## Department of Mathematics 2009 Publications

- 1. **Cai, Maomao**; **Li, Dening**, Global Solutions for Coupled Kuramoto-Sivashinsky-KdV System Q. Appl. Math., Vol. 67, Issue 3, pp. 477-488, Univ Press Inc, Providence 2009.
- 2. **K.C. Ciesielski** and J.K. Udupa, Affinity functions: recognizing essential parameters in fuzzy connectedness based image segmentation, Medical Imaging 2009: Image Processing, SPIE Proceedings 7259, 2009.
- 3. **K.C. Ciesielski**, J.K. Udupa, X. Chen, and G. Grevera, Linear time algorithms for exact distance transform: elaboration on Maurer et al. algorithm, Medical Imaging 2009: Image Processing, SPIE Proceedings 7259, 2009.
- 4. **Darrah, M**. and Dowling, A. (2009). Preparing the Next Generation of Innovators through Collaboration. In S. Rumler and K Bor NG (Eds.) *Collaborative Technologies and Applications for Interactive Information Design: Emerging Trends in User Experiences*. Scott Rumler (pp. 67-81) New York: IGI Publishing.
- 5. **Darrah, M.**, Pullum, L., **Beck Roth, S., Gilkerson,** B. and Taipale, E. (2009). Using Genetic Algorithms for Robust Tasking of Multiple UAVs with Diverse Sensors. *Proceeding of AIAA Infotech@Aerospace Conference and Exhibit.* April 6-9, 2009.
- 6. Miller, D., Fuller, E. and Darrah, M. (2009). Comparing Partial-credit Graded Examinations and the End of Semester Bonus Quiz for Computerized Examination. *Proceeding of ICTCM 2009 International Conference on Technology in Collegiate Mathematics*. March 12-15, 2009.
- 7. **Darrah, M** and Blake, M. (2009). Providing Real World Experinences for High School Teachers and Students. *Proceeding of Society of Technology and Teacher Education Conference*. Charleston, SC, March 2-6, 2009.
- 8. **Deshler, Jessica,** A Two-Semester Observational Study of Teaching Practices and Interactions in Multi-Section Undergraduate Mathematics Courses, Conference Proceedings for the 12th Annual Conference on Research in Undergraduate Mathematics Education, February, 2009.
- 9. **Fang, Weifu; Zeng, Suxing**, Numerical recovery of Robin boundary from boundary measurements for the Laplace equation, J. Comput. Appl. Math., Vol. 224, Issue 2, pp. 573-580, Elsevier Science Bv, Amsterdam, 15-Feb 2009.
- 10. **Gingold, H**., Factorization of Matrix Functions and Their Inverses via Power Product Expansions, Linear Alg. Appl., Vol. 430, Issue 12, Nov, pp. 2835-2858, Elsevier Science Inc, New York, 1-Jun 2009.

- 11. **Goldwasser, John** L.; Klostermeyer, William F., Maximum Orbit Weights in the sigma-game and Lit-only sigma-game on Grids and Graphs, Graphs Comb., Vol. 25, Issue 3, pp. 309-326, Springer Tokyo, Tokyo, Aug 2009.
- 12. **Goldwasser, Joh**n; Wang, Xinmao; Wu, Yaokun, Does the Lit-only Restriction Make Any Difference for the Sigma-game and Sigma(+)-game? Eur. J. Comb., Vol. 30, Issue 4, pp. 774-787, Academic Press Ltd Elsevier Science Ltd, London, May 2009.
- 13. **H. W. Gould**, Proof and generalization of an Identity of E. T. Bell, Bulletin of the Allahabad Math. Society, 24(2009), Part 1, pp. 71-82.
- 14. **H. W. Gould** and **Jocelyn Quaintance**, Partial fraction expansions and a question of Bruckman, Fibonacci Quarterly, Vol. 46/47, No. 3, Aug. 2008/2009, pp. 245-248. [Published in 2009].
- 15. **H. W. Gould** and **Jocelyn Quaintance**, Bell Numbers and Variant Sequences Derived from a General Functional Differential Equation, Integers Journal, 9(2009), paper #A44, pp. 581-589.
- 16. **H. W. Gould**, In Memoriam: Kai Lai Chung (1917-2009), Journal of Mathematical Research and Exposition, (Dalian, China) Vol. 29(2009), No. 6, pp. 952-953.
- 17. **H. W. Gould** and **Jocelyn Quaintance**, Operators, inverse series relations and other expansions connected with generalized Gould-Hopper polynomials, Indian J. Math., 51(2009), No. 3, Dec. pp. 463-487.
- 18. **H. W. Gould** and **Jocelyn Quaintance**, Solution and generalization of Problem 11343, American Math. Monthly 116(2009), Dec., pp. 944-945.
- 19. S. Berman, **Á. Halász**, M.A. Hsieh and V. Kumar, Optimized Stochastic Policies for Task Allocation in Swarms of Robots, IEEE Trans. Robotics, 25(4) (2009), 927-937.
- 20. M. A. Hsieh, **A. Halász**, E. D. Cubuk, S. Schoenholz and A. Martinoli, Specialization as an optimal strategy under varying external conditions, Proceedings of the 2009 IEEE International Conference on Robotics and Automation (2009), 1941-1946.
- 21. D. J. Cappelleri, **Á. Halász**, J.-Y. Sul, T. K. Kim, J. Eberwine and V. Kumar, Towards fully automated phototransfection, Proceedings of the 5<sup>th</sup> Annual IEEE Conference on Automation Science and Engineering (2009), 202-207.
- 22. **Á. Halász**, [Non]-deterministic dynamics in cells: From multistability to stochastic switching, Proceedings of the 2009 IEEE Information Theory Workshop (2009), 599-603.

- 23. **Ryan Hansen**, Matt Leonard, and Ron Taylor. (2009). The Algebraic Case of a Conjecture of Nakanishi. Missouri Journal of Mathematical Sciences. Vol. 21, Number 2, pp. 127-135. Spring 2009.
- 24. **Hong-Jian Lai**, Yehong Shao, Gexin Yu and Mingquan Zhan, Hamiltonian connectedness in 3-connected line graphs, Discrete Applied Math. 157 (2009), 982-990.
- 25. Zhi-Hong Chen, **Hong-Jian Lai**, Reinforcing the number of disjoint spanning trees, Ars Combinatoria, 93 (2009), 113-127.
- 26. **Xianfeng Gu**, Kamesh Madduri, K. Subramani and **Hong-Jian Lai**, Improved Algorithms for Detecting Negative Cost Cycles in Undirected Graphs, Lecture Notes in Computer Science, June 2009, 5598 (2009), 40-50.
- 27. Sridhar Chouhan, Hui Wan, **Hong-Jian Lai**, Ali Feliachi and M. A. Choudhry Intelligent Reconfiguration of Smart Distribution Network using Multi-Agent Technology}, (Invited Panel Paper), IEEE Power Engineering Society General Meeting, Calgary, Canada, July 2009.
- 28. **Liang, Yanting**; Liu, Bolian; **Lai, Hong-Jian**, Multi-g Base Index of Primitive Anti-symmetric Sign Pattern Matrices, Linear Multilinear Algebra, Vol. 57, Issue 6, pp. 535-546, Taylor & Francis Ltd, Abingdon, 2009.
- 29. Chen, Zhi-hong; **Lai, Hong-Jian**; Xiong, Liming; **Yan, Huiya**; Zhan, Mingquan, Hamilton-connected Indices of Graphs, Discret. Math., Vol. 309, Issue 14, pp. 4819-4827, Elsevier Science Bv, Amsterdam, 28 Jul 2009.
- 30. Li, Xiaomin; Li, Dengxin; **Lai, Hong-Jian**, The Supereulerian Graphs in the Graph Family C(l, K), Discret. Math., Vol. 309, Issue 9, pp. 2937-2942, Elsevier Science Bv, Amsterdam, 6 May, 2009.
- 31. **Lai, Hong-Jian**; Miao, Lianying; Shao, Yehong, Every Line Graph of a 4-edge-connected Graph Is Z(3)-connected, Eur. J. Comb., Vol. 30, Issue 2, pp. 595-601, Academic Press Ltd, Elsevier Science Ltd, London, Feb 2009.
- 32. **Lai, Hong-Jian**; Shao, Yehong; Wu, Hehui; Zhou, Ju, On Mod (2p+1)-Orientations of Graphs, J. Comb. Theory, Ser. B, Vol. 99, Issue 2, pp. 399-406, Academic Press Inc, Elsevier Science, San Diego, Mar 2009.
- 33. Subramani, K.; **Lai, Hong-Jian**; **Gu, Xiaofeng**, Random Walks for Selected Boolean Implication and Equivalence Problems, Acta Inform., Vol. 46, Issue 2, pp. 155-168, Springer, New York, Apr 2009.
- 34. Catlin, Paul A.; **Lai, Hong-Jian**; Shao, Yehong, Edge-connectivity and Edge-disjoint Spanning Trees, Discret. Math., Vol. 309, Issue 5, pp. 1033-1040, Elsevier Science Bv, Amsterdam, 28 Mar 2009.

- 35. Kannan, Lavanya; Hobbs, Arthur; **Lai, Hong-Jian**; Lai, Hongyuan, Transforming a Graph into a 1-Balanced Graph, Discret Appl. Math., Vol. 157, Issue 2, pp. 300-308, Elsevier Science By, Amsterdam, 28 Jan 2009.
- 36. Brefczynski-lewis, Julie; **Lowitszch, Svenja**; Parsons, Michael; Lemieux, Susan; Puce, Aina, Audiovisual Non-verbal Dynamic Faces Elicit Converging Fmri and Erp Responses, Brain Topogr., Vol. 21, Issue 4, Mar, pp. 193-206, Springer, Dordrecht, May 2009.
- 37. **Miller, D**. and Sugden, S. (2009). Insight into fractional calculus via a spreadsheet. Electronic Journal of Spreadsheets in Education (eJSiE), Vol. 3, Issue 2, Article 4.
- 38. **Miller, D**.(2009). Participants' perceptions and experiences with worked-out examples in calculus. Online Proceedings of the 12th Annual Conference for Research in Undergraduate Mathematics Education (RUME).
- 39. **Miller, D**. (2009). Promoting success in applied college algebra by using worked examples in supplemental sessions. Online Proceedings of the 12th Annual Conference for Research in Undergraduate Mathematics Education (RUME).
- 40. **Miller, D., Fuller, E., & Darrah, M**. (2009). A comparative study of partial credit assessment and computer-based testing. Online Proceedings of the International Conference of Technology and Computers in Mathematics Conference (ICTCM).
- 41. J. Janssen and **P. Pralat,** Protean graphs with a variety of ranking schemes, Theoretical Computer Science 410 (2009), 5491-5504.
- 42. A. Bonato and **P. Pralat,** The good, the bad, and the great: homomorphisms and cores of random graphs, Discrete Mathematics 309 (2009), 5535-5539.
- 43. W. Aiello, A. Bonato, C. Cooper, J. Janssen, and **P. Pralat**, A spatial web graph model with local influence regions, Internet Mathematics 5 (2009), 175-196.
- 44. C.A. Baker, A. Bonato, N.A. McKay, and **P. Pralat**, Graphs with the N-e.c. adjacency property constructed from resolvable designs, Journal of Combinatorial Designs 17 (2009), 294-306.
- 45. A. Bonato, **P. Pralat,** and C. Wang, Pursuit-evasion in models of complex networks, Internet Mathematics 4 (2009), 419-436.
- 46. S. Gaspers, M.E. Messinger, R. Nowakowski, and **P. Pralat,** Clean the graph before you draw it!, Information Processing Letters 109 (2009), 463-467.
- 47. **P. Pralat** and N. Wormald, Growing protean graphs, Internet Mathematics 4 (2009), 1-16.

- 48. **P. Pralat**, Cleaning random graphs with brushes, Australasian Journal of Combinatorics 43 (2009), 237-251.
- 49. A. Bonato, N. Hadi, P. Horn, **P. Pralat**, and C. Wang, A dynamic model for on-line social networks, Proceedings of the 6th Workshop on Algorithms and Models for the Web-Graph (WAW2009), Lecture Notes in Computer Science 5427, Springer, 2009, 127-142.
- 50. **Pyzdrowski, L.** & Pyzdrowski, A. (2009) Student Preferences for Learning College Algebra in a Web Enhanced Environment. Research in Higher Education Journal. (4) 1-9.
- 51. **Pyzdrowski, L., Mays, Michael**, Butler, M., Walker, V., and Pyzdrowski, A. (2009) WvEB Mathematics: A Successful Web Enhanced Project Offering College Level Courses to High School Students, Proceedings of TheTwentieth Annual International Conference on Technology in Collegiate Mathematics, USA. (pp. 204 208). Reading: Addison Wesley Longman.
- 52. **Quaintance, Jocelyn**, Symmetrically Inequivalent Partitions of a Square Array: Part II, The Australasian Journal of Combinatorics, Vol. 44 (2009), pp. 199-224.
- **Quaintance, Jocelyn**, Word Representations of m x n x p Proper Arrays, Discrete Mathematics, Vol. 309 (2009), No. 6, pp. 1199-1212.
- 54. Engelke, Nicole & Sealey, Vicki (2009). The Great Gorilla Jump: A Riemann Sum Investigation. Proceedings of the 12th Annual Conference on Research in Undergraduate Mathematics Education. Raleigh, NC.
- 55. **Van Vliet, Daniel**, Analytic Signals with Nonnegative Instantaneous Frequency, J. Integral Equ. Appl., Vol. 21, Issue 1, pp. 95-111, Rocky Mt Math Consortium, Tempe, Spr 2009.
- 56. **Qin Wu, Eddie Fuller, Cun-Quan Zhang,** Text Document Classification and Pattern Recognition, Proceedings of the International Conference on Advances in Social Network Analysis and Mining 2009, pp. 405-410.
- 57. **Wu, Yezhou**; Zang, Wenan; **Zhang, Cun-Quan**, A Characterization of Almost Cis Graphs, Siam Discret. Math. Vol. 23, Issue 2, pp. 749-753, Siam Publications, Philadelphia, 2009.
- 58. **Wu, Y**., Larrabee, J. H., and Putman, Casdorph, H. Caring Behaviors Inventory Short Form. In J. Watson (Ed.), Assessing and measuring caring in nursing and health sciences, 2009 (2nd ed., pp. 233-239.). New York: Springer Pub. Co.
- 59. Niu, Jianbing; **Zhang, Cun-Quan**, Cliques, Minors and Apex Graphs, Discret. Math., Vol. 309, Issue 12, pp. 4095-4107, Elsevier Science BV, Amsterdam, 28 Jun, 2009.

- 60. Xie, Dezheng; **Zhang, Cun-Quan**, Flows, Flow-pair Covers and Cycle Double Covers, Discret. Math., Vol. 309, Issue 14, pp. 4682-4689, Elsevier Science BV, Amsterdam, 28 Jul 2009.
- 61. **Wang, Xiaofeng; Zhang, Cun-Quan**; Zhang, Taoye, Nowhere-zero 4-flow in Almost Petersen-minor Free Graphs, Discret. Math., Vol. 309, Issue, pp. 1025-1032, Elsevier Science Bv, Amsterdam, 28 Mar, 2009.
- 62. **Hao, Rongxia**; Niu, Jianbing; **Wang, Xiaofeng; Zhang, Cun-Quan**; Zhang, Taoye, A Note on Berge-Fulkerson Coloring, Discret. Math., Vol. 309, Issue 13, pp. 4235-4240, Elsevier Science Bv, Amsterdam, 6 Jul 2009.
- 63. **CQ Zhang** and Y. B. Ou, Method for data clustering and classification by a graph theory model -- network partition into high density subgraphs, US patent, (2009) #11/416,766.
- 64. Yan, Weigen; **Zhang, Zuhe**, Asymptotic Energy of Lattices, Physica a, Vol. 388, Issue 8, pp. 1463-1471, Elsevier Science Bv, Amsterdam, 15 Apr 2009.