

Recent publications by IBM authors

The information listed here is supplied by the Institute for Scientific Information and other outside sources. Reprints of the papers may be obtained by writing directly to the first author cited.

- Journals are listed alphabetically by title: papers are listed sequentially for each journal.

A

Information Retrieval on the Web, M. Kobayashi (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) and K. Takeda, *ACM Computing Surveys* **32**, No. 2, 144–173 (2000).

Data Prefetch Mechanisms, S. P. VanderWiel (IBM Corporation, 3605 Highway 52 North, Rochester, MN 55901) and D. J. Lilja, *ACM Computing Surveys* **32**, No. 2, 174–199 (2001).

Hint-Based Cooperative Caching, P. Sarkar (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and J. H. Hartman, *ACM Transactions on Computer Systems* **18**, No. 4, 387–419 (2000).

A Slicing-Based Approach for Locating Type Errors, F. Tip (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) and T. B. Dinesh, *ACM Transactions on Software Engineering and Methodology* **10**, No. 1, 5–55 (2001).

A Novel Approach to Functionalized Nanoparticles: Self Cross-Linking of Macromolecules in Ultradilute Solution, D. Mecerreyes (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Advanced Materials* **13**, No. 3, 204–208 (2001).

A User-Focused Security Service Architecture for Communication Networks, R. Sailer (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *AEU—International Journal of Electronics and Communications* **55**, No. 1, 72–80 (2001).

Violence Prevention at Work: A Business Perspective, C. W. Wilkinson (IBM Corporation, New Orchard Road, Armonk, NY 10504), *American Journal of Preventive Medicine* **20**, No. 2, 155–160 (2001).

Row Methods Adapted to a Cheap Jacobian, M. Gunther (University Karlsruhe, Kaiserstrasse 12, D76128 Karlsruhe, Germany) et al., *Applied Numerical Mathematics* **37**, No. 1–2, 231–240 (2001).

Mechanisms for Very Long Electromigration Lifetime in Dual-Damascene Cu Interconnections, C. K. Hu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **78**, No. 7, 904–906 (2001).

Writing and Reading Perpendicular Magnetic Recording Media Patterned by a Focused Ion Beam, J. Lohau (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Applied Physics Letters* **78**, No. 7, 990–992 (2001).

SiGe-on-Insulator Prepared by Wafer Bonding and Layer Transfer for High-Performance Field-Effect Transistors, L. J. Huang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **78**, No. 9, 1267–1269 (2001).

Atomic-Force Microscope Cantilevers for Combined Thermomechanical Data Writing and Reading, W. P. King (Stanford University, Stanford, CA 94305) et al., *Applied Physics Letters* **78**, No. 9, 1300–1302 (2001).

White-Noise Magnetization Fluctuations in Magnetoresistive Heads, N. Smith (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and P. Arnett, *Applied Physics Letters* **78**, No. 10, 1448–1450 (2001).

Formation of a Stratified Lanthanum Silicate Dielectric by Reaction with Si(001), M. Copel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **78**, No. 11, 1607–1609 (2001).

Inverse Magnetoresistance in Chromium-Dioxide-Based Magnetic Tunnel Junctions, A. Gupta (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **78**, No. 13, 1894–1896 (2001).

Low Noise Flux Gate Magnetic Field Sensors Using Ring-Core and Rod-Core Geometries, R. H. Koch (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. R. Rozen, *Applied Physics Letters* **78**, No. 13, 1897–1899 (2001).

Fractal Structure in Galactic Star Fields, B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. M. Elmegreen, *Astronomical Journal* **121**, No. 3, 1507–1511 (2001).

A Fractal Analysis of the HI Emission from the Large Magellanic Cloud, B. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Astrophysical Journal* **548**, No. 2, 749–769 (2001).

C

Room-Temperature Synthesis of α SiO₂ Thin Films by UV-Assisted Ozonolysis of a Polymer Precursor, M. Brinkmann (Massachusetts Institute of Technology, Cambridge, MA 02139) et al., *Chemistry of Materials* **13**, No. 3, 967–972 (2001).

When Computers Speak, Hear, and Understand, J. Lai (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *Communications of the ACM* **44**, No. 3, 66–67 (2001).

Pushing Functionality into Even Smaller Devices, C. Miner (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Communications of the ACM* **44**, No. 3, 72–73 (2001).

Spiritual Life and Information Technology, M. J. Muller (Lotus Corporation, Cambridge, MA 02142) et al., *Communications of the ACM* **44**, No. 3, 82–83 (2001).

A Commonsense Opportunity for Computing, D. Riecken (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *Communications of the ACM* **44**, No. 3, 132–133 (2001).

MAADLY Spanning the Length Scales in Dynamic Fracture, F. F. Abraham (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Computer Modeling in Engineering & Sciences* **1**, No. 4, 63–69 (2000).

DEAPspace: Transient Ad Hoc Networking of Pervasive Devices, R. Hermann (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Computer Networks* **35**, No. 4, 411–428 (2001).

Hitting the Distributed Computing Sweet Spot with Tspaces, T. J. Lehman (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Computer Networks* **35**, No. 4, 457–472 (2001).

Face Clustering of a Large-Scale CAD Model for Surface Mesh Generation, K. Inoue (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *Computer-Aided Design* **33**, No. 3, 251–261 (2001).

Java and Numerical Computing, R. F. Boisvert (National Institute of Standards and Technology, Gaithersburg, MD 20899) et al., *Computing in Science & Engineering* **3**, No. 2, 18–24 (2001).

D

Personalization of Supermarket Product Recommendations, R. D. Lawrence (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Data Mining and Knowledge Discovery* **5**, No. 1–2, 11–32 (2001).

Visualization and Analysis of Clickstream Data of Online Stores for Understanding Web Merchandising, J. Lee (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Data Mining and Knowledge Discovery* **5**, No. 1–2, 59–84 (2001).

Amorphous Carbon-Based Materials as the Interconnect Dielectric in ULSI Chips, A. Grill (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Diamond and Related Materials* **10**, No. 2, 234–239 (2001).

Being Prepared for Intrusion, D. Farmer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and W. Venema, *Dr. Dobbs's Journal* **26**, No. 4, 78+ (2001).

E

Centrality Functions of a Network with Capacities on Vertices and Edges, M. Takeuchi (Takushoku University, Hachioji, Tokyo 1938585, Japan) et al., *Electronics and Communications in Japan Part III* **84**, No. 6, 60–74 (2001).

Reduced Complexity Decoding Algorithm for Low Density Parity Check Codes, E. Eleftheriou (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Electronics Letters* **37**, No. 2, 102–104 (2001).

Multiscale Wavelet Analysis of Scattered Spherical Data: Design and Estimation, T. H. Li (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Environmetrics* **12**, No. 2, 179–202 (2001).

H

When Bots Collide, J. O. Kephart (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) and A. R. Greenwald, *Harvard Business Review* **78**, No. 4, 17+ (2000).

Designing the User Interface for Multimodal Speech and Pen-Based Gesture Applications: State-of-the-Art Systems and Future Research Directions, S. Oviatt (Oregon Graduate Institute of Science and Technology, 20000 Northwest Walker Road, Beaverton, OR 97006) et al., *Human-Computer Interaction* **15**, No. 4, 263–322 (2000).

Trends in e-Business Technologies, R. A. Smith (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709), *IBM Systems Journal* **40**, No. 1, 4–7 (2001).

The IBM Application Framework for e-Business, G. Flurry (IBM Corporation, 11400 Burnet Road, Austin, TX 78758) and W. Vicknair, *IBM Systems Journal* **40**, No. 1, 8–24 (2001).

WebSphere as an e-Business Server, D. F. Ferguson (IBM Corporation, Route 100, Somers, NY 10589) and R. Kerth, *IBM Systems Journal* **40**, No. 1, 25–45 (2001).

CICS and Enterprise JavaBeans, A. Bainbridge (IBM United Kingdom, Ltd., Winchester SO21 2JN, Hants, England) et al., *IBM Systems Journal* **40**, No. 1, 46–67 (2001).

Business-to-Business Integration with tpaML and a Business-to-Business Protocol Framework, A. Dan (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *IBM Systems Journal* **40**, No. 1, 68–90 (2001).

Java Management Extensions for Application Management, H. Kreger (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709) *IBM Systems Journal* **40**, No. 1, 104–129 (2001).

Security Challenges for Enterprise Java in an e-Business Environment, L. Koved (Tivoli Corporation, Austin, TX 78759) et al., *IBM Systems Journal* **40**, No. 1, 130–152 (2001).

Transcoding: Extending e-Business to New Environments, K. H. Britton (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709) et al., *IBM Systems Journal* **40**, No. 1, 153–178 (2001).

Intermediary-Based Transcoding Framework, S. C. Ihde (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IBM Systems Journal* **40**, No. 1, 179–192 (2001).

Application Hosting for Pervasive Computing, S. G. Hild (IBM Corporation, Immeuble Zeus, F-75611 Paris 12, France) et al., *IBM Systems Journal* **40**, No. 1, 193–219 (2001).

In-Process Metrics for Software Testing, S. H. Kan (IBM Corporation, Highway 52 North, Rochester, MN 55901) et al., *IBM Systems Journal* **40**, No. 1, 220–241 (2001).

Using Textual Demographics to Understand Computer Use: 1950–1990, J. W. Cortada (IBM Corporation, Armonk, NY 10504), *IEEE Annals of the History of Computing* **23**, No. 1, 34–56 (2001).

SiGe PMODFETs on Silicon-on-Sapphire Substrates with 116-GHz F(Max), S. J. Koester (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Electron Device Letters* **22**, No. 2, 92–94 (2001).

On the Temperature Dependence of Hysteresis Effect in Floating-Body Partially Depleted SOICMOS Circuits, R. Puri (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Journal of Solid-State Circuits* **36**, No. 2, 290–298 (2001).

A Terabit Multiservice Switch, K. Y. Yun (Applied Micro Circuits Corporation, 6310 Sequence Drive, San Diego, CA 92121), *IEEE Micro* **21**, No. 1, 58–70 (2001).

Gigabit Ethernet PCI Adapter Performance, M. L. Loeb (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709) et al., *IEEE Network* **15**, No. 2, 42–47 (2001).

IRDA-VFIR (16 Mb/s): Modulation Code and System Design, W. Hirt (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *IEEE Personal Communications* **8**, No. 1, 58–71 (2001).

Digital Communications Above 1-Gb/s Using 890 nm Surface-Emitting Light-Emitting Diodes, M. Akbulut (Purdue University, West Lafayette, IN 47907) et al., *IEEE Photonics Technology Letters* **13**, No. 1, 85–87 (2001).

Text-Independent Speaker Verification Using Covariance Modeling, R. D. Zilca (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Signal Processing Letters* **8**, No. 4, 97–99 (2001).

The International Software Connection, K. Mohan (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), *IEEE Software* **18**, No. 1, 100–103 (2001).

Building Networks on the Fly, R. Pascoe (Senior Technical Staff Consulting LLC, Harker Heights, TX 76543), *IEEE Spectrum* **38**, No. 3, 61–65 (2001).

Simulating Package Behavior Under Power Dissipation Using Uniform Thermal Loading, J. A. Wakil (IBM Corporation, 1701 North Street, Endicott, NY 13760) and P. S. Ho, *IEEE Transactions on Advanced Packaging* **24**, No. 1, 60–65 (2001).

Effect of Nonconducting Filler Additions on ACA Properties and the Reliability of ACA Flip-Chip on Organic Substrates, M. J. Yim (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and K. W. Paik, *IEEE Transactions on Components and Packaging Technologies* **24**, No. 1, 24–32 (2001).

EDA in IBM: Past, Present, and Future, J. Darringer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **19**, No. 12, 1476–1497 (2000).

Equipotential Shells for Efficient Inductance Extraction, M. Beattie (Carnegie Mellon University, Pittsburgh, PA 15213) et al., *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **20**, No. 1, 70–79 (2001).

Interconnect Synthesis Without Wire Tapering, C. J. Alpert (IBM Corporation, 11400 Burnet Road, Austin, TX 78758) et al., *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **20**, No. 1, 90–104 (2001).

Timed Circuit Verification Using TEL Structures, W. Belluomini (IBM Corporation, 11400 Burnet Road, Austin, TX 78758) et al., *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **20**, No. 1, 129–146 (2001).

The Maximum Factor Queue Length Batching Scheme for Video-on-Demand Systems, C. C. Aggarwal (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Computers* **50**, No. 2, 97–110 (2001).

Inherently Lower-Power High-Performance Superscalar Architectures, V. V. Zyuban (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and P. M. Kogge, *IEEE Transactions on Computers* **50**, No. 3, 268–285 (2001).

Analytical Modeling of the Partially Depleted SOI MOSFET, M. Y. Hammad (IBM Corporation, Essex Junction, VT 05452) and D. K. Schroder, *IEEE Transactions on Electron Devices* **48**, No. 2, 252–258 (2001).

The Pseudo-Two-Dimensional Approach to Model the Drain Section in SOI MOSFETs, M. Y. Hammad (IBM Corporation, Essex Junction, VT 05452) and D. K. Schroder, *IEEE Transactions on Electron Devices* **48**, No. 2, 386–387 (2001).

The Turbo Decoding Algorithm and Its Phase Trajectories, D. Agrawal (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) and A. Vardy, *IEEE Transactions on Information Theory* **47**, No. 2, 699–722 (2001).

Writing and Detecting Bits at 100 Gbit/in.² in Longitudinal Magnetic Recording Media, A. Moser (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2137–2139 (2000).

DFE Timing Acquisition: Analysis and a New Approach for Fast Acquisition, J. J. Wang (Data Storage Institute, Singapore, Singapore) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2193–2196 (2000).

A Design Method of a Multirate Servo Controller Using H- ∞ , T. Semba (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan), *IEEE Transactions on Magnetics* **36**, No. 5, 2219–2221 (2000).

Disk Drive Using the Thermal Signal from an MR Head as a Radial Position Sensor, G. J. Smith (IBM Corporation, Highway 52 North, Rochester, MN 55901) and H. H. Ottesen, *IEEE Transactions on Magnetics* **36**, No. 5, 2232–2234 (2000).

Electromechanical Modeling of Actuator Dynamics in a Load/Unload Disk Drive, E. H. Klaassen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *IEEE Transactions on Magnetics* **36**, No. 5, 2238–2240 (2000).

A Growth-Model for Polycrystalline Thin-Film Media: Comparison of Bicrystal and Unicrystal Grain Structures, Z. Jin (University of California, La Jolla, CA 92093) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2294–2296 (2000).

A Ni-Mn Spin Valve for High-Density Recording, T. S. Lin (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2563–2565 (2000).

1/F Noise in Saturated GMR Heads, M. Xiao (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2593–2595 (2000).

Inverted Spin Valves with IrMn Biasing Layer, A. M. Zeltser (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2626–2628 (2000).

Effect of the Additive X-1P on the Tribological Performance and Migration Behavior of PfpE Lubricant at the Head-Disk Interface, C. Y. Chen (MMC Technologies, San Jose, CA 95131) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2708–2710 (2000).

Laser Processing to Adjust the Suspension Preload of Magnetic Recording Head Stack Assemblies, G. P. Singh (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 2724–2726 (2000).

Evaluation of the Anisotropy Constant Using Transverse Biased Initial Susceptibility Method, G. R. Aranda (University Pais Vasco, E-20080 San Sebastian, Spain) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 3260–3262 (2000).

A Novel Interpolation Approach for Reducing Clock Rate in Multilevel Decision-Feedback Equalization Detectors, G. Mathew (National University of Singapore, Singapore 117608, Singapore) et al., *IEEE Transactions on Magnetics* **36**, No. 5, 3866–3878 (2000).

The Effects of Proton Irradiation on the Lateral and Vertical Scaling of UHV/CVD SiGeHBT BiCMOS Technology, J. D. Cressler (Auburn University, Auburn, AL 36849) et al., *IEEE Transactions on Nuclear Science* **47**, No. 6, 2515–2520 (2000).

Theoretical Determination of the Temporal and Spatial Structure of Alpha-Particle-Induced Electron-Hole Pair Generation in Silicon, P. Oldiges (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *IEEE Transactions on Nuclear Science* **47**, No. 6, 2575–2579 (2000).

Simulation of See-Induced Charge Collection in UHV/CVD SiGeHBTs, G. F. Niu (Auburn University, Auburn, AL 36849) et al., *IEEE Transactions on Nuclear Science* **47**, No. 6, 2682–2689 (2000).

The Role of Holistic Paradigms in Handwritten Word Recognition, S. Madhvanath (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and V. Govindarajan, *IEEE Transactions on Pattern Analysis and Machine Intelligence* **23**, No. 2, 149–164 (2001).

An Application of Discriminative Feature-Extraction LO Filter-Bank-Based Speech Recognition, A. Biem (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Speech and Audio Processing* **9**, No. 2, 96–110 (2001).

Fast Isosurface Generation Using the Volume Thinning Algorithm, T. Itoh (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *IEEE Transactions on Visualization and Computer Graphics* **7**, No. 1, 32–46 (2001).

Identifying the Structure of Business Processes for Comprehensive Enterprise Modeling, Y. Shinkawa (IBM Japan, Ltd., Chiba 2618522, Japan) and M. J. Matsumoto, *IEICE Transactions on Information and Systems* **84D**, No. 2, 239–248 (2001).

Robust Threshold DSS Signatures, R. Gennaro (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *Information and Computation* **164**, No. 1, 54–84 (2001).

A Simple Proof Technique for Priority-Scheduled Systems, J. H. Anderson (University of North Carolina, Chapel Hill, NC 27599) et al., *Information Processing Letters* **77**, No. 2–4, 63–70 (2001).

Derivation of a Rotator Circuit with Homogeneous Interconnect, H. P. Hofstee (IBM Corporation, 11400 Burnet Road, Austin, TX 78758) and J. Sawada, *Information Processing Letters* **77**, No. 2–4, 131–135 (2001).

On the Role of Formal Methods in Security, J. R. Rao (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *Information Processing Letters* **77**, No. 2–4, 209–212 (2001).

Real-Time Observations of the Growth and Development of Self-Assembled GeSi Islands on Si(001), F. M. Ross (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Institute of Physics Conference Series* **164**, 103–106 (1999).

High-Brightness Monochromator for Stem, P. E. Batson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Institute of Physics Conference Series* **165**, 213–214 (2000).

Electron Energy Loss (EELs) Spectroscopic Profiling of Microelectronic Devices, J. Bruley (IBM Corporation, Route 52, Hopewell Junction, NY 12533) and P. Flaitz, *Institute of Physics Conference Series* **165**, 223–224 (2000).

Local Potentials in Independent Electron Models, R. K. Nesbet (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *International Journal of Quantum Chemistry* **81**, No. 6, 384–388 (2001).

On the Statistical Properties of Diffie–Hellman Distributions, R. Canetti (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *Israel Journal of Mathematics* **120**, 23–46 (2000).

J

JSPS or Servlets: Which Architecture is Right for You? S. Petschulat (IBM Corporation, Armonk, NY 10504), *Java Report* **6**, No. 3, 54–56 (2001).

Electromigration of Copper in Al(0.25 At.% Cu) Conductor Lines, H. K. Kao (Intel Corporation, Santa Clara, CA 95052) et al., *Journal of Applied Physics* **89**, No. 5, 2588–2597 (2001).

Texture Transformations in Reactive Metal Films Deposited upon Amorphous Substrates, D. N. Dunn (University of Virginia, Charlottesville, VA 22903) et al., *Journal of Applied Physics* **89**, No. 5, 2635–2640 (2001).

Determination of Processing Damage in Thin Polycrystalline Ir Films Using Bragg-Peak Fringe Analysis, K. L. Saenger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and I. C. Noyan, *Journal of Applied Physics* **89**, No. 6, 3125–3131 (2001).

Determination of Ir Consumption During Thermal Oxidation and PbZr_{1-x}Ti_xO₃ Processing Using Bragg-Peak Fringe Analysis, K. L. Saenger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. A. Neumayer, *Journal of Applied Physics* **89**, No. 6, 3132–3137 (2001).

Chemical Modification of Sputtered Amorphous Carbon Surfaces, P. B. Leezenberg (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of Applied Physics* **89**, No. 6, 3498–3507 (2001).

Electron Mobility in Tris(8-Hydroxy-Quinoline)Aluminum Thin Films Determined Via Transient Electroluminescence from Single- and Multilayer Organic Light-Emitting Diodes, S. Barth (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Journal of Applied Physics* **89**, No. 7, 3711–3719 (2001).

Power Exponential Densities for the Training and Classification of Acoustic Feature Vectors in Speech Recognition, S. Basu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Computational and Graphical Statistics* **10**, No. 1, 158–184 (2001).

Weakness in Quaternion Signatures, D. Coppersmith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Cryptology* **14**, No. 2, 77–85 (2001).

Human Vision and Electronic Imaging, B. E. Rogowitz (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *Journal of Electronic Imaging* **10**, No. 1, 10–19 (2001).

Properties of GaN Epitaxial Layers Grown on 6H–SiC(0001) by Plasma-Assisted Molecular Beam Epitaxy, C. D. Lee (Carnegie Mellon University, Pittsburgh, PA 15213) et al., *Journal of Electronic Materials* **30**, No. 3, 162–169 (2001).

A Numerical Study of the Thermal Performance of a Tape Ball Grid Array (TBGA) Package, S. B. Sathe (IBM Corporation, 1701 North Street, Endicott, NY 13760) and B. G. Sammakia, *Journal of Electronic Packaging* **122**, No. 2, 107–114 (2000).

Fatigue Life Analysis of Solder Joints in Flip-Chip Bonding, Y. Tsukada (IBM Japan, Ltd., 800 Ichimiya, Yasu, Shiga 52023, Japan) et al., *Journal of Electronic Packaging* **122**, No. 3, 207–213 (2000).

Evaluation of Smear and Its Effect on the Mechanical Integrity of Plated Through-Hole Inner Plane Interface in Thick Printed Wiring Boards, R. Vankatraman (LSI Logic Corporation, 3140 Alfred Street, Santa Clara, CA 95054) et al., *Journal of Electronic Packaging* **123**, No. 1, 6–15 (2001).

Two-Dimensional Simulation of Wave Propagation in a Three-Pipe Junction, R. J. Pearson (Lotus Engineering, Hethel, Norfolk, England) et al., *Journal of Engineering for Gas Turbines and Power—Transactions of the ASME* **122**, No. 4, 549–555 (2000).

Buoyancy-Range to Inertial-Range Transition in Forced Stratified Turbulence, G. F. Carnevale (University of California, La Jolla, CA 92093) et al., *Journal of Fluid Mechanics* **427**, 205–239 (2001).

Sub-continuum Simulations of Heat Conduction in Silicon-on-Insulator Transistors, P. G. Sverdrup (Stanford University, Stanford, CA 94305) et al., *Journal of Heat Transfer—Transactions of the ASME* **123**, No. 1, 130–137 (2001).

Biquadratic Exchange Coupling in an Unequal Fe/Cr/Fe(100) Trilayer, P. Vavassori (Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439) et al., *Journal of Magnetism and Magnetic Materials* **223**, No. 3, 284–292 (2001).

An Investigation of Material Removal Mechanisms in Lapping with Grain-Size Transition, Y. P. Chang (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *Journal of Manufacturing Science and Engineering—Transactions of the ASME* **122**, No. 3, 413–419 (2000).

Evaluation of the Modified Edge Lift-Off Test for Adhesion Characterization in Microelectronic Multifilm Applications, J. C. Hay (Fast Forward Devices, 11020 Solway School Road, Suite 113, Knoxville, TN 37931) et al., *Journal of Materials Research* **16**, No. 2, 385–393 (2001).

Non-Alpha-Helical Elements Modulate Polytopic Membrane Protein Architecture, R. P. Riek (Saint Vincent's Hospital, Victor Chang Cardiac Research Institute, Darlinghurst, New South Wales 2010, Australia) et al., *Journal of Molecular Biology* **306**, No. 2, 349–362 (2001).

Extending UML to Improve the Representation of Design Patterns, M. Fontoura (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and C. J. de Lucena, *Journal of Object-Oriented Programming* **13**, No. 11, 12–19 (2001).

A Tree Projection Algorithm for Generation of Frequent Item Sets, R. C. Agarwal (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *Journal of Parallel and Distributed Computing* **61**, No. 3, 350–371 (2001).

Near-Edge X-ray-Absorption Fine-Structure (NEXAFS) Microscopy of a Polycarbonate/Poly(Acrylonitrile/Butadiene/Styrene) Blend, C. C. Sloop (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709) et al., *Journal of Polymer Science Part B* **39**, No. 5, 531–535 (2001).

Studies of the Magnetic Structure at the Ferromagnet–Antiferromagnet Interface, A. Scholl (University of California, Berkeley, CA 94720) et al., *Journal of Synchrotron Radiation* **8**, 101–104 (2001).

Interfaces for Mixed-Level Simulation with Sequential Elements, R. H. Klenke (Virginia Commonwealth University, 601 West Main Street, Richmond, VA 23284) et al., *Journal of Systems Architecture* **47**, No. 2, 87–101 (2001).

Stability of Advanced Photoresist Systems for Subquarter Micrometer Lithography During Reactive Ion-Etch Processes, M. D. Naeem (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Journal of the Electrochemical Society* **148**, No. 3, G137–G140 (2001).

Measuring and Modeling Optical Diffraction from Subwavelength Features, X. Wang (California Institute of Technology, Pasadena, CA 91125) et al., *Journal of the Optical Society of America A* **18**, No. 3, 565–572 (2001).

Light Propagation and Scattering in Stratified Media: A Green's Tensor Approach, M. Paulus (Swiss Federal Institute of Technology, CH-8092 Zurich, Switzerland) and O. J. F. Martin, *Journal of the Optical Society of America A* **18**, No. 4, 854–861 (2001).

Pattern Characterization of Deep Ultraviolet Photoresists by Near-Field Infrared Microscopy, B. Dragnea (National Institute of Standards and Technology, Boulder, CO 80309) et al., *Journal of Vacuum Science & Technology B* **19**, No. 1, 142–152 (2001).

M

Correlation of Surface and Bulk Order in Low Surface Energy Polymers, J. Luning (Stanford Synchrotron Radiation Laboratory, P.O. Box 4349, Stanford, CA 94309) et al., *Macromolecules* **34**, No. 5, 1128–1130 (2001).

Differential Imaging in Electrical Impedance Computerized Tomography, J. R. Shie (General Electric Company, 1 River Road, Schenectady, NY 12345) et al., *Materials Evaluation* **59**, No. 3, 406–412 (2001).

Dislocations in Si Generated by Fatigue at Room Temperature, N. I. Kato (IBM Japan, Ltd., 800 Ichimiya, Shiga 5202392, Japan) et al., *Materials Science in Semiconductor Processing* **4**, No. 1–3, 113–115 (2001).

Advanced Time-of-Flight Secondary Ion Mass Spectrometry Analyses for Application to TFT-LCD, H. Takatsuji (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan), *Materials Science in Semiconductor Processing* **4**, No. 1–3, 309–312 (2001).

The Size-Minimization of Planar Cam Mechanisms, O. Navarro (McGill University, 817 Sherbrooke Street West, Montreal, Quebec H3A 2K6, Canada) et al., *Mechanism and Machine Theory* **36**, No. 3, 371–386 (2001).

Providing Visual Information to Validate 2-D to 3-D Registration, A. Guezic (365 Amer Avenue, Sunnyvale, CA 94086) et al., *Medical Image Analysis* **4**, No. 4, 357–374 (2000).

Dynamic Studies of Semiconductor Growth Processes Using In-Situ Electron Microscopy, F. M. Ross (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *MRS Bulletin* **26**, No. 2, 94–101 (2001).

N

Stable Ultrahigh-Density Magneto-optical Recordings Using Introduced Linear Defects, L. Krusin-Elbaum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Nature* **410**, No. 6827, 444–446 (2001).

Tahoe's Road to the Extranet, G. Clark (IBM Corporation, Armonk, NY 10504), *Network Computing* **12**, No. 4, 20 (2001).

O

A Note on Coefficient Adjustment Using SOS Constraints, R. Lougee-Heimer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Operations Research* **49**, No. 1, 175–177 (2001).

P

Effects of Surface Damaging and Overcoating on the Formation of Hillocks and Whiskers on Pure Al Films Deposited on to a Glass Substrate, H. Saka (Nagoya University, Nagoya, Aichi 4648603, Japan) et al., *Philosophical Magazine A* **81**, No. 2, 275–285 (2001).

Electron Microscopy Observation of Whiskers and Hillocks Formed on an Al Film Deposited on to a Glass Substrate, K. Tsujimoto (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *Philosophical Magazine A* **81**, No. 2, 287–299 (2001).

Spin-Dependent Transport in Trilayer Junctions of Doped Manganites, J. Z. Sun (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physica C* **350**, No. 3–4, 215–226 (2001).

Four-Party Unlockable Bound Entangled State: Article Number 032306, J. A. Smolin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physical Review A* **6303**, No. 3, 2306+ (2001).

Critical Behavior of Epitaxial Half-Metallic Ferromagnetic CrO₂ Films: Article Number 092403, F. Y. Yang (Johns Hopkins University, Baltimore, MD 21218) et al., *Physical Review B* **6309**, No. 9, 2403+ (2001).

Influence of the Deposition Angle on the Magnetic Anisotropy in Thin Co Films on Cu(001): Article Number 104431, S. Van Dijken (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Physical Review B* **6310**, No. 10, 4431+ (2001).

Diamagnetic Persistent Current in Diffusive Normal Metal Rings, E. M. Q. Jariwala (University of Maryland, College Park, MD 20742) et al., *Physical Review Letters* **86**, No. 8, 1594–1597 (2001).

Nonadditivity of Bipartite Distillable Entanglement Follows from a Conjecture on Bound-Entangled Werner States, P. W. Shor (AT&T Laboratories, Florham Park, NJ 07932) et al., *Physical Review Letters* **86**, No. 12, 2681–2684 (2001).

Magnetic Dissipation and Fluctuations in Individual Nanomagnets Measured by Ultrasensitive Cantilever Magnetometry, B. C. Stipe (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Physical Review Letters* **86**, No. 13, 2874–2877 (2001).

Scattering Theory of Kondo Mirages and Observation of Single Kondo Atom Phase-Shift, G. A. Fiete (Harvard University, Cambridge, MA 02138) et al., *Physics Review Letters* **86**, No. 11, 2392–2395 (2001).

S

Improved Algorithms and Analysis for Secretary Problems and Generalizations, M. Ajtai (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *SIAM Journal on Discrete Mathematics* **14**, No. 1, 1–27 (2001).

Experience with an Efficient Parallel Kernel Memory Allocator, P. E. McKenney (IBM Corporation, 15450 S. W. Koll Parkway, Beaverton, OR 97006) et al., *Software—Practice & Experience* **31**, No. 3, 235–257 (2001).

Impact of Gamma Irradiation on the RF Phase Noise Capability of UHV/CVD SiGeHBTs, G. F. Niu (Auburn University, Auburn, AL 36849) et al., *Solid-State Electronics* **45**, No. 1, 107–112 (2001).

Digital Signature Technology for Health Care Applications, H. A. Wang (IBM Corporation, 6710 Rockledge Drive, Bethesda, MD 20817) et al., *Southern Medical Journal* **94**, No. 3, 281–286 (2001).

T

Mo-Capped Al–Nd Alloy for Both Gate and Data Bus Lines of Liquid Crystal Displays, T. Arai (IBM Japan, Ltd, 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *Thin Solid Films* **383**, No. 1–2, 287–291 (2001).

Millipede: An AFM Data Storage System at the Frontier of Nanotribology, U. Durig (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Tribology Letters* **9**, No. 1–2, 25–32 (2000).