

Recent publications by IBM authors

The information listed here is supplied by the Institute for Scientific Information and other outside sources. Complete addresses are provided for the lead author of each publication.

• Journals and books are listed alphabetically by title; papers are listed sequentially for each journal.

A

A Central Limit Theorem for Cumulative Processes, A. L. Roginsky (IBM Corporation, Research Triangle Park, NC 27709), *Advances in Applied Probability* **26**, No. 1, 104-121 (1994).

Rodlike, Cross-Linked, Flexible Polyimide Semiinterpenetrating Polymer Network Composites: Miscibility and Properties, M. Ree (IBM Corporation, Route 52, Hopewell Junction, NY 12533) and D. Y. Yoon, *Advances in Chemistry Series* **239**, 247-267 (1994).

A Deterministic O(K(3))-Competitive K-Server Algorithm for the Circle, A. Fiat (Tel Aviv University, IL-69978 Tel Aviv, Israel) et al., *Algorithmica* **11**, No. 6, 572-578 (1994).

Effective Parameter Extraction Using Multiple Objective Function for VLSI Circuits, S. M. Gowda (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Analog Integrated Circuits & Signal Processing* **5**, No. 2, 121-133 (1994).

Optical and Acoustic Study of Nucleation and Growth of Bubbles at a Liquid-Solid Interface Induced by Nanosecond Pulsed Laser Heating, O. Yavas (University of Konstanz, D-78434 Constance, Germany) et al., *Applied Physics A* **58**, No. 4, 407-415 (1994).

Comparison of Transport, Recombination, and Interfacial Quality in Molecular Beam Epitaxy and Organometallic Vapor Phase Epitaxy GaAs/Al_{1-x}Ga_xAs Structures, D. J. Wolford (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **64**, No. 11, 1416-1418 (1994).

Laser-Assisted PD Seeding for Electroless Plating on SiO₂, A. G. Schrott (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **64**, No. 12, 1582-1584 (1994).

Experimental Comparison of Strained Quantum Wire and Quantum Well Laser Characteristics, S. Tiwari (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. M. Woodall, *Applied Physics Letters* **64**, No. 17, 2211-2213 (1994).

Light Curves of SN-1993J from the Keck Northeast Astronomy Consortium, P. J. Benson (Wellesley College, Wellesley, MA 02181) et al., *Astronomical Journal* **107**, No. 4, 1453+ (1994).

B

Evaluation of a Region Growing Algorithm for Segmenting Pelvic Computed Tomography Images During Radiotherapy Planning, A. J. Neal (Institute of Cancer Research, Downs Road, Sutton SM2 5PT, Surrey, England) et al., *British Journal of Radiology* **67**, No. 796, 392-395 (1994).

Theoretical Mathematics: Toward a Cultural Synthesis of Mathematics and Theoretical Physics, G. J. Chaitin (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *Bulletin of the American Mathematical Society* **30**, No. 2, 181-182 (1994).

C

Multiple Wave Number Photoelectron Holography of Pt(111), B. L. Petersen (University of California at Berkeley, Berkeley, CA 94720) et al., *Chemical Physics Letters* **220**, Nos. 1-2, 46-52 (1994).

Airborne Contamination of a Chemically Amplified Resist II. Effect of Polymer Film Properties on Contamination Rate, W. D. Hinsberg (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Chemistry of Materials* **6**, No. 4, 481-488 (1994).

Single-Molecule Spectroscopy in Shpolskii Matrices, T. Plakhotnik (Swiss Federal Institute of Technology, CH-8092 Zurich, Switzerland) et al., *Chimia* **48**, Nos. 1-2, 31-32 (1994).

The Bisector of a Point and a Plane Parametric Curve, R. T. Farouki (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. K. Johnstone, *Computer-Aided Geometric Design* **11**, No. 2, 117-151 (1994).

A Fourth-Order-Accurate Difference Approximation for the Incompressible Navier-Stokes Equations, W. D. Henshaw (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Computers and Fluids* **23**, No. 4, 575-593 (1994).

D

A Variational Mixed Torelli Theorem, K. Ivinskis (IBM Corporation, Schonaicher Strasse 220, D-71032 Böblingen, Germany), *Duke Mathematical Journal* **74**, No. 1, 237-251 (1994).

E

Optical Binding in Scanning Probe Microscopy, A. Dereux (Fac. University of Notre Dame Paix, Rue Bruxelles 61, B-5000 Namur, Belgium) et al., *Europhysics Letters* **26**, No. 1, 37-42 (1994).

Scanning Tunneling Microscopy with a Large Gap Semiconductor Tip, W. E. Packard (Arizona State University, Tempe, AZ 85287) et al., *Europhysics Letters* **26**, No. 2, 97-102 (1994).

Schottky Barriers and the Reactivity of the Interface, M. Wittmer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. L. Freeouf, *Europhysics Letters* **26**, No. 2, 135-140 (1994).

F

Golfers Tee Off into the Future, A. S. Akins (IBM Corporation, 3700 Bay Area Boulevard, Houston, TX 77058), *Futurist* **28**, No. 2, 39-42 (1994).

I

Software Quality: An Overview from the Perspective of Total Quality Management, S. H. Kan (IBM Corporation, Highway 52 & NW 37th Street, Rochester, MN 55901) et al., *IBM Systems Journal* **33**, No. 1, 4-19 (1994).

Forging a Silver Bullet from the Essence of Software, R. G. Mays (IBM Corporation, Research Triangle Park, NC 27709), *IBM Systems Journal* **33**, No. 1, 20-45 (1994).

Journey to a Mature Software Process, C. Billings (IBM Corporation, 3700 Bay Area Boulevard, Houston, TX 77058) et al., *IBM Systems Journal* **33**, No. 1, 46-61 (1994).

AS/400 Software Quality Management, S. H. Kan (IBM Corporation, Highway 52 & NW 37th Street, Rochester, MN 55901) et al., *IBM Systems Journal* **33**, No. 1, 62-88 (1994).

Adopting Cleanroom Software Engineering with a Phased Approach, P. A. Hausler (IBM Corporation, 6710 Rockledge Drive, Bethesda, MD 20817) et al., *IBM Systems Journal* **33**, No. 1, 89-109 (1994).

RE-Analyzer: From Source Code to Structured Analysis, A. B. O'Hare (IBM Corporation, Research Triangle Park, NC 27709) and E. W. Troan, *IBM Systems Journal* **33**, No. 1, 110-130 (1994).

The Impact of Object-Oriented Technology on Software Quality: Three Case Histories, N. P. Capper (IBM United Kingdom, P.O. Box 41, North Harbour, Portsmouth PO6 3AU, Hants, England) et al., *IBM Systems Journal* **33**, No. 1, 131-157 (1994).

Deriving Programs Using Generic Algorithms, V. R. Yakhnis (IBM Corporation, 1701 North Street, Endicott, NY 13760) et al., *IBM Systems Journal* **33**, No. 1, 158-181 (1994).

In-Process Improvement Through Defect Data Interpretation, I. Bhandari (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *IBM Systems Journal* **33**, No. 1, 182-214 (1994).

The Road to Effective Software Development, Y. Wolfsthal (IBM Israel, Haifa, Israel), *IEEE Communications Magazine* **32**, No. 4, 84-87 (1994).

Recessed Channel Structure for Fabricating Ultrathin SOI MOSFET with Low Series Resistance, M. S. Chan (University of California at Berkeley, Berkeley, CA 94720) et al., *IEEE Electron Device Letters* **15**, No. 1, 22-24 (1994).

Experimental High-Performance Sub-0.1 μm Channel nMOSFETs, Y. Mii (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Electron Device Letters* **15**, No. 1, 28-30 (1994).

A 7-Mbyte/s (65 MHz), Mixed Signal, Magnetic Recording Channel DSP Using Partial Response Signaling with Maximum-Likelihood Detection, R. A. Philpott (IBM Corporation, Rochester, MN 55901) et al., *IEEE Journal of Solid-State Circuits* **29**, No. 3, 177-184 (1994).

A Single Poly-EEPROM Cell Structure for Use in Standard CMOS Processes, K. Ohsaki (IBM Japan Ltd., 800 Ichimiyake, Yasu, Shiga 52023, Japan) et al., *IEEE Journal of Solid-State Circuits* **29**, No. 3, 311-316 (1994).

A Monolithic GaAs Receiver for Optical Interconnect Systems, J. H. Choi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Journal of Solid-State Circuits* **29**, No. 3, 328-331 (1994).

A Sampling Technique and Its CMOS Implementation with 1 GB/S Bandwidth and 25 PS Resolution, C. T. Gray (IBM Corporation, Research Triangle Park, NC 27709) et al., *IEEE Journal of Solid-State Circuits* **29**, No. 3, 340-349 (1994).

Compound Cavity Gain of Tandem Electrode Multiple Quantum Well AlGaAs Laser Diodes, W. Knop (Swiss Federal Institute of Technology, CH-8092 Zurich, Switzerland) et al., *IEEE Photonics Technology Letters* 6, No. 3, 338-340 (1994).

Third Order Guided Wave Distributed Bragg Reflectors Fabricated by Ion Exchange in KTiOPO₄, W. P. Risk (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Photonics Technology Letters* 6, No. 3, 406-408 (1994).

Encapsulants Used in Flip Chip Packages, D. Suryanarayana (IBM Corporation, 1701 North Street, Endicott, NY 13760) et al., *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* 16, No. 8, 858-862 (1993).

Encapsulant for Fatigue Life Enhancement of Controlled Collapse Chip Connection (C4), D. W. Wang (IBM Corporation, 1701 North Street, Endicott, NY 13760) and K. I. Papatomas, *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* 16, No. 8, 863-867 (1993).

A Package Analysis Tool Based on a Method of Moments Surface Formulation, S. Ponnappalli (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* 16, No. 8, 884-892 (1993).

Resistive Signal Line Wiring Net Designs in Multichip Modules, C. S. Chang (IBM Corporation, 1701 North Street, Endicott, NY 13760), *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* 16, No. 8, 909-918 (1993).

Evaluation of a Three-Dimensional Memory Cube System, C. L. Bertin (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* 16, No. 8, 1006-1011 (1993).

Identification of Redundant Delay Faults, D. Brand (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and V. S. Iyengar, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* 13, No. 5, 553-565 (1994).

Instruction Window Size Trade-Offs and Characterization of Program Parallelism, P. K. Dubey (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Computers* 43, No. 4, 431-442 (1994).

Analysis of Asynchronous Binary Arbitration on Digital Transmission Line Busses, S. Kipnis (IBM Corporation, IL-31905 Haifa, Israel), *IEEE Transactions on Computers* 43, No. 4, 484-489 (1994).

Uniform Parity Group Distribution in Disk Arrays with Multiple Failures, S. W. Ng (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and R. L. Mattson, *IEEE Transactions on Computers* 43, No. 4, 501-506 (1994).

The Effect of Cosmic Rays on the Soft Error Rate of a Dram at Ground Level, T. J. Ogorman (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), *IEEE Transactions on Electron Devices* 41, No. 4, 553-557 (1994).

Algorithms for Searching Massive Graphs, R. Agrawal (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and H. V. Jagadish, *IEEE Transactions on Knowledge and Data Engineering* 6, No. 2, 225-238 (1994).

Large Join Optimization on a Hypercube Multiprocessor, E. T. Lin (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Knowledge and Data Engineering* 6, No. 2, 304-315 (1994).

Buffer Analysis for a Data Sharing Environment with Skewed Data Access, A. Dan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Knowledge and Data Engineering* 6, No. 2, 331-337 (1994).

Two-Dimensional Capacitance Calculation in Stratified and or Arbitrary Dielectric Media, C. C. Huang (IBM Corporation, Research Triangle Park, NC 27709), *IEEE Transactions on Microwave Theory and Techniques* 42, No. 3, 501-504 (1994).

Performance Evaluation of Transaction Processing Coupling Architectures for Handling System Dynamics, P. S. Yu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and A. Dan, *IEEE Transactions on Parallel and Distributed Systems* 5, No. 2, 139-153 (1994).

Multidimensional Indexing for Recognizing Visual Shapes, A. Califano (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and R. Mohan, *IEEE Transactions on Pattern Analysis and Medicine Intelligence* 16, No. 4, 373-392 (1994).

Rapid Prototyping on the Georgia Tech Digital Signal Multiprocessor, B. A. Curtis (IBM Corporation, Boca Raton, FL 33432) and V. K. Madiseti, *IEEE Transactions on Signal Processing* 42, No. 3, 649-662 (1994).

On the Efficient Engineering of Ambitious Program Analysis, J. D. Choi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Software Engineering* 20, No. 2, 105-114 (1994).

Designing an Agent Synthesis System for Cross-RPC Communication, Y. M. Huang (IBM Corporation, Research Triangle Park, NC 27709) and C. V. Ravishankar, *IEEE Transactions on Software Engineering* 20, No. 3, 188-198 (1994).

Example-Based Word Sense Disambiguation, N. Uramoto (IBM Corporation, Yamato 242, Japan), *IEICE Transactions on Information and Systems* 2, 240-246 (1994).

A Transfer System Using Example-Based Approach, H. Watanabe (IBM Corporation, Yamato 242, Japan), *IEICE Transactions on Information and Systems* 2, 247-257 (1994).

Development Tools in a Multidatabase Application Environment, J. Dospisil (Monash University, Melbourne, VIC, Australia) and T. Polgar, *IFIP Transactions A* 31, 69-83 (1993).

Automated High-Level Verification Against Clocked Algorithmic Specifications, F. Corella (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *IFIP Transactions A* 32, 147-154 (1993).

Circuit Simulation for Large Interconnected IC Networks, S. Lin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and E. S. Kuh, *IFIP Transactions A* **42**, 333-342 (1994).

The Raycasting Engine and Ray Representations for Solid Modeling: A Research Synopsis, J. P. Menon (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IFIP Transactions B* **9**, 241-257 (1993).

Architectures for Integrating Manufacturing Activities and Enterprises, T. J. Williams (Purdue University, West Lafayette, IN 47907) et al., *IFIP Transactions B* **14**, 3-16 (1993).

The Departure Process of a Finite Capacity Polling System with Bursty and Correlated Input Traffic, Y. F. Jou (MCNC, P.O. Box 12889, Research Triangle Park, NC 27709) et al., *IFIP Transactions C* **21**, 83-101 (1994).

Route Discovery in Multistage Switch Fabrics, A. Herkersdorf (IBM Corporation, Säumerstrasse 4, 8803 Rüslikon, Switzerland) et al., *IFIP Transactions C* **21**, 103-118 (1994).

On the Cell Loss Distribution of Protocol Data Units in ATM Networks, H. Yamashita (Sophia University, Tokyo 102, Japan) and R. O. Onvural, *IFIP Transactions C* **21**, 183-197 (1994).

A Study of the Jitter in ATM Multiplexers, C. C. Bisdikian (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *IFIP Transactions C* **21**, 219-235 (1994).

Protocol Processing in Communication Subsystems for High-Speed Networks, D. N. Serpanos (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598), *IFIP Transactions C* **21**, 351-360 (1994).

Photoelectron Spectroscopic Studies of the Electronic Structure and Bonding in TiC and TiN, S. V. Didziulis (Aerospace Corporation, El Segundo, CA 90245) et al., *Inorganic Chemistry* **33**, No. 9, 1979-1991 (1994).

Smart Cards and Their Opportunities for Controlling Health Information Systems, E. Kuhnel (GSF GmbH, Ingolstadter Land Strasse 1, D-85758 Oberschleissheim, Germany) et al., *International Journal of Bio-Medical Computing* **35**, 153-157 (1994).

The Conjugate Electromagnetic Properties of Bosons and Vortices in Two Dimensions, D. H. Lee (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *International Journal of Modern Physics B* **8**, No. 4, 429-445 (1994).

J

Temperature Dependence of Quantized States in Strained Layer In_{0.21}Ga_{0.79}As/GaAs Single Quantum Well, W. S. Chi (National Taiwan Institute of Technology, Taipei 106, Taiwan) et al., *Japanese Journal of Applied Physics* **1** **33**, No. 2, 966-970 (1994).

Elimination of Fabry-Perot Effect in 4 × 4 Propagation Matrix Method and Its Application to Liquid Crystal Displays, H. L. Ong (Prime View Int. Co. Ltd., 21 Prosper Road 1, Hsinchu, Taiwan), *Japanese Journal of Applied Physics* **1** **33**, No. 2, 1085-1087 (1994).

Electroplated and Dry-Released Metallic Microstructures for a Lateral Tunneling Unit Application, T. Hirano (IBM Corporation, 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *Japanese Journal of Applied Physics* **1** **33**, No. 2, 1202-1208 (1994).

Interdiffusion and Reaction in Cu/PtSi/Si(100) Systems, S. Q. Hong (Cornell University, Ithaca, NY 14853) et al., *Journal of Applied Physics* **75**, No. 8, 3959-3963 (1994).

Nucleation of Dislocations in SiGe Layers Grown on (001) Si, P. M. Mooney (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Applied Physics* **75**, No. 8, 3968-3977 (1994).

Multiple Time Scale Simulation of a Flexible Model of Co₂, M. E. Tuckerman (IBM Corporation, Säumerstrasse 4, 8803 Rüslikon, Switzerland) and W. Langel, *Journal of Chemical Physics* **100**, No. 9, 6368-6371 (1994).

Interaction of Water with Metal Surfaces, S. B. Zhu (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. R. Philpott, *Journal of Chemical Physics* **100**, No. 9, 6961-6968 (1994).

Hydro Climatological Trends in the Continental United States, 1948-88, D. P. Lettenmaier (University of Washington, Seattle, WA 98195) et al., *Journal of Climate* **7**, No. 4, 586-607 (1994).

A Si_{1-x}Ge_x/Si Single Quantum Well P-I-N Structure Grown by Solid Source and Gas Source Hybrid Si Molecular Beam Epitaxy, Y. Kato (IBM Corporation, 1623-14 Shimo Tsuruma, Yamato, Kanagawa 242, Japan) et al., *Journal of Crystal Growth* **136**, Nos. 1-4, 355-360 (1994).

Epitaxial Growth of Cuprate Superconductors from the Gas Phase, D. G. Schlom (Penn State University, University Park, PA 16802) et al., *Journal of Crystal Growth* **137**, Nos. 1-2, 259-267 (1994).

Crystallization Study of Glassy Te-Se-I Thin Films, A. Blatter (University of Bern, Sidlerstrasse 5, CH-3012 Bern, Switzerland) and C. Ortiz, *Journal of Crystal Growth* **139**, Nos. 1-2, 120-128 (1994).

Vibronic Spectroscopy of Single Molecules: Exploring Electronic Vibrational Frequency Correlations Within an Inhomogeneous Distribution, A. B. Myers (University of Rochester, Rochester, NY 14627) et al., *Journal of Luminescence* **58**, Nos. 1-6, 161-167 (1994).

Anomalous Optical Dephasing in Crystalline Y₂O₃-Eu₃, G. P. Flinn (University of Georgia, Athens, GA 30602) et al., *Journal of Luminescence* **58**, Nos. 1-6, 374-379 (1994).

Heat Treatment of Spun-on Acid Catalyzed Sol-Gel Silica Films, T. M. Parrill (Texas Instruments, 13353 Floyd Road, MS 374, Dallas, TX 75243), *Journal of Materials Research* **9**, No. 3, 723-730 (1994).

Micro Impact Technique and Its Applications, T. W. Wu (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and C. K. Lee, *Journal of Materials Research* **9**, No. 3, 797-804 (1994).

The Micro Wear Technique and Its Application to Ultrathin Film Systems, T. W. Wu (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and C. K. Lee, *Journal of Materials Research* **9**, No. 3, 805-811 (1994).

Trapped Cracks at Indentations I. Experiments on YTTRIA Tetragonal Zirconia Polycrystals, R. F. Cook (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Materials Science* **29**, No. 8, 2133-2142 (1994).

Trapped Cracks at Indentations II. Fracture Mechanics Model, R. F. Cook (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and L. M. Braun, *Journal of Materials Science* **29**, No. 8, 2192-2204 (1994).

Evaluation of the Antigenicity and Reactogenicity of Varying Formulations of the Rhesus Rotavirus-Based Quadrivalent and the M37 Rotavirus Vaccine Candidates, I. Perezschael (NIAID, Rockville Pike, Bethesda, MD 20892) et al., *Journal of Medical Virology* **42**, No. 4, 330-337 (1994).

Investigation of Absolute Photonic Band Gaps in Two-Dimensional Dielectric Structures, S. Y. Lin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Modern Optics* **41**, No. 2, 385-393 (1994).

Measuring Second Order Selection Bias in a Work Site Health Program, M. Sepulveda (IBM Corporation, Route 100, Somers, NY 10589) et al., *Journal of Occupational Medicine* **36**, No. 3, 326-333 (1994).

Data and Task Alignment in Distributed Memory Architectures, B. Sinharoy (IBM Corporation, P.O. Box 950, Poughkeepsie, NY 12602) and B. K. Szymanski, *Journal of Parallel and Distributed Computing* **21**, No. 1, 61-74 (1994).

Multiple Quadratic Forms: A Case Study in the Design of Data Parallel Algorithms, M. C. Wang (City University of New York, 65-30 Kissena Boulevard, Flushing, NY 11367) et al., *Journal of Parallel and Distributed Computing* **21**, No. 1, 124-139 (1994).

Ab Initio Molecular Dynamics Studies of Fullerenes and Fullerides: A Brief Discussion of Results and Open Issues, W. Andreoni (IBM Corporation, Säumerstrasse 4, 8803 Rorschlikon, Switzerland), *Journal of Physics & Chemistry of Solids* **54**, No. 12, 1789-1793 (1993).

Hole and Electron Doping of $R_2\text{BaNiO}_5$ (R = Rare-Earths), J. A. Alonso (CSIC, Inst. Ciencia Mat. Madrid, Serrano 113, E-28006 Madrid, Spain) et al., *Journal of Solid State Chemistry* **109**, No. 2, 231-240 (1994).

Stabilization of Unusual Oxidation States of Chromium, Cr(IV) and Cr(V), in the Ordered Perovskite $\text{La}_x\text{LiV}_{1-x}\text{Cr}_x\text{O}_6$, J. H. Choy (Seoul National University, Seoul 151742, South Korea) et al., *Journal of Solid State Chemistry* **109**, No. 2, 289-294 (1994).

Predictive Stochastic Complexity and Model Estimation for Finite State Processes, M. J. Weinberger (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. Feder, *Journal of Statistical Planning & Inference* **39**, No. 3, 353-372 (1994).

Alternative Approaches for the Use of Metrics to Order Programs by Complexity, T. M. Khoshgoftaar (Florida Atlantic University, Boca Raton, FL 33431) et al., *Journal of Systems & Software* **24**, No. 3, 211-221 (1994).

X-ray Absorption Study of Electrochemically Grown Oxide Films on AlCr Sputtered Alloys, G. S. Frankel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of the Electrochemical Society* **141**, No. 1, 83-90 (1994).

Reactive Ion Etch Processes for Amorphous Silicon Thin Film Transistors: A SiCl_4 Based Chemistry, Y. Kuo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and A. G. Schrott, *Journal of the Electrochemical Society* **141**, No. 2, 502-506 (1994).

Electrolytic Codeposition of NI GAMMA AL203 Thin Films, P. R. Webb (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and N. L. Robertson, *Journal of the Electrochemical Society* **141**, No. 3, 669-673 (1994).

Characterization Enhancements in Resist Photospeed, W. Conley (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Journal of the Electrochemical Society* **141**, No. 4, 1034-1040 (1994).

Thin Film Transistors with Graded SiN_x Gate Dielectrics, Y. Kuo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of the Electrochemical Society* **141**, No. 4, 1061-1065 (1994).

Iterative Scheme for Computing Exactly the Total Field Propagating in Dielectric Structures of Arbitrary Shape, O. J. F. Martin (IBM Corporation, Säumerstrasse 4, 8803 Rorschlikon, Switzerland) et al., *Journal of the Optical Society of America A* **11**, No. 3, 1073-1080 (1994).

Modeling a Horizontal Heat-Flux Cylinder as a Line Source, V. Deschamps (Conservatoire National Arts & Metiers, 292 Rue St. Martin, F-75141 Paris, France) and G. Desrayaud, *Journal of Thermophysics & Heat* **8**, No. 1, 84-91 (1994).

Experimental Study and Modeling of Thermal Contact Resistance Across Bolted Joints, S. Song (IBM Corporation, P.O. Box 950, Poughkeepsie, NY 12602) et al., *Journal of Thermophysics & Heat* **8**, No. 1, 159-163 (1994).

Deposition of Aluminum Oxide Films with High Refractive Index, K. K. Shih (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. B. Dove, *Journal of Vacuum Science & Technology A* **12**, No. 2, 321-322 (1994).

Fluorocarbon High-Density Plasmas I. Fluorocarbon Film Deposition and Etching Using CF_4 and CHF_3 , G. S. Oehrlein (SUNY Albany, 1400 Washington Avenue, Albany, NY 12222) et al., *Journal of Vacuum Science & Technology A* **12**, No. 2, 323-332 (1994).

Fluorocarbon High-Density Plasmas II. Silicon Dioxide and Silicon Etching Using CF_4 and CHF_3 , G. S. Oehrlein (SUNY Albany, 1400 Washington Avenue, Albany, NY 12222) et al., *Journal of Vacuum Science & Technology A* **12**, No. 2, 333-344 (1994).

Damage to Si Substrates During SiO_2 Etching: A Comparison of Reactive Ion Etching and Magnetron-Enhanced Reactive Ion Etching, T. Gu (Penn State University, University Park, PA 16802) et al., *Journal of Vacuum Science & Technology B* **12**, No. 2, 567-573 (1994).

Quantum Confined Stark Shift Observed by Electroluminescence and Circular Polarized Luminescence Excitation Spectroscopy in GaAs/AlGaAs Coupled Quantum Wells, Y. Kato (IBM Corporation, 1623-14 Shimo, Yamato, Kanagawa 242, Japan) et al., *Journal of Vacuum Science & Technology B* **12**, No. 2, 1053-1055 (1994).

L

Force Microscopy Study of Friction and Elastic Compliance of Phase Separated Organic Thin Films, R. M. Overney (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Langmuir* **10**, No. 4, 1281-1286 (1994).

M

The K-Dimensional Distribution of Combined GFSR Sequences, S. Tezuka (IBM Corporation, 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan), *Mathematics of Computation* **62**, No. 206, 809-817 (1994).

Characterization of Inhomogeneous Elastic Deformation with X-ray Diffraction, I. C. Noyan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and L. S. Schadler, *Metallurgical and Materials Transactions A* **25**, No. 2, 341-347 (1994).

N

A Lower Critical Ordering Transition in a Diblock Copolymer Melt, T. P. Russell (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Nature* **368**, No. 6473, 729-731 (1994).

Sharper Analysis of Packet Routing on a Butterfly, A. Krishna (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Networks* **24**, No. 2, 91-101 (1994).

QCD Spectroscopy, D. Weingarten (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Nuclear Physics B* **S34**, 29-46 (1994).

The Scalar and Tensor Glueballs in the Valence Approximation, H. Chen (University of Dublin Trinity College, Dublin 2, Ireland) et al., *Nuclear Physics B* **S34**, 357-359 (1994).

P

Low Temperature Scanning Tunneling Microscopy, B. Reihl (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Physica B* **197**, Nos. 1-4, 64-71 (1994).

Magnetic Quantum Tunneling and the Topological Phase, D. P. DiVincenzo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physica B* **197**, Nos. 1-4, 109-114 (1994).

Local Magnetization and Magnetotransport in Magnetic Semiconductors, S. von Molnar (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physica B* **197**, Nos. 1-4, 151-157 (1994).

Numerical Experiments on Single Quantized Vortices, K. W. Schwarz (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physica B* **197**, Nos. 1-4, 324-334 (1994).

Microstructure of (001), (110) and (103) Oriented Thin Films of $YBa_2Cu_3O_{7-x}$ Investigated with STM, SEM and HRTEM, C. Rossel (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Physica C* **223**, Nos. 3-4, 370-382 (1994).

Dynamics of Confined Ions Driven by Light Beams: A Singular Perturbation Approach, L. G. Reyna (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. R. Sobehart, *Physical Review A* **49**, No. 3, 1629-1636 (1994).

Sample-Dependent Optical Dephasing in Bulk Crystalline Samples of $Y_2O_3Eu_3$, G. P. Flinn (University of Georgia, Athens, GA 30602) et al., *Physical Review B* **49**, No. 9, 5821-5827 (1994).

Temperature Dependence of the Penetration Depth in $Nd_{1.85}Ce_{0.15}CuO_{4-x}$ Superconducting Thin Films, A. Andreone (University of Napoli Federico 2, I-80125 Naples, Italy) et al., *Physical Review B* **49**, No. 9, 6392-6394 (1994).

Luminescence Kinetics of Intrinsic Excitonic States Quantum Mechanically Bound Near High Quality (*n*-Type GaAs)/(*p*-Type $Al_xGa_{1-x}As$) Heterointerfaces, G. D. Gilliland (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review B* **49**, No. 12, 8113-8125 (1994).

Dirac Coupled Channel Calculations for Proton Inelastic Scattering from Spherically Symmetrical Nuclei for Projectile Energies of 362, 500, and 800 MeV, L. Kurth (Ohio State University, Columbus, OH 43210) et al., *Physical Review C* **49**, No. 4, 2086-2103 (1994).

Percolation of a Simulated Metallic Film on a Porous Substrate: The Copper-Polyimide Interface, B. D. Silverman (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. E. Platt, *Physical Review E* **49**, No. 2, 1028-1039 (1994).

Ultraslow Optical Dephasing in $Eu_3 < -Y_2SiO_5$, R. W. Equall (Montana State University, Bozeman, MT 59717) et al., *Physical Review Letters* **72**, No. 14, 2179-2181 (1994).

Transitions Between Hall Plateaus in the Presence of Strong Landau Level Mixing, Z. Q. Wang (Los Alamos National Lab, Los Alamos, NM 87545) et al., *Physical Review Letters* **72**, No. 15, 2454–2457 (1994).

Atomic-Hydrogen Reactions with P(B) Centers at the (100) Si/SiO₂ Interface, J. H. Stathis (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and E. Cartier, *Physical Review Letters* **72**, No. 17, 2745–2748 (1994).

Interface Roughness and Asymmetry in InAs/GaSb Superlattices Studied by Scanning Tunneling Microscopy, R. M. Feenstra (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review Letters* **72**, No. 17, 2749–2752 (1994).

Observed Frustration in Confined Block Copolymers, P. Lambooy (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Physical Review Letters* **72**, No. 18, 2899–2902 (1994).

Connected Moments Expansion for the $S = 1/2$ Antiferromagnetic Spin Chain, C. F. Lo (Chinese University of Hong Kong, Sha Tin, Hong Kong) and Y. J. Wong, *Physics Letters A* **187**, No. 3, 269–272 (1994).

Photon Tunneling Microscopy of Polyethylene Single Crystals, M. Srinivasarao (University of Massachusetts, Amherst, MA 01003) et al., *Polymer* **35**, No. 6, 1137–1141 (1994).

X-ray Scattering Studies of Thin Films of Photosensitive Polyimides, M. Ree (Pohang Institute of Science and Technology, P.O. Box 125, Kyongbuk 790600, South Korea) et al., *Polymer* **35**, No. 6, 1148–1156 (1994).

193 nm Resists and Lithography, R. R. Kunz (Massachusetts Institute of Technology, Lincoln Lab, Lexington, MA 02173) et al., *Polymer for Advanced Technologies* **5**, No. 1, 12–21 (1994).

R

Barrier Interaction Time in Tunneling, R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and T. Martin, *Reviews of Modern Physics* **66**, No. 1, 217–228 (1994).

S

Observation of Quantum Size Effects at Room Temperature on Metal Surfaces with STM, P. Avouris (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and I. W. Lyo, *Science* **264**, No. 5161, 942–945 (1994).

The Quantum Hall Effect in Open Conductors, M. Buttiker (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Semiconductors and Semimetals* **35**, 191–277 (1992).

Multidimensional Lines I. Representation, A. Inselberg (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) and B. Dimsdale, *SIAM Journal of Applied Mathematics* **54**, No. 2, 559–577 (1994).

Multidimensional Lines II. Proximity and Applications, A. Inselberg (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) and B. Dimsdale, *SIAM Journal of Applied Mathematics* **54**, No. 2, 578–596 (1994).

Constructing Small Sample Spaces Satisfying Given Constraints, D. Koller (University of California, Berkeley, CA 94720) and N. Megiddo, *SIAM Journal on Discrete Mathematics* **7**, No. 2, 260–274 (1994).

Remote Database Access in the Distributed Computing Environment, J. Wong (Iowa State University, Ames, IA 50011) et al., *Software Practice & Experience* **24**, No. 4, 421–434 (1994).

Calibration Procedure for Quantitative Surface Analysis by Total Reflection X-ray Fluorescence, L. Torcheux (IBM Corporation, 244 Bd J. F. Kennedy, F-91105 Corbeil Essonnes, France) et al., *Surface and Interface Analysis* **21**, No. 3, 192–198 (1994).

Cluster Model Description of the Chemisorption Bond: Effect of the Cluster Model Electronic State, J. M. Ricart (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Surface Science* **304**, No. 3, 335–342 (1994).

Optical Measurements of Warped Valence Bands in Quantum Wells, J. A. Kash (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Surface Science* **305**, Nos. 1–3, 251–255 (1994).

Cyclotron Effective Mass of Holes in Strained Si_{1-x}Ge_x/Si Quantum Well Structures, J. P. Cheng (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Surface Science* **305**, Nos. 1–3, 275–279 (1994).

2DEG in Strained Si/SiGe Heterostructures, F. F. Fang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Surface Science* **305**, Nos. 1–3, 301–306 (1994).

Valence Band Landau Level Mixing and Anisotropy in Si_{1-x}Ge_x Investigated by Resonant Magnetotunneling, A. Zaslavsky (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Surface Science* **305**, Nos. 1–3, 307–311 (1994).

Low Temperature Equilibrium Vertical Transport Through a Two-Dimensional Electron Gas, P. C. Vanson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Surface Science* **305**, Nos. 1–3, 516–519 (1994).

The Influence of Reduced Dimensionality on the Spin Splitting in GaAlAs/GaAs Quantum Wires, J. Wrobel (University of Vienna, A-1090 Vienna, Austria) et al., *Surface Science* **305**, Nos. 1–3, 615–619 (1994).

Deep Levels and Band Bending at GaP(100) and GaP(110) Surfaces, L. J. Brillson (Xerox Corporation, 800 Phillips Road 114-41 D, Webster, NY 14580) et al., *Surface Science* **309**, 303–308 (1994).

Subnanometer Lateral Resolution in Photon-Emission from ⁶⁰C Molecules on Au (110), R. Berndt (University of Lausanne, CH-1015 Lausanne, Switzerland) et al., *Surface Science* **309**, 1033–1037 (1994).