to Improve the Fault Tolerance of the Extra Stage Cube Interconnection Network," 1984 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 169-173, Bellaire, MI, Aug. 1984.
18. Robert J. McMillen and Howard Jay Siegel, "Evaluation of Cube and Data Manipulator Networks," Journal of Parallel and Distributed Computing, Vol. 2, No. 1, pp. 79-107, Feb. 1985.
19. Howard Jay Siegel, author, Interconnection Networks for Large-Scale Parallel Processing: Theory and Case Studies, Lexington Books, a division of D. C. Heath and Company, Lexington, MA, 260 pp., 1985.
20. Nathaniel J. Davis IV and Howard Jay Siegel, "The Performance Analysis of Partitioned Circuit Switched Multistage Interconnection Networks," 12th Annual International Symposium on Computer Architecture, cosponsors: IEEE Computer Society and ACM, pp. 387-394, Boston, MA, June 1985.
21. Nathaniel J. Davis IV, William Tsun-yuk Hsu, and Howard Jay Siegel, "Fault Location Techniques for Distributed Control Interconnection Networks," IEEE Transactions on

Computers, Special Issue on Parallel Processing, Vol. C-34, No. 10, pp. 902-910, Oct. 1985 (reprinted in *Interconnection Networks for High-Performance Parallel Computers*, edited by I. D. Scherson and A. S. Youssef, IEEE Computer Society Press, Los Alamitos, CA, pp. 752-760, 1994).

22. Nathaniel J. Davis IV and Howard Jay Siegel, "Performance Analysis of Multiple-Packet Multistage Cube Networks and Comparison to Circuit Switching," 1986 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 108-114, St. Charles, IL, Aug. 1986.

Algorithms and Applications

1. Leah J. Siegel, Philip T. Mueller, Jr., and Howard Jay Siegel, "FFT Algorithms for SIMD Machines," 17th Annual Allerton Conference on Communication, Control, and Computing, sponsor: University of Illinois-Urbana, pp. 1006-1015, Monticello, IL, Oct. 1979.
2. Leah J. Siegel, Howard Jay Siegel, Robert J. Safranek, and Mark A. Yoder, "SIMD Algorithms to Perform Linear Predictive Coding for Speech Processing Applications," 1980 International Conference on Parallel Processing, cosponsor: IEEE Computer Society, pp. 193-196, Harbor Springs, MI, Aug. 1980.
3. Philip T. Mueller, Jr., Leah J. Siegel, and Howard Jay Siegel, "Parallel Algorithms for the Two-Dimensional FFT," 5th International Conference on Pattern Recognition, cosponsors: IAPR (International Association for Pattern Recognition) and IEEE Computer Society, pp. 497-502, Miami Beach, FL, Dec. 1980.
4. Philip H. Swain, Howard Jay Siegel, and Joseph El-Achkar, "Multiprocessor Implementation of Image Pattern Recognition: A General Approach," 5th International Conference on Pattern Recognition, cosponsors: IAPR (International Association for Pattern Recognition) and IEEE Computer Society, pp. 309-317, Miami Beach, FL, Dec. 1980.
5. Howard Jay Siegel and Philip H. Swain, "Contextual Classification on PASM," IEEE Computer Society Conference on Pattern Recognition and Image Processing (PRIP 81), sponsor: IEEE Computer Society, pp. 320-325, Dallas, TX, Aug. 1981.
6. Leah J. Siegel, Edward J. Delp, Trevor N. Mudge, and Howard Jay Siegel, "Block Truncation Coding on PASM," 19th Annual Allerton Conference on Communication, Control, and Computing, sponsor: University of Illinois-Urbana, pp. 891-900, Monticello, IL, Oct. 1981.
7. Howard Jay Siegel, Philip H. Swain, and Bradley W. Smith, "Remote Sensing on PASM and CDC Flexible Processors," in *Multicomputers and Image Processing: Algorithms and Programs*, edited by Kendall Preston, Jr., and Leonard Uhr, Academic Press, New York, NY, pp. 331-342, 1982.
8. Leah J. Siegel, Howard Jay Siegel, and Arthur E. Feather, "Parallel Processing Approaches to

- Image Correlation," IEEE Transactions on Computers, Vol. C-31, No. 3, pp. 208-218, Mar. 1982.
9. Edward J. Delp, Trevor N. Mudge, Leah J. Siegel, and Howard Jay Siegel, "Parallel Processing for Computer Vision," Society of Photo-Optical Instrumentation Engineers Proceedings Vol. 336: Robot Vision, sponsor: SPIE (Society of Photo-Optical Instrumentation Engineers), pp. 161-167, Arlington, VA, May 1982.
 10. Trevor N. Mudge, Edward J. Delp, Leah J. Siegel, and Howard Jay Siegel, "Image Coding Using the Multimicroprocessor System PASM," 1982 IEEE Computer Society Conference on Pattern Recognition and Image Processing, sponsor: IEEE Computer Society, pp. 200-207, Las Vegas, NV, June 1982.
 11. Leah J. Siegel, Howard Jay Siegel, and Philip H. Swain, "Performance Measures for Evaluating Algorithms for SIMD Machines," IEEE Transactions on Software Engineering, Vol. SE-8, No. 4, pp. 319-331, July 1982.
 12. David Lee Tuomenoksa, George B. Adams, III, Howard Jay Siegel, and O. Robert Mitchell, "A Parallel Algorithm for Contour Extraction: Advantages and Architectural Implications," 1983 IEEE Computer Society Symposium on Computer Vision and Pattern Recognition (CVPR), sponsor: IEEE Computer Society, pp. 336-374, Arlington, VA, June 1983.
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