

Recent publications by IBM authors

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A

Whole-Program Optimization for Time and Space Efficient Threads, D. Grunwald (University of Colorado, Boulder, CO 80309) and R. Neves, *ACM SIGPLAN Notices* **31**, No. 9, 50–59 (1996).

Thread Scheduling for Cache Locality, J. Philbin (NEC Research Institute, 4 Independence Way, Princeton, NJ 08540) et al., *ACM SIGPLAN Notices* **31**, No. 9, 60–71 (1996).

Improving Cache Performance with Balanced Tag and Data Paths, J. K. Peir (University of Florida, Gainesville, FL 32611) et al., *ACM SIGPLAN Notices* **31**, No. 9, 268–278 (1996).

Slicing Class Hierarchies in C $\ll$, F. Tip (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *ACM SIGPLAN Notices* **31**, No. 10, 179–197 (1996).

Fast Static Analysis of C $\ll$ Virtual Function Calls, D. F. Bacon (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and P. F. Sweeney, *ACM SIGPLAN Notices* **31**, No. 10, 324–341 (1996).

Golden Interfaces: The Surface of Self-Assembled Monolayers, E. Delamarche (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Advanced Materials* **8**, No. 9, 719+ (1996).

Comparison of Daily Noise Exposures in One Workplace Based on Noise Criteria Recommended by ACGIH and OSHA, M. E. Petrick (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709) et al., *American Industrial Hygiene Association Journal* **57**, No. 10, 924–928 (1996).

A BDD Sat Solver for Satisfiability Testing: An Industrial Case Study, R. Puri (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. Gu, *Annals of Mathematics and Artificial Intelligence* **17**, No. 3–4, 315–337 (1996).

Photoemission with Laser-Generated Harmonics Tunable to 80 eV, R. Haight (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Applied Optics* **35**, No. 33, 6445–6448 (1996).

Measuring Radiation-Induced Changes in the Error Rate of Fiber Optic Data Links, C. Decusatis (IBM Corporation, Route 52, Hopewell Junction, NY 12533) and M. Benedict, *Applied Optics* **35**, No. 34, 6819–6822 (1996).

Room Temperature Repositioning of Individual C-60 Molecules at Cu Steps: Operation of a Molecular Counting Device, M. T. Cuberes (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Applied Physics A—Solids and Surfaces* **69**, No. 20, 3016–3018 (1996).

Ion-Scattering for In-Situ Characterization of Composition of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Films, P. K. Hucknall (AEA Technology, 477 Harwell, Berks, England) et al., *Applied Physics A—Solids and Surfaces* **69**, No. 20, 3081–3083 (1996).

Flexible Giant Magnetoresistance Sensors, S. S. P. Parkin (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Applied Physics A—Solids and Surfaces* **69**, No. 20, 3092–3094 (1996).

An Optical Scheme for Enhancing the Performance of the F2 (157 nm) Laser: A Possible F2 2-Photon Femtosecond Pulse Generator, J. H. Glowina (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics B* **63**, No. 5, 421-424 (1996).

Novel Sensitized Photochromic Organic Glass for Holographic Optical Storage, R. Wortmann (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Applied Physics Letters* **69**, No. 12, 1657-1659 (1996).

Quenching of Giant Magnetoresistance by Interface Roughening and Alloying in Annealed Y'(Ni, Fe_{1-x})₂Au/Y''/Au Multilayers, R. F. C. Farrow (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Applied Physics Letters* **69**, No. 13, 1963-1965 (1996).

Movable-Mask Reactive Ion Etch Process for Thickness Control in Devices, R. L. Sandstrom (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **69**, No. 15, 2163-2165 (1996).

The Effect of Current-Density and Stripe Length on Resistance Saturation During Electromigration Testing, R. G. Filippi (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Applied Physics Letters* **69**, No. 16, 2350-2352 (1996).

Low Stiffness Silicon Cantilevers for Thermal Writing and Piezoresistive Readback with the Atomic Force Microscope, B. W. Chui (Stanford University, Terman 551, Stanford, CA 94305) et al., *Applied Physics Letters* **69**, No. 18, 2767-2769 (1996).

A Gratingless Wavelength Stabilized Semiconductor Laser, B. Pezeshki (SDI Inc., 80 Rose Orchard Way, San Jose, CA 95131) et al., *Applied Physics Letters* **69**, No. 19, 2807-2809 (1996).

Surface Lifetimes of Ga and Growth Behavior on GaN(0001) Surfaces During Molecular-Beam Epitaxy, S. Guha (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **69**, No. 19, 2879-2881 (1996).

Electrooptic Beam Scanner in KTiOPO₄, Y. Chiu (Carnegie Mellon University, Pittsburgh, PA 15213) et al., *Applied Physics Letters* **69**, No. 21, 3134-3136 (1996).

Observation of Large Low-Field Magnetoresistance in Trilayer Perpendicular Transport Devices Made Using Doped Manganate Perovskites, J. Z. Sun (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **69**, No. 21, 3266-3268 (1996).

Imaging and Magnetometry of Switching in Nanometer Scale Iron Particles, S. Gider (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Applied Physics Letters* **69**, No. 21, 3269-3271 (1996).

Stress-Induced Roughening in Epitaxial Growth, J. Tersoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Applied Surface Science* **102**, 1-2 (1996).

A Manufacturable Polyemitter Graded-SiGe HBT Technology for Wireless and Mixed-Signal Applications, D. Nguyenngoc (IBM Corporation, Hopewell Junction, NY 12533) et al., *Applied Surface Science* **102**, 194-201 (1996).

Weak Fluence Dependence of Charge Generation in Ultra-Thin Oxides on Silicon, K. R. Farmer (New Jersey Institute of Technology, Newark, NJ 07102) et al., *Applied Surface Science* **104**, 369-372 (1996).

Surface and Subsurface Imaging of Indium in InGaAs by Scanning Tunneling Microscopy, M. Pfister (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Applied Surface Science* **104**, 516-521 (1996).

Polymer Characterization by Laser-Desorption with Multiphoton Ionization of End Group Chromophores, M. S. Devries (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and H. E. Hunziker, *Applied Surface Science* **106**, 466-472 (1996).

A Fractal Origin for the Mass-Spectrum of Interstellar Clouds, B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and E. Falgarone, *Astrophysical Journal* **471**, No. 2, 816-821 (1996).

B

Application of Borophosphosilicate Glass (BPSG) in Microelectronic Processing, M. Kirchoff (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Berichte der Bunsen Gesellschaft für Physikalische Chemie—An International Journal of Physical Chemistry* **100**, No. 9, 1434-1437 (1996).

Arnoldi Versus Nonsymmetric Lanczos Algorithms for Solving Matrix Eigenvalue Problems, J. Cullum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *BIT* **36**, No. 3, 470-493 (1996).

ABC of Work-Related Disorders: Stress at Work, J. Vononciul (Lucas Varsity Industrial Management Development & Training, W. Midlands, England), *British Medical Journal* **313**, No. 7059, 745-748 (1996).

C

Synthesis and Characterization of Nanometer-Size Fe₃O₄ and Gamma-Fe₂O₃ Particles, Y. S. Kang (University of California, Davis, CA 95616) et al., *Chemistry of Materials* **8**, No. 9, 2209+ (1996).

On the Crystal Structure of Azafullerene (C₅₉N) (2), C. M. Brown (University of Sussex, Brighton BN1 9QJ, E. Sussex, England) et al., *Chemistry of Materials* **8**, No. 11, 2548+ (1996).

An Essential Design Pattern for Fault-Tolerant Distributed State Sharing, N. Islam (IBM Corporation, Old Orchard Road, Armonk, NY 10504) and M. Devarakonda, *Communications of the ACM* **39**, No. 10, 65-74 (1996).

Mining Business Databases, R. J. Brachman (AT&T Bell Laboratories, Murray Hill, NJ 07974) et al., *Communications of the ACM* **39**, No. 11, 42-48 (1996).

Roughening of Growing Surfaces: Kinetic Models and Continuum Theories, A. L. Barabasi (University of Notre Dame, Notre Dame, IN 46556), *Computational Materials Science* **6**, No. 2, 127-134 (1996).

Understanding Living, Breathing Information Systems, D. McDavid (IBM Corporation, Old Orchard Road, Armonk, NY 10504), *Computer* **29**, No. 11, 9-10 (1996).

Topologically Exact Evaluation of Polyhedra Defined in CSG with Loose Primitives, R. Banerjee (IBM Corporation, Boca Raton, FL 33431) and J. R. Rossignac, *Computer Graphics Forum* **15**, No. 4, 205-217 (1996).

A Unified, Object-Oriented Graphics System and Software Architecture for Visualizing CAD/CAM Presentations, S. Kochhar (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. Hall, *Computer Graphics Forum* **15**, No. 4, 229-248 (1996).

The Helix Switch: A Single Chip Cell Switch Design, B. Patel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Computer Networks and ISDN Systems* **28**, No. 13, 1791-1807 (1996).

Deriving Deadlock and Unspecified Reception-Free Protocol Converters from Message Mapping Sets, M. Peyravian (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709) and C. T. Lea, *Computer Networks and ISDN Systems* **28**, No. 13, 1831-1844 (1996).

Formal Methods After 15 Years: Status and Trends, a Paper Based on Contributions of the Panelists at the Formal Technique 95 Conference, Montreal, October 1995, J. P. Courtiat (University of Ottawa, Ottawa, Ontario K1N 6N5, Canada) et al., *Computer Networks and ISDN Systems* **28**, No. 13, 1845-1855 (1996).

A Three-Dimensional Medical Image Database Management System, M. Arya (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Computerized Medical Imaging and Graphics* **20**, No. 4, 269-284 (1996).

Negative Magnetoresistance in Amorphous 3D Superconducting Films at High (Up to 30 T) Magnetic Fields, A. V. Samoilov (California Institute of Technology, Pasadena, CA 91125) et al., *Czechoslovak Journal on Physics* **46**, No. S2, 761-762 (1996).

3D-XY Critical Behavior in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Thin-Films Probed by Penetration Depth Measurement, Y. Jaccard (University Neuchatel, CH-2000 Neuchatel, Switzerland) et al., *Czechoslovak Journal on Physics* **46**, No. S2, 1079-1080 (1996).

The Nature of the Overdoped State in High T_c Superconductors, J. P. Locquet (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and M. H. Pedersen, *Czechoslovak Journal on Physics* **46**, No. S2, 1085-1086 (1996).

Impact of the Symmetry of the Superconducting Wave Function on Supercurrent Transport in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Josephson Junctions, Z. G. Ivanov (Chalmers University of Technology, S-41296 Gothenburg, Sweden) et al., *Czechoslovak Journal on Physics* **46**, No. S3, 1311-1312 (1996).

Anomalous Gap Structures in $\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_8 < \Delta$ Single Crystals Measured by Scanning Tunneling Spectroscopy, G. I. Meijer (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Czechoslovak Journal on Physics* **46**, No. S3, 1347-1348 (1996).

Pinning-to-Barrier Crossover in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Single Crystals, M. V. Indenbom (École Polytechnique Fédérale de Lausanne, CH-1015 Lausanne, Switzerland) et al., *Czechoslovak Journal on Physics* **46**, No. S3, 1541-1542 (1996).

Irreversibility and Melting in YbCo Through AC Susceptibility Measurements, B. Billon (CNRS, BP 166, F-38042 Grenoble 9, France) et al., *Czechoslovak Journal on Physics* **46**, No. S3, 1581-1582 (1996).

Dynamics of Vortices Pinned by Columnar Defects in $\text{YBa}_2\text{Cu}_3\text{O}_7$ Crystals, J. R. Thompson (Oak Ridge National Laboratory, Oak Ridge, TN 37831) et al., *Czechoslovak Journal on Physics* **46**, No. S3, 1661-1662 (1996).

Vortex Motion Through the Splayed Configurations of Columnar Defects, L. Krusin-Elbaum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Czechoslovak Journal on Physics* **46**, No. S3, 1799-1800 (1996).

E

BiCMOS Process Integration and Device Optimization: Basic Concepts and New Trends, J. N. Burghartz (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Electrical Engineering* **79**, No. 5, 313-327 (1996).

Treatment of Chlorinated Ethenes in Groundwater with Ozone and Hydrogen Peroxide, P. B. Clancy (IBM Corporation, Essex Junction, VT 05452) et al., *Environmental Process* **15**, No. 3, 187-193 (1996).

On the Structure of ICTAL Events *In-Vitro*, R. D. Traub (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Epilepsia* **37**, No. 9, 879-891 (1996).

Rotation Orbits and the Farey Tree, L. Goldberg (Barra Inc., Berkeley, CA 94707) and C. Tresser, *Ergodic Theory and Dynamical Systems* **16**, 1011-1029 (1996).

H

Synthesis of Glycosylrifamycins, A New Type of Semisynthetic Rifamycins, C. Bartolucci (Istituto Strutturalistica Chimica G. Giacomello, I-00016 Monterotondo, Rome, Italy) et al., *Helvetica Chimica Acta* **79**, No. 6, 1611-1619 (1996).

I

Techniques for Data Hiding, W. Bender (Massachusetts Institute of Technology, Cambridge, MA 02139) et al., *IBM Systems Journal* **35**, No. 3-4, 313-336 (1996).

Computational Holographic Bandwidth Compression, M. Lucente (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IBM Systems Journal* **35**, No. 3-4, 349-365 (1996).

Experiments in Digital Graphic Design, J. F. Musgrave (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and M. R. Cooper, *IBM Systems Journal* **35**, No. 3-4, 499-513 (1996).

Personal Area Networks: Near-Field Intrabody Communication, T. G. Zimmerman (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *IBM Systems Journal* **35**, No. 3-4, 609-617 (1996).

Implementing OSI Agent/Managers for TWN, M. Feridun (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Communications Magazine* **34**, No. 9, 62-67 (1996).

Cable Access Beyond the Hype: On Residential Broad-Band Data Services Over HFC Networks, C. Bisdikian (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Communications Magazine* **34**, No. 11, 128-135 (1996).

Inside Parallel Computers: Trends in Interconnection Networks, H. J. Siegel (Purdue University, West Lafayette, IN 47907) and C. B. Stunkel, *IEEE Computational Science & Engineering* **3**, No. 3, 69-71 (1996).

Reality Check for Data Mining, E. Simoudis (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *IEEE Expert—Intelligent Systems & Their Applications* **11**, No. 5, 26-33 (1996).

Stock Selection Using Rule Induction, G. H. John (IBM Corporation, Old Orchard Road, Armonk, NY 10504) et al., *IEEE Expert—Intelligent Systems & Their Applications* **11**, No. 5, 52-58 (1996).

Low Frequency Noise in UHV/CVD Epitaxial Si and SiGe Bipolar Transistors, L. S. Vempati (Delphi Chassis Systems, Livonia, MI 48151) et al., *IEEE Journal of Solid-State Circuits* **31**, No. 10, 1458-1467 (1996).

VBIC95: The Vertical Bipolar Inter-Company Model, C. C. McAndrew (Motorola Inc., Tempe, AZ 85284) et al., *IEEE Journal of Solid-State Circuits* **31**, No. 10, 1476-1483 (1996).

A Parallel-Processing Chip with Embedded DRAM Macros, T. Sunaga (IBM Japan Ltd., Shiga 52023, Japan) et al., *IEEE Journal of Solid-State Circuits* **31**, No. 10, 1556-1559 (1996).

QOS-Based Routing of Multimedia Streams in Computer Networks, R. Vogel (Chemnitz University of Technology, D-09107 Chemnitz, Germany) et al., *IEEE Journal on Selected Areas in Communications* **14**, No. 7, 1235-1244 (1996).

Protocol Architecture for Multimedia Applications Over ATM Networks, D. D. Kandlur (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Journal on Selected Areas in Communications* **14**, No. 7, 1349-1359 (1996).

Object-Oriented Communication Structures for Multimedia Data Transport, K. Ravindran (CUNY City College, New York, NY 10031) and R. J. Steinmetz, *IEEE Journal on Selected Areas in Communications* **14**, No. 7, 1360-1375 (1996).

End-Station Performance Under Leaky Bucket Traffic Shaping, B. V. Patel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and C. C. Bisdikian, *IEEE Network* **10**, No. 5, 40-47 (1996).

Femtosecond Carrier Dynamics and Modelocking in Monolithic CPM Lasers, S. D. Brorson (Tele Danmark R&D, DK-2970 Horsholm, Denmark) et al., *IEEE Photonics Technology Letters* **8**, No. 10, 1308-1310 (1996).

Localized Saturation of Loss Grating in Complex Coupled DFB Laser Diodes, M. Achtenhagen (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *IEEE Photonics Technology Letters* **8**, No. 11, 1432-1434 (1996).

Imaging Magnetic Fields, J. Kirtley (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Spectrum* **33**, No. 12, 40+ (1996).

Server Allocation and Routing in Homogeneous Queues with Switching Penalties, R. Rajan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and R. Agrawal, *IEEE Transactions on Automatic Control* **41**, No. 11, 1657-1661 (1996).

An Efficient CMOS Bridging Fault Simulator: With Spice Accuracy, C. I. Di (IBM Corporation, Essex Junction, VT 05452) and J. A. G. Jess, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **15**, No. 9, 1071-1080 (1996).

On Particle-Mesh Coupling in Monte-Carlo Semiconductor-Device Simulation, S. E. Laux (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **15**, No. 10, 1266-1277 (1996).

Defect Level Evaluation in an IC Design Environment, J. T. Desousa (Technical University, P-1096 Lisbon, Portugal) et al., *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **15**, No. 10, 1286-1293 (1996).

Transient Simulation on Integrated Circuits in the Charge-Voltage Plane, A. Devgan (IBM Corporation, 11400 Burnet Road, Austin, TX 78758), *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **15**, No. 11, 1379-1390 (1996).

Switching Codes for Delta-I Noise Reduction, C. L. Chen (IBM Corporation, P.O. Box 950, Poughkeepsie, NY 12602) and B. W. Curran, *IEEE Transactions on Computers* **45**, No. 9, 1017-1021 (1996).

Algorithm-Based Fault Location and Recovery for Matrix Computations on Multiprocessor Systems, A. Roy-Chowdhury (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and P. Banerjee, *IEEE Transactions on Computers* **45**, No. 11, 1239-1247 (1996).

Need for Critical Assessment, R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Transactions on Electron Devices* **43**, No. 10, 1634-1639 (1996).

A Comparative Study of Advanced MOSFET Concepts, C. H. Wann (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Electron Devices* **43**, No. 10, 1742-1753 (1996).

Technology and Device Scaling Considerations for CMOS Imagers, H. S. Wong (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Transactions on Electron Devices* **43**, No. 12, 2131-2142 (1996).

Effects of Skew Angle on the Written-In Base-Line Shift (BLS) Signal at High-Track Densities, T. Chang (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3395-3397 (1996).

Submicron Trackwidth and Stripe Height MR Sensor Test Structures, R. E. Fontana (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3440-3442 (1996).

Antiferromagnetic and Hard-Magnetic Stabilization Schemes for Magnetoresistive Sensors, T. Lin (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3443-3445 (1996).

Micromagnetic Simulation of 10 Gb/In(2) Spin-Valve Heads, T. R. Koehler (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. L. Williams, *IEEE Transactions on Magnetics* **32**, No. 5, 3446-3448 (1996).

Harmonic Analysis of Nonlinear MR Head Transfer Characteristics, T. C. Arnoldussen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *IEEE Transactions on Magnetics* **32**, No. 5, 3449-3451 (1996).

Cross-Talk in Shielded Magnetoresistive Sensors, J. S. Feng (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), *IEEE Transactions on Magnetics* **32**, No. 5, 3458-3460 (1996).

Spontaneous Micromagnetic Oscillation in a Thin-Film Head, D. J. Seagle (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), *IEEE Transactions on Magnetics* **32**, No. 5, 3497-3499 (1996).

A Simple Recording Head Write Field Rise-Time Measurement, T. C. Arnoldussen (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3521-3523 (1996).

Nonlinear, Eddy-Current Damped, Thin-Film Write Head Model, K. B. Klaassen (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) and R. G. Hirko, *IEEE Transactions on Magnetics* **32**, No. 5, 3524-3526 (1996).

High-Frequency Characterization and Recording Performance of NiFe and Laminated FeN Heads, H. L. Hu (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3530-3532 (1996).

Effect of Substrate Texture on Thin-Film Disk Noise, X. Z. Xing (University of California, La Jolla, CA 92093) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3575-3577 (1996).

Microstructure/Magnetic Property Relationships in CoCrPt Magnetic Thin-Films, S. E. McKinlay (Stanford University, Stanford, CA 94305) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3587-3589 (1996).

Magnetic Performance and Tribology of Sputter-Textured Thin-Film Disks, M. Mirzamaani (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) and M. F. Doerner, *IEEE Transactions on Magnetics* **32**, No. 5, 3638-3641 (1996).

Wear of Hydrogenated Carbon-Coated Disks by Carbon-Coated and Uncoated Al₂O₃/TiC Sliders in Ultra-High Vacuum, X. H. Yun (University of California, Berkeley, CA 94720) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3669-3671 (1996).

A Glass Disk Distortion Effect in an Optical Flying Height Tester, T. Fukuzawa (IBM Corporation, Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3690-3692 (1996).

Composition Monitoring for One Year of Lube Cross-Contamination of Hard Disks Using Aluminum Substrates, K. Noda (IBM Corporation, Shimotsuruma, Yamato, Kanagawa 242, Japan) and M. Naoe, *IEEE Transactions on Magnetics* **32**, No. 5, 3708-3710 (1996).

Experimental and Theoretical Studies of Bump Formation During Laser Texturing of Ni-P Disk Substrates, A. C. Tam (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3771-3773 (1996).

The Interaction of Perfluoro-Polyether Lubricant with Hydrogenated Carbon, R. H. Wang (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3777-3779 (1996).

Characteristics of High-Density Recording Using a Single Layer Perpendicular Medium and a Merged MR Head, Y. Sonobe (IBM Japan Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3801-3803 (1996).

Noise and Delta-M-Perpendicular-To Analysis of a Cr-Rich Co-Cr Perpendicular Medium for an MR Head, Y. Ikeda (IBM Japan Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3828-3830 (1996).

The Effects of Wave-Form Asymmetry on the OF Track Capability of an MR Head, J. S. Feng (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), *IEEE Transactions on Magnetics* **32**, No. 5, 3872-3874 (1996).

Erase Band and Transition Charge: Model and MFM, M. R. Madison (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3878-3880 (1996).

Nonlinear Transition Shift Measurement in Perpendicular Magnetic Recording, H. Muraoka (Tohoku University, Sendai, Miyagi 98077, Japan) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 3926-3928 (1996).

Improving Performance of PRML/EPRML Through Noise Prediction, E. Eleftheriou (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and W. Hirt, *IEEE Transactions on Magnetics* **32**, No. 5, 3968-3970 (1996).

Quantitative Magnetometry Using Electron Holography: Field Profiles Near Magnetic Force Microscope Tips, D. G. Streblechenko (Arizona State University, Box 871504, Tempe, AZ 85287) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 4124-4129 (1996).

Magnetic Properties of Fe(N)/NiFe(N) Sputtered on Sloping Surfaces, R. E. Jones (Carnegie Mellon University, Pittsburgh, PA 15213) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 4588-4590 (1996).

Equalization and Detection in Storage Channels, S. K. Nair (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **32**, No. 5, 5206-5217 (1996).

Interframe Coding of Magnetic-Resonance Images, A. Nosratinia (Rice University, Houston, TX 77005) et al., *IEEE Transactions on Medical Imaging* **15**, No. 5, 639-647 (1996).

Algorithmic Aspects of a Neuron for Coherent Wave Synapse Realizations, S. L. Adler (Institute of Advanced Study, Olden Lane, Princeton, NJ 08540) et al., *IEEE Transactions on Neural Networks* **7**, No. 5, 1262-1271 (1996).

An Analysis of the Average Message Overhead in Replica Control Protocols, D. Saha (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Parallel and Distributed Systems* **7**, No. 10, 1026-1034 (1996).

Parallelized Direct Execution Simulation of Message Passing Parallel Programs, P. M. Dickens (IIT, Chicago, IL 60616) et al., *IEEE Transactions on Parallel and Distributed Systems* **7**, No. 10, 1090-1105 (1996).

A Framework for Resource-Constrained Rate-Optimal Software Pipelining, R. Govindarajan (Indian Institute of Science, Bangalore 560012, Karnataka, India) et al., *IEEE Transactions on Parallel and Distributed Systems* **7**, No. 11, 1133-1149 (1996).

Using Neural Networks to Predict Software Faults During Testing, T. M. Khoshgoftaar (Florida Atlantic University, Boca Raton, FL 33431) and R. M. Szabo, *IEEE Transactions on Reliability* **45**, No. 30, 456-462 (1996).

A More Realistic Locking Model and Its Analysis, A. Thomasian (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *Information Systems* **21**, No. 5, 409-430 (1996).

Composing and Combining Complex Designs from Different Project Perspectives, A. Demaid (Open University, Milton Keynes MK7 6AA, Bucks, England) and J. Zucker, *International Journal of Computer Integrated Manufacturing* **9**, No. 6, 454-462 (1996).

Hierarchical Decomposition: A Parallel Implementation of the Barnes-Hut Tree Algorithm, G. Bhanot (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *International Journal of High-Speed Computing* **8**, No. 1, 1-12 (1996).

Anisotropic Vortex Dynamics and Phase-Diagram of $\text{YBa}_2\text{Cu}_3\text{O}_7$ Single Crystals with Canted Columnar Defects, D. S. Reed (USN, Research Laboratory, Washington, DC 20375) et al., *International Journal of Modern Physics B* **10**, No. 22, 2723-2743 (1996).

Ultrahigh-Vacuum Scanning Tunneling Microscope-Based Nanolithography and Selective Chemistry on Silicon Surfaces, J. W. Lyding (University of Illinois, 1406 W. Green Street, Urbana, IL 61801) et al., *Israel Journal of Chemistry* **36**, No. 1, 3-10 (1996).

J

A New 2×2 Matrix Representation for Twisted Nematic Liquid-Crystal Displays at Oblique-Incidence, A. Lien (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and C. J. Chen, *Japanese Journal of Applied Physics Part 2* **35**, No. 9B, 1204-1207 (1996).

Conductance Measurements on P-B Centers at the (111)Si-SiO₂ Interface, M. J. Uren (Defense Research Agency, Great Malvern WR14 3PS, England) et al., *Journal of Applied Physics* **80**, No. 7, 3915-3922 (1996).

Pressure Generation and Measurement in the Rapid Vaporization of Water on a Pulsed Laser Heated Surface, H. K. Park (Vanderbilt University, Nashville, TN 37235) et al., *Journal of Applied Physics* **80**, No. 7, 4072-4081 (1996).

Effect of Copper on the Microstructure and Electromigration Lifetime of Ti-AlCu-Ti Fine Lines in the Presence of Tungsten Diffusion Barriers, A. G. Domenicucci (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Journal of Applied Physics* **80**, No. 9, 4952-4959 (1996).

Microstructure Modifications Induced by Bonded Hydrogen in N-Rich SiN/H Films, E. C. Paloura (Aristotelian University of Thessaloniki, GR-54006 Thessaloniki, Greece) et al., *Journal of Applied Physics* **80**, No. 10, 5742-5747 (1996).

Crystallization Behavior and Mechanical Properties of a Nylon-6, Nylon-6/6, and Nylon-12 Terpolyamide, C. R. Davis (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Applied Polymer Science* **62**, No. 13, 2237-2245 (1996).

A Density Functional Study of the Intermolecular Interactions of Benzene, E. J. Meijer (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and M. Sprik, *Journal of Chemical Physics* **104**, No. 19, 8684-8689 (1996).

Dynamics of the Displacement of Co from Cu(111) by H-Atoms Incident from the Gas Phase, C. T. Rettner (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and D. J. Auerbach, *Journal of Chemical Physics* **104**, No. 19, 8842-8848 (1996).

Phase Diagram of Yukawa Systems Near the One-Component-Plasma Limit Revisited, S. Hamaguchi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Chemical Physics* **105**, No. 17, 7641-7647 (1996).

Alignment of D-2(V,J) Desorbed from Cu(111): Low-Sensitivity of Activated Dissociative Chemisorption to Approach Geometry, S. J. Gulding (University of California, Santa Barbara, CA 93106) et al., *Journal of Chemical Physics* **105**, No. 21, 9702-9705 (1996).

Verification of Numerical Models Used in Microelectronics Packaging Design by Interferometric Displacement Measurement Methods, B. Han (Clemson University, Clemson, SC 29634) et al., *Journal of Electronic Packaging* **118**, No. 3, 157-163 (1996).

Analysis of Snubber-Clamped Diode-String Mixed Voltage Interface ESD Protection Network for Advanced Microprocessors (Reprinted from Electrical Overstress Electrostatic Discharge Symposium Proceedings, 1995), S. H. Voldman (IBM Corporation, 1000 River Road, Essex Junction, VT 05452) et al., *Journal of Electrostatics* **38**, No. 1-2, 3-31 (1996).

Failure Analysis of Shallow Trench Isolated ESD Structures, J. M. Never (IBM Corporation, 1000 River Road, Essex Junction, VT 05452) and S. H. Voldman, *Journal of Electrostatics* **38**, No. 1-2, 93-112 (1996).

ESD Failure Mechanisms of Inductive and Magnetoresistive Recording Heads, A. J. Wallash (IBM Corporation, 1000 River Road, Essex Junction, VT 05452) et al., *Journal of Electrostatics* **38**, No. 1-2, 159-173 (1996).

Design and Control of Micro Cellular Networks with QOS Provisioning for Real-Time Traffic, M. Naghshineh (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and A. S. Acampora, *Journal of High-Speed Networks* **5**, No. 1, 53-71 (1996).

Design Issues in Wireless LANs, H. Ahmadi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of High-Speed Networks* **5**, No. 1, 87-104 (1996).

Dendrimers and Hyperbranched Polymers: Two Families of Three-Dimensional Macromolecules with Similar but Clearly Distinct Properties, J. M. J. Frechet (Cornell University, Ithaca, NY 14853) et al., *Journal of Macromolecular Science—Pure and Applied Chemistry* **33**, No. 10, 1399-1425 (1996).

Current Driven Excitation of Magnetic Multilayers, J. C. Slonczewski (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Magnetism and Magnetic Materials* **159**, No. 1-2, 7 (1996).

Atomic Mechanism for Giant Magnetoresistance in Layered CrFe, R. K. Nesbet (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Journal of Magnetism and Magnetic Materials* **159**, No. 1-2, 22 (1996).

Spatial Variation of Currents and Fields Due to Localized Scatterers in Metallic Conduction, R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Mathematical Physics* **37**, No. 10, 5259 (1996).

Evaluating the Performance of Multithreading and Prefetching in Multiprocessors, R. Bianchini (University Fed. Rio de Janeiro, BR-21945970 Rio de Janeiro, Brazil) and B. H. Lim, *Journal of Parallel and Distributed Computing* **37**, No. 1, 83-97 (1996).

COIR: An Object-Oriented System for Control and Dynamic Data Parallelism, N. Sundaresan (IBM Corporation, 555 Bailey Avenue, San Jose, CA 95141) and D. Gannon, *Journal of Parallel and Distributed Computing* **37**, No. 1, 98-105 (1996).

Studies of the Vibrational Frequencies and Intensities of Primary Alkyl Radicals, $\text{CH}_3(\text{CH}_2)_N\text{CH}_2$ for $N = 1-6$, J. Pacansky (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of Physical Chemistry* **100**, No. 42, 6828-6834 (1996).

Platinum-Modified Nucleobase Pairs in the Solid State: A Theoretical Study, P. Carloni (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and W. Andreoni, *Journal of Physical Chemistry* **100**, No. 4590, 7797-7800 (1996).

Periodic Domain Inversion in Poled KTiOPO_4 via High-Resolution X-ray Topography and Diffraction-Space Mapping, Z. W. Hu (University of Warwick, Coventry CV4 7AL, W. Midlands, England) et al., *Journal of Physics D—Applied Physics* **29**, No. 10, 2696-2704 (1996).

Ab-Initio Molecular-Dynamics Simulation of Liquids and Solutions, M. Sprik (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), *Journal of Physics—Condensed Matter* **8**, No. 47, 9405-9409 (1996).

Interdiffusion of Polymers Across Interfaces, G. Agrawal (University of Delaware, Newark, DE 19716) et al., *Journal of Polymer Science* **34**, No. 17, 2919-2940 (1996).

Small-Molecule Diffusion in a Rubbery Polymer Near T-G: Effects of Probe Size, Shape, and Flexibility, D. D. Deppe (Northwestern University, 2145 Sheridan Road, Evanston, IL 60208) et al., *Journal of Polymer Science* **34**, No. 17, 2987-2997 (1996).

Polymer-Chain Organization and Orientation in Ultrathin Films: A Spectroscopic Investigation, M. M. Despotopoulou (Stanford University, Stanford, CA 94305) et al., *Journal of Polymer Science Part B—Polymer Physics* **34**, No. 14, 2335-2349 (1996).

High T-G Polyimide Nanofoams Derived from Pyromellitic Dianhydride and 1,1-Bis(4-Aminophenyl)-1-Phenyl-2,2,2-Trifluoroethane, J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of Polymer Science Part B—Polymer Physics* **34**, No. 14, 2867–2877 (1996).

Microporous Polycyanurate Networks, J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of Polymer Science Part B—Polymer Physics* **34**, No. 14, 2879–2888 (1996).

Oxidation Behavior of a Si-C-O-Fiber-Reinforced Magnesium Aluminosilicate, A. Kumar (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and K. M. Knowles, *Journal of the American Ceramic Society* **79**, No. 9, 2364–2374 (1996).

Effect of Oxidation Heat Treatments on the Mechanical Behavior of a Si-C-O-Fiber-Reinforced Magnesium Aluminosilicate, A. Kumar (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and K. M. Knowles, *Journal of the American Ceramic Society* **79**, No. 9, 2375–2878 (1996).

Structure of a Model Transient Peroxide Intermediate of Peroxidases by *Ab-Initio* Methods, G. Loew (Molecular Research Institute, 845 Page Mill Road, Palo Alto, CA 94304) and M. Dupuis, *Journal of the American Chemical Society* **118**, No. 43, 584–587 (1996).

Dendritic Initiators for Living Radical Polymerizations: A Versatile Approach to the Synthesis of Dendritic Linear Block-Copolymers, M. R. Leduc (Cornell University, Ithaca, NY 14853) et al., *Journal of the American Chemical Society* **118**, No. 45, 1111–1118 (1996).

Unconventional Bonding of Azafullerenes: Theory and Experiment, W. Andreoni (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Journal of the American Chemical Society* **118**, No. 45, 1335–1336 (1996).

Radical Crossover in Nitroxide Mediated Living Free-Radical Polymerizations, C. J. Hawker (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of the American Chemical Society* **118**, No. 46, 1467–1471 (1996).

The Weakest Failure Detector for Solving Consensus, T. D. Chandra (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *Journal of the Association for Computing Machinery* **43**, No. 4, 685–722 (1996).

A Study of the Oxidation Slow-Down Mechanism Induced by Carbon Contamination on Silicon Surface, M. Tsuchiaki (IBM Corporation, Hopewell Junction, NY 12533) et al., *Journal of the Electrochemical Society* **143**, No. 9, 2965–2972 (1996).

Etching of Tantalum in Fluorine Containing High-Density Plasmas, R. Hsiao (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and D. Miller, *Journal of the Electrochemical Society* **143**, No. 10, 3266–3270 (1996).

Two-Gap Behavior Observed in YbCo (100)A-Axis, (110)C-Axis Tunnel Junctions, K. A. Muller (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), *Journal of the Physical Society of Japan* **65**, No. 9, 3090–3091 (1996).

The Effect of Disk Roughness on the Wear of Contact Recording Heads, M. Suk (IBM Corporation, San Jose, CA 95193), *Journal of Tribology—Transactions of the ASME* **118**, No. 4, 794–799 (1996).

Schiff-Base Precursor Compounds for the Chemical Beam Epitaxy of Oxide Thin-Films I. Deposition of CuO on MgO(001) Using Copper (II) Bis (Benzoylacetone): Ethylenediamine, E. Fritsch (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Journal of Vacuum Science & Technology A* **14**, No. 6, 3208–3213 (1996).

Fluorocarbon High-Density Plasmas VII. Investigation of Selective SiO₂-to-Si₃N₄ High Density Plasma Etch Processes, Y. Zhang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Vacuum Science & Technology A* **14**, No. 6, 3291 (1996).

Ionized Physical Vapor-Deposition of Cu for High-Aspect-Ratio Damascene Trench Fill Applications, C. A. Nichols (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Vacuum Science & Technology B* **14**, No. 5, 3270–3275 (1996).

L

Influence of Structure on Smectic-A-Smectic-A Phase Separation, P. Gorria (University of Bordeaux 1, F-33600 Pessac, France) et al., *Liquid Crystals* **21**, No. 4, 523–530 (1996).

M

Polymer Mobility in Thin-Films, B. Frank (University of Massachusetts, Amherst, MA 01003) et al., *Macromolecules* **29**, No. 20, 6531–6534 (1996).

Effect of ABC Triblock Copolymers with an Elastomeric Midblock in the Adhesion Between Immiscible Polymers, H. R. Brown (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Macromolecules* **29**, No. 20, 6582–6588 (1996).

High-Resolution Profiling of the Polyimide-Polyimide Interface, N. C. Stoffel (Cornell University, Ithaca, NY 14853) et al., *Macromolecules* **29**, No. 21, 6880–6891 (1996).

Studies of the Solid-State Conformation of Polysilaethylene: An Organic/Inorganic Hybrid Polymer with an Alternating C/Si Backbone, M. W. Tsao (University of Delaware, Newark, DE 19716) et al., *Macromolecules* **29**, No. 22, 7130–7135 (1996).

Equilibrium Flexibility of a Rigid Linear Conjugated Polymer, P. M. Cotts (DuPont Company Inc., Wilmington, DE 19880) et al., *Macromolecules* **29**, No. 23, 7323–7328 (1996).

Poly(Aryl Ether Benzimidazoles), R. Twieg (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Macromolecules* **29**, No. 23, 7335–7341 (1996).

Electron-Beam Irradiation of a Perfluoroalkoxy Fluorocarbon Resin: Tetrafluoroethylene/Perfluoro Methyl Vinyl Ether Copolymer, J. Pacansky (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Macromolecules* **29**, No. 24, 7699-7704 (1996).

Nickel Silicide Thermal Stability on Polycrystalline and Single Crystalline Silicon, E. G. Colgan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Materials Chemistry and Physics* **46**, No. 2-3, 209-214 (1996).

Epitaxial Growth of Thin-Films of $\text{SrTi}_{1-x}\text{Ru}_x\text{O}_{3-\delta}$ by Pulsed-Laser Deposition, A. Gupta (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Materials Research Bulletin* **31**, No. 12, 1463-1470 (1996).

On Weight-Functions Which Admit Explicit Gauss-Turan Quadrature-Formulas, L. Gori (University Roma La Sapienza, I-00161 Rome, Italy) and C. A. Micchelli, *Mathematics of Computation* **65**, No. 216, 1567-1581 (1996).

An All-Fiber-Optic Fourier-Transform Spectrometer, M. Stelzle (University of Tübingen, Eberhardstrasse 29, D-72762 Reutlingen, Germany) et al., *Measurement Science & Technology* **7**, No. 11, 1619-1630 (1996).

Electron-Beam Technology: SEM to Microcolumn, T. H. P. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Microelectronic Engineering* **32**, No. 1-4, 113-130 (1996).

The Nanoworld: Chances and Challenges, H. Rohrer (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), *Microelectronic Engineering* **32**, No. 1-4, 5-14 (1996).

Scaling Silicon MOS Devices to Their Limits, S. J. Wind (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Microelectronic Engineering* **32**, No. 1-4, 271-282 (1996).

Comprehensive Gate-Oxide Reliability Evaluation for DRAM Processes, R. P. Vollertsen (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) and W. W. Abadeer, *Microelectronics and Reliability* **36**, No. 11-1, 1631-1638 (1996).

The Application of Advanced Techniques for Complex Focused Ion Beam Device Modification, M. T. Abramo (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) and L. L. Hahn, *Microelectronics and Reliability* **36**, No. 11-1, 1775-1778 (1996).

Impact of Channel Allocation Policies on Quality of Service of Video on Demand Over CATV, J. P. Nussbaumer (IBM Corporation, Old Orchard Road, Armonk, NY 10504) and F. Schaffa, *Multimedia Tools and Applications* **2**, No. 2, 111-131 (1996).

Factors Influencing ATM Adapter Throughput, A. Rindos (IBM Corporation, Research Triangle Park, NC 27709) et al., *Multimedia Tools and Applications* **2**, No. 3, 253-271 (1996).

Content-Based Representation and Retrieval of Visual Media: A State-of-the-Art Review, P. Aigrain (University of Toulouse 3, 118 Route Narbonne, F-31062 Toulouse, France) et al., *Multimedia Tools and Applications* **3**, No. 3, 179-202 (1996).

N

A Mechanism for Generation of Long-Range Synchronous Fast Oscillations in the Cortex, R. D. Traub (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Nature* **383**, No. 6601, 621-624 (1996).

Global Compartmental Analysis of the Fluorescence Decay Surface of Intramolecular Chain Mediated and Through-Space Excited State Complex Formation of a Silane Linked Donor Acceptor System, E. Hermans (Katholieke University Leuven, B-3001 Heverlee, Belgium) et al., *New Journal of Chemistry* **20**, No. 7-8, 829-838 (1996).

Channeling Radiation from LIH and LID, B. L. Berman (George Washington University, Washington, DC 20052) et al., *Nuclear Instruments & Methods in Physics Research Section B* **119**, No. 1-2, 71-78 (1996).

O

Parallel Computing Helps Three-Dimension Depth Imaging, Processing, E. O. Nestvold (IBM Corporation, Houston, TX) et al., *Oil & Gas Journal* **94**, No. 44, 35+ (1996).

Performance of a Diode-Pumped $\text{BaY}_2\text{F}_8/\text{Er}^{3+}$ (7.5%) Laser at 2.8- μm , S. Wittwer (University of Bern, Sidlerstrasse 5, CH-3012 Bern, Switzerland) et al., *Optics Communications* **132**, No. 1-2, 107-110 (1996).

First-Principles Investigation of Enantioselective Catalysis: Asymmetric Allylic Amination with Pd Complexes Bearing P, N-Ligands, P. E. Blochl (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and A. Togni, *Organometallics* **15**, No. 20, 4125-4132 (1996).

P

Is There Any Texture in the Image?, K. Karu (Michigan State University, East Lansing, MI 48824) et al., *Pattern Recognition* **29**, No. 9, 1437-1446 (1996).

Should Caches Be Split or Shared: Analysis Using the Superposition of Bursty Stack Depth Processes, H. Levy (Rutgers State University, New Brunswick, NJ 08903) and R. J. T. Morris, *Performance Evaluation* **27**, No. 8, 175-188 (1996).

Stochastic Analysis of Gang Scheduling in Parallel and Distributed Systems, M. S. Squillante (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Performance Evaluation* **27**, No. 8, 273-296 (1996).

Numerical Analysis of Deterministic and Stochastic Petri Nets with Concurrent Deterministic Transitions, C. Lindemann (Technical University of Berlin, Rudower Chaussee 5, D-12489 Berlin, Germany) and G. S. Shedler, *Performance Evaluation* **27**, No. 8, 565-582 (1996).

Accelerating Mean Time to Failure Computations, P. Heidelberger (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *Performance Evaluation* **27**, No. 8, 627-645 (1996).

Addressing Future Analytical Requirements of Electronic Materials, B. Elkareh (IBM Corporation, Route 52, Hopewell Junction, NY 12533), *Philosophical Transactions of the Royal Society of London Series A* **354**, No. 1719, 2597-2617 (1996).

Off-Specular X-ray Scattering Studies of the Morphology of Thin-Films, S. K. Sinha (Argonne National Laboratory, Argonne, IL 60439) et al., *Physica A* **231**, No. 1-3, 99-110 (1996).

Mesoscopic Noise: Common-Sense View, R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physica B* **227**, No. 1-4, 156-160 (1996).

Electron-Transport in the Quantum Hall Regime in Strained Si-SiGe, K. Ismail (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physica B* **227**, No. 1-4, 310-314 (1996).

Ground-State and Excited-State Properties of Neutral and Anionic Selenium Dimers and Trimers, C. Heinemann (Technical University of Berlin, Str. 17 Juni 135, D-10623 Berlin, Germany) et al., *Physical Review A* **54**, No. 3, 1979-1993 (1996).

Electron Absorption by Complex Potentials: One Dimensional Case, P. Molinasmat (University of Paris 11, Batiment 213, F-91405 Orsay, France) and P. Molinasmat, *Physical Review A* **54**, No. 3, 2060-2065 (1996).

Schumacher's Quantum Data-Compression as a Quantum Computation, R. Cleve (University of Calgary, Calgary, Alberta T2N 1N4, Canada) and D. P. DiVincenzo, *Physical Review A* **54**, No. 4, 2636-2650 (1996).

Parity Bit in Quantum Cryptography, C. H. Bennett (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review A* **54**, No. 4, 2675-2684 (1996).

Fully Relativistic Calculations for the Ground State of the AgH Molecule, A. K. Mohanty (IBM Corporation, P.O. Box 950, Poughkeepsie, NY 12602) and F. A. Parpia, *Physical Review A* **54**, No. 4, 2863-2867 (1996).

Nonadiabatic Phase-Matrix Method for Vibrational-Excitation and Dissociative Attachment in Electron-Molecule Scattering, R. K. Nesbet (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Physical Review A* **54**, No. 4, 2899-2905 (1996).

Mixed-State Entanglement and Quantum Error Correction, C. H. Bennett (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review A* **54**, No. 5, 3824-3851 (1996).

Magnetic-Field-Induced Multiple Electronic States in $\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$, G. Xiao (Brown University, Providence, RI 02912) et al., *Physical Review B* **54**, No. 9, 6073-6076 (1996).

Spectral Hole Burning of $\text{Eu}_2 < \text{In CaF}_2$, D. M. Boye (Davidson College, Davidson, NC 28036) et al., *Physical Review B* **54**, No. 9, 6263-6271 (1996).

Raman Study of the Oxygen Anharmonicity in $\text{YBa}_2\text{Cu}_3\text{O}_x$ ($6.4 < x < 7.0$) Superconductors, D. Palles (National Technology University of Athens, GR-15780 Athens, Greece) et al., *Physical Review B* **54**, No. 9, 6721-6726 (1996).

Variation of the Inplane Penetration Depth $\lambda(\text{AB})$ as a Function of Doping in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ δ -Thin-Films on SrTiO_3 : Implications for the Overdoped State, J. P. Locquet (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Physical Review B* **54**, No. 10, 7481-7488 (1996).

Growth, Microstructure, and Electrochemical Oxidation of MBE-Grown C-Axis La_2CuO_4 Thin Films, F. Arrouy (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Physical Review B* **54**, No. 10, 7512-7520 (1996).

Si 2P Core Level Shifts at the $\text{Si}(100)\text{-SiO}_2$ Interface: An Experimental Study, K. Z. Zhang (University of Michigan, Ann Arbor, MI 48109) et al., *Physical Review B* **54**, No. 11, 7686-7689 (1996).

Interactions of Hydrogen and Methyl Radicals with Diamond C(111) Studied by Sum-Frequency Vibrational Spectroscopy, R. P. Chin (Nellcor Puritan Bennett, 4280 Hacienda Drive, Pleasanton, CA 94588) et al., *Physical Review B* **54**, No. 11, 8243-8251 (1996).

Large Magnetotunneling Effect at Low Magnetic Fields in Micrometer-Scale Epitaxial $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ Tunnel-Junctions, Y. Lu (Brown University, Providence, RI 02912) et al., *Physical Review B* **54**, No. 12, 8357-8360 (1996).

Vortex Lattice-Dynamics in $\text{DyBa}_2\text{Cu}_3\text{O}_7/(\text{Sr}_{1-x}\text{Ca}_x)\text{RuO}_3$ Multilayers, L. Mieville (University of Geneva, 24 Quai E. Ansermet, CH-1211 Geneva 4, Switzerland) et al., *Physical Review B* **54**, No. 13, 9525-9531 (1996).

Weak-Localization in Back-Gated $\text{Si/Si}_{0.7}\text{Ge}_{0.3}$ Quantum-Well Wires Fabricated by Reactive Ion Etching, S. J. Koester (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review B* **54**, No. 15, 604-608 (1996).

Low-Energy Electron Microscopy Study of Step Mobilities on $\text{Si}(001)$, N. C. Bartelt (University of Maryland, College Park, MD 20742) and R. M. Tromp, *Physical Review B* **54**, No. 16, 1731-1740 (1996).

Ostwald Ripening of Two-Dimensional Islands on $\text{Si}(001)$, N. C. Bartelt (University of Maryland, College Park, MD 20742) et al., *Physical Review B* **54**, No. 16, 1741-1751 (1996).

Type-II Antiferromagnetism in Compounds of Iron with 4D Metals, P. M. Marcus (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Physical Review B* **54**, No. 17, 1933-1935 (1996).

Angle-Dependent Reversible and Irreversible Magnetic Torque in Single-Crystalline $Y_2Ba_4Cu_8O_{16}$, D. Zech (University of Zurich, Winterthurestrasse 190, CH-8057 Zurich, Switzerland) et al., *Physical Review B* **54**, No. 17, 2535-2542 (1996).

Electrical Conductivities for Hot, Dense Hydrogen, I. Kwon (Seoul National University, Seoul 151742, South Korea) et al., *Physical Review E* **54**, No. 3, 2344-2851 (1996).

Simple Nonequilibrium Extension of the Ising-Model, A. Achahbar (University of Granada, E-18071 Granada, Spain) et al., *Physical Review E* **54**, No. 5, 4838-4843 (1996).

Generation of Magnetic Flux by Single Grain Boundaries of $YBaCu_3O_{7-x}$, J. Mannhart (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Physical Review Letters* **77**, No. 13, 2782-2785 (1996).

Thermodynamics of a Charged Fermion Layer at High $R(S)$ Values, S. Shapira (Cavendish Laboratory, Madingley Road, Cambridge CB3 0HE, England) et al., *Physical Review Letters* **77**, No. 15, 3181-3184 (1996).

Fault-Tolerant Error-Correction with Efficient Quantum Codes, D. P. DiVincenzo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and P. W. Shor, *Physical Review Letters* **77**, No. 15, 3260-3263 (1996).

Scaling of Low-Order Structure Functions in Homogeneous Turbulence, N. Z. Cao (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review Letters* **77**, No. 18, 3799-3802 (1996).

Nonlinear Dynamics of Modulated Flow Between a Porous Injector and an Impermeable Substrate, J. A. Medina (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and D. T. Schwartz, *Physics of Fluids* **8**, No. 11, 2895-2905 (1996).

Polyimide Foams Derived from a High T-G Polyimide with Grafted Poly(Alpha-Methylstyrene), J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Polymer* **37**, No. 23, 5229-5236 (1996).

On Queues with Interarrival Times Proportional to Service Times, I. Cidon (Technion, Israel Institute of Technology, IL 32000 Haifa, Israel) et al., *Probability in the Engineering and Information Sciences* **10**, No. 1, 87-107 (1996).

Forcing of Periodic Orbits for Interval Maps and Renormalization of Piecewise Affine Maps, M. Martens (State University of New York, Stony Brook, NY 11794) and C. Tresser, *Proceedings of the American Mathematical Society* **124**, No. 9, 2863-2870 (1996).

Light-Directed Synthesis of High-Density Oligonucleotide Arrays Using Semiconductor Photoresists, G. McGall (Affymetrix Inc., 3380 Central Expressway, Santa Clara, CA 95051) et al., *Proceedings of the National Academy of Sciences of the United States of America* **93**, No. 24, 3555-3560 (1996).

Q

Evaluation of a Two-Day Time Scale of High-Reliability Electronic Assemblies by *In-Situ* Electrical and Optomechanical Test Techniques, G. Gregoris (Alcatel Espace, 26 Av. JF Champoll, F-31037 Toulouse, France) et al., *Quality and Reliability Engineering International* **12**, No. 4, 247-252 (1996).

Physical Mechanisms of Dielectric Breakdown in SiO_2 for the Range of $-150^\circ C$ to $150^\circ C$, W. W. Abadeer (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) and R. P. Vollertsen, *Quality and Reliability Engineering International* **12**, No. 4, 287-289 (1996).

S

Ergonomics Task-Analysis in Technical Training: Case Study, M. J. Bourassa (IBM Canada, 23 BD Aeroport, Bromont, Quebec JOE 1L0, Canada) et al., *Safety Science* **23**, No. 2-3, 145-146 (1996).

Organic Glasses: A New Class of Photorefractive Materials, P. M. Lundquist (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Science* **274**, No. 5290, 1182-1185 (1996).

Life-Styles of the Information Rich, H. Dutton (IBM Corporation, Old Orchard Road, Armonk, NY 10504), *Search* **27**, No. 8, 243-246 (1996).

Growth and Transport Properties of Thin Bi Films on $InP(110)$, B. G. Briner (Fritz Haber Institute, D-14195 Berlin, Germany) et al., *Semiconductor Science and Technology* **11**, No. 11, 1575-1581 (1996).

Convergence Properties of Minimization Algorithms for Convex Constraints Using a Structured Trust Region, A. R. Conn (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *SIAM Journal of Optics* **6**, No. 4, 1059-1086 (1996).

A Deterministic Poly(Log Log N)-Time N-Processor Algorithm for Linear Programming in Fixed Dimension, M. Ajtai (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and N. Megiddo, *SIAM Journal on Computing* **25**, No. 6, 1171-1195 (1996).

An Advanced End-Point Detection Solution for Less-Than-1-Percent Open Areas, P. Biolsi (IBM Corporation, 1000 River Street, Essex Junction, VT 05452) et al., *Solid State Technology* **39**, No. 12, 59+ (1996).

Space-Charge in Nanostructure Resonances, P. J. Price (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Superlattices and Microstructures* **20**, No. 3, 253-260 (1996).

Nanolithography with an Atomic-Force Microscope, M. Wendel (University of Munich, D-80539 Munchenberg, Germany) et al., *Superlattices and Microstructures* **20**, No. 3, 349-356 (1996).

Novel Structures from ARC-Vaporized Carbon and Metals: Single-Layer Carbon Nanotubes and Metallofullerenes, C. H. Kiang (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Surface Review Letters* **3**, No. 1, 765-769 (1996).

Structural Study of Self-Assembled Monolayer of 22-Mercapto-1-Docosanoic Acid on Silver(111), M. G. Samant (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Surface Science* **365**, No. 3, 729-734 (1996).

Epitaxial Strain and Epitaxial Bending, P. M. Marcus (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Surface Science* **366**, No. 1, 219-227 (1996).

Scanning Tunneling Microscopy and Spectroscopy of Individual C-60 Molecules on Si(100)-(2×1) Surfaces, X. W. Yao (University of Arizona, Tucson, AZ 85721) et al., *Surface Science* **366**, No. 3, L743-L749 (1996).

Temperature Dependence of the Epitaxial Growth of Pt on Basal-Plane Sapphire, T. J. Minvielle (Stanford University, Stanford, CA 94305) et al., *Surface Science* **366**, No. 3, L755-L759 (1996).

Templating a Face-Centered Cubic (110) Termination of C-60, P. W. Murray (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Surface Science* **367**, No. 3, 79-L (1996).

Intramolecular Features of Individual C-60 Molecules on Si(100) Observed by STM, X. W. Yao (University of Arizona, Tucson, AZ 85721) et al., *Surface Science* **367**, No. 3, 85-L (1996).

Increased Brightness and Lifetime of Polymer Light-Emitting Diodes with Polyaniline Anodes, S. Karg (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Synthetic Metals* **80**, No. 2, 111-117 (1996).

T

Characterizing the Behavior of High-Speed Interconnection Systems with Distributed Control, I. Chlamtac (Boston University, Boston, MA 02215) et al., *Telecommunications Systems* **6**, No. 2, 91-115 (1996).

The Generalized Y'X"/D/1 Queue: A Flexible Computer Communications Model, C. Bisdikian (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Telecommunications Systems* **6**, No. 2, 127-146 (1996).

Investigation of Thin-Film Transistors Using a Combination of Focused Ion Beam Etching and Cross-Sectional Transmission Electron Microscopy Observation, S. Tsuji (IBM Japan Ltd., Yamato, Kanagawa 242, Japan) et al., *Thin Solid Films* **282**, No. 1-2, 562-567 (1996).

Stabilization of Water-Soluble Surfactants at the Air-Water Interface with Gegenion Complexation, P. Stroeve (University of California, Davis, CA 95616) et al., *Thin Solid Films* **285**, 200-203 (1996).

Gas Transfer in Supported Films Made by Molecular Self-Assembly of Ionic Polymers, P. Stroeve (University of California, Davis, CA 95616) et al., *Thin Solid Films* **285**, 708-712 (1996).

Structure and Permeation in Gegenion Complex Langmuir-Blodgett Films, P. J. Bruinsma (University of California, Davis, CA 95616) et al., *Thin Solid Films* **285**, 713-717 (1996).

U

Greatly Defocused, Point-Projection, Off-Axis Electron Holography, J. M. Cowley (Arizona State University, Tempe, AZ 85287) et al., *Ultramicroscopy* **63**, No. 2, 133-147 (1996).

Z

Anomalous Dependence of the Critical Current of 45-Degrees Grain-Boundaries in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ on an Applied Magnetic Field, J. Mannhart (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Zeitschrift für Physik B—Condensed Matter* **101**, No. 2, 175-179 (1996).