

RESEARCH OUTPUTS 2009 - 2010

Chapter in an edited book

- 1 **HU, B.Q., IP, W.C.** and **WONG, H.** " Fuzzy Integral on Credibility Measure ". In B. Cao, T.F. Li and C.Y. Zhang, eds., *Fuzzy Information and Engineering*, Vol. 2, Springer-Verlag, Berlin, pp.253-261 (2009)

Publication in refereed journal

- 2 BAI, Z.J., NG, M.K. and **QI, L.Q.** " A Coordinate Gradient Descent Method for Nonsmooth Nonseparable Minimization ". *Numerical Mathematics: Theory, Methods and Applications*, Vol. 2, No. 4, pp.377-402 (2009)
- 3 BALAKRISHNAN, N. and **ZHAO, X.Q.** " A Nonparametric Test for the Equality of Counting Processes with Panel Count Data ". *COMPUTATIONAL STATISTICS & DATA ANALYSIS*, Vol. 54, pp.135-142 (2010)
- 4 BALAKRISHNAN, N. and **ZHAO, X.Q.** " New Multi-sample Nonparametric Tests for Panel Count Data ". *ANNALS OF STATISTICS*, Vol. 37, No. 3, pp.1112-1149 (2009)
- 5 BASS, L., NIMMO, J.J.C., **ROGERS, C.** and SCHIEF, W.K. " Electrical Structures of Interfaces: a Painlevé II Model ". *Proceedings of The Royal Society A*, Vol. 466, pp.2117-2136 (2010)
- 6 CAO, L.Q., ZHANG, Y., ALLEGRETTO, W. and **LIN, Y.P.** " Multiscale Asymptotic Method for Maxwell's Equations in Composite Materials ". *SIAM J. Numer. Anal.*, Vol. 47, No. 6, pp.4257-4289 (2010)
- 7 **CHAN, C.KIN**, WITT, S.F., **LEE, Y.C.E.** and SONG, H. " Tourism Forecast Combination Using the CUSUM Technique ". *TOURISM MANAGEMENT*, Vol. 31, No. 6, pp.891-897 (2010)
- 8 CHAN, KY, CHAN, KW, **PONG, GTY**, AYDIN, ME, FOGARTY, TC and LING, SH " A statistics-based genetic algorithm for quality improvements of power supplies ". *European Journal of Industrial Engineering*, Vol. 3, No. 4, pp.468-492 (2009)
- 9 CHAN, T.L., LIU, Y.H. and **CHAN, C.K.** " Direct Quadrature Method of Moments for the Exhaust Particle Formation and Evolution in the Wake of the Studied Ground Vehicle ". *JOURNAL OF AEROSOL SCIENCE*, Vol. 41, No. 6, pp.553-568 (2010)
- 10 CHANG, S.S., **CHAN, C.KIN**, **LEE, H.W.J** and YANG, L. " A System of Mixed Equilibrium Problems, Fixed Point Problems of Strictly Pseudo-contractive Mappings and Nonexpansive Semi-groups ". *APPLIED MATHEMATICS AND COMPUTATION*, Vol. 216, pp.51-60 (2010)
- 11 CHANG, S.S., **CHAN, C.KIN**, **LEE, H.W.J.**, LIU, J.A. and VERMA, R. " A Fixed Point Theorem in Convex Metric Spaces with Application ". *PANAMERICAN MATHEMATICAL JOURNAL*, Vol. 20, No. 3, pp.59-68 (2010)
- 12 CHANG, S.S., **LEE, H.W.J.** and **CHAN, C.KIN** " A New Hybrid Method for Solving a Generalized Equilibrium Problem, Solving a Variational Inequality Problem and Obtaining Common Fixed Points in Banach Spaces, with Applications ". *NONLINEAR ANALYSIS*, Vol. 73, pp.2260-2270 (2010)

- 13 **CHEN, X.J.** " Numerical Verification Methods for Spherical t-Designs ". *Japan J. Indust. Appl. Math.*, Vol. 26, pp.1-9 (2009)
- 14 **CHEN, X.J.**, ZHANG, C. and FUKUSHIMA, M. " Robust Solution of Monotone Stochastic Linear Complementarity Problems ". *Math. Program., Series B*, Vol. 117, pp.51-80 (2009)
- 15 CHEN, Y., **CHAN, C.KIN** and **LEUNG, B.P.K.** " An Analysis of Three-level Orthogonal Saturated Designs ". *Computational Statistics & Data Analysis*, Vol. 54, pp.1952-1961 (2010)
- 16 CHENG, T.C.E., **LI, S.J.** and **YANG, X.Q.** " Vector equilibrium flows with nonconvex ordering relations ". *JOURNAL OF GLOBAL OPTIMIZATION*, Vol. 46, pp.537-542 (2010)
- 17 CHEUNG, M.M, HUI, E.S, CHAN, K.C, HELPERN, J.A, **QI, L.Q.** and WU, E.X. " Does Diffusion Kurtosis Imaging Lead to Better Neural Tissue Characterization? A Rodent Brain Maturation Study ". *NEUROIMAGE*, Vol. 45, pp.386-392 (2009)
- 18 CLARK, S., LI, C.K. and **SZE, N.S.** " Multiplicative Maps Preserving the Higher Rank Numerical Ranges and Radii ". *LINEAR ALGEBRA AND ITS APPLICATIONS*, Vol. 432, No. 11, pp.2729-2738 (2010)
- 19 GUO, W.L., **AUSTIN, F.** and CHEN, S.H. " Global Synchronization of Nonlinearly Coupled Complex Networks with Non-delayed and Delayed Coupling ". *Communications in nonlinear science and numerical simulation*, Vol. 15, pp.1631-1639 (2010)
- 20 GUO, W.L., **AUSTIN, F.** and CHEN, S.H. " Structure Identification of Nonlinearly Coupled Complex Networks with Non-delayed and Delayed Coupling ". *Chinese Physics Letters*, Vol. 27, No. 3, pp.030507-1-030507-4 (2010)
- 21 HE, J.H., WU, G.C. and **AUSTIN, F.** " The Variational Iteration Method Which Should Be Followed". *Nonlinear Science Letters A*, Vol. 1, No. 1, pp.1-30 (2010)
- 22 HE, X.M., LIN, T. and **LIN, Y.P.** " The Convergence of the Bilinear and Linear Immersed Finite Element Solutions to Interface Problems ". *Numerical Methods for Partial Differential Equations*, Vol. 10, pp.20620 (2010)
- 23 HE, X.M., LIN, T. and **LIN, Y.P.** " Interior Penalty Bilinear IFE Discontinuous Galerkin Methods for Elliptic Equations with Discontinuous Coefficient ". *Journal of System Sciences and Complexity*, Vol. 23, pp.467-483 (2010)
- 24 **HOU, S.H.** " On a Theorem of Abel. ". *Amer. Math. Monthly*, Vol. 116, No. 7, pp.629-630 (2009)
- 25 **HOU, S.H.**, GONG, X.H. and YANG, X.M. " Existence and Stability of Solutions for Generalized Ky Fan Inequality Problems with Trifunctions ". *J. of Optimization Theory and Applications*, Vol. 146, No. 2, pp.387-398 (2010)
- 26 HUA, G.W., WANG, S.Y., **CHAN, C.KIN** and **HOU, S.H.** " A Fractional Programming Model for International Facility Location ". *Journal of Industrial and Management Optimization*, Vol. 5, No. 3, pp.629-649 (2009)
- 27 **HUANG, J.H.** and **LI, X.** " System Uncertainty and Statistical Detection for Jump-diffusion Models". *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*, Vol. 55, No. 3, pp.697-702 (2010)

- 28 **HUANG, J.H., LI, X.** and WANG, G.C. " Maximum Principles for a Class of Partial Information Risk-Sensitive Optimal Controls ". *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*, Vol. 55, No. 6, pp.1438-1443 (2010)
- 29 **HUANG, J.H., LI, X.** and WANG, G.C. " Near-optimal Control Problems for Linear Forward-backward Stochastic Systems ". *AUTOMATICA*, Vol. 46, No. 2, pp.397-404 (2010)
- 30 HUANG, X., **YANG, X.Q.** and ZHU, D.L. " Levitin-Polyak Well-posedness of Variational Inequality Problems with Functional Constraints ". *JOURNAL OF GLOBAL OPTIMIZATION*, Vol. 44, No. 2, pp.159-174 (2009)
- 31 **IP, W.C., HU, B.Q., WONG, H.** and XIA, J. " Application of Grey Relational Method to River Environmental Quality Evaluation in China ". *JOURNAL OF HYDROLOGY*, Vol. 379, pp.284-290 (2009)
- 32 ISLAM, S., KHAN, Y., FARAZ, N. and **AUSTIN, F.** " Numerical Solution of Logistic Differential Equations by Using the Laplace Decomposition Method ". *World Applied Sciences Journal*, Vol. 8, No. 9, pp.1100-1105 (2010)
- 33 KIMURA, T. and **CHEN, X.J.** " Validated Solutions of Saddle Point Linear Systems ". *SIAM J. Matrix Anal. Appl.*, Vol. 30, No. 4, pp.1697-1708 (2009)
- 34 **KWONG, M.K.** and OU, C.H. " Existence and Nonexistence of Monotone Traveling Waves for the Delayed Fisher Equation ". *JOURNAL OF DIFFERENTIAL EQUATIONS*, Vol. 249, No. 3, pp.728-745 (2010)
- 35 **KWONG, M.K.** and WONG, J.S.W. " Solvability of Second-order Nonlinear Three-point Boundary Value Problems ". *NONLINEAR ANALYSIS*, Vol. 73, No. 8, pp.2343-2352 (2010)
- 36 **KWONG, M.K.** and WONG, J.S.W. " Some Remarks On Three-point and Four-point BVP's for Second-order Nonlinear Differential Equations ". *Electronic Journal of Qualitative Theory of Differential Equations*, Vol. SI, No. 20, pp.1-18 (2009) (<http://www.math.u-szeged.hu/ejqtde/sped1/120.html>)
- 37 LAU, HCW, CHAN, TM, TSUI, WT and **PANG, WK** " Application of Genetic Algorithms to Solve the Multidepot Vehicle Routing Problem ". *IEEE TRANSACTIONS ON AUTOMATION SCIENCE AND ENGINEERING*, Vol. 7, No. 2, pp.383-392 (Apr 2010)
- 38 LAU, HCW, TANG, CXH, **LEUNG, BPK,** LEE, CKM and HO, GTS " A Performance Tradeoff Function for Evaluating Suggested Parameters in the Reactive Ion Etching Process ". *IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS: PART A SYSTEMS AND HUMANS*, Vol. 39, No. 4, pp.933-938 (Jul 2009)
- 39 LI, J., HUANG, N.J. and **YANG, X.Q.** " Weak Sharp Minima for Set-valued Vector Variational Inequalities with an Application ". *EUROPEAN JOURNAL OF OPERATIONAL RESEARCH*, Vol. 205, No. 2, pp.262-272 (2010)
- 40 **LI, R.H., LEUNG, P.K.** and **PANG, W.K.** " Convergence of Numerical Solutions to Stochastic Age-dependent Population Equations with Markovian Switching ". *JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS*, Vol. 233, pp.1046-1055 (2009)
- 41 **LI, R.H., PANG, W.K.** and **LEUNG, P.K.** " Convergence of Numerical Solutions to Stochastic Age-structured Population Equations with Diffusions and Markovian Switching ". *APPLIED MATHEMATICS AND COMPUTATION*, Vol. 216, pp.744-752 (2010)

- 42 **LI, R.H., PANG, W.K.** and **LEUNG, P.K.** " Exponential Stability of Numerical Solutions to Stochastic Delay Hopfield Neural Networks ". *NEUROCOMPUTING*, Vol. 73, pp.920-926 (2010)
- 43 LI, X.G., **CHAN, C.K.** and HOU, Y. " A Numerical Method with Particle Conservation for the Maxwell-Dirac System ". *APPLIED MATHEMATICS AND COMPUTATION*, Vol. 216, No. 4, pp.1096-1108 (2010)
- 44 LIN, G.H., **CHEN, X.J.** and FUKUSHIMA, M. " Solving Stochastic Mathematical Programs with Equilibrium Constraints via Approximation and Smoothing Implicit Programming with Penalization ". *Math. Program., Series B*, Vol. 116, pp.343-368 (2009)
- 45 LING, C., NIE, J., **QI, L.Q.** and **YE, Y.Y.** " Biquadratic Optimization over Unit Spheres and Semidefinite Programming Relaxations ". *SIAM JOURNAL ON OPTIMIZATION*, Vol. 20, No. 3, pp.1286-1310 (2009)
- 46 LOXTON, R.C., TEO, K.L., REHBOCK, V. and **YIU, K.F.C.** " Optimal Control Problems with a Continuous Inequality Constraint on the State and the Control ". *Automatica*, Vol. 45, pp.2250-2257 (2009)
- 47 NG, M., **QI, L.Q.** and ZHOU, G. " Finding the Largest Eigenvalue of a Non-negative Tensor ". *SIAM JOURNAL ON MATRIX ANALYSIS AND APPLICATIONS*, Vol. 31, No. 3, pp.1090-1099 (2009)
- 48 NIE, G.H., **CHAN, C.K.**, YAO, J.C. and HE, X.Q. " Asymptotic Solution for Nonlinear Buckling of Orthotropic Shells on Elastic Foundation ". *AIAA JOURNAL*, Vol. 47, No. 7, pp.1772-1783 (2009)
- 49 **QI, L.Q.**, TONG, X. and WANG, Y." Computing Power System Parameters to Maximize the Small Signal Stability Margin Based on Min-max Models ". *Optimization and Engineering* , Vol. 10, pp.465-476 (2009)
- 50 **QI, L.Q.**, WANG, F. and WANG, Y.J. " Z-eigenvalue Methods for a Global Polynomial Optimization Problem ". *Mathematical Programming, Ser. A*, Vol. 118, pp.301-316 (2009)
- 51 **ROGERS, C.** and SCHIEF, W.K. " Bäcklund Transformations and Superposition Principles in Nonlinear Elastodynamics ". *Studies in Applied Mathematics*, Vol. 124, pp.137-149 (2009)
- 52 **ROGERS, C.** and SZERESZEWSKI, A. " A Bäcklund Transformation for L-isothermic Surfaces ". *JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL*, Vol. 42, pp.404015-404026 (2009)
- 53 SCHIEF, W.K. and **ROGERS, C.** " Modulated Waves and Helicoidal Pseudospherical Surfaces in Nonlinear Inhomogeneous Elasticity ". *JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL* , Vol. 43, pp.105206-105217 (2010)
- 54 SCHIEF, W.K., SZERESZEWSKI, A. and **ROGERS, C.** " On Shell Membranes of Enneper Type: Generalized Dupin Cyclides ". *JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL* , Vol. 42, pp.404016-404032 (2009)
- 55 SHANNON, A. and **CHOY, Y.H.** " Generalized Nets for the Diagnosis and Management of Diabetic Nephropathy ". *BIOAUTOMATION*, Vol. 13, No. 3, pp.73-82 (2009)

- 56 SHAO, Q.X., **WONG, H.**, **IP, W.C.** and LI, M. " Effect of Ambient Air Pollution on Respiratory Illness in Hong Kong: A Regional Study ". *ENVIRONMETRICS*, Vol. 21, pp.173-188 (2010)
- 57 SHI, Y., TIAN, Y.J., **CHEN, X.J.** and ZHANG, P. " Regularized Multiple Criteria Linear Programs for Classification ". *Science in China Series F: Information Sciences*, Vol. 52, No. 10, pp.1812-1820 (2009)
- 58 TONG, X., WU, F. and **QI, L.Q.** " Worst-case CVar Based Portfolio Optimization Models with Applications to Scenario Planning ". *OPTIMIZATION METHODS AND SOFTWARE*, Vol. 24, No. 6, pp.933-958 (2009)
- 59 WALKER, D.M., ALLINGHAM, D., **LEE, H.W.J.** and SMALL, M. " Parameter Inference in Small World Network Disease Models with Approximate Bayesian Computational Methods ". *PHYSICA A- STATISTICAL MECHANICS AND ITS APPLICATIONS*, Vol. 389, pp.540-548 (2010)
- 60 YANG, Y., TAO, Z.L. and **AUSTIN, F.** " Solutions of the Generalized KdV Equation with Time-dependent Damping and Dispersion ". *APPLIED MATHEMATICS AND COMPUTATION*, Vol. 216, pp.1029-1035 (2010)
- 61 **YANG, Z.Y.**, **YAM, S.C.P.**, **LI, L.K.** and WANG, Y.W. " Universal Repetitive Learning Control for Nonparametric Uncertainty and Unknown State-Dependent Control Direction Matrix ". *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*, Vol. 55, No. 7, pp.1710-1715 (2010)
- 62 **YIU, K.F.C.**, CHAN, K.Y., LOW, S.Y. and NORDHOLM, S. " A Multi-filter System for Speech Enhancement Under Low Signal-to-noise Ratios ". *JOURNAL OF INDUSTRIAL AND MANAGEMENT OPTIMIZATION*, Vol. 5, No. 3, pp.671-682 (2009)
- 63 **YIU, K.F.C.**, LIU, J.Z., SIU, K. and CHING, W.K. " Optimal Portfolios with Regime Switching and Value-at-Risk Constraint ". *AUTOMATICA*, Vol. 46, No. 6, pp.979-989 (2010)
- 64 ZHANG, C., **CHEN, X.J.** and XIU, N.H. " Global Error Bounds for the Extended Vertical LCP ". *COMPUTATIONAL OPTIMIZATION AND APPLICATIONS*, Vol. 42, pp.335-352 (2009)
- 65 ZHANG, S.S., **LEE, H.W.J.** and **CHAN, C.KIN** " Quadratic Minimization for Equilibrium Problem Variational Inclusion and Fixed Point Problem ". *APPLIED MATHEMATICS AND MECHANICS*, Vol. 31, No. 7, pp.917-928 (2010)
- 66 ZHAO, Y.X., WANG, S.Y., CHENG, T.C.E., **YANG, X.Q.** and HUANG, Z.M. " Coordination of Supply Chain by Option Contracts: A Cooperative Game Theory Approach ". *EUROPEAN JOURNAL OF OPERATIONAL RESEARCH*, Vol. 207, pp.668-675 (2010)
- 67 ZHOU, W.J. and **CHEN, X.J.** " Global Convergence of a New Hybrid Gauss-Newton Structured BFGS Method for Nonlinear Least Squares Problems ". *SIAM J. Optim.*, Vol. 20, No. 5, pp.2422-2441 (2010)

Invited conference paper

- 68 **HOU, S.H.** and YAN, Q. " Feedback Stabilization of Euler-Bernoulli Beams ". *Proceedings of 2009 CACS International Automatic Control Conference*, Taipei, Taiwan, 27-29 November, 2009, pp.1-3 (2009)
- 69 **ROGERS, C.**, SCHIEF, W.K., MENTRELLI, A. and RUGGERI, T. " Application of a Bäcklund Transformation in Nonlinear Elastodynamics. Two-pulse Interaction ". 15th International Conference on Waves and Stability in Continuous Media, Palermo, Italy, 28 June - 1 July 2009 (2009)

- 70 張石生, 李向榮 and 陳志堅 "平衡問題變分包含問題及不動點問題的二次極小化". *應用數學和力學*, Vol. 31, No. 7, pp.874-883 (2010)

Refereed conference paper

- 71 **CHAN, C.K.** and NIE, G.H. " Elastic Field of an Elliptical Inhomogeneity with Polynomial Eigenstrains in Orthotropic Media ". *12th International Conference on Fracture*, Ottawa, Canada, July 2009, Canada, pp.211 (2009)
- 72 HE, F, **WANG, YH**, CHAN, KW and MEI, SW " Optimal Load Shedding Strategy Based on Particle Swarm Optimization ". *International Conference on Advances in Power System Control, Operation and Management*, Hong Kong, 8 – 11 Nov 2009 (2009)
- 73 LIU, Q. and **CHAN, C.K.** " The Flame Simulation of a Premixed Turbulent by a Conservation Level Set Method ". *The 8th Asian Computational Fluid Dynamics Conference*, Hong Kong, 10-14 January 2010, Hong Kong (2010)
- 74 **NIE, G.H.** and **CHAN, C.K.** " Anisotropic Elliptical Inhomogeneity with Perfect and Imperfect Interfaces ". *12th International Conference on Mesomechanics*, Taiwan, June 2010, pp.403-406 (2010)
- 75 TANG, W.C., **HO, C.H.**, SHAM, C.W. and **YIU, K.F.C.** " Low-Power Reconfigurable Acceleration of Robust Frequency-Domain Echo Cancellation on FPGA ". *International Conference on Green Circuits and Systems (ICGCS'2010)*, Shanghai, China, June (2010) (CD Version)
- 76 **WANG, YH**, YING, DS, CHAN, KW and MEI, SW " Optimal Secondary Voltage Preventive Control Based on Particle Swarm Optimization ". *International Conference on Advances in Power System Control, Operation and Management*, Hong Kong, 8 – 11 Nov 2009 (2009)
- 77 WU, Y.Y. and **CHAN, C.K.** " Buoyancy Effects on Large Eddy Simulation of Methane/Air Turbulent Premixed V-Flames ". *The 8th Asian Computational Fluid Dynamics Conference*, Hong Kong, 10-14 January 2010, Hong Kong (2010)
- 78 WU, Y.Y. and **CHAN, C.K.** " Extended Progress Variable and Mixture Fraction Model for Turbulent Premixed Combustion ". *World Congress on Engineering*, Vol. III, London, UK, 30 June - 2 July 2010, London (2010)