

2009 International Joint Conference on Computational Sciences and Optimization

CSO 2009 Table of Contents Volume - 2

Preface - Volume 2	xxii
Organizing Committee - Volume 2	xxiv
Program Committee - Volume 2	xxv
Workshop Co-chairs - Volume 2	xxix
Co-sponsors - Volume 2	xxx
Reviewers - Volume 2	xxxix

Bio-inspired Business Intelligence

Recognition of a Sucker Rod's Defect with ANN and SVM	3
<i>Hongchun Sun and Liyang Xie</i>	
Weighted LS-SVM Credit Scoring Models with AUC Maximization by Direct Search	7
<i>Ligang Zhou and Kin Keung Lai</i>	
Crude Oil Price Prediction Using Slantlet Denoising Based Hybrid Models	12
<i>Kaijian He, Kin Keung Lai, and Jerome Yen</i>	
A Statistical Neural Network Approach for Value-at-Risk Analysis	17
<i>Xiaoliang Chen, Kin Keung Lai, and Jerome Yen</i>	
Simulated Annealing Based Rule Extraction Algorithm for Credit Scoring Problem	22
<i>Gang Dong, Kin Keung Lai, and Ligang Zhou</i>	

Intelligent Computing for Meteorological Applications

A Neural Network Ensemble Prediction Model Based on MGF and PLS for Drought and Waterlogging Disasters in Short-Range Climate	29
<i>Long Jin and Ying Huang</i>	
A Summer Precipitation FNN Multi-step Prediction Model Based on SSA-MGF	34
<i>Yong-hua Li, Hai-ming Xu, Yang-hua Gao, Suo-quan Zhou, and Qiang Li</i>	
Application of Fuzzy Neural Network to the Flood Season Precipitation Forecast	39
<i>Hui Wu and Xi Lin</i>	
A Novel Artificial Neural Network Ensemble Model Based on K--Nearest Neighbor Nonparametric Estimation of Regression Function and Its Application for Rainfall Forecasting	44
<i>Jiansheng Wu</i>	
Bayesian Neural Network Ensemble Model Based on Partial Least Squares Regression and Its Application in Rainfall Forecasting	49
<i>Xiaoming Pan and Jiansheng Wu</i>	
Decision Making Meteorological Services System Based on Geographic Information System	53
<i>Huanping Wu, Weijiang Zheng, Bing Luo, Zhongliang Lv, and Wei Tang</i>	
Application of Nonparametric Methods in Short-Range Precipitation Forecasting	56
<i>Jifu Nong</i>	

Computational Transportation Science

The Distribution Characteristic of Travel Time Reliability in Beijing Road Network	61
<i>Huimin Wen, Xuejie Liu, and Yong Gao</i>	
Synchronized Traffic Flow and Metastable States from the Perspective of Constant Time Headway	64
<i>Rui Jiang and Katsuhiro Nashinari</i>	
The Evaluation Method of Road Network Connectivity Reliability Based on Key Segments Identification	69
<i>Xuejie Liu, Huimin Wen, and Yong Gao</i>	
Cell Size: An Important Factor for Modeling Bottleneck Traffic in Cellular Automata Model	72
<i>Xingang Li, Ziyou Gao, and Bin Jia</i>	
A System Entropy Model for Optimizing the Number of Tollbooths at Highway Toll Plazas	77
<i>Xingyong Zhang, Chengtong Sun, and Jinwu Zhuo</i>	

Optimum Modeling and Computation for Lane-Based Route Choice	81
<i>Shaokuan Chen, Liping Gao, Mingjun Liu, Jifu Guo, and Jinyi Guo</i>	
Simulation on Information Guidance in Regional Heavy Traffic Flow	85
<i>Liping Gao, Mingjun Liu, Baohua Mao, and Shaokuan Chen</i>	
A Turn-Based Algorithm for Solving the Logit Type Network Loading Problem	89
<i>Gang Ren and Wei Wang</i>	
A P2P Computational Grid-Based Parallel Traffic Micro-simulation Model for Large Scale Transportation Networks	95
<i>Lishao Wang, Baohua Mao, Shaokuan Chen, and Kuilin Zhang</i>	
Mixed Flow Simulation at Urban Intersections: Computational Comparisons between Conflict-Point Detection and Cellular Automata Models	100
<i>Lishao Wang, Baohua Mao, Shaokuan Chen, and Kuilin Zhang</i>	
The Automatic Recognition and Update Techniques about the Increment of the Road Network Data	105
<i>Liyun Zhu, Xuejie Liu, and Zhongwei Hu</i>	
Metropolitan Congestion Performance Measures Based on Mass Floating Car Data	109
<i>Jianping Sun, Huimin Wen, Yong Gao, and Zhongwei Hu</i>	
Using One-at-a-Time Sensitivity Analysis Designs for Genetic Algorithm Solving Continuous Network Design Problems	114
<i>Meng Xu, Jin Yang, and Ziyou Gao</i>	
Modeling Time-Dependent Travel Choice Problems in a Mixed-Mode Network with Park-and-Ride Facilities	119
<i>Qiong Tian, William H.K. Lam, Haijun Huang, and Hui Mou</i>	
A Mixed Traffic Flow Model Based on a Modified Cellular Automaton in Two-Lane System	124
<i>Jian-Xun Ding, Hai-Jun Huang, and Qiong Tian</i>	
Departure Time and Mode Choice for the Morning Commute in a Highway/Railway Network	127
<i>Wen-Xiang Wu and Hai-Jun Huang</i>	
A Mixed Equilibrium Traffic Assignment Model for Transportation Networks with ATIS under Demand and Supply Uncertainties	132
<i>Guodong Wang, Hu Shao, and Dexin Cao</i>	
A Two-Stage Step Size Rule on Improved Prediction-Correction Method for Monotone Nonlinear Variational Inequalities	137
<i>Hu Shao and Guodong Wang</i>	
An Entropy Interval Newton Method for Linear Complementarity Problem	140
<i>Yanqiang Wu and Haiwen Xu</i>	

Sequential Experimental Approach for Congestion Pricing with Multiple Vehicle Types and Multiple Time Periods	143
<i>Wei Xu, Hai Yang, and Deren Han</i>	
Modeling Correlation between Origin-Destination Traffic Demands in Stochastic Transportation Networks	147
<i>Xiaoqiu Song, Hu Shao, and Guodong Wang</i>	
Spatial Computational Sciences and Applications	
3D Spatial Analysis Oriented Hybrid P2P Computing	153
<i>Xicheng Tan and Huang Fang</i>	
A Method Based on Genetic Algorithm for Anti-ship Missile Path Planning	156
<i>Xuechun Zhao and Xiaohong Fan</i>	
A Nonlinear Kalman Smoothing Method for Ballistic Target Tracking	160
<i>Panlong Wu, Jianshou Kong, Yuming Bo, and Bing Li</i>	
A Novel Calculation Approach for Helicopter Blades Forces	163
<i>Chengtao Cai, Zhuoyi Xing, and Bo Wen</i>	
An Empirical Analysis of EZhou's Spatial Expansion Using Genealogy of Orientation Based on GIS	167
<i>Qinghua Zhou, Bing He, and Kun Wang</i>	
Measurement Accuracy and Evaluation of Uncertainty Principle	172
<i>Jiudong Yang</i>	
An Image Matching Method on Photography Measurement	176
<i>Wang Wei, Hong Jun, Tang Yiping, Chui Mingwei, and Yang Pengtao</i>	
Automated Map Generalization in Distributed Environments	181
<i>Qinghua Qiao and Tong Zhang</i>	
Distributed Real-Time Organization and Scheduling Strategy of Massive Grid Data	184
<i>Ying Huang, Zhong Xie, Liang Wu, Mingqiang Guo, and Xiangang Luo</i>	
Grid-Enabled High Performance GIS Web Portals	187
<i>Tong Zhang, Qinghua Qiao, and Qing Wu</i>	
Adaptive Extended Kalman Filtering for SINS/GPS Integrated Navigation Systems	192
<i>YanLing Hao, Zhen Guo, Feng Sun, and Wei Gao</i>	
A Sensor Registration Method Using Improved Bayesian Regularization Algorithm	195
<i>Xin Li and Desheng Wang</i>	
Performance of an Acoustic Doppler Velocity Estimation Method Based on the Mixed Scattering Model	200
<i>Dezhu Liu, Dajun Sun, and Dianlun Zhang</i>	
3D Space Path Planning of Complex Environmental Underwater Vehicle	204
<i>Liqiang Liu and Yuntao Dai</i>	

Enhanced Sliding Mode Control for Missile Autopilot Based on Nonlinear Disturbance Observer	210
<i>Haijun Lee, Xianlin Huang, and Hang Yin</i>	
A Model and Approach for Heterogeneous Ontology Automatic Merging	214
<i>Shixiang Li, Hong Fan, Yuli Wang, and Liang Hong</i>	
An Improved Algorithm for the Solution of Geodetic Problems	218
<i>Huadong Yang and Xiaojun Ren</i>	
Study of the GM(1,1) Model and Improved Model of the Trend Term of Micromechanical Gyroscope Drift	221
<i>Xuelian Li, Yao Sun, Hongwei Mo, and Kejun Wang</i>	
The New Decision Making Approach in Map Building Base on TBM	224
<i>Yao Sun, Xin-an Wu, and Yuxin Zhao</i>	
A Framework of Marine Geography Information System for Ship	228
<i>Lei Li and Yanling Hao</i>	
Path Planning for Aircraft Based on MAKLINK Graph Theory and Multi Colony Ant Algorithm	232
<i>Yanling Hao, Zhifeng Shen, and Yuxin Zhao</i>	
Seabed Terrain Match Algorithm Based on Hausdorff Distance and Particle Swarm Optimization	236
<i>Gannan Yuan, Jialin Tan, Liqiang Liu, and Yang Song</i>	
GIS-Based Missile Target Assignment Intelligent Decision Support System	240
<i>Fei Yang, Chaoyang Dong, and Qing Wang</i>	
3D Vector-Raster Data Integration Model Based on View Dependent Quadtree and GPU Friendly Rendering Algorithm	244
<i>Xuefeng Cao, Gang Wan, and Feng Li</i>	
Efficacy Analysis of Countering ARM by Moving Baiting Source	248
<i>Zhen Shi, Ping Jiang, Haibo Liang, and Ciyu Ji</i>	
Bearing-Only Data Association Algorithm for Single Warship Target Tracking System	252
<i>Hui Chen, Weirong Liu, Haijie Mao, and Chaorong Liu</i>	
Relative Location Technology Based on Dead Reckoning and Ultrasonic Data Fusion	255
<i>Peng Yue, Zhen Shi, and Ciyu Ji</i>	
A Modified LOD Terrain Model Based on QuadTree Algorithm	259
<i>Yuxin Zhao and Yan Ma</i>	
Endpoint Triangle's Circumcircle Method in Delaunay Triangulation	264
<i>Yuxin Zhao and Fengmin Tian</i>	
Real-Time Obstacle Avoidance Method for Mobile Robots Based on a Modified Particle Swarm Optimization	269
<i>Yuxin Zhao and Wei Zu</i>	

3-D Human Tracking Based on Particle Filter	273
<i>Yonggang Zhang, Ning Li, and Yuxin Zhao</i>	
A Novel Entity Adjusting Method for Spatial Data Conflation	278
<i>Ning Li, Wenjing Tang, Yonggang Zhang, and Yanling Hao</i>	
Research of Neural Network to Tidal Prediction	282
<i>Gang Li, Yan-ling Hao, and Yu-xin Zhao</i>	
The Terrain Multi-resolution Generation Algorithm Based on the Sound Signal Attenuation	285
<i>Gang Li, Yan-ling Hao, and Yu-xin Zhao</i>	
Integrated Navigation System Based on Correlation between Gravity Gradient and Terrain	289
<i>Fanming Liu, Dong Qian, Fengming Liu, and Yan Li</i>	
A Raster-Based Marine Data Model with Its Application	294
<i>Yanling Hao, Lei Li, and Ning Li</i>	
Advanced Data Mining Algorithms and Applications	
A Hybrid Particle Swarm Genetic Algorithm for Classification	301
<i>Rui Ding, Hongbin Dong, Xianbin Feng, and Guisheng Yin</i>	
Security Analysis of Poker-Resembled Protocol Based on Hidden Number Problem	306
<i>Dong Su and Ke-wei Lv</i>	
Multi-coordinates Scene Management in Space Information Visualization System	309
<i>Junlan Nie, Yanfen Wang, and Dongliang Guo</i>	
A SOM-Based Method for Manifold Learning and Visualization	312
<i>Chao Shao, Xinxiang Zhang, Chunhong Wan, and Wenqian Shang</i>	
Fuzzy Clustering with Improved Artificial Fish Swarm Algorithm	317
<i>Si He, Nabil Belacel, Habib Hamam, and Yassine Bouslimani</i>	
Association Rules Based Data Mining on Test Data of Physical Health Standard	322
<i>Lan Yu</i>	
Multi-object Tracking with Explicit Reasoning about Occlusion	325
<i>Jingling Wang, Yan Ma, Chuanzhen Li, Hui Wang, and Jianbo Liu</i>	
A Novel Method of Dynamic Textures Analysis and Synthesis	328
<i>Chuanzhen Li, Jingling Wang, Long Ye, and Hui Wang</i>	
Simulation of Key Management Protocol in Wireless Sensor Networks	333
<i>Yuling He, Yun Pan, Ping Pan, and Licheng Wang</i>	
A P2P Application Demonstration System for Resilient Overlay Networks with Intelligent Nodes Supporting DRM	336
<i>Yongbin Wang, Rui Lv, and Zhiguo Hong</i>	

A Study of Parallel FDTD Method on High-Performance Computer Clusters	340
<i>Zengrui Li, Limei Luo, and Junhong Wang</i>	
Storage Appliance System Based on Content Addressable Storage	343
<i>Ligu Zhu, Zhiwei Sun, Yong Ren, Jianfeng Peng, and Lei Zhang</i>	
Applications of HMM in Protocol Anomaly Detection	347
<i>Jing Zhao, Houkuan Huang, ShengFeng Tian, and Xiang Zhao</i>	
An Adaptive Fuzzy Neural Network for Extracting Scene Image Parameters	350
<i>Wei Gong, Donghui Feng, and Xin Feng</i>	
Using Data Mining to Estimate Equivalent Surface of Broadcasting Effect	354
<i>Shouxun Liu, Guang Li, Yongbin Wang, and Ying Li</i>	
The Application of Data Mining in Satellite TV Broadcasting Monitoring	357
<i>Ying Li, Yongbin Wang, Jian Yan, and Yingjian Qi</i>	
Intelligent Decision-Making System Based on Data Mining	360
<i>Wenqian Shang, Hongbin Dong, and Haibin Zhu</i>	
An Online Adaptive Network Anomaly Detection Model	365
<i>Xiaotao Wei, Houkuan Huang, Shengfeng Tian, Xiaohui Yang, and Baomin Xu</i>	
The Dynamic Analysis and Time Selection on MAS Reputation System	369
<i>Xiang Zhao, Houkuan Huang, Jing Zhao, and Liping Zhou</i>	
An Effective Compound Clustering Algorithm	373
<i>Jianlin Zhang, Wensheng Zou, Jianfeng Xu, and Lan Liu</i>	
Parallel Reducts in a Series of Decision Subsystems	377
<i>Dayong Deng, Jiyi Wang, and Xiangjun Li</i>	
Vehicle License Plate Location Method Based-on Wavelet Transform	381
<i>Weijuan Wen, Xianglin Huang, Lifang Yang, Zhao Yang, and Pengju Zhang</i>	
The Application Research of Predicting Amount of Gas Gushing Based on Gray Theory and Artificial Neural Network	385
<i>Youxin Wu, Jiguang Qiu, Xiangjun Li, Lihui Wan, and Xing Tong</i>	
Software Development Practice for FDA-Compliant Medical Devices	388
<i>Weiguo Lin and Xiaomin Fan</i>	
An Approach to Measuring Inconsistency for DL-Lite Ontologies	391
<i>Liping Zhou, Houkuan Huang, Youli Qu, and Xiang Zhao</i>	
The Temporal-Spatial Modeling of Vocabulary for Language Monitoring	396
<i>Wei He, Yu Zou, Yonglin Teng, Min Hou, and Weibin Zhu</i>	
The Organization and Application of Multimedia information Based on Ontology	399
<i>Pengzhou Zhang, Xiaogang Yang, Chi Zhang, and Yang Li</i>	
Automatic Extraction of Spoken Word in Broadcast Media Language	403
<i>Yuqiang Zhang, Yu Zou, Wei He, Min Hou, and Yonglin Teng</i>	
A Special Prosodic Phrasing in Broadcasting News Programs	406
<i>Yu Zou, Wei He, Yuqiang Zhang, Min Hou, and Weibin Zhu</i>	

Computational Methods in Energy Economics

Electricity Price Direct Discount Model of Power Supply Chain Based on Pareto Optimization	411
<i>Jingsong Zhang, Jianzhong Zhou, Li Mo, Qingqing Li, and Hui Qin</i>	
Cointegration and Causal Relation between Energy Intensity and Structure Change	416
<i>Benzhao Yang</i>	
The Comparison of Energy Consumption among the Sectors in Technological Progress Point Based on the Input-Output Table	420
<i>Junbo Xue, Lijuan Wang, Zheng Wang, and Qiong He</i>	
Are There any Influences of Oil Prices to Chinese and American Stock Returns?	425
<i>Jian-bao Chen, Ting-ting Cheng, and Deng-ling Wang</i>	
Analysis and Prediction of China's Energy Consumption Based on LMDI Method	429
<i>Hailin Mu, Ming Zhang, and Yadong Ning</i>	
Modeling on Oil-Importing Risk under Risk Correlation	434
<i>Wan He, Xiaolei Sun, Ling Tang, and Jianping Li</i>	
Identifying the Risk-Return Spectrum of the FSU Oil Economies	439
<i>Xiaolei Sun, Wan He, Gang Li, and Jianping Li</i>	
Combination Forecasting Model Based on Drift	443
<i>Meijuan Li, Guohong Chen, Zhibing Lin, and Binqing Cai</i>	
Modeling for Cascaded Reservoirs Scheduling Considering Policy Factors	447
<i>Jingrui Zhang, Wu Li, Yang Chen, and Jinpeng Jinpeng Li</i>	
Spatial Econometric Analysis of China's Provincial CO ₂ Emissions	452
<i>Junjie Ma, Xia Liu, Jianxin You, and Maolin Zhang</i>	
Dynamic Analysis of Electric Power Load in 2008 Beijing Olympics	457
<i>Li-juan Wang, Yu Zhao, and Zheng Wang</i>	
Modeling and Simulation of Bidding Strategies of Generation Companies Based on Multi-population Replicator Dynamics	462
<i>Xian Huang and Zhan-Hua Wang</i>	
Modeling and Simulation of Bidding Activities of Power Generation Companies by Multi-agent	466
<i>Xian Huang and Xu-dong Liu</i>	
Energy Price Shock, Employment and Output	471
<i>Li Li and Liu Yang</i>	
Oil Price Volatility and Change Point Analysis	475
<i>Jian Chai, Ju'e Guo, Shou-yang Wang, and Hong-quan Li</i>	
Influence of the Renewable Energy in the Simulation of Liberalised Markets	480
<i>Nuno Domingues</i>	

Causality and Impulse Response on the Relationship between Energy Consumption and Environmental Pollution---A Case Study of Qingdao City	485
<i>Jianyue Ji, Xiaoli Yu, and Yanqing Liu</i>	
Multi-fractal Analysis of World Crude Oil Prices	489
<i>Xiucheng Dong, Junchen Li, and Jian Gao</i>	
An Endogenous Economic Growth Model: Analyzing the Sustainable Development in China	494
<i>Chunjie Chi, Tiejun Ma, and Jun Chen</i>	
Risk-Constrained Stochastic Optimization Methods for Dealing with Uncertain Technological Learning in Energy Systems	499
<i>Tiejun Ma, Chunjie Chi, and Jun Chen</i>	
Computational Financial Engineering	
Application of SVM in Financial Research	507
<i>Bingyu Cao, Deping Zhan, and Xianbin Wu</i>	
The Volatility Risk of Stock Price and Its Defusing	512
<i>Fei Chen</i>	
Introducing Total Market Value of Listed Companies into Financial Crisis Early Warning	517
<i>Wenjun Chen and Zhengchu He</i>	
Location Advantages and Strategy Selection of Changsha Auto Industry	522
<i>Qilin Ding and Zuoxiang Liu</i>	
Credit Risk Pricing with Multivariate Stochastic Volatility	526
<i>Jun Du and Yang Liu</i>	
Markov Properties with Sequential Bargaining	531
<i>Yu Fu and Lin Liang</i>	
Coherent Risk Management and Its Portfolio Optimization Model	536
<i>Linjie He and Chaoqun Ma</i>	
Mechanism of Credit Guarantee Pricing in Finance Trade	540
<i>Yaxiong Huang, Zhengchu He, and Ailian Xiao</i>	
Information Productivity and Interest Rate of Credit — An Analysis Based on the Model of Credit Rationing	545
<i>Quanguo Huang</i>	
An Actuarial Approach to Option Pricing under O-U Process and Stochastic Interest Rates	549
<i>Jian Liu, Chaoqun Ma, and Fenghua Wen</i>	
An Analysis of Corporation Debt Financing Based on the Comparison with Equity	554
<i>Yang Liu</i>	
Selecting Optimal Portfolio on the Basis of Value at Risk	558
<i>Hongmei Peng</i>	

Money Supply, Economic Growth and Inflation of China: 1998-2007	562
<i>Chaohua Xie, Haifeng Tang, and Yuling Cui</i>	
Asset Injection and the Equilibrium of Shareholder's Interests: A Study Based on China's Stock Market	567
<i>Zhujia Yin and Jianhuan Huang</i>	
An Intelligent Optimization Algorithm for Demand Fulfillment and ATP in Advanced Planning System	572
<i>Xiaoqing Zeng, Haiyan Xiao, and Ning Liu</i>	
Empirical Analysis of the Effect of Foreign Bank Entry on the Efficiency of Chinese Banking Industry	577
<i>Xiaofeng Zhang, Xiaohua Zhong, and Ling Lv</i>	
A Research in Performances of Non-normal ARCH Type Models and of VaR Measure	582
<i>Xiaoyong Zhang and Min Yu</i>	
Advanced Computing on Service and Supply Chain Management	
Flow-Based Supply Chains	589
<i>Sabah Al-Fedaghi</i>	
A Dynamic Stochastic Network Model for Asset Allocation Problem	597
<i>Haiqing Song, Huei-Chuen Huang, Ning Shi, and K.K. Lai</i>	
A Survey on Vehicle Routing Problem with Loading Constraints	602
<i>Fan Wang, Yi Tao, and Ning Shi</i>	
Risk Management and Emergency Logistics	
Using Information Entropy to Analyze Dynamic Reserves of Emergency Material	609
<i>Lisheng Zhou and Bin Ding</i>	
Control of Supply Risk Based on Ranking Foreign Suppliers Using Pattern Search Weighted Fuzzy Comprehensive Evaluation	613
<i>Lei Yang, Cheng Liu, Zhiyong Zhang, and Yongqiang Shi</i>	
Resilience Evaluation Approach of Transportation Networks	618
<i>W.H. Ip and Dingwei Wang</i>	
Empirical Evaluation of the Hedge Risk of Stock Index Futures Based on Hushen 300 Simulation	623
<i>Yu Sun</i>	
Anti-disruption Capability Evaluation of Supply Chains Based on the Multi-factor Level Fuzzy Appraisal Model	626
<i>Lei Yang, Fei-Fei Tian, Zhi-Yong Zhang, and Yong-Qiang Shi</i>	
Collaborative Research between Epidemic Diffusion Network and Emergency Rescue Network in Anti-bioterrorism System	630
<i>Jingjing Xu, Lindu Zhao, and Haiyan Wang</i>	

Advanced Numerical Algorithms

Some Modified Newton-Type Methods with Order of Convergence Varied from Two to Six under Weak Conditions	637
<i>Liang Fang, Guoping He, Yunhong Hu, and Li Sun</i>	
An Implicit Finite Difference Scheme with Preconditioning for Convection Dominated Diffusion Equation	641
<i>Lunji Song, Yujiang Wu, Yang Wang, and Sa Xie</i>	
Numerical Simulation of Mechanical Oil Expression from Sesame Based on Fluid-Solid Coupling Flowing through Porous Media	645
<i>Xiao Zheng, Yan You, Guoxiang Lin, and Yaxin Zhang</i>	
An Algorithm Based on Differential Evolutionary for Constrained Optimization	649
<i>Tao Min, Xiaoli Yang, Hongpeng Lu, and Miao Wu</i>	
Three Dimension Multi-body Contact Boundary Element Method	652
<i>Xia Yang and Hong Xiao</i>	

Dynamic Systems

Global Exponential Stability and Periodic Solutions of FCNNs with Constant Delays and Time-Varying Delays	659
<i>Qianhong Zhang and Wei Luo</i>	
Stabilization and Dynamics of Stochastic Linear Systems under Finite Communication Bandwidth Feedback	663
<i>Hui Cheng</i>	
Improved Group-Oriented Encryption for Group Communication	667
<i>Chunbo Ma and Jun Ao</i>	
Vibration Characteristics of a 3-Degree-of-Freedom System with Clearance	672
<i>Yanzhi Shen, Hongmin Liu, Jie Xiong, and Guojun Du</i>	
Adaptive Tracking Control of Spacecraft Using Magnetic Actuators	676
<i>Zexin Guan and Zhonghua Wang</i>	
Fault Diagnosis for Dynamic Nonlinear System Based on Kernel Principal Component Analysis	680
<i>Yanwei Huang and Xianbo Qiu</i>	
Generalized Wronskian Solutions for a Non-isospectral KdV Equation	684
<i>Yuanyuan Zhang</i>	
Nonlinear Vibration Caused by Beam of Cable Structures	687
<i>Jianguen Lv and Ronghui Wang</i>	
Dynamic Stability of Shallow Arches with the Geometrical Imperfections	691
<i>Jianguen Lv, Zhuangpeng Yi, and Ronghui Wang</i>	

Linear/Nonlinear Programming

A Bicriteria Approximation Algorithm for Generalized k-Multicut in Trees	699
<i>Peng Zhang, Daming Zhu, and Junfeng Luan</i>	
Generalized (α, ρ) - (η, θ) -Convexity in Multi-objective Optimization.....	703
<i>Xiaoling Liu, Dehui Yuan, Shengyun Yang, and Chuanqing Xu</i>	
Grey Multi-objective Optimization of Technological Parameters during the Gas Quenching Process	708
<i>Youxin Luo, Huiping Li, Xiaoyi Che, and Bin Zeng</i>	
Vector Optimization Involving Preinvex Functions in Banach Spaces	711
<i>Yu Guolin</i>	
Sufficient Conditions of ε -Optimality Solutions Involving ε -Invex Fractional Semi-infinite Programming	716
<i>Yong Yang, RuiJin Mu, and TieYan Lian</i>	
A New Non-interior Continuation Method for Second-Order Cone Programming	719
<i>Liang Fang, Yongli Wang, Guoping He, and Congying Han</i>	
Generalized Gradients in Sense of Henig Efficiency for Set-Valued Maps	723
<i>Yu Guolin</i>	
On Inherited Properties and Scalarization Algorithms for Set-Valued Maps	727
<i>Bingjiang Zhang</i>	
Multi-objective Non-linear Programming Method of Optimizing Foundation Deformation Modulus for Jinping High Arch Dam	730
<i>Hui Peng, De-fu Liu, and Bin Tian</i>	
Optimal Design of the S-Rail for Crashworthiness Analysis	735
<i>Hequan Wu and Yong Xin</i>	
On Characterization of Solution Sets of Nonsmooth Pseudoinvex Minimization Problems	739
<i>Shashi Kant Mishra and Kin Keung Lai</i>	

Convex/Fractional Programming

Optimal Policy for Manufacturer in a Supply Chain with Stochastic Demand	745
<i>Tiesong Shen, Xunzhi Lu, and Bingshan Wu</i>	
A Primal-Dual Interior-Point Algorithm for Convex Quadratic Optimization Based on a Parametric Kernel Function	748
<i>Guoqiang Wang and Yanqin Bai</i>	
Several Examples for Generalized Invariant Monotonicity	753
<i>Yunlian Guo and Liya Fan</i>	
Duality Theory in Generalized ρ -Univex Fractional Semi-infinite Programming	757
<i>Yong Yang and QingXiang Zhang</i>	

A Numerical Method for Solving a Class of Continuous-Time Linear Fractional Programming Problems	761
<i>Ching-Feng Wen, Yung-Yih Lur, and Sy-Ming Guu</i>	

Multiobjective Programming

New Application of Multiobjective Optimization Algorithm: Optical Thin Film Design	769
<i>Wenliang Wang</i>	
A Fuzzy Multi-objective Optimization Algorithm in Mine Ore Blending	773
<i>Liang Li, Tiejun Xu, and Zhiqiang Liu</i>	
Local Search Heuristic for Multiple Objective Coil Scheduling Problem on Unrelated Parallel Machines	777
<i>Yang Yang and Lixin Tang</i>	

Varational Problem and Varational Inequalities

A Hybrid Proximal Point Algorithm for Solving the General Variational Inclusions with (A, η) -Maximal Monotone Operators	783
<i>Jun-Min Chen, Tie-Gang Fan, and Xue-Fei Li</i>	
Iterative Methods for Solving a New System of Variational Inclusions with (A, η) -Accretive Operators in Banach Spaces	787
<i>Jun-Min Chen, Tie-Gang Fan, and Xue-Fei Li</i>	
An Iterative Algorithm for Solving Generalized Equilibrium Problems and Fixed Points Problems	792
<i>Mengqin Li, Yonghong Yao, and Yeong-Cheng Liou</i>	
A Strong Convergence Theorem for Nonexpansive Mappings and Monotone Mappings	797
<i>Junhong Wang and Yongfu Su</i>	

Game Theory

Neumann-Morgenstern Stable Set of a Finite Static Game	805
<i>Dianyu Jiang</i>	
Game Theoretic Models of Enterprises Financing	808
<i>Tong Liang and Wansheng Tang</i>	
Fuzzy Linear Programming Model to Solve Two-Person Zero-Sum Matrix Game with Fuzzy Payoffs	812
<i>Lin Xu and Xiaobin Wang</i>	
Urban Land Auctions with Incentive Contracts	816
<i>Qianqin Chen and Min Fan</i>	
The Output Competition for Color TV Supply Chain Based on Game Theory	820
<i>Zhonghe Wu, Hong Chen, and Qian Zhao</i>	

Price Competition for Color TV Supply Chain Based on Stackelberg and Repeated Model Game Theory	825
<i>Zhonghe Wu, Hong Chen, and Qian Zhao</i>	

Fuzzy Optimization

Mixed-Type Splitting Iterative Method for Linear Complementarity Problem	831
<i>Jiaoyu Wu</i>	
A Fuzzy Chance Constraint Programming Approach for Location-Allocation Problem under Uncertainty in a Closed-Loop Supply Chain	836
<i>Yanxue Gong, Dao Huang, Enbo Wang, and Yigong Peng</i>	
Intuitionistic Fuzzy Lie Sub-superalgebras and Ideals of Lie Superalgebras	841
<i>Wenjuan Chen</i>	
On the Max-quasi-Arithmetic Mean Powers of a Fuzzy Matrix	846
<i>Yung-Yih Lur, Yan-Kuen Wu, Kin Keung Lai, and Sy-Ming Guu</i>	
Seismic Reservoir Fuzzy Rules Extraction Based on GA-BP FNN	850
<i>Chunli Du and Jinhua Cheng</i>	
Dynamic Balanced Scorecard with Rough Set and Fuzzy Evaluation	853
<i>Pei Zheng, Kin Keung Lai, and Yuxiang Zhang</i>	

Global Optimization

A Class of Constrained Inverse Bottleneck Optimization Problems under Weighted Hamming Distance	859
<i>Yangbo Cao and Xiucui Guan</i>	
A Simulative Bionic Intelligent Optimization Algorithm: Artificial Searching Swarm Algorithm and Its Performance Analysis	864
<i>Tanggong Chen</i>	
A Branch-and-Price Algorithm for the Dynamic Inventory Slab Allocation Problem in the Steel Industry	867
<i>Yongyue Zheng and Lixin Tang</i>	

Theoretical Development of Optimization

A Voting Statistical Method of Group Decision	873
<i>Suhong Yang</i>	
Production-Inventory Cooperation for Perishable Products in Supply Chain	876
<i>Dongjie Shen, Ming Wang, K.K. Lai, and L. Liang</i>	
Analysis of a Heuristics for Scheduling Two-Stage Hybrid Flow Shop	879
<i>Xie Xie and Lixin Tang</i>	
Optimization of Goods Location Numbering and Storage and Retrieval Sequence in Automated Warehouse	883
<i>Shuqin Wang and Lindu Zhao</i>	

Topology Optimization of Thermal Structure Based Bi-directional Interpolation Model	887
<i>Jiachun Li, Xudong Yang, and Feng He</i>	

Heuristics of Scheduling a Single Crane in Batch Annealing Process	891
<i>Xie Xie and Lixin Tang</i>	

Computational and Numerical Experiments

An Adaptive Static Reanalysis Method for Structural Modifications Using Epsilon Algorithm	897
<i>Zhijun Yang, Xin Chen, and Robert Kelly</i>	

An Infeasible Primal-Dual Interior-Point Algorithm for Linearly Constrained Convex Optimization Based on a Parametric Kernel Function	900
<i>Guoqiang Wang, Baocun Wang, and Qingduan Fan</i>	

A New Method of Support Vector Machine for Class Imbalance Problem	904
<i>Li Yan, Danrui Xei, and Zhe Du</i>	

Nesting in the Clothing Industry Using Semi-discrete Representations	908
<i>Chia-Cheng Liu</i>	

Genetic Algorithm Application to a Production-Inventory Model of Imperfect Process with Deteriorating Items under Two Dispatching Policies	913
<i>Yu-Su Shen, June-Chung Sung, and Dah-Chuan Gong</i>	

Light Ray Optimization and Its Parameter Analysis	918
<i>Jihong Shen and Yan Li</i>	

New Algorithmic Approaches to Optimization

A Revised Research Approach to the Defining of DEILPHI Weight Value Based on Objective Predilections	925
<i>Bing Han, Hui Liu, and Songtao Wu</i>	

A Cooperative Optimization Algorithm Based on Gaussian Process and Particle Swarm Optimization for Optimizing Expensive Problems	929
<i>Guoshao Su and Quan Jiang</i>	

An Approximation Algorithm for Max k-Uncut with Capacity Constraints	934
<i>Salimur Choudhury, Daya Gaur, and Ramesh Krishnamurti</i>	

A Modified Multi-output Support Vector Regression Machine Based on Data Dependent Kernel Function	939
<i>Yongjun Ma and Dongxu Zhai</i>	

Applications Related to Optimization

The Application of NGA Based on Referenced Model in Optimization of FCAS	945
<i>Jingping Shi, Weiguo Zhang, Guangwen Li, and Xiaoxiong Liu</i>	

Pedagogical Comments on "An Integrated Single-Vendor Single-Buyer Inventory System with Shortage Derived Algebraically"	949
<i>Kit-Nam Francis Leung</i>	
Aerodynamic Shape Optimal Design in Automotive Headlamp	952
<i>Lanfang Jiang, Hong Liu, and Guozhong Chai</i>	
Mean-Variance Portfolio Selections in Continuous-Time Mode with Poisson Jumps	956
<i>Zijun Guo</i>	
Comprehensive Evaluation of the Effects of Reform of the Resource Tax in Western China by Input-Occupancy-Output Analysis	961
<i>Hong-Tao Liu, Ju-E Guo, You-Min Xi, and Dong Qian</i>	
Multiple Trajectory Search for Uncapacitated Facility Location Problems	965
<i>Lin-Yu Tseng and Chih-Sheng Wu</i>	
Network Fault Feature Selection Based on Adaptive Immune Clonal Selection Algorithm	969
<i>Li Zhang, Xiangru Meng, Weijia Wu, and Hua Zhou</i>	
A Convergence Proof for Ant Colony Algorithm	974
<i>Jifu Nong and Long Jin</i>	
Hybrid Scatter Search and Tabu Search for the Mother Plate Design Problem in the Iron and Steel Industry	978
<i>Yongyue Zheng and Lixin Tang</i>	
Coordinated Optimization of Bus Headways for Passenger Corridors	981
<i>Jing Teng, Xiaoguang Yang, Xuan Li, and Ming Zhao</i>	
An Effective Tabu Search Based Algorithm for Integrated Pickling-Rolling Scheduling and Coil Shuffling in Iron and Steel Industry	986
<i>Ren Zhao and Lixin Tang</i>	
Modeling and Optimization of Hull Building Process Based on P-TPN	989
<i>Yongquan Zhang, Kelin Xu, and Xudong Hong</i>	
Characteristics and Structures of Production Possibility Set Corresponding to WY Model	993
<i>Chen Ci</i>	
A Lagrangian Relaxation Approach for Unit Commitment with Stochastic Disruption Management	998
<i>Ping Che and Lixin Tang</i>	
A Coupling Optimum Method Based on Embedding Space Condensation PSO into FLAC and Application in Tunnel Design	1002
<i>Quan Jiang, Jiaxin Zhang, and Guoshao Su</i>	
An Optimal Model for Work-Related Injury Insurance System	1006
<i>Sifeng Zhang, Lijian Wang, and Lan Yong</i>	

Altruism, Uncertain Lifetime and Partially Funded Public Pension Replacement Rate	1010
<i>Zaigui Yang</i>	
Application of Response Surface Model and Kriging Model to ADI Lower Control Arm Optimization	1013
<i>Xue Guan Song, Han Seok Park, Kwon Hee Lee, and Young Chul Park</i>	
Multiobjective Optimal Design of Symmetrical Langevin Transducers	1017
<i>Bo Fu, Ting Li, and Tobias Hemsel</i>	
On the Best Bezier Approximation of Ellipses	1021
<i>Zhenbing Zeng and Liangyu Chen</i>	
Construction of Double Sampling Plans through Six Sigma Quality Levels	1027
<i>Rajagopal Radhakrishnan and Palanigounder Krishnasamy Sivakumaran</i>	
A New Hybrid Gradient-Based Particle Swarm Optimization Algorithm and its Applications to Control of Polarization Mode Dispersion Compensation in Optical Fiber Communication Systems	1031
<i>Rongguo Zhang, Wenbo Zhang, and Xiaoguang Zhang</i>	
Stackelberg Inventory Model under Two Levels of Trade Credit	1034
<i>Qiutan Shen and Liang Liang</i>	
A New Model of Choosing Vehicle Type under the Weight Fee Policy	1039
<i>Haoxiong Yang and Mingke He</i>	
Author Index - Volume 2	1043