

SCHOOL OF ENGINEERING

CHEMICAL AND NUCLEAR ENGINEERING

Anderson, Harold M.

Li, X, L. Ling, X. Hua, G. S. Oehrlein, Y. Wang, "Characteristics of C4F8 plasmas with Ar, Ne and He additives for SiO2 etching in an inductively coupled plasma (ICP) reactor," *J. Vac. Sci. and Technol. A.* 21, pp. 1943-1954 (2003).

Li, X, L. Ling, X. Hua, M. Fukasawa, G. S. Oehrlein, M. Barela, "Effects of Ar and O2 additives on SiO2 etching in C4F8-based plasmas," *J. Vac. Sci. and Technol. A.* 21, pp. 284-293 (2003).

Atanassov, Plamen

M. Hampden-Smith, P. Atanassova, and T. Kodas, "Manufacture of Electrocatalyst Powders by a Spray-based Production Platform," In W. Vielstich, A. Lamm and H. Gasteiger (Eds.), *Handbook of Fuel Cell Technology*, John Wiley & Sons, Chichester, UK, 2003, Vol. 3, Chapter 40, pp. 497-508.

J. Yan, G. V. Ramo Rao, M. Barela, H. Xu, D. A. Brevnov, Y. Jiang, H. Xu, G. P. López, "Growth of patterned nanopore arrays of anodic aluminum oxide," *Advanced Materials*, 2003, 15(23), pp. 2015-2018.

G. Gupta, V. Rajendran, "Laccase Biosensor based on Monolayer Modified Gold Electrode," *Electroanalysis*, 15 (2003) pp. 1577-1583.

M. Hampden-Smith, T. Kodas, K. Kunze, P. Napolitano, R. Bhatia, D. Dericotte and P. Atanassova. *Electrocatalyst Powders, Method for Producing Powders and Devices Fabricated from the Same*, US Patent No: 6,660,680, December 9, 2003.

G. P. Lopez, A. Chillkoti, and V. Goparaju. *Stimuli Responsive Hybrid Materials Containing Molecular Actuators and their Applications*. US Patent No: 6,615,855, September 9, 2003.

Brinker, C. Jeffrey

Dunphy, DR, Singer, S, Cook, AW, Smarsly, B, Doshi, DA, "Aqueous stability of mesoporous silica films doped or grafted with aluminum oxide." *Langmuir*, Nov 25 2003, v. 19, no. 24, pp. 10403-10408.

G. Xomeritakis, C. M. Braunbarth, B. Smarsly, N. Liu, R. Kohn, Z. Klipowicz, "Aerosol-assisted deposition of surfactant-templated mesoporous silica membranes on porous ceramic supports." *Microporous and Mesoporous Materials*, Nov 18 2003, v. 66, pp. 91-101.

Lu, YF, McCaughey, BF, Wang, DH, Hampsey, JE, Doke, N, Yang, ZZ, "Aerosol-assisted Formation of Mesostructured Thin Films." *Advanced Materials*, Oct 16 2003, v. 15, no. 20, pp. 1733-1736.

- Doshi, DA, Gibaud, A, Goletto, V, Lu, MC, Gerung, H, Ocko, B, Han, SM, "Peering into the self-assembly of surfactant templated thin-film silica mesophases." *Journal of The American Chemical Society*, Sep. 24 2003, v. 125, no. 38, pp. 11646-11655.
- Smarsly, B., Xomeritakis, G., Yu, K., Liu, N., Fan, H., Assink, R. A., Drewien, C. A., Ruland, W., "Microstructural Characterization of Polystyrene-block-poly(ethylene oxide)-Templated Silica Films with Cubic-Ordered Spherical Mesopores." *Langmuir*, Sep. 2 2003, v. 19, pp. 7295-7301.
- Wu, X., Yu, K., Ripmeester J."Mesostructured MTES-Derived Silica Thin Film with Spherical Voids Investigated by TEM: 2. Dislocations and Strain Relaxation." *Langmuir*, Sep. 2 2003, v. 19, pp. 7289-7294.
- Yu, K., Wu, X., Ripmeester, J."Mesostructured MTES-Derived Silica Thin Film with Spherical Voids Investigated by TEM: 1. Mesostructure Determination." *Langmuir*, Sep. 2 2003, v. 19, pp. 7282-7288.
- Gibaud, A, Baptiste, A, Doshi, DA, Yang, L, Ocko, B."Wall thickness and core radius determination in surfactant templated silica thin films using GISAXS and X-ray reflectivity." *Europhysics Letters*, Sep. 2003, v. 63, no. 6, pp. 833-839.
- Doshi, DA, Gibaud, A, Liu, NG, Sturmayer, D, Malanoski, AP, Dunphy, DR, Chen, HJ, Narayanan, S, MacPhee, A, Wang, J, et. al."In-situ X-ray scattering study of continuous silica-surfactant self-assembly during steady-state dip coating." *Journal of Physical Chemistry B*, Aug 7 2003, v. 107, no. 31, pp. 7683-7688.
- McCaughey, B, Costello, C, Wang, DH, Hampsey, JE, Yang, ZZ, Li, CJ, Lu, YF. Self-assembly of mesostructured conjugated poly (2,5-thienylene ethynylene)/silica nanocomposites. *Advanced Materials*, Aug 5 2003, v. 15, no. 15, p. 1266.
- Gibaud, A, Grosso, D, Smarsly, B, Baptiste, A, Bardeau, JF, Babonneau, F, Doshi, DA, Chen, Z, Sanchez, C."Evaporation-controlled self-assembly of silica surfactant mesophases." *Journal of Physical Chemistry B*, Jun 26 2003, v. 107, no. 25, pp. 6114-6118.
- Garnweitner, G, Smarsly, B, Assink, R, Ruland, W, Bond, E, "Self-assembly of an environmentally responsive polymer/silica nanocomposite." *Journal of The American Chemical Society*, May 14 2003, v. 125, no. 19, pp. 5626-5627.
- Xomeritakis, G, Naik, S, Braunbarth, CM, Cornelius, CJ, Pardey, R, "Organic-templated silica membranes-I. Gas and vapor transport properties." *Journal of Membrane Science*, Apr 15 2003, v. 215, no. 1-2, pp. 225-233.
- Yang, Y, Lu, YF, Lu, MC, Huang, JM, Haddad, R, Xomeritakis, G, Liu, NG, Malanoski, AP, Sturmayer, D, Fan, HY, et. al."Functional nanocomposites prepared by self-assembly and polymerization of diacetylene surfactants and silicic acid." *Journal of The American Chemical Society*, Feb 5 2003, v. 125, no. 5, pp. 1269-1277.

Wang, DW, Zhou, WL, McCaughy, BF, Hampsey, JE, Ji, XL, Jiang, YB, Xu, HF, Tang, JK, Schmehl, RH, O'Connor, C, et. al."Electrodeposition of metallic nanowire thin films using mesoporous silica templates." *Advanced Materials*, Jan 16 2003, v. 15, no. 2, p. 130.

Yu, K, Smarsly, B, "Self-assembly and characterization of mesostructured silica films with a 3D arrangement of isolated spherical mesopores." *Advanced Functional Materials*, Jan 2003, v. 13, no. 1, pp. 47-52.

Gibaud, A, Doshi, D, Ocko, B, Goletto, V, "Time-resolved in situ grazing incidence small angle x-ray scattering experiment of evaporation induced self-assembly." *Nanotechnology In Mesostructured Materials*, 2003, v. 146, pp. 351-354.

Smarsly, B, Yu, K, "Detailed investigation of the microporous character of mesoporous silicas as revealed by small-angle scattering techniques." *Nanotechnology In Mesostructured Materials*, 2003, v. 146, pp. 295-298.

Liu, NG, Chen, Z, Dunphy, DR, Jiang, YB, Assink, RA, "Photoresponsive nanocomposite formed by self-assembly of an azobenzene-modified silane." *Angewandte Chemie-International Edition*, 2003, v. 42, no. 15, pp. 1731-1734.

Liu, NG, Assink, RA, Smarsly, B, "Synthesis and characterization of highly ordered functional mesoporous silica thin films with positively chargeable -NH₂ groups." *Chemical Communications*, 2003, no. 10, pp. 1146-1147.

Liu, NG, Assink, RA, "Synthesis and characterization of highly ordered mesoporous thin films with -COOH terminated pore surfaces." *Chemical Communications*, 2003, no. 3, pp. 370-371.

Tsai, Chung-Yi, Lu, Yungfeng, *Inorganic Dual-Layer Microporous Supported Membranes*, U.S. Patent No. 6,536,604, March 25, 2003.

Fan, Hongyou, Lopez, Gabriel P, Lu, Yunfeng, *Prototyping of Patterned Functional Nanostructures*, U.S. Patent No. 6,471,761, February 27, 2003.

Cecchi, Joseph L.

Sang M. Han, and John J. Russell "High Performance Engines: Fast Cars Accelerate Learning," *Chem. Eng. Educ.* 37(3), p. 208 (2003).

Cooper, Gary W.

S. A. Slutz, J. E. Bailey, G. A. Chandler, G. R. Bennett, J. S. Lash, S. Lazier, P. Lake, R. W. Lemke, T. A. Mehlhorn, T. J. Nash, D. S. Nielson, J. McGurn, T. C. Moore, C. L. Ruiz, D. G. Schroen, J. Torres, W. Varnum, and R. A. Vesey, "Dynamic Hohlräum-driven Inertial Fusion Capsules," *Physics of Plasmas*, V 10, May 2003, pp. 1875-1882.

Curro, John G.

D. Heine, D. T. Wu, and G. S. Grest, Role of Intramolecular energy on Polyolefin Miscibility: Isotactic Polypropylene/Polyethylene Blend, *J. Chem Phys.* 118, p. 914 (2003).

M. Tsige, G. S. Grest, J. D. McCoy, "Molecular Dynamics and Integral Equation Theory of Alkane Chains: Comparison of Explicit and United Atom Models," *Macromolecules* 36, p. 2158 (2003).

A. L. Frischknecht "Improved United Atom Force Field for Poly (dimethylsiloxane)," *Macromolecules* 36, p. 2122 (2003).

Y. Ye, J. D. McCoy, " Application of Density Functional Theory to Tethered Polymer Chains: Effect of Intermolecular Attractions," *J. Chem Phys.* 119, p. 555 (2003).

Datye, Abhaya. K.

Pham, H.N., L. Nowicki, J. Xu, D.B. Bukur, and C. Bartholomew, Attrition Resistance of Supports for Iron Fischer-Tropsch Catalysts. *Industrial and Engineering Chemistry Research*, 2003, 20(42): pp. 4001-4008.

Scott, R.W.J., and R.M. Crooks, Bimetallic Palladium-Platinum Dendrimer-Encapsulated Catalysts. *Journal of The American Chemical Society*, 2003, 2(125): pp. 3708-3709.

Choudhary, T.V., C. Sivadinarayana, D. Kumar, and D.W. Goodman, Acetylene hydrogenation on Au-based catalysts. *Catalysis Letters*, 2003, 86: pp. 1-3.

Xu, Q., K.C.C. Kharas, The preparation of highly dispersed Au/Al₂O₃ by aqueous impregnation. *Catalysis Letters*, 2003, 85: pp. 3-4.

Bore, M. T., S. B. Rathod, T. L. Ward, Hexagonal mesostructure in powders produced by evaporation-induced self-assembly of aerosols from aqueous tetraethoxysilane solutions. *Langmuir*, 2003, 21(19): pp. 256-264.

Electron microscopy of catalysts: recent achievements and future prospects. *Journal of Catalysis*, 2003, 15(216): pp. 1-2.

Mokoena, E. M., and N. J. Coville, A systematic study of the use of DL-tartaric acid in the synthesis of silica materials obtained by the sol-gel method. *Journal of Sol Gel Science And Technology*, 2003, 28: pp. 307-317.

Vanamu, G., Allerman, A., Zaidi, S. H., Characterization and analysis of heteroepitaxial growth on silicon structures, *Microscopy and Microanalysis*, 2003, 9(2), p. 372CD.

Pham, H., *Synthesis of attrition-resistant heterogeneous catalysts using templated mesoporous silica*, US patent 6,548,440, April 15, 2003.

El-Genk, Mohamed S.

- H. H. Saber, "High Efficiency. Segmented Thermoelectric for Operation between 973 K and 300 K," *J. Energy Conversion and Management*, 44(7), 2003, pp. 1069-1088.
- H. Bostanci, "Saturation Boiling of HFE-7100 from a Copper Surface, Simulating a Microelectronics Chip," *Int. J. Heat and Mass Transfer*, 46, 2003, pp. 1841-1854.
- H. H. Saber, and T. Caillat, "Efficient, Segmented Thermoelectric for Space Power Applications," *J. Energy Conversion and Management*, 44(11), 2003, pp. 1755-1772.
- H. Bostanci, "Combined Effects of Subcooling and Surface Orientation on Pool Boiling of HFE-7100 from a Simulated Electronic Chip," *J. Experimental Heat Transfer*, 16, 2003, pp. 281-301.
- Momozaki, Y., "Electrical Breakdown Experiments with Applications to Alkali Metals Thermal-to-Electrical Converters," *J. Energy Conversion and Management*, 44 (6), 2003, pp. 819-843.
- Tournier, J. -M., "Startup of a horizontal Lithium-Molybdenum Heat Pipe from a Frozen Startup," *International Journal of Heat and Mass Transfer*, 46, 2003, pp. 819-844.
- J. -M. Tournier, "High Power AMTEC Converters for Deep-Space Nuclear Reactor Power Systems," *Proc. Space Technology and Applications International Forum (STAIF-03)*, AIP Conference Proceedings No. 654, American Institute of Physics, Melville, NY, 2003, pp. 730-739.
- "Energy Conversion Options for Advanced Radioisotope Power Systems," *Proc. Space Technology and Applications International Forum (STAIF-03)*, AIP Conference Proceedings No. 654, American Institute of Physics, Melville, NY, 2003, pp. 368-375.
- J. -M. Tournier, "Coated Particle Fuel Compact-General Purpose Heat Source for Advanced Radioisotope Power Systems," *Proc. Space Technology and Applications International Forum (STAIF-03)*, AIP Conference Proceedings No. 654, American Institute of Physics, Melville, NY, 2003, pp. 361-367.
- J. -M. Tournier, "Conceptual Design of a 100-kWe Space Nuclear Reactor Power System with High-Power AMTEC," *Proc. Space Technology and Applications International Forum (STAIF-03)*, AIP Conference Proceedings No. 654, American Institute of Physics, Melville, NY, 2003, pp. 397-407.
- Momozaki, Y., "Effect of Collector Temperature on the Performance of Grooved Electrodes Converters," *Proc. Space Technology and Applications International Forum (STAIF-03)*, AIP Conference Proceedings No. 654, American Institute of Physics, Melville, NY, 2003, pp. 757-765.
- M. S. El-Genk, "Design Optimization of High-Power, Liquid Anode AMTEC," *Proc. Space Technology and Applications International Forum (STAIF-03)*, AIP Conference Proceedings No. 654, American Institute of Physics, Melville, NY, 2003, 740-750.
- Jean-Michel Tournier, "Nuclear Power Plant Concepts with Dynamic and Static Combined Energy Conversion," *Proceedings of the International Congress on Advanced Nuclear Power Plants (ICAPP-03)*, held in Cordoba, Spain, May 4-7, 2003.

“Energy Conversion Options for NASA’s Space Nuclear Power Systems Initiative,” *Proceedings of the International Congress on Advanced Nuclear Power Plants (ICAPP-03)*, held in Cordoba, Spain, May 4-7, 2003.

M, H. Saber, J. Sakamoto, and T. Caillat, “Life Tests of Skutterudites Thermoelectric Unicouple (MAR-03),” *Proceedings of 22nd International Conference of Thermoelectrics (ICT-2003)*, held in La Grande-Motte, France, 17-21 August 2003, IEEE Proceedings ICT’03, pp. 417-420.

Fulghum, Julia E.

“XPS Imaging,” Artyushkova K, pp. 677-704 in *Surface Analysis by Auger and X-ray Photoelectron Spectroscopy*, ed D. Briggs and J. Grant, IM Publications, UK, 2003.

Han, Sang M.

Qiming Li, Steven R. J. Brueck, Stephen Hersee, Ying-Bing Jiang, and Huifang Xu, “Selective growth of Ge on Si(100) through vias of SiO₂ nanotemplate using solid source molecular beam epitaxy,” *Appl. Phys. Lett.*, 83(24), p. 5032 (2003).

Madhava R. Kosuri, Henry Gerung, Bruce C. Bunker, and Thomas M. Mayer, “Vapor-phase Adsorption Kinetics of 1-Decene on H-terminated Si(100),” *Langmuir*, 19(22), p. 9315 (2003).

Dhaval A. Doshi, Alain Gibaud, Valerie Goletto, Mengcheng Lu, Henry Gerung, Benjamin Ocko, and C. Jeffrey Brinker, “Peering into the self-assembly of surfactant templated thin-film silica mesophases,” *J. Am. Chem. Soc.*, 125, p. 11646 (2003).

Sang M. Han, Joseph L. Cecchi, and John J. Russell “High Performance Engines: Fast Cars Accelerate Learning,” *Chem. Eng. Educ.* 37(3), p. 208 (2003).

López, Gabriel P.

“Fabrication of an Integrated Nanofluidic Chip Using Interferometric Lithography,” O’Brien, M.J., Bisong, P., Ista, L. K., Rabinovich, E.M., Garcia, A.L., Sibbett, S.S., Brueck, S.R.J. *J. Vac. Sci. Tech. B.* 2003, 21, pp. 2941-2945.

“Microchip Countercurrent Electroseparation,” Ista, L.K., Ivory, C.F., Ortiz, M.J., Schifani, T.A., Schwappach, C.D., Sibbett, S.S. *Lab on a Chip* 2003, 3, pp. 266-272.

“Control of Molecular Transport Through Stimuli Responsive Ordered Mesoporous Materials,” Fu, Q., Rama Rao, G.V., Ista, L.K., Wu, Y., Andrzejewski, B., Sklar, L.A., Ward, T.L., *Adv. Mater.* 2003, 15, pp. 1262-1266.

“Biomimetic Molecular Assemblies on Glass and Mesoporous Microbeads for Biotechnology,” Buranda, T., Huang, J., Ramarao, G.V., Ista, L.K., Larson, R.S., Ward, T.L., Sklar, L.A., *Langmuir* 2003, 19, pp. 1654-1663.

Morel, Jim E.

T. A. Wareing, R. B. Lowrie, and D. K. Parsons, "Analysis of Ray-Effect Mitigation Techniques," *Nuclear Science and Engineering*, 144, pp. 1-22 (2003).

J. S. Warsa, T. A. Wareing, "Solution of the Discontinuous P1 Equations in Two-Dimensional Cartesian Geometry with Multi-Level Preconditioning," *SIAM Journal on Scientific Computing*, 24, pp. 2093-2124 (2003).

T. M. Evans, Todd J. Urbatsch, Henry Lichtenstein, "A Residual Monte Carlo Method for Radiative Diffusion," *Journal of Computational Physics*, 189, pp. 539-556 (2003).

James S. Warsa, Todd A. Waring, "On the Degraded Effectiveness of Diffusion Synthetic Acceleration for Multidimensional Sn Calculations in the Presence of Material Discontinuities," *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*, Gatlinburg, Tennessee, April 6-11, 2003, on CD-ROM. American Nuclear Society, LaGrange Park, IL (2003).

T. M. Evans, Todd J. Urbatsch, Henry Lichtenstein, "A Residual Monte Carlo Method for Radiative Diffusion," *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*, Gatlinburg, Tennessee, April 6-11, 2003, on CD-ROM. American Nuclear Society, LaGrange Park, IL (2003).

James S. Warsa, Todd A. Waring, "Krylov Iterative Methods Applied to Multidimensional Sn Calculations in the Presence of Material Discontinuities," *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*, Gatlinburg, Tennessee, April 6-11, 2003, on CD-ROM. American Nuclear Society, LaGrange Park, IL (2003).

James S. Warsa, Todd A. Waring, John M. McGhee, and Richard B. Lahoucq, "Krylov Subspace Iterations for the Calculation of k-Eigenvalues with Sn Transport Codes," *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*, Gatlinburg, Tennessee, April 6-11, 2003, on CD-ROM. American Nuclear Society, LaGrange Park, IL (2003).

J. S. Warsa, M. Benzi, T. Wareing "Two-Level Preconditioning of a Discontinuous Galerkin Method for Radiation Diffusion," in *Numerical Mathematics and Advanced Applications, Proceedings of ENUMATH 2001*, F. Brezzi, A. Buffa, S. Corsaro and A. Murli, eds., Springer-Verlag, New York and Berlin, pp. 967-978 (2003).

A. K. Prinja, J. M. McGhee, T. A. Wareing, and B. C. Franke, "A Discretization Scheme for the 3-D Continuous-Scattering Operator," *Transactions of the American Nuclear Society*, 89, pp. 360-362 (2003).

J. S. Warsa, K. Thompson, "Improving the Efficiency of Simple Parallel Sn Algorithms with Krylov Iterative Methods," *Transactions of the American Nuclear Society*, 89, pp. 449-451 (2003).

Gordon L. Olson, and Edward W. Larsen, "Chord Length Distributions in Binary Stochastic Media in Two and Three Dimensions," *Transactions of the American Nuclear Society*, 89, pp. 307-309 (2003).

Aaron M. Watson, "Homogenized Cross Sections for Statistical Media," *Transactions of the American Nuclear Society*, 89, pp. 293-295 (2003).

Phillips, Jonathan

S. Gleiman and C. K. Chen, *Method for Preparing Spherical Particles of Boron Nitride*, U. S. Patent 6,652,822 (2003).

Dmitry Gerenrot, Leonid Berlyand, "Random Network Model for Heat Transfer in High Contrast Composite Materials," *IEEE Transactions on Advanced Packaging* 26, p. 1521 (2003).

Chun-Ku Chen, William L. Perry, "Plasma Torch Production of Macroscopic Carbon Nanotube Structures," *Carbon* 41, p. 2555 (2003).

Ingber, M. S., Schmidt, C. C., Tanski, J. A., "Boundary Element Analysis of 3D Diffusion Problems Using a Parallel Domain Decomposition Method," *Numerical Heat Transfer* B44, p. 145 (2003).

Prinja, Anil K.

Gleicher, F. N., "A Standard Model for Higher Statistical Moments in Random Medium Transport," *Transactions of the American Nuclear Society*, Vol 89, p. 302 (2003).

Harding, L. T., "An Energy-Loss Decomposition Scheme for Efficient Energy Straggling Computations," *Transactions of the American Nuclear Society*, Vol 89, p. 503 (2003).

Morel, J. E., McGhee, J., Wareing, T. A., and Franke, B. C., "A Discretization Scheme for the 3-D Continuous-Scattering Operator," *Transactions of the American Nuclear Society*, Vol 89, p. 360 (2003).

Franke, B. C., "Electron Energy Deposition in Binary Statistical Media: A PDF Approach," *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*, Gatlinburg, Tennessee, April 6-11, 2003, on CD-ROM. American Nuclear Society, LaGrange Park, IL (2003).

Franke, B. C., "Monte Carlo Electron Dose Calculations Using Discrete Scattering Angles and Discrete Energy Losses," *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*, Gatlinburg, Tennessee, April 6-11, 2003, on CD-ROM. American Nuclear Society, LaGrange Park, IL (2003).

Roderick, Norman F.

T. W. L. Sanford, R. C. Mock, R. J. Leeper, D. L. Peterson, R. C. Watt, R. E. Crien, G. C. Idzorek, B. V. Oliver, M. G. Haines, "Unexpected Axial Asymmetry in Radiated Power from Dynamic-Hohlraum X-ray Sources," *Phys. Plasmas*, 10 (5) p. 1199, May 2003.

Tournier, Jean-Michel

M. S. El-Genk, "Startup of a Horizontal Lithium-Molybdenum Heat Pipe from a Frozen State," *International Journal of Heat and Mass Transfer*, 46, 2003, pp. 671-685.

M. S. El-Genk, "Analyses of Static Energy Conversion Systems for Small Nuclear Power Plants," *International Journal of Progress in Nuclear Energy*, 42(3), 2003, pp. 283-310.

M. S. El-Genk, "Design Optimization of High-Power, Liquid Anode AMTEC," *Space Technology and Applications International Forum (STAIF-2003)*, M. S. El-Genk, Ed., American Institute of Physics, Melville, NY, AIP Conference Proceedings No. 654, 2003, pp. 740-750.

El-Genk, M. S., "High-Power AMTEC Converters for Deep-Space Nuclear Reactor Power systems," *Space Technology and Applications International Forum (STAIF-2003)*, M. S. El-Genk, Ed., American Institute of Physics, Melville, NY, AIP Conference Proceedings No. 654, 2003, pp. 730-739.

El-Genk, M. S., "Conceptual Design of a 100-kWe Space Nuclear Reactor Power system with High-Power AMTEC," *Space Technology and Applications International Forum (STAIF-2003)*, M. S. El-Genk, Ed., American Institute of Physics, Melville, NY, AIP Conference Proceedings No. 654, 2003, pp. 397-407.

El-Genk, M. S., "Coated Particles Fuel Compact-General Purpose Heat Source for Advanced Radioisotope Power Systems," *Space Technology and Applications International Forum (STAIF-2003)*, M. S. El-Genk, Ed., American Institute of Physics, Melville, NY, AIP Conference Proceedings No. 654, 2003, pp. 361-367.

Ueki, Taro

F. B. Brown, D. K. Parsons, and D. E. Kornreich, "Autocorrelation and Dominance Ratio in Monte Carlo Criticality Calculations," *Nuclear Science and Engineering*, 145, pp. 279 (2003).

Ward, Timothy L.

Q. Fu, G. V. Rama Rao, L. K. Ista, Y. Wu, B. Andrzejewski, L. A. Sklar, G. P. López, "Control of Molecular Transport Through Stimuli-Responsive Ordered Mesoporous Materials," *Adv. Mater.* 15, p. 1262 (2003).

M. T. Bore, S. B. Rathod, A. K. Datye, "Hexagonal mesostructure in powders produced by evaporation-induced self-assembly of aerosols from aqueous tetraethoxysilane solutions," *Langmuir* 19 (2), pp. 256-264 (2003).

T. Buranda, J. Huang, G. V. Rama Rao, L. K. Ista, R. S. Larson, L. A. Sklar, G. P. Lopez, "Biomimetic molecular assemblies on glass and mesoporous silica microbeads for biotechnology," *Langmuir*, 19 (5), pp. 1654-1663 (2003).

T. J. Boyle, S. M. De'Angeli, H. F. Xu, W. F. Hammetter, "Properties of MOCVD deposits using novel Sn(II) neo-pentoxide precursors," *Chem. Mater.* 15 (3), pp. 765-775 (2003).

S. Rathod, G. V. Rama Rao, B. Andrzejewski, G. P. López, C. J. Brinker, A. K. Datye, "Monodisperse mesoporous microparticles prepared by evaporation-induced self assembly within aerosols," in *Self Assembled Nanostructured Materials, MRS Proc. Vol 775*, eds. C. J. Brinker, Y. Lu, M. Antonietti, and C. Bai, p. 15, 2003.

Wilkins, Ebtisam S.

Yelleti S., "Techniques for Detection of Explosives," *International Journal of Environmentally Conscious Design and Manufacturing*, Vol 11, No. 3., 2003.

Shah J., "Biosensors for Detection of Biological Warfare Agents," *Electroanalysis*, Vol 15, No. 3, pp. 157-167, 2003.

CIVIL ENGINEERING

Gerstle, Walter H.

"Book Review: Two Handbooks on Structural Steel Design," *Journal of Structural Engineering*, ASCE, Vol. 129, No. 6, p. 842, June 2003.

Gerstle, W., and Cheng, P.-Y. "Constructive Topological Domain Modeling for Computational Engineering," *Proceedings of the 7th U.S. National Congress on Computational Mechanics*, July 27-July 31, 2003, Albuquerque, NM.

Lenke, Lary R.

Lenke, L.R., McKeen, R.G., and Grush, M., "Laboratory Evaluation of the GeoGauge for Compaction Control," *Journal of the Transportation Research Board, Soil Mechanics 2003, Transportation Research Record, No. 1849*, Transportation Research Board, Washington, DC, 2003, pp. 20-30.

Maji, Arup K.

Maji A. K., and Montemerlo P., "Interferometry with LabView." *Experimental Techniques Journal*, V27, No. 1, 2003, pp. 41-44.

Maji A. K., Wegner P., "Deployable Optical Telescope Testbed." *SAMPE Journal*, V39, No. 5, 2003, pp. 35-40.

Francis W., Lake M., Mallick K., Maji A., and Freebury G., "Development and Testing of a Hinge/Actuator Using Elastic Memory Composites," *AIAA-2003-1496*, April, 2003.

Campbel D., and Maji A. K., "Deployment Accuracy and Mechanics of Elastic Memory Composites," *AIAA-2003-1495*, April 2003.

Campbel D., and Maji A., "Failure Mechanisms in the Folding of Unidirectional Soft-Resin Composites," *Proceedings of SEM International Conference*, Charlotte, NC, June 2003.

Fosness E., Maji A., Guerrero J., Carpenter B., and Tupper M., "On-orbit Results of the Lightweight Flexible Solar Array Shape Memory Alloy Hinge Experiment," *Proceedings of 2nd AIAA Unmanned Unlimited Systems Conference*, Sept. 2003.

Maji A.K., "Structural Testing," in *The Status of Experimental Mechanics, 2nd Edition*, SEM Publication, June, 2003, pp. 29-30.

Orozco A., and Maji A. K., "Failure Modes of FRP Reinforced Concrete Beams," *Proceedings of SEM International Conference*, Charlotte, NC, June 2003.

Brown J. and Maji A. K., "Blast Resistant Design with GFRP," *Proceedings of SEM International Conference*, Charlotte, NC, June 2003.

Taha, Mahmoud R

Reda Taha, M.M., Noureldin, A., El-Sheimy, N. and Shrive, N.G. (2003): "Artificial Neural Networks to Predict Creep With an Example Application to Structural Masonry," *Canadian Journal of Civil Engineering*, Vol. 30, No. 3, 2003, pp. 523-532.

Reda Taha, M.M., and Shrive, N. G. (2003): "Ultra High Performance Concrete (UHPC) Anchors: A Step towards Metal-Free Structures," *Concrete International*, Vol. 25, No. 8, 2003, pp 35-40.

Reda Taha, M. M. and Shrive, N. G. (2003): "New Concrete Anchors for CFRP Post-Tensioning Tendon- Part I: State of the Art Review/Design," *ACI Structural Journal*, Vol. 100, No. 1, 2003, pp. 86-95.

Reda Taha, M.M. and Shrive, N. G. (2003): "New Concrete Anchors for CFRP Post-Tensioning Tendon- Part II: Experimental Investigation," *ACI Structural Journal*, Vol. 100, No. 1, 2003, pp. 96-104.

Reda Taha, M. M. and Hassanain, M. A. (2003) "Estimating The Error in Deflections of Reinforced Concrete Slabs: A Parametric Study Using the Theory of Error Propagation," ACI Special Publication SP-210, Deflection Control for The Future, Gardner, J. Ed., *American Concrete Institute*, MI, USA, 2003, pp. 65-92.

Reda Taha, M. M., Noureldin, A. and El-Sheimy (2003) "Improving INS/GPS Positioning Accuracy During GPS Outages Using Fuzzy Logic," *Proceedings of the 16th Annual Technical Meeting of Satellite Division, Institute of Navigation (ION) GPS-GNSS 2003*, Portland, Oregon, Sept. 2003, pp. 499-508.

Reda Taha, M.M., Noureldin, A. (2003) "Examining the use of Wavelet Multi-resolution Analysis in Damage Detection for Structural Health Monitoring Systems," *Proceedings of the International Symposium on Integrated Life Cycle Design of Structures (ILCDES)*, A. Sarja, Ed., Kuopio, Finland, pp. 355-360.

Ackley, David H.

Barrantes, E.G., Ackley, D.H., Forrest, S., Palmer, T.S., Stefanovic, D., Zovi, D.D. "Randomized Instruction Set Emulation to Disrupt Binary Code Injection Attacks." In *Proceedings of the 10th ACM Conference on Computer and Communications Security (CCS 2003)*: pp. 281-289.

Angel, Edward S.

Angel, E., and Moreland, K. "Fourier Processing in the Graphics Pipeline." *Integrated Image and Graphics Technologies*. Editors Zhang, D., Kamel, M., and Baciuc, G. Kluwer Academic Publishers, Nov. 2003.

Moreland, K., and Angel, E. "The FFT on a GPU." *Proceedings of Eurographics/SIGGRAPH Workshop on Graphics Hardware 2003*: pp. 112-119.

Interactive Computer Graphics, A Top-Down Approach with OpenGL (Third Edition). Addison-Wesley, 2003.

Bridges, P.

Brightwell, R., Riesen, R., Underwood, K., Hudson, T. B., Bridges, P., and Maccabe, A.B. "A Performance Comparison of Linux and a Lightweight Kernel." In *Proceedings of Cluster 2003*.

Forrest, Stephanie

Chao, D. L., and Forrest, S. "Information immune systems." *Genetic Programming and Evolvable Machines. Vol 4: 4* (2003): pp. 311-331.

Esponda, F., Forrest, S., and Helman, P. "The Crossover Closure and Partial Match Detection." *Proceedings of the Second International Conference on Artificial Immune Systems (ICARIS)*, Edinburgh, UK, September 2003, Editors Jon Timmis, Peter Bentley, Emma Hart. Springer.

Chao, D. L., and Forrest, S. "Generating biomorphs with an aesthetic immune system." In *Artificial Life VIII: The 8th International Conference on the Simulation and Synthesis of Living Systems*, MIT Press, Cambridge, MA. (2003): pp. 89-92.

Helman, Paul A.

Esponda, F., Forrest, S., and Helman, P., "The Crossover Closure and Partial Match Detection." *Proceedings of the Second International Conference on Artificial Immune Systems (ICARIS)*, Edinburgh, UK, September 2003, Editors Jon Timmis, Peter Bentley, Emma Hart. Springer.

Hermenegildo, Manuel

Correas, J., Gomez, J.M., Carro, M., Cabeza, D., Hermenegildo, M. "A Generic Persistence Model for CLP Systems." *2003 International Conference on Logic Programming*. LNCS, Springer-Verlag, December 2003.

Puebla, G., Hermenegildo, M. Abstract Specialization and its Applications. *Partial Evaluation and Semantics-based Program Manipulation*. ACM Press, June 2003: pp. 29-43.

Hermenegildo, M., Puebla, G., Bueno, F., López-García, P. "Program Development Using Abstract Interpretation (and The Ciao System Preprocessor)." *10th International Static Analysis Symposium (SAS'03)*. LNCS, Num. 2694, Springer-Verlag, June 2003: pp. 127-152.

Hermenegildo, M., Puebla, G., Bueno, F., López-García, P. Abstract Verification and Debugging of Constraint Logic Programs. *Recent Advances in Constraints*. LNCS, Num. 2627, Springer-Verlag, January 2003: pp. 1-14.

Correas, J., J. Gomez, M., Carro, M., Cabeza, D., Hermenegildo, M. "A Generic Persistence Model for CLP Systems (And Two Useful Implementations)." *Second CoLogNet Workshop on Implementation Technology for Computational Logic Systems. Facultad de Informatica*, September 2003: pp. 51-64.

Ingber, Jeanine A.

Etter, Delores M., Ingber Jeanine A. *Engineering Problem Solving with C++*. Prentice Hall, 2003.

Kapur, Deepak

Chtcherba, A., and Kapur, D. "Exact Resultants for Corner-cut Unmixed Multivariate Polynomial Systems Using the Dixon Formulation." *Journal of Symbolic Computation*, August 2003.

Kapur, D., and Subramaniam, M. "Automatic Generation of Simple Lemmas From Recursive Definitions Using Decision Procedures – Preliminary Report." *The Proceedings of ASIAN 2003*, LNCS Springer, Mumbai, India, Dec 2003.

Cochran, J., Kapur D., and Stefanovic, D. "Model Checking Reconfigurable Processor Configurations for Safety Properties." *The Proceedings of International Conference on FPL and Applications*. LNCS Springer, Lisbon, Portugal, Sep 2003.

Kapur, D., and Sakhanenko, N.A. "Automatic Generation of Generalization Lemmas for Proving Properties of Tail-recursive Definitions." *The Proceedings of Theorem Provers for Higher-Order Logics, TPHOLs(2003)*. LNCS 2758, Springer, Rome, Italy, Sept. 2003.

Giesl, J., and Kapur, D. "Deciding inductive validity of equations." *The Proceedings of CADE 2003*. LNCS, Springer, Miami, Florida, July 2003.

Kapur, D., Narendran, P., and Wang, L. "An E-unification algorithm for analyzing protocols that use modular exponentiation." *Proceedings of International Conference on Rewriting Technique and Applications, RTA-2003*. LNCS, Springer Valencia, Spain, June 2003.

Kapur, D., and Chtcherba, A. "Support hull of a polynomial system and the Dixon-based resultant construction." *International Symposium on Symbolic and Algebraic Computation (ISSAC 2003)*. Poster Session, Philadelphia, August 2003.

Kapur, D., Narendran, P., and Wang, L. "Undecidability of unification over two theories with modular exponentiation." *Proceedings Unification Workshop 2003*, Valencia, Spain, June 2003.

Lane, Terran D.

Lane, T. and Brodley, C. E. "An Empirical Study of Two Approaches to Sequence Learning for Anomaly Detection." *Machine Learning*, Volume 51, Number 1, 2003: pp. 73-107.

Luger, George F.

Pless, D., and Luger, G. "EM Learning of Product Distributions in a First-Order Stochastic Logic Language." *Artificial Intelligence and Soft Computing: Proceedings of the IASTED International Conference*. IASTED/ACTA Press, 2003.

Artificial Intelligence: Structures and Strategies for Complex Problem Solving, Addison-Wesley, 2003, in Russian.

Artificial Intelligence: Structures and Strategies for Complex Problem Solving, China Machine Press and CITIC Publishing House, 2003, in Chinese.

Maccabe, Arthur B.

Brightwell, R., Riesen, R., Underwood, K., Hudson, T., Bridges, P., and Maccabe, A.B. "A Performance Comparison of Linux and a Lightweight Kernel." *Proceedings of the IEEE International Conference on Cluster Computing (Cluster2003)*. Dec. 2003.

Brightwell, R., Maccabe, A.B., and Riesen, R. "The Appropriateness of Commodity Operating Systems for Large-Scale, Balanced Computing Systems." *Proceedings of 2003 International Parallel and Distributed Processing Symposium (IPDPS)*. Apr. 2003.

Brightwell, R., Maccabe, A.B., Riesen, R. "Design, Implementation, and Performance of MPI on Portals 3.0." *International Journal of High Performance Computing Applications*. Volume 17, Number 1, Spring 2003.

Riesen, R., and Maccabe, A.B. "Simple, Scalable Protocols for High-Performance Local Networks." *Proceedings of 2003 IEEE Conference on Local Computer Networks (LCN 2003)*. October 2003.

León, E.L., Maccabe, A.B., and Brightwell, R. "An MPI Tool to Measure Application Sensitivity to Variation in Communication Parameters Recent Advances in Parallel Virtual Machine and Message Passing Interface." Springer Verlag, *LNCS 2840*, September/October 2003.

Moore, Cristopher

Achlioptas, D., and Moore, C. "Almost all graphs of degree 4 are 3-colorable." *Journal of Computer and System Sciences*. 67, (2003): pp. 441-471.

Coja-Oghlan, A., Moore, C., and Sanwalani, V. "MAX k-CUT and approximating the chromatic number of random graphs." *Proceedings of the International Colloquium on Automata, Languages and Programming (ICALP '03)*: pp. 200-211.

Griffeath, D., and Moore, C. Eds. *New Constructions in Cellular Automata*. Oxford University Press, 2003.

Moret, B.M.E.

Marron, M., Swenson, K.M., and Moret, B.M.E., "Genomic distances under deletions and insertions," *Proceedings 9th International Combinatorics and Computing Conference COCOON'03*, in *Lecture Notes in Computer Science 2697*, (2003): pp. 537-547.

Nakhleh, L., Sun, J., Warnow, T., Linder, R., Moret, B.M.E., and Tholse, A., "Towards the development of computational tools for evaluating phylogenetic network reconstruction methods," *Proceedings 8th Pacific Symposium on Biocomputing (PSB'03)*, Hawaii, World Scientific Pub. (2003): pp. 315-326.

St. John, K., Warnow, T., Moret, B.M.E., and Vawter, L., "Performance study of phylogenetic methods: (unweighted) quartet methods and neighbor-joining," *Journal of Algorithms*. 48, 1 (2003): pp. 173-193.

Tang, J., and Moret, B.M.E., "Scaling up accurate phylogenetic reconstruction from gene-order data," *Proceedings of the 11th International Conference on Intelligent Systems for Molecular Biology ISMB'03*, in *Bioinformatics*. 19 (Suppl. 1) (2003): pp. i305-i312.

Tang, J., and Moret, B.M.E., "Phylogenetic reconstruction from gene rearrangement data with unequal gene contents," *Proceedings of the 8th Workshop on Algorithms and Data Structures WADS'03*, in *Lecture Notes in Computer Science 2748*, (2003): pp. 37-46.

Williams, T., and Moret, B.M.E., "An investigation of phylogenetic likelihood methods," *Proceedings of the 3rd IEEE Symposium on Bioinformatics and Bioengineering BIBE'03*, IEEE Press (2003): pp. 79-86.

Stefanovic, Darko

Stojanovic, M.N., and Stefanovic, D. "A Deoxyribozyme-Based Molecular Automaton." *Nature Biotechnology*, 21, (2003): pp. 1069-1074.

Stojanovic, M.N., and Stefanovic, D. "Deoxyribozyme-Based Half Adder." *Journal of the American Chemical Society*, 125(22), (2003): pp. 6673-6676.

Stojanovic, M.N., Nikic, D.B., and Stefanovic, D. "Implicit-OR tiling of Deoxyribozymes: Construction of Molecular Scale OR, NAND, and Four-Input Logic Gates." *Journal of the Serbian Chemical Society*, 68(4-5), (2003): pp. 321-326.

Barrantes, E.G., Ackley, D.H., Forrest, S., Palmer, T.S., Stefanovic, D., Zovi, D.D. "Randomized Instruction Set Emulation to Disrupt Binary Code Injection Attacks." In *Proceedings of the 10th ACM Conference on Computer and Communications Security (CCS 2003)*: pp. 281-289.

Cochran, J., Kapur D., and Stefanovic, D. "Model Checking Reconfigurable Processor Configurations for Safety Properties." *The Proceedings of International Conference on FPL and Applications*. LNCS Springer, Lisbon, Portugal, September 2003.

Veroff, Robert L.

Veroff, R. "A Shortest 2-Basis for Boolean Algebra in Terms of the Sheffer Stroke." *Journal of Automated Reasoning*, 31(1), (2003): pp. 1-9.

Williams, Lance R.

Mahamud, S., Williams, L.R., Thornber, K.K., and Xu, K. "Segmentation of Multiple Salient Closed Contours from Real Images." *IEEE Trans. On Pattern Analysis and Machine Intelligence* 25(4), (2003): pp. 433-444.

Williams, L.R. and Zweck, J.W. "A Rotation and Translation Invariant Discrete Saliency Network." *Biological Cybernetics* 88(1), (2003): pp. 2-10.

ELECTRICAL AND COMPUTER ENGINEERING

Abdallah, Chaouki T.

C. T. Abdallah, E. Chahine, D. Georgiev, and E. Schamiloglu, "Dynamics and Control of Microwave-Propelled Sails Using Delayed Measurements," *Proceedings First International Symposium on Beamed Energy Propulsion, AIP 664*, Huntsville, AL, pp. 348-357, 2003.

C. T. Abdallah, N. Alluri, J. D. Birdwell, J. Chiasson, V. Chupryna, Z. Tang, T. Wang, "A Linear Time Delay Model for Studying Load Balancing Instabilities in Parallel Computations," *International Journal Systems Sciences*, 2003.

D. Georgiev, E. Schamiloglu, C. T. Abdallah, and E. Chahine, "3-D Simulation of Rigid Microwave-Propelled Sails Using Spin," *Proceedings First International Symposium on Beamed Energy Propulsion, AIP 664*, Huntsville, AL, pp. 336-347, 2003.

F. L. Lewis, D. Dawson, and C. T. Abdallah, *Robot Manipulator Control: Theory and Practice*, Marcel Dekker Publishing Company, New York, NY, 2003.

I. Bakim, C. T. Abdallah, and E. Schamiloglu, "Communicating with Microwave Propelled Sails," *IEEE Antennas and Propagation Magazine*, pp. 111-122, August 2003.

J. Chiasson, J. D. Birdwell, Z. Tang, and C. T. Abdallah, "The Effect of Time Delays in the Stability of Load Balancing Algorithms for Parallel Computations," *Proceedings IEEE CDC 2003*, Maui, Hawaii.

J. Rohwer, and C. T. Abdallah, "One-vs-One Multiclass Least Squares Support Vector Machines for Direction of Arrival Estimation," *Applied Computational Electromagnetics Society (ACES) Journal, Special issue on Neural Networks Applications in Electromagnetics*, Vol. 18, No. 2, pp. 34-45, July 2003.

J. Rohwer, C. T. Abdallah, and C. Christodoulou, "Least Squares Support Vector Machines for Fixed-Step and Fixed-Set CDMA Power Control," *Proceedings IEEE CDC 2003*, Maui, Hawaii.

P. Hokayem, C. T. Abdallah, and Peter Dorato, "Quasi-Monte Carlo Methods in Robust Control Design," *Proceedings IEEE CDC 2003*, Maui, Hawaii.

S. Dhakal, B. Paskaleva, M. Hayat, E. Schamiloglu, and C. T. Abdallah, "Dynamic Discrete-Time Load Balancing in Distributed Systems in Presence of Time Delays," *Proceedings IEEE CDC 2003*, Maui, Hawaii.

S. Tarbouriech, M. Ariola, and C. T. Abdallah, "Bounded Controller Design of an ABR Explicit Rate Algorithm for ATM Switches," *Proceedings IEEE CDC 2003*, Maui, Hawaii.

Brueck, Steven R. J.

A. K. Raub and S. R. J. Brueck Deep, "UV Immersion Interferometric Lithography Proc. SPIE 5040," *Optical Microlithography XVI*, pp. 667-678 (2003).

C. J. Schwarz, Y. Kuznetsova and S. R. J. Brueck, "Imaging Interferometric Microscopy," *Optics Lett.*, 28, pp. 1424-1426 (2003).

Christian J. Schwarz, Yuliya Kuznetsova and S. R. J. Brueck, "Demonstration of Imaging Interferometric Microscopy Proc. SPIE 5038," *Metrology, Inspection and Process Control XVII*, pp. 1-12 (2003).

Eric S. Wu, Balu Santhanam and S. R. J. Brueck, "Grating Analysis of Frequency Parsing Strategies for Imaging Interferometric Lithography," *Proc. SPIE 5040, Optical Microlithography XVI*, pp. 1267-1283 (2003).

M. J. O'Brien, P. Bisong, L. K. Ista, E. M. Rabinovitch, A. L. Garcia, S. S. Sibbett, G. P. Lopez and S. R. J. Brueck, "Fabrication of an Integrated Nanofluidic Chip using Interferometric Lithography," *Jour. Vac. Sci. Technol.* 21, 2941-2945 (2003).

Q. Li, S. M. Han, S. R. J. Brueck, S. Hersee, Y-B. Jiang and H. Xu, " Selective Growth of Ge on Si(100) through Vias of SiO₂ Nanotemplate using Solid Source Molecular Beam Epitaxy," *Appl. Phys. Lett.* 83, pp. 5032-5034 (2003).

S. R. J. Brueck, V. A. Smagley and P. G. Eliseev, "Radiation from a Dipole Embedded in a Multilayer Dielectric," *Slab Phys. Rev. E* 68, p. 036608, 2003.

Buchenauer, Jerald C.

J. H. Chen, C. J. Buchenauer, J. S. Tyo. "Numerical and Experimental Modeling of Subnanosecond Plasma Closing Switches in Gases," *PPC-2003 14th IEEE International Pulsed Power Conference Proceedings*, pp. 59-62.

Caudell, Thomas P.

Caudell, T. P. , Xiao, Y. , and Healy, M. J. , "eLoom and Flatland: Specification, Simulation, and Visualization Engines for the Study of Arbitrary Hierarchical Neural Architectures," *Neural Networks*, Vol. 16, Nos. 5-6, pp. 617-624, July 2003.

Caudell, T. P, Summers, K. L. , Holten, J. , Hakamata, T. Mowafi, M. , Jacobs, J. , Lozanoff, B. K. , Lozanoff, S. , Wilks, D. , Keep, M. F. , S. , Saiki, S, Alverson, A. , "Virtual Patient Simulator for Distributed Collaborative Medical Education," *The Anatomical Record, Part B: New Anat.*, Vol. 270B, pp. 23-29, Jan. , 2003.

Edlund, K. M. and T. P. Caudell, 2003. "A Quantitative Image-Level Evaluation of Multi-Resolution 3D Texture-Based Volume Rendering." *Proceedings of the SPIE Conference on Visualization and Data Analysis*, Jan 2003.

Fisk, M. , Kothapally, S. , Smith, S. A. , and Caudell, T. P. , "Immersive Network Monitoring," *Proceedings of the Passive and Active Measurement Workshop PAM*, June, 2003.

Healy, M. J. , Caudell, T. P. , Xaio, Y. , "From Categorical Semantics to Neural Network Design," *Proceedings of the INNS/IEEE International Joint Conference on Neural Networks*, Portland OR, pp. 1981-1986, July, 2003.

Hubbard, P. F. , Umland, K. L. , Pereyra, C. and Caudell, T. P. , "Three-Dimensional Audio Localization using Wavelet-Domain Convolution," in *Proceedings of Wavelets X Conference*, San Diego, CA, Aug 3-8, 2003.

Jacobs, J. , Caudell, T. P. , Wilks, D. , Keep, M. F. , Mitchell, S. , Buchanan, H. , Saland, L. , Rosenheimer, J. , Lozanoff, B. K. , Lozanoff, S. , Saiki, S, Alverson, A. , "Integration of Advanced Technologies to Enhance Problem-Based Learning Over Distance: Project TOUCH," *The Anatomical Record, Part B: New Anat.*, Vol. 270B, pp. 16-22, Jan 2003.

Summers, K. L. , Goldsmith, T. E. , Kubica, S. , Caudell, T. P. , "An Experimental Evaluation of Continuous Semantic Zooming in Program Visualization," in *Proceedings of IEEE Visualization*, Seattle, WA, Oct. , 2003.

Sun, L. S., Smith, S. A., and Caudell, T. P., "FROTH: a Force-Directed Representation of Tree Hierarchies," Poster and short paper in *Proceedings of the IEEE Visualization*, Seattle, WA. pp. 108-109, Oct. , 2003.

Xiao, Y. , Healy, M. J. , and Caudell, T. P. , "eLoom: Specification, Simulation, and Visualization Engines for Modeling Arbitrary Hierarchical Neural Architectures," *Proceedings of the INNS/IEEE International Joint Conference on Neural Networks*, Portland OR. , pp. 3048-3053, July, 2003.

Zhou, C. , Summers, K. L. , Caudell, T. P. , Berkbigler, K. , Bush, B. , Davis, K. , and Smith, S. A. , "Graph Visualization for the Analysis of the Structure and Dynamics of Extreme-Scale Supercomputers," *Proceedings of ACM Softviz*, June, 2003.

Christodoulou, Christos

"Antenna Radiation Patterns," *John Wiley Encyclopedia of RF and Microwave Engineering*, by M. Chryssomallis and C. G. Christodoulou , 2003.

"Antennas for Mobile Communications," *Wiley Encyclopedia of Telecommunications*, editor John Proakis, John Wiley and Sons, Inc., by M. Chryssomallis and C. G. Christodoulou, April 2003.

"Antennas," *John Wiley Encyclopedia of RF and Microwave Engineering*, by C. G. Christodoulou and P. F. Wahid, 2003.

C. G. Christodoulou, "RF-MEMS and its Applications to Microwave Systems, Antennas and Wireless Communications," *Proceedings of the SBMO/IEEE MTT-S Conference*, in Foz Do Iguacu, Brazil, pp. 525-531, September 2003.

D. Anagnostou, C. Christodoulou, and Ramiro Jordan, "MEMS and Reconfigurable Antennas," in *Frontiers of NanoEngineering 2003*, Sao Paulo, Brazil, October 2-3, 2003.

D. Anagnostou, M. T. Chryssomallis, J. C. Lyke, and C. G. Christodoulou, "Reconfigurable Sierpinski Gasket Antenna using RF-MEMS Switches," *IEEE AP/URSI Symposium* in Columbus, Ohio, June 2003, pp. 357-378.

D. Capsidis, M. T. Chryssomallis, and C. G. Christodoulou, "An Accurate Circuit Model of a Microstrip Patch Antenna for CAD Applications," *IEEE AP/URSI Symposium* in Columbus, OH, June 2003, Vol. 3, pp. 120-123.

G. Tzeremes, M. Khodier, T. S. Liao, P. K. L. Yu, and C. G. Christodoulou, "Optically Driven CPW Fed Slot Antennas and Arrays for Wireless Communications," *IEEE AP/URSI Symposium* in Columbus, OH, pp. 659-662, June 2003.

Gomez-Tagle J and C. G. Christodoulou, "FDTD Analysis of Finite Phased Arrays of Stacked Microstrip Antennas," *IEEE Transactions on Antennas and Propagation*, Vol. 51, no. 8, pp. 2057-2062, Aug. 2003.

J. A. Rohwer, C. T. Abdallah, and Christos G. Christodoulou, "Least Squares Support Vector Machines for Direction of Arrival," *IEEE AP/URSI Symp.* in Columbus, OH, June 2003, pp. 57-60.

J. Rohwer, C. T. Abdallah, and C. G. Christodoulou, "Least Squares Support Vector Machines for Fixed-Step and Fixed-Set CDMA Power Control," *Proceedings IEEE CDC 2003*, Maui, Hawaii, pp. 284-9553.

J. Rohwer, C. T. Abdallah, and C. G. Christodoulou, "Least Squares Support Vector Machines for Direction of Arrival with Error Control and Validation," *GLOBECOM 2003*, Vol. 4, Dec. 2003, pp. 2172-2176.

Khodier M. and C. G. Christodoulou, "A Proposed Stacked Microstrip Antenna Structure for Bandwidth Enhancement," *Microwave and Optical Technology Letters*, Jan. 2003.

Tzeremes G. , T. S. Liao, P. K. L. Yu, and C. G. Christodoulou, "Computation of Equivalent Circuit Models of Optically Driven CPW Fed Slot Antennas for Wireless Communications," *IEEE Antennas and Wireless Propagation Letters*, Vol. 2, no. 10, pp. 140-142, 2003.

Clark, Lawrence T.

L. Clark, "Trends and Challenges for Wireless Embedded DSP's," *Proc. CICC*, pp. 171-176, Sept. 2003.

L. Clark, M. Wilkerson, and B. Choi, "Reducing Translation Lookaside Buffer Active Power," *Proc. ISLPED*, pp. 10-13, Aug. 2003.

T. Maloney, S. Poon, and L. Clark, "Methods for Designing Low-leakage Power Supply Clamps," *Proc. EOS-ESD Symp.*, pp. 27-33, Sept. 2003.

Fuks, Mikhail

A. Andreev, M. Fuks, and E. Schamiloglu, "Compact Relativistic Magnetron with Output Mode Converter," *Bull. Am. Phys. Soc.*, Vol. 48, p. 313, 2003.

M. Fuks, E. Schamiloglu, A. Gromov, and N. Kovalev, "Pierce and Bursian Instabilities of a Relativistic Electron Beam in a Vacuum Channel with Small Irregularities," *Bull. Am. Phys. Soc.*, Vol. 48, p. 110, 2003.

M. Fuks, M. Goikhman, A. Palitsin, N. Kovalev, and E. Schamiloglu, "Improvement of Selective Properties of Waveguide Bragg Resonators," *AIP Conference Proceedings, High Energy Density and High Power RF*, Vol. 691, pp. 272-281, Melville-New York, 2003.

Gaudet, John A.

“Influence Of Nanocrystalline Grain Size On The Breakdown Strength Of Ceramic Dielectrics,” Y. Y. Shi, C. Zhang, F. Dogan, E. Schamiloğlu, J. Gaudet, P. Castro, M. Roybal, M. Joler, and C. Christodoulou, *Digest of Technical Papers, 14th International Pulsed Power Conference*, Dallas, Texas, pp. 719-722, June 2003.

“Modeling of a Compact, Portable, Transmission Line for Pulsed Power Applications,” M. Joler, C. G. Christodoulou, E. Schamiloğlu, and J. Gaudet, *Digest of Technical Papers, 14th International Pulsed Power Conference*, Dallas, Texas, pp. 253-256, June 2003.

Gilmore, Mark

C. X. Yu, M. Gilmore, W. A. Peebles, and T. L. Rhodes (2003). “Structure Function Analysis of Long-Range Correlations in Plasma Turbulence,” *Physics of Plasmas* 10(7), p. 2772.

M. Gilmore, W. A. Peebles, S. Kubota, X. V. Nguyen, and A. Ejiri (2003). “Progress Toward a Practical Magnetic Field Diagnostic for Low-Field Fusion Plasmas Based on Dual Mode Correlation Reflectometry,” *Rev. Sci. Instrumen.* 74(3), p. 1469.

Hawkins, Charles F.

A. Keshavarzi, K. Roy, C. Hawkins, and V. De, “Multiple-Parameter CMOS IC Testing with Increased Sensitivity for IDDQ,” *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, Vol. 11, Issue: 5, pp. 863 -870, October 2003.

O. Seminov, A. Vassighi, M. Sachdev, A. Keshavarzi, and C. Hawkins, “Effect of CMOS Technology Scaling On Thermal Management During Burn-In,” *IEEE Transactions On Semiconductor Manufacturing*, Vol. 16. No. 4, November 2003.

Hayat, Majeed M.

B. M. Ratliff, M. M. Hayat, and J. S. Tyo, “An Algorithm for Two-Dimensional, Radiometrically Accurate Nonuniformity Correction,” *SPIE AereoSense, 2003: Infrared Imaging Systems: Design, Analysis, Modeling, and Testing XIV*, Orlando, FL, *SPIE Proceedings*, Vol. 5076, pp. 82-91, 2003.

B. M. Ratliff, M. M. Hayat, and J. S. Tyo, “Radiometrically Accurate Scene-based Nonuniformity Correction for Array Sensors,” *The Journal of the Optical Society of America A*, Vol. 20, pp. 1890-1899, 2003.

“Digital Image Processing (with Russell Hardie),” Part of the Encyclopedia of Optical Engineering, 2003, Ronald Drigger, editor. Dekker Publishing, ISBN: 0-8247-4258-3.

J. Chiasson, J. D. Birdwell, M. M. Hayat, and C. Abdallah, “Dynamic Time Delay Models for Load Balancing: Part I,” *Proceedings of the CNRS-NSF Workshop: Advances in Control of Time-delay Systems*, pp. 106-114, Jan. 22-24, 2003, Paris, France.

J. D. Birdwell, J. Chiasson, C. T. Abdallah and M. M. Hayat, "The Effect of Feedback Gains on the Performance of a Load Balancing Network with Time Delays," *Proceedings of the IFAC Workshop on Time Delay Systems*, TDS'03, Rocquencourt France, September 2003.

M. M. Hayat and O-H. Kwon, "High Speed Heterostructure Avalanche Photodiodes," *Active and Passive Optical Components for WDM Communications III*, part of *The International Symposium on ITCOM 2003*, Orlando, FL, SPIE Vol. 5246, pp. 400-408, 2003.

M. M. Hayat, C. Abdallah, J. D. Birdwell, and J. Chiasson, "Dynamic Time Delay Models for Load Balancing, Part II: A Stochastic Analysis of the Effect of Delay Uncertainty," *Proceedings of the CNRS-NSF Workshop: Advances in Control of Time-delay Systems*, pp. 115-122, Jan. 22-24, 2003, Paris, France.

M. M. Hayat, U. Sakoglu, O-H. Kwon, S. Wang, J. C. Campbell, B. E. A. Saleh, and M. C. Teich, "Breakdown Probabilities for Thin Heterostructure Avalanche Photodiodes," *IEEE J. Quantum Electronics*, Vol. 39, pp. 179 -185, Jan. 2003.

O-H. Kwon, M. M. Hayat, S. Wang, J. C. Campbell, A. L. Holmes, Y. Pan, B. E. A. Saleh, and M. C. Teich, "Optimal Excess Noise Reduction in Thin Heterojunction Al_{0.6}Ga_{0.4}As Avalanche Photodiodes," *IEEE J. Quantum Electronics*, Vol. 39, pp. 1287-1296, 2003.

O-H. Kwon, P. Sun, M. M. Hayat, J. C. Campbell, B. E. A. Saleh, and M. C. Teich, "Enhanced Gain-Bandwidth Product and Performance in Thin Heterostructure Avalanche Photodiodes," *Proceedings of the IEEE-LEOS 2003 Annual Meeting: High-Speed Photodetectors*, Tucson, AZ, Vol. 2, pp. 997-998, Oct. , 2003.

S. Dhakal, B. S. Paskaleva, M. M. Hayat, E. Schamiloglu, C. T. Abdallah "Dynamical Discrete Time Load Balancing in Distributed Systems in the Presence of Time Delays," *Proceedings of the IEEE Conference on Decisions and Controls (CDC-03)*, Maui, Hawaii, Dec. 2003.

S. N. Torres and M. M. Hayat, "Kalman Filtering for Adaptive Nonuniformity Correction in Infrared Focal Plane Arrays," *Journal of the Optical Society of America A*, Vol. 20, pp. 470-480, March 2003.

S. N. Torres, J. E. Pezoa, and M. M. Hayat, "Scene-Based Nonuniformity Correction for Focal Plane Arrays Using the Method of the Inverse Covariance Form," *Applied Optics*, Vol. 42, pp. 5872-5881, Oct. 2003.

Heileman, Gregory L.

G. C. Anagnostopoulos, M. Bharadwaj, M. Georgiopoulos, S. J. Verzi, and G. L. Heileman. "Exemplar-based Pattern Recognition via Semi-Supervised Learning," *Proceedings of the IEEE-INNS-ENNS International Joint Conference on Neural Networks*, pp. 2782-2787, Portland, OR, July, 2003.

G. L. Heileman and Y. Yang. "The Effects of Invisible Watermarking on Satellite Image Classification," *Proceedings of the Third ACM Workshop on Digital Right Management*, Washington, DC, pp. 120-132, Oct, 2003.

H. Goldstein, G. L. Heileman, M. D. Heileman, T. Nicolakis, C. E. Pizano, B. Prumo, and M. Webb. "Protecting Digital Archives at the Greek Orthodox Archdiocese of America," *Proceedings of the Third ACM Workshop on Digital Rights Management*, Washington, DC, pp. 13-26, Oct, 2003.

S. J. Verzi, G. L. Heileman, and M. Georgiopoulos. "Universal Approximation with Fuzzy ART and Fuzzy ARTMAP," *Proceedings of the IEEE-INNS-ENNS International Joint Conference on Neural Networks*, pp. 1987-1992, Portland, OR July, 2003.

V. Licks, F. Ourique, R. Jordan, and G. Heileman. "Performance Loss of Dirty-Paper Codes for Additive White Gaussian Noise and Jitter Channels," *Proceedings of the 2003 IEEE Workshop on Statistical Signal Processing*, Sept. 28–Oct 1, St. Louis, MO, pp. 217-220, 2003.

W. Luo and G. L. Heileman. "Characterizing Open Addressing Hash Functions," *Proceedings of the 18th International Conference on Computers and Their Applications*, pp. 21-24, Honolulu, HI, March, 2003.

W. Luo and G. L. Heileman. "Comparison of Different Open Addressing Hashing Algorithms," *Proceedings of the 18th International Conference on Computers and Their Applications*, pp. 1-4, Honolulu, HI, March, 2003.

Hermenegildo, Manuel

J. Correas, J. M. Gomez, M. Carro, D. Cabeza, M. Hermenegildo. "A Generic Persistence Model for CLP Systems (And Two Useful Implementations)," Second CoLogNet Workshop on Implementation Technology for Computational Logic Systems, pp. 51-64, *Facultad de Informatica*, September 2003.

J. Morales, M. Carro, M. Hermenegildo. "Improving the Compilation of Prolog to C Using Type and Determinism Information: Preliminary Results," *Colloquium on Implementation of Constraint and Logic Programming Systems*, 14 pages, December 2003.

M. Hermenegildo, G. Puebla, F. Bueno, P. López-García. "Abstract Verification and Debugging of Constraint Logic Programs," *Recent Advances in Constraints, LNCS*, Num. 2627, pp. 1-14, Springer-Verlag, January 2003.

M. Hermenegildo, G. Puebla, F. Bueno, P. López-García. "Program Development Using Abstract Interpretation (and The Ciao System Preprocessor)," *10th International Static Analysis Symposium (SAS'03), LNCS*, Num. 2694, pp. 127-152, Springer-Verlag, June 2003.

Hersee, Steve

"Selective Growth of Ge on Si(100) T through Vias of SiO₂ Nanotemplate Using Solid Source Molecular Beam Epitaxy," Q. Li and S. M. Han, S. R. J. Brueck, S. D. Hersee, Y. B. Jiang and H. Xu, *Appl. Phys. Lett.*, 83 (2003) 5032-5034.

Huffaker, Diana

A. A. El-Emawy, S. Birudavolu, P. S. Wong, Y. -B. Jiang, H. Xu, S. Huang, and D. L. Huffaker, "Formation Trends in Quantum Dot Growth Using Metalorganic Chemical Vapor Deposition," *J. Appl. Phys.* 93, p. 3529-3534, March 15, 2003.

A. El-Emawy, S. Birudavolu, S. Huang, H. Xu, and D. L. Huffaker, "Selective Surface Migration for Defect-free Quantum Dot Ensembles Using Metal Organic Chemical Vapor Deposition," *J. Crystal Growth* 255, pp. 3-4, 213-219, August 2003.

D. L. Huffaker "Atomic Structure in Self-Assembled and Nanopatterned Quantum Dots," *Jet Propulsion Labs* (Paul von Allman), Sept. 23 2003.

Y. -C. Xin, L. G. Vaughn, L. R. Dawson, A. Stintz, Y. Lin, L. F. Lester, K. J. Malloy and D. L. Huffaker, "InAs Quantum Dot GaAs-based Lasers Grown on AlGaAsSb Metamorphic Buffers," *J. Appl. Phys.* 94, July 15, 2003.

Y. -C. Xin, L. G. Vaughn, L. R. Dawson, A. Stintz, Y. Lin, L. F. Lester, K. J. Malloy and D. L. Huffaker, "InAs Quantum Dot GaAs-based Lasers Grown on AlGaAsSb Metamorphic Buffers," *Virtual Journal of Nanoscale Science and Technology*, David Awschalom, Editor (July 28, 2003).

Jamshidi, Mo

A. El-Osery and M. Jamshidi, "Color Image Enhancement: Statistical Versus Fuzzy Expert Systems Approaches," in Ross, Booker and Parkinson (eds.) *Fuzzy Logic and Probability Applications*. SIAM, 2003, Chapter 7, pp. 127-144.

Berman, Y. Edan and M. Jamshidi, "Decentralized Autonomous Automatic Guided Vehicles in Material Handling," *IEEE Transactions on Robotics and Automation*, 2003.

M. Jamshidi, "Tools for Intelligent Control: Fuzzy Controllers, Neural Networks and Genetic Algorithms," *Phil. Trans. of Royal Society, London*, Vol. 361, pp. 1781-1808, 2003.

M. Jamshidi L. dos S. Coelho, R. A. Krohling and P. Fleming, *Robust Control Design Using Genetic Algorithms*, CRC Publishers, Boca Raton, FL, 2003.

M. Jamshidi, S. Sheikh-Bahaei, J. Kitzinger, P. Sridhar, S. Xia, Y. Wang, T. Song, U. Dole, J. Liu, E. Tunstel, Jr, M. Akbarzadeh, P. Lino, A. El-Osery, M. Fathi, X. Hu, And B. P. Zeigler, "V-LAB® - A Distributed Intelligent Discrete-Event Environment for Autonomous Agents Simulation," *Intelligent Automation and Soft Computing*, Vol. 9, No. 3, 2003, pp. 181-214.

M. Jamshidi, S. Sheikh-Bahaei, J. Kitzinger, P. Sridhar, S. Xia, Y. Wang, J. Liu, E. Tunstel, Jr, M. Akbarzadeh, A. El-Osery, M. Fathi, X. Hu, And B. P. Zeigler, "A Distributed Intelligent Discrete-Event Environment For Autonomous Agents Simulation," Chapter 11, *Applied Simulation* (M. Obaidat, et al, eds.), Kluwer Publishers, Amsterdam, the Netherlands, pp. 241-274, 2003.

Martinez, A. W. Doerry, M. Jamshidi and D. Bickel, "Coherent Data Alignment and Baseline Calibration for Improved Two-Pass Interferometric SAR," *SPIE Optical Engineering Journal*, 2003.

P. Sridhar, J. Kitzinger, Y. Wang and M. Jamshidi, "Distributed Architecture for Modeling and Simulation of Autonomous Multi-agent Multi-Physics Systems Using I-DEVS: V-Lab[®]," *Proc. IEEE Int. Conference on Systems, Man and Cybernetics*, Washington, DC, October 2003.

U. Dole, S. Beatty, M. Jamshidi, "Modified Hardware Design for Cooperative Mobile Robots," *Proc. IEEE Int. Conference on Systems, Man and Cybernetics*, Washington, DC, October 2003.

Krishna, Sanjay

B. Kochman, A. D. Stiff-Roberts, S. Chakrabarti, J. D. Phillips, S. Krishna, J. Singh and P. Bhattacharya, "Absorption, Carrier Lifetime, and Gain in InAs-GaAs Quantum Dot Infrared Photodetectors," *IEEE J. Quant. Electron*, 39, p. 459, 2003.

E. Plis, P. Rotella, S. Raghavan, L. R. Dawson, S. Krishna, D. Le and C. P. Morath, "Growth of Room-Temperature "Arsenic Free" Infrared Photovoltaic Detectors on GaSb Substrate Using Metamorphic InAlSb Digital Alloy Buffer Layers," *Appl. Phys. Lett.*, 82, p. 1658, 2003.

P. Rotella, S. Raghavan, A. Stintz, B. Fuchs, S. Krishna, C. Morath, D. Le and S. W. Kennerly, "Normal incidence InAs/InGaAs dots-in-well detectors with current blocking AlGaAs layer," *J. Cryst. Growth*, 251/1-4, pp. 787-793, 2003.

S. Krishna, S. Raghavan, G von Winckel, P. Rotella, A. Stintz, , C. Morath, D. A. Cardimona, and S. W. Kennerly, "Two Color InAs/InGaAs Dots-in-a-Well Detector with Background Limited Performance at 91K," *Appl. Phys. Lett.*, 82, p. 2574, 2003.

S. Raghavan, P. Rotella, A. Stintz, K. J. Malloy, S. Krishna, A. L Gray, "Structural and Optical Characterization of Rapid Thermally Annealed InAs/In_{0.15}Ga_{0.85}As Dots-In-Well Structure," *J. Cryst. Growth*, 247, pp. 269-274, 2003.

U. Sakoglu, J. S. Tyo, M. M. Hayat, S. Raghavan, and S. Krishna, "Spectrally Adaptive Infrared Photodetectors Using Bias-Tunable Quantum Dots," *J. Opt. Soc. Am. B*. Vol 21, p. 7, Jan 2004.

Lester, Luke F

"2. 5-3. 5 Micron Optically Pumped GaInSb/AlGaInSb Multiple Quantum Well Lasers Grown on AlInSb Metamorphic Buffer Layers Pease," EA, Dawson, LR, Vaughn, LG, Rotella, P, Lester, LF, *Journal of Applied Physics*, March 15 2003, Vol. 93, no. 6, p. 3177-3181.

"High External Feedback Resistance of Laterally Loss-Coupled Distributed Feedback Quantum Dot Semiconductor Lasers," Su, H, Zhang, L, Gray, AL, Wang, R, Newell, TC, Malloy, KJ, Lester, LF, *IEEE Photonics Technology Letters*, November 2003, Vol. 15, no. 11, p. 1504-1506.

"High-Gain Quantum-Dot Semiconductor Optical Amplifier for 1300 nm," Bakonyi, Z, Su, H, Onishchukov, G, Lester, LF, Gray, AL, Newell, TC, Tunnermann, *A Journal of Quantum Electronics*, November 2003, Vol. 39, no. 11, pp. 1409-1414.

"InAs Quantum-Dot GaAs-Based Lasers Grown on AlGaAsSb Metamorphic Buffers Xin," YC, Vaughn, LG, Dawson, LR, Stintz, A, Lin, Y, Lester, LF, Huffaker, DL, *Journal of Applied Physics*, August 1 2003, Vol. 94, no. 3, pp. 2133-2135.

Osinski, Marek

C. -Y. Liu, H. -J. Su, H. Cao, G. M. Peake, P. G. Eliseev, and M. Osinski, "Mode Beating Resonances in Microwave Spectra of Long-Cavity InGaAs/GaAs/AlGaAs GRIN-SCH Lasers," *Technical Digest, Pt. 12, Frontiers in Optics, The 87th Annual Meeting of the Optical Society of America*, Tucson, Arizona, 5-9 Oct. 2003, p. 16.

H. Xu, Y. -B. Jiang, Z. Nie, J. Lee, H. Konishi, Y. Wang, and M. Osinski, "Titanium oxide Based Nanotubes, Nanofibers, Nanoflowers, and Nanodiscs," *Proceedings of Microscopy and Microanalysis 2003 Meeting*, San Antonio, Texas, 3-7 August, 2003.

J. -H. Lee, P. G. Eliseev, M. Osinski, D. S. Lee, D. I. Florescu, S. -P. Guo, and M. Pophristic, "High-Temperature Properties of InGaN/AlInGaN-Based Quantum-Well UV LEDs in 300-600 K Range," Technical Digest CD-ROM, *Twenty Third Annual Conference on Lasers and Electro-Optics CLEO 2003*, Baltimore, Maryland, 2-6 June 2003, Paper CMX4.

J. -H. Lee, P. G. Eliseev, M. Osinski, D. -S. Lee, D. I. Florescu, S. -P. Guo, and M. Pophristic, "InGaN-Based Ultra-Violet Emitting Heterostructures with Quaternary AlInGaN Barriers," *IEEE Journal of Selected Topics in Quantum Electronics, Semiconductor Lasers Issue*, Vol. 9 (#5), pp. 1239-1245, September/October 2003.

J. -H. Lee, P. G. Eliseev, M. Osinski, D. -S. Lee, D. I. Florescu, S. -P. Guo, and M. Pophristic, "Properties of InGaN/AlInGaN/AlGaIn Quantum-Well UV-Light-Emitting Diodes," *Physics and Simulation of Optoelectronic Devices XI* (M. Osinski, H. Amano, and P. Blood, Eds.), SPIE International Symposium on Integrated Optoelectronic Devices OPTO 2003, San Jose, California, 27-31 January 2003, Proceedings of SPIE, Vol. 4986, pp. 595-607.

M. Osinski, K. C. Jungling, M. Sheik-Bahae, S. Prasad, J. K. McIver, and A. H. Guenther, "20 Years of Graduate Optics Education at the University of New Mexico," *Proceedings of Education and Training in Optics and Photonics Conference ETOP 2003*, Tucson, Arizona, 6-8 October 2003, pp. 151-159.

M. Osinski, S. Prasad, A. H. Guenther, A. L. Madsen, and C. B. McCormick, "Curriculum, Program, and Infrastructure Development for Bachelor of Science in Optical Science and Engineering (Invited Paper)," *Proceedings of Education and Training in Optics and Photonics Conference ETOP 2003*, Tucson, Arizona, 6-8 October 2003, Paper EWD2, pp. 220-234.

M. Osinski, "InNAs – a New Optoelectronic Material for Mid-Infrared Applications," *Opto-Electronics Review*, Vol. 11 (#4), pp. 321-326 (2003).

P. Adamiec, F. Dybała, A. Bercha, R. Bohdan, W. Trzeciakowski, and M. Osinski, "Pressure Tuning of High-Power Laser Diodes," *High-Power Diode Laser Technology and Applications* (M. S. Zediker, Ed.), SPIE International Symposium on Lasers and Applications in Science and Technology LASE 2003, San Jose, California, 27-28 January 2003, Proceedings of SPIE, Vol. 4973, pp. 158-165.

V. A. Smagley, M. Lu, G. A. Smolyakov, P. G. Eliseev, M. Osinski, B. P. Riely, P. H. Shen, and G. J. Simonis, "Electrical-Thermal-Optical Simulation of GaAs/ AlGaAs Oxide Confined VCSELs," *Physics and Simulation of Optoelectronic Devices XI* (M. Osin'ski, H. Amano, and P. Blood, Eds.), *SPIE International Symposium on Integrated Optoelectronic Devices OPTO 2003*, San Jose, California, 27-31 January 2003, *Proceedings of SPIE*, Vol. 4986, pp. 332-342.

Y. -R. Zhao, G. A. Smolyakov, and M. Osin'ski, "High-Performance InGaAs-GaAs-AlGaAs Broad-Area Diode Lasers with Impurity-Free Intermixed Active Region," *IEEE Journal of Selected Topics in Quantum Electronics, Semiconductor Lasers Issue*, Vol. 9 (#5), pp. 1333-1339, September/October 2003.

Pattichis, Marios S.

Barriga, E. S. , T'so, D. Y. , Pattichis, M. S. , and Soliz, P. , "Independent Component Analysis for Processing of Retinal Responses to Patterned Stimuli," published in *The Proceedings of the IEEE 25th International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS 2003)*, Cancun, Mexico, September, 2003.

Barriga, E. S., Truitt, P. W., Pattichis, M. S., T'so, D., Kwon, Y. H., Kardon, R. H., C. Christodoulou, E. Kyriacou, M. S. Pattichis, C. S., Pattichis, A. Nicolaides, "A Comparative Study of Morphological and other Texture Features for the Characterization of Atherosclerotic Carotid Plaques," *Computer Analysis of Images and Patterns, Lecture Notes in Computer Science (LNCS2756)*, 10th International Conference, CAIP 2003, Ed. by N. Petkov, and M. Westenberg, Springer Verlag, Groningen, The Netherlands, August 25-27, pp. 503-511, 2003.

C. S. Pattichis, C. Christodoulou, E. Kyriacou, M. S. Pattichis, "Artificial Neural Networks in Medical Imaging Systems," *Craiova Medicala* Vol. 5, Sup. 3 and CD-ROM. *Proceedings of the 1st MEDINF International Conference on Medical Informatics and Engineering*, 12-15 October, Craiova, Romania, pp. 83-91, 2003.

Pattichis, M. S. and Bovik, A. C. , "Latent Fingerprint Analysis using an AM-FM Model," in *Advances in Fingerprint Recognition*, Springer-Verlag, pages 317-338, 2003.

Rodriguez, P. V. , Pattichis, M. S. , and Goens, M. B. , "M-mode Echocardiography Image and Video Segmentation based on AM-FM Demodulation Techniques," published in *The Proceedings of the IEEE 25th International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS 2003)*, Cancun, Mexico, September, 2003.

Rodriguez, P. , Jordan, R. , Pattichis, M. S. , and Goens, M. B. , "Fast AM-FM Demodulation Image and Video Analysis Using Single Instruction Multiple Data (SIMD) Architectures," published in *The Proceedings of the IASTED International Conference on Signal Processing, Pattern Recognition and Applications, SPRA 2003*, Rhodes, Greece, June 30 – July 2, 2003.

Soliz, P. , "Blind Source Separation in Retinal Videos," published in *The Proceedings of the SPIE Medical Imaging Conference*, San Diego, California, February 2003.

Phillips, Cynthia

C. Burch, R. Carr, S. Krumke, M. Marathe, C. Phillips, and E. Sundberg, *A Decomposition-Based Pseudoapproximation Algorithm for Network Flow Interdiction*, in *Network Interdiction and Stochastic Integer Programming*, D. L. Woodruff (ed), Kluwer Academic Press, 2003, pp. 51-68.

J. Berry, L. Fleischer, W. Hart, and C. Phillips, "Sensor Placement in Municipal Water Networks," *Proceedings of the World Water and Environmental Resources Congress*, June 2003.

Ritchie-Tyo, Elizabeth

Ritchie, E. A. , 2003: Chapter 12. "Some Aspects of Midlevel Vortex Interaction in Tropical Cyclogenesis. Cloud Systems, Hurricanes, and the Tropical Rainfall Measuring Mission (TRMM)," W-K. Tao and R. Adler, eds. *Meteorological Monographs*, 29, pp. 165-174.

Ritchie, E. A. , 2003: "The Extratropical Transition of Tropical Cyclones: Contributions by the Midlatitude Circulation," *Proceedings of the 2nd International Workshop on Extra-tropical Transition (IWET2)*, Halifax, Nova Scotia, November 2003.

Ritchie, E. A. , and R. L. Elsberry, 2003: "Simulations of the Extra Tropical Transition of Tropical Cyclones: Contributions by the Midlatitude Upper-Level Trough to Re-Intensification," *Mon. Wea. Rev.*, 131, pp. 2122-2128.

Ritchie, E. A. , J. Simpson, T. Liu, J. Halverson, C. Velden, K. Brueske, and H. Pierce, 2003: Chapter 12, "Present Day Satellite Technology for Hurricane Research: A Closer Look at Formation and Intensification." *Hurricane! Coping with Disaster*, R. Simpson, ed. AGU Publications, pp. 249-891.

Ritchie, E. A. , R. L. Elsberry, and J. Molinari, 2003: "Tropical Cyclones in Vertical Shear: An Idealized Study of TS Chantal (2001) During the CAMEX-4 Field Campaign," *Proceedings of the Simpson Symposium, American Meteorological Society*, February 2003, Long Beach CA.

Santhanam, Balu

Santhanam, Balu "Generalized Energy Demodulation for Large Frequency Deviations," *IEEE Signal Processing Letters*, Vol. 11, No. 3, March 2004.

Santhanam, Balu and Malay Gupta, "Energy Separation and Demodulation of CPM Signals," *Proc. of Tenth IEEE DSP Workshop*, Pine Mountains, Georgia, pp. 20-23, Oct, 2002.

Wu, Eric and Balu Santhanam and S. R. J. Brueck, "Grating Analysis of Frequency Parsing Strategies for Imaging Interferometric Lithography," *Proc. of SPIE Conference on Optical Microlithography*, Vol. 5040, pp. 1276-1283, Feb 2003.

Schamiloglu, Edl

A. Andreev, M. Fuks, and E. Schamiloglu, "Compact Relativistic Magnetron with Output Mode Converter," *Bull. Am. Phys. Soc.*, Vol. 48, p. 313 (2003).

I. S. Bakim, C. T. Abdallah, and E. Schamiloglu, "Communicating with Microwave-Propelled Sails," *IEEE Antennas and Propagation Magazine Antennas*, Vol. 45, pp. 111-122 (2003).

M. Fuks, E. Schamiloglu, A. Gromov, and N. Kovalev, "Pierce and Bursian Instabilities of a Relativistic Electron Beam in a Vacuum Channel with Small Irregularities," *Bull. Am. Phys. Soc.*, Vol. 48, p. 110 (2003).

M. Fuks, M. Goikhman, A. Palitsin, N. Kovalev, and E. Schamiloglu, "Improvement of Selective Properties of Waveguide Bragg Resonators," *Proceedings of High Energy Density and High Power RF* (Berkeley Springs, West Virginia, June 2003).

N. Zamoski, T. Svimonishvili, M. Gilmore, E. Schamiloglu, J. Gaudet, and M. O. Manasreh, "Secondary Electron Yield Measurements," *Bull. Am. Phys. Soc.*, Vol. 48, p. 312 (2003).

R. Sandoval-Rodriguez, C. T. Abdallah, P. F. Hokayem, and E. Schamiloglu, "Robust Mobile Robotic Formation Control Using Internet-Like Protocols," *Proceedings 42nd IEEE Conf. On Decision and Control* (Maui, Hawaii, USA, 2003), pp. 5109-5112.

S. Dhakal, B. S. Paskaleva, M. M. Hayat, E. Schamiloglu, and C. T. Abdallah, "Dynamical Discrete-Time Load Balancing in Distributed Systems in the Presence of Time Delays," *Proceedings 42nd IEEE Conf. On Decision and Control* (Maui, Hawaii, USA, 2003), pp. 5128-5134.

Shu, Wei Wennie

M. Y. Wu and W. Shu, "Video Distribution with Edge Stations and Wi-Fi Delivery Networks," *IEEE International Conference on Multimedia and Expo (ICME2003)*, July 2003.

M. Y. Wu, W. Shu, and C. S. Lin, "Odyssey: A High-Performance Clustered Video Server," *Software Practice and Experience*, Vol. 33, no. 7, pp. 673--700, June 2003.

Smith, Christopher E.

H. Schaub and C. Smith, "Color Snakes for Dynamic Lighting Conditions on Mobile Manipulation Platforms," *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, October 27-31, 2003, Las Vegas, NV.

W. Abd-Elmageed, A. El-Osery, and C. Smith, "Non-Parametric Expectation Maximization: A Learning Automata Approach," *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics*, October 5-8, 2003, Washington, DC.

W. Abd-Elmageed, C. Smith, and S. Ramadan, "Kernel Snakes: Non-Parametric Active Deformable Models," *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics*, October 5-8, 2003, Washington, DC.

Tyo, Scott J.

B. M. Ratliff, M. M. Hayat, and J. S. Tyo, "Radiometrically Accurate, Scene-Based Nonuniformity Correction for Array Sensors," *J. Opt. Soc. Am. A*, 20: pp. 1890-1899, 2003.

B. M. Ratliff, M. M. Hayat, and J. S. Tyo, "Radiometrically Accurate Nonuniformity Correction with Arbitrary Spatial Shift," *SPIE AEROSENSE 2003*, Orlando, FL, April 2003.

J. S. Tyo, "A Class of Artificial Materials Isorefractive with Free Space," *IEEE Trans. Antennas Propagat.* 51: pp. 1093-1099, 2003.

J. S. Tyo, "Extending Optimization to Active Mueller Polarimeters," SPIE Vol. 4819: *Polarization Measurement, Analysis, and Remote Sensing V*, D.L. Goldstein and D.B. Chenault, Eds, pp. 68-74, SPIE, Bellingham, WA 2003.

J. S. Tyo, D. I. Diersen, A. Konsolakis, and R. C. Olsen, "Principal Components-Based Display Strategy for Spectral Imagery," *IEEE Trans. Geosci. Remote Sens.* 41: pp. 708 -718 2003.

M. J. Baretela and J. S. Tyo, "Improvement of Prompt Radiated Response from Impulse Radiating Antennas by Aperture Trimming," *IEEE Trans. Antennas Propagat.* 51: pp. 2158-2167, 2003.

Wu, Min-You

M. Y. Wu, W. Shu, and C. S. Lin, "Odyssey: A High-Performance Clustered Video Server," *Software Practice and Experience*, vol. 33, no. 7, pp. 673-700, June 2003.

MECHANICAL ENGINEERING

Ebrahimi, Nader D.

"Optimization of Flywheels and Rotating Disks," *Proceedings, 40th AIAA Aerospace Sciences Meeting*, Reno, Nevada.

"Dynamic Considerations in Design of a Multi-legged Vehicle," *Proceedings, 43rd AIAA/ASME/ASCE/ AHS Structures, Structural Dynamics, and Materials Conference*, Denver, Colorado.

"Studies in Dynamic Analysis of Multi-body Systems," *Proceedings, 44th AIAA/ASME/ASCE/ AHS Structures, Structural Dynamics, and Materials Conference*, Norfolk, Virginia.

Gorbatikh, Larissa

Jing, P., Khraishi, T., Gorbatikh, L., "Closed-Form Solutions for the Mode II Crack Tip Plastic Zone Shape," *International Journal of Fracture*, Vol. 122, No. 3-4, pp. L137-L142, 2003.

Gorbatikh, L., Popova, M., “Note On The Shape of a Slip Zone in Planar Frictional Sliding,” *International Journal of Fracture*, Vol. 119, No. 2, pp. L29-L34, January, 2003.

Jing, P., Khraishi, T., Gorbatikh, L., “Analytical Solutions of Crack Tip Plasticity Zone Shape for a Semi-Infinite Crack,” *Proceedings of the ASME Pressure Vessels and Piping (PVP) Division Symposium on Residual Stresses, Fitness-for-Service, and Manufacturing Processes*, Brust, F.W. (Ed.), Vol. 464, pp. 149-157, 2003.

Ingber, Marc S.

Ingber, M.S., Schmidt, C.C., Tanski, J.A., and Phillips, J., “Boundary Element Analysis of 3D Diffusion Problems Using a Parallel Domain Decomposition Method,” *Numerical Heat Transfer Part B*, Vol. 44, pp. 145-164, 2003.

Divo, E., Kassab, A.J., and Ingber, M.S., “Shape Optimization of Acoustic Scattering Bodies,” *Engineering Analysis Boundary Elements*, Vol. 27, No. 7, pp. 695-703, 2003.

“A Vorticity Method for the Solution of Natural Convection Flows in Enclosures,” *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 13, No. 6, pp. 655-671, 2003.

Brown, M.J., Mammoli, A.A., and Ingber, M.S., “Parallel Multipole Implementation of the Generalized Helmholtz Decomposition for Solving Viscous Flow Problems,” *International Journal for Numerical Methods in Engineering*, Vol. 58, No. 11, pp. 1617-1635, 2003.

Hsiao, S.-C., Mammoli, A.A., and Ingber, M.S., “The Evaluation of Domain Integrals in Complex Multiply-Connected Three-Dimensional Geometries for Boundary Element Methods,” *Computational Mechanics*, Vol. 32, No. 4-6, pp. 226-233, 2003.

Ingber, M.S. and Chen, C.S., “A parallel domain decomposition approach for solving diffusion equations using the method of fundamental solutions,” *Proceedings, 6th ASME-JSME Thermal Engineering Joint Conference, AJTEC 2003*, Hawaii Island, Hawaii, Japan Society of Mechanical Engineers, 2003.

Hampton, R.E., Mammoli, A.A., and Ingber M.S., “A Corrected BEM for the Inclusion of Near-Field Effects Associated With Suspension Flows at Low Reynolds Numbers,” in *Boundary Element Technology XV*, Brebbia, C.A. and Dippery, R.E. (Eds.), WIT Press, Southampton, UK, pp. 249-258, 2003.

Hsiao, S.-C., Christensen, D., Ingber, M.S., Mondy, L.A., and Altobelli, S.A., “Particle Migration Rates in a Couette Apparatus,” in *Computational Methods in Multiphase Flow II*, Mammoli, A. A. and Brebbia, C. A. (Eds.), WIT Press, Southampton, UK, pp. 241-251, 2003.

Khraishi, Tariq A.

Jing, P., Khraishi, T.A., Gorbatikh, L., “Closed-Form Solutions for the Mode II Crack Tip Plastic Zone Shape,” *International Journal of Fracture*, Vol. 122, No. 3-4, pp. L137-L142, 2003.

- Mulholland, M.M., Ege, E.S., Khraishi, T.A., Horstemeyer, M.F., Shen, Y.-L., "Cavity Mediated Strain Localization and Overall Ductility in Eutectic Tin-Lead Alloy," *Materials Science and Engineering A*, Vol. 360, No. 1-2, pp. 160-168, 2003.
- Khraishi, T.A., Demir, I., "On Cauchy Singular Integrals and Stress Intensity Factors for 2D Mode I Cracks," *Mechanics Research Communications*, Vol. 30, No. 4, pp. 353-364, 2003.
- Lerma, J., Khraishi, T.A., Shen, Y.-L., Wirth, B.D., "The Elastic Fields of Misfit Cylindrical Particles: A Dislocation-Based Numerical Approach," *Mechanics Research Communications*, Vol. 30, No. 4, pp. 325-334, 2003.
- Wakeland, P., Khraishi, T.A., Zubia, D., "An Anisotropic Elasticity Model of Strain Partitioning in Epitaxial Thin Layers," *Journal of Electronic Materials*, Vol. 32, No. 8, pp. 836-841, 2003.
- Khraishi, T.A., Yan, L., Shen, Y.-L., "Modelling Strengthening Mechanisms in Solids Using Dislocation Dynamics," *Proceedings of the ASME International Mechanical Engineering Congress and Exposition (IMECE'03)*, Washington, D.C., Nov. 16-21, 2003.
- Lerma, J.D., Khraishi, T.A., Shen, Y.-L., Wirth, B.D., "A Distributed-Dislocation Method for Generalized Eigenstrain Problems," *Proceedings, First International Conference on Computational Methods in Materials Characterization 2003*, Mammoli, A.A., Brebbia, C.A. (Eds.) pp. 185-194, 2003.
- Jing, P., Khraishi, T.A., Gorbatiikh, L., "Analytical Solutions of Crack Tip Plasticity Zone Shape for a Semi-Infinite Crack," *Proceedings, ASME Pressure Vessels and Piping (PVP) Division symposium on Residual Stresses, Fitness-for-Service, and Manufacturing Processes*, Brust, F.W. (Ed.), Vol. 464, pp. 149-157, 2003.
- Yan, L., Khraishi, T. A., Shen, Y.-L., Horstemeyer, M. F., "A Numerical Method for the Treatment of Image Stresses in Dislocation Dynamics Simulations," *Proceedings, Second MIT Conference on Computational Fluid and Solid Mechanics*, K. J. Bathe (Ed.), pp. 776-779, 2003.
- "A First Attempt at Introducing Problem-Based Learning in an Engineering Dynamics Course," *Proceedings, 2003 ASEE Gulf-Southwest Annual Conference*, March 19-21, 2003, Williams, J. and Peterson, L. (Eds.), The University of Texas at Arlington, 2003.

Lumia, Ronald

- Bowers, D., Lumia, R., "Manipulation of Unmodeled Objects Using Intelligent Grasping Schemes," *IEEE Transactions on Fuzzy Systems*, Vol. 11, No. 3, 2003.
- Jonnalagadda, K., Lumia, R., Starr, G., Wood, J., "Viewpoint Selection For Object Reconstruction Using Only Local Geometric Features," *IEEE International Conference on Robotics and Automation (ICRA)*, Taipei, Taiwan, September 13-19, 2003.
- Zhang, J., Lumia, R., Starr, G., Wood, J., "The Influence of Vision System Delay on the Stability of Visual Servoing Systems," *IEEE International Conference on Intelligent Robots and Systems (IROS)*, Las Vegas, NV, October 27- November 1, 2003.

Mammoli, Andrea A.

Hsiao, S.-C., Mammoli, A.A., and Ingber, M.S., "The Evaluation of Domain Integrals in Complex Multiply-Connected Three-Dimensional Geometries for Boundary Element Methods," *Computational Mechanics*, Vol. 32 (4-6), pp. 226-233, 2003.

Brown, M.J., Mammoli, A.A., Ingber, M.S., "Parallel Multipole Implementation of the Generalized Helmholtz Decomposition for Solving Viscous Flow Problems," *International Journal for Numerical Methods in Engineering*, Vol. 58, pp. 1616-1635, 2003.

Truesdell, R.A., Vorobieff, P. Sklar, L.A., Mammoli, A.A., "Mixing of a Continuous Flow of Two Fluids Due To Unsteady Flow," *Physical Review E*, Vol. 67, p. 066304, 2003.

"Direct Evaluation of Lubrication Forces in Asymptotically Corrected Completed Double Layer Boundary Integral Formulations," *Computational Methods in Multiphase Flows II*, Mammoli, A.A. and Brebbia, C.A. (Eds.), WIT Press, Southampton (UK), pp. 211-220, 2003.

"Preconditioned Iterative Solution of the Corrected Mobility Problem." In *Boundary Elements XXV*, Brebbia, C.A., Poljack, D. and Roje, V. (Eds.), WIT Press, Southampton (UK), pp. 155-164, 2003.

Moriconi, G., Mammoli, A.A., "Concrete in the Service Of Mankind: Characterization Aimed at Sustainable Development," *Computational Methods in Materials Characterization*, Mammoli, A.A. and Brebbia, C.A. (Eds.), WIT Press, Southampton (UK), pp. 277-286, 2003.

Mazzoli, A, Mammoli, A.A., "Manufacture And Morphological Characterization of Osteoconductive Porous Scaffolds." *Computational Methods in Materials Characterization*, Mammoli, A.A. and Brebbia, C.A. (Eds.), WIT Press, Southampton (UK), pp. 277-286, 2003.

Hampton, R.E., Mammoli, A.A., Ingber, M.S., "A Corrected BEM for the Inclusion of Near-Field Effects Associated With Suspension Flows at Low Reynolds Numbers," *Boundary Element Technology XV*, Brebbia, C.A. and Dippery, R.E. (Eds.), WIT Press, Southampton (UK), pp. 249-258, 2003.

Gallegos, C.M., Mammoli, A.A., "A Two Dimensional Numerical Study of Viscous Fingering in a Porous Medium." *Moving Boundaries VII*, Mammoli, A.A. and Brebbia, C.A. (Eds.), WIT Press, Southampton (UK), pp. 163-172, 2003.

Mammoli, A.A. and Brebbia, C.A., (Eds.). *Proceedings, Computational Methods in Multiphase Flows II* (Vol. 37 of the Advances in Fluid Mechanics series), WIT Press, Southampton, UK, 2003.

Mammoli, A.A. and Brebbia, C.A., (Eds.). *Proceedings, Computational Methods in Materials Characterization*, WIT Press, Southampton, UK, 2003.

Mammoli, A.A. and Brebbia, C.A. (Eds.). *Proceedings, Moving Boundaries VII, Computational Modelling of Free and Moving Boundary Problems*, WIT Press, Southampton (UK), 2003.

Razani, Arsalan

Lloyd, G.M., Kim, K.J., Razani, A., Shahinpoor, M., "Investigation of a Solar-Thermal Bio-mimetic Metal Hydride Actuator," *ASME Journal of Solar Energy Engineering*, Vol. 125, pp. 95-100, 2003.

Stone, A., Kim, K.J., Razani, A., Paquette, J., "Enhanced Steam Condensation as a Result of Heat Transfer Additives," *International Journal of Environmentally Conscious Design and Manufacturing*, Vol. 10, pp. 1-9, 2003.

Razani, A., "Some Thermodynamic Optimization Criteria for Biological Systems with Applications to Artificial Muscles," *Proceedings of the First World Congress on Biomimetics*, Vol. 1, pp. 1-5, 2003.

Shen, Yu-Lin

Shen, Y.-L., Ramamurty, U., "Constitutive Response of Passivated Copper Films to Thermal Cycling," *Journal of Applied Physics*, Vol. 93, pp. 1806-1812, 2003.

Kozola, B. D., Shen, Y.-L., "A Mechanistic Analysis of the Correlation between Overall Strength and Indentation Hardness in Discontinuously Reinforced Aluminum," *Journal of Materials Science*, Vol. 38, pp. 901-907, 2003.

Lerma, J., Khraishi, T., Shen, Y.-L., Wirth, B. D., "The Elastic Fields of Misfit Cylindrical Particles: A Dislocation-Based Numerical Approach," *Mechanics Research Communication*, Vol. 30, pp. 325-334, 2003.

Shen, Y.-L., Ramamurty, U., "Temperature Dependent Inelastic Response of Passivated Copper Films: Experiments, Analyses and Implications," *Journal of Vacuum Science and Technology B*, Vol. 21, pp. 1258-1264, 2003.

Shen, Y.-L., "Strength and Interface-Constrained Plasticity in Thin Metal Films," *Journal of Materials Research*, Vol. 18, pp. 2281-2284, 2003.

Mulholland, M. M., Ege, E. S., Khraishi, T. A., Horstemeyer, M. F., Shen, Y.-L., "Cavity Mediated Strain Localization and Overall Ductility in Eutectic Tin-Lead Alloy," *Materials Science and Engineering A*, Vol. 360, pp. 160-168, 2003.

Yan, L., Khraishi, T. A., Shen, Y.-L., Horstemeyer, M. F., "A Numerical Method for the Treatment of Image Stresses in Dislocation Dynamics Simulations," *Proceedings of The Second M.I.T. Conference on Computational Fluid and Solid Mechanics*, K. J. Bathe (Ed.), pp. 776-779, 2003.

Ege, E. S., Shen, Y.-L., "Effects of Inclusions and Porosity on the Indentation Response," in *Surface Engineering 2002-Synthesis, Characterizations, and Applications, Proceedings, Materials Research Society Symposium*, Vol. 750, Kumar, A., Meng, W.J., Cheng, Y.T., Zabinski, J.S., Doll, G.L. and Veprek S. (Eds.), paper number U6.2, 2003.

Ege, E.S., Shen, Y.-L., “Atomistic Simulation of Flow Stress and Dislocation-Interface Interaction in Thin Metal Films,” *Mechanical Properties Derived from Nanostructuring Materials, Materials Research Society Symposium Proceedings*, Vol. 778, Kung, H., Bahr, D.F., Moody, N.R., Wahl, K.J., (Eds.), 2003), paper number Y9.4, 2003.

Ege, E.S., Pereyra, R., Shen, Y.-L., “Indentation Behavior of Heterogeneous Materials,” *Computational Methods in Materials Characterization*, Mammoli, A.A. and Brebbia, C. A., (Eds.), WIT Press, pp. 155-164, 2003.

Ege, E.S., Shen, Y.-L., “Flow Stress and Dislocation-Interface Interaction in Thin Metallic Films,” in *Computational Methods in Materials Characterization*, Mammoli, A.A. and Brebbia, C. A., (Eds.), WIT Press, pp. 67-76, 2003.

Lerma, J.D., Khraishi, T.A., Shen, Y.-L., Wirth, B.D., “A Distributed-Dislocation Method for Generalized Eigenstrain Problems,” *Computational Methods in Materials Characterization*, Mammoli, A.A. and Brebbia, C. A., (Eds.), WIT Press, pp. 185-194, 2003.

Tanner, Herbert G.

Tanner, H.G., Loizou, S., Kyriakopoulos, K.J., “Nonholonomic Navigation and Control of Cooperating Mobile Manipulators,” *IEEE Transactions on Robotics and Automation*, Vol. 19, No. 1, pp. 53-64, 2003.

Tanner, H.G., Kyriakopoulos, K.J., “Backstepping for non smooth systems,” *Automatica*, Vol. 39, pp. 1259-1265, 2003.

Tanner, H.G., Jadbabaie, A., Pappas, G.J., “Stable Flocking of Mobile Agents, Part I: Fixed Topology,” *Proceedings, 42nd IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 2010-2015, December 2003.

Tanner, H.G., Jadbabaie, A., Pappas, G.J., “Stable Flocking of Mobile Agents, Part II: Dynamic Topology,” *Proceedings, 42nd IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 2016-2021, December 2003.

Loizou, S.G., Tanner, H.G., Kumar, V., Kyriakopoulos, K., “Closed Loop Motion Planning and Control for Mobile Robots in Uncertain Environment,” *Proceedings, 42nd IEEE Conference on Decision and Control*, Maui, Hawaii, pp. 2010-2015, December 2003.

Tanner, H.G., Jadbabaie, A., Pappas, G.J., “Coordination of Multiple Autonomous Agents,” *Proceedings, 11th Mediterranean Conference on Control and Automation*, June 2003.

“ISS Properties of Nonholonomic Mobile Robots,” *Proceedings, 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems*, Las Vegas NV, pp. 3799-3804, October 27-31, 2003.

Loizou, S.G., Tanner, H.G., Kumar, V., Kyriakopoulos, K., “Closed Loop Navigation for Mobile Robots in Dynamic Environments,” *Proceedings, 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems*, Las Vegas NV, pp. 3769-3774, October 27-31, 2003.

Tanner, H.G., Pappas, G.J., "Abstractions of Constrained Linear Systems," *Proceedings, 2003 American Control Conference*, Denver CO, pp. 3381-3386, 2003.

Truman, Randall

Wisniewski, C.F., Hewett, K.B., Manke, G.C. II, Truman, C.R., and Hager, G.D., "Spatially Resolved Sub-Doppler Overtone Gain Measurement on a Small-scale Supersonic HF Laser," *Recent Research and Development in Quantum Electronics*, 2003.

Manke, G.C. II, Hewett, K.B., Wisniewski, C.F., Truman, C.R., and Hager, G.D., "On the Presence of Rotational Nonequilibrium in a Supersonic HF Laser," *IEEE Journal of Quantum Electronics*, Vol. 39, pp. 1625-1634, 2003.

Wisniewski, C.F., Hewett, K.B., Manke, G.C., Crowell, P.G., Truman, C.R., and Hager, G.D., "Small Signal Gain Measurements in a Small Scale HF Overtone Laser," *Applied Physics A*, Vol. 77, pp. 337-342, 2003.

Wisniewski, C.F., Hewett, K.B., Manke, G.C. II, Truman, C.R., and Hager, G.D., "Non-Intrusive Mach Number Measurement in Supersonic Hydrogen Fluoride Laser," *Chemical Physics Letters*, Vol. 371, pp. 522-527, 2003.

Wisniewski, C.F., Hewett, K.B., Manke, G.C. II, Truman, C.R., and Hager, G.D., "Direct Measurements of Fluorine Atom Concentration, Gain Length and Small Signal Gain in a Hydrogen Fluorine Overtone Laser," *Chemical Physics Letters*, Vol. 370, pp. 591-596, 2003.

Vorobieff, Peter

Tomkins, C., Prestridge, K., Rightley, P., Marr-Lyon, M., Vorobieff, P.V., and Benjamin, R., "A Quantitative Study of the Interaction of Two Richtmyer-Meshkov-Unstable Gas Cylinders," *Physics of Fluids*, Vol. 15, No. 4, pp. 986-1004, 2003.

Truesdell, R.A., Vorobieff, P.V., Sklar, L.A., and Mammoli, A.A., "Mixing of a Continuous Flow of Two Fluids Due To Unsteady Flow," *Physical Review E*, Vol. 67, No. 6, pp. 066304-1 - 066304-11, 2003.

Vorobieff, P.V., Mohamed, N.-G., Tomkins, C., Goodenough, C., Marr-Lyon, M., and Benjamin, R.F., "Scaling Evolution In Shock-Induced Transition to Turbulence," *Physical Review E*, Vol. 68, No. 6, pp. 065301-1 - 065301-4, 2003.

Aranson, I., Blair, D., and Vorobieff, P.V., "Interface Motion in a Vibrated Granular Layer," *A Gallery of Fluid Motion*, Samimy, M.K., Breuer, S., Leal, L.G., Steen, P.H. (Eds.), Cambridge University Press, Cambridge, UK, p. 55, 2003.

Rightley, P.M., Vorobieff, P., and Benjamin, R.F., "Mushrooms and Snakes: A Visualization of Richtmyer-Meshkov Instability," *A Gallery of Fluid Motion*, Samimy, M.K., Breuer, S., Leal, L.G., Steen, P.H. (Eds.), Cambridge University Press, Cambridge, UK, p. 93, 2003.