

David J. Kuck

Intel Fellow, Software and Solutions Group
Director, Parallel and Distributed Solutions Division
INTEL CORPORATION

Publications

- » George H. Barnes, Richard M. Brown, Masao Kato, David J. Kuck, Daniel L. Slotnick, and Richard A. Stokes. "The ILLIAC IV Computer", IEEE Transactions on Computers, Vol. C-17, No. 8, August 1968.
- » David Kuck. "Illiac IV Software and Application Programming", IEEE Transactions on Computers, Vol. C-17, No. 8, August 1968.
- » Norma E. Abel, Paul P. Budnik, David J. Kuck, Yoichi Muraoka, Robert S. Northcote, and Robert B. Wilhelmson. "TRANQUIL: A Language for an Array Processing Computer, Proc. AFIPS Joint Computer Conference, 34:57-73, 1969.
- » G.M. Ackins and D.J. Kuck. "Seismic Signal Processing via the ILLIAC IV Computer", IEEE Trans. Geoscience Electronics, GE-7:34-41, Jan., 1969.
- » D.J. Kuck and D.H. Lawrie. "The Use and Performance of Memory Hierarchies: A Survey", Software Engineering, 1970.
- » D.J. Kuck. "Investigation of New Technical Developments in Electronic Computers", Technical Report, Japanese Electronics Industry Development Association, Rpt. No. 45-C-205, March, 1970.
- » David Kuck. "A Preprocessing High-Speed Memory System", IEEE Transactions on Computers, Vol. C-19, No. 9, September 1970.
- » Paul Budnik and David Kuck. "The Organization and Use of Parallel Memories", IEEE Transactions on Computers, December 1971.
- » D.J. Kuck and Ahmed H. Sameh. "Parallel Computation of Eigenvalues of Real Matrices", Information Processing 71, pages 1266-1272, Amsterdam-London, North Holland Publishing Co., 1972.
- » David Kuck. "Supercomputers for Ordinary Users", Fall Joint Computer Conference, 1972.
- » D.J. Kuck, D.H. Lawrie, and Y. Muraoka. "Interconnection Networks for Processors and Memories in Large Systems", Compton 72, IEEE Computer Society Conf. Proc., pages 131-134, Sept. 1972.
- » D.J. Kuck and Y. Muraoka. "Fast Computers from Slow Parts", Compton 72, IEEE Computer Society Conf. Proc., pages 49-52, Sept. 1972.
- » David Kuck, Yoichi Muraoka, and Shyh-Ching Chen. "On the Number of Operations Simultaneously Executable in Fortran-like Programs and Their Resulting Speedup", IEEE Transactions on Computers, Vol. C-21, No. 12, December 1972.

- » D.J. Kuck. "Multioperation Machine Computational Complexity", In J.F. Traub, editor, *Complexity of Sequential and Parallel Numerical Algorithms*, pages 17-47, Academic Press, 1973.
- » Yoichi Muraoka and David J. Kuck. "On the Time Required for a Sequence of Matrix Products", *Comm. of the ACM*, 16:-26, Jan., 1973.
- » Richard Brent, David Kuck, and Kiyoshi Maruyama. "The Parallel Evaluation of Arithmetic Expressions Without Division", *IEEE Transactions on Computers*, Vol. C-22, No. 5, pp. 532-534, May, 1973.
- » D.J. Kuck. "Multioperation Machine Processing of Ordinary Program", *Proc. of the First Int'l Symp. on Computers and Chinese Input/Output Systems*, pages 653-672, Aug., 1973.
- » David Kuck and Yoichi Muraoka. "Bounds on the Parallel Evaluation of Arithmetic Expressions Using Associativity and Commutativity", *Acta Informatica*, Vol. 3, Fasc. 3, pp. 203-216, 1974.
- » D.E. Gold and D.J. Kuck. "Implementation Considerations for Masking Rotational Latency by Dynamic Disk Allocation", Inc E. Gelenbe; R. Mahl, editor, *Computer Architectures and Networks*, pages 207-237, Amsterdam, North-Holland Publishing Co., 1974.
- » D. Kuck, P. Budnik, S-C. Chen, E. Davis, Jr., J. Han, P. Kraska, D. Lawrie, Y. Muraoka, R. Strebendt, and R. Towle. "Measurements of Parallelism in Ordinary FORTRAN Programs", *Computer*, Vol. 7, No. 1, pp. 37-46, Jan., 1974.
- » D. E. Gold and D. J. Kuck. "A Model for Masking Rotational Latency by Dynamic Disk Allocation". *Comm. of the ACM*, Vol. 17, pp. 278-288, May, 1974.
- » D. J. Kuck and K. Maruyama. "Time Bounds on the Parallel Evaluation of Arithmetic Expressions", *SIAM Journal of Computing*, Vol. 4, No. 2, pp. 147-162, June, 1975.
- » S. C. Chen and D. J. Kuck. "Time and Parallel Processor Bounds for Linear Recurrence Systems", *IEEE Trans. on Computers*, Vol. C-24, No. 7, pp. 701-717, July, 1975.
- » D. J. Kuck, D. S. Parker, Jr., and A. H. Sameh. "ROM-Rounding: A New Rounding Scheme", *Proceedings of the Third IEEE Symposium on Computer Arithmetic*, Pp. 67-72, Nov., 1975.
(Also in *IEEE Trans. on Computers*, Vol. C-26, No. 7, pp. 643-650, July 1977)
- » D. J. Kuck. "On the Speedup and Cost of Parallel Computation", *The Complexity of Computational Problem Solving*, editors: R. S. Andersen; R. P. Brent, University of Queensland Press, St. Lucia, Queensland, pp. 63-78, 1976.
- » A. H. Sameh, S. C. Chen, and D. J. Kuck. "Parallel Poisson and Biharmonic Solvers", *Computing*, Vol. 17, pp. 219-230, 1976.
- » D. J. Kuck. "Parallel Processing of Ordinary Programs", *Advances in Computers*, Vol. 15, pp. 119-179, editors: M. Rubinoff; M. C. Yovits. Academic Press, 1976.
- » D. J. Kuck and D. H. Lawrie. "Supercomputers, Implementations", *Encyclopedia of Computer Science*, First Edition, pp. 1376-1382, editors: A. Ralston; C. L. Meek. Petrocelli/Charter, NY, 1976.

- » D. J. Kuck. "Supercomputers, Principles", Encyclopedia of Computer Science, First Edition, pp. 1373-1376, editors: A. Ralston; C. L. Meek, Petrocelli/Charter, NY, 1976.
- » D. J. Kuck and B. Kumar. "A System Model for Computer Performance Evaluation", Proc. of the Int'l. Symp. on Computer Performance Modeling, Measurement and Evaluation, pp. 187-199, Mar., 1976.
- » L. A. Hollaar, B. J. Hurley, D. J. Kuck, D. H. Lawrie, J. W. S. Liu, J. M. Milner, J. K. Morgan, J. R. Rinewalt and W. H. Stellingma. "The Design of System Architectures for Information Retrieval", Proc. of the ACM 76 National Conf., pp. 38-44, Oct., 1976.
- » D. J. Kuck, D. H. Lawrie and A. H. Sameh. "High Speed Computer and Algorithm Organization", Academic Press, Inc., NY, 1977.
- » A. H. Sameh and D. J. Kuck. "A Parallel QR Algorithm for Symmetric Tridiagonal Matrices", IEEE Transactions on Computers, Vol. C-26, No. 2, pp. 147-153, Feb., 1977.
(Corr. in IEEE TC, Vol. C-26, No. 8, p. 236, Aug. 1977)
- » A. H. Sameh and D. J. Kuck. "Parallel Direct Linear System Solvers--A Survey", IMACS (AICA)-GI-Symp. on Parallel Computers--Parallel Mathematics, Munich, Germany, pp. 25-30, editor: M. Feilmeier, Mar., 1977.
(Also, in Mathematics and Computers in Simulation, Vol. XIX, pp. 272-277, North-Holland Pub. Co., 1977)
- » D. J. Kuck. "A Survey of Parallel Machine Organization and Programming", ACM Computing Surveys, Vol. 9, No. 1, pp. 29-59, Mar., 1977.
- » D. Chang, D. J. Kuck and D. Lawrie. "On the Effective Bandwidth of Parallel Memories", IEEE Trans. on Computers, Vol. C-26, No. 5, pp. 480-490, May, 1977.
- » D. J. Kuck, D. S. Parker and A. H. Sameh. "Analysis of Rounding Methods in Floating-Point Arithmetic", IEEE Trans. on Computers, Vol. C-26, No. 7, pp. 643-650, July, 1977.
- » S. C. Chen and D. J. Kuck. "Combinational Circuit Synthesis with Time and Component Bounds" IEEE Trans. on Computers, Vol. C-26, No. 8, pp. 712-726, Aug., 1977.
- » D. J. Kuck. "The Structure of Computers and Computations", Vol. I, John Wiley & Sons, Inc., NY, 1978.
- » A. H. Sameh and D. J. Kuck. "On Stable Parallel Linear System Solvers", Journal of the ACM, Vol. 25, No. 1, pp. 81-91, San Francisco, CA, Jan., 1978.
- » S. C. Chen, D. J. Kuck and A. H. Sameh. "Practical Parallel Band Triangular System Solvers", ACM Trans. on Mathematical Software, Vol. 4, No. 3, pp. 270-277, Sept., 1978.
- » T. G. Burket, P. Emrath and D. J. Kuck. "The Use of Vocabulary Files for On-Line Information Retrieval", Information Processing and Management, Vol. 15, No. 6, pp. 281-289, 1979.

- » W. Abu-Sufah, D. Kuck and D. Lawrie. "Automatic Program Transformations for Virtual Memory Computers", Proc. of the 1979 National Computer Conf., pp. 969-974, June, 1979.
- » D. J. Kuck and D. A. Padua. "High-Speed Multiprocessors and Their Compilers", Proceedings of the 1979 Int'l. Conf. on Parallel Processing, pp. 5-16, Aug., 1979.
- » U. Banerjee, S. C. Chen, D. J. Kuck and R. A. Towle. "Time and Parallel Processor Bounds for Fortran-Like Loops", IEEE Trans. on Computers, Vol. C-28, No. 9, pp. 660-670, Sept., 1979.
- » A. E. Casavant, D. D. Gajski and D. J. Kuck. "Automatic Design with Dependence Graphs", Proc. of the 17th Design Automation Conf., Minneapolis, MN, pp. 506-515, June, 1980.
- » U. Banerjee, D. Gajski and D. Kuck. "Array Machine Control Units for Loops Containing ifs", Proc. of the 1980 Int'l. Conf. on Parallel Processing, Harbor Springs, MI, pp. 28-36, Aug., 1980.
- » D. A. Padua, D. J. Kuck and D. H. Lawrie. "High-Speed Multiprocessors and Compilation Techniques", Special Issue on Parallel Processing, IEEE Trans. on Computers, Vol. C-29, No. 9, pp. 763-776, Sept., 1980.
(Also, Tutorial on Supercomputers: Design and Applications, pp. 298-311, 1984)
- » D. J. Kuck, R. H. Kuhn, B. Leasure, and M. Wolfe. "The Structure of an Advanced Vectorizer for Pipelined Processors", Proc. of COMPSAC 80, The 4th Int'l. Computer Software and Applications Conf., Chicago, IL, pp. 709-715, Oct., 1980.
- » D. J. Kuck, R. H. Kuhn, D. A. Padua, B. Leasure, and M. Wolfe. "Dependence Graphs and Compiler Optimizations", Proceedings of the 8th ACM Symp. on Principles of Programming Languages (POPL) Williamsburg, VA, pp. 207-218, Jan., 1981.
- » D. D. Gajski, D. J. Kuck, and D. A. Padua. "Dependence Driven Computation", Proceedings of the COMPCON 81 Spring Computer Conf., San Francisco, CA, pp.168-172, Feb., 1981.
- » W. Abu-Sufah, D. J. Kuck, and D. H. Lawrie. "On the Performance Enhancement of Paging Systems Through Program Analysis and Transformations", IEEE Trans. on Computers, Vol. C-30, No. 5, pp. 341-356, May, 1981.
- » D. J. Kuck, "Automatic Program Restructuring for High-Speed Computation", Proc. of CONPAR 81, Conf. on Analysing Problem-Classes and Programming for Parallel Computing, W. Handler, Springer-Verlag, Nurnberg, F. R. Germany, pp.66-84, June, 1981.
- » D. J. Kuck, "Languages and Compilers for Parallel and Pipeline Machines", Invited paper, Proc. of the CREST Conf. on Design of Numerical Algorithms for Parallel Processing, Univ. of Bergamo, Bergamo, Italy, June, 1981.
- » David J. Kuck. "High-Speed Machines and Their Compilers", Parallel Processing Systems, editor: D. J. Evans, pp. 193-214, Cambridge University Press, 1982.

- » D. J. Kuck and D. D. Gajski. "Pipelining Techniques and Array Processors", Encyclopedia of Computer Science, Second Edition, editor: A. Ralston, pp. 1143-1145, Van Nostrand Reinhold Co., NY, 1982.
- » D. J. Kuck. "Supercomputer Principles", Encyclopedia of Computer Science, Second Edition, editor: A. Ralston, pp. 1455-1458, Van Nostrand Reinhold Co., NY, 1982.
- » D. D. Gajski, D. A. Padua, D. J. Kuck, and R. H. Kuhn. "A Second Opinion on Dataflow Machines and Languages", Invited paper, Special Dataflow Issue, Computer, Vol. 15, No. 2, pp. 58-69, Feb., 1982.
(Also, Tutorial on Supercomputers, Design and Applications, pp. 489-500, 1984)
- » David J. Kuck and Richard A. Stokes. "The Burroughs Scientific Processor (BSP)", Special Issue on Supersystems, IEEE Trans. on Computers, Vol. C-31, No. 5, pp. 363-376, May, 1982.
(Also, Tutorial on Supercomputers: Design and Applications, pp. 90-103, 1984)
- » D. Kuck, D. Padua, A. Sameh, and M. Wolfe. "Languages and High-Performance Computations", Invited paper, Proceedings of the IFIP Working Conference on The Relationship Between Numerical Computation and Programming Languages, Boulder, CO, pp. 205-1, editor: J. Reid, North-Holland, Aug., 1982.
- » U. Banerjee, D. Gajski, and D. Kuck. "Accessing Sparse Arrays in Parallel Memories", Journal of VLSI and Computer Systems, Vol. 1, No. 1, pp. 69-100, Spring, 1983.
- » David J. Kuck and Daniel D. Gajski. "Parallel Processing of Sparse Structures", Proceedings of the NATO Advanced Research Workshop on High-Speed Computation (Series F: Computer and Systems Sciences, Vol. 7), Julich, F. R. Germany, pp. 9-244, editor: J. S. Kowalik, Springer-Verlag, June, 1983.
- » Daniel Gajski, David Kuck, Duncan Lawrie, and Ahmed Sameh. "CEDAR - A Large Scale Multiprocessor" Proceedings of the 1983 International Conference on Parallel Processing, Bellaire, MI, editor: H. J. Siegel; Leah Siegel, pp. 524-529, Aug., 1983.
- » David Kuck, Duncan Lawrie, Ron Cytron, Ahmed Sameh, and Daniel Gajski. "The Architecture and Programming of the Cedar System", Proceedings of the 1983 LASL Workshop on Vector and Parallel Processing, Cedar Doc. No. 21, Invited paper, Aug. 12, 1983.
- » David J. Kuck, Robert H. Kuhn, Bruce Leasure, and Michael Wolfe. "The Structure of an Advanced Retargetable Vectorizer", Tutorial on Supercomputers: Designs and Applications, pp. 163-178, editor: Kai Hwang, IEEE Cat. No. EH 02 19-6, 1984.
- » Daniel D. Gajski, Duncan H. Lawrie, David J. Kuck, and Ahmed H. Sameh. "CEDAR", Proceedings of COMPCON Spring 84, San Francisco, CA, pp. 306-310, Feb.27-Mar. 1, 1984.

- » David J. Kuck and Michael J. Wolfe. "Interactive Supercompilers for Supercomputers", Invited paper, *Physics Today*, Vol. 37, No. 5, pp. 67-75, May, 1984.
- » David J. Kuck and Michael Wolfe. "Retire Fortran: NO", *Physics Today*, Vol. 37, No. 5, pp. 67-75, May 1984 .
- » David J. Kuck. "Supercomputer Prospectives", Invited paper, Proceedings of the 4th Jerusalem Conf. on Information Technology (JCIT), pp. 8-14, Jerusalem, Israel, May 21-25, 1984.
- » Won Kim, Daniel Gajski, and David J. Kuck. "A Parallel Pipelined Relational Query Processor", *ACM Trans. on Database Systems*, Vol. 9, No. 2, pp. 214-242, June, 1984.
(Also, IBM Res. Rpt. 4087, Oct. 31, 1983)
- » David J. Kuck, Ahmed H. Sameh, Ron Cytron, Alexander V. Veidenbaum, Constantine D. Polychronopoulos, Gyungho Lee, Tim McDaniel, Bruce R. Leasure, Carol Beckman, James R. B. Davies, and Clyde P. Kruskal. "The Effects of Program Restructuring, Algorithm Change, and Architecture Choice on Program Performance", Proceedings of 1984 International Conference on Parallel Processing, Bellaire, MI, pp. 129-138, editor: R. Keller, Aug.21-24, 1984.
- » K. Y. Lee, W. Abu-Sufah, and D. J. Kuck."On Modeling Performance Degradation Due to Data Movement in Vector Machines", Proceedings of the 1984 Int'l. Conf. on Parallel Processing, Bellaire, MI, pp. 269-277, Aug. 21-24, 1984.
- » Ron Cytron, David J. Kuck, and Alex V. Veidenbaum. "The Effect of Restructuring Compilers on Program Performance for High-Speed Computers", Special Issue of *Computer Physics Communications* devoted to the Proceedings of the Conference on Vector and Parallel Processors in Computational Science II, Oxford, England, Vol. 37, pp. 39-48, editor: I. S. Duff; J. K. Reid, Elsevier Science Publishers B. V. (North-Holland Physics Publ.), 1985.
- » C. Kamath, A. H. Sameh, G. C. Yang, and D. J. Kuck. "Structural Computations on the Cedar System", *Computers and Structures*, Vol. 20, No. 1-3, pp. 47-54, 1985.
(Also published in: Proc. of the Symposium on Advances and Trends in Structures and Dynamics, Oct. -25, 1984, Washington, D.C.)
- » David J. Kuck. "Supercomputers and Distributed Computing", Proceedings of the 1985 ACM Thirteenth Annual Computer Science Conference (CSC '85), New Orleans, LA, pp. 34-46, Mar. 12-14, 1985.
- » Gyungho Lee, Clyde P. Kruskal, and David J. Kuck. "The Effectiveness of Automatic Restructuring on Nonnumerical Programs", Proceedings of the 1985 Int'l. Conference on Parallel Processing, St. Charles, IL, pp. 607-613, Summary only, August 20-23, 1985.
- » Gyungho Lee, Clyde P. Kruskal, and David J. Kuck. "An Empirical Study of Automatic Restructuring of Nonnumerical Programs for Parallel Processors",

- Special Issue on Parallel Processing of IEEE Transactions on Computers, Vol. C-34, No. 10, pp. 927-933, Oct., 1985.
- » D. J. Kuck, D. Lawrie, R. Cytron, A. Sameh, and Daniel Gajski. "Cedar Project", *Frontiers of Supercomputing*, pp. 97-123, Univ. of Calif. Press, editors: N. Metropolis, D. H. Sharp, W. J. Worlton, K. R. Ames, 1986.
 - » David J. Kuck, Edward S. Davidson, Duncan H. Lawrie, and Ahmed H. Sameh. "Parallel Supercomputing Today and the Cedar Approach", *Science*, Vol. 231, pp. 967-974, Feb. 28, 1986.
 - » E. Davidson, D. Kuck, D. Lawrie, and A. Sameh. "Supercomputing Tradeoffs and the Cedar System", *High-Speed Computing: Scientific Applications and Algorithm Design*, editor: R. Wilhelmson, University of Illinois Press, pp. 3-11, 1986.
 - » Walid Abu-Sufah, Harlan Husmann, and David Kuck. "On Input/Output Speed-up in Tightly-Coupled Multiprocessors", *IEEE Transactions on Computers*, Vol. C-35, No. 6, pp. 520-530, June 1986.
 - » Gyungho Lee, Clyde P. Kruskal, and David J. Kuck. "The Effectiveness of Combining in Shared Memory Parallel Computers in the Presence of 'Hot Spot'", *Proceedings of the 1986 Int'l. Conference on Parallel Processing*, St. Charles, IL, pp. 35-41, editors: K. Hwang, S. Jacobs, E. Swartzlander, Aug. 19, 1986.
 - » Constantine D. Polychronopoulos, David J. Kuck, and David A. Padua. "Execution of Parallel Loops on Parallel Processor Systems", *Proceedings of the 1986 Int'l. Conference on Parallel Processing*, St. Charles, IL, pp. 519-527, editors: K. Hwang, S. Jacobs, E. Swartzlander, Aug. 19, 1986.
 - » Constantine Polychronopoulos and David J. Kuck. "Guided Self-Scheduling: A Practical Scheduling Scheme for Parallel Supercomputers", *IEEE Transactions on Computers*, Vol. C-36, No. 12, pp. 1425-1439, December 1987.
 - » David Kuck, Edward Davidson, Duncan Lawrie, and Ahmed Sameh. "Parallel Supercomputing Today and the Cedar Approach", *Experimental Parallel Computing Architectures*, editor: J. J. Dongarra, Elsevier Science Publishers B.V. (North-Holland), New York, NY, pp. 1-20, 1987.
 - » David Kuck and Ahmed Sameh. "A Supercomputing Performance Evaluation Plan", *Lecture Notes in Computer Science No. 297: Proceedings of First Int'l. Conference on Supercomputing*, Athens, Greece, editors: E.N. Houstis, T.S. Papatheodorou, C.D. Polychronopoulos, Springer-Verlag, New York, NY, pp.1-17, June 1987.
 - » Harlan Husmann, David Kuck, and David Padua. "Automatic Compound Function Definition for Multiprocessors", *Proceedings of 1988 Int'l. Conference on Parallel Processing*, St. Charles, IL, pp. 34-41, August 1988
 - » D. Padua, Luddy Harrison, and D. J. Kuck. "Languages and Compilers for Parallel Symbolic Computing", *Biological and Artificial Intelligence Systems*, editors: E. Clementi and S. Chin, ESCOM, Leiden, The Netherlands, pp. 453-461, September 1988.

- » David J. Kuck. Keynote Address 15th Annual Int'l. Symp. on Computer Architecture, May 30-June 3, 1988, Honolulu, HI, Computer Architecture News, Vol. 17, No. 1, pp. 5-26, March 1989.
- » Constantine Polychronopoulos, David Kuck, and David Padua. "Utilizing Multidimensional Loop Parallelism on Large-Scale Parallel Processor Systems", IEEE Transactions on Computers, Vol. 38, No. 9, pp. 1285-1296, September 1989.
- » M. Berry, D. Chen, P. Koss, D. Kuck, L. Pointer, S. Lo, Y. Pang, R. Roloff, A. Sameh, E. Clementi, S. Chin, D. Schneider, G. Fox, P. Messina, D. Walker, C. Hsiung, J. Schwarzmeier, K. Lue, S. Orszag, F. Seidl, O. Johnson, G. Swanson, R. Goodrum, and J. Martin. "The Perfect Club Benchmarks: Effective Performance Evaluation of Supercomputers", Int'l. Journal of Supercomputer Applications, Fall 1989, Vol. 3, No. 3, pp. 5-40, Fall 1989.
- » George Cybenko, Lyle Kipp, Lynn Pointer, and David Kuck. "Supercomputer Performance Evaluation and the Perfect Benchmarks", Proceedings of ICS, Amsterdam, Netherlands, March 1990.
- » David J. Kuck. "A User's View of High-Performance Scientific and Engineering Software Systems in the Mid-21st Century", Second Int'l. Conference on Expert Systems for Numerical Computing, West Lafayette, IN. Also to appear as a chapter in the book tentatively entitled "Intelligent Scientific Software Systems", August 24, 1990.
- » David J. Kuck. "Performance Studies and Problem Solving Environments", Frontiers of Supercomputing II Conference, Los Alamos, NM, April 1990.
- » J. Konicek, T. Tilton, A. Veidenbaum, C. Z. Zhu, D. Kuck, P. C. Yew, D. Lavery, R. Lindsey, D. Pointer, T. Murphy, J. Andrews, and S. Turner. "The Organization of the Cedar System", Proceedings of ICCP'91, St. Charles, IL, Vol. 1, pp. 49-56, August 12-16, 1991.
- » D.J. Kuck. "A User's View of High-Performance Scientific and Engineering Software Systems in the mid-21st Century", In E.N. Houstis, J.R. Rice, and R. Vichnevetsky, editors, Expert Systems for Scientific Computing, pages 69-87, Amsterdam, North-Holland Publishing, 1992.
- » George Cybenko and David J. Kuck. "Revolution or Evolution?", IEEE Spectrum Special Issue: Supercomputers, Vol. 29, No. 9, pp. 39-41, September 1992.
- » D. Kuck, E. Davidson, D. Lawrie, A. Sameh, C.-Q. Zhu, A. Veidenbaum, J. Konicek, P. Yew, K. Gallivan, W. Jalby, H. Wijshoff, R. Bramley, U.M. Yang, P. Emrath, D. Padua, R. Eigenmann, J. Hoeflinger, G. Jaxon, Z. Li, T. Murphy, J. Andrews, S. Turner. "The Cedar System and an Initial Performance Study", Proceedings of the 20th Int'l. Symposium on Computer Architecture, San Diego, CA, May 16-19, 1993.
- » Gyungho Lee, Clyde P. Kruskal, and David J. Kuck. "On the Effectiveness of Combining in Resolving 'Hot-Spot' Contention", Journal Parallel Distributed Computing, (20,2), Feb., 1994.

- » D.J. Kuck. "High Performance Computing: Challenges for Future Systems", Oxford University Press, 1996.
- » Kuck, David, "Parallelism and CSE", Computers in Science and Engineering, pp. 68-69, vol.1, nbr.1, Jan. - Feb. 1999.
- » David J. Kuck. "Productivity in HPC," Intl. Jour. of High Performance Computing Applications, Volume 18, No. 4, Winter 2004 (November).
- » S. Borkar, P. Dubey, K. Kahn, D. Kuck, H. Mulder, S. Pawlowski, and J. Rattner, "Platform 2015: Intel® Processor and Platform Evolution for the Next Decade." Intel Platform 2015 White Paper, 2005, <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.92.1433>
- » D. J. Kuck, "Platform 2015 Software Enabling Innovation in Parallelism for the Next Decade," Intel Platform 2015 White Paper, 2005, Technology@Intel Magazine. <http://www.intel.com/technology/magazine/computing/Parallelism-0405.html>
- » David J. Kuck , "Computational Capacity-based Codesign of Computer Systems," High-Performance Scientific Computing: Algorithms and Applications, Springer, 2012, pp 45-73.
- » William Jalby, David C. Wong, David J. Kuck, Jean-Thomas Acquaviva, and Jean-Christophe Beyler, "Measuring Computer Performance," High-Performance Scientific Computing: Algorithms and Applications, Springer, 2012, pp 75-95.