

2004 Peered Reviewed Archival Publications

Adjeroh, D.A. and M.C. Lee⁺. 2004. Scene-adaptive transform domain video partitioning. *IEEE Transactions on Multimedia* 6(1): 58-69. **(LCSEE)**

Ahluwalia, R.S. and A. Srinivasan*. 2004. Forensic information management system. *Forensic Science Communications* 6(12). **(IMSE)**

Aksoy⁺, C.O., H. Kose⁺, E. Yalcin⁺, K. Heasley, and C. Mark⁺. 2004. Enhancing the safety of remnant pillar recovery in lignite by numerical modeling. *Canadian Institute of Mining (CIM) Bulletin* 97(1082): 1-5. **(MinE)**

Azizinamini, A., K.E. Barth, R. Dexter, and C. Rubeiz. 2004. High performance steel: research front – an historical account of research activities. *ASCE. Journal of Bridge Engineering* 9(3): 212-217. **(CEE)**

Barbero, E.J. and K.J. Ford*. 2004. Equivalent time temperature model for physical ageing and temperature effects on polymer creep and relaxation. *ASME J. Eng. Sci. and Technology* 126: 413-410. **(MAE)**

Barbero E.J., C. Irwin⁺, X. Liu, V. Sikka⁺, and F. Goodwin⁺. 2004. Development of the next generation of bath hardware materials. *Iron and Steel Technology* 10: 31-37. **(MAE)**

Barbero, E.J. and M.J. Julius*. 2004. Time-temperature-age behavior of commercial polymer blends and felt filled polymers. *Journal of Mechanics of Advanced Materials and Structures* 11(3): 287-300. **(MAE)**

Barth, K.E., B.A. Hartnagel, D.W. White, and M.G. Barker. 2004. Improved simplified inelastic design of steel I girder bridges. *ASCE. Journal of Bridge Engineering* 9(3): 230-242. **(CEE)**

Bayraktar*, O. and E.L. Kugler. 2004. Temperature-programmed reduction of metal-contaminated fluid catalytic cracking catalysts. *Applied Catalysis A: General* 260: 125-132. **(ChE)**

Bayraktar*, O. and E.L. Kugler. 2004. Effect of pretreatment on the performance of metal-contaminated fluid catalytic cracking catalysts. *Applied Catalysis A: General* 260: 119-124. **(ChE)**

Bayraktar*, O. and E.L. Kugler. 2004. Temperature-programmed oxidation of equilibrium fluid catalytic cracking catalysts. *J. Thermal Analysis and Calorimetry* 75: 989-998. **(ChE)**

Boland⁺, P.J., H. Singh⁺, and B. Cukic. 2004. The stochastic precedence ordering with applications in sampling and testing. *Journal of Applied Probability* 41: 73-82. **(LCSEE)**

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Booth, D.W.* and S.E. Guffey. 2004. Field evaluation of methods for determining the obstructed section of branches of industrial ventilation systems. *Journal of Occupational and Environmental Hygiene* 1(4): 248-255. **(IMSE)**

Boubakeur⁺, A., L. Mokhnache⁺, S. Boukhtache⁺, and A. Feliachi. 2004. Barrier effect on point-plane air gap breakdown voltage based on streamers criterion. *IEE Proceedings – Science, Measurement and Technology* 15(3): 167-174. **(LCSEE)**

Burt, A.C.* , I.B. Celik, R.S. Gemmen⁺, and A.V. Smirnov. 2004. A numerical study of cell-to-cell variations in a SOFC stack. *Journal of Power Sources* 126: 76-87. **(MAE)**

Campa, G., S. Wan* , M.R. Napolitano, B. Seanor, and M.L. Fravolini. 2004. Design of formation control laws for maneuvered flight. *The Aeronautical Journal* 125-134. **(MAE)**

Celik, I.B. and G. Hu*. 2004. Single grid error estimation using error transport equation. *ASME Journal of Fluids Engineering* 126(5): 778-790. **(MAE)**

Chen, H.L. and J. Choi*. 2004. Acoustic emission study of fatigue cracks in materials used for AVL. *Journal of Nondestructive Evaluation* 23(4): 133-151. **(CEE)**

Crihalmeanu* , M.C., M.A. Jerabek, and K. Meehan⁺. 2004. Security enhancement of hand geometry scanners using optical blood flow detection. *Proceedings of SPIE, Biometric Technology for Human Identification* 5404: 259-269. **(LCSEE)**

Clark, N.N., M. Gautam, W.S. Wayne, R.D. Nine, D.W. Lyons, and H. Maldonado⁺. 2004. Creation and evaluation of a medium heavy-duty truck test cycle. *SAE 2003 Transactions – Journal of Fuels and Lubricants. Society of Automotive Engineers* 112(3): 2654-2667. **(MAE)**

Clark, N.N., M. Gautam, W.S. Wayne, R.D. Nine, G.J. Thompson, D.W. Lyons, H. Maldonado⁺, M. Carlock⁺, and A. Agarwal⁺. 2004. Creation and evaluation of a medium-duty truck test cycle. *SAE Transactions. Journal of Fuels and Lubricants* 2654-2667. **(MAE)**

Clark, N.N., M. Gautam, J. Boyce⁺, W. Xie, S. Mehta, R. Farett⁺, and B.L. Rapp. 2004. Heavy-duty vehicle exhaust plume study in the NASA/Langley wind tunnel. *SAE Transactions. Journal of Fuels and Lubricants* 1635-1655. **(MAE)**

Clark, N.N., W.S. Wayne, R.D. Nine, T. Buffamonte* , T. Hall* , B.L. Rapp, G.J. Thompson, and D.W. Lyons. 2004. Emissions from diesel-fueled heavy-duty vehicles in southern California. *Journal of Fuels and Lubricants* 112:1688-1699. **(MAE)**

Creese, R.C. and H.V.S. GangaRao. 2004. Polymer composites III B 2004 B transportation infrastructure, defense and novel applications of composites. *DEStech Publications, Inc, Lancaster, Pennsylvania. ISBN: 1-932078-35-5. (IMSE/CEE)*

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Creese, R.C. 2004. Discrete product manufacturing. Book Chapter in Skills and Knowledge of Cost Engineering. 5th Edition, Chapter 11. ISBN: 1-885517-49-1. **(IMSE)**

Della-Giustina, D.E. 2004. Motor fleet safety and security management. First Edition, CRC Press LLC, Boca Raton, Florida. ISBN: 1-56670-650-5. **(IMSE)**

Deng*, Y., A.R. McKendall, and M. Jaraiedi. 2004. Dynamic pricing under uncertainty using fuzzy logic. *International Journal of Industrial Engineering* 11: 99-107. **(IMSE)**

Drozdov, A.D., A. Al-Mulla*, and R.K. Gupta. 2004. The effect of recycling on the time-dependent behavior of polycarbonate reinforced with short glass fibers. *Composites Sci. Technol.* 64: 129-144. **(ChE)**

Drozdov, A.D., S. Agarwal, and R.K. Gupta. 2004. Linear thermo-viscoelasticity of isotactic polypropylene. *Computational Materials Science* 29: 195-213. **(ChE)**

Drozdov, A.D., S. Agarwal, and R.K. Gupta. 2004. The effect of temperature on the viscoelastic behavior of linear low-density polyethylene. *Arch. Appl. Mech.* 73: 591-614. **(ChE)**

Drozdov, A.D., S. Agarwal, and R.K. Gupta. 2004. The effect of temperature on the viscoelastic response of semicrystalline polymers. *J. Appl. Polym. Sci.* 94: 9-23. **(ChE)**

Feragotti, L.A.*, Z.S. Wowczuk*, B.J Corso⁺, and J.E. Smith. 2004. Sensitivity analysis of the C-130 sensor deployment system arm using finite element methods SAE transactions. *Journal of Aerospace*. SAE International. **(MAE)**

Fravolini, M.L., G. Campa, M.R. Napolitano, and M.G. Perhinschi. 2004. A learning based sensor validation scheme within flight control laws. *AIAA Journal of Guidance, Control, and Dynamics* 27(2): 307-310. **(MAE)**

Fravolini, M.L., A. Ficola⁺, G. Campa, M.R. Napolitano, and B. Seanor. 2004. Modeling and control issues for autonomous aerial refueling for UAVs using a probe-drogue refueling system. *Aerospace Science and Technology* 8(7): 599-610. **(MAE)**

Gajendran, P* and N.N. Clark. 2004. Effect of truck operating weight on heavy duty diesel emission. *Environmental Science & Technology* 37(18): 4309-4317. **(MAE)**

GangaRao, H.V.S. and R. Liang. 2004. Composites past, present and future: opening doors for composite infrastructure (Invited). *Composites Technology* 6-7. **(CEE/ChE)**

Gautam, M., N.N. Clark, S. Mehta, J.A. Boyce⁺, F. Rogers, and A. Gertler⁺. 2004. Concentrations and size distributions of particulate matter emissions from a class-8 heavy-duty diesel truck tested in a wind tunnel. *SAE Transactions. Journal of Fuels and Lubricants* 1615-1634. **(MAE)**

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Gopalakrishnan, B., S. Tirunellayi*, and R. Todkar*. 2004. Design and development of an autonomous mobile smart vehicle: a mechatronics application. *Mechatronics* 14: 491-514. **(IMSE)**

Gopalakrishnan, B., R. Turuvekere*, and D.P. Gupta*. 2004. Computer integrated facilities planning and design. *Facilities* 22(7/8): 199-209. **(IMSE)**

Hasanovic*, A., A. Feliachi, A. Hasanovic+, N.B. Bhatt+, and A.G. DeGroff+. 2004. Robust PSS control design or practical robust PSS control design through low order transfer function identification. *IEEE Transactions on Power Systems* 19(3): 1492-1500. **(LCSEE)**

Huebsch, W.W. and A.P. Rothmayer+. 2004. Numerical prediction of unsteady vortex shedding for large leading-edge roughness. *Computers and Fluids Journal* 33(3): 405-434. **(MAE)**

Iyer*, M.V., L.P. Norcio, A. Punnose+, E.L. Kugler, D.B. Dadyburjor, and M.S. Seehra+. 2004. Catalysis for synthesis gas formation from reforming of methane. *Topics in Catalysis* 29: 197-201. **(ChE)**

Jain, A.K+, A. Ross, and S. Prabhakar+. 2004. An introduction to biometric recognition. *IEEE Transactions on Circuits and Systems Video Technology* 14(1): 4-20. **(LCSEE)**

Jain, A.K.+ and A. Ross. 2004. Multibiometric systems. *Communications of the ACM* 47(1): 34-40. **(LCSEE)**

Jia*, J., and J.F. Davalos. 2004. Loading variable effects on mode-I fatigue of wood-FRP composite bonded interface. *J. of Composites Science and Technology* 64(1): 99-107. **(CEE)**

Jia*, J., and J.F. Davalos. 2004. Load ratio Effect on fatigue behavior of wood-FRP bonded interfaces. *J. of Composite Materials* 38(14): 1211-1230. **(CEE)**

Khair, A., B. Yu*, and M. Venkataraman*. 2004. An approach to optimization of a continuous miner's cutting head using numerical and experimental studies. *SME Transactions* 316: 157-162. **(MinE)**

Kumar*, S., R.C. Creese, P. Kumar+, and H.S. Shan*. 2004. Investigation on the effect of process parameters on the mechanical properties (tensile) of Al-7%Si alloy castings produced by evaporative pattern casting process. *Indian Foundry Journal* 50(7): 21-29. **(IMSE)**

Lewellen, D.C. and W.S. Lewellen. 2004. Buoyancy flux modeling for cloudy boundary layers. *Journal of the Atmospheric Sciences* 61: 1147-1160. **(MAE)**

Li, X. 2004. Scalable video compression via overcomplete motion compensated wavelet coding. In *Signal Processing: Image Communication, special issue on interframe wavelet coding* 19(7): 637-651. **(LCSEE)**

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Liu, X., B. Kang, W. Carpenter⁺, and E. Barbero. 2004. Investigation of the crack growth behavior of Inconel 718 by high temperature moiré interferometry. *Journal of Materials Science* 39: 1967-1973. **(MAE)**

Long, Z., X. Liu, W. Yang⁺, K-M Chang, and E. Barbero. 2004. Thermodynamic assessment of liquid composition change during solidification and its effect on freckle formation in superalloys. *Materials Science and Engineering A*. A386: 254-261. **(MAE)**

Lopez-Anido and H.V.S. GangaRao. 2004. Modular FRP deck systems. US Patent No. 6544624. **(CEE)**

Luo, Y., S. Peng, and M. Mishra. 2004. Longwall mining under a mine refuse-disposal facility. *Mining Engineering* 9: 89-93. **(MinE)**

Madan⁺, B., K. Goseva–Popstojanova, K. Vaidyanathan⁺, and K.S. Trivedi⁺. 2004. A method for modeling and quantifying the security attributes of intrusion tolerant systems. *Performance Evaluation Journal* 56(1-4): 167-186. **(LCSEE)**

Miller, D., Semmens^{*}, K., R. Viadero, and A. Tierney. 2004. The resource potential of mining discharge water for aquaculture. *World Aquaculture* 35(4): 57-61. **(CEE)**

Morris, G.J. 2004. Environment condition detector with audible alarm and voice identifier. US Patent No. 6,784,798. **(MAE)**

Morris, G.J. 2004. Environmental condition detector with remote fire extinguisher locator system. US Patent No. 6,600,424. **(MAE)**

Noore, A., N. Tungala^{*}, and M.M. Houck⁺. 2004. Embedding biometric identifiers in 2D barcodes for improved security. *Journal of Computers and Security* 23: 679-686. **(LCSEE)**

Ogretim, E.^{*} and W.W. Huebsch. 2004. A novel method for automated grid generation of ice shapes for local-flow analysis. *International Journal for Numerical Methods in Fluids* 44: 579-597. **(MAE)**

Pandey^{*}, P., R. Turton, P. Yue⁺, and L. Shadle⁺. 2004. Non-intrusive particle motion studies in the near-wall region of a pilot-scale circulating fluidized bed. *Ind. and Eng. Chem. Res.* 43: 5582-5592. **(ChE)**

Paradkar^{*}, A., A. Davari⁺, A. Feliachi, and T. Biswas^{*}. 2004. Integration of a fuel cell into the power system using an optimal controller based on disturbance accommodation control theory. *Journal of Power Sources* 128(2): 218-230. **(LCSEE)**

Paramatmuni, R.⁺, K-M Chang, B. Kang, and X. Liu. 2004. Evaluation of cracking resistance of DC casting high strength aluminum ingots. *Materials Science and Engineering A*. A379: 293-301. **(MAE)**

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Peng, S., X. Tang*, Y. Luo, and G. Wilson. 2004. Void prediction in mine roof geology information system (MRGIS). *SME Transactions* 316: 18-27. **(MinE)**

Pertl, F.A., R. Nutter, and J.E. Smith. 2004. An analysis of the CTHA's resonance currents and the resulting radiation shapes. *IEEE Transactions on Antennas and Propagation* AP0307-0386.R1: 377-385. **(MAE/LCSEE)**

Petro, S., E.L. Kemp, and H.V.S. GangaRao. 2004. Something old, something new: saving covered bridges with glass FRP. *Association for Preservation Technology (APT) International Journal* 4(35). **(CEE)**

Qiu, X., B. Reed*, and R. Viadero. 2004. Effects of plant flavonoids on ¹⁴C[7,10]-Benzo[a]pyrene degradation in root zone soil. *Environmental Engineering Science* 21(5): 637-646. **(CEE)**

Righman, J.E*, K.E. Barth, and J.F. Davalos. 2004. Development of an economical and efficient connector system for FRP bridge decks to steel girders. *ASCE. Journal of Composites for Construction* 8(4): 279-288. **(CEE)**

Righman*, J.E, K.E. Barth⁺, and J.F. Davalos. 2004. Development of an economical and efficient connector system for FRP bridge decks to steel girders. *ASCE. Journal of Composites for Construction*. 8(4): 279-288. **(CEE)**

Roeder, C.W., K.E. Barth, and A. Bergman. 2004. Effect of live load deflection on steel bridge performance. *ASCE. Journal of Bridge Engineering* 9(3): 259-267. **(CEE)**

Saadevandi*, B.A. and R. Turton. 2004. Particle velocity and voidage profiles in a draft-tube equipped spouted-fluidized bed coating device. *Chemical Engineering Communications* 191: 1426-1447. **(ChE)**

Sakhare*, A., A. Davari⁺, and A. Feliachi. 2004. Fuzzy logic control of fuel cell stand-alone and grid connection. *Journal of Power Sources* 135(1-2): 165-176. **(LCSEE)**

Sandadi*, S., P. Pandey*, and R. Turton. 2004. In-situ, near real-time acquisition of particle motion in rotating pan coating equipment using imaging techniques. *Chem. Eng. Sci.* 59: 5807-5817. **(ChE)**

Schmid, N.A. and J.A. O'Sullivan. 2004. Performance prediction methodology for biometric systems using a large deviations approach. *IEEE Trans. on Signal Processing. Supplement on Secure Media* 52: 3036–3045. **(LCSEE)**

Sedguisigarchi*, K. and A. Feliachi. 2004. Dynamic and transient analysis of power distribution systems with fuel cells. Part I: Fuel Cell Dynamic Model. *IEEE Trans. on Energy Conversion* 19(2): 423-428. **(LCSEE)**

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Sedguisigarchi*, K. and A. Feliachi. 2004. Dynamic and transient analysis of power distribution systems with fuel cells. Part II: Control and Stability Enhancement. *IEEE Trans. on Energy Conversion* 19(2): 429-434. **(LCSEE)**

Shoukry, S.N., G.W. William, and M. Riad. 2004. Validation of 3DFE model of jointed concrete pavement response to temperature variations. *The International Journal of Pavement Engineering* 5: 123-136. **(CEE/MAE)**

Smirnov, A.V. 2004. Multi-physics modeling environment for continuum and discrete dynamics. *International Journal of Modeling and Simulation* 24(3): 190-197. **(MAE)**

Smirnov A.V., H. Zhang*, A. Burt*, and I.B. Celik. 2004. Fuel-cell simulator interface. *Journal of Power Sources* 138(1-2): 187-193. **(MAE)**

Smirnov, A.V., H. Zhang*, B. Sowers*, A.C. Burt*, and I.B. Celik. 2004. Fuel-cell simulator interface. *Journal of Power Sources* 138: 187-193. **(MAE)**

Smith, J.E. 2004. Aerially deployable marking device. US Patent No. 6,794,994. **(MAE)**

Stephenson, S.V.+ and J.L. Loth. 2004. Characterizing oil, gas or geothermal wells, including fractures thereof. US Patent No. 6,724,687. **(MAE)**

Taylor, S.T.*, N.N. Clark, M. Gautam, and W.S. Wayne. 2004. Diesel emissions prediction from dissimilar cycle scaling. *Journal of Automobile Engineering* 218: 341-352. **(MAE)**

Tian*, L. and A. Noore. 2004. A novel approach for short-term load forecasting using support vector machines. *Intl. Journal of Neural Systems* 14: 329-335. **(LCSEE)**

Tian*, L. and A. Noore. 2004. Software reliability prediction using recurrent neural network with Bayesian regularization. *Intl. Journal of Neural Systems* 14: 165-174. **(LCSEE)**

Trivedi+, K.S., K. Vaidynathan+, and K. Goseva-Popstojanova. 2004. Analysis of software aging and rejuvenation. *Recent Developments in Quality Reliability and Information Technology-Trends and Future Directions*. P.K. Kapur, A. Kumar, Y. Singh, P.C. Jha, and A.K. Bardhanm (editors). IMH, New Delhi, India. 25-42. **(LCSEE)**

Turton, R., D.A. Berry+, T.H. Gardner+, and A. Miltz+. 2004. The evaluation of zinc oxide sorbents in a pilot scale transport reactor: Sulfidation kinetics and reactor modeling. *Ind. and Eng. Chem. Res.* 43: 1235-1243. **(ChE)**

Uludag, U.+ , A. Ross, and A.K. Jain+. 2004. Biometric template selection and update: a case study in fingerprints. *Pattern Recognition* 37(7): 1533-1542. **(LCSEE)**

Valenti, M.C. and J. Sun*. 2004. Turbo codes. *Handbook of RF and Wireless Technologies*. Newnes Burlington, Massachusetts 375-399. **(LCSEE)**

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VanMil⁺*, B.L., H. Guo⁺*, L.J. Holbert⁺*, K. Lee⁺*, T.H. Myers⁺, T. Liu^{*}, and D. Korakakis. 2004. High temperature limitations for GaN growth by rf-plasma assisted molecular beam epitaxy: effects of active nitrogen species, surface polarity, hydrogen, and excess Ga-overpressure. *J. Vacuum Science and Technology B* 22(4): 2149-2154. **(LCSEE)**

Viadero, R., A. Tierney, and K. Semmens^{*}. 2004. Use of treated mine water for rainbow trout (*Oncorhynchus Mykiss*) culture – a production scale assessment. *Aquacultural Engineering* 31(3-4): 319-336. **(CEE)**

Wang, L., J.M. Dawson, L.A. Hornak, and P. Famouri. 2004. Real-time translational control of a MEMS comb resonator. *IEEE Transaction on Aerospace and Electronic Systems* 40(2): 567-575. **(LCSEE)**

Wang^{*}, L., J.M. Dawson^{*}, L.A. Hornak, and P. Famouri. 2004. Applied real-time high-frequency closed-loop control of a MEMS lateral comb resonator. *IEEE Transaction on Aerospace and Electronic Systems* 40(2): 567-575. **(LCSEE)**

Wayne, W.S., N.N. Clark, R.D. Nine, and D. Elefante⁺. 2004. A comparison of emissions and fuel economy from hybrid-electric and conventional-drive transit buses. *Energy and Fuels* 18(1): 257-270. **(MAE)**

Winn, G.L., B. Seaman^{*}, and J.C. Baldwin^{*}. 2004. Fall protection incentives in the construction industry: Literature review and field study. *International Journal of Occupational Safety and Ergonomics* 1(10): 5-11. **(IMSE)**

Yacoub⁺, S., B. Cukic, and H.H. Ammar. 2004. A scenario based reliability analysis approach for component based software. *IEEE Transactions on Reliability* 53(4): 465-480. **(LCSEE)**

Yacoub⁺, S., B. Cukic, and H.H. Ammar. 2004. A scenario based reliability analysis approach for component based software. *IEEE Transactions on Reliability* 53(4): 465-480. **(LCSEE)**

Yin, X.J.⁺, C.C. Dong⁺, J.Y.C. Ma⁺, J.M. Antonini⁺, J.R. Roberts⁺, C.F. Stanley, R. Schafer⁺, and K.H. Ma⁺. 2004. Suppression of cell mediated immune responses to listeria infection by repeated exposure to diesel exhaust particles in brown Norway rats. *Toxicological Sciences* 77: 263-271. **(MAE)**

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