

Author index for papers in Volume 50

Pages are numbered consecutively through the volume: 1–166, January; 167–334, March/May; 335–524, July/September; 525–666, November.

- Aberg, I.**
363 see Antoniadis, D. A.
- Abraham, D. W.,** P. L. Trouilloud, and D. C. Worledge
55 *Rapid-turnaround characterization methods for MRAM development*
- Agarwal, R. C.,** K. Gupta, S. Jain, and S. Amalapurapu
149 *An approximation to the greedy algorithm for differential compression*
- Agerwala, T.,** and M. Gupta
173 *Systems research challenges: A scale-out perspective*
- Amalapurapu, S.**
149 see Agarwal, R. C.
- Antoniadis, D. A.,** I. Aberg, C. Ní Chléirigh, O. M. Nayfeh, A. Khakifirooz, and J. L. Hoyt
363 *Continuous MOSFET performance increase with device scaling: The role of strain and channel material innovations*
- Assefa, S.**
41 see Gaidis, M. C.
- Bacon, D. F.,** and X. Shen
209 *Braids and fibers: Language constructs with architectural support for adaptive responses to memory latencies*
- Baugh, L.,** and C. Zilles
287 *Decomposing the load-store queue by function for power reduction and scalability*
- Becker-Szendy, R. A.**
181 see Wilcke, W. W.
- Bedell, S. W.**
377 see Shang, H.
- Belluomini, W.,** D. Jamsek, A. K. Martin, C. McDowell, R. K. Montoye, H. C. Ngo, and J. Sawada
277 *Limited switch dynamic logic circuits for high-speed low-power circuit design*
- Bernevig, B. A.,** and S. Zhang
141 *Toward dissipationless spin transport in semiconductors*
- Bernstein, K.,** D. J. Frank, A. E. Gattiker, W. Haensch, B. L. Ji, S. R. Nassif, E. J. Nowak, D. J. Pearson, and N. J. Rohrer
433 *High-performance CMOS variability in the 65-nm regime and beyond*
- Bernstein, K.**
469 see Hanson, S.
- Bernstein, K.**
491 see Topol, A. W.
- Bhushan, M.**
451 see Ketchen, M. B.
- Blaauw, D.**
469 see Hanson, S.
- Bohrer, P. J.**
321 see Peterson, J. L.
- Bosilca, G.**
223 see Dongarra, J.
- Brown, P. G.**
545 see Eckman, B. A.
- Bryant, A.**
339 see Haensch, W.
- Bryant, A.**
469 see Hanson, S.
- Burbeck, S.,** and K. E. Jordan
529 *An assessment of the role of computing in systems biology*
- Carter, N. P.,** and A. Hussain
311 *Modeling wire delay, area, power, and performance in a simulation infrastructure*
- Cascaval, C.,** E. Duesterwald, P. F. Sweeney, and R. W. Wisniewski
239 *Performance and environment monitoring for continuous program optimization*
- Chang, L.**
469 see Hanson, S.
- Chen, L.**
321 see Peterson, J. L.
- Chen, Z.**
223 see Dongarra, J.
- Cheng, A. C.,** and G. S. Tyson
299 *High-quality ISA synthesis for low-power cache designs in embedded microprocessors*
- Chitchekanova, A. Y.**
101 see Wolf, S. A.
- Chu, J. O.**
377 see Shang, H.
- Das, K. K.**
469 see Hanson, S.
- de Tombe, P. P.**
583 see Hussan, J.
- DeBrosse, J. K.**
25 see Maffitt, T. M.
- DeLisi, C.**
631 see Holloway, D. T.
- Demin, O. V.**
561 see Sorokin, A.
- Dennard, R. H.**
339 see Haensch, W.
- Dokumaci, O. H.**
419 see Frank, D. J.
- Dokumaci, O. H.**
339 see Haensch, W.
- Dongarra, J.,** G. Bosilca, Z. Chen, V. Eijkhout, G. E. Fagg, E. Fuentes, J. Langou, P. Luszczyk, J. Pjesivac-Grbovic, K. Seymour, H. You, and S. S. Vadhiyar
223 *Self-adapting numerical software (SANS) effort*
- Dronov, S.**
561 see Sorokin, A.

- Duesterwald, E.**
239 see Caşcaval, C.
- Eckman, B. A.,** and P. G. Brown
545 *Graph data management for molecular and cell biology*
- Eijkhout, V.**
223 see Dongarra, J.
- Elnozahy, E. N.**
321 see Peterson, J. L.
- Erwin, S. C.**
121 see Žutić, I.
- Fabian, J.**
121 see Žutić, I.
- Fagg, G. E.**
223 see Dongarra, J.
- Fang, L.**
249 see Kandaswamy, G.
- Fernandez, K. R.**
181 see Wilcke, W. W.
- Fischetti, M. V.**
339 see Haensch, W.
- Fleiner, C.,** R. B. Garner, J. L. Hafner, K. K. Rao, D. R. Kenchammana-Hosekote, W. W. Wilcke, and J. S. Glider
199 *Reliability of modular mesh-connected intelligent storage brick systems*
- Fleiner, C.**
181 see Wilcke, W. W.
- Franaszek, P. A.,** L. A. Lastras-Montano, S. R. Kunkel, and A. C. Sawdey
507 *Victim management in a cache hierarchy*
- Frank, D. J.,** W. Haensch, G. Shahidi, and O. H. Dokumaci
419 *Optimizing CMOS technology for maximum performance*
- Frank, D. J.**
433 see Bernstein, K.
- Frank, D. J.**
491 see Topol, A. W.
- Frank, M. M.**
387 see Gusev, E. P.
- Frank, M. M.**
377 see Shang, H.
- Freitas, R. F.**
181 see Wilcke, W. W.
- Fuentes, E.**
223 see Dongarra, J.
- Gabric, J. A.**
25 see Maffitt, T. M.
- Gaidis, M. C.,** E. J. O'Sullivan, J. J. Nowak, Y. Lu, S. Kanakasabapathy, P. L. Trouilloud, D. C. Worledge, S. Assefa, K. R. Milkove, G. P. Wright, and W. J. Gallagher
41 *Two-level BEOL processing for rapid iteration in MRAM development*
- Gallagher, W. J.,** and S. S. P. Parkin
5 *Development of the magnetic tunnel junction MRAM at IBM: From first junctions to a 16-Mb MRAM demonstrator chip*
- Gallagher, W. J.**
41 see Gaidis, M. C.
- Gallagher, W. J.**
25 see Maffitt, T. M.
- Gannon, D.**
249 see Kandaswamy, G.
- Garner, R. B.**
199 see Fleiner, C.
- Garner, R. B.**
181 see Wilcke, W. W.
- Gattiker, A. E.**
433 see Bernstein, K.
- Ghazal, P.**
561 see Sorokin, A.
- Gheith, A.**
321 see Peterson, J. L.
- Glider, J. S.**
199 see Fleiner, C.
- Glider, J. S.**
181 see Wilcke, W. W.
- Goettert, C.**
181 see Wilcke, W. W.
- Golding, R. A.**
181 see Wilcke, W. W.
- Goryanin, I.**
561 see Sorokin, A.
- Gow, E. T.**
25 see Maffitt, T. M.
- Guarini, K. W.**
377 see Shang, H.
- Guarini, K. W.**
491 see Topol, A. W.
- Gupta, K.**
149 see Agarwal, R. C.
- Gupta, M.**
173 see Agerwala, T.
- Gusev, E. P.,** V. Narayanan, and M. M. Frank
387 *Advanced high- κ dielectric stacks with polySi and metal gates: Recent progress and current challenges*
- Gusev, E. P.**
377 see Shang, H.
- Haensch, W.,** E. J. Nowak, R. H. Dennard, P. M. Solomon, A. Bryant, O. H. Dokumaci, A. Kumar, X. Wang, J. B. Johnson, and M. V. Fischetti
339 *Silicon CMOS devices beyond scaling*
- Haensch, W.**
433 see Bernstein, K.
- Haensch, W.**
419 see Frank, D. J.
- Haensch, W.**
469 see Hanson, S.
- Hafner, J. L.**
199 see Fleiner, C.
- Hafner, J. L.**
181 see Wilcke, W. W.
- Hanson, S.,** B. Zhai, K. Bernstein, D. Blaauw, A. Bryant, L. Chang, K. K. Das, W. Haensch, E. J. Nowak, and D. M. Sylvester
469 *Ultralow-voltage, minimum-energy CMOS*
- Hernandez, M.**
181 see Wilcke, W. W.
- Hiramoto, T.,** M. Saitoh, and G. Tsutsui
411 *Emerging nanoscale silicon devices taking advantage of nanostructure physics*
- Holloway, D. T.,** M. A. Kon, and C. DeLisi
631 *Machine learning methods for transcription data integration*
- Hoyt, J. L.**
363 see Antoniadis, D. A.
- Huang, Y.**
249 see Kandaswamy, G.
- Huels, H.**
181 see Wilcke, W. W.

- Hunter, P.**
617 see Nickerson, D.
- Hussain, A.**
311 see Carter, N. P.
- Hussan, J.,** P. P. de Tombe, and J. J. Rice
583 *A spatially detailed myofilament model as a basis for large-scale biological simulations*
- Ieong, M.**
377 see Shang, H.
- Ieong, M.**
491 see Topol, A. W.
- Jain, S.**
149 see Agarwal, R. C.
- Jamsek, D.**
277 see Belluomini, W.
- Jewell, R. H.**
321 see Peterson, J. L.
- Ji, B. L.**
433 see Bernstein, K.
- Jiang, X.,** R. Wang, R. M. Shelby, and S. S. P. Parkin
111 *Highly efficient room-temperature tunnel spin injector using CoFe/MgO(001)*
- Johnson, J. B.**
339 see Haensch, W.
- Jordan, K. E.**
529 see Burbeck, S.
- Kahn, H.**
181 see Wilcke, W. W.
- Kanakasabapathy, S.**
41 see Gaidis, M. C.
- Kandaswamy, G.,** L. Fang, Y. Huang, S. Shirasuna, S. Marru, and D. Gannon
249 *Building web services for scientific grid applications*
- Kenchammana-Hosekote, D. R.**
199 see Fleiner, C.
- Kenchammana-Hosekote, D. R.**
181 see Wilcke, W. W.
- Ketchen, M. B.,** and M. Bhushan
451 *Product-representative "at speed" test structures for CMOS characterization*
- Khakifirooz, A.**
363 see Antoniadis, D. A.
- Kharbutli, M.**
261 see Shetty, R.
- Kistler, M. D.**
321 see Peterson, J. L.
- Kon, M. A.**
631 see Holloway, D. T.
- Kumar, A.**
339 see Haensch, W.
- Kumar, A.**
491 see Topol, A. W.
- Kunkel, S. R.**
507 see Franaszek, P. A.
- La Tulipe, D. C., Jr.**
491 see Topol, A. W.
- Lamorey, M. C.**
25 see Maffitt, T. M.
- Langou, J.**
223 see Dongarra, J.
- Lastras-Montano, L. A.**
507 see Franaszek, P. A.
- Lenk, H.**
181 see Wilcke, W. W.
- Loo, T.**
181 see Wilcke, W. W.
- Lu, Y.**
41 see Gaidis, M. C.
- Luszczek, P.**
223 see Dongarra, J.
- Maeurer, T. R.**
321 see Peterson, J. L.
- Maffitt, T. M.,** J. K. DeBrosse, J. A. Gabric, E. T. Gow, M. C. Lamorey, J. S. Parenteau, D. R. Willmott, M. A. Wood, and W. J. Gallagher
25 *Design considerations for MRAM*
- Malone, S. A.**
321 see Peterson, J. L.
- Marru, S.**
249 see Kandaswamy, G.
- Martin, A. K.**
277 see Belluomini, W.
- McDowell, C.**
277 see Belluomini, W.
- Milkove, K. R.**
41 see Gaidis, M. C.
- Miller, B.**
575 see Podowski, R. M.
- Mohiuddin, K. M.**
181 see Wilcke, W. W.
- Montoye, R. K.**
277 see Belluomini, W.
- Murrell, D. B.**
321 see Peterson, J. L.
- Narayanan, V.**
387 see Gusev, E. P.
- Nash, M.**
617 see Nickerson, D.
- Nassif, S. R.**
433 see Bernstein, K.
- Nayfeh, O. M.**
363 see Antoniadis, D. A.
- Needel, N.**
321 see Peterson, J. L.
- Ngo, H. C.**
277 see Belluomini, W.
- Ní Chléirigh, C.**
363 see Antoniadis, D. A.
- Nickerson, D.,** M. Nash, P. Nielsen, N. Smith, and P. Hunter
617 *Computational multiscale modeling in the IUPS Physiome Project: Modeling cardiac electromechanics*
- Nielsen, P.**
617 see Nickerson, D.
- Nielsen, U. B.**
645 see Schoeberl, B.
- Nowak, E. J.**
433 see Bernstein, K.
- Nowak, E. J.**
339 see Haensch, W.
- Nowak, E. J.**
469 see Hanson, S.

- Nowak, J. J.**
41 see Gaidis, M. C.
- O'Sullivan, E. J.**
41 see Gaidis, M. C.
- Paliy, K.**
561 see Sorokin, A.
- Papin, J. A.**
601 see Peirce, S. M.
- Parenteau, J. S.**
25 see Maffitt, T. M.
- Parkin, S. S. P.**
5 see Gallagher, W. J.
- Parkin, S. S. P.**
111 see Jiang, X.
- Paxson, R.**
645 see Schoeberl, B.
- Pearson, D. J.**
433 see Bernstein, K.
- Peirce, S. M.,** T. C. Skalak, and J. A. Papin
601 *Multiscale biosystems integration: Coupling intracellular network analysis with tissue-patterning simulations*
- Peterson, J. L.,** P. J. Bohrer, L. Chen, E. N. Elnozahy, A. Gheith, R. H. Jewell, M. D. Kistler, T. R. Mauerer, S. A. Malone, D. B. Murrell, N. Needel, K. Rajamani, M. A. Rinaldi, R. O. Simpson, K. Sudeep, and L. Zhang
321 *Application of full-system simulation in exploratory system design and development*
- Picunko, T.**
181 see Wilcke, W. W.
- Pjesivac-Grbovic, J.**
223 see Dongarra, J.
- Podowski, R. M.,** B. Miller, and W. W. Wasserman
575 *Visualization of complementary systems biology data with parallel heatmaps*
- Prvulovic, M.**
261 see Shetty, R.
- Rajamani, K.**
321 see Peterson, J. L.
- Rao, K K**
199 see Fleiner, C.
- Rao, K K**
181 see Wilcke, W. W.
- Rice, J. J.**
583 see Hussan, J.
- Ries, M.**
181 see Wilcke, W. W.
- Rinaldi, M. A.**
321 see Peterson, J. L.
- Rohrer, N. J.**
433 see Bernstein, K.
- Rubin, B. J.**
181 see Wilcke, W. W.
- Saitoh, M.**
411 see Hiramoto, T.
- Sawada, J.**
277 see Belluomini, W.
- Sawdey, A. C.**
507 see Franaszek, P. A.
- Schoeberl, B.,** U. B. Nielsen, and R. Paxson
645 *Model-based design approaches in drug discovery: A parallel to traditional engineering approaches*
- Selkov, A.**
561 see Sorokin, A.
- Seymour, K.**
223 see Dongarra, J.
- Shahidi, G.**
419 see Frank, D. J.
- Shang, H.,** M. M. Frank, E. P. Gusev, J. O. Chu, S. W. Bedell, K. W. Guarini, and M. Jeong
377 *Germanium channel MOSFETs: Opportunities and challenges*
- Shelby, R. M.**
111 see Jiang, X.
- Shen, X.**
209 see Bacon, D. F.
- Shetty, R.,** M. Kharbutli, Y. Solihin, and M. Prvulovic
261 *HeapMon: A helper-thread approach to programmable, automatic, and low-overhead memory bug detection*
- Shi, L.**
491 see Topol, A. W.
- Shirasuna, S.**
249 see Kandaswamy, G.
- Simpson, R. O.**
321 see Peterson, J. L.
- Singco, G. U.**
491 see Topol, A. W.
- Skalak, T. C.**
601 see Peirce, S. M.
- Smith, N.**
617 see Nickerson, D.
- Smolin, K.**
181 see Wilcke, W. W.
- Solihin, Y.**
261 see Shetty, R.
- Solomon, P. M.**
339 see Haensch, W.
- Sorokin, A.,** K. Paliy, A. Selkov, O. V. Demin, S. Dronov, P. Ghazal, and I. Goryanin
561 *The Pathway Editor: A tool for managing complex biological networks*
- Steen, S. E.**
491 see Topol, A. W.
- Sudeep, K.**
321 see Peterson, J. L.
- Sun, J. Z.**
81 *Spin angular momentum transfer in current-perpendicular nanomagnetic junctions*
- Sweeney, P. F.**
239 see Caşcaval, C.
- Sylvester, D. M.**
469 see Hanson, S.
- Topol, A. W.,** D. C. La Tulipe, Jr., L. Shi, D. J. Frank, K. Bernstein, S. E. Steen, A. Kumar, G. U. Singco, A. M. Young, K. W. Guarini, and M. Jeong
491 *Three-dimensional integrated circuits*
- Treger, D. M.**
101 see Wolf, S. A.
- Trouilloud, P. L.**
55 see Abraham, D. W.
- Trouilloud, P. L.**
41 see Gaidis, M. C.
- Tsutsui, G.**
411 see Hiramoto, T.

Tyson, G. S.
 299 see Cheng, A. C.

Vadhiyar, S. S.
 223 see Dongarra, J.

Wang, R.
 111 see Jiang, X.

Wang, X.
 339 see Haensch, W.

Wassermen, W. W.
 575 see Podowski, R. M.

Wilcke, W. W., R. B. Garner, C. Fleiner, R. F. Freitas, R. A. Golding, J. S. Glider, D. R. Kenchammana-Hosekote, J. L. Hafner, K. M. Mohiuddin, K. K. Rao, R. A. Becker-Szendy, T. M. Wong, O. A. Zaki, M. Hernandez, K. R. Fernandez, H. Huels, H. Lenk, K. Smolin, M. Ries, C. Goettert, T. Picunko, B. J. Rubin, H. Kahn, and T. Loo
 181 *IBM Intelligent Bricks project—Petabytes and beyond*

Wilcke, W. W.
 199 see Fleiner, C.

Willmott, D. R.
 25 see Maffitt, T. M.

Wisniewski, R. W.
 239 see Cascaval, C.

Wolf, S. A., A. Y. Chtchelkanova, and D. M. Treger
 101 *Spintronics—A retrospective and perspective*

Wong, T. M.
 181 see Wilcke, W. W.

Wood, M. A.
 25 see Maffitt, T. M.

Worledge, D. C.
 69 *Single-domain model for toggle MRAM*

Worledge, D. C.
 55 see Abraham, D. W.

Worledge, D. C.
 41 see Gaidis, M. C.

Wright, G. P.
 41 see Gaidis, M. C.

You, H.
 223 see Dongarra, J.

Young, A. M.
 491 see Topol, A. W.

Zaki, O. A.
 181 see Wilcke, W. W.

Zhai, B.
 469 see Hanson, S.

Zhang, L.
 321 see Peterson, J. L.

Zhang, S.
 141 see Bernevig, B. A.

Zilles, C.
 287 see Baugh, L.

Žutić, I., J. Fabian, and S. C. Erwin
 121 *Bipolar spintronics: Fundamentals and applications*