Appendices

Appendix A  RLE Publications and Papers Presented
Appendix B  Current RLE Personnel
Appendix C  Milestones
Appendix D  RLE Research Support Index
Appendix A. RLE Publications and Papers Presented

The first section of this bibliography includes papers and talks presented by RLE faculty, staff and students during 1991 and is in alphabetical order by conference name. Reprints of these papers may be obtained by contacting the authors directly.

Section 2 includes an alphabetical listing by author of journal articles that were published and accepted or submitted for publication. Book chapters by RLE authors are listed in Section 3. Section 4 of this bibliography lists RLE general publications and technical reports, and Section 5 is a list of RLE theses submitted during 1991. Section 6 contains miscellaneous publications.

A.1 Meeting Papers

A.1.1 Papers Presented


Stevens, K.N. "Models for Voicing and Aspiration in Stop Consonants."

Zurek, P.M. "Interference Reduction for the Hearing Impaired."


Ram, A.K., A. Bers, V. Fuchs, and M. Shoucri. "Current Drive by Fast Alfven Waves and in Combination with Lower Hybrid Waves."


Alerhand, O.L. "Finite-Temperature Equilibrium Properties of Steps on Si(100) Surfaces."
Appendix A. RLE Publications

Berker, A.N. "Quenched Fluctuation-Induced Second-Order Phase Transitions."

Hoston, W., and A.N. Berker. "New Multicritical Phase Diagrams from the Blume-Emery-Griffiths Model with Repulsive Biquadratic Interactions."


Melnagailis, J. "Focused Ion Beam Patterning."


Kleppner, D. "Quantum Chaos: An Experimental View."


Kolodziejski, L.A. "Chemical Beam Epitaxy of II-VI Semiconductors" (invited paper).


Lim, J.S. "Advanced Television Systems."

Association for Research in Otolaryngology, 15th Midwinter Meeting, St. Petersburg Beach, Florida, February 2-6, 1991.

Donahue, K.M., J.J. Rosowski, and W.T. Peake. "Can the Motion of the Human Malleus be Described as Pure Rotation?"

Guinan, J.J. "Inhibition of Stimulus Frequency Emissions by Medial Olivocochlear Efferent Neurons in Cats."


AT&T Bell Laboratories, Holmdel, New Jersey, April 7-8, 1991.

Melnagailis, J. "Focused Ion Beam Microfabrication."


Rosenkranz, P.W. "Overview of Line Coupling in the 5 mm Band of Oxygen."


Appendix A. RLE Publications

"Time-Resolved Coherent Phonon Study of the Insulator-Metal Phase Transition in Ti2O3."


Fujimoto, J.G. "Femtosecond Lasers and Ultrafast Measurement Techniques."

Wong, N.C. "Squeezed Amplification in a Grain-Saturated Parametric Amplifier."

Conference on Neural Networks for Computing, Snowbird, Utah, April 2-5, 1991.


McIlrath, M. "Semiconductor Process Representation (SPR) Server Prototyping."

McIlrath, M. "Mini-SPR Prototype Programming Interface."


Kumar, A. "Self-Consistent Calculations on Confined Electrons in Three-Dimensional Geometries."

Enrico Fermi International School of Physics, Course CSVIII, Milan, Italy, July 1991.


Hoston, W., and A.N. Berker. "New Multicritical Phase Diagrams from the Blume-Emery-Griffiths Model with Repulsive Biquadratic Interactions."


Fujimoto, J.G. "Femtosecond Pulse Generation with APM."


Delgutte, B. "Fundamental Issues in Auditory Modeling."


Appendix A. RLE Publications

Sugiyama, Linda E. "Time Dependent Model for D-3He Fusion Ignition and Burning in a Tokamak."


International A.D. Sakharov Conference on Physics, First, the Lebedev Physical Institute of the USSR Academy of Sciences, Moscow, USSR, May 27-31, 1991.

Coppi, B. "High Energy Plasmas in the Laboratory and in Astrophysics."


Cheung, S., and J.S. Lim. "Combined Multi-Resolution (Wideband/Narrowband) Spectrogram."

Preisig, J.C. "A Robust Adaptive Matched Field Processor Based Upon a Minmax Criterion."

Wornell, G.W. "Communication Over Fractal Channels."


Van Aelten, F., J. Allen, and S. Devadas. "Verification of Relations between Synchronous Machines."


Rahmat, K., J. White, and D.A. Antoniadis. "Computation of Drain and Substrate Currents in Ultra-Short-Channel nMOSFET's Using the Hydrodynamic Model."


International Geoscience and Remote Sensing Symposium, (IGARSS '91), Helsinki University of Technology, Espoo, Finland, June 3-6, 1991.


Schattenburg, M.L., and H.I. Smith. “X-ray Nanolithography—the Clearest Path to 0.1 and sub-0.15m ULSI.”

International Microwave Landing System Progress Forum, Amsterdam, the Netherlands, June 25-26, 1991.

Yang, Y-C.E. “ILS/MLS Frequency Management Assessment.”


Sugiyama, L., B. Coppi, and M. Nassi. “Physics Basis for Compact Ignition Experiments.”


Altshuler, B.L. “Thermodynamics of Mesoscopic Systems.”


Van Aelten, F., J. Allen, and S. Devadas. “Verification of Relations Between Synchronous Machines.”


Kunz, R., D.J. Ehrlich, J. Melngailis, and M.W. Horn. “Selective Area Growth of Metal Oxide Films Induced by Patterned Excimer Laser Surface Photolysis.”


Appendix A. RLE Publications


Lumsdaine, A., M. Reichelt, and J. White. "Parallel Circuit Simulation."


Yang, Y-C. "Project Summary: Instrument Landing System/Microwave Landing System Frequency Management Assessment."


Lim, J.S. "Progress on HDTV Research at MIT."

National Center for Integrated Photonics Workshop on Phase Array Radar, Arrowhead, California, November 11-12, 1991.

Haus, H.A. "Proposed Approach to the Phased Array Radar Demonstration Project."

Hultgren, C.T., D.J. Dougherty, and E.P. Ippen. "Optical Nonlinearities in GaAs Lasers and Amplifiers."

NATO Advanced Study Institute on Liquid Crystals, Erice, Italy, May 2-12, 1991.

Berker, A.N. "Microscopic Theory of Polar Liquid Crystals and Multiply Reentrant Phase Diagrams."


NOAA Workshop on Long-Term Upper Stratospheric and Mesospheric Temperature Measurements and Their Importance of Global Change, University of Maryland, June 25, 1991.


Baggeroer, A.B. "Environmentally Robust Matched Field Processing."


Kong, J.A. "Electromagnetic Modelling: Inverse."

Optical Society of America, Annual Meeting, San Jose, California, November 3-8, 1991.


Shapiro, J.H. "Phase-Conjugate Quantum Communication at Zero Error Probability with Finite Average Photon Number."

Wong, N.C. "Precise Optical Frequency Comb Generator Based on Optical Parametric Oscillators."

Wong, N.C. "Gravitational Wave Detection Via an Optical Parametric Oscillator."

Wong, N.C., and D. Lee. "A Tunable Optical Parametric Oscillator for Precision Measurements."


Rosenkranz, P.W. "Rough-Sea Microwave Emissivities Measured with the SSM/I."

Appendix A. RLE Publications


Pritchard, D.E. “Atom Optics and Atom Interferometers.”

**Santa Cruz Conference on Advanced Research in VLSI,** University of California, Santa Cruz, California, March 23-31, 1991.


**Society of Information Display,** Anaheim, California, May 6-8, 1991.

Lim, J.S. “ATVA-Progressive System.”

**Society of Motion Picture and Television Engineers,** 25th Annual Conference, Detroit, Michigan, February 1-2, 1991.


Yang, W. “Analog CCD Processors for Image Filtering.”

**SPIE Microlithography Symposium,** San Jose, California, March 3-8, 1991.

Melnagilis, J. “Focused Ion Beam Induced Deposition—A Review.”


Appendix A. RLE Publications


Mcllrath, M. “Report on SPR Prototyping.”
Mcllrath, M. “TCAD Framework Architectural Issues.”

Lim, J.S. “Research at the MIT Advanced Television Research Program.”


Devadas, S., K. Keutzer, and A. Ghosh. “Recent Progress in Synthesis for Testability.”

Wisconsin Sematech Center of Excellence Review Committee Meeting, Madison, Wisconsin, October 2-3, 1991.
Melingailis, J. “Focused Ion Beam Lithography for X-ray Mask Making.”


Boyce, K. “Sub-PPB Mass Measurements on Single Ions.”


Workshop on Squeezed States and Uncertainty Relations, College Park, Maryland, March 27-30, 1991.
Bergman, K., and H.A. Haus. “Squeezed Pulsed Light from a Fiber Ring Reflector.”
Shapiro, J.H. “Going Through a Quantum Phase.”

A1.2 Papers To Be Presented

Netz, R.R. “Symmetry-Breaking Fields in Frustrated Ising Systems on Square and Cubic Lattices.”

Appendix A. RLE Publications


IEEE International Conference on Thermodynamics and Statistical Mechanics, Berlin, Germany, August 2-8, 1992.

Berkov, A.N. “Critical Behavior Induced by Quenched Disorder.”

Netz, R.R., and A.N. Berkov. “Smectic C/A2 Order, Domains, Reentrance in a Microscopic Model of Liquid Crystals.”

International Liquid Crystal Conference, 14th, Pisa, Italy, June 21-26, 1992.


A.1.3 Published Meeting Papers


Appendix A. RLE Publications


A.2 Journal Articles

A.2.1 Published Journal Articles


Bahl, S.R., W.J. Azzam, and J.A. del Alamo. “Origin Dependence of Mismatched In$_{0.53}$Al$_{0.47}$As/In$_{0.53}$Ga$_{0.47}$As HFETs.” *J. Crystal Growth* 111(1-4): 479-483 (1991).


Appendix A. RLE Publications


Ismail, K., M. Burkhardt, H.I. Smith, N.H. Karam, and P.A. Sekula-Moise. “Patterning and Characterization of Large-Area Quantum Wire...
Appendix A. RLE Publications


Appendix A. RLE Publications


A.2.2 Journal Articles Accepted for Publication


Smet, J.H., T.P.E. Broekaert, and C.G. Fonstad. "Peak-to-valley Current Ratios as High as 50:1 at Room Temperature in Pseudomorphic In$_{0.53}$Ga$_{0.47}$As/AlAs/InAs Resonant Tunneling Diodes." J. Appl. Phys.


A.2.3 Journal Articles Submitted for Publication


Wong, N.C. “Proposal for a 10 THz, Precision Optical Frequency Comb Generator.” *Electron. Lett.*


A.3 Books/Chapters in Books


Srinivasan, M.A., and R.H. LaMotte. “Encoding of Shape in the Responses of Cutaneous Mechano-


A.4 RLE Publications

RLE publications may be obtained by writing the Communications Office, Building 36-412, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139-4307, at the listed cost.

Prepayment in the form of a check or money order in U.S. dollars payable to MIT RLE is required. Please allow six to eight weeks for foreign surface mail. For foreign airmail, include an additional $4.00 for each report ordered.


Appendix A. RLE Publications

A.5 RLE Theses

Theses are available from the Microreproduction Laboratory, Building 14-0551, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139-4307. Write for individual prices.


Appendix A. RLE Publications


A.6 Miscellaneous


