

2008 Peer Reviewed Archival Publications

Adjeroh, D., T. Bell⁺, and A. Mukherjee*. 2008. The burrows-wheeler transform: data compression, suffix arrays and pattern matching. *Springer*. Book: 1-361. (LCSEE)

Agarwal, S., M.M.K. Khan⁺, and R.K. Gupta. 2008. Thermal conductivity of polymer nanocomposites made with carbon nanofibers. *Polym. Eng. Sci.* 48(12): 2474-2481. (ChE)

Ahluwalia, R. and S. Chidambaram*. 2008. Proteomic pattern analysis using neural networks. *International Journal of Industrial Engineering.* 15(1): 45-52. (IMSE)

Al-Mulla⁺, A., J. Mathew⁺, S.-K. Yeh*, and R.K. Gupta. 2008. Nonisothermal crystallization kinetics of PBT nanocomposites. *Composites: Part A.* 39(2): 204-217. (ChE)

Belkacemi*, R. and A. Feliachi. 2008. Immune based design of a load frequency controller in power systems. *Journal of Electrical Systems.* 4(2): 1-12. (LCSEE)

Bhattacharya*, A., I. Ray, and J.F. Davalos. 2008. Effects of aggregate grading and admixture/filler on self-consolidating concrete. *The Open Construction and Building Technology Journal, Bentham Open.* 2: 89-95. (CEE)

Brentner⁺, L.B., S.T. Mukherji⁺, K.M. Merchie⁺, J.M. Yoon⁺, J.L. Schnoor⁺, and B. Van Aken. 2008. Expression of glutathione S-transferases in poplar trees (*Populus trichocarpa*) exposed to 2,4,6-trinitrotoluene (TNT). *Chemosphere.* 73: 657-662. (CEE)

Campa, G., M.R. Napolitano, and M.L. Fravolini. 2008. A simulation environment for machine vision based aerial refueling for UAV. *IEEE Transaction on Aerospace and Electronic Systems.* 45(1): 138-151. (MAE)

Campa, G., M. Thiagarajan, M. Krishnamurthy, M.R. Napolitano, and M. Gautam. 2008. A neural network based sensor validation scheme for heavy-duty diesel engines. *ASME Journal of Dynamic Systems, Measurement and Control.* 130(2): 1-10. (MAE)

Cao, X.A., Y. Yang*, and H. Guo*. 2008. On the origin of efficiency roll-off in InGaN-based light-emitting diodes. *Journal of Applied Physics.* 104(9): 093108-093108-4. (LCSEE)

Celik, I.B. and S.R. Pakalapati. 2008. From a single cell to a stack modeling, fuel cells and hydrogen energy: modeling solid oxide fuel cells. *Springer Science and Business Media B.V.* 123-182. (MAE)

Chen*, J., E.M. Eschen, and H.-J. Lai⁺. 2008. Group connectivity of certain graphs. *Ars Combinatoria.* 89: 141-158. (LCSEE)

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Chen^{*}, Y. and L.-S. Lin. 2008. Regional stream chemical recovery from acidification in central Appalachian mountain region of West Virginia, USA - comparisons with other regions in north American and Europe. *Science of the Total Environment* 10.1016/j.scitotenv. 11: 035. (CEE)

Cheng, Y., D.A. McVay⁺, J. Wang⁺, and W.B. Ayers⁺. 2008. Simulation-based technology for rapid assessment of redevelopment potential in Marginal gas fields – technology advances and validation in Garden plains field, Western Canada sedimentary basin. *SPEREE*. 6: 521-534. (PNGE)

Cheng, Y., W.J. Lee⁺, and D.A. McVay⁺. 2008. Improving reserve estimates from decline curve analysis of tight and multilayer gas wells. *SPEREE*. 10: 912-920. (PNGE)

Cheng, Y., W.J. Lee⁺, and D.A. McVay⁺. 2008. Quantification of uncertainty in reserves estimation from decline curve analysis of production data for unconventional reservoirs. *ASME JERT*. 12(130): 1-6. (PNGE)

Cortes, D.H., S.K. Datta, and O.M. Mukdadi. 2008. Dispersion of elastic guided waves in piezoelectric infinite plates with inversion layers. *International Journal of Solids and Structures*. 45: 5088-5102. (MAE)

Cunningham, J., C. Cunningham, B. Van Aken, and L.-S. Lin^{*}. 2008. Feasibility of disinfection kinetics and minimum inhibitory concentration determination on microbial consortia using flow Cytometry. *Water Science and Technology*. 58(4): 937-944. (CEE)

Davalos, J.F., S. Kodakani^{*}, I. Ray, and C. Lin. 2008. Fracture evaluation for GFRP-concrete interfaces for freeze-thaw and wet-dry cycling. *Journal of Composite Materials*. 42(14): 1439-1466. (CEE)

Davalos, J.F., Y. Chen^{*}, and I. Ray. 2008. Effect of FRP bar degradation on interface bond with high-strength concrete. *J. of Cement and Concrete Composites*. 30(8): 722-730. (CEE)

Devaru^{*}, D., U.B. Halabe, B. Gopalakrishnan, and S. Agrawal^{*}. 2008. Ground penetrating radar (GPR) based system for nondestructive detection of interior defects in wooden logs. *International Journal of Manufacturing Research (IJMR)*. 3(4): 425-451. (CEE/IMSE)

Dodrill^{*}, M. and S.E. Guffey. 2008. Experimental validation of a target method for balancing exhaust ventilation duct systems with dampers. *Journal of Occupational and Environmental Hygiene*. 5: 689-701. (IMSE)

Eli, R.N. and D.D. Gray. 2008. Hydraulic performance of a steep single layer riprap drainage channel. *ASCE Journal of Hydraulic Engineering*. 134(11): 1651-1655. (CEE)

Farmer, R.S., A. Top⁺, L.M. Argust⁺, S. Liu⁺, and K.L. Kiick⁺. 2008. Evaluation of the conformation and association behavior of multivalent alanine-rich polypeptide scaffolds. *Pharm. Res*. 25(3): 700-708. (ChE)

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Feng, C. and B.S.-J. Kang. 2008. Young's modulus measurement using a simplified transparent indenter measurement technique. *Experimental Mechanics*. 48(1): 9-15. (MAE)

Flokstra⁺, B.R., B. Van Aken, and J.L. Schnoor⁺. 2008. Microtox (R) toxicity test: detoxification of TNT and RDX contaminated solutions by poplar tissue cultures. *Chemosphere*. 71: 1970-1976. (CEE)

Fravolini, M.L., G. Campa, and M.R. Napolitano. 2008. Modeling and performance analysis of a machine vision-based semi-autonomous aerial refueling. *Int. J. Modeling, Identification and Control*. 3(4): 357-367. (MAE)

Gopalakrishnan, B. and A. Chandrasekharan*. 2008. Maintenance risk reduction for effective facilities management. *Journal of Facilities Management*. 6(1): 52-68. (IMSE)

Goseva-Popstojanova, K., F. Wang⁺, R. Wang⁺, F. Gong⁺, K. Vaidyanathan⁺, K. Trivei⁺, and B. Muthusamy⁺. 2008. Intrusion tolerant communication networks and associated methods. U.S. Patent No. 7350234. (LCSEE)

Guo*, H., Y. Yang*, and X. A. Cao. 2008. Thermal and nonthermal factors affecting the quantum efficiency of deep-ultraviolet light-emitting diodes. *Physical Status Solidi (a)*. 205(12): 2953-2957. (LCSEE)

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Harman*, J., A. Kabulski*, V. Pagan*, P. Famouri, K.R. Kasarla*, L.E. Rodak*, J.P. Hensel⁺, and D. Korakakis. 2008. Effect of contact metals on the piezoelectric properties of aluminum nitride thin films. *Journal of Vacuum Science and Technology B*. 26(4): 1417-1419. (LCSEE)

Hartzell, C., K. Koch, Z. Wowczuk, J. Ruth, K. Means, and J.E. Smith. 2008. Thermal protection apparatus and method for ISO containers. U.S. Patent No. 7,464,504. (MAE)

Izadian*, A. and P. Famouri. 2008. Reliability enhancement of micro comb resonators under fault conditions. *IEEE Transactions on Control Systems Technology*. 16(4): 726-734. (LCSEE)

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Karimi*, A. and A. Feliachi. 2008. Decentralized adaptive backstepping control of electric power systems. *Electric Power Systems Research Journal*. 78(3): 484-493. (LCSEE)

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Kim⁺, K.-J., S. Bumm⁺, R.K. Gupta, and J.L. White⁺. 2008. Interfacial adhesion of cellulose fiber and natural fiber filled polypropylene compounds and their effects on rheological and mechanical properties. *Composite Interfaces*. 15: 301-319. (ChE)

Klinke, D.J. 2008. Extent of beta cell destruction is important but insufficient to predict the onset of type 1 diabetes mellitus. *PLoS ONE*. 3(1): 1-10. (ChE)

Klinke, D.J. 2008. Integrating epidemiological data into a mechanistic model of type 2 diabetes: validating the prevalence of virtual patients. *Ann. Biomed. Eng.* 36: 321-334. (ChE)

Klinke, D.J., I.V. Ustyugova*, K. Brundage⁺, and J.B. Barnett⁺. 2008. Modulating temporal control of NF-kappaB activation: implications for therapeutic and assay selection. *Biophys. J.* 94: 4249-4259. (ChE)

Lamont*, S.J., R.N. Eli, and J. Fletcher. 2008. Continuous hydrologic models and curve numbers: a path forward. *ASCE Journal of Hydrologic Engineering*. 13(7): 621-630. (CEE)

Leight⁺, V.W., S.B. Leight⁺, R.S. Nutter, Jr., C.B. Schmidt*, and D.J. Miller⁺. 2008. Instrumented breast model. Canadian Patent No.: 2,345,274. (LCSEE)

Lee⁺, M.C., R.K.W. Chan⁺, and D.A. Adjeroh. 2008. Fast three-dimensional discrete cosine transform. *SIAM Journal on Scientific Computing*. 30(6): 3087-3107. (LCSEE)

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Li, H., J. Low, K.S. Brown, and N.Q. Wu. 2008. Large-area well-ordered nanodot array pattern fabricated with self-assembled nanosphere template. *IEEE Sensors Journal*. 8(6): 880-884. (MAE)

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- Liu, K., J. Luo, C. Johnson, X. Liu, J. Yang, and S.X. Mao. 2008. Conducting oxide formation and mechanical endurance of potential SOFC interconnects in coal syngas environment. *Journal of Power Sources*. 18: 247-252. (MAE)
- Liu, L.L., O.M. Mukdadi, M.K. Tripp, C.F. Herrman, J.R. Hertzburg, S.M. George, V.M. Bright, and R. Shandas. 2008. Atomic layer deposition for fabricating capacitive micromachined ultrasonic transducers: initial characterization. *Sensors and Materials*. 20(1): 15-34. (MAE)
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- Luo, Y. 2008. Systematic approach to assess and mitigate longwall subsidence influences on surface structures. *Journal of Coal Science & Engineering (China)*. 14(3): 407-414. (MinE)
- Ma, N., B. Cooper, J. Lewis and B. Kang. 2008. Criteria for ductility in Cr alloys based on electronic structures. *Applied Physical Letters*. 93(24): 1903-1906. (MAE)
- Mahmoud^{*}, A., D. Cortes, A. Abaza⁺, H. Ammar, M. Hazey, P. Ngan, R. Crout, and O. Mukdadi. 2008. Noninvasive assessment of human jawbone using ultrasonic guided waves. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*. 55(6): 1316-1327. (LCSEE/MAE)
- Mammarella, M., G. Campa, M.R. Napolitano, M.L. Fravolini, R. Dell'Aquila, V. Brunori, and M.G. Perhinschi. 2008. Comparison of point matching algorithms for the UAV aerial refueling problem. *Machine Vision and Applications*. DOI 10.1007/s00138-008-0149-8. (MAE)
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- Martinez, X., S. Oller, F. Rastellini, and A. Barbat. 2008. Numerical procedure for the computation of RC structures reinforced with FRP using the serial/parallel mixing theory. *Computers and Structures*. 86(15-16): 1604-1618. (MAE)

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- Martinez, X., S. Oller, and E. Barbero. 2008. Study of delamination in composites by using the serial/parallel mixing theory and a damage formulation. *Mechanical Response of Composites*. 10: 119-140. (MAE)
- McGraw, T. 2008. Generalized reaction-diffusion textures. *Computers and Graphics*. 32(1): 82-92. (LCSEE)
- McIntyre*, D.L., S.D. Woodruff, S.W. Richardson, M.H. McMillian, and M. Gautam. 2008. Laser spark plug development. *SAE Transactions Journal of Engines*. 3(116): 1101–1111. (MAE)
- McKendall, A.R. 2008. Improved tabu search heuristics for the dynamic space allocation problem. *Computers & Operations Research*. 35(10): 3347-3359. (IMSE)
- McKendall, A.R., J.S. Noble⁺, and C.M. Klein⁺. 2008. Scheduling maintenance activities during planned outages at nuclear power plants. *International Journal of Industrial Engineering*. 15(1): 53-61. (IMSE)
- McKendall, A.R. and J. Shang*. 2008. Tabu search heuristics for the crane sequencing problem. *International Journal of Operational Research*. 3(4): 412-429. (IMSE)
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- Menzies, T., M. Feather⁺, S. Cornford⁺, K. Hicks⁺, and J. Kiper⁺. 2008. Application of a broad-spectrum quantitative requirements model to early-lifecycle decision making. *IEEE Software*. 24(2): 49-56. (LCSEE)
- Mohaghegh, S.D. 2008. Essential components of an integrated data mining tool for the oil and gas industry with an example application in the DJ basin. *ScientiaIranica*. 15(4): 469-479. (PNGE)
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- Morris, G.J. 2008. Blood pressure simulation apparatus with tactile interface. U.S. Patent No. 7,320,599. (MAE)
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Nassare*, D.E., A. Abaza*, X. Li, and H. Ammar. 2008. Automatic construction of dental charts for postmortem identification. *IEEE Transactions on Information and Security*. 3(2): 234-246. (LCSEE)

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Raylman, R., S. Majewski⁺, M. Smith⁺, J. Proffitt⁺, W. Hammond⁺, A. Srinivasan⁺, J. McKisson⁺, V. Popov⁺, A. Weisenberger⁺, C. Judy, B. Kross⁺, S. Ramasubramanian^{*}, L. Banta, P. Kinahan⁺, and K. Champley⁺. 2008. The positron emission mammography/tomography breast imaging and biopsy system (PEM/PET): design, construction and phantom-based measurements. *Physics in Medicine and Biology*. 53: 637-653. (MAE)

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Rentch⁺, J.S., J.T. Anderson⁺, S.J. Lamont^{*}, J. Sencindiver⁺, and R.N. Eli. 2008. Vegetation along hydrologic, edaphic, and geochemical gradients in a high-elevation poor fen in West Virginia. *Wetlands Ecology and Management, Springer Netherlands*. 16(3): 237-253. (CEE)

Riad, M.Y., S.N. Shoukry, G.W. William, and D. Rao^{*}. 2008. Curling of concrete slabs on grade: experimental vs. theoretical analysis. *International Journal of Structures and Infrastructure Engineering*. 4(1): 57-72. (CEE/MAE)

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Sheik^{*}, K., H.H. Ammar, and W.M. Abdelmoez^{*}. 2008. A prototype tool for software architecture risk assessment (SARA). *International Journal of Software Engineering*. 1(2): 21-34. (LCSEE)

Shoukry, S.N., E. Sosa, G.W. William, and M.Y. Riad. 2008. Short carbon fiber reinforced latex modified concrete for crack resistant bridge deck overlays. *Journal of Bridge Structures*. 4(3-4): 155-168. (CEE/MAE)

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