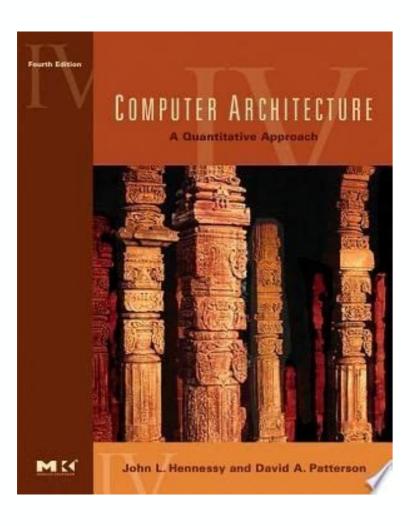
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IEEE Computer Society, pp 176-182 Google Scholar Baumgartner J, Mony H (2009) Scalable liveness checking via property-preserving transformations. In: Benini L, Micheli GD, Al-Hashimi BM, Müller W (eds) Design, automation and test in Europe, DATE 2009, Nice, 20-24 Apr 2009. IEEE, pp 1680-1685 Google Scholar Baumgartner J, Mony H, Paruthi V, Kanzelman R, Janssen G (2006) Scalable sequential equivalence checking across arbitrary design transformations. In: 24th international conference on computer design (ICCD 2006), 1-4 Oct 2006, San Jose. IEEE, pp 259-266CrossRef Google Scholar Bayless S, Val CG, Ball T, Hoos HH, Hu AJ (2013) Efficient modular SAT solving for IC3. In: Formal methods in computer-aided design (FMCAD). IEEE, pp 149-156 Google Scholar Bjesse P, Borälv A (2004) Dag-aware circuit compression for formal verification. In: 2004 international conference on computer-aided design, ICCAD 2004, San Jose, 7-11 Nov 2004.



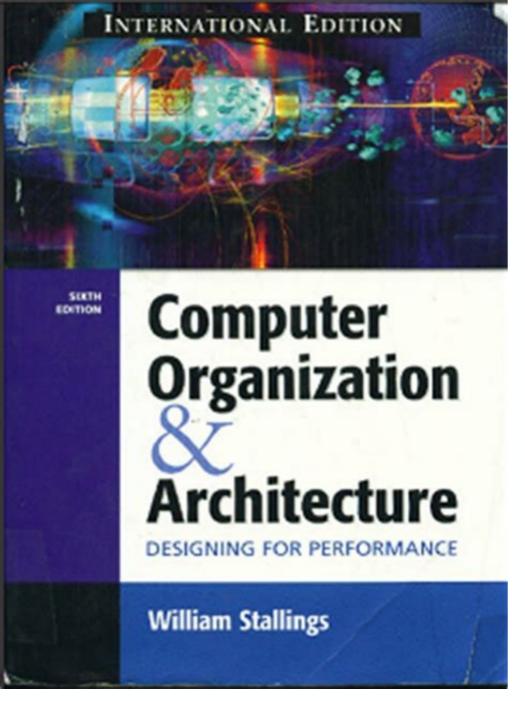
IEEE, pp 1680-1685 Google Scholar Baumgartner J, Mony H, Paruthi V, Kanzelman R, Janssen G (2006) Scalable sequential equivalence checking across arbitrary design (ICCD 2006), 1-4 Oct 2006, San Jose. IEEE, pp 259-266CrossRef Google Scholar Bayless S, Val CG, Ball T, Hoos HH, Hu AJ (2013) Efficient modular SAT solving for IC3. In: Formal methods in computer-aided design (FMCAD). IEEE, pp 149-156 Google Scholar Biere A, Cimatti A, Clarke EM, Zhu Y (1999) Symbolic model checking without BDDs. In: Tools and algorithms for the construction and analysis of systems (TACAS). LNCS, vol 1579. Springer, pp 193-207 Google Scholar Biesse P, Borälv A (2004) Dag-aware circuit compression for formal verification. In: 2004 international conference on computer-aided design, ICCAD 2004, San Jose, 7-11 Nov 2004. IEEE Computer Society/ACM, pp 42-49 Google Scholar Biesse P, Kukula JH (2005) Automatic generalized phase abstraction for formal verification.

Verification.
In: 2005 international conference on computer-aided design, ICCAD 2005, San Jose, 6-10 Nov 2005. IEEE Computer Society, pp 1076-1082 Google Scholar Bradley AR (2011) SAT-based model checking without unrolling.

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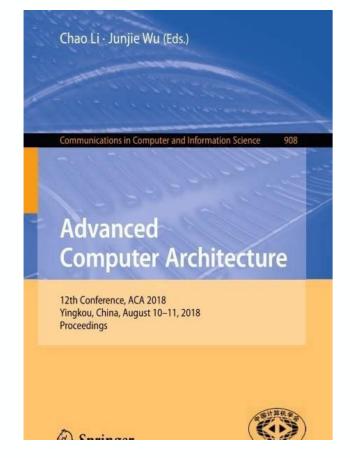
PhD thesis, University of Texas Google Scholar Baumgartner J, Kuehlmann A (2001) Min-area retiming on dynamic circuit structures. In: Ernst R (ed) Proceedings of the 2001 IEEE/ACM international conference on computer-aided design, ICCAD 2001, San Jose, 4-8 Nov 2001. IEEE Computer Society, pp 176-182 Google Scholar Baumgartner J, Mony H (2009) Scalable liveness checking via property-preserving transformations. In: Benini L, Micheli GD, Al-Hashimi BM, Müller W (eds) Design, automation and test in Europe, DATE 2009, Nice, 20-24 Apr 2009. IEEE, pp 1680-1685 Google Scholar Baumgartner J, Mony H, Paruthi V, Kanzelman R, Janssen G (2006) Scalable sequential equivalence checking across arbitrary design transformations. In: 24th international conference on computer aided design (ICCD 2006), 1-4 Oct 2006, San Jose, IEEE, pp 259-266CrossRef Google Scholar Bayless S, Val CG, Ball T, Hoos HH, Hu AJ (2013) Efficient modular SAT solving for IC3. In: Formal methods in computer-aided design (FMCAD). IEEE, pp 149-156 Google Scholar Biere A, Cimatti A, Clarke EM, Zhu Y (1999) Symbolic model checking without BDDs. In: Tools and algorithms for the construction and analysis of systems (TACAS). LNCS, vol 1579. Springer, pp 193-207 Google Scholar Biesse P, Borälv A (2004) Dag-aware circuit compression for formal verification. In: 2004 international conference on computer-aided design, ICCAD 2004, San Jose, 6-10 Nov 2005. San Jose, 6-10 Nov 2005.

IEEE Computer Society/ACM, pp 42-49 Google Scholar Bjesse P, Kukula JH (2005) Automatic generalized phase abstraction for formal verification. In: 2005 international conference on computer-aided design, ICCAD 2005, San Jose, 6-10 Nov 2005. IEEE Computer Society, pp 1076-1082 Google Scholar Bradley AR (2011) SAT-based model checking without unrolling. In: Verification, model checking and abstract interpretation (VMCAI). LNCS, vol 6538. Springer, pp 70-87 Google Scholar Bradley AR, Somenzi F, Hassan Z, Zhang Y (2011) An incremental approach to model checking progress properties.



PhD thesis, University of Texas Google Scholar Baumgartner J, Kuehlmann A (2001) Min-area retiming on dynamic circuit structures. In: Ernst R (ed) Proceedings of the 2001 IEEE Computer Society, pp 176-182 Google Scholar Baumgartner J, Mony H (2009) Scalable liveness checking via property-preserving transformations. In: Benini L, Micheli GD, Al-Hashimi BM, Müller W (eds) Design, automation and test in Europe, DATE 2009, Nice, 20-24 Apr 2009. IEEE, pp 1680-1685 Google Scholar Baumgartner J, Mony H, Paruthi V, Kanzelman R, Janssen G (2006) Scalable sequential equivalence checking across arbitrary design transformations.

In: 24th international conference on computer design (ICCD 2006), 1-4 Oct 2006, San Jose. IEEE, pp 259-266CrossRef Google Scholar Bayless S, Val CG, Ball T, Hoos HH, Hu AJ (2013) Efficient modular SAT solving for IC3. In: Formal methods in computer-aided design (FMCAD). IEEE, pp 149-156 Google Scholar Biere A, Cimatti A, Clarke EM, Zhu Y (1999) Symbolic model checking without BDDs. In: Tools and algorithms for the construction and analysis of systems (TACAS). LNCS, vol 1579. Springer, pp 193-207 Google Scholar Bierse P, Borälv A (2004) Dag-aware circuit compression for formal verification.



In: 24th international conference on computer design (ICCD 2006), 1-4 Oct 2006, San Jose. IEEE, pp 259-266CrossRef Google Scholar Bayless S, Val CG, Ball T, Hoos HH, Hu AJ (2013) Efficient modular SAT solving for IC3. In: Formal methods in computer-aided design (FMCAD). IEEE, pp 149-156 Google Scholar Biere A, Cimatti A, Clarke EM, Zhu Y (1999) Symbolic model checking without BDDs. In: Tools and algorithms for the construction and analysis of systems (TACAS). LNCS, vol 1579. Springer, pp 193-207 Google Scholar Bjesse P, Borälv A (2004) Dag-aware circuit compression for formal verification. In: 2004 international conference on computer-aided design, ICCAD 2004, San Jose, 7-11 Nov 2004. IEEE Computer Society/ACM, pp 42-49 Google Scholar Bjesse P, Kukula JH (2005) Automatic generalized phase abstraction. In: 2005 international conference on computer-aided design, ICCAD 2005, San Jose, 6-10 Nov 2005. IEEE Computer Society, pp 1076-1082 Google Scholar Bradley AR (2011) SAT-based model checking without unrolling. In: Verification, model checking brogress properties. In: Bjesse P, Slobodová A (eds) International conference on formal methods in computer-aided design, FMCAD'11, Austin, 30 Oct-02 Nov 2011. FMCAD Inc., pp 144-153 Google Scholar Brayton RK, Mishchenko A (2010) ABC: an academic industrial-strength verification tool. In: Computer aided verification (CAV). LNCS, vol 6174. Springer, pp 24-40 Google Scholar Bryant RE (1986) Graph-based algorithms for Boolean function manipulation. IEEE Trans Comput 35(8):677-691CrossRef MATH Google Scholar Burch IR, Clarke EM, McMillan KL, Dill DL, Hwang LJ (1990) Symbolic model checking: 1020 states and beyond. In: Logic in computer science (LICS). IEEE, pp 428-439 Google Scholar Cabodi G, Nocco S, Quer S (2011) Interpolation sequences revisited. In: Design automation and test in Europe (DATE). IEEE, pp 316-322 Google Scholar Cabodi G, Camurati P, Mishchenko A, Palena M, Pasini P (2017) SAT solver management strategies in IC3: an experimental approach. Formal Methods Syst Des 50(1):39-74CrossRef MATH Google Scholar Chockler H, Ivrii A, Matsliah A, Moran S, Nevo Z (2011) Incremental formal verification of hardware. In: Formal methods in computer-aided design (FMCAD). FMCAD Inc., pp 135-143 Google Scholar Claessen K, Sörensson N (2012) A liveness checking algorithm that counts. In: Cabodi G, Singh S (eds) Formal methods in computer-aided design, FMCAD 2012, IEEE, pp 52-59 Google Scholar Clarke EM, Emerson EA, Sistla AP (1986) Automatic verification of finite-state concurrent systems using temporal logic specifications. ACM Trans Program Lang Syst 8(2):244-263CrossRef MATH Google Scholar Clarke E, Grumberg O, Long D (1992) Model checking and abstraction. In: Principles of programming languages (POPL). ACM, pp 343-354 Google Scholar Clarke EM, Grumberg O, Jha S, Lu Y, Veith H (2000) Counterexample-guided abstraction refinement. In: Computer aided verification (CAV). LNCS, vol 1855. Springer, pp 154-169 Google Scholar Clarke EM, Grumberg O, Peled DA (2001) Model checking, 1st edn.. MIT PressMATH Google Scholar Clarke EM, Kroening D, Ouaknine J, Strichman O (2004) Completeness and complexity of bounded model checking. In: Verification, model checking and abstract interpretation (VMCAI). LNCS, vol 2937. Springer, pp 85–96 Google Scholar Craig W (1957) Linear reasoning. A new form of the Herbrand-Gentzen theorem. J Symb Logic 22(3):250-268CrossRef MATH Google Scholar Eén N, Mishchenko A (2013) A fast reparameterization procedure. In: Ganai MK, Sen A (eds) Proceedings of the second international workshop on design and implementation of formal tools and systems, Portland, 19 Oct 2013. CEUR workshop proceedings, vol 1130. CEUR-WS.org Google Scholar Eén N, Mishchenko A, Amla N (2010) A single-instance incremental SAT formulation of proof- and counterexample-based abstraction. In: Bloem R, Sharygina N (eds) Proceedings of 10th international conference on formal methods in computer-aided design, FMCAD 2010, Lugano, 20-23 Oct. IEEE, pp 181-188 Google Scholar Een N, Mishchenko A, Brayton R (2011) Efficient implementation of property directed reachability. In: Formal methods in computer-aided design (FMCAD). FMCAD Inc., pp 125-134 Google Scholar Froleyks N, Biere A (2021) Single clause assumption without activation literals to speed-up IC3. In: Formal methods in computer aided design, FMCAD 2021, New Haven, 19-22 Oct 2021. IEEE, pp 72-76 Google Scholar Goldberg E, Novikov Y (2003) Verification of proofs of unsatisfiability for CNF formulas. In: Design automation and test in Europe (DATE).

IEEE, pp 886-891 Google Scholar Gurfinkel A, Ivrii A (2015) Pushing to the top. In: Kaivola R, Wahl T (eds) Formal methods in computer-aided design, FMCAD 2015, Austin, 27-30 Sept 2015, IEEE, pp 65-72 Google Scholar Hurst AP, Mishchenko A, Brayton RK (2007) Fast minimum-register retiming via binary maximum-flow. In: Formal methods in computer-aided design, 7th international conference, FMCAD 2007, Austin, 11–14 Nov 2007, Proceedings. IEEE Computer Society, pp 181–187 Google Scholar Ivrii A, Nevo Z, Baumgartner J (2018) k-fair = k-liveness + FAIR revisiting sat-based liveness algorithms. In: Bjørner N, Gurfinkel A (eds) 2018 formal methods in computer aided design, FMCAD 2018, Austin, 30 Oct-2 Nov 2018. IEEE, pp 1-5 Google Scholar Jhala R, McMillan KL (2005) Interpolant-based transition relation approximation. In: Computer aided verification (CAV), vol 3576. Springer, pp 39-51 Google Scholar Krishnan HGV, Vizel Y, Ganesh V, Gurfinkel A (2019) Interpolating strong induction. In: Dillig I, Tasiran S (eds) Computer aided verification - 31st international conference, vol 11562. Springer, pp 367-385 Google Scholar Kuehlmann A, Baumgartner J (2001) Transformation-based verification using generalized retiming. In: Berry G, Comon H, Finkel A (eds) Computer aided verification, 13th international conference, CAV 2001, Paris, 18–22 July 2001, Proceedings. Lecture notes in computer science, vol 2102. Springer, pp 104–117 Google Scholar Kuehlmann A, Paruthi V, Krohm F, Ganai MK (2002) Robust boolean reasoning for equivalence checking and functional property verification. IEEE Trans Comput Aided Des Integr Circuits Syst 21(12):1377-1394CrossRef Google Scholar Kurshan RP (1994) Computer-aided verification of coordinating processes: the automata-theoretic approach. Princeton University Press, PrincetonMATH Google Scholar Li J, Zhu S, Zhang Y, Pu G, Vardi MY (2017) Safety model checking with complementary approximations. In: Parameswaran S (ed) 2017. IEEE, pp 95-100 Google Scholar McMillan KL (2003) Interpolation and SAT-based model checking. In: Computer aided verification (CAV). LNCS, vol 2725. springer, pp 1-13 Google Scholar McMillan KL, Amla N (2003) Automatic abstraction without counterexamples. In: Tools and algorithms for the construction and analysis of systems (TACAS). LNCS, vol 2619. Springer, pp 2-17 Google Scholar Mishchenko A, Chatterjee S, Brayton RK (2006) Dag-aware AIG rewriting a fresh look at combinational logic synthesis. In: Sentovich E (ed) Proceedings of the 43rd design automation conference, DAC 2006, San Francisco, 24-28 July 2006. ACM, pp 532-535 Google Scholar Mishchenko A, Eén N, Brayton RK, Baumgartner J, Mony H, Nalla PK (2013) GLA: gate-level abstraction revisited. In: Design automation and test in Europe (DATE). EDA Consortium, pp 1399-1404 Google Scholar Mony H, Baumgartner J, Paruthi V, Kanzelman R, Kuehlmann A (2004) Scalable automated verification via expert-system guided transformations. In: Hu AJ, Martin AK (eds) Formal methods in computer-aided design, 5th international conference, FMCAD 2004, Austin, 15-17 Nov 2004, Proceedings. Lecture notes in computer science, vol 3312. Springer, pp 159-173 Google Scholar Mony H, Baumgartner J, Mishchenko A, Brayton RK (2009) Speculative reduction-based scalable redundancy identification. In: Benini L, Micheli GD, Al-Hashimi BM, Müller W (eds) Design, automation and test in Europe, DATE

IEEE, pp 1674-1679 Google Scholar Moon I, Kwak H, Kukula JH, Shiple TR, Pixley C (2002) Simplifying circuits for formal werification using parametric representation. In: Aagaard MD, O'Leary JW (eds) Formal methods in computer-aided design, 4th international conference, FMCAD 2002, Portland, 6-8 Nov 2002, Proceedings. Lecture notes in computer science, vol 2517. Springer, pp 52-69 Google Scholar Pnueli A (1977) The temporal logic of programs.

(2000) A comparative study of symbolic algorithms for the computers of fair cycles. In: WAH. Jr. and Johnson SD (eds) Formal methods in computer science, vol 1954. Springer, pp 143-160 Google Scholar Rozier KY (2011) Linear temporal logic symbolic model checking. Comput Sci Rev 5(2):163-203CrossRef MATH Google Scholar Schuppan V, Biere A (2004) Efficient reduction of finite state model checking to reachability analysis. Int J Softw Tools Technol Transf 5(2-3):185-204CrossRef Google Scholar Schuppan V, Biere A (2004) Efficient reduction of finite state model checking to reachability analysis. Int J Softw Tools Technol Transf 5(2-3):185-204CrossRef Google Scholar Schuppan V, Biere A (2004) Efficient reduction of finite state model checking to reachability analysis. properties using induction and a SAT-solver. In: Formal methods in computer-aided design (FMCAD). LNCS, vol 1954. Springer, pp 108-125 Google Scholar Tseitin G (1983) On the complexity of proofs in propositional logics. In: Siekmann J, Wrightson G (eds) Automation of reasoning: classical papers in computational logic 1967–1970, vol 2. Springer, Originally published 1970 Google Scholar van Eijk CAJ (1998) Sequential equivalence checking without state space traversal. In: Dewilde PM, Rammig FJ, Musgrave G (eds) 1998 design, automation and test in Europe (DATE'98), 23-26 Feb 1998, Le Palais des Congrès de Paris, Paris, IEEE Computer Society, pp 618-623 Google Scholar

In: 18th annual symposium on foundations of computer science, Providence, 31 Oct-1 Nov 1977. IEEE Computer Society, pp 46-57 Google Scholar Queille J-P, Sifakis J (1982) Specification of concurrent systems in CESAR. In: International symposium on programming, pp 337-351MATH Google Scholar Ravi K, Bloem R, Somenzi F

Vardi MY (2007) Automata-theoretic model checking revisited. In: Cook B, Podelski A (eds) Verification, model checking, and abstract interpretation, 8th international conference, VMCAI 2007, Nice, 14-16 Jan 2007, Proceedings, Lecture notes in computer science, vol 4349. Springer, pp 137-150 Google Scholar Vizel Y, Grumberg O (2009) Interpolation-sequence based model checking. In: Formal methods in computer-aided design (FMCAD). IEEE, pp 1-8 Google Scholar Vizel Y, Gurfinkel A (2014) Interpolating property directed reachability. In: Computer aided verification (CAV). LNCS, vol 8559. Springer, pp 260-276 Google Scholar Vizel Y, Ryvchin V, Nadel A (2013) Efficient generation of small interpolants in CNF. In: Computer aided verification (CAV), LNCS, vol 8044. Springer, pp 330-346 Google Scholar Vizel Y, Gurfinkel A, Malik S (2015) Fast interpolating BMC. In: Kroening D, Pasareanu CS (eds) Computer aided verification - 27th international conference, CAV 2015, San Francisco, 18-24 July 2015, Proceedings, Part I. Lecture notes in computer science, vol 9206. Springer, pp 641-657 Google Scholar Wolper P, Vardi MY, Sistla AP (1983) Reasoning about infinite computation paths (extended abstract). In: 24th annual symposium on foundations of computer science, Tucson, 7-9 Nov 1983. IEEE Computer Society, pp 185-194 Google Scholar Wu C, Wu C, Lai C, Huang CR (2013) A counterexample-guided interpolant generation algorithm for sat-based model checking. In: The 50th annual design automation conference 2013, DAC'13, Austin, 29 May-07 June 2013. ACM, pp 118:1-118:6 Google Scholar Skip Bibliometrics Section Skip Abstract SectionAbstract The computing world today is in the middle of a revolution: mobile clients and cloud computing have emerged as the dominant paradigms driving programming and hardware innovation today. The Fifth Edition of Computer Architecture focuses on this dramatic shift, exploring the ways in which software and technology in the "cloud" are accessed by cell phones, tablets, laptops, and other mobile computing devices. Each chapter includes two real-world examples, one mobile and one datacenter,

to illustrate this revolutionary change. Updated to cover the mobile computing revolution most important topics in architecture today: memory hierarchy and parallelism in all its forms. Develops common themes throughout each chapter: power, performance, cost, dependability, protection, programming models, and emerging trends ("What's Next") Includes three review appendices in the printed text. Additional reference appendices are available online. Includes updated Case Studies and completely new exercises. Adve, S. V., and K. Gharachorloo [1996]. "Shared memory consistency models: A tutorial," IEEE Computer 29:12 (December), 66-76. Adve, S. V., and M. D. Hill [1990]. "Weak ordering--a new definition," Proc. 17th Annual Int'l. Symposium on Computer Architecture (ISCA), May 28-31, 1990, Seattle, Wash., 2-14. Agarwal, A. [1987]. "Analysis of Cache Performance for Operating Systems and Multiprogramming," Ph. D. thesis, Tech. Rep. No. CSL-TR-87-332, Stanford University, Palo Alto, Calif. Agarwal, A. [1991]. "Limits on interconnection network performance," IEEE Trans. on Parallel and Distributed Systems 2:4 (April), 398-412. Agarwal, A., and S. D. Pudar [1993]. "Column-associative caches: A technique for reducing the miss rate of direct-mapped caches," 20th Annual Int'l. Symposium on Computer Architecture News 21:2 (May), 179-190, 1993. Agarwal, A., R. Bianchini, D. Chaiken, K. Johnson, and D. Kranz [1995]. "The MIT Alewife machine: Architecture and performance," Int'l. Symposium on Computer Architecture (June), 280-289. Agarwal, A., J. Kubiatowicz, D. Kranz, B.-H. Lim, D. Yeung, G.

D'Souza, and M. Parkin [1993]. "Sparcle: An evolutionary processor design for large-scale multiprocessors," IEEE Micro 13 (June), 48-61. Agerwala, T., and J. Cocke [1987]. High Performance Reduced Instruction Set Processors, IBM Tech. Rep. RC12434, IBM, Armonk, N.Y. Akeley, K. and T. Jermoluk [1988]. "High-Performance Polygon Rendering,"

Proc. 15th Annual Conf. on Computer Graphics and Interactive Techniques (SIGGRAPH 1988), August 1-5, 1988, Atlanta, Ga., 239-246. Alexander, W. G., and D. B. Wortman [1975]. "Static and dynamic characteristics of XPL programs," IEEE Computer 8:11 (November), 41-46. Alles, A. [1995]. "ATM Internetworking," White Paper (May), Cisco Systems, Inc., San Jose, Calif. (www.cisco.com/warp/public/614/12.html) Alliant. [1987]. Alliant FX/Series: Product Summary, Alliant FX/Series: Product Summary, Alliant FX/Series: Product Summary, Alliant FX/Series: Product Summary, Cisco Systems, Inc., San Jose, Calif. (www.cisco.com/warp/public/614/12.html) Alliant. [1987]. Alverson, G., R. Alverson, D. Callahan, B. Koblenz, A. Porterfield, and B. Smith [1992]. "Exploiting heterogeneous parallelism on a multithreaded multiprocessor," Proc. ACM/IEEE Conf. on Supercomputing, November 16-20, 1992, Minneapolis, Minn., 188-197. Amdahl, G. M. [1967]. "Validity of the single processor approach to achieving large scale computing capabilities," Proc. AFIPS Spring Joint Computer Conf., April 18-20, 1967, Atlantic City, N. J., 483-485. Amdahl, G. M., G. A. Blaauw, and F. P. Brooks, Jr. [1964]. "Architecture of the IBM System 360," IBM J. Research and Development 8:2 (April), 87-101. Amza, C., A. L. Cox, S. Dwarkadas, P. Keleher, H. Lu, R. Rajamony, W. Yu, and W. Zwaenepoel [1996]. "Treadmarks: Shared memory computing on networks of workstations," IEEE Computer 29:2 (February), 18-28. Anderson, D. [2003]. "You don't know jack about disks," Queue, 1:4 (June), 20-30.

Anderson, D., J. Dykes, and E. Riedel [2003].

"SCSI vs. ATA--More than an interface," Proc.

2nd USENIX Conf. on File and Storage Technology (FAST '03), March 31- April 2, 2003, San Francisco. Anderson, D.

W., F. J. Sparacio, and R. M. Tomasulo [1967]. "The IBM 360 Model 91: Processor philosophy and instruction handling," IBM J. Research and Development 11:1 (January), 8-24. Anderson, M. H. [1990]. "Strength (and safety) in numbers (RAID, disk storage technology)," Byte 15:13 (December), 337-339. Anderson, T. E., D. E. Culler, and D. Patterson [1995]. "A case for NOW (networks of workstations)," IEEE Micro 15:1 (February), 54-64. Ang, B., D. Chiou, D. Rosenband, M. Ehrlich, L. Rudolph, and Arvind [1998]. "StarTVoyager: A flexible platform for exploring scalable SMP issues," Proc. ACM/IEEE Conf.

on Supercomputing, November 7-13, 1998, Orlando, FL. Anjan, K. V., and T. M. Pinkston [1995]. "An efficient, fully-adaptive deadlock recovery scheme: Disha," Proc. 22nd Annual Int'l. Symposium on Computer Architecture (ISCA), June 22-24, 1995, Santa Margherita, Italy. Anon. et al. [1985]. A Measure of Transaction Processing Power, Tandem Tech. Rep. TR85.2. Also appears in Datamation 31:7 (April), 112-118, 1985. Apache Hadoop. [2011]. , J., and J.-L. Baer [1986]. "Cache coherence protocols: Evaluation using a multiprocessor simulation model," ACM Trans. on Computer Systems 4:4 (November), 273-298. Armbrust, M., A. Fox, R. Griffith, A. D. Joseph, R. Katz, A. Konwinski, G. Lee, D. Patterson, A. Rabkin, I. Stoica, and M. Zaharia [2009]. Above the Clouds: A Berkeley View of Cloud Computing, Tech. Rep. UCB/EECS-2009-28, University of California, Berkeley (.Arpaci, R. H., D.

E. Culler, A. Krishnamurthy, S. G. Steinberg, and K. Yelick [1995]. "Empirical evaluation of the CRAY-T3D: A compiler perspective," 22nd Annual Int'l. Symposium on Computer Architecture (ISCA), June 22-24, 1995, Santa Margherita, Italy. Asanovic, K. [1998]. "Vector Microprocessors," Ph. D. thesis, Computer Science Division, University of California, Berkeley. Associated Press. [2005]. "Gap Inc. shuts down two Internet stores for major overhaul," USATODAY.com, August 8, 2005.Atanasoff, J.

V. [1940]. Computing Machine for the Solution of Large Systems of Linear Equations, Internal Report, Iowa State University, Ames. Atkins, M. [1991]. Performance and the i860 Microprocessor, IEEE Micro, 11:5 (September), 24-27, 72-78. Austin, T. M., and G. Sohi [1992]. "Dynamic dependency analysis of ordinary programs," Proc. 19th Annual Int'l.

Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia, 342-351. Babbay, F., and A. Mendelson [1998]. "Using value prediction to increase the power of speculative execution hardware," ACM Trans. on Computer Systems 16:3 (August), 234-270. Baer, J.-L., and W.-H. Wang [1988]. "On the inclusion property for multilevel cache hierarchies," Proc. 15th Annual Int'l. Symposium on Computer Architecture, May 30-June 2, 1988, Honolulu, Hawaii, 73-80. Bailey, D. H., E. Barszcz, J. T. Barton, D. S. Browning, R. L. Carter, L. Dagum, R. A. Fatoohi, P. O. Frederickson, T. A. Lasinski, R. S. Schreiber, H. D. Simon, V.

Venkatakrishnan, and S. K. Weeratunga [1991]. "The NAS parallel benchmarks," Int'l. J. Supercomputing Applications 5, 63-73. Bakoglu, H. B., G. F. Grohoski, L. E. Thatcher, J. A. Kaeli, C. I

Moore, D. P. Tattle, W. E. Male, W. R. Hardell, D. A.

Hicks, M. Nguyen Phu, R. K. Montoye, W. T. Glover, and S. Dhawan [1989]. "IBM second-generation RISC processor organization," Proc. IEEE Int'l. Conf. on Computer Design, September 30-October 4, 1989, Rye, N.Y., 138-142. Balakrishnan, H., V. N. Padmanabhan, S. Seshan, and R. H. Katz [1997]. "A comparison of mechanisms for improving TCP performance over wireless links," IEEE/ACM Trans. on Networking 5:6 (December), 756-769. Ball, T., and J. Larus [1993]. "Branch prediction for free," Proc. ACM SIGPLAN'93 Conference on Programming Language Design and Implementation (PLDI), June 23-25, 1993, Albuquerque, N.

M., 300-313. Banerjee, U. [1979]. "Speedup of Ordinary Programs," Ph. D. thesis, Dept. of Computer Science, University of Illinois at Urbana-Champaign. Barham, P., B. Dragovic, K. Fraser, S. Hand, T. Harris, A. Ho, and R. Neugebauer [2003]. "Xen and the art of virtualization," Proc. of the 19th ACM Symposium on Operating Systems Principles, October 19-22, 2003, Bolton Landing, N.Y. Barroso, L. A. [2010]. "Warehouse Scale Computing [keynote address]," Proc. ACM SIGMOD, June 8-10, 2010, Indianapolis, Ind. Barroso, L. A., and U. Holzle [2007], "The case for energy-proportional computing," IEEE Computer, 40:12 (December), 33-37. Barroso, L. A., and U. Holzle [2009]. The Datacenter as a Computer: An Introduction to the Design of Warehouse-Scale Machines, Morgan & Claypool, San Rafael, Calif Barroso, L. A., K. Gharachorloo, and E. Bugnion [1998]. "Memory system characterization of commercial workloads," Proc. 25th Annual Int'l. Symposium on Computer Architecture (ISCA), July 3-14, 1998, Barcelona, Spain, 3-14. Barton, R. S. [1961].

"A new approach to the functional design of a computer," Proc. Western Joint Computer Conf., May 9-11, 1961, Los Angeles, Calif., 393-396. Bashe, C. J., W. Buchholz, G. V. Hawkins, J. L. Ingram, and N. Rochester [1981]. "The architecture of IBM's early computers," IBM J. Research and Development 25:5 (September), 363-375. Bashe, C. J., L. R.

Johnson, J. H. Palmer, and E. W. Pugh [1986]. IBM's Early Computers, MIT Press, Cambridge, Mass. Baskett, F., and T. W. Keller [1977].

"An evaluation of the Cray-1 processor," in High Speed Computer and Algorithm Organization, D.

J. Kuck, D. H. Lawrie, and A. H. Sameh, eds., Academic Press, San Diego, 71-84.Baskett, F., T. Jermoluk, and D. Solomon [1988]. "The 4D-MP graphics superworkstation: Computing + graphics = 40 MIPS + 40 MFLOPS and 10,000 lighted polygons per second," Proc. IEEE COMPCON, February 29-March 4, 1988, San Francisco, 468-471.BBN Laboratories. [1986]. Butterfly Parallel Processor Overview, Tech. Rep. 6148, BBN Laboratories, Cambridge, Mass.Bell, C. G. [1984].

"The mini and micro industries," IEEE Computer 17:10 (October), 14-30. Bell, C. G. [1985]. "Multis: A new class of multiprocessor computers in science and engineering," Communications of the ACM 32:9 (September), 1091-1101. Bell, G., and J. Gray [2001]. Crays, Clusters and Centers, Tech. Rep. MSR-TR-2001-76, Microsoft Research, Redmond, Wash.Bell, C. G., and J. Gray [2002]. "What's next in high performance computing?" CACM 45:2 (February), 91-95. Bell, C. G., and A. Newell [1971]. Computer Structures: Readings and Examples, McGraw-Hill, New York. Bell, C.

G., and W. D. Strecker [1976], "Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?," Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learned from the PDP-11?, "Third Annual Int'l, Symposium on Computer structures: What have we learne Computer Architecture (Selected Papers), ACM, New York, 138-151. Bell, C. G., J. C. Mudge, and J. E. McNamara [1978]. A DEC View of Computer Engineering, Digital Press, Bedford, Mass.Bell, C. G., R. Cady, H. McFarland, B. DeLagi, J. O'Laughlin, R. Noonan, and W. Wulf [1970].

"A new architecture for mini-computers: The DEC PDP-11," Proc. AFIPS Spring Joint Computer Conf., May 5-May 7, 1970, Atlantic City, N. J., 657-675. Benes, V. E. [1962]. "Rearrangeable three stage connecting networks," Bell System Technical Journal 41, 1481-1492. Bertozzi, D., A. Jalabert, S. Murali, R. Tamhankar, S. Stergiou, L. Benini, and G. De Micheli [2005]. "NoC synthesis flow for customized domain specific multiprocessor systems-on-chip," IEEE Trans. on Parallel and Distributed Systems 16:2 (February), 113-130. Bhandarkar, D. P. [1995]. Alpha Architecture and Implementations, Digital Press, Newton, Mass. Bhandarkar, D. P., and D. W. Clark [1991]. "Performance from architecture: Comparing a RISC and a CISC with similar hardware organizations," Proc. Fourth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 8-11, 1991, Palo Alto, Calif., 310-319. Bhandarkar, D. P., and J. Ding [1997]. "Performance characterization of the Pentium Pro processor," Proc. Third Int'l. Symposium on High-Performance Computer Architecture, February 1, 1997, San Antonio, Tex., 288-297. Bhuyan, L. N., and D. P. Agrawal [1984]. "Generalized hypercube and hyperbus structures for a computer network," IEEE Trans. on Computers 32:4 (April), 322-333. Bienia, C., S. Kumar, P. S. Jaswinder, and K. Li [2008]. The Parsec Benchmark Suite: Characterization and Architectural Implications, Tech. Rep. TR-811-08, Princeton University, Princeton, N. J.Bier, J. [1997]. "The Evolution of DSP Processors," presentation at University of California, Berkeley, November 14.Bird, S., A. Phansalkar, L. K. John, A. Mericas, and R. Indukuru [2007]. "Characterization of performance of SPEC CPU benchmarks on Intel's Core Microarchitecture based processor," Proc. 2007, Austin, Tex.Birman, M., A. Samuels, G. Chu, T. Chuk, L. Hu, J. McLeod, and J. Barnes [1990]. "Developing the WRL3170/3171 SPARC floating-point coprocessors," IEEE Micro 10:1, 55-64. Blackburn, M., R. Garner, C. Hoffman, A. M. Khan, K. S. McKinley, R. Bentzur, A. Diwan, D. Feinberg, D. Frampton, S. Z. Guyer, M. Hirzel, A. Hosking, M. Jump, H. Lee, J. E. B. Moss, A. Phansalkar, D. Stefanovic, T. VanDrunen, D.

symbols, "IEEE Trans. on Information Theory, IT-42 (March), 529-42. Blaum, M., J. Brady, J. Bruck, and J. Menon [1994]. "EVENODD: An optimal scheme for tolerating double disk failures in RAID architectures," Proc. 21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago, 245-254. Blaum, M., J. Brady, J. Bruck, and J. Menon [1994]. "EVENODD: An optimal scheme for tolerating double disk failures in RAID architectures," Proc. 21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago, 245-254. Blaum, M., J. Brady, J. Bruck, and J. Menon [1994]. "EVENODD: An optimal scheme for tolerating double disk failures in RAID architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. Symposium on Computer Architectures," Proc. 21st Annual Int'l. Symposium on Computer Architectures, "Proc. 21st Annual Int'l. and J. Menon [1995]. "EVENODD: An optimal scheme for tolerating double disk failures in RAID architectures," IEEE Trans. on Computers 44:2 (February), 192-202. Blaum, M., J. Brady, J., Bruck, J. Menon, and A. Vardy [2001]. "The EVENODD code and its generalization," in H. Jin, T. Cortes, and R. Buyya, eds., High Performance Mass Storage and Parallel I/O: Technologies and Applications, Wiley-IEEE, New York, 187-208. Bloch, E. [1959]. "The engineering design of the Eastern Joint Computer Conf., December 1-3, 1959, Boston, Mass., 48-59. Boddie, J. R. [2000]. "History of DSPs," www.lucent.com/micro/dsp/dsphist.html.Bolt, K. M. [2005]. "Amazon sees sales rise, profit fall," Seattle Post-Intelligencer, October 25 (.Bordawekar, R., U. Bondhugula, R. Rao [2010]. "Believe It or Not!: Multi-core CPUs can Match GPU Performance for a FLOP-Intensive Application!" 19th International Conference on Parallel Architecture and Compilation Techniques (PACT 2010). Vienna, Austria, September 11-15, 2010, 537-538. Borg, A., R. E. Kessler, and D. W. Wall [1990]. "Generation and analysis of very long address traces," 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia, 270-279. Bouknight, W. J., S. A. Deneberg, D. E. McIntyre, J. M. Randall, A. H. Sameh, and D. L. Slotnick [1972]. "The Illiac IV system," Proc. IEEE 60:4, 369-379. Also appears in D. P. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples and Examples, McGraw-Hill, New York, 1982, 306-316. Brady, J. T. [1986]. "A theory of productivity in the creative process," IEEE CG&A (May), 25-34. Brain, M. [2000]. "Inside a Digital Cell Phone," www.howstuffworks.com/insidecellphone. htm.Brandt, M., J. Brooks, M. Cahir, T. Hewitt, E. Lopez-Pineda, and D. Sandness [2000]. The Benchmarker's Guide for Cray SV1 Systems. Cray Inc., Seattle, Wash.Brent, R. P., and H. T. Kung [1982]. "A regular layout for parallel adders," IEEE Trans. on Computers C-31,

von Dincklage, and B. Wiedermann [2006]. "The DaCapo benchmarks: Java benchmarking development and analysis," ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), October 22-26, 2006, 169-190. Blaum, M., J. Bruck, and A. Vardy [1996]. "MDS array codes with independent parity

260-264. Brewer, E. A., and B. C. Kuszmaul [1994]. "How to get good performance from the CM-5 data network," Proc. Eighth Int'l. Parallel Processing Symposium, April 26-27, 1994, Cancun, Mexico. Brin, S., and L. Page [1998]. "The anatomy of a large-scale hypertextual Web search engine," Proc. 7th Int'l. World Wide Web Conf., April 14-18, 1998, Brisbane, Queensland, Australia, 107-117. Brown, A., and D. A. Patterson [2000]. "Towards maintainability, availability, availability, availability, availability, and growth benchmarks: A case study of software RAID systems." Proc. 2000 USENIX Annual Technical Conf., June 18-23, 2000, San Diego, Calif. Bucher, I. V., and A. H. Hayes [1980]. "I/O performance measurement on Cray-1 and CDC 7000 computers," Proc. Computer Systems (SIGMETRICS 1983), August 29-31, 1983, Minneapolis, Minn., 151-165. Bucholtz, W. [1962] Planning a Computer System: Project Stretch, McGraw-Hill, New York. Burgess, N., and T. Williams [1995]. "Choices of operand truncation in the SRT division algorithm," IEEE Trans. on Computer System, Tech. Rep. KSR-TR-9202001, Kendall Square Research, Boston, Mass.Burks, A. W., H. H. Goldstine, and J. von Neumann [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department, p. 1; also appears in Papers of John von Neumann [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department, p. 1; also appears in Papers of John von Neumann [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department, p. 1; also appears in Papers of John von Neumann [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department, p. 1; also appears in Papers of John von Neumann [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department [1946]. "Preliminary discussion of the logical design of an electronic computing instrument," Report to the U. S. Army Ordnance Department [1946]. "Preliminary discussion of the logical design of th

Tomash Publishers, Los Angeles, Calif., 1987, 97-146. Calder, B., G. Reinman, and D. M. Tullsen [1999]. "Selective value prediction," Proc. 26th Annual Int'l. Symposium on Computer Architecture (ISCA), May 2-4, 1999, Atlanta, Ga. Calder, B., D. Grunwald, M. Jones, D. Lindsay, J. Martin, M. Mozer, and B.

"Evidence-based static branch prediction using machine learning," ACM Trans. Program. Lang. Syst. 19:1, 188-222. Callahan, D., J. Dongarra, and D. Levine [1988]. "Vectorizing compilers: A test suite and results," Proc.

ACM/IEEE Conf. on Supercomputing, November 12-17, 1988, Orland, Fla., 98-105. Cantin, J. F., and M. D. Hill [2001]. "Cache Performance for Selected SPEC CPU2000 Benchmarks," www.jfred.org/cache-data.html (June). Cantin, J. F., and M. D. Hill [2003]. "Cache Performance for SPEC CPU2000 Benchmarks, Version 3.0," www.cs.wisc.edu/multifacet/misc/spec2000cache-data/index.html.Carles, S.

[2005]. "Amazon reports record Xmas season, top game picks," Gamasutra, December 27 (J., and K. Rajamani [2010]. "Designing energy-efficient servers and data centers," IEEE Computer 43:7 (July), 76-78. Case, R. P., and A. Padegs [1978]. "The architecture of the IBM System/370," Communications of the ACM 21:1, 73-96. Also appears in D. P. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples, McGraw-Hill, New York, 1982, 830-855. Censier, L., and P. Feautrier [1978].

"Superprocessors: Design and applications," IEEE (August), 602-609, 1984. Chen, T. C. [1980]. "Overlap and parallel processing," in H. Stone, ed., Introduction to Computer Architecture, Science Research Associates, Chicago, 427-486. Chow, F. C. [1983].

Operating Systems (ASPLOS), October 4-7, 1994, San Jose, Calif., 12-24. Chang, F., J. Dean, S. Ghemawat, W. C. Hsieh, D. A. Wallach, M. Burrows, T. Chandra, A. Fikes, and R. E. Gruber [2006]. "Bigtable: A distributed storage system for structured data," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Operational energy to sustainability, "Proc. 7th USENIX Symposium on Operational energy to sustainability," Proc. 7th USENIX Symposium on Oper

"A new solution to coherence problems in multicache systems," IEEE Trans. on Computers C-27:12 (December), 1112-1118. Chandra, R., S. Devine, B. Verghese, A. Gupta, and M. Rosenblum [1994]. "Scheduling and page migration for multiprocessor compute servers," Sixth Int'l. Conf. on Architectural Support for Programming Languages and

Workshop on Power Aware Computing and Systems (HotPower '10), October 3, 2010, Vancouver, British Columbia. Chang, P. P., S. A. Mahlke, W. Y. Chen, N. J. Warter, and W. W. Hwu [1991]. "IMPACT: An architectural framework for multiple-instruction-issue processors," 18th Annual Int'l. Symposium on Computer Architecture (ISCA), May 27-30, 1991, Toronto, Canada, 266-275. Charlesworth, A. E. [1981]. "An approach to scientific array processing: The architecture design of the AP-120B/FPS-164 family, "Computer 14:9 (September), 18-27. Charlesworth, A. [1998]. "Starfire: Extending the SMP envelope," IEEE Micro 18:1 (January/February), 39-49. Chen, P. M., and E. K. Lee [1995]. "Striping in a RAID level 5 disk array," Proc. ACM SIGMETRICS Conf. on Measurement and Modeling of Computer Systems, May 15-19, 1995, Ottawa, Canada, 136-145. Chen, P. M., G. A. Gibson, R. H. Katz, and D. A. Patterson [1990]. "An evaluation of redundant arrays of inexpensive disks using an Amdahl 5890," Proc. ACM SIGMETRICS Conf. on Measurement and Modeling of Computer Systems, May 22-25, 1990, Boulder, Colo. Chen, P. M., E. K. Lee, G. A. Gibson, R. H. Katz, and D. A. Patterson [1994]. "RAID: High-performance, reliable secondary storage," ACM Computing Surveys 26:2 (June), 145-188. Chen, S. [1983]. "Large-scale and high-speed multiprocessor system for scientific applications," Proc. NATO Advanced Research Workshop on High-Speed Computing, June 20-22, 1983, Julich, West Germany. Also appears in K. Hwang, ed.,

"A Portable Machine-Independent Global Optimizer--Design and Measurements," Ph. D. thesis, Stanford University, Palo Alto, Calif. Chrysos, G. Z., and J. S. Emer [1998]. "Memory dependence prediction using store sets," Proc. 25th Annual Int'l. Symposium on Computer Architecture (ISCA), July 3-14, 1998, Barcelona, Spain, 142-153. Clark, B., T. Deshane, E.

Dow, S. Evanchik, M. Finlayson, J. Herne, and J. Neefe Matthews [2004]. "Xen and the art of repeated research," Proc. USENIX Annual Technical Conf. , June 27-July 2, 2004, 135-144. Clark, D. W. [1983]. "Cache performance of the VAX-11/780," ACM Trans. on Computer Systems 1:1, 24-37. Clark, D. W. [1987]. "Pipelining and performance in the VAX 8800 processor," Proc.

Second Int'l. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 5-8, 1987, Palo Alto, Calif., 173-177. Clark, D. W., and J. S. Emer [1985]. "Performance of the VAX-11/780 translation buffer: Simulation and measurement," ACM Trans. on Computer Systems 3:1 (February), 31-62. Clark, D., and H. Levy [1982].

"Measurement and analysis of instruction set use in the VAX-11/780," Proc. Ninth Annual Int'l. Symposium on Computer Architecture (ISCA), April 26-29, 1982, Austin, Tex., 9-17. Clark, D., and W. D. Strecker [1980]. "Comments on 'the case for the reduced instruction set computer,' Computer Architecture News 8:6 (October), 34-38. Clark, W. A. [1957]. "The Lincoln TX-2 computer development," Proc. Western Joint Computer Conference, February 26-28, 1957, Los Angeles, 143-145. Clidaras, J., C. Johnson, and B. Felderman [2010]. Private communication. Climate Savers Computing Initiative. [2007]. "Efficiency Specs," . climatesaverscomputing.org/. Clos, C. [1953]. "A study of non-blocking switching networks," Bell Systems Technical Journal 32 (March), 406-424. Cody, W. J., J. T. Coonen, D. M. Gay, K. Hanson, D. Hough, W. Kahan, R. Karpinski, J. Palmer, F. N. Ris, and D. Stevenson [1984]. "A proposed radix- and word-lengthindependent standard for floating-point arithmetic," IEEE Micro 4:4, 86-100. Colwell, R. P., and R. Steck [1995]. "A 0.6 µm BiCMOS processor with dynamic execution." Proc. of IEEE Int'l. Symposium on Solid State Circuits (ISSCC), February 15-17, 1995, San Francisco, 176-177.Colwell, R. P., R. P. Nix, J. J.

O'Donnell, D. B. Papworth, and P. K. Rodman [1987]. "A VLIW architecture for a trace scheduling compiler," Proc. Second Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 5-8, 1987, Palo Alto, Calif., 180-192. Comer. D.

[1993]. Internetworking with TCP/IP, 2nd ed., Prentice Hall, Englewood Cliffs, N. J. Compaq Computer Corporation. [1999]. Compiler Writer's Guide for the Alpha 21264. Prentice Hall, Englewood Cliffs, N. J. Compaq Computer Corporation. [1999]. Compiler Writer's Guide for the Alpha 21264. pdf. Conti, C., D. H. Gibson, and S. H. Pitkowsky [1968]. "Structural aspects of the System/ 360 Model 85. Part I. General organization," IBM Systems J. 7:1, 2-14. Coonen, J. [1984]. "Contributions to a Proposed Standard for Binary Floating-Point Arithmetic," Ph. D. thesis, University of California, Berkeley. Corbett, P., B. English, A. Goel, T. Grcanac, S.

Kleiman, J. Leong, and S. Sankar [2004]. "Row-diagonal parity for double disk failure correction," Proc. 3rd USENIX Conf. on File and Storage Technology (FAST '04), March 31-April 2, 2004, San Francisco. Crawford, J., and P. Gelsinger [1988]. Programming the 80386, Sybex Books, Alameda, Calif.Culler, D. E., J. P. Singh, and A. Gupta [1999]. Parallel Computer Architecture: A Hardware/Software Approach, Morgan Kaufmann, San Francisco. Curnow, H. J., and B. A. Wichmann [1976]. "A synthetic benchmark," The Computer J. 19:1, 43-49. Cvetanovic, Z., and R.

"Performance analysis of the Alpha 21264- based Compaq ES40 system," Proc. 27th Annual Int'l. Symposium on Computer Architecture (ISCA), June 10-14, 2000, Vancouver, Canada, 192-202. Dally, W. J. [1990]. "Performance analysis of k -ary n -cube interconnection networks," IEEE Trans. on Computers 39:6 (June), 775-785. Dally, W. J. [1992]. "Virtual channel flow control," IEEE Trans. on Parallel and Distributed Systems 3:2 (March), 194-205. Dally, W. J. [1999]. "Interconnect limited VLSI architecture," Proc. of the International Interconnect Technology Conference, May 24-26, 1999, San Francisco. Dally, W. J., and C. I. Seitz [1986]. "The torus routing chip," Distributed Computing 1:4, 187-196. Dally, W. J., and B. Towles [2001]. "Route packets, not wires: On-chip interconnection networks," Proc. 38th Design Automation Conference, June 18-22, 2001, Las

Towles [2003]. Principles and Practices of Interconnection Networks, Morgan Kaufmann, San Francisco. Darcy, J. D., and D. Gay [1996]. "FLECKmarks: Measuring floating point performance using a full IEEE compliant arithmetic benchmark," CS 252 class project, University of California, Berkeley (see HTTP.CS.Berkeley.EDU/~darcy/Projects/cs252/).Darley, H. M. et al. [1989]. "Floating Point/Integer Processor with Divide and Square Root Functions," U. S. Patent 4,878,190, October 31. Davidson, E. S. [1971]. "The design and control of pipelined function generators," Proc. IEEE Conf. on Systems, Networks, and Computers, January 19-21, 1971,

Patel [1975]. "Effective control for pipelined processors." Proc. IEEE COMPCON, February 25-27, 1975, San Francisco, 181-184. Davie, B. S., L.

Peterson, and D. Clark [1999]. Computer Networks: A Systems Approach, 2nd ed., Morgan Kaufmann, San Francisco.

Oaxtepec, Mexico, 19-21. Davidson, E. S., A. T. Thomas, L. E. Shar, and J. H.

Johnson, J. Flich, F.

Dean, J. [2009]. "Designs, lessons and advice from building large distributed systems and Middleware, Co-located with the 22nd ACM Symposium on Operating Systems Principles, October 11-14, 2009, Big Sky, Mont. Dean, J., and S. Ghemawat [2004]. "MapReduce: Simplified data processing on large clusters." In Proc. Operating Systems Design and Implementation (OSDI), December 6-8, 2004, San Francisco, Calif., 137-150. Dean, J., and S. Ghemawat [2008]. "MapReduce: Simplified data processing on large clusters," Communications of the ACM, 51:1, 107-113. DeCandia, G., D. Hastorun, M.

Iampani. G. Kakulapati. A. Lakshman, A. Pilchin, S. Sivasubramanian, P. Vosshall, and W. Vogels [2007]. "Dynamo: Amazon's highly available key-value store," Proc. 21st ACM Symposium on Operating Systems Principles, October 14-17, 2007, Stevenson, Wash. Dehnert, J. C., P. Y.-T. Hsu, and J. P. Bratt [1989]. "Overlapped loop support on the Cydra 5," Proc. Third Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 3-6, 1989, Boston, Mass., 26-39. Demmel, J. W., and X. Li [1994]. "Faster numerical algorithms via exception handling," IEEE Trans. on Computers 43:8, 983-992. Denehy, T. E., J. Bent, F. I. Popovici, A. C. Arpaci-Dusseau, and R. H. Arpaci-Du

Scientific American (International Edition) 266:1 (January), 96-103. Diep, T. A., C. Nelson, and J. P. Shen [1995]. "Performance evaluation of the PowerPC 620 microarchitecture," Proc. 22nd Annual Int'l. Symposium on Computer Architecture (ISCA), June 22-24, 1995, Santa Margherita, Italy. Digital Semiconductor. [1996]. Alpha Architecture Handbook, Version 3, Digital Press, Maynard, Mass. Ditzel, D. R., and H. R.

McLellan [1987], "Branch folding in the CRISP microprocessor: Reducing the branch delay to zero," Proc. 14th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1987, Pittsburgh, Penn., 2-7, Ditzel, D. R., and D. A. Patterson [1980]. "Retrospective on high-level language computer architecture," Proc. Seventh Annual Int'l. Symposium on Computer Architecture, V. J., and R. P. Kelisky [1979]. "Managing VM/CMS systems for user effectiveness," IBM Systems J. 18:1, 143-166. Dongarra, J. J. [1986]. "A survey of high performance processors." Proc.

IEEE COMPCON, March 3-6, 1986, San Francisco, 8-11. Dongarra, J., T. Sterling, H. Simon, and E. Strohmaier [2005]. "High-performance computing: Clusters, constellations, MPPs, and future directions," Computing in Science & Engineering, 7:2 (March/April), 51-59. Douceur, J. R., and W. J. Bolosky [1999]. "A large scale study of file-system contents," Proc. ACM SIGMETRICS Conf. on Measurement and Modeling of Computer Systems, May 1-9, 1999, Atlanta, Ga., 59-69. Douglas, J. [2005]. "Intel 8xx series and Paxville Xeon-MP microprocessors," paper presented at Hot Chips 17, August 14-16, 2005, Stanford University, Palo Alto, Calif. Duato, J. [1993]. "A new theory of deadlock-free adaptive routing in wormhole networks," IEEE Trans. on Parallel and Distributed Systems 4:12 (December), 1219-1235. Duato, J., and T. M. Pinkston [2001]. "A general theory for deadlock-free adaptive routing using a mixed set of resources," IEEE Trans. on Parallel and Distributed Systems 12:12 (December), 1219-1235. Duato, J., S. Yalamanchili, and L. Ni [2003]. Interconnection Networks: An Engineering Approach, 2nd printing, Morgan Kaufmann, San Francisco.Duato, J., I.

Naven, P. Garcia, and T. Nachiondo [2005a]. "A new scalable and cost-effective congestion management strategy for lossless multistage interconnection networks," Proc. 11th Int'l. Symposium on High-Performance Computer Architecture, February 12-16, 2005, San Francisco. Duato, J., O. Lysne, R. Pang, and T. M. Pinkston [2005b]. "Part I: A theory for deadlockfree dynamic reconfiguration of interconnection networks," IEEE Trans. on Parallel and Distributed Systems 16:5 (May), 412-427. Dubois, M., C. Scheurich, and F. Briggs [1988]. "Synchronization, coherence, and event ordering," IEEE Computer 21:2 (February), 9-21. Dunigan, W., K. Vetter, K. White, and P. Worley [2005]. "Performance evaluation of the Cray X1 distributed shared memory architecture," IEEE Micro January/February, 30-40.

Eden. A., and T. Mudge [1998]. "The YAGS branch prediction scheme," Proc. of the 31st Annual ACM/IEEE Int'l. Symposium on Microarchitecture, November 30-December 2, 1998, Dallas, Tex., 69-80. Edmondson, J. H., P. I. Rubinfield, R. Preston, and V. Rajagopalan [1995]. "Superscalar instruction execution in the 21164 Alpha microprocessor,"

IEEE Micro 15:2, 33-43. Eggers, S. [1989]. "Simulation Analysis of Data Sharing in Shared Memory Multiprocessors," Ph. D. thesis, University of California, Berkeley. Elder, J., A. Gottlieb, C.

K. Kruskal, K. P. McAuliffe, L. Randolph, M. Snir, P. Teller, and I. Wilson [1985], "Issues related to MIMD shared-memory computers: The NYU Ultracomputer approach," Proc. 12th Annual Int'l, Symposium on Computer Architecture (ISCA), June 17-19, 1985, Boston, Mass., 126-135, Ellis, I. R. [1986]. Bulldog: A Compiler for VLIW Architectures, MIT Press, Cambridge, Mass. Emer, J. S., and D. W.

Clark [1984]. "A characterization of processor performance in the VAX-11/780," Proc. 11th Annual Int'l. Symposium on Computer Architecture (ISCA), June 5-7, 1984, Ann Arbor, Mich., 301-310. Enriquez, P. [2001]. "What happened to my dial tone? A study of FCC service disruption reports," poster, Richard Tapia Symposium on the Celebration of Diversity in Computing, October 18-20, Houston, Tex. Erlichson, A., N. Nuckolls, G. Chesson, and J. L. Hennessy [1996]. "SoftFLASH: Analyzing the performance of clustered distributed virtual

shared memory," Proc. Seventh Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 1-5, 1996, Cambridge, Mass., 210-220. Esmaeilzadeh, H., T. Cao, Y. Xi, S. M. Blackburn, and K. S. McKinley [2011]. "Looking Back on the Language and Hardware Revolution: Measured Power, Performance, and Scaling," Proc. 16th Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), March 5-11, 2011, Newport Beach, Calif. Evers, M., S. J. Patel, R.

Chappell, and Y. N. Patt [1998]. "An analysis of correlation and predictability: What makes two-level branch predictors work," Proc. 25th Annual Int'l. Symposium on Computer Architecture (ISCA), July 3-14, 1998, Barcelona, Spain, 52-61. Fabry, R. S. [1974]. "Capability based addressing," Communications of the ACM 17:7 (July), 403-412. Falsafi, B., and D. A. Wood

[1997]. "Reactive NUMA: A design for unifying S-COMA and CC-NUMA," Proc. 24th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-4, 1997, Denver, Colo., 229-240. Fan, X., W. Weber, and L. A. Barroso [2007]. "Power provisioning for a warehouse-sized computer," Proc. 34th Annual Int'l. Symposium on Computer Architecture (ISCA), June 9-13, 2007, San Diego, Calif. Farkas, K. I., and N. P. Jouppi [1994]. "Complexity/performance trade-offs with nonblocking loads," Proc. 21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago. Farkas, K. I., N. P. Jouppi, and P. Chow [1995]. "How useful are non-blocking loads, stream buffers and speculative execution in multiple issue processors," Proc. First IEEE Symposium on High-Performance Computer Architecture, January 22-25, 1995, Raleigh, N.C., 78-89. Farkas, K. I., P. Chow, N. P. Jouppi, and Z. Vranesic [1997]. "Memory-system design considerations for dynamically-scheduled processors," Proc. 24th Annual Int'l. Symposium on

Computer Architecture (ISCA), June 2-4, 1997, Denver, Colo., 133-143. Fazio, D. [1987]. "It's really much more fun building a supercomputer than it is simply inventing one," Proc. IEEE COMPCON, February 23-27, 1987, San Francisco, 102-105. Fisher, J. A. [1981]. "Trace scheduling: A technique for global microcode compaction," IEEE Trans. on Computers 30:7 (July), 478-490. Fisher, J. A. [1983]. "Very long instruction word architectures and ELI-512," 10th Annual Int'l. Symposium on Computer Architecture (ISCA), June 5-7, 1982, Stockholm, Sweden, 140-150. Fisher, J. A., and S. M. Freudenberger [1992]. "Predicting conditional branches from previous runs of a program," Proc. Fifth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 12-15, 1992, Boston, Mass., 85-95. Fisher, J. A., and B. R. Rau [1993]. Journal of Supercomputing, January (special issue). Fisher, J. A., J. R. Ellis, J. C. Ruttenberg, and A. Nicolau [1984]. "Parallel processing: A smart compiler and a dumb processor," Proc. SIGPLAN Conf. on Compiler and a dumb processor," Proc. SIGPLAN Conf. on Compiler Construction, June 17-22, 1984, Montreal, Canada, 11-16. Flemming, P. J., and J. J. Wallace [1986]. "How not to lie with

statistics: The correct way to summarize benchmarks results," Communications of the ACM 29:3 (March), 218-221. Flynn, M. [1966]. "Very high-speed computing systems," Proc. IEEE 54:12 (December), 1901-1909. Forgie, J. W. [1957]. "The Lincoln TX-2 input-output system," Proc. Western Joint Computer Conference (February), Institute of Radio Engineers, Los Angeles, 156-160. Foster, C. C., and E. M. Riseman [1972]. "Percolation of code to enhance parallel dispatching

and execution," IEEE Trans. on Computers C-21:12 (December), 1411- 1415. Frank, S. J. [1984]. "Tightly coupled multiprocessor systems speed memory access time," Electronics 57:1 (January), 164-169. Freiman, C. V. [1961].

"Statistical analysis of certain binary division algorithms," Proc. IRE 49:1, 91-103. Friesenborg, S. E., and R. J. Wicks [1985].

DASD Expectations: The 3380, 3380-23, and MVS/XA, Tech. Bulletin GG22-9363-02, IBM Washington Systems Center, Gaithersburg, Md.Fuller, S. H., and W.

E. Burr [1977]. "Measurement and evaluation of alternative computer architectures," Computer 10:10 (October), 24-35. Furber, S. B. [1996]. ARM System Architecture, Addison-Wesley, Harlow, England (see www.cs.man.ac.uk/amulet/publications/books/ARMsysArch). Gagliardi, U. O. [1973]. "Report of workshop 4--software-related advances in computer hardware," Proc. Symposium on the High Cost of Software, September 17-19, 1973, Monterey, Calif., 99-120.Gajski, D., D. Kuck, D.

Lawrie, and A. Sameh [1983]. "CEDAR--a large scale multiprocessor," Proc. Int'l. Conf. on Parallel Processing (ICPP), August, Columbus, Ohio, 524-529. Gallagher, D. M., W. Y. Chen, S.

A. Mahlke, J. C. Gyllenhaal, and W. W. Hwu [1994]. "Dynamic memory disambiguation using the memory conflict buffer," Proc. Sixth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 4-7, Santa Jose, Calif., 183-193. Galles, M. [1996]. "Scalable pipelined interconnect for distributed endpoint routing: The SGI SPIDER chip, Proc. IEEE HOT Interconnects '96, August 15-17, 1996, Stanford University, Palo Alto, Calif.Game, M., and A. Booker [1999]. "CodePack code compression for PowerPC processors," MicroNews, 5:1, www.chips.ibm.com/micronews/vol5 no1/codepack.html.Gao, O. S. [1993]. "The Chinese remainder theorem and the prime memory system," 20th Annual Int'l

Symposium on Computer Architecture (ISCA), May 16-19, 1993, San Diego, Calif. (Computer Architecture News 21:2 (May), 337-340). Gap. [2005]. "Gap Inc. Reports Third Quarter Earnings," . [2006]. "Gap Inc. Reports Fourth Quarter and Full Year Earnings," R., A. Agarwal, F. Briggs, E. Brown, D. Hough, B. Joy, S. Kleiman, S. Muchnick, M. Namjoo, D.

Patterson, J. Pendleton, and R. Tuck [1988]. "Scalable processor architecture (SPARC)," Proc. IEEE COMPCON, February 29-March 4, 1988, San Francisco, 278-283, Gebis, J., and D. Patterson [2007]. "Embracing and extending 20th-century instruction set architectures," IEEE Computer 40:4 (April), 68-75.

Gee, J. D., M. D. Hill, D. N. Pnevmatikatos, and A. J. Smith [1993]. "Cache performance of the SPEC92 benchmark suite," IEEE Micro 13:4 (August), 17-27. Gehringer, E. F., D. P. Siewiorek, and Z. Segall [1987]. Parallel Processing: The Cm* Experience, Digital Press, Bedford, Mass. Gharachorloo, K., A. Gupta, and J. L. Hennessy [1992]. "Hiding memory latency using dynamic scheduling in shared-memory multiprocessors," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia. Gharachorloo, K., D. Lenoski, J. Laudon, P. Gibbons, A. Gupta, and J. L. Hennessy [1990]. "Memory consistency and event ordering in scalable shared-memory multiprocessors," Proc. 17th Annual Int'l. Symposium on Computer Architecture (ISCA), May 28-31, 1990, Seattle, Wash., 15-26. Ghemawat, S., H. Gobioff, and S.-T. Leung [2003]. "The Google file system," Proc. 19th ACM Symposium on Operating Systems Principles, October 19-22, 2003, Bolton Landing, N.Y. Gibson, D. H. [1967]. "Considerations" in block-oriented systems design," AFIPS Conf. Proc. 30, 75-80. Gibson, G. A. [1992]. Redundant Disk Arrays: Reliable, Parallel Secondary Storage, MIT Press, Cambridge, Mass. Gibson, J. C. [1970]. "The Gibson mix," Rep. TR. 00.2043, IBM Systems Development Division, Poughkeepsie, N.Y. (research done in 1959).Gibson, J., R. Kunz, D.

Ofelt, M. Horowitz, J. Hennessy, and M. Heinrich [2000]. "FLASH vs. (simulated) FLASH: Closing the simulation loop," Proc.

Ninth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), November 12-15, Cambridge, Mass., 49-58. Glass, C. J., and L. M.

Ni [1992]. "The Turn Model for adaptive routing," 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia. Goldberg, D. [1991]. "What every computer scientist should know about floating-point arithmetic," Computing Surveys 23:1, 5-48. Goldberg, I. B. [1967]. "27 bits are not enough for 8-digit accuracy," Communications of the ACM 10:2, 105-106. Goldstein, S. [1987].

Storage Performance--An Eight Year Outlook, Tech. Rep. TR 03.308-1, Santa Teresa Laboratory, IBM Santa Teresa Laboratory, San Jose, Calif.Goldstine, H. H. [1972]. The Computer: From Pascal to von Neumann, Princeton University Press, Princeton, N. J. Gonzalez, J., and A. González [1998]. "Limits of instruction level parallelism with data speculation," Proc. Vector and Parallel Processing (VECPAR) Conf., June 21-23, 1998, Porto, Portugal, 585-598. Goodman, J. R. [1983]. "Using cache memory to reduce processor memory traffic," Proc. 10th Annual Int'l. Symposium on Computer Architecture (ISCA)

, June 5-7, 1982, Stockholm, Sweden, 124-131. Goralski, W. [1997]. SONET: A Guide to Synchronous Optical Network, McGraw-Hill, New York, Gosling, J. B. [1980]. "A census of Tandem system availability between 1985 and 1990," IEEE Trans. on Reliability, 39:4 (October), 409-418. Gray, J. (ed.) [1993]. The Benchmark Handbook for Database and Transaction Processing Systems, 2nd ed., Morgan Kaufmann, San Francisco. Gray, J. [2006]. Sort benchmark home page, J., and A. Reuter [1993] Transaction Processing: Concepts and Techniques, Morgan Kaufmann, San Francisco. Gray, J., and D. P. Siewiorek [1991]. "High-availability computer systems," Computer 24:9 (September), 39-48. Gray, J., and C. van Ingen [2005]. Empirical Measurements of Disk Failure Rates and Error Rates, MSR-TR-2005-166, Microsoft Research, Redmond, Wash.Greenberg, A., N. Jain, S. Kandula, C. Kim, P. Lahiri, D. Maltz, P. Patel, and S. Sengupta [2009]. "VL2: A Scalable and Flexible Data Center Network," in Proc. ACM SIGCOMM, August 17-21,

deadlocks in packet-switched data transport systems," IEEE Trans. on Communications COM-29:4 (April), 512-524. Hagersten, E., and M. Koster [1998]. "WildFire: A scalable path for SMPs," Proc. Fifth Int'l. Symposium on High-Performance Computer Architecture, January 9-12, 1999, Orlando, Fla. Hagersten, E., A. Landin, and S. Haridi [1992].

2009, Barcelona, Spain. Grice, C., and M. Kanellos [2000]. "Cell phone industry at crossroads: Go high or low?," CNET News , August 31, technews.netscape.com/news/0-1004-201-2518386- 0.html?tag=st.ne.1002.tgif.sf.Groe, J. B., and L. E. Larson [2000]. "CDMA Mobile Radio Design", Artech House, Boston. Gunther, K. D. [1981]. "Prevention of

"DDM--a cache-only memory architecture." IEEE Computer 25:9 (September), 44-54, Hamacher, V. C., Z. G. Vranesic, and S. G. Zaky [1984]. Computer Organization, 2nd ed., McGraw-Hill, New York. Hamilton, J. [2009]. "Data center networks are in my way," paper presented at the Stanford Clean Slate CTO Summit, October 23, 2009 (.Hamilton, J. [2010]. "Cloud computing economies of scale," paper presented at the AWS Workshop on Genomics and Cloud Computing, June 8, 2010, Seattle, Wash. (.Handy, J. [1993]. The Cache Memory Book, Academic Press, Boston. Hauck, E. A., and B. A. Dent [1968] "Burroughs' B6500/B7500 stack mechanism," Proc. AFIPS Spring Joint Computer Conf., April 30-May 2, 1968, Atlantic City, N. J., 245-251. Heald, R., K. Aingaran, C. Amir, M. Ang, M. Boland, A. Das, P. Dixit, G. Gouldsberry, J. Hart, T. Horel, W.-J. Hsu, J. Kaku, C. Kim, S. Kim, F. Klass, H. Kwan, R. Lo, H. McIntyre, A. Mehta, D. Murata, S. Nguyen, Y.-P. Pai, S. Patel, K. Shin, K. Tam, S. Vishwanthaiah, J. Wu, G. Yee, and H. You [2000]. "Implementation of thirdgeneration SPARC V9 64-b microprocessor," ISSCC Digest of Technical Papers, 412-413 and slide supplement. Heinrich, J. [1993]. MIPS R4000 User's Manual, Prentice Hall, Englewood Cliffs, N. J. Henly, M., and B. McNutt [1989]. DASD I/O Characteristics: A Comparison of

MVS to VM, "Tech. Rep. TR 02.1550 (May), IBM General Products Division, San Jose, Calif. Hennessy, J. [1984]. "VLSI processor architecture," IEEE Trans. on Computers C-33:11 (December), 1221-1246. Hennessy, J. [1985]. "VLSI RISC processors," VLSI Systems Design 6:10 (October), 22-32. Hennessy, J., N. Jouppi, F. Baskett, and J. Gill [1981]. "MIPS: A VLSI processor architecture," in CMU Conference on VLSI Systems and Computations, Computer Science Press, Rockville, Md.Hewlett-Packard, Palo Alto, Calif.Hewlett-Packard, Palo Alto, Calif.Hewlett-Packard, [1994]. "HP's '5NINES:5MINUTES' Vision Extends Leadership and Redefines High Availability in Mission-Critical Environments," February 10, www.future.enterprisecomputing.hp.com/ia64/news/5nines vision pr.html.Hill, M. D. [1987]. "Aspects of Cache Memory and Instruction Buffer Performance," Ph. D. thesis, Tech. Rep. UCB/CSD 87/381, Computer Science Division, University of California, Berkeley. Hill, M. D.

[1988]. "A case for direct mapped caches," Computer 21:12 (December), 25-40. Hill, M. D. [1998]. "Multiprocessors should support simple memory consistency models," IEEE Computer 31:8 (August), 28-34. Hillis, W. D. [1985]. The Connection Multiprocessor, MIT Press, Cambridge, Mass. Hillis, W. D.

and G. L. Steele [1986]. "Data parallel algorithms," Communications of the ACM 29:12 (December), 1170-1183. (. Hinton, G., D. Sager, M.

Upton, D. Boggs, D. Carmean, A. Kyker, and P. Roussel [2001]. "The microarchitecture of the Pentium 4 processor," Intel Technology Journal, February, Hintz, R. G., and D.

Tate [1972]. "Control data STAR-100 processor design," Proc.

IEEE COMPCON, September 12-14, 1972, San Francisco, 1-4. Hirata, H., K. Kimura, S. Nagamine, Y. Mochizuki, A. Nishimura, Y. Nakase, and T. Nishimura, Y. Nakase, 1992, Gold Coast, Australia, 136-145. Hitachi. [1997]. SuperH RISC Engine SH7700 Series Programming Manual, Hitachi, Santa Clara, Calif. (see www.halsp.hitachi.com/tech prod/and search for title). Ho, R., K. W. Mai, and M. A. Horowitz [2001]. "The future of wires," Proc. of the IEEE 89:4 (April), 490-504. Hoagland, A. S. [1963]. Digital Magnetic Recording, Wiley, New York. Hockney, R. W., and C. R. Jesshope [1988]. Parallel Computers 2: Architectures , Programming and Algorithms, Adam Hilger, Ltd., Bristol, England. Holland, J. H. [1959]. "A universal computer capable of executing an

arbitrary number of subprograms simultaneously," Proc. East Joint Computer Surveys 4:3 (September), 179-196. Hopkins, M. [2000]. "A critical look at IA-64: Massive resources, massive ILP, but can it deliver?" Microprocessor Report, February, Hord, R. M. [1982]. The Illiac-IV, The First Supercomputer, Computer Science Press, Rockville, Md. Horel, T., and G. Lauterbach [1999]. "UltraSPARC-III: Designing third-generation 64-bit performance," IEEE Micro 19:3 (May-June), 73-85. Hospodor, A. D., and A. S. Hoagland [1993]. "The changing nature of disk controllers." Proc. IEEE 81:4 (April), 586-594.Holzle, U. [2010]. "Brawny cores still beat wimpy cores, most of the time," IEEE Micro 30:4 (July/August). Hristea, C., D. Lenoski, and J. Keen [1997] "Measuring memory hierarchy performance of cache-coherent multiprocessors using micro benchmarks," Proc. ACM/IEEE Conf.

on Supercomputing, November 16-21, 1997, San Jose, Calif. Hsu, P. [1994]. "Designing the TFP microprocessor," IEEE Micro, 20:5 (September-October), 12-23. Hughes, C. J., P. Kaul, S. V. Adve, R. Jain, C. Park, and J.

Srinivasan [2001]. "Variability in the execution of multimedia applications and implications for architecture," Proc. 28th Annual Int'l. Symposium on Computer Architecture (ISCA), June 30-July 4, 2001, Goteborg, Sweden, 254-265. Hwang, K. [1979]. Computer Architecture applications for architecture, when york. Hwang, K. [1993]. Advanced Computer Architecture and Parallel Programming, McGraw-Hill, New York. Hwu, W.-M., and Y. Patt [1986].

"HPSm, a high performance restricted data flow architecture having minimum functionality," Proc. 13th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1986, Tokyo, 297-307. Hwu, W. W., S. A. Mahlke, W. Y. Chen, P. P. Chang, N. J. Warter, R. A.

Bringmann, R. O. Ouellette, R. E. Hank, T.

Kiyohara, G. E. Haab, J. G. Holm, and D. M. Lavery [1993]. "The superblock: An effective technique for VLIW and superscalar compilation," J. Supercomputing 7:1, 2 (March), 229-248. IBM. [1982]. The Economic Value of Rapid Response Time, GE20-0752-0, IBM, White Plains, N.Y., 11-82.IBM. [1990]. "The IBM RISC System/6000 processor" (collection of papers), IBM J. Research and Development 34:1 (January).IBM. [1994]. The PowerPC Architecture, Morgan Kaufmann, San Francisco.IBM. [2005]. "IREE standard for binary floating-point arithmetic," SIGPLAN Notices 22:2, 9-25.IEEE. [2005]. "Intel virtualization technology, computer," IEEE Computer Society 38:5 (May), 48-56. IEEE. 754-2008 Working Group. [2006]. "DRAFT Standard for Floating-Point Arithmetic 754-2008," . Imprimis Product Specification , 97209 Sabre Disk Drive IPI-2 Interface 1.2 GB , Document No. 64402302, Imprimis, Dallas, Tex.InfiniBand Trade Association. [2001]. InfiniBand Architecture Specifications Release 1.0.a, www.infinibandta.org.Intel. [2001]. "Using MMX Instructions to Convert RGB to YUV Color Convertions," cedar.intel.com/cgi-bin/ids.dll/content.jsp?cntKey=Legacy::irtm AP548_9996& cntType=IDS_EDITORIAL.Internet Retailer. [2005]. "The Gap launches a new site--after two weeks of downtime," Internet® Retailer, September 28, R.

[1991]. The Art of Computer Systems Performance Analysis: Techniques for Experimental Design, Measurement, Simulation, and Modeling, Wiley, New York. Jantsch, A., and C. Lin [2002]. "Neural methods for dynamic branch prediction," ACM Trans. on Computer Systems 20:4 (November), 369-397. Johnson, M. [1990]. Superscalar Microprocessor Design, Prentice Hall, Englewood Cliffs, N. J.Jordan, H. F. [1983]. "Performance measurements on HEP--a pipelined MIMD computer," Proc.

10th Annual Int'l. Symposium on Computer Architecture (ISCA), June 5-7, 1982, Stockholm, Sweden, 207-212. Jordan, K. E. [1987].

"Performance comparison of large-scale scientific processors: Scalar mainframes, mainframes with vector facilities, and supercomputers," Computer 20:3 (March), 10-23. Jouppi, N. P. [1990]. "Improving direct-mapped cache performance by the addition of a small fully-associative cache and prefetch buffers," Proc. 17th Annual Int'l. Symposium on

Computer Architecture (ISCA), May 28-31, 1990, Seattle, Wash., 364-373. Jouppi, N. P. [1998]. "Retrospective: Improving direct-mapped cache performance by the addition of a small fully-associative cache and prefetch buffers," 25 Years of the International Symposia on Computer Architecture (Selected Papers), ACM, New York, 71-73. Jouppi, N. P., and D. W. Wall [1989]. "Available instruction-level parallelism for superscalar and superpipelined processors," Proc. Third Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 3-6, 1989, Boston, 272-282. Jouppi, N. P., and S. J. E. Wilton [1994]. "Trade-offs in two-level on-chip caching," Proc. 21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago, 34-45. Kaeli, D. R., and P. G. Emma [1991]. "Branch history table prediction of moving target branches due to subroutine returns," Proc. 18th Annual Int'l. Symposium on Computer Architecture (ISCA), May 27-30, 1991, Toronto, Canada, 34-42. Kahan, J. [1990]. "On the advantage of the 8087's stack," unpublished course notes, Computer Science Division, University of California, Berkeley.Kahan, W. [1968]. "7094-II system support for numerical analysis," SHARE Secretarial Distribution SSD-159, Department of Computer Science, University of Toronto.Kahaner, D.

K. [1988]. "Benchmarks for 'real' programs," SIAM News, November.Kahn, R. E. [1972].

"Resource-sharing computer communication networks," Proc. IEEE 60:11 (November), 1397-1407. Kane, G. [1986]. MIPS R2000 RISC Architecture, Prentice Hall, Englewood Cliffs, N. J. Kane, G. [1996]. PA-RISC 2.0 Architecture, Prentice Hall, Upper Saddle River, N. J. Kane, G., and J. Heinrich [1992]. MIPS RISC Architecture, Prentice Hall, Englewood Cliffs, N. J. Katz, R. H., D.

1992, Gold Coast, Australia, 202-213. Keller, R. M. [1975]. "Look-ahead processors," ACM Computing Surveys 7:4 (December), 177-195. Keltcher, C. N., K. J. McGrath, A. Ahmed, and P. Conway [2003]. "The AMD Opteron processor for multiprocessor servers," IEEE Micro 23:2 (March-April), 66-76 (dx.doi.org/10.1109.

A. Patterson, and G. A. Gibson [1989]. "Disk system architectures for high performance computing," Proc. IEEE 77:12 (December), 1842-1858. Keckler, S. W., and W. J. Dally [1992]. "Processor coupling: Integrating compile time and runtime scheduling for parallelism," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21,

MM.2003.119116). Kembel, R. [2000]. "Fibre Channel: A comprehensive introduction," Internet Week, April. Kermani, P., and L. Kleinrock [1979]. "Virtual Cut-Through: A New Computer Communication Switching Technique," Computer Networks 3 (January), 267-286. Kessler, R. [1999]. "The Alpha 21264 microprocessor," IEEE Micro 19:2 (March/April) 24-36. Kilburn, T., D. B. G. Edwards, M. J. Lanigan, and F. H. Sumner [1962]. "One-level storage system," IRE Trans.

on Electronic Computers EC-11 (April) 223-235. Also appears in D. P. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures: Principles and Examples of Mr. F. Siewiorek, C. G. Bell, and A. Newell, Computer Structures and Examples of Mr. F. Siewiorek, C. G. Bell, Palo Alto, Calif., 1.6-1.19, Kim, M. Y. [1986].

"Synchronized disk interleaving," IEEE Trans. on Computers C-35:11 (November), 978-988. Kissell, K. D. [1997]. "MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Proc. Real Time Systems '97, June 15, 1997, Las Vegas, Nev. (see www.sgi.com/MIPS16: High-density for the embedded market," Pro (January), 2-7.Knuth, D. [1981]. The Art of Computer Programming, Vol. II, 2nd ed., Addison-Wesley, Reading, Mass.Kogge, P. M. [1981]. The Architecture of Pipelined Computers, McGraw-Hill, New York.Kohn, L., and S.-W. Fu [1989]. "A 1,000,000 transistor microprocessor," Proc. of IEEE Int'l. Symposium on Solid State Circuits (ISSCC), February 15-17, 1989, New York, 54-55.Kohn, L., and N. Margulis [1989]. "Introducing the Intel i860 64-Bit Microprocessor," IEEE Micro, 9:4 (July), 15-30. Kontothanassis, L., G. Hunt, R. Stets, N. Hardavellas, M. Cierniak, S. Parthasarathy, W. Meira, S. Dwarkadas, and M. Scott [1997]. "VM-based shared memory on lowlatency, remote-memory-access networks," Proc. 24th Annual Int'l. Symposium on Computer Arithmetic Algorithms, Prentice Hall, Englewood Cliffs, N. J. Kozyrakis, C. [2000]. "Vector IRAM: A media-oriented vector processor with embedded DRAM," paper presented at Hot Chips 12, August 13-15, 2000, Palo Alto, Calif, 13-15. Kozyrakis, C., and D. Patterson, [2002].

"Vector vs. superscalar and VLIW architectures for embedded multimedia benchmarks," Proc. 35th Annual Int'l. Symposium on Microarchitecture (MICRO-35), November 18-22, 2002, Istanbul, Turkey. Kroft, D. [1981]. "Lockup-free instruction fetch/prefetch cache organization," Proc.

Eighth Annual Int'l. Symposium on Computer Architecture (ISCA), May 12-14, 1981, Minneapolis, Minn., 81-87. Kroft, D. [1998]. "Retrospective: Lockup-free instruction fetch/prefetch cache organization," 25 Years of the International Symposium on Computer Architecture (Selected Papers), ACM, New York, 20-21. Kuck, D., P. P. Budnik, S.-C. Chen,

D. H. Lawrie, R. A. Towle, R. E. Strebendt, E. W. Davis, Jr., J. Han, P. W. Kraska, and Y. Muraoka [1974]. "Measurements of failure in the public switched telephone network," IEEE Computer 30:4 (April), 31-36. Kumar, A. [1997]. "The HP PA-8000 RISC CPU," IEEE Micro 17:2 (March/April), 27-32. Kunimatsu, A., N. Ide, T. Sato, Y. Endo, H. Murakami, T. Kamei, M. Hirano, F. Ishihara, H. Tago, M. Oka, A. Ohba, T. Yutaka, T. Okada, and M.

F., and K. W. Ross [2001]. Computer Networking: A Top-Down Approach Featuring the Internet, Addison-Wesley, Boston. Kuskin, J., D. Ofelt, M. Heinrich, J. Heinlein, R. Simoni, K. Gharachorloo, J. Chapin, D. Nakahira, J. Baxter, M. Horowitz, A. Gupta, M. Rosenblum, and J. L. Hennessy [1994]. "The Stanford FLASH multiprocessor," Proc.

21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago. Lam, M. [1988]. "Software pipelining: An effective scheduling technique for VLIW processors," SIGPLAN Conf. on Programming Language Design and Implementation, June 22-24, 1988, Atlanta, Ga., 318-328. Lam, M. S., and R. P.

Suzuoki [2000]. "Vector unit architecture for emotion synthesis," IEEE Micro 20:2 (March-April), 40-47. Kunkel, S. R., and J. E. Smith [1986]. "Optimal pipelining in supercomputers," Proc. 13th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1986, Tokyo, 404-414. Kurose, J.

Wilson [1992]. "Limits of control flow on parallelism," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia, 46-57. Lam, M.

S., E. E. Rothberg, and M. E. Wolf [1991]. "The cache performance and optimizations of blocked algorithms," Proc. Fourth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 8-11, 1991, Santa Clara, Calif. (SIGPLAN Notices 26:4 (April), 63-74). Lambright, D. [2000]. "Experiences in measuring the reliability of a cache-based storage system," Proc. of First Workshop on Industrial Experiences with Systems Software (WIESS 2000), Co-Located with the 4th Symposium on Operating Systems Design and Implementation (OSDI), October 22, 2000, San Diego, Calif. Lamport, L. [1979]. "How to make a multiprocessor computer that correctly executes multiprocess programs," IEEE Trans. on Computers C-28:9 (September), 241-248. Lang, W., J. M. Patel, and S. Shankar [2010]. "Wimpy node clusters: What about non-wimpy workloads?" Proc. Sixth International Workshop on Data Management on New Hardware (DaMoN), June 7, Indianapolis, Ind. Laprie, J.-C.

[1985]. "Dependable computing and fault tolerance: Concepts and terminology," Proc. 15th Annual Int'l. Symposium on Fault-Tolerant Computing, June 19-21, 1985, Ann Arbor, Mich., 2-11.Larson, E. R. [1973]. "Findings of fact, conclusions of law, and order for judgment," File No. 4-67, Civ. 138, Honeywell v. Sperry-Rand and Illinois Scientific Development, U.

S. District Court for the State of Minnesota, Fourth Division (October 19). Laudon, J., and D. Lenoski [1997]. "The SGI Origin: A ccNUMA highly scalable server," Proc. 24th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-4, 1997, Denver, Colo., 241-251. Laudon, J., A. Gupta, and M. Horowitz [1994]. "Interleaving: A multithreading technique targeting multiprocessors and workstations," Proc. Sixth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 4-7, San Jose, Calif., 308-318. Lauterbach, G., and T. Horel [1999]. "UltraSPARC-III: Designing third generation 64-bit performance," IEEE

Micro 19:3 (May/June). Lazowska, E. D., J. Zahorjan, G. S. Graham, and K. C. Sevcik [1984]. Quantitative System Performance: Computer System Analysis Using Queueing Network Models, Prentice Hall, Englewood Cliffs, N. J. (Although out of print, it is available online at www.cs.washington.edu/homes/lazowska/qsp/.) Lebeck, A. R., and D.

A. Wood [1994]. "Cache profiling and the SPEC benchmarks: A case study," Computer 27:10 (October), 15-26. Lee, R. [1989]. "Precision architecture," Computer 22:1 (January), 78-91. Lee, W. V. et al. [2010]. "Debunking the 100X GPU vs. CPU myth: An evaluation of throughput computing on CPU and GPU," Proc. 37th Annual Int'l. Symposium on Computer Architecture (ISCA), June 19-23, 2010, Saint-Malo, France. Leighton, F. T. [1992]. Introduction to Parallel Algorithms and Architectures: Arrays, Trees, Hypercubes, Morgan Kaufmann, San Francisco. Leiner, A. L.

[1954]. "System specifications for the DYSEAC," J. ACM 1:2 (April), 57-81. Leiner, A. L., and S. N. Alexander [1954]. "System organization of the DYSEAC," IRE Trans. of Electronic Computers EC-3:1 (March), 1-10.Leiserson, C. E. [1985]. "Fat trees: Universal networks for hardware-efficient supercomputing," IEEE Trans. on Computers C-34:10 (October), 892-901. Lenoski, D., J. Laudon, K. Gharachorloo, A. Gupta, and J. L. Hennessy [1990]. "The Stanford DASH multiprocessor," Proc. 17th Annual Int'l. Symposium on Computer Architecture (ISCA), May 28-31, 1990, Seattle, Wash., 148-159.Lenoski, D., J. Laudon, K. Gharachorloo, W.-D.

Weber, A. Gupta, J. L. Hennessy, M. A. Horowitz, and M. Lam [1992]. "The Stanford DASH multiprocessor," IEEE Computer 25:3 (March), 63-79. Levv. H.. and R.

Eckhouse [1989]. Computer Programming and Architecture: The VAX, Digital Press, Boston. Li, K. [1988]. "IVY: A shared virtual memory system for parallel computing," Proc. 1988 Int'l. Conf. on Parallel Processing, Pennsylvania State University Press, University Park, Penn.Li, S., K. Chen, J. B. Brockman, and N. Jouppi [2011]. "Performance Impacts of Nonblocking Caches in Out-of-order Processors," HP Labs Tech Report HPL-2011-65 (full text available at .Lim, K., P.

Ranganathan, J. Chang, C. Patel, T. Mudge, and S. Reinhardt [2008]. "Understanding and designing new system architectures for emerging warehouse-computing environments," Proc. 35th Annual Int'l. Symposium on Computer Architectures for emerging warehouse-computing environments," Proc. 35th Annual Int'l. Symposium on Computer Architectures for emerging warehouse-computing environments," Proc. 35th Annual Int'l. Symposium on Computer Architectures for emerging warehouse-computing environments," Proc. 35th Annual Int'l. Symposium on Computer Architectures for emerging warehouse-computing environments," Proc. 35th Annual Int'l. Symposium on Computer Architectures for emerging warehouse-computing environments, and the significant for example of the symposium on Computer Architectures for emerging warehouse-computing environments, and the symposium on Computer Architectures for emerging warehouse-computing environments, and the symposium on Computer Architectures for emerging warehouse-computing environments, and the symposium on Computer Architectures for emerging warehouse-computing environments, and the symposium on Computer Architectures for emerging warehouse-computing environments, and the symposium on Computer Architectures for emerging warehouse-computing environments, and the symposium of the creation of a modern supercomputer," IEEE Trans. on Computers C-31:5 (May), 363-376. Lindholm, T., and F. Yellin [1999]. The Java Virtual Machine Specification, 2nd ed., Addison-Wesley, Reading, Mass. (also available online at java.sun.com/docs/books/vmspec/).

Lipasti, M. H., and I. P. Shen [1996], "Exceeding the dataflow limit via value prediction," Proc. 29th Int'l. Symposium on Microarchitecture, December 2-4, 1996, Paris, France, Lipasti, M.

H., C. B. Wilkerson, and J. P. Shen [1996]. "Value locality and load value prediction," Proc. Seventh Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 1-5, 1996, Cambridge, Mass., 138-147. Liptay, J.

"Structural aspects of the System/360 Model 85, Part II: The cache," IBM Systems J. 7:1, 15-21. Lo, J., L.

Barroso, S. Eggers, K. Gharachorloo, H. Levy, and S. Parekh [1998]. "An analysis of database workload performance on simultaneous multithreaded processors," Proc. 25th Annual Int'l. Symposium on Computer Architecture (ISCA), July 3-14, 1998, Barcelona, Spain, 39-50. Lo, J., S. Eggers, J. Emer, H. Levy, R. Stamm. and D.

Tullsen [1997]. "Converting threadlevel parallelism into instruction-level parallelism via simultaneous multithreading," ACM Trans. on Computer Systems 15:2 (August), 322-354. Lovett, T., and S. Thakkar [1988]. "The Symmetry multiprocessor system," Proc. 1988 Int'l. Conf. of Parallel Processing, University Park, Penn., 303-310. Lubeck, O., J. Moore, and R. Mendez [1985]. "A benchmark comparison of three supercomputers: Fujitsu VP-200, Hitachi S810/20, and Cray X-MP/2," Computer 18:12 (December), 10-24. Luk, C.-K., and T. C Mowry [1999]. "Automatic compiler-inserted prefetching for pointer-based applications," IEEE Trans. on Computers 48:2 (February), 134-141. Lunde, A. [1977]. "Empirical evaluation of some features of instruction set processor architecture," Communications of the ACM 20:3 (March), 143-152. Luszczek, P., J. J. Dongarra, D. Koester, R. Rabenseifner, B. Lucas, J. Kepner, J. McCalpin, D. Bailey, and D. Takahashi [2005], "Introduction to the HPC challenge benchmark suite," Lawrence Berkeley National Laboratory, Paper LBNL-57493 (April 25), repositories, cdlib.org/lbnl/LBNL-57493. Maberly, N.

C. [1966]. Mastering Speed Reading, New American Library, New York. Magenheimer, D. J., L. Peters, K. W. Pettis, and D. Zuras [1988]. "Integer multiplication and division on the HP precision architecture," IEEE Trans. on Computers 37:8, 980-990. Mahlke, S. A., W. Y. Chen, W.-M. Hwu, B. R. Rau, and M. S. Schlansker [1992]. "Sentinel scheduling for VLIW and superscalar processors," Proc. Fifth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 12-15, 1992, Boston, 238-247. Mahlke, S. A., R. E. Hank, J. E. McCormick, D. I. August, and W. W. Hwu [1995]. "A comparison of full and partial predicated execution support for ILP processors," Proc. 22nd Annual Int'l.

Symposium on Computer Architecture (ISCA), June 22-24, 1995, Santa Margherita, Italy, 138-149. Major, J. B. [1989]. "Are queuing models within the grasp of the unwashed?," Proc. Int'l. Conf. on Management and Performance Evaluation of Computer Systems, December 11-15, 1989, Reno, Nev., 831-839.Markstein, P.

McCalpin, R. J. Eickemeyer, and S. R.

Kunkel [2005]. "Characterization of the multithreading (SMT) efficiency in Power5," IBM J. Research and Development, 49:4/5 (July/September), 555-564. McCalpin, J., D. Bailey, and D. Takahashi [2005]. Introduction to the

HPC Challenge Benchmark Suite, Paper LBNL-57493 Lawrence Berkeley, National Laboratory, University of California, Berkeley, repositories.cdlib.org/lbnl/LBNL-57493.McCormick, J., and A. Knies [2002]. "A brief analysis of the SPEC CPU2000 benchmarks on the Intel Itanium 2 processor," paper presented at Hot Chips 14, August 18-20, 2002, Stanford University, Palo Alto, Calif.McFarling, S. [1989]. "Program optimization for instruction caches," Proc. Third Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 3-6, 1989, Boston, 183-191. McFarling, S. [1993]. Combining Branch Predictors, WRL Technical Note TN-36, Digital Western Research Laboratory, Palo Alto, Calif.McFarling, S., and J. Hennessy [1986]. "Reducing the cost of branches," Proc. 13th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1986, Tokyo, 396-403. McGhan, H., and M. O'Connor [1998]. "PicoJava: A direct execution engine for Java bytecode," Computer 31:10 (October), 22-30. McKeeman, W. M. [1967]. "Language directed computer design," Proc. AFIPS Fall Joint Computer Conf., November 14-16, 1967, Washington, D.C., 413-417. McMahon, F. M. [1986]. "The Livermore FORTRAN Kernels: A Computer Test of Numerical Performance Range," Tech. Rep. UCRL-55745, Lawrence Livermore National Laboratory, University of California,

Livermore.McNairy, C., and D. Soltis [2003]. "Itanium 2 processor microarchitecture," IEEE Micro 23:2 (March-April), 44-55. Mead, C., and L. Conway [1980]. Introduction to VLSI Systems, Addison-Wesley, Reading, Mass. Mellor-Crummey, J. M., and M.

L. Scott [1991]. "Algorithms for scalable synchronization on shared-memory multiprocessors," ACM Trans. on Computer Systems 9:1 (February), 21-65. Menabrea, L. F. [1842]. "Sketch of the analytical engine invented by Charles Babbage," Bibliothèque Universelle de Genève, 82 (October). Menon, A., J. Renato Santos, Y. Turner, G. Janakiraman, and

W. Zwaenepoel [2005]. "Diagnosing performance overheads in the xen virtual machine environment," Proc. First ACM/USENIX Int'l. Conf. on Virtual Execution Environments, June 11-12, 2005, Chicago, 13-23. Merlin, P. M., and P. J. Schweitzer [1980]. "Deadlock avoidance in store-and-forward networks. Part I. Store-and-forward deadlock," IEEE on Communications COM-28:3 (March), 345-354.Metcalfe, R. M. [1993]. "Computer/network interface design: Lessons from Arpanet and Ethernet: Distributed packet switching for local computer networks," Communications of the ACM 19:7 (July), 395-404. Metropolis, N., J. Howlett, and G.

Rota (eds.) [1980]. A History of Computing in the Twentieth Century, Academic Press, New York. Meyer, R. A., and L. H. Seawright [1970]. A virtual machine time sharing system, IBM Systems J. 9:3, 199-218. Meyers, G. J. [1978]. "The evaluation of expressions in a storage-to-storage architecture," Computer Architecture News 7:3 (October), 20-23. Meyers, G. J. [1982]. Advances in Computer Architecture, 2nd ed., Wiley, New York. Micron. [2004]. "Calculating Memory System Power for DDR2,". micron.com/pdf/pubs/designline/dl1Q04.pdf. Micron. [2006]. "The Micron® System-Power Calculator,". [1997]. "MIPS16 Application Specific Extension Product Description," www.sqi.com/MIPS/arch/MIPS16/mips16.pdf.Miranker, G. S., J.

Rubenstein, and J. Sanguinetti [1988]. "Squeezing a Cray-class supercomputer into a single-user package," Proc. IEEE COMPCON, February 29-March 4, 1988, San Francisco, 452-456. Mitsubishi. [1996]. Mitsubishi. [1988]. "The Transputer: The time is now," Computer Design (RISC suppl.), 40-41. Mitsubishi. [1988]. "Squeezing a Cray-class supercomputer into a single-user package," Proc. IEEE COMPCON, February 29-March 4, 1988, San Francisco, 452-456. Mitsubishi. [1988]. "The Transputer: The time is now," Computer Design (RISC suppl.), 40-41. Mitsubishi. [1988]. "Squeezing a Cray-class supercomputer into a single-user package," Proc. IEEE COMPCON, February 29-March 4, 1988, San Francisco, 452-456. Mitsubishi. [1988]. "The Transputer: The time is now," Computer Design (RISC suppl.), 40-41. Mitsubishi. [1988]. "The Transputer Design (RISC suppl.), 40-41. Mitsubishi. [1988]. Family Software Manual, Mitsubishi, Cypress, Calif. Miura, K., and K. Uchida [1983]. "FACOM vector processing system: VP100/200," Proc. NATO Advanced Research Workshop on High-Speed Computing, June 20-22, 1983, Jülich, West Germany. Also appears in K. Hwang, ed., "Superprocessors: Design and applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications," IEEE (August 1984), 59-73. Miya, E. N. [1985]. "Multiprocessors' Design and Applications' Design and Applications' Design and Applications' Desig Hokenek, and S. L.

Runyon [1990]. "Design of the IBM RISC System/6000 floating-point execution," IBM J. Research and Development 34:1, 59-70. Moore, B., A. Padegs, R. Smith, and W. Bucholz [1987]. "Concepts of the System/370 vector architecture," 14th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1987, Pittsburgh, Penn., 282-292. Moore, G. E. [1965]. "Cramming more components onto integrated circuits," Electronics, 38:8 (April 19), 114-117. Morse, S., B. Ravenal, S. Mazor, and W. Pohlman [1980]. "Intel microprocessors--8080 to 8086," Computer 13:10 (October). Moshovos, A., and G. S. Sohi [1997]. "Streamlining inter-operation memory communication via data dependence prediction," Proc. 30th Annual Int'l. Symposium on Microarchitecture, December 1-3, Research Triangle Park, N.C., 235-245. Moshovos, A., S. Breach, T. N. Vijaykumar, and G. S. Sohi [1997]. "Dynamic speculation and synchronization of data dependences," 24th Annual Int'l.

Symposium on Computer Architecture (ISCA), June 2-4, 1997, Denver, Colo. Moussouris, J., L. Crudele, D. Freitas, C. Hansen, E. Hudson, S. Przybylski, T. Riordan, and C. Rowen [1986]. "A CMOS RISC processor with integrated system functions," Proc. IEEE COMPCON, March 3-6, 1986, San Francisco, 191, Mowry, T. C., S. Lam, and A. Gupta [1992]. "Design and evaluation of a compiler algorithm for prefetching," Proc. Fifth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 12-15, 1992, Boston (SIGPLAN Notices 27:9 (September), 62-73). MSN Money. [2005]. "Amazon Shares Tumble after Rally Fizzles," .msn.com/content/CNBCTV/Articles/Dispatches/P133695.asp.Muchnick, S. S. [1988]. "Optimizing compilers for SPARC," Sun Technology 1:3 (Summer), 64-77.Mueller, M., L. C. Alves, W. Fischer, M. L. Fair, and I. Modi [1999]. "RAS strategy for IBM S/390 G5 and G6," IBM J.

Research and Development 43:5-6 (September-November), 875-888. Mukherjee, S. S., C. Weaver, J. S. Emer, S. K. Reinhardt, and T. M. Austin [2003]. "Measuring architectural vulnerability factors," IEEE Micro 23:6, 70-75. Murphy, B., and T. Gent [1995]. "Measuring system and software reliability using an automated data collection process," Quality and Reliability Engineering International 11:5 (September-October), 341-353. Myer, T. H., and I. E. Sutherland [1968]. "On the design of display processors," Communications of the ACM 11:6 (June), 410-414. Narayanan, D., E. Thereska, A.

Donnelly, S. Elnikety, and A. Rowstron [2009]. "Migrating server storage to SSDs: Analysis of trade-offs," Proc. 4th ACM European Conf. on Computer Systems, April 1-3, 2009, Nuremberg, Germany. National Research Council. [1997]. The Evolution of Untethered Communications, Computer Science and Telecommunications Board, National Research Council. [1997]. Academy Press, Washington, D.C. National Storage Industry Consortium. [1998]. "Tape Roadmap," www.nsic.org.Nelson, V. P. [1990]. "Fault-tolerant computing: Fundamental concepts," Computer 23:7 (July), 19-25. Ngai, T.-F., and M. J. Irwin [1985]. "Regular, area-time efficient carry-lookahead adders," Proc. Seventh IEEE Symposium on Computer Arithmetic, June 4-6, 1985, University of Illinois, Urbana, 9-15. Nicolau, A., and J. A. Fisher [1984]. "Measuring the parallelism available for very long instruction word architectures," IEEE Trans. on Computers C-33:11 (November), 968-976.

Nikhil, R. S., G. M. Papadopoulos, and Arvind [1992]. "*T: A multithreaded massively parallel architecture," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1999, Gold Coast, Australia, 156-167. Noordergraaf, L., and R. van der Pas [1999]. "Performance experiences on Sun's WildFire prototype," Proc. ACM/IEEE Conf. on Supercomputing, November 13-19, 1999, Portland, Ore. Nyberg, C. R., T. Barclay, Z. Cvetanovic, J. Gray, and D. Lomet [1994].

"AlphaSort: A RISC machine sort," Proc. ACM SIGMOD, May 24-27, 1994, Minneapolis, Minn. Oka, M., and M. Suzuoki [1999]. "Designing and programming the emotion engine," IEEE Micro 19:6 (November-December), 20-28. Okada, S., S. Okada, Y. Matsuda, T. Yamada, and A. Kobayashi [1999]. "System on a chip for digital still camera," IEEE Trans. on Consumer Electronics 45:3 (August), 584-590.

Oliker, L., A. Canning, J. Carter, J. Shalf, and S. Ethier [2004]. "Scientific computations on modern parallel vector systems," Proc. ACM/IEEE Conf. on Supercomputing, November 6-12, 2004, Pittsburgh, Penn., 10. Pabst, T. [2000].

"Performance Showdown at 133 MHz FSB--The Best Platform for Coppermine," www6.tomshardware.com/mainboard/00q1/000302/.Padua, D., and M. Wolfe [1986]. "Advanced compiler optimizations for supercomputers," Communications of the ACM 29:12 (December), 1184-1201. Palacharla, S., and R.

E. Kessler [1994]. "Evaluating stream buffers as a secondary cache replacement," Proc. 21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago, 24-33. Palmer, J., and S. Morse [1984]. The 8087 Primer, John Wiley & Sons, New York, 93.Pan, S.-T., K. So, and J. T. Rameh [1992]. "Improving the accuracy of dynamic branch prediction using branch correlation," Proc. Fifth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 12-15, 1992, Boston, 76-84. Partridge, C.

[1994]. Gigabit Networking, Addison-Wesley, Reading, Mass. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. A., and D. R. Ditzel [1980]. "The case for the reduced instruction set computers," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47:10 (October), 71-75. Patterson, D. [2004]. "Latency lags bandwidth," Communications of the ACM 47 set computer." Computer Architecture News 8:6 (October), 25-33, Patterson, D. A., and I. L. Hennessy [2004]. Computer Organization and Design: The Hardware/Software Interface, 3rd ed., Morgan Kaufmann, San Francisco. Patterson, D. A., G. A.

Gibson, and R. H. Katz [1987]. A Case for Redundant Arrays of Inexpensive Disks (RAID), Tech.

Rep. UCB/CSD 87/391, University of California, Berkeley.

Also appeared in Proc. ACM SIGMOD, June 1-3, 1988, Chicago, 109-116. Patterson, D. A., P. Garrison, M. Hill, D. Lioupis, C. Nyberg, T. Sippel, and K. Van Dyke [1983]. "Architecture of a VLSI instruction cache for a RISC," 10th Annual Int'l. Conf. on Computer Architecture Conf.

, June 13-16, 1983, Stockholm, Sweden, 108-116. Pavan, P., R. Bez, P. Olivo, and E. Zanoni [1997]. "Flash memory cells--an overview." Proc. IEEE 85:8 (August), 1248-1271.Peh, L. S., and W. J. Dally [2001]. "A delay model and speculative architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers, and W. J. Dally [2001]. "A delay model and speculative architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers, and W. J. Dally [2001]. "A delay model and speculative architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers, and W. J. Dally [2001]. "A delay model and speculative architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers, and W. J. Dally [2001]. "A delay model and speculative architecture for pipelined routers," Proc. 7th Int'l. Symposium on High-Performance Computer Architecture for pipelined routers, and the pipelined routers for pipelined routers for pipelined routers for pipelined routers, and the pipelined routers for pi dividers in VLSI floating point units," Proc. 8th IEEE Symposium on Computer Arithmetic, May 19-21, 1987, Como, Italy, 95-102. Pfister, G. F., W. C. Brantley, D. A. George, S. L. Harvey, W. J. Kleinfekder, K. P. McAuliffe, E. A. Melton, V. A. Norton, and J. Weiss [1985]. "The IBM research parallel processor prototype (RP3): Introduction and architecture," Proc. 12th Annual Int'l. Symposium on Computer Architecture, "Proc. 12th Annual Int'l. Symposium on Computer Architecture," Proc. 5th USENIX Conference on File and Storage Technologies (FAST '07), February 13-16, 2007, San Jose, Calif. Pinkston, T. M. [2004]. "Deadlock characterization and resolution in interconnection networks," in M. C.

"Trends toward on-chip networked microsystems," Int'l. J. of High Performance Computing and Networking 3:1, 3-18. Pinkston, T. M., and S. Warnakulasuriya [1997]. "On deadlocks in interconnection networks," 24th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-4, 1997, Denver, Colo. Pinkston, T. M., A. Benner, M. Krause, I. Robinson, and T. Sterling [2003]. "InfiniBand: The 'de facto' future standard for system and local area networks or just a scalable replacement for PCI buses?" Cluster Computing (special issue on communication architecture for clusters) 6:2 (April), 95-104.

Zhu and M. P. Fanti, eds., Deadlock Resolution in Computer-Integrated Systems, CRC Press, Boca Raton, FL, 445-492. Pinkston, T.

Postiff, M. A., D. A. Greene, G. S.

Tyson, and T. N. Mudge [1999]. "The limits of instruction level parallelism in SPEC95 applications," Computer Architecture News 27:1 (March), 31-40. Przybylski, S. A. [1990]. Cache Design: A Performance-Directed Approach, Morgan Kaufmann, San Francisco. Przybylski, S. A., M. Horowitz, and J. L. Hennessy [1988]. "Performance trade-offs in cache design," 15th Annual Int'l. Symposium on Computer Architecture, May 30-June 2, 1988, Honolulu, Hawaii, 290-298. Puente, V., R. Beivide, J. A. Gregorio, J. M.

Prellezo, I. Duato, and C. Izu [1999]. "Adaptive bubble router: A design to improve performance in torus networks." Proc. 28th Int'l. Conference on Parallel Processing, September 21-24, 1999, Aizu-Wakamatsu, Fukushima, Japan. Radin, G. [1982]. "The 801 minicomputer," Proc. Symposium Architectural Support for Programming Languages and Operating Systems (ASPLOS), March 1-3, 1982, Palo Alto, Calif., 39-47. Rajesh Bordawekar, Uday Bondhugula, Ravi Rao: Believe it or not!: mult-core CPUs can match GPU performance for a FLOP-intensive application! 19th International Conference on Parallel Architecture and Compilation Techniques (PACT 2010), Vienna, Austria, September 11-15, 2010: 537-538. Ramamoorthy, C. V., and H. F. Li [1977]. "Pipeline architecture, "ACM Computing Surveys 9:1 (March), 61-102. Ranganathan, P., P. Leech, D. Irwin, and J. Chase [2006]. "Ensemble-Level Power Management for Dense Blade Servers," Proc. 33rd Annual Int'l. Symposium on Computer Architecture (ISCA), June 17-21, 2006, Boston, Mass., 66-77.

Rau, B. R. [1994]. "Iterative modulo scheduling: An algorithm for software pipelining loops," Proc. 27th Annual Int'l. Symposium on Microarchitecture, November 30-December 2, 1994, San Jose, Calif., 63-74. Rau, B. R., C. D. Glaeser, and R. L. Picard [1982]. "Efficient code generation for horizontal architectures: Compiler techniques and architecture (ISCA), April 26-29, 1982, Austin, Tex., 131-139. Rau, B. R., D. W. L. Yen, W. Yen, and R. A.

Towle [1989]. "The Cydra 5 departmental supercomputer: Design philosophies, decisions, and trade-offs," IEEE Computers 22:1 (January), 12-34. Reddi, V. J., B. C. Lee, T. Chilimbi, and K. Vaid [2010]. "Web search using mobile cores: Quantifying and mitigating the price of efficiency," Proc. 37th Annual Int'l.

Symposium on Computer Architecture (ISCA), June 19-23, 2010, Saint-Malo, France. Redmond, K. C., and T. M. Smith [1980]. Project Whirlwind--The History of a Pioneer Computer, Digital Press, Boston. Reinhardt, S. K., J. R. Larus, and D. A. Wood [1994].

"Tempest and Typhoon: User-level shared memory," 21st Annual Int'l. Symposium on Computer Architecture (ISCA), April 18-21, 1994, Chicago, 325-336. Reinman, G., and N. P.

Jouppi. [1999]. "Extensions to CACTI," research.compaq.com/wrl/people/jouppi/CACTI.html.Rettberg, R. D., W. R.

Crowther, P. P. Carvey, and R. S. Towlinson [1990]. "The Monarch parallel processor hardware design," IEEE Computer 23:4 (April), 18-30. Riemens, A., K. A. Vissers, R. J. Schutten, F. W. Sijstermans, G. J. Hekstra, and G. D. La Hei [1999]. "Trimedia CPU64 application domain and benchmark suite," Proc. IEEE Int'l. Conf. on Computer Design: VLSI in Computers and C. C. Foster [1972]. "Percolation of code to enhance parallel dispatching and execution," IEEE Trans.

on Computers C-21:12 (December), 1411-1415. Robin, J., and C. Irvine [2000]. "Analysis of the Intel Pentium's ability to support a secure virtual machine monitor." Proc.

USENIX Security Symposium, August 14-17, 2000, Denver, Colo. Robinson, B., and L. Blount [1986]. The VM/HPO 3880-23 Performance Results, IBM Tech. Bulletin GG66-0247-00, IBM Washington Systems Center, Gaithersburg, Md.Ropers, A., H. W. Lollman, and J. Wellhausen [1999]. DSPstone: Texas Instruments TMS320C54x, Tech. Rep. IB 315 1999/9-ISS-Version 0.9, Aachen University of Technology, Aaachen, Germany (www.ert.rwth-aachen.de/Projekte/Tools/coal/dspstone c54x/index.html). Rosenblum, M., S. A. Herrod, E. Witchel, and A. Gupta [1995]. "Complete computer simulation: The SimOS approach," in IEEE Parallel and Distributed Technology (now called Concurrency) 4:3, 34-43. Rowen, C., M. Johnson, and P. Ries [1988]. "The MIPS R3010 floating-point coprocessor," IEEE Micro 8:3 (June), 53-62. Russell, R. M. [1978]. "The Crav-1 processor system," Communications of the ACM 21:1 (January), 63-72. Rymarczyk, J.

"Coding guidelines for pipelined processors," Proc. Symposium Architectural Support for Programming Languages and Operating Systems (ASPLOS), March 1-3, 1982, Palo Alto, Calif., 12-19. Saavedra-Barrera, R. H. [1992]. "CPU Performance Evaluation and Execution Time Prediction Using Narrow Spectrum Benchmarking," Ph. D. dissertation, University of California, Berkeley.

Salem, K., and H. Garcia-Molina [1986]. "Disk striping," Proc. 2nd Int'l.

IEEE Conf. on Data Engineering, February 5-7, 1986, Washington, D.C., 249-259. Saltzer, J. H., D. P. Reed, and D. D. Clark [1984]. "End-to-end arguments in system design," ACM Trans. on Computer Systems 2:4 (November), 277-288. Samples, A. D., and P. N. Hilfinger [1988]. Code Reorganization for Instruction Caches, Tech. Rep. UCB/CSD 88/447, University of California, Berkeley. Santoro, M. R., G. Bewick, and M. A. Horowitz [1989]. "Rounding algorithms for IEEE multipliers," Proc. Ninth IEEE Symposium on Computer Arithmetic, September 6-8, Santa Monica, Calif., 176-183. Satran, J., D. Smith, K. Meth, C.

Sapuntzakis, M. Wakeley, P. Von Stamwitz, R. Haagens, E. Zeidner, L. Dalle Ore, and Y. Klein [2001]. "iSCSI," IPS Working Group of IETF, Internet draft www.ietf.org/internet-drafts/draft-ietf-ips-iscsi-07.txt.Saulsbury, A., T. Wilkinson, J. Carter, and A. Landin [1995]. "An argument for Simple COMA," Proc. First IEEE Symposium on High-Performance Computer Architectures, January 22-25, 1995, Raleigh, N.C., 276-285. Schnoeder, B., and G. A. Gibson [2007]. "Understanding failures in petascale computers," J. of Physics Conf. Series 78(1), 188-198. Schroeder, B., E. Pinheiro, and W.-D. Weber [2009]. "DRAM errors in the wild: a largescale field study," Proc. Eleventh Int'l. Joint Conf. on Measurement and Modeling of Computer Systems (SIGMETRICS), June 15-19, 2009, Seattle, Wash. Schurman, E., and J. Brutlag [2009]. "The user and business impact of server delays," Proc. Velocity: Web Performance and Operations Conf., June 22-24, 2009, San Jose, Calif. Schwartz, J. T. [1980]. "Ultracomputers," ACM Trans. on Programming Languages and Systems 4:2, 484-521. Scott, N. R. [1985]. Computer Number Systems and Arithmetic, Prentice Hall, Englewood Cliffs, N. J. Scott, S. L. [1996].

"Synchronization and communication in the T3E multiprocessor," Seventh Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 1-5, 1996, Cambridge, Mass. Scott, S. L., and J. Goodman [1994]. "The impact of pipelined channels on k -ary n -cube networks," IEEE Trans. on Parallel and Distributed Systems 5:1 (January), 1-16. Scott, S.

L., and G. M. Thorson [1996]. "The Cray T3E network: Adaptive routing in a high performance 3D torus," Proc. IEEE HOT Interconnects '96, August 15-17, 1996, Stanford University, Palo Alto, Calif., 14-156. Scranton, R. A., D. A. Thompson, and D. W. Hunter [1983]. The Access Time Myth, "Tech. Rep. RC 10197 (45223), IBM, Yorktown Heights, N.Y. Seagate. [2000]. Seagate Cheetah 73 Family: ST173404LW/LWV/LC/LCV Product Manuals/scsi/29478b.pdf). Seitz, C. L. [1985]. "The Cosmic Cube (concurrent computing)," Communications of the ACM 28:1 (January), 22-33. Senior, J. M. [1993]. Optical Fiber Communications: Principles and Practice, 2nd ed., Prentice Hall, Hertfordshire, U. K. Sharangpani, H., and K. Arora [2000]. "Itanium Processor Microarchitecture," IEEE Micro 20:5 (September-October), 24-43. Shurkin, J. [1984]. Engines of the Mind: A History of the Computer, W. W. Norton, New York. Shustek, L. J. [1978]. "Analysis and Performance of Computer Instruction Sets," Ph. D. dissertation, Stanford University, Palo Alto, Calif. Silicon Graphics. [1996]. MIPS V Instruction Set (see .Singh, J. P., J. L. Hennessy, and A. Gupta [1993]. "Scaling parallel programs for multiprocessors: Methodology and examples," Computer 26:7 (July), 22-33. Sinharoy, B., R. N. Koala, J. M. Tendler, R. J. Eickemeyer, and J. B. Joyner [2005]. "POWER5 system microarchitecture," IBM J. Research and Development, 49:4-5, 505-521. Sites, R. [1979]. Instruction Ordering for the CRAY-1 Computer, Tech. Rep. 78-CS-023, Dept. of Computer Science, University of California, San Diego. Sites, R. L. (ed.) [1992]. Alpha Architecture Reference Manual, Digital Press, Burlington, Mass. Sites, R. L., and R. Witek, (eds.) [1995]. Alpha Architecture Reference Manual, 2nd ed., Digital Press, Newton, Mass. Skadron, K., and D. W. Clark [1997]. "Design issues and tradeoffs for write buffers," Proc. Third Int'l. Symposium on High-Performance Computer Architecture, February 1-5, 1997, San Antonio, Tex., 144-155.

Skadron, K., P. S. Ahuja, M. Martonosi, and D. W. Clark [1999]. "Branch prediction, instruction-window size, and cache size: Performance tradeoffs and simulation techniques," IEEE Trans. on Computers 48:11 (November). Slater, R. Portraits in Silicon, MIT Press, Cambridge, Mass.

Slotnick, D. L., W. C. Borck, and R. C. McReynolds [1962]. "The Solomon computer," Proc. AFIPS Fall Joint Computer Conf., December 4-6, 1962, Philadelphia, Penn., 97-107. Smith, A., and J. Lee [1984]. "Branch prediction strategies and branch-target buffer design," Computer 17:1 (January), 6-22. Smith, B. J. [1978]. "A pipelined, shared resource MIMD computer," Proc. Int'l. Conf. on Parallel Processing (ICPP), August, Bellaire, Mich., 6-8. Smith, B. J.

Symposium on Computer Architecture (ISCA), May 12-14, 1981, Minneapolis, Minn., 135-148. Smith, J E. [1984]. "Decoupled access/execute computer architectures," ACM Trans. on Computer Systems 2:4 (November), 289-308. Smith, J. E. [1988].

[1981]. "Architecture and applications of the HEP multiprocessor system," Real-Time Signal Processing IV 298 (August), 241-248. Smith, J. E. [1981]. "A study of branch prediction strategies," Proc. Eighth Annual Int'l.

"Characterizing computer performance with a single number," Communications of the ACM 31:10 (October), 1202-1206. Smith, J. E. [1989]. "Dynamic instruction scheduling and the Astronautics ZS-1," Computer 22:7 (July), 21-35. Smith, J. E., and J. R. Goodman [1983]. "A study of instruction cache organizations and replacement policies," Proc. 10th Annual Int'l. Symposium on Computer Architecture (ISCA), June 5-7, 1982, Stockholm, Sweden, 132-137. Smith, J. E., and A. R.

Pleszkun [1988]. "Implementing precise interrupts in pipelined processors," IEEE Trans. on Computers 37:5 (May), 562-573. (This paper is based on an earlier paper that appeared in Proc.

"The art of massive storage: A case study of a Web image archive," Computer (November). Tamir, Y., and G. Frazier [1992]. "Dynamically-allocated multi-gueue buffers for VLSI communication switches," IEEE Trans.

12th Annual Int'l. Symposium on Computer Architecture (ISCA), June 17-19, 1985, Boston, Mass.) Smith, J. E., G. E. Dermer, B. D. Vanderwarn, S. D. Klinger, C. M. Rozewski, D. L. Fowler, K. R. Scidmore, and J. P. Laudon [1987]. "The ZS-1 central processor," Proc. Second Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 5-8, 1987, Palo Alto, Calif., 199-204. Smith, M. D., M. Horowitz, and M. S. Lam [1992]. "Efficient superscalar

performance through boosting," Proc. Fifth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 12-15, 1992, Boston, 248-259. Smith, M. D., M. Johnson, and M. A. Horowitz [1989]. "Limits on multiple instruction issue," Proc. Third Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 3-6, 1989, Boston, 290-302. Smotherman, M. [1989]. "A sequencing-based taxonomy of I/O systems and review of historical machines," Computer Architecture Readings, M. D. Hill, N. P. Jouppi, and G. S. Sohi, eds., Morgan Kaufmann, San Francisco, 1999, 451-461. Sodani, A., and G. Sohi [1997]. "Dynamic instruction reuse,"

Proc. 24th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-4, 1997, Denver, Colo. Sohi, G. S. [1990]. "Instruction issue logic for high-performance, interruptible, multiple functional unit, pipelined computers," IEEE Trans. on Computers 39:3 (March), 349-359. Sohi, G. S., and S. Vajapeyam [1989]. "Tradeoffs in instruction format design for horizontal architectures," Proc. Third Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 3-6, 1989, Boston, 15-25. Soundararajan, V., M. Heinrich, B. Verghese, K. Gharachorloo, A. Gupta, and J. L. Hennessy [1998]. "Flexible use of memory for replication/migration in cachecoherent DSM multiprocessors," Proc. 25th Annual Int'l. Symposium on Computer Architecture (ISCA), July 3-14, 1998, Barcelona, Spain, 342-355. SPEC. [1989]. SPEC Benchmark Suite Release 1.0 (October 2).SPEC. [1989]. SPEC Benchmark Suite Release 1.0 (October 2).SPEC Benchma

IEEE COMPCON , February 29-March 4, 1988, San Francisco, 464.Spurgeon, C. [2001]. "Charles Spurgeon's Ethernet Web Site," www.ethermanage.com/ethernet/ethernet.html.Stenstrom, P., T. Joe, and A. Gupta [1992] "Comparative performance evaluation of cache-coherent NUMA and COMA architectures," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia, 80-91. Sterling, T. [2001]. Beowulf PC Cluster Computing with Windows and Beowulf PC Cluster Computing with Linux, MIT Press, Cambridge, Mass. Stern, N. [1980]. "Who invented the first electronic digital computer?" Annals of the History of Computing 2:4 (October), 375-376. Stevens, W.

R. [1994-1996]. TCP/IP Illustrated (three volumes), Addison-Wesley, Reading, Mass. Stokes, J. [2000]. "Sound and Vision: A Technical Overview of the Emotion Engine," arstechnica.com/reviews/1900/playstation2/ee-1.html.Stone, H. [1991]. High Performance Computers, Addison-Wesley, New York.Strauss, W. [1998]. "Cache memories for the

PDP-11?," Proc. Third Annual Int'l. Symposium on Computer Architecture (ISCA), January 19-21, 1976, Tampa, Fla., 155-158. Strecker, W. D. [1978]. "VAX-11/780: A virtual address extension of the PDP-11 family," Proc. AFIPS National Computer Conf., June 5-8, 1978, Anaheim, Calif., 47, 967-980. Sugumar, R. A., and S. G. Abraham [1993]. "Efficient simulation of caches under optimal replacement with applications to miss characterization." Proc. ACM SIGMETRICS Conf. on Measurement and Modeling of Computer Systems, May 17-21, 1993, Santa Clara, Calif., 24-35. Sun Microsystems. [1989]. The SPARC Architectural Manual, Version 8, Part No. 8001399-09, Sun Microsystems, Santa Clara, Calif. Sussenguth, E. [1999]. "IBM's ACS-1 Machine," IEEE Computer 22:11 (November). Swan, R. J., S. H. Fuller, and D. P.

Siewiorek [1977]. "Cm*--a modular, multimicroprocessor," Proc. AFIPS National Computing Conf., June 13-16, 1977, Dallas, Tex., 645-654. Swan, R. J., A. Bechtolsheim, K. W. Lai, and J. K. Ousterhout [1977]. "The implementation of the Cm* multi-microprocessor," Proc. AFIPS National Computing Conf., June 13-16, 1977, Dallas, Tex., 645-654. Swartzlander, E. (ed.) [1990]. Computer Arithmetic, IEEE Computer Society Press, Los Alamitos, Calif. Takagi, N., H. Yasuura, and S. Yajima [1985]. "High-speed VLSI multiplication algorithm with a redundant binary addition tree." IEEE Trans. on Computers C-34:9, 789-796, Talagala, N. [2000] "Characterizing Large Storage Systems: Error Behavior and Performance Benchmarks," Ph. D. dissertation, Computer Science Division, University of California, Berkeley. Talagala, N., and D. Patterson [1999]. An Analysis of Error Behavior in a Large Storage System, Tech. Report UCB//CSD-99-1042, Computer Science Division, University of California, Berkeley. Talagala, N., R. Arpaci-Dusseau, and D. Patterson [2000]. Micro-Benchmark Based Extraction of Local and Global Disk Characteristics, CSD-99-1063, Computer Science Division, University of California, Berkeley. Talagala, N., S. Asami, D. Patterson, R. Futernick, and D. Hart [2000].

on Computers 41:6 (June), 725-734. Tanenbaum, A. S. [1978]. "Implications of structured programming for machine architecture," Communications of the ACM 21:3 (March), 237-246. Tanenbaum, A. S. [1988]. Computer Networks, 2nd ed., Prentice Hall, Englewood Cliffs, N. J. Tang, C. K. [1976]. "Cache design in the tightly coupled multiprocessor system," Proc. AFIPS National Computer Conf., June 7-10, 1976, New York, 749-753.

Tanqueray, D. [2002]. "The Cray X1 and supercomputer road map," Proc. 13th Daresbury Machine Evaluation Workshop, December 11-12, 2002, Daresbury Laboratories, Daresbury Labo [1981]. "Compatible hardware for division and square root," Proc. 5th IEEE Symposium on Computer Arithmetic, May 18-19, 1981, University of Michigan, Ann Arbor, Mich., 127-134. Taylor, G. S. [1985]. "Radix 16 SRT dividers with overlapped quotient selection stages," Proc. Seventh IEEE Symposium on Computer Arithmetic, June 4-6, 1985, University of Michigan, Ann Arbor, Mich., 127-134. Taylor, G. S. [1985]. "Radix 16 SRT dividers with overlapped quotient selection stages," Proc. Seventh IEEE Symposium on Computer Arithmetic, June 4-6, 1985, University of Michigan, Ann Arbor, Mich., 127-134. Taylor, G. S. [1985]. "Radix 16 SRT dividers with overlapped quotient selection stages," Proc. Seventh IEEE Symposium on Computer Arithmetic, June 4-6, 1985, University of Michigan, Ann Arbor, Mich., 127-134. Taylor, G. S. [1985]. "Radix 16 SRT dividers with overlapped quotient selection stages," Proc. Seventh IEEE Symposium on Computer Arithmetic, June 4-6, 1985, University of Michigan, Ann Arbor, Mich., 127-134. Taylor, G. S. [1985]. "Radix 16 SRT dividers with overlapped quotient selection stages," Proc. Seventh IEEE Symposium on Computer Arithmetic, June 4-6, 1985, University of Michigan, Ann Arbor, Michigan, Michi University of Illinois, Urbana, Ill., 64-71. Taylor, G., P. Hilfinger, J. Larus, D. Patterson, and B. Zorn [1986].

"Evaluation of the SPUR LISP architecture," Proc. 13th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1986, Tokyo. Taylor, M. B., W. Lee, S. P. Amarasinghe, and A. Agarwal [2005]. "Scalar operand networks," IEEE Trans. on Parallel and Distributed Systems 16:2 (February), 145-162. Tendler, J. M., J. S. Dodson, J. S. Fields, Jr., H. Le, and B. Sinharoy [2002]. "Power4 system microarchitecture," IBM J. Research and Development 46:1, 5-26. Texas Instruments. [2000]. "History of Innovation: 1980s," www.ti.com/corp/docs/company/history/1980s.shtml.Tezzaron Semiconductor.

Soft Errors in Electronic Memory, White Paper, Tezzaron Semiconductor, Naperville, Ill. (.Thacker, C. P., E. M. McCreight, B. W. Lampson, R. F. Sproull, and A. Newell, eds., Computer Structures: Principles and Examples, McGraw-Hill, New York, 549-572. Thadhani, A. J. [1981]. "Interactive user productivity," IBM Systems J. 20:4, 407-423. Thekkath, R., A. P. Singh, J. P. Singh, S. John, and J. L. Hennessy [1997]. "An evaluation of a commercial CC-NUMA architecture--the CONVEX Exemplar SPP1200," Proc. 11th Int'l. Parallel Processing Symposium (IPPS), April 1-7, 1997, Geneva, Switzerland. Thorlin, J. F. [1967]. "Code generation for PIE (parallel instruction execution) computers," Proc. Spring Joint Computer Conf., April 18-20, 1967, Atlantic City, N. J., 27. Thornton, J. E. [1964]. "Parallel operation in the Control Data 6600," Proc. AFIPS Fall Joint Computer Conf. , Part II , October 27-29, 1964, San Francisco, 26, 33-40. Thornton, J. E. [1970]. Design of a Computer, the Control Data 6600, Scott, Foresman, Glenview, Ill. Tjaden, G. S., and M. J. Flynn [1970]. "Detection and parallel execution of independent instructions," IEEE Trans. on Computers C-19:10 (October), 889-895. Tomasulo, R. M. [1967]. "An efficient algorithm for exploiting multiple arithmetic units," IBM J. Research and

Development 11:1 (January), 25-33. Torrellas, J., A. Gupta, and J. Hennessy [1992]. "Characterizing the caching and synchronization performance of a multiprocessor operating Systems (ASPLOS), October 12-15, 1992, Boston (SIGPLAN Notices 27:9). (September), 162-174). Touma, W. R. [1993]. The Dynamics of the Computer Industry: Modeling the Supply of Workstations and Their Components, Kluwer Academic, Boston. Tuck, N., and D. Tullsen [2003].

"Initial observations of the simultaneous multithreading Pentium 4 processor," Proc. 12th Int. Conf. on Parallel Architectures and Compilation Techniques (PACT'03), September 27-October 1, 2003, New Orleans, La., 26-34. Tullsen, D. M., S. J. Eggers, and H. M. Levy [1995]. "Simultaneous multithreading: Maximizing on-chip parallelism," Proc. 22nd Annual Int'l. Symposium on Computer Architecture (ISCA), June 22-24, 1995, Santa

(105-124), Online publication date: 1-Jun-2022.Orts F, Ortega G, Filatovas E and M. Garzón E (2022).

Margherita, Italy, 392-403. Tullsen, D. M., S. J. Eggers, J. S. Emer, H. M. Levy, J. L.

Lo, and R.

L. Stamm [1996]. "Exploiting choice: Instruction fetch and issue on an implementable simultaneous multithreading processor," Proc. 23rd Annual Int'l. Symposium on Computer Architecture (ISCA), May 22-24, 1996, Philadelphia, Penn., 191-202. Ungar, D., R. Blau, P. Foley, D. Samples, and D. Patterson [1984]. "Architecture of SOAR: Smalltalk on a RISC," Proc. 11th Annual Int'l. Symposium on Computer Architecture (ISCA), June 5-7, 1984, Ann Arbor, Mich., 188-197. Unger, S. H. [1958].

"A computer oriented towards spatial problems," Proc. Institute of Radio Engineers 46:10 (October), 1744-1750. Vahdat, A., M. Al-Fares, N. Farrington, R. Niranjan Mysore, G. Porter, and S. Radhakrishnan [2010]. "Scale-Out Networking in the Data Center," IEEE Micro 30:4 (July/August), 29-41. Vaidya, A. S., A Sivasubramaniam, and C. R. Das [1997]. "Performance benefits of virtual channels and adaptive routing: An application-driven study," Proc. ACM/IEEE Conf. on Supercomputing, November 16-21, 1997, San Jose, Calif. Vajapevam, S. [1991]. "Instruction-Level Characterization of the Cray Y-MP Processor," Ph. D. thesis, Computer Sciences Department, University of Wisconsin-Madison. van Eijndhoven, J. T. J., F. W. Sijstermans, K. A. Vissers, E. J. D. Pol, M. I. A. Tromp, P. Struik, R. H. J. Bloks, P. van der Wolf, A. D.

Pimentel, and H. P. E. Vranken [1999]. "Trimedia CPU64 architecture," Proc. IEEE Int'l. Conf. on Computer Design: VLSI in Computers and Processors (ICCD'99), October 10-13, 1999, Austin, Tex., 586-592. Van Vleck, T. [2005]. "The IBM 360/67 and CP/CMS," Eicken, T., D. E. Culler, S. C. Goldstein, and K. E. Schauser [1992]. "Active Messages: A mechanism for integrated communication and computation," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia. Waingold, E., M. Taylor, D. Srikrishna, V. Sarkar, W. Lee, V. Lee, J. Kim, M. Frank, P. Finch, R. Barua, J. Babb, S. Amarasinghe, and A. Agarwal [1997]. "Baring it all to software: Raw Machines," IEEE Computer 30 (September), 86-93. Wakerly, J. [1989]. "Limits of instruction-level parallelism," Proc. Fourth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 8-11, 1991, Palo Alto, Calif., 248-259. Wall, D. W. [1993]. Limits of Instruction-Level Parallelism, Research Rep.

93/6, Western Research Laboratory, Digital Equipment Corp., Palo Alto, Calif.Walrand, J. [1991]. Communication Networks: A First Course, Aksen Associates/Irwin, Homewood, Ill. Wang, W.-H., J.-L. Baer, and H. M. Levy [1989]. "Organization and performance of a two-level virtual-real cache hierarchy," Proc. 16th Annual Int'l. Symposium on Computer Architecture (ISCA), May 28-June 1, 1989, Jerusalem, 140-148. Watanabe, T. [1987]. "Architecture and performance of the NEC supercomputer SX system," Parallel Computing 5, 247-255. Waters, F. (ed.) [1986]. IBM RT Personal Computer Technology, SA 23-1057, IBM, Austin, Tex. Watson, W. J. [1972]. "The TI ASC--a highly modular and flexible super processor architecture," Proc. AFIPS Fall Joint Computer Conf., December 5-7, 1972, Anaheim, Calif., 221-228. Weaver, D. L., and T. Germond [1994]. The SPARC Architectural Manual, Version 9, Prentice Hall, Englewood Cliffs, N. J. Weicker, R. P. [1984]. "Instruction issue logic for pipelined supercomputers," Proc. 11th Annual Int'l. Symposium on Computer Architecture (ISCA), June 5-7, 1984, Ann Arbor, Mich., 110-118. Weiss, S., and J. E. Smith [1987]. "A study of scalar compilation techniques for pipelined supercomputers," Proc. Second Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), October 5-8, 1987, Palo Alto, Calif., 105-109. Weiss, S., and J. E. Smith [1994]. Power and PowerPC, Morgan Kaufmann, San Francisco. Wendel, D., R. Kalla, J. Friedrich, J. Kahle, J. Leenstra, C. Lichtenau, B. Sinharoy, W. Starke, and V. Zyuban [2010]. "The Power7 processor SoC," Proc. Int'l. Conf. on IC Design and

Technology, June 2-4, 2010, Grenoble, France, 71-73. Weste, N., and K. Eshraghian [1993]. Principles of CMOS VLSI Design: A Systems Perspective, 2nd ed., Addison-Wesley, Reading, Mass. Wiecek, C. [1982]. "A case study of the VAX 11 instruction set usage for compiler execution," Proc. Symposium on Architectural Support for Programming Languages and Operating Systems (ASPLOS), March 1-3, 1982, Palo Alto, Calif., 177-184. Wilkes, M. [1965]. "Slave memories and dynamic storage allocation," IEEE Trans. Electronic Computers EC-14:2 (April), 270-271. Wilkes, M. V. [1982]. "Hardware support for memory protection: Capability implementations," Proc. Symposium on Architectural Support for Programming Languages and Operating Systems (ASPLOS), March 1-3, 1982, Palo Alto, Calif., 107-116. Wilkes, M. V. [1985]. Computing Perspectives, Morgan Kaufmann, San Francisco. Wilkes, M. J. Wheeler, and S. Gill [1951]. The Preparation of Programs for an Electronic Digital Computer, Addison-Wesley, Cambridge, Mass. Williams, S., A.

Waterman, and D. Patterson [2009]. "Roofline: An insightful visual performance model for multicore architectures," Communications of the ACM, 52:4 (April), 65-76. Williams, T. E., M. Horowitz, R. L. Alverson, and T. S. Yang [1987]. "A self-timed chip for division," in P. Losleben, ed., 1987 Stanford Conference on Advanced Research in VLSI, MIT Press, Cambridge, Mass. Wilson, A. W., Jr. [1987]. "Hierarchical cache/bus architecture for shared-memory multiprocessors," Proc.

14th Annual Int'l. Symposium on Computer Architecture (ISCA), June 2-5, 1987, Pittsburgh, Penn., 244-252. Wilson, R. P., and M. S. Lam [1995]. "Efficient context-sensitive pointer analysis for C programs," Proc. ACM SIGPLAN'95 Conf. on Programming Language Design and Implementation, June 18-21, 1995, La Jolla, Calif., 1-12. Wolfe, A., and J. P. Shen [1991]. "A variable instruction stream extension to the VLIW architecture," Proc.

Fourth Int'l. Conf. on Architectural Support for Programming Languages and Operating Systems (ASPLOS), April 8-11, 1991, Palo Alto, Calif., 2-14. Wood, D. A., and M. D. Hill [1995]. "Cost-effective parallel computer 14:7 (July), 41-47. Wulf, W. [1981]. "Computer 28:2 (February), 69-72. Wulf, W. [1981]. "Computer architecture," Computer 14:7 (July), 41-47. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective parallel computer 28:2 (February), 69-72. Wulf, W. [1981]. "Cost-effective paral

W., and C. G. Bell [1972]. "C.mmp--A multi-mini-processor," Proc. AFIPS Fall Joint Computing Conf., December 5-7, 1972, Anaheim, Calif., 939-951. Wulf, W. A., and S. McKee [1995]. "Hitting the memory wall: Implications of the obvious," ACM SIGARCH Computer Architecture News, 23:1 (March), 20-24. Wulf, W. A., R. Levin, and S. P. Harbison [1981]. Hydra/C.mmp: An Experimental Computer System, McGraw-Hill, New York. Yamamoto, W., M. J. Serrano, A.

Nemirosky [1994]. "Performance estimation of multistreamed, superscalar processors," Proc. 27th Annual Hawaii Int'l. Conf. on System Sciences, January 4-7, 1994, Maui, 195-204. Yang, Y., and G. Mason [1991]. "Nonblocking broadcast switching networks," IEEE Trans. on Computers 40:9 (September), 1005-1015. Yeager, K. [1996]. "The MIPS

R10000 superscalar microprocessor." IEEE Micro 16:2 (April), 28-40, Yeh, T., and Y. N. Patt [1993a]. "Alternative implementations of two-level adaptive branch prediction," Proc. 19th Annual Int'l. Symposium on Computer Architecture (ISCA), May 19-21, 1992, Gold Coast, Australia, 124-134. Yeh, T., and Y. N. Patt [1993b]. "A comparison of dynamic branch predictors that use two levels of branch history," Proc. 20th Annual Int'l. Symposium on Computer Architecture (ISCA), May 16-19, 1993, San Diego, Calif., 257-266. Hessien S and Hassan M (2022). PISCOT: A Pipelined Split-Transaction COTS-Coherent Bus for Multi-Core Real-Time Systems, ACM Transactions on

Embedded Computing Systems, 22:1, (1-27), Online publication date: 31-Jul-2023. Naghibijouybari H, Koruyeh E and Abu-Ghazaleh N (2022). Microarchitectural Attacks in Heterogeneous Systems: A Survey, ACM Computing Surveys, 55:7, (1-40), Online publication date: 31-Jul-2023. Kong L, Tan J, Huang J, Chen G, Wang S, Jin X, Zeng P, Khan M and Das S (2022). Edge-computing-driven Internet of Things: A Survey, ACM Computing Surveys, 55:8, (1-41), Online publication date: 31-Aug-2023.Xu M, Ng W, Lim W, Kang J, Xiong Z, Niyato D, Yang Q, Shen X and Miao C (2023). A Full Dive Into Realizing the Edge-Enabled Metaverse: Visions, Enabling Technologies, and Challenges, IEEE Communications Surveys & Tutorials, 25:1, (656-700), Online publication date: 1-Jan-2023. Araújo De Medeiros D, Markidis S and Bo Peng I LibCOS: Enabling Converged HPC and Cloud Data Stores with MPI Proceedings of the International Conference on High Performance Computing in Asia-Pacific Region, (106-116) Mhatre S and Chandran P On the Measurement of Performance Metrics for Virtualization-Enhanced Architectures Proceedings of the 38th ACM/SIGAPP Symposium on Applied Computing, (1268-1276)Resch S, Cilasun H, Chowdhury Z, Zabihi M, Zhao Z, Wang J, Sapatnekar S and Karpuzcu U On Endurance of Processing in (Nonvolatile) Memory Proceedings of the 50th Annual International Symposium on Computer Architecture, (1-13)Orts F, Ortega G, Combarro E, Rúa I, Puertas A and Garzón E (2023). Efficient design of a quantum absolute-value circuit using Clifford+T gates, The Journal of Supercomputing, 79:11, (12656-12670), Online publication date: 1-Jul-2023. Khanna G, Chaturvedi S and Othman M (2023). On design and performance analysis of improved shuffle exchange gamma interconnection network layouts, The Journal of Supercomputing, 79:11, (11611-11640), Online publication date: 1-Jul-2023.Li X, Parazeres M, Oberman A, Ghaffari A, Asgharian M and Nia V (2023). EuclidNets: An Alternative Operation for Efficient Inference of Deep Learning Models, SN Computer Science, 4:5, Online publication date: 30-Jun-2023.Min D, Kim K, Moon C, Khan A, Lee S, Yun C, Chung W and Kim Y (2023). A Multi-tenant Key-value SSD with Secondary Index for Search Query Processing and Analysis, ACM Transactions on Embedded Computing Systems, 22:4, (1-27), Online publication date: 31-Jul-2023. Sahabandu D, Mertoguno J and Poovendran R (2023). A Natural Language Processing Approach for Instruction Set Architecture Identification, IEEE Transactions on Information Forensics and Security, 18, (4086-4099), Online publication date: 1-Jan-2023.Kong X, Zheng X, Zhu Y, Duan G and Chen Z (2023). I/O-efficient GPU-based acceleration of coherent dedispersion for pulsar observation, Journal of Systems Architecture: the EUROMICRO Journal, 142:C, Online publication date: 1-Sep-2023.Gade S and Deb S (2021). A Novel Hybrid Cache Coherence with Global Snooping for Many-core Architectures, ACM Transactions on Design Autonomous Vehicles and Pedestrians with illback Considered, ACM Transactions on Cyber-Physical Systems, 6:1, (1-29), Online publication date: 31-Jan-2022. Mbonque J. Kwadjo D. Shuping A and Bobda C (2022). Deploying Multi-tenant FPGAs within Linux-based Cloud Infrastructure, ACM Transactions on Reconfigurable Technology and Systems, 15:2, (1-31), Online publication date: 30-Jan-2022. Mbonque J. Kwadjo D. Shuping A and Bobda C (2022). Deploying Multi-tenant FPGAs within Linux-based Cloud Infrastructure, ACM Transactions on Reconfigurable Technology and Systems, 15:2, (1-31), Online publication date: 30-Jan-2022. Mbonque J. Kwadjo D. Shuping A and Bobda C (2022). Deploying Multi-tenant FPGAs within Linux-based Cloud Infrastructure, ACM Transactions on Reconfigurable Technology and Systems, 15:2, (1-31), Online publication date: 30-Jan-2022. Mbonque J. Kwadjo D. Shuping A and Bobda C (2022). Deploying Multi-tenant FPGAs within Linux-based Cloud Infrastructure, ACM Transactions on Reconfigurable Technology and Systems, 15:2, (1-31), Online publication date: 30-Jan-2022. Mbonque J. Kwadjo D. Shuping A and Bobda C (2022). Deploying Multi-tenant FPGAs within Linux-based Cloud Infrastructure, ACM Transactions on Reconfigurable Technology and Systems, 15:2, (1-31), Online publication date: 30-Jan-2022. Mbonque J. Kwadjo D. Shuping A and Bobda C (2022). Deploying Multi-tenant FPGAs within Linux-based Cloud Infrastructure, ACM Transaction and Acceptance of the Academy and Jun-2022. Priya Dharishini P and Ramana Murthy P Static Analyzer for Computing WCET of Multithreaded Programs using Hoare's CSP 15th Innovations in Software Engineering Conference, (1-12) Arras P, Andronidis A, Pina L, Mituzas K, Shu Q, Grumberg D and Cadar C (2022). SaBRe: load-time selective binary rewriting, International Journal on Software Tools for Technology Transfer (STTT), 24:2, (205-223), Online publication date: 1-Apr-2022 Jiang Z, Dong P, Wei R, Zhao Q, Wang Y, Zhu D, Zhuang Y and Audsley N (2022). PSpSys, Journal of Systems Architecture: the EUROMICRO Journal, 123:C, Online publication date: 1-Feb-2022.Xiong W and Szefer J (2021). Survey of Transient Execution Attacks and Their Mitigations, ACM Computing Surveys, 54:3, (1-36), Online publication date: 30-Apr-2022. Guerrero-Balaguera J, Condia J and Reorda M A compaction method for STLs for GPU in-field test Proceedings of the 2022 Conference & Exhibition on Design, Automation & Test in Europe, (454-459)Gudaparthi S and Shrestha R (2022). Selective register-file cache: an energy saving technique for embedded processor architecture, Design Automation for Embedded Systems, 26:2,

Implementation of three efficient 4-digit fault-tolerant quantum carry lookahead adders, The Journal of Supercomputing, 78:11, (13323-13341), Online publication date: 1-Jul-2022. Mahafzah B, Al-Adwan A and Zaghloul R (2022). Topological properties assessment of optoelectronic architectures, Telecommunications Systems, 80:4, (599-627), Online publication date: 1-Aug-2022. Zhang J, Cheng Y, Deng X, Wang B, Xie J, Yang Y and Zhang M (2022). A Reputation-Based Mechanism for Transaction Processing in Blockchain Systems, IEEE Transactions on Computers, 71:10, (2423-2434), Online publication date: 1-Oct-2022. Gebregiorgis A, Du Nguyen H, Yu J, Bishnoi R, Taouil M, Catthoor F and Hamdioui S (2022). A Survey on Memory-centric Computer Architectures, ACM Journal on Emerging Technologies in Computing Systems, 18:4, (1-50), Online publication date: 31-Oct-2022.Bang T, May N, Petrov I and Binnig C (2022). The full story of 1000 cores, The VLDB Journal — The International Journal on Very Large Data Bases, 31:6, (1185-1213), Online publication date: 1-Nov-2022.Resch S, Khatamifard S, Chowdhury Z, Zabihi M, Zhao Z, Cilasun H, Wang J, Sapatnekar S and Karpuzcu U (2022). Energy-efficient and Reliable Inference in Nonvolatile Memory under Extreme Operating Conditions, ACM Transactions on Embedded Computing Systems, 21:5, (1-36), Online publication date: 30-Sep-2022.Neto A, Neto J and Moreno E (2022). The development of a low-cost big data cluster using Apache Hadoop and Raspberry Pi. A complete guide, Computers and Electrical Engineering, 104:PA, Online publication date: 1-Dec-2022.Rosenbloom P Thoughts on Architecture Artificial General Intelligence, (364-373)Kopper P, Copplestone S, Pfeiffer M, Koch C, Fasoulas S and Beck A (2022). Hybrid parallelization of Euler-Lagrange simulations based on MPI-3 shared memory, Advances in Engineering Software, 174:C, Online publication date: 1-Nov-2022. Jiang Z, Yang K, Fisher N, Audsley N and Dong Z (2022). Towards an energy-efficient quarter-clairvoyant mixed-criticality system, Journal of Systems Architecture: the EUROMICRO Journal, 130:C, Online publication date: 1-Sep-2022. Baldassin A, Barreto J, Castro D and Romano P (2021). Persistent Memory, ACM Computing Surveys, 54:7, (1-sep-2022. Baldassin A, Barreto J, Castro D and Romano P (2021). 37), Online publication date: 30-Sep-2022.Resch S and Karpuzcu U (2021). Benchmarking Quantum Computers and the Impact of Quantum Noise, ACM Computing Surveys, 54:7, (1-35), Online publication date: 30-Sep-2022.Shukla S, Bandishte S, Gaur J and Subramoney S Register file prefetching Proceedings of the 49th Annual International Symposium on Computer Architecture, (410-423) Paul A, Choi J, Karimi A and Wang F Machine Learning Assisted HPC Workload Trace Generation for Leadership Scale Storage Systems Proceedings of the 31st International Symposium on High-Performance Parallel and Distributed Computing, (199-212) Wu N, Yang H, Xie Y, Li P and Hao C High-level synthesis performance prediction using GNNs Proceedings of the 59th ACM/IEEE Design Automation Conference, (49-54)Beckmann N, Gibbons P and McGuffey C Brief Announcement: Spatial Locality and Granularity Change in Caching Proceedings of the 34th ACM Symposium on Parallelism in Algorithms and Architectures, (173-175)Bura A,

Rengarajan D, Kalathil D, Shakkottai S and Chamberland J (2021). Learning to Cache and Caching Algorithms, IEEE/ACM Transactions on Networking, 30:1, (18-31), Online publication date: 1-Feb-2022.Li Y, Yu X, Yang Y, Zhou Y, Yang Y, Yang Y, Zhou Y, Yang Y, and Fast Flow Size Measurement, IEEE/ACM Transactions on Networking, 30:2, (586-600), Online publication date: 1-Apr-2022.Kim H, Amarnath A, Bagherzadeh J, Talati N and Dreslinski R (2021). A Survey Describing Beyond Si Transistors and Exploring Their Implications for Future Processors, ACM Journal on Emerging Technologies in Computing Systems, 17:3, (1-44), Online publication date: 31-Jul-2021.Bazzaz M, Hoseinghorban A and Ejlali A (2021). Fast and Predictable Non-Volatile Data Memory for Real-Time Embedded Systems, IEEE Transactions on Computers, 70:3, (359-371), Online publication date: 1-Mar-2021. Schuiki F, Zaruba F, Hoefler T and Benini L (2021). Stream Semantic Registers: A Lightweight RISC-V ISA Extension Achieving Full Compute Utilization in Single-Issue Cores, IEEE Transactions on Computers, 70:2, (212-227), Online publication date: 1-Feb-2021. Zhou

C, Wu W, He H, Yang P, Lyu F, Cheng N and Shen X (2021). Deep Reinforcement Learning for Delay-Oriented IoT Task Scheduling in SAGIN, IEEE Transactions on Wireless Communications, 20:2, (911-925), Online publication date: 1-Feb-2021. Zhang J, Zhou X, Ge T, Wang X and Hwang T (2021). Joint Task Scheduling and Containerizing for Efficient Edge Computing, IEEE Transactions on Parallel and Distributed Systems, 32:8, (2086-2100), Online publication date: 1-Aug-2021. Moreira A, Ottoni G and Quintão Pereira F (2021). VESPA: static profiling for binary optimization, Proceedings of the ACM on Programming Languages, 5:OOPSLA, (1-28), Online publication date: 20-Oct-2021. Carvalho D and Seznec A (2021). Understanding Cache Compression, ACM Transactions on Architecture and Code Optimization, 18:3, (1-27), Online publication date: 30-Sep-2021.C. A, Lee W and Lin W Branchboozle Proceedings of the 36th Annual ACM Symposium on Applied Computing, (1617-1625)Chen J, Lu C, Ni J, Guo X, Girard P and Cheng Y (2021). DOVA PRO: A Dynamic Overwriting Voltage Adjustment Technique for STT-MRAM L1 Cache Considering Dielectric Breakdown Effect, IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 29:7, (1325-1334), Online publications: An Insight for Many-Core Systems, IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 29:9, (1675-1679), Online publication date: 1-Sep-2021. Chowdhury S, Yang K and Nuzzo P ReIGNN: State Register Identification Using Graph Neural Networks for Circuit Reverse Engineering 2021 IEEE/ACM International Conference On Computer Aided Design (ICCAD), (1-9)Wu Y, Li J, Dai H, Yi X, Wang Y and Yang X micROS.BT: An Event-Driven Behavior Tree Framework for Swarm Robots 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), (9146-9153)Mustard C, Goswami S, Gharavi N, Nider J, Beschastnikh I and Fedorova A Jumpgate Proceedings of the 14th ACM International Conference on Systems and Storage, (1-12)Min D and Kim Y Isolating namespace and performance in key-value SSDs for multi-tenant environments Proceedings of the 13th ACM Workshop on Hot Topics in Storage and File Systems, (8-13)Nair A, Pai A, Raveendran B and Patil G MOESI Proceedings of the 2021 IEEE/ACM 25th International Symposium on Distributed Simulation and Real Time Applications, (1-8)Moti N, Schimmelpfennig F, Salkhordeh R, Klopp D, Cortes T, Rückert U and Brinkmann A Simurgh Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1-14)Zhang M, Xie L, Zhang Z, Yu Q, Xi G, Zhang T, Salkhordeh R, Klopp D, Cortes T, Rückert U and Brinkmann A Simurgh Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1-14)Zhang M, Xie L, Zhang Z, Yu Q, Xi G, Zhang T, Salkhordeh R, Klopp D, Cortes T, Rückert U and Brinkmann A Simurgh Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1-14)Zhang M, Xie L, Zhang Z, Yu Q, Xi G, Zhang T, Salkhordeh R, Klopp D, Cortes T, Rückert U and Brinkmann A Simurgh Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1-14)Zhang M, Xie L, Zhang Z, Yu Q, Xi G, Zhang T, Salkhordeh R, Klopp D, Cortes T, Salkhordeh R, Salkhordeh R, Salkhordeh R, Salkhordeh R, Salkhordeh R, Salkhordeh R, Salkhordeh R H, Liu F, Zheng Y, Zh Subramoney S Cryptographic Capability Computing MICRO-54: 54th Annual IEEE/ACM International Symposium on Microarchitectural replay attacks Proceedings of the 26th ACM International Conference on Architectural Support for Programming Languages and Operating Systems, (1061-1076)Zeitak A and Morrison A Cuckoo Trie Proceedings of the ACM SIGOPS 28th Symposium on Operating Systems Principles, (147-162)Parra P, Guzmán D, Polo Ó, da Silva A, Martínez A, Sánchez S and Prieto M (2021). Improving performance and determinism of multitasking systems on the

LEON architecture, Microprocessors & Microsystems, 80:C, Online publication date: 1-Feb-2021.Lozano R and Schulte C (2019). Survey on Combinatorial Register Allocation date: 31-May-2020. Jeon Y, Park B, Kwon S, Kim B, Yun J and Lee D BiQGEMM Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1-16)Zhang R, Biswas S, Balaji V, Bond M and Lucia B Peacenik Proceedings of the Twenty-Fifth International Conference on Architectural Support for Programming Languages and Operating Systems, (317-333)Nguyen H, Yu J, Lebdeh M, Taouil M, Hamdioui S and Catthoor F (2020). A Classification of Memory-Centric Computing, ACM Journal of Parallel and Distributed Computing, 139:C, (135-147), Online publication date: 1-May-2020.Liu B, Cheshmi K, Soori S, Strout M and Dehnavi M MatRox Proceedings of the 25th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming, (389-402)Lipp M, Schwarz M, Gruss D, Prescher T, Haas W, Horn J, Mangard S, Kocher P, Genkin D, Yarom Y, Hamburg M and Strackx R (2020). Meltdown, Communications of the ACM, 63:6, (46-56), Online publication date: 21-May-2020. Coffin E, Young S, Kaur H, Brown J, Pirvu M and Kent K MicroJIT Proceedings of the 30th Annual International Conference on Computer Science and Software Engineering, (179-188) Ritter F and Hack S PMEvo: portable inference of port mappings for out-oforder processors by evolutionary optimization Proceedings of the 41st ACM SIGPLAN Conference on Programming Language Design and Implementation, (608-622)Park H, Ahn H and Jung S (2020). A Novel Matchline Scheduling Method for Low-Power and Reliable Search Operation in Cross-Point-Array Nonvolatile Ternary CAM, IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 28:12, (2650-2657), Online publication date: 1-Dec-2020. Jošilo S and Dán G (2020). Computation Offloading Scheduling for Periodic Tasks in Mobile

Edge Computing, IEEE/ACM Transactions on Networking, 28:2, (667-680), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Robotics Research, 39:9, (1155-1177), Online publication date: 1-Apr-2020. FSMI, International Journal of Transactions on Design Automation of Electronic Systems, 25:4, (1-22), Online publication date: 2-Sep-2020. Berg B, Berger D, McAllister S, Grosof I, Gunasekar S, Lu J, Uhlar M, Carrig J, Beckmann N, Harchol-Balter M and Ganger G The CacheLib caching engine Proceedings of the 14th USENIX Conference on Operating Systems Design and Implementation, (769-786) Manjith B.C. and Ramasubramanian N. (2020). Securing AES Accelerator from Key-Leaking Trojans on FPGA, International Journal of Embedded and Real-Time Communication Systems, 11:3, (84-105), Online publication date: 1-Jul-2020. Sheikh S and Pasha M (2020). Energy-efficient Real-time Scheduling on Multicores, ACM Transactions on Embedded Computing Systems, 19:4, (1-25), Online publication date: 31-Jul-2020. Hahn S and Reineke J (2019). Design and analysis of SIC: a provably timing-predictable pipelined processor core, Real-Time Systems, 56:2, (207-245), Online publication date: 1-Apr-2020.Orts F, Ortega G, Puertas A, García I and Garzón E (2020). On solving the unrelated parallel machine scheduling problem: active microrheology as a case study. The Journal of Supercomputing, 76:11, (8494-8509), Online publication date: 1-Nov-2020. Mozafari S and Meyer B (2020). Hot sparing for lifetime-chip-performance and cost improvement in application date: 1-Dec-2020. Fichte J, Hecher M and Szeider S A Time Leap Challenge

for SAT-Solving Principles and Practice of Constraint Programming, (267-285)Szymczyk M and Szymczyk P (2020). Automatic processing of Z-transform artificial neural networks using parallel programming, Neurocomputing, 379:C, (74-88), Online publication date: 28-Feb-2020. Damaj I, Elshafei M, El-Abd M and Aydin M (2022). An analytical framework for high-speed hardware particle swarm optimization, Microprocessors & Microsystems, 72:C, Online publication date: 1-Feb-2020.Salazar C and Bobby Birrer M Instrumentation and Extension of reduced, simulated Single Cycle MIPS architecture to improve Student Comprehension 2020 IEEE Frontiers in Education Conference (FIE), (1-5) Wang M, Wang J, Wen C and Chao H Roadrunner: Autonomous Intersection Management with Dynamic Lane Assignment 2020 IEEE 23rd International Conference on Intelligent Transportation Systems (ITSC), (1-7) Atre N, Sherry J, Wang W and Berger D Caching with Delayed Hits Proceedings of the Annual conference of the ACM Special Interest Group on Data Communication on the applications, technologies, architectures, and protocols for computer communication, (495-513)Salehnamadi N, Alshayban A, Ahmed I and Malek S ER catcher Proceedings of the 35th IEEE/ACM International Conference on Automated Software Engineering, (324-335)Lanuza J, Trabes G and Wainer G Parallel execution of DEVS in shared-memory multicore architectures Proceedings of the 2020 Spring Simulation Conference, (1-11)Vineyard C, Plagge M and Green S Comparing Neural Accelerators & Neuromorphic Architectures The False Idol of Operations Proceedings of the 2020 Annual Neuro-Inspired Computational Elements Workshop, (1-6)Chen Y

Reshaping Future Computing Systems With Emerging Nonvolatile Memory Technologies, IEEE Micro, 39:1, (54-57), Online publication date: 1-Jan-2019. Gebai M and Dagenais M (2018).

Survey and Analysis of Kernel and Userspace Tracers on Linux, ACM Computing Surveys, 51:2, (1-33), Online publication date: 31-Mar-2019.Guo X, Wang H, Zhang C, Tang H and Yuan Y Leakage-aware thermal management for multi-core systems using piecewise linear model based predictive control Proceedings of the 24th Asia and South Pacific

```
Design Automation Conference, (64-69)Shelor C and Kavi K Reconfigurable dataflow graphs for proceedings of the 20th International Conference on Distributed Computing and Networking, (110-119)Rhisheekesan A, Jeyapaul R and Shrivastava A (2019). Control Flow Checking or Not? (for Soft Errors), ACM Transactions on Distributed Computing and Networking, (110-119)Rhisheekesan A, Jeyapaul R and Shrivastava A (2019).
Embedded Computing Systems, 18:1, (1-25), Online publication date: 31-Jan-2019. Chen Y and Louri A An online quality management framework for approximate communication in network-on-chips Proceedings of the ACM International Conference on Supercomputing, (217-226) Coffin E, Young S, Kent K and Pirvu M A roadmap for extending MicroJIT
Proceedings of the 29th Annual International Conference on Computer Science and Software Engineering, (293-298)Nair A, Colaco L, Patil G, Raveendran B and Punnekkatt S MEDIATOR Proceedings of the 23rd IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications, (146-153)Al-Adwan A, Sharieh A and Mahafzah
B (2019). Parallel heuristic local search algorithm on OTIS hyper hexa-cell and OTIS mesh of trees optoelectronic architectures, Applied Intelligence, 49:2, (661-688), Online publication date: 1-Feb-2019.Li F, Xu L, Duan S, Wu W, Zhao H and Ling Q (2019). Improving hierarchical mobile video caching through distributed cross-laver coordination.
Multimedia Tools and Applications, 78:5, (6049-6071), Online publication date: 1-Mar-2019. Reichenbach M, Holzinger P, Häublein K, Lieske T, Blinzer P and Fey D (2019).
Heterogeneous Computing Utilizing FPGAs, Journal of Signal Processing Systems, 91:7, (745-757), Online publication date: 1-Jul-2019. Hou Y, He H, Shamsi K, Jin Y, Wu D and Wu H (2019). On-Chip Analog Trojan Detection Framework for Microprocessor Trustworthiness, IEEE Transactions on Computer-Aided Design of Integrated Circuits and
Systems, 38:10, (1820-1830), Online publication date: 1-Oct-2019. Zaruba F and Benini L (2019). The Cost of Application-Class Processing: Energy and Performance Analysis of a Linux-Ready 1.7-GHz 64-Bit RISC-V Core in 22-nm FDSOI Technology, IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 27:11, (2629-2640), Online
publication date: 1-Nov-2019.Pontarelli S, Bonola M and Bianchi G (2018). Smashing OpenFlow's "atomic" actions, International Journal of Network Management, 29:1, Online publication date: 11-Jan-2019.Lozano R, Carlsson M, Blindell G and Schulte C (2019).
Combinatorial Register Allocation and Instruction Scheduling, ACM Transactions on Programming Languages and Systems, 41:3, (1-53), Online publication date: 30-Sep-2019.Geng T, Wang T, Wu C, Yang C, Wu W, Li A and Herbordt M O3BNN Proceedings of the ACM International Conference on Supercomputing, (461-472)Ponugoti M and
Enabling On-the-Fly Hardware Tracing of Data Reads in Multicores, ACM Transactions on Embedded Computing Systems, 18:4, (1-27), Online publication date: 31-Jul-2019. Moreira F, Oliveira D and Navaux P SPADA Proceedings of the 16th ACM International Conference on Computing Frontiers, (50-58) Nongpoh B, Ray R, Das M and Banerjee A
(2019). Enhancing Speculative Execution With Selective Approximate Computing, ACM Transactions on Design Automation of Electronic Systems, 24:2, (1-29), Online publication date: 21-Mar-2019.Gurung A and Ray R Simultaneous Solving of Batched Linear Programs on a GPU Proceedings of the 2019 ACM/SPEC International Conference on
Performance Engineering, (59-66) Jordan H, Subotić P, Zhao D and Scholz B A specialized B-tree for concurrent datalog evaluation Proceedings of the 24th Symposium on Principles and Practice of Parallel Programming, (327-339) Pittino F, Benini L and Cavazzoni C Prediction of Time-to-Solution in Material Science
Simulations Using Deep Learning Proceedings of the Platform for Advanced Scientific Computing Conference, (1-9)Ying B, Yuan K and Sayed A (2019). Supervised Learning Under Distributed Features, IEEE Transactions on Signal Processing, 67:4, (977-992), Online publication date: 1-Feb-2019. Calciu I, Puddu I, Kolli A, Nowatzyk A, Gandhi J, Mutlu
O and Subrahmanyam P Project PBerry Proceedings of the Workshop on Hot Topics in Operating Systems, (127-135)Wang L, Gao W, Yang K and Jiang Z BOPS, A New Computation-Centric Metric for Datacenter Computing Benchmarking, Measuring, and Optimizing, (262-277)Edelkamp S and Weiß A (2019). BlockQuicksort, ACM Journal of
Experimental Algorithmics, 24, (1-22), Online publication date: 17-Dec-2019.Liu Z, Nath A, Ding X, Fu H, Muhib Khan M and Yu W (2022).
Multivariate modeling and two-level scheduling of analytic queries, Parallel Computing, 85:C, (66-78), Online publication and scheduling of Systems Architecture: the
EUROMICRO Journal, 98:C, (346-360), Online publication date: 1-Sep-2019. Nadeau D, Ezzati-Jivan N and Dagenais M (2019). Efficient large-scale heterogeneous debugging using dynamic tracing, Journal of Systems Architecture: the EUROMICRO Journal, 98:C, (346-360), Online publication date: 1-Sep-2019. García-Martín E, Rodrigues C, Riley G and
Grahn H (2019). Estimation of energy consumption in machine learning, Journal of Parallel and Distributed Computing, 134:C, (75-88), Online publication of Network Updates in SDN IEEE INFOCOM 2019 - IEEE Conference on
Computer Communications, (1081-1089) Sperl P and Böttinger K Side-Channel Aware Fuzzing Computer Security - ESORICS 2019, (259-278) Van Sandt P, Chronis Y and Patel J Efficiently Searching In-Memory Sorted Arrays Proceedings of the 2019 International Conference on Management of Data, (36-53) Jošilo S and Dán G (2018). Selfish
Decentralized Computation Offloading for Mobile Cloud Computing in Dense Wireless Networks, IEEE Transactions on Mobile Computing Surveys, ACM Computing Surveys
51:3, (1-36), Online publication date: 31-May-2019. Park S, Wu Y, Lee J, Aupov A and Mahlke S (2019). Multi-objective Exploration for Practical Optimization date: 31-Oct-2019. Castro-Godínez J, Shafique M and Henkel J (2019).
ECAx, ACM Transactions on Embedded Computing Systems, 18:5s, (1-20), Online publication date: 31-Oct-2019.Real P, Molina-Abril H, Díaz-del-Río F, Blanco-Trejo S and Onchis D Enhanced Parallel Generation of Tree Structures for the Recognition of 3D Images Pattern Recognition, (292-301)Ayers G, Nagendra N, August D, Cho H, Kanev S,
Kozyrakis C, Krishnamurthy T, Litz H, Moseley T and Ranganathan P AsmDB Proceedings of the 46th International Symposium on Microarchitecture, (428-441)Dey M,
Nazari A, Zajic A and Prvulovic M TEMProf Proceedings of the 51st Annual IEEE/ACM International Symposium on Microarchitecture, (881-893)Prakash A, Clarke C, Lam S and Srikanthan T (2018). Rapid Memory-Aware Selection of Hardware Accelerators in Programmable SoC Design, IEEE Transactions on Very Large Scale Integration (VLSI)
Systems, 26:3, (445-456), Online publication date: 1-Mar-2018. Malas T, Hager G, Ltaief H and Keyes D (2017). Multidimensional Intratile Parallelization for Memory-Starved Stencil Computations, ACM Transactions on Parallel Computing, 4:3, (1-32), Online publication date: 27-Apr-2018. Morse J, Kerrison S and Eder K (2018). On the Limitations of
Analyzing Worst-Case Dynamic Energy of Processing, ACM Transactions on Embedded Computing Systems, 17:3, (1-22), Online publication date: 31-May-2018.Lee J, Kim C, Lin K, Cheng L, Govindaraju R and Kim J WSMeter Proceedings of the Twenty-Third International Conference on Architectural Support for Programming Languages and
Operating Systems, (549-563) Josipović L, Ghosal R and Ienne P Dynamically Scheduled High-level Synthesis Proceedings of the 2018 ACM/SIGDA International Symposium on Field-Programmable Gate Arrays, (127-136) Chen K and Chen C (2018).
Enabling SIMT Execution Model on Homogeneous Multi-Core System, ACM Transactions on Architecture and Code Optimization, 15:1, (1-26), Online publication date: 31-Mar-2018. Baba T, Watanabe S, Jackin B, Ohkawa T, Ootsu K, Yokota T, Hayasaki Y and Yatagai T Overcoming the difficulty of large-scale CGH generation on multi-GPU cluster
Proceedings of the 11th Workshop on General Purpose GPUs, (13-21)Kwon K, Amid A, Gholami A, Wu B, Asanovic K and Keutzer K Co-design of deep neural nets and N
Sampling Simulation Model Profile Data for Analysis Proceedings of the 2018 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation, (17-28)Kelefouras V and Djemame K A methodology for efficient code optimizations and memory management Proceedings of the 15th ACM International Conference on Computing Frontiers, (105-
112) Kougkas A, Devarajan H and Sun X IRIS Proceedings of the 2018 International Conference on Supercomputing, (33-42) Zhang J and Gruenwald L Regularizing irregularity Proceedings of the 2018 International Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA), (1-8) Zonian Conference on Supercomputing, (33-42) Zhang J and Gruenwald L Regularizing irregularity Proceedings of the 2018 International Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA), (1-8) Zonian Conference on Supercomputing, (33-42) Zhang J and Gruenwald L Regularizing irregularity Proceedings of the 2018 International Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA), (1-8) Zonian Conference on Supercomputing, (33-42) Zhang J and Gruenwald L Regularizing irregularity Proceedings of the 2018 International Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA), (1-8) Zonian Conference on Supercomputing, (33-42) Zhang J and Gruenwald L Regularizing irregularity Proceedings of the 2018 International Workshop on Graph Data Management Experiences & Systems (GRADES) and Gruenwald L Regularizing irregularity Proceedings of the 2018 International Workshop on Graph Data Management Experiences (GRADES) and Graph Data Management Exp
D, Barenghi A, Pelosi G and Fornaciari W (2018). A Comprehensive Side-Channel Information Leakage Analysis of an In-Order RISC CPU Microarchitecture, ACM Transactions on Design Automation of Electronic Systems, 23:5, (1-30), Online publication date: 30-Sep-2018. Ji K, Ling M, Shi L and Pan J (2018). An Analytical Cache Performance
```

Evaluation Framework for Embedded Out-of-Order Processors Using Software Characteristics, ACM Transactions on Embedded Computing Systems, 17:4, (1-25), Online publication date: 29-Aug-2018. Ognawala S, Amato R, Pretschner A and Kulkarni P Automatically assessing vulnerabilities discovered by compositional analysis Proceedings of the 1st International Workshop on Machine Learning and Software Engineering in Symbiosis, (16-25)Khattab O, Hammoud M and Shekfeh O PolyHJ Proceedings of the 27th ACM International Conference on Information and Knowledge Management, (1323-1332)Rashid S, Nelissen G and Tovar E Trading Between Intra- and Inter-Task Cache Interference to Improve Schedulability Proceedings of the 26th International Conference on Real-Time Networks and Systems, (125-136) Einziger G, Eytan O, Friedman R and Manes B Adaptive Software Cache Management Proceedings of the 19th International Middleware Conference, (94-106) Jimenez L and Agyeman M A Study of Techniques to Increase Instruction Level Parallelisms Proceedings of the 2nd International Symposium on Computer Science and Intelligent Control, (1-5)Lee J, Kim C, Lin K, Cheng L, Govindaraju R and Kim J (2018). WSMeter, ACM SIGPLAN Notices, 53:2, (549-563), Online publication date: 30-Nov-2018. Zhang J, Wu C, Yang D, Chen Y, Meng X, Xu L and Guo M (2018). HSCS, Frontiers of Computer Science: Selected Publications from Chinese Universities, 12:6, (1090-1104), Online publication date: 1-Dec-2018. Liao C, Lee S, Chiou Y, Lee C and Lee C (2018). Power consumption minimization by distributive particle swarm optimization for luminance control and its parallel implementations. An International Journal, 96:C, (479-491), Online publication date: 15-Apr-2018. Breβ S, Köcher B, Funke H, Zeuch S, Rabl T and Markl V (2018). Generating custom code for efficient query execution on heterogeneous processors, The VLDB Journal — The International Journal on Very Large Data Bases, 27:6, (797-822), Online publication date: 1-Dec-2018.Al-Adwan A, Mahafzah B and Sharieh A (2018). Solving traveling salesman problem using parallel repetitive nearest neighbor algorithm on OTIS-Hypercube and OTIS-Mesh optoelectronic architectures, The Journal of Supercomputing, 74:1, (1-36), Online publication date: 1-Feb-2018. Jakovljević R, Berić A, Van Dalen E and Milićev D (2018). New access modes of parallel memory subsystem for sub-pixel motion estimation, Journal of Real-Time Image Processing, 15:2, (279-296), Online publication date: 1-Aug-2018. Slicing from formal semantics, International Journal on Software Tools for Technology Transfer (STTT), 20:6 (739-769), Online publication date: 1-Nov-2018. Schulz L, Broneske D and Saake G (2018). An eight-dimensional systematic evaluation of optimized search algorithms on modern processors, Proceedings of the VLDB Endowment, 11:11, (1550-1562), Online publication date: 1-Jul-2018. Jiang Z, Gao W, Wang L, Xiong X, Zhang Y, Wen X, Luo C, Ye H, Lu X, Zhang Y, Feng S, Li K, Xu W and Zhan J HPC Al500: A Benchmark Suite for HPC Al Systems Benchmarking, Measuring, and Optimizing, (10-22)Dolbeau R (2018). Theoretical peak FLOPS per instruction set: a tutorial, The Journal of Supercomputing, 74:3, (1341-1377), Online publication date: 1-Mar-2018. Catalán S, Herrero J, Quintana-Ortí E and Rodríguez-Sánchez R (2018). Static scheduling of the LU factorization with look-ahead on asymmetric multicore processors, Parallel Computing, 76:C, (18-27), Online publication date: 1-Aug-2018.Gu J, Yin S, liu L and Wei S (2018). Stress-Aware Loops Mapping on CGRAs with Dynamic Multi-Map Reconfiguration, IEEE Transactions on Parallel and Distributed Systems, 29:9, (2105-2120), Online publication date: 1-Sep-2018.Kwon K, Amid A, Gholami A, Wu B, Asanovic K and Keutzer K Invited: Co-Design of Deep Neural Nets and Neural Net Accelerators for Embedded Vision Applications 2018 55th ACM/ESDA/IEEE Design Automation Conference (DAC), (1-6)Psychou G, Rodopoulos D, Sabry M, Gemmeke T, Atienza D, Noll T and Catthoor F (2017). Classification of Resilience Techniques Against Functional Errors at Higher Abstraction Layers of Digital Systems, ACM Computing Surveys, 50:4, (1-38), Online publication date: 31-Jul-2018. Tan W, Chang S, Fong L, Li C, Wang Z and Cao L Matrix Factorization on GPUs with Memory Optimization and Approximate Computing Proceedings of the 47th International Conference on Parallel Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer A and Annual International Symposium on Computer Architecture, (425-438) Parasar M, Bhattacharjee A and Krishna T SEESAW Proceedings of the 45th Annual International Symposium on Computer A and Annual International Symposium on Computer Architecture, (193-206)Tran K, Jimborean A, Carlson T, Koukos K, Själander M and Kaxiras S (2018). SWOOP: software-hardware co-design for non-speculative, execute-ahead, in-order cores, ACM SIGPLAN Notices, 53:4, (328-343), Online publication date: 2-Dec-2018.Tran K, Jimborean A, Carlson T, Koukos K, Själander M and Kaxiras S SWOOP: software-hardware co-design for non-speculative, execute-ahead, in-order cores Proceedings of the 39th ACM SIGPLAN Conference on Programming Language Design and Implementation, (328-343)Melani A, Bertogna M, Davis R, Bonifaci V, Marchetti-Spaccamela A and Buttazzo G (2017). Exact Response Time Analysis for Fixed Priority Memory-Processor Co-Scheduling, IEEE Transactions on Computers, 66:4, (631-646), Online publication date: 1-Apr-2017. Chow K and Zhu W Software Performance Engineering, (419-421) Liu Y and Sun X (2017).

CompEx++, ACM Transactions on Architecture and Code Optimization, 14:1, (1-30), Online publication date: 14-Apr-2017.Gupta S and Wilsey P Quantitative Driven Optimization of a Time Warp Kernel Proceedings of the 2017 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation, (27-38)Paredes M, Riley G and Luján M Vectorization of Hybrid Breadth First Search on the Intel Xeon Phi Proceedings of the Computing Frontiers Conference, (127-135)Stanic M, Palomar O, Hayes T, Ratkovic I, Cristal A, Unsal O and Valero M (2017).

An Integrated Vector-Scalar Design on an In-Order ARM Core, ACM Transactions on Architecture and Code Optimization, 14:2, (1-26), Online publication date: 21-Jul-2017.Wang K and Lin C Decoupled Affine Computation for SIMT GPUs Proceedings of the 44th Annual International Symposium on Computer Architecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Computer Architecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Computer Architecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Computer Architecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Computer Architecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Microarchitecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Microarchitecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Microarchitecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Microarchitecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga Proceedings of the 44th Annual International Symposium on Microarchitecture, (295-306)Tsai P, Beckmann N and Sanchez D Jenga P, Beckmann N a

publication date: 14-Sep-2017. Tsai P, Beckmann N and Sanchez D (2017). Jenga, ACM SIGARCH Computer Architectures Proceedings of the

2nd Workshop on Cloud-Assisted Networking, (7-12)Tran K, Carlson T, Koukos K, Själander M, Spiliopoulos V, Kaxiras S and Jimborean A Clairvoyance: look-ahead compile-time scheduling Proceedings of the 2017 International Symposium on Code Generation and Optimization, (171-184)Crawford P, Eidenbenz S, Barnes P and Wilsey P Some

SDN Research, (143-149)Palangappa P and Mohanram K (2017).

and Patterson D (2015)

Evaluating the Combined Effect of Memory Capacity and Concurrency for Many-Core Chip Design, ACM Transactions on Modeling and Performance Evaluation of Computing Systems, 2:2, (1-25), Online publication date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A and Zhang Z ParaBox Proceedings of the Symposium on Modeling and Performance Evaluation of Computing Systems, 2:2, (1-25), Online publication date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A and Zhang Z ParaBox Proceedings of the Symposium on Modeling and Performance Evaluation of Computing Systems, 2:2, (1-25), Online publication date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A and Zhang Z ParaBox Proceedings of the Symposium on Modeling and Performance Evaluation of Computing Systems, 2:2, (1-25), Online publication date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A and Zhang Z ParaBox Proceedings of the Symposium on Modeling and Performance Evaluation date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A and Zhang Z ParaBox Proceedings of the Symposium on Modeling and Performance Evaluation date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A and Zhang Z ParaBox Proceedings of the Symposium on Modeling and Performance Evaluation date: 5-May-2017. Zhang Y, Anwer B, Gopalakrishnan V, Han B, Reich J, Shaikh A, Shaikh A,

properties of communication behaviors in discrete-event simulation models Proceedings of the 2017 Winter Simulation Conference, (1-12)Mai V and Khalil I (2017).

Design and implementation of a secure cloud-based billing model for smart meters as an Internet of things using homomorphic cryptography, Future Generation Computer Systems, 72:C, (327-338), Online publication date: 1-Jul-2017.Tang Q, Basten T, Geilen M, Stuijk S and Wei J (2017). Mapping of synchronous dataflow graphs on MPSoCs based on parallelism enhancement, Journal of Parallel and Distributed Computing, 101:C, (79-91), Online publication date: 1-Mar-2017.He H, Cui L, Zhou F and Wang D (2017). Distributed proxy cache technology based on autonomic computing in smart cities, Future Generation Computer Systems, 76:C, (370-383), Online publication date: 1-Nov-2017.Gutierrez-Alcoba A, Ortega G, Hendrix E and Garca I (2017). Accelerating an algorithm for perishable inventory control on heterogeneous platforms, Journal of Parallel and Distributed Computing, 104:C, (12-18), Online publication date: 1-Jun-2017.Brandalero M and Beck A A mechanism for energy-efficient reuse of decoding and scheduling of x86 instruction streams Proceedings of the Conference on Design, Automation & Test in Europe, (1472-1477)Qin H, Liu Z, Liu Y and Zhong H (2017). An object-oriented MATLAB toolbox for automotive body conceptual design using distributed parallel optimization, Advances in Engineering Software, 106:C, (19-32), Online publication date: 1-Apr-2017.Zhang Y, Hou J, Cao Y, Gu J and Huang C (2017).

OpenMP parallelization of a gridded SWAT (SWATG), Computers & Geosciences, 109:C, (228-237), Online publication date: 1-Dec-2017. Chen Q, Wang X, Wan H and Yang R (2017). A Logic Circuit Design for Perfecting Memristor-Based Material Implication, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 36:2, (279-284), Online publication date: 1-Feb-2017. Deng S and Suresh K (2017). Topology optimization under thermo-elastic buckling, Structural and Multidisciplinary Optimization, 55:5, (1759-1772), Online publication date: 1-May-2017. Khan A, Al-Mouhamed M, Al-Mulhem M and Ahmed A (2017). RT-CUDA, International Journal of Parallel Programming,

45:3, (551-594), Online publication date: 1-Jun-2017.Ortega G, Filatovas E, Garzón E and Casado L (2017). Non-dominated sorting procedure for Pareto dominance ranking on multicore CPU and/or GPU, Journal of Global Optimization, 69:3, (607-627), Online publication date: 1-Nov-2017.Ortega G, Puertas A and Garzón E (2017). Accelerating the problem of microrheology in colloidal systems on a GPU, The Journal of Supercomputing, 73:1, (370-383), Online publication date: 1-Jan-2017. Aghaei Khouzani H, Hosseini F and Yang C (2017). Segment and Conflict Aware Page Allocation and Migration in DRAM-PCM Hybrid Main Memory, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 36:9, (1458-1470), Online publication date: 1-Sep-2017. Alioto M Energy-quality scalable adaptive VLSI circuits and systems beyond approximate computing Proceedings of the Conference on Design, Automation & Test in Europe, (127-132) Blohoubek J, Fier P and Schmidt J (2017). Error masking method based on the short-duration offline test, Microprocessors & Microp 2017. Wan H, Gao X, Long X and Jiang B Introducing parallel computing concepts in computer system related courses 2017 IEEE 56th Annual Conference on Decision and Control (CDC), (2674-2679) Wickerson J, Batty M, Sorensen T and Constantinides G Automatically comparing memory consistency models Proceedings of the 44th ACM SIGPLAN Symposium on Principles of Programming Languages, (190-204) Kleanthous M, Sazeides Y, Ozer E, Nicopoulos C, Nikolaou P and Hadjilambrou Z (2016). Toward Multi-Layer Holistic Evaluation of System Designs, IEEE Computer Architecture Letters, 15:1, (58-61), Online publication date: 1-Jan-2016. Quéva C, Couroussé D and Charles H Self-optimisation using runtime code generation for wireless sensor networks Proceedings of the 17th International Conference on Distributed Computing and Networking, (1-6) Bijo S, Johnsen E, Pun K and Tarifa S An operational semantics of cache coherent multicore architectures Proceedings of the 31st Annual ACM Symposium on Applied Computing, (1219-1224) Madarbux M, Van Laer A, Watts P and Jones T Energy Efficient And Low Latency Interconnection Network For Multicast Invalidates In Shared Memory Systems Proceedings of the 1st International Workshop on Advanced Interconnect Solutions and Technologies for Emerging Computing Systems, (1-6)Fadolalkarim D, Sallam A and Bertino E PANDDE Proceedings of the Sixth ACM Conference on Data and Application Security and Privacy, (267-276)Goossens B, Parello D, Porada K and Rahmoune D Parallel Locality and Parallelization Quality Proceedings of the 7th International Workshop on Programming Models and Applications for Multicores and Manycores, (59-68)Darav N, Kennings A, Tabrizi A, Westwick D and Behjat L (2016). Eh?Placer, ACM Transactions on Design Automation of Electronic Systems, 21:3, (1-27), Online publication date: 26-Jul-2016. Wilsey P Some Properties of Events Executed in Discrete-Event Simulation, (165-176) Luppold A, Kittsteiner C and Falk H Cache-Aware Instruction SPM Allocation for Hard Real-Time Systems Proceedings of the 19th International Workshop on Software Programming, (1-8)Tran K Student Research Poster Proceedings of the 2016 International Conference on Parallel Architectures and Compilation, (458-458)Joshi A, Vollala S, Begum B and Ramasubramanian N Performance Analysis of Cache Coherence on Advances in Information Communication Technology & Computing, (1-7)Siegl P, Buchty R and Berekovic M Data-Centric Computing Frontiers Proceedings of the Second International Symposium on Memory Systems, (295-308)Hahn S, Jacobs M and Reineke J Enabling Compositionality for Multicore Timing Analysis Proceedings of the 24th International Conference on Real-Time Networks and Systems, (299-308) Fernandes F, Weigel L, Jung C, Navaux P, Carro L and Rech P (2016). Evaluation of Histogram of Oriented Gradients Soft Errors Criticality for Automotive Applications, ACM Transactions on Architecture and Code Optimization, 13:4, (1-25), Online publication date: 28-Dec-2016. Bederián Company of Conference on Real-Time Networks and Systems, (299-308) Fernandes F, Weigel L, Jung C, Navaux P, Carro L and Rech P (2016). Evaluation of Histogram of Oriented Gradients Soft Errors Criticality for Automotive Applications, 13:4, (1-25), Online publication date: 28-Dec-2016. Bederián Company of Com and Wolovick N A project-based HPC course for single-box computers Proceedings of the Workshop on Education for High Performance Computing, (1-6)Sewall J, Pennycook S, Duran A, Tian X and Narayanaswamy R A modern memory management system for OpenMP Proceedings of the Third International Workshop on Accelerator Programming Using Directives, (25-35)Johnson P and Ekstedt M (2016). The Tarpit - A general theory of software engineering, Information and Software Technology, 70:C, (181-203), Online publication date: 1-Feb-2016. Savidis I, Ciftcioglu B, Xu J, Hu J, Jain M, Berman R, Xue J, Liu P, Moore D, Wicks G, Huang M, Wu H and Friedman E (2016). Heterogeneous 3-D circuits, Microelectronics Journal, 50:C, (66-75), Online publication date: 1-Apr-2016. Souza J, Carro L, Rutzig M and Beck A A reconfigurable heterogeneous multicore with a homogeneous mult CMPs Proceedings of the 2016 Conference on Design, Automation & Test in Europe, (1433-1436)Brock J and Bruce R (2016). Power labs, Journal of Computing Sciences in Colleges, 32:2, (104-110), Online publication date: 1-Dec-2016. Elkhouly R, El-Mahdy A and Elmasry A Optimality analysis of if-conversion transformation Proceedings of the 24th High Performance Computing Symposium, (1-8)Lee Y, Kim J, Jang H, Yang H, Kim J, Jeong J and Lee J (2015). A fully associative, tagless DRAM cache, ACM SIGARCH Computer Architecture News, 43:3S, (211-222), Online publication date: 4-Jan-2016. Masliah I, Abdelfattah A, Haidar A, Tomov S, Baboulin M, Falcou J and Dongarra J High Performance Matrix-Matrix Multiplications of Very Small Matrices Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Volume 9833, (659-671)Catalán S, Malossi A, Bekas C and Quintana-Ortí E The Impact of Voltage-Frequency Scaling for the Matrix-Vector Product on the IBM POWER8 Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Volume 9833, (659-671)Catalán S, Malossi A, Bekas C and Quintana-Ortí E The Impact of Voltage-Frequency Scaling for the Matrix-Vector Product on the IBM POWER8 Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Voltage-Frequency Scaling for the Matrix-Vector Product on the IBM POWER8 Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Voltage-Frequency Scaling for the Matrix-Vector Product on the IBM POWER8 Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Voltage-Frequency Scaling for the Matrix-Vector Product on the IBM POWER8 Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Voltage-Frequency Scaling for the Matrix-Vector Product on the IBM POWER8 Proceedings of the 22nd International Conference on Euro-Par 2016: Parallel Processing - Voltage-Frequency Scaling Frequency Scal International Conference on Euro-Par 2016: Parallel Processing - Volume 9833, (103-116)Dai Y, Fang Y, Yang L and Jeon G (2016). Graphics processing unit-accelerated joint-bitplane belief propagation algorithm in DSC, The Journal of Supercomputing, 72:6, (2351-2375), Online publication date: 1-Jun-2016.Kanev S, Darago J, Hazelwood K, Ranganathan P, Moseley T, Wei G and Brooks D (2015). Profiling a warehouse-scale computer, ACM SIGARCH Computer Architecture News, 43:3S, (158-169), Online publication date: 4-Jan-2016. Hong J and Kim S (2016). Flexible ECC Management for Low-Cost Transient Error Protection of Last-Level Caches, IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 24:6, (2152-2164), Online publication date: 1-Jun-2016. Unal E and Savaş E (2016). On Acceleration and Scalability of Number Theoretic Private Information Retrieval, IEEE Transactions on Parallel and Distributed Systems, 27:6, (1727-1741), Online publication date: 1-Jun-2016. Unal E and Savaş E (2016). On Acceleration and Scalability of Number Theoretic Private Information Retrieval, IEEE Transactions on Parallel Turing Machine Model Network and Parallel Computing, (191-204) Shahvarani A and Jacobsen H A Hybrid B+-tree as Solution for In-Memory Indexing on CPU-GPU Heterogeneous Computing Platforms Proceedings of the 2016 International Conference on Management of Data, (1523-1538) Ben Youssef B (2015). A parallel cellular automata algorithm for the deterministic simulation of 3-D multicellular tissue growth, Cluster Computing, 18:4, (1561-1579), Online publication date: 1-Dec-2015. Fox A and Patterson D (2015). Do-it-yourself textbook publishing, Communications of the ACM, 58:2, (40-43), Online publication date: 1-Dec-2015. Mozafari S, Meyer B and Skadron K Yield-aware Performance. Cost Characterization for Multi-Core SIMT Proceedings of the 25th edition on Great Lakes Symposium on VLSI, (237-240)Kandemir M, Zhao H, Tang X and Karakoy M Memory Row Reuse Distance and its Role in Optimizing Application Performance Proceedings of the 2015 ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems, (137-149)Kanev S, Darago J, Hazelwood K, Ranganathan P, Moseley T, Wei G and Brooks D Profiling a warehouse-scale computer Proceedings of the 42nd Annual International Symposium on CPUs and GPUaccelerated clusters, SIGSPATIAL Special, 6:3, (27-34), Online publication date: 22-Apr-2015. Abadal S, Nemirovsky M, Alarcón E and Cabellos-Aparicio A Networks-on-Chip, (1-8) Gottscho M, Banaiyan Mofrad A, Dutt N, Nicolau A and Gupta P (2015). DPCS, ACM Transactions on Architecture Education, (1-6) Kandemir M, Zhao H, Tang X and Karakoy M (2015). Memory Row Reuse Distance and its Role in Optimizing Application Performance Evaluation Proceedings M, Hahn S and Hack S WCET analysis for multi-core processors with shared buses and event-driven bus arbitration Proceedings of the 23rd International Conference on Real Time and Networks Systems, (193-202)Zhang J, You S and Xia Y Prototyping A Web-based High-Performance Visual Analytics, (16-23)Zhang J, You S and Gruenwald L Efficient Parallel Zonal Statistics on Large-Scale Global Biodiversity Data on GPUs Proceedings of the 4th International ACM SIGSPATIAL Workshop on Analytics for Big Geospatial Data, (35-44)Kiran D, Gurunarayanan S, Misra J and Nawal A (2015). Global scheduling heuristics for multicore architecture, Scientific Programming, 2015, (18-18), Online publication date: 1-Jan-2015. Damodaran P, Zaib A, Wallentowitz S, Wild T and Herkersdorf A Sharer status-based caching in tiled multiprocessor systems-on-chip Proceedings of the Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing, (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing (67-74) Li A, Tay Y, Kumar A and Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Computing (67-74) Li A, Tay Y, Corporaal H Transit Proceedings of the 24th International Symposium on High Performance Performance Parallel and Distributed Computing, (101-106)Cilku B, Kammerer R and Puschner P (2015). Aligning single path loops to reduce the number of capacity cache misses, ACM SIGBED Review, 12:1, (13-18), Online publication date: 27-Mar-2015.Liu Y and Sun X C2-bound Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1-11)Li W, Jin G, Cui X and See S An evaluation of unified memory technology on NVIDIA GPUs Proceedings of the 15th IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing, (1092-1098)Eslami H, Kougkas A, Kotsifakou M, Kasampalis T, Feng K, Lu Y, Gropp W, Sun X, Chen Y and Thakur R Efficient disk-to-disk sorting Proceedings of the 2015 International Workshop on Data-Intensive Scalable Computing Systems, (1-8)Cilku B and Puschner P (2015). Designing a time predictable memory hierarchy for single-path code, ACM SIGBED Review, 12:2, (16-21), Online publication date: 20-May-2015. Tan Z, Qian Z, Chen X, Asanovic K

DIABLO, ACM SIGARCH Computer Architecture News, 43:1, (207-221), Online publication date: 29-May-2015. Tan Z, Qian Z, Chen X, Asanovic K and Patterson D IABLO Proceedings of the Twentieth International Conference on Architectural Support for Programming Languages and Operating Systems, (207-221) Gallenmüller S, Emmerich P, Wohlfart F, Raumer D and Carle G Comparison of Frameworks for networking and Communications systems, (29-38) Foang Y, Hoang T, Becchi M and Chien A Fast support for unstructured data processing Proceedings of the 48th International Symposium on Microarchitecture, (533-545) Chaker H, Cudennec L, Dahmani S, Gogniat G and Sepúveda M Cycle-based Model to Evaluate Consistency Protocols within a Multi-protocol Compilation Tool-chain Proceedings of the 2015 International Workshop on Code Optimisation for Multi and Many Cores, (1-10) Altamimi M and Naik K A Computing Profiling Proceedings of the 18th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, (301-305) Diaz I, Zhang C, Hollevoet L, Svensson J, Rodrigues J, Wilhelmsson L, Olsson T, Van der Perre L and Öwall V (2015). A new digital front-end for flexible reception in software defined radio, Microprocessors & Microsystems, 39:8, (889-900), Online publication date: 1-Nov-2015. Gadouleau M and Riis S (2015). Memoryless computer Systems, Future Generation Computer Systems, 51:C, (132-141), Online publication date: 1-Oct-2015. Gadouleau M and Riis S (2015). Memoryless computation of large-Scale computer Systems, 50:Ec, (132-141), Online publication date: 1-Dec-2015. State-of-the-Art in epublication date: 1-Dec-2015. Subset In Pto-15. State-of-the-Art in epublication date: 1-Dec-2015. Subset In Nguyen K and Cheriet M (2015). OpenFlow-based in-network Layer-2 adaptive multipath aggregation in data centers, Computer Communications, 61:C, (58-69), Online publication date: 1-May-2015. Lazarescu M and Lavagno L (2015). Interactive Trace-Based Analysis Toolset for Manual Parallelization date: 1-Jul-2015. Sanch

On the Functional Test of Branch Prediction Units, IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 23:9, (1675-1688), Online publication date: 1-Sep-2015.Lai B, Kuan-Ting Chen and Ping-Ru Wu (2015). A High-Performance Double-Layer Counting Bloom Filter for Multicore Systems, IEEE Transactions on Very Large Scale

Integration (VLSI) Systems, 23:11, (2473-2486), Online publication date: 1-Nov-2015.Li Wang, Minqi Zhou, Zhenjie Zhang, Minqi Zhou, Zhenjie Zhou, Zhenjie Zhang, Minqi Zhou, Zhenjie Zhou, Zhenjie Zhou, Zhenjie Zhou, Zhenjie Zhou, Zhenjie Zhou, Apr-2015.Oxley M, Pasricha S, Maciejewski A, Siegel H, Apodaca J, Young D, Briceno L, Smith J, Bahirat S, Khemka B, Ramirez A and Zou Y (2015). Makespan and Energy Robust Stochastic Static Resource Allocation of a Bag-of-Tasks to a Heterogeneous Computing System, IEEE Transactions on Parallel and Distributed Systems, 26:10, (2791-2805), Online publication date: 1-Oct-2015. Son Y, Seongil O, Yang H, Jung D, Ahn J, Kim J and Lee J Microbank Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, (1059-1070) Riemens D, Gaydadjiev G, Zeeuw C and Strydis C (2014). Towards scalable arithmetic units with graceful degradation, ACM Transactions on Embedded Computing Systems, 13:4, (1-26), Online publication date: 5-Dec-2014. Sahu A and Ramakrishna S Creating heterogeneity at run time by dynamic cache and bandwidth partitioning schemes Proceedings of the 29th Annual ACM Symposium on Applied Computing, (872-879)Patterson D (2014). How to build a bad research center, Communications of the ACM, 57:3, (33-36), Online publication date: 1-Mar-2014. Fang J, Sips H, Zhang L, Xu C, Che Y and Varbanescu A Test-driving Intel Xeon Phi Proceedings of the 5th ACM/SPEC international conference on Performance engineering, (137-148) Hrbacek R and Sekanina L Towards highly optimized cartesian genetic programming Proceedings of the 2014 Annual Conference on Genetic and Evolutionary Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Genetic and Evolutionary Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation, (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavendra K, Warrier T and Mutyam M SAMO Proceedings of the 11th ACM Conference on Computation (1015-1022)Raghavend Neumann T Heterogeneity-conscious parallel query execution Proceedings of the Tenth International Workshop on Data Management on New Hardware, (1-10)Pirk H, Petraki E, Idreos S, Manegold S and Kersten M Database cracking Proceedings of the Tenth International Workshop on Data Management on New Hardware, (1-8)Piro G, Abadal S, Mestres A, Alarcón E, Solé-Pareta J, Grieco L and Boggia G Initial MAC Exploration for Graphene-enabled Wireless Networks-on-Chip Proceedings of ACM The First Annual International Conference on Nanoscale Computing and Communication, (1-9)Segulja C and Abdelrahman T What is the cost of weak determinism? Proceedings of the 23rd international conference on Parallel architectures and compilation, (99-112) Yalcin G, Ergin O, Islek E, Unsal O and Cristal A (2014). Exploiting Existing Comparators for Fine-Grained Low-Cost Error Detection, ACM Transactions on Architecture and Code Optimization, 11:3, (1-24), Online publication date: 27-Oct-2014. Aziz A, Cireno M, Barros E and Prado B Balanced Prefetching Aggressiveness Controller for NoC-based Multiprocessor Proceedings of the 27th Symposium on Integrated Circuits and Systems Design, (1-7)Kaligirwa N, Leal E, Gruenwald L, Zhang J and You S Parallel QuadTree encoding of large-scale raster geospatial data on multicore CPUs and GPGPUs Proceedings of the 3rd ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data, (30-39)Tsoutsos N and Maniatakos M HEROIC Proceedings of the conference on Design, Automation & Test in Europe, (1-6)Shoukourian H, Wilde T, Auweter A and Bode A (2014). Predicting the Energy and Power Consumption of Strong and Weak Scaling HPC Applications, Supercomputing Frontiers and Innovations: an International Journal, 1:2, (20-41), Online publication date: 9-Jul-2014.Lazarescu M, Cohen A, Guatto A, Lê N, Lavagno L, Pop A, Prieto M, Terechko A and Sutii A Energy-aware parallelization flow and toolset for C code Proceedings of the 17th International Workshop on Software and Compilers for Embedded Systems, (79-88) Liu J, Bouganis C and Cheung P Image progressive acquisition for hardware systems Proceedings of the conference on Design, Automation & Test in Europe, (1-6) Valero M, Moreto M, Casas M, Ayguade E and Labarta J (2014). Runtime-Aware Architectures, Supercomputing Frontiers and Innovations: an International Journal, 1:1, (29-44), Online publication date: 6-Apr-2014. Titmus M, Gurtowski J and Schatz M (2014). Answering the demands of digital genomics, Concurrency and Computation: Practice & Experience, 26:4, (917-928), Online publication date: 25-Mar-2014. Bhattacharya A, Banerjee A and Sur-Kolay S Energy-Aware H.264 Decoding Proceedings of the 10th International Conference on Distributed Computing and International Symposium on Field programmable gate arrays, (171-180)Li S, Ahn J, Strong R, Brockman J, Tullsen D and Jouppi Nethodogy - Volume 8337, (200-211)Huang Y, Ienne P, Temam O, Chen Y and Wu C Elastic CGRAs Proceedings of the ACM/SIGDA international symposium on Field programmable gate arrays, (171-180)Li S, Ahn J, Strong R, Brockman J, Tullsen D and Jouppi Nethodogy - Volume 8337, (200-211)Huang Y, Ienne P, Temam O, Chen Y and Wu C Elastic CGRAs Proceedings of the ACM/SIGDA international symposium on Field programmable gate arrays, (171-180)Li S, Ahn J, Strong R, Brockman J, Tullsen D and Jouppi Nethodogy - Volume 8337, (200-211)Huang Y, Ienne P, Temam O, Chen Y and Wu C Elastic CGRAs Proceedings of the ACM/SIGDA international symposium on Field programmable gate arrays, (171-180)Li S, Ahn J, Strong R, Brockman J, Tullsen D and Jouppi Nethodogy - Volume 8337, (200-211)Huang Y, Ienne P, Temam O, Chen Y and Wu C Elastic CGRAs Proceedings of the ACM/SIGDA international symposium on Field programmable gate arrays, (171-180)Li S, Ahn J, Strong R, Brockman J, Tullsen D and Jouppi Nethodogy - Volume 8337, (200-211)Huang Y, Ienne P, Temam O, Chen Y and Wu C Elastic CGRAs Proceedings of the ACM/SIGDA international symposium on Field programmable gate arrays, (171-180)Li S, Ahn J, Strong R, Brockman J, Strong (2013). The McPAT Framework for Multicore and Manycore Architectures, ACM Transactions on Mathematical Software, 39:3, (1-22), Online publication date: 1-Apr-2013. Nanavati M, Spear M, Taylor N, Rajagopalan S, Meyer D, Aiello W and Warfield A Whose cache line is it anyway? Proceedings of the 8th ACM European Conference on Computer Systems, (141-154) Szymanski T Low latency energy efficient communications in global-scale cloud computing systems Proceedings of the 2013 workshop on Energy efficient high performance parallel and distributed computing, (13-22)Neela G and Draper J An asymmetric adaptive-precision energy-efficient 3DIC multiplier Proceedings of the 23rd ACM international conference on Great lakes symposium on VLSI, (269-274)Cook H, Moreto M. Bird S, Dao K, Patterson D and Asanovic K A hardware evaluation of cache partitioning to improve utilization and energy-efficiency while preserving responsiveness Proceedings of the 40th Annual International Symposium on Computer Architecture, (308-319)Son Y, Seongil O, Ro Y, Lee J and Ahn J Reducing memory access latency with asymmetric DRAM bank organizations Proceedings of the 40th Annual International Symposium on Computer Architecture, (380-391)Martínez H, Tárraga J, Medina I, Barrachina S, Castillo M, Dopazo J and Quintana-Ortí E A dynamic pipeline for RNA sequencing on multicore processors Proceedings of the 20th European MPI Users' Group Meeting, (235-240) Song X, Shi J, Chen H and Zang B Schedule processes, not VCPUs Proceedings of the 4th Asia-Pacific Workshop on Systems, (1-7) Cook H, Moreto M, Bird S, Dao K, Patterson D and Asanovic K (2013). A hardware evaluation of cache partitioning to improve utilization and energy-efficiency while preserving responsiveness, ACM SIGARCH Computer Architecture News, 41:3, (308-319), Online publication date: 26-Jun-2013. Son Y, Seongil O, Ro Y, Lee J and Ahn J (2013). Reducing memory access latency with asymmetric DRAM bank organizations, ACM SIGARCH Computer Architecture News, 41:3, (380-391), Online publication date: 26-Jun-2013. Choi J, Kwak J, Jhang S and Jhon C Data filter cache with word selection cache for low power embedded processor Proceedings of the 2013 Research in Adaptive and Convergent Systems, (422-427)Xu T, Liljeberg P, Plosila J and Tenhunen H MMSoC Proceedings of the 14th International Conference on Computer Systems and Technologies, (67-74)Bhatia M, Kiran D, Misra J and Gurunarayanan S Fine grain thread scheduling on multicore processors Proceedings of the 6th ACM India Computing Convention, (1-8) Fauzia N, Elango V, Ravishankar M, Ramanujam J, Rastello F, Rountev A, Pouchet L and Sadayappan P (2013). Beyond reuse distance analysis, ACM Transactions on Architecture and Code Optimization, 10:4, (1-29), Online publication date: 1-Dec-2013.Bardizbanyan A, Själander M, Whalley D and Larsson-Edefors P (2013). Designing a practical data filter cache to improve both energy efficiency and performance, ACM Transactions on Architecture and Code Optimization, 10:4, (1-25), Online publication date: 1-Dec-2013. Hong S and Kim S AVICA Proceedings of the Conference on Design, Automatic OpenCL work-group size selection for multicore CPUs Proceedings of the 22nd international conference on Parallel architectures and compilation techniques, (387-398)Hossain S and Steihaug T (2013). Sparse matrix computations with application to solve system of nonlinear equations, WIREs Computations with application to solve system of nonlinear equations, which is a solve system of nonlinear equations and the solve system of nonlinear equations are solved system. Rocker B, Karl W and Heuveline V Evaluation of two formulations of the conjugate gradients method with transactional memory Proceedings of the 19th international conference on Parallel Processing, (508-520) Soliman M (2013). Design, implementation, and evaluation of a low-complexity vector-core for executing scalar/vector instructions, Journal of Parallel and Distributed Computing, 73:6, (836-850), Online publication date: 1-Jun-2013. Altinigneli M, Plant C and Böhm C Massively parallel expectation maximization using graphics processing units Proceedings of the 19th ACM SIGKDD international conference on Knowledge discovery and data mining, (838-846)Benner P, Ezzatti P, Quintana-Ortí E and Remón A On the Impact of Optimization on the Time-Power-Energy Balance of Dense Linear Algebra Factorizations Algorithms and Architectures for Parallel Processing, (3-10)Ahn J, Jouppi N, Kozyrakis C, Leverich J

and Schreiber R (2012). Improving System Energy Efficiency with Memory Rank Subsetting, ACM Transactions on Architectures and Code Optimization, 9:1, (1-28), Online publication date: 1-Mar-2012. Edwards J and Vishkin U Brief announcement Proceedings of the twenty-fourth annual ACM symposium on Parallelism in algorithms and architectures, (190-192)Wang Y, Zhang C, Yu H and Zhang W Design of low power 3D hybrid memory by non-volatile CBRAM-crossbar with block-level data-retention Proceedings of the 2012 ACM/IEEE international symposium on Low power electronics and acking Made Sign, (197-202)Zhang J, Kamga C, Gong H and Gruenwald L U2SOD-DB 40:3, Online publication date: 1-Sep-2012. Mang Signature and Computing, (163-171)Tu C, Hung S and Tsai T (2012). MCEmu, ACM Transactions on Design Automation of Electronic Systems, 17-4, (1-25), online publication date: 1-Ot-2012. Menag K (2012). Bang J, You S and Gruenwald L High-performance online spatial and temporal aggregations on multi-core CPUs and many-core GPUs Proceedings of the fifteenth international workshop on Data warehousing and OLAP, (89-96)Zhang J, You S and Gruenwald L U2STRA Proceedings of the 2012 ACM workshop on Data warehousing and OLAP, (89-96)Zhang J, You S and Gruenwald L U2STRA Proceedings of the 2012 ACM workshop on Network on Chip Architectures, (12-83)Hart S, Fractional Symposium on Computer Architecture, (72-83)Hart S, Fractional Symposiu