

## Department of Mathematics Publications List for 2004

**Butler, F.**, Rook theory and cycle-counting permutation statistics, *Advances in Applied Mathematics* 33:655 - 675, 2004.

**Ciesielski, Krzysztof** and Pawlikowski, J., *Covering Property Axiom CPA. A combinatorial core of the iterated perfect set model*, Cambridge Tracts in Mathematics **164**, Cambridge Univ. Press, 2004. **MONOGRAPH**

**Ciesielski, Krzysztof**, Generalized continuities, in: *Encyclopedia of General Topology* (K.P. Hart, J.I. Nagata, and J.E. Vaughan, eds.), Elsevier, (2004), 126-130.

Balcerzak, M., Bartoszewicz, A, and **Ciesielski, Krzysztof**, Algebras with inner MB-representation, *Real Anal. Exchange* 29(1) (2003-2004), 265-273.

**Ciesielski, Krzysztof** and Pawlikowski, J., Uncountable intersections of open sets under CPAprism, *Proc. Amer. Math. Soc.* 132(11) (2004), 3379-3385.

**Ciesielski, Krzysztof** and Pawlikowski, J., Continuous images of big sets and additivity of  $s_0$  under CPAprism, *Real Anal. Exchange* 29(2) (2003-2004), 755-762.

**Ciesielski, Krzysztof** and Pawlikowski, J., Nice Hamel bases under the Covering Property Axiom, *Acta Math. Hungar.* 105(3) (2004), 197-213.

**W. Fang**, A nonlinear image reconstruction algorithm for electrical capacitance tomography, *Meas. Sci. Technol.*, 15(2004), pp.2124-2132.

**W. Fang**, K.Ito, and D.A.Redfern, LBIC imaging of semiconductor arrays: the cross-sectional model, *Math. Comput. Modelling*, 40(2004), pp.127-136.

D.A.Redfern, **W. Fang**, K.Ito, C.A.Musca, J.M.Dell, and L.Faraone, Low temperature saturation of p-n junction laser beam induced current signals, *Solid-State Electronics*, 48(2004), pp.409-414.

**W. Fang** and M.Lu, A fast collocation method for an inverse boundary value problem, *Int. J. Numer. Meth. Engng.*, 59(2004), pp.1563-1585.

**W. Fang**, Y.Wang, and Y.Xu, An implementation of fast wavelet Galerkin methods for integral equations of the second kind, *J. Sci. Comput.*, 20(2004), pp.277-320.

**Edgar Fuller**, Sampath Yerramalla, Bojan Cukic, Yan Liu, and Srikanth Gururajan, Adaptive Control Software: Can We Guarantee Safety, *Proceedings of COMPSAC 2004*, IEEE Press.

**Edgar Fuller**, Bojan Cukic, Sampath Yerramalla, Yan Liu and Srikanth Gururajan, An Approach to V&V of Embedded Adaptive Systems, Formal Approaches to Agent-Based Systems (FAABS) III, Lecture Notes in Computer Science, Springer-Verlag.

**H.Gingold**, Approximation of Unbounded Functions via Compactification, Journal of Approximation Theory, Vol.131(2004), 284-305.

**H.Gingold**, Diagonalization of Singularly Perturbed Systems Possessing A coefficient Matrix with Coalescing Eigenvalues. International Journal of Pure and Applied Mathematics, 9(2003), 319-343. (Reported as Accepted in 2003).

**Henry W. Gould**, Sums of powers of binomial coefficients via Legendre polynomials, Ars Combinatoria, 73(2004), pp. 33-43.

**Henry W. Gould**, A curious identity which is not so curious, Mathematical Gazette, 88(2004), Issue No. 511, March, p. 87.

**H. Hattori**, The Riemann Problem for Thermoelastic Materials with Phase Change, Journal of Differential Equations 205 (2004) 229-252.

Yang, Xiaofan, **Lai, Hongjian**, Evans, David J., Megson, Graham M., Global asymptotic stability in a rational recursive sequence. Appl. Math. Comput.158 (2004), no. 3, 703-716.

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**Robert Mayes**, Editor of focused edition of The International Journal for Technology in Mathematics Education, Volume 11, Number 2.

J. N. Ridley and **M. E. Mays**, Compositions of unions of graphs, Fibonacci Quarterly 42 (2004), 222-230.

**Michael Mays**, Java applets for trigonometry, ICTCM 16th Proceedings (2004), 201-205.

**Michael Mays** and **Laura Pyzdrowski**, The Gutter Problem, in the Mathematics Digital Library at <http://www.mathdl.org>, a refereed web resource.

**Nadler, Sam B., Jr.**, Periodic points of multi-valued 0-contractive maps, *Top. Methods in Nonlinear Anal.* 22(2003), 399-409.

**Nadler, Sam B., Jr.**, Continua on which all real-valued connected functions are connectivity functions, *Top. Procs.* 28(2004), 229-239.

**Nadler, Sam B., Jr.**, Another proof that  $\mathbf{R}^3$  has no square root, *Amer. Math. Monthly* 111(2004), 527-528.

**Nadler, Sam B., Jr.**, Shift points and the fixed point property for products (with T. Bruce McLean), *Fixed Point Theory* 5(2004), 299-302.

Raymond H. Chan, **Sherman D. Riemenschneider**, Lixin Shen, Zuowei Shen, High-Resolution Image Reconstruction With Displacement Errors: A Framelet Approach, *International Journal of Imaging Systems and Technology*, 14(3) (2004), pages 91-104.

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