

2010 Second International Conference on Computer Modeling and Simulation

ICCMS 2010

Table of Contents

Volume - 4

Preface - Volume 4	xiii
Organizing Committee - Volume 4	xiv
Reviewers - Volume 4	xv

Volume 4: Session 1

A Novel Bi-objective Genetic Algorithm for the Graph Coloring Problem	3
<i>Lixia Han and Zhanli Han</i>	
A Study on Marine Information Sharing and Integration Model Based on Ontology	7
<i>Wang Wenjun, Gao Shan, Yang Peng, and Wang Xiaodong</i>	
Swarm Intelligence Optimization Algorithm Based on Orthogonal Optimization	12
<i>Yongxian Li and Jiazhong Li</i>	
An SOPC Based Intelligent Bike	17
<i>S. Prabhu, J.K. Kumar, A.K. Vivekanandan, R. Rekha, and C. Nishanthi</i>	
On-Design Cycle Analysis of a Separate-Flow Turbofan Engine with an Interstage Turbine Burner	21
<i>Kyaw Shwin</i>	
The Numerical Analysis on the Weld-Bonded Joints with Bi-adhesive	25
<i>Min You, Jialing Yan, Xiaoling Zheng, Dingfeng Zhu, Jianli Li, and Jingrong Hu</i>	
Study of Finite Radon Transform in Face Recognition	29
<i>Yuhua Zhang and Xin Wang</i>	

Research on Identification in E-commerce	33
<i>Song Qiang and Lingxia Liu</i>	
Decoupling the Location-Identity Split from Superpages in Local-Area Networks	37
<i>Nan Yao</i>	
Sensitivities for Drop Test Model Parameters for Conical Shell	41
<i>Zhifang Deng, Yixia Yan, Xicheng Huang, and Gang Chen</i>	
Improving the Internet Using Concurrent Methodologies	45
<i>Geng Rui</i>	
Volume 4: Session 2	
The Influence of Extensible Algorithms on Complexity Theory	51
<i>Hualing Li</i>	
Research on the Visual Image Processing Based on Neural Network	55
<i>Suo Yishuang, Huanping Hong, and Chen Gang</i>	
Comparison of the Limited Partnership System and Corporate System—Discussion about Improving the Venture Capital Organization	59
<i>Xing-ting Peng and Sheng-ting Peng</i>	
A Multi-swarm Based Hybrid Optimization Algorithm in Dynamic Environments	63
<i>Yan Yu</i>	
An Image Histogram-Dealing Algorithm Based on Gray Redundancy	67
<i>Huanping Hong and Liu Guowei</i>	
Analyzing of Local-Area Networks Using DuralAke	70
<i>Gao Guanghong</i>	
A Simulation Approach of Complex Repairable System Based on Stateflow	74
<i>Xue-zhi Lv, Fan Ren, Yong-li Yu, and Ling-yan Sun</i>	
SeRA: A Secure Routing Algorithm Against Sinkhole Attacks for Mobile Wireless Sensor Networks	79
<i>Liping Teng and Yongping Zhang</i>	
Study on Key Techniques of Submarine Maneuvering Hydrodynamics Prediction Using Numerical Method	83
<i>Guang-hui Zeng and Jun Zhu</i>	
System Design of Number Inquiry Software Basing on J2ME	88
<i>Zhan Shaobin, Lu Xin, Gao Yuefang, and Li Xiaotang</i>	
Research on the Three Dimensional Indoor RFID Positioning Algorithm	93
<i>Zhang Qinghui and Li Wei</i>	
Research on the Intrusion Detection System in Wireless Mesh Networks	96
<i>Xuemei You</i>	

Volume 4: Session 3

An Optimization Base Point Choice Algorithm of ECC on GF(p)	103
<i>Yan Hu, Yan-yan Cui, and Tong Li</i>	
Simulation and Analysis of Thermo-Mechanical Coupling Load and Mechanical Dynamic Load for a Piston	106
<i>Yanxia Wang, Yongqi Liu, and Haiyan Shi</i>	
Design of Logistics Information Management System Based on Database	111
<i>Neng Wang and Fenghua Xiao</i>	
Decoupling Replication in Active Networks	116
<i>Nan Yao</i>	
Effect of Buffer Zone Size on the Simulation of Tropical Cyclone Track in Regional Climate Model RegCM3	120
<i>Wang Xiaodan, Qi Linlin, and Zhong Zhong</i>	
Investigation of Active Flow Control on Aerodynamic Performance of HALE UAV Airfoil	123
<i>Xiaoping Xu, Zhou Zhou, Ruijun Fan, and Junli Wang</i>	
The Study on Dynamic Topology Structure of Wireless Sensor Networks	127
<i>Hui Zhang and Lin Lei</i>	
Design of Glass Furnace Control System Based on Model-Free Adaptive Controller	130
<i>Qi Jianling and Ma Guang</i>	
A New Formation and Solution for Batch Chemical Process Stochastic Scheduling with Uncertain Processing Time	134
<i>Lingqi Kong, Yugang Li, and Shiqing Zheng</i>	
Constitute Equation of 5A06 Aluminum Alloy at High Temperature	139
<i>Li Weifen, Hao Zhiming, Li Minghai, and Hu Shaoquan</i>	
The Picking System Optimization Based on Genetic Algorithm and Implemented by eM-Plant	143
<i>Xiang-Bin Xu and Xin-Jian Zhou</i>	
Motion Pattern Simulation of Rollers Transmission Mechanism in Wire Sawing Machine	148
<i>Yanbo Feng and Tao Sun</i>	

Volume 4: Session 4

Research on Vibro-acoustic Prediction and Passive Control Technique of a Rocket-Payload Model	155
<i>Xudong Hu and Xiaoyong Liu</i>	
Agent-Based Free Competitive Market Build and Simulation Experiments	158
<i>Qianjiao Wu, Rong Lan, and Zhijie Lin</i>	
Rapid Evaluation of Fractal Coons Patches Using GPU	162
<i>Yong Zhang and Nan Geng</i>	

3-D Numerical Simulation of Laser Braze Welding Process of Different Metals	165
<i>Yan Yixia, Hao Zhiming, and Huang Xicheng</i>	
An Optimization Approach to the Shift Selection Problem in Alternating Direction Implicit Iteration	169
<i>Zhang Geng</i>	
The Reliability Analysis for Pistons on Fracture Mechanics	173
<i>Yanxia Wang, Yongqi Liu, and Haiyan Shi</i>	
RF Effect Algorithms of Terrain Environment in Signal-Level Radar System Simulation	178
<i>Wang Quanmin, Wang Chuncai, Guo Gang, and Huang Kedi</i>	
Nonlinear Stability Analysis on Bellows with Interlayer Contact	182
<i>Xu Bin, He Qinshu, Li Weifen, and Yu Shaorong</i>	
Design of Embedded Environmental Monitor System of Computer Room Based on SQL	185
<i>Wang Wei</i>	
Research of the Network Information Monitoring System Based on P2DR Model	190
<i>Ying Liu, Ming Wan, Sidong Zhang, and Hongke Zhang</i>	
Simulation-Based Analysis and Productivity Improvement of a Fully Automatic Bottle-Filling Production System: A Practical Case Study	195
<i>Tarek Al-Hawari, Faisal Aqlan, Mu'aweyah Al-Buhaisi, and Zaid Al-Faqeer</i>	
The Study on Extraction Methods of Color Tree Image	200
<i>Xiaosong Wang, Xinyuan Huang, and Hui Fu</i>	
Volume 4: Session 5	
Analysis on Drop Tower Subjected to Explosion Superpressure and Static Loading	207
<i>Weizhou Zhong, Shuncheng Song, Yixia Yan, and Xicheng Huang</i>	
Application Research of Intelligent Greenhouse's Control System Based on Multi-sensor Data Fusion	211
<i>Li-yan Huang and Jiang Xiao</i>	
Soil Water Prediction of Moving Dune Based on BP Neural Network Model in Northwest Liaoning Sandy Land	215
<i>Yan Ge, ZuoXin Liu, and BaoZe Wang</i>	
The Earthquake Hydrodynamic Pressure Effects Analysis of the Large Bridge Group Piles Foundation Based on ABAQUS Software	220
<i>Fu-rong Li, Guo-xing Chen, and Zhi-hua Wang</i>	
Research on Dynamic Simulation for Leakage of Natural Gas Pipeline	226
<i>Yuna Xu, Wu Liu, Muyang Ai, Yi Liu, and Denghai Wang</i>	

Method for Intelligent Decision Making Based Rough Sets and Particle Swarm Optimization	230
<i>Yan Yu, Jianhua Wang, and Jianfeng Zhu</i>	
Modeling and Simulation of the Hydraulic Excitation System Based on the Power Bond Graph	234
<i>Junxia Li and Ziming Kou</i>	
An Application of Improved BP Neural Network in Personal Credit Scoring	238
<i>Rui Qin, Lie Li Liu, and Jun Xie</i>	
A Cascadic Multigrid Algorithm for the Double Obstacle Problem	242
<i>Jiantao Gu, Caixia Liu, and Liping Du</i>	
Discussion of Channel Mode Classification Under E-commerce Environment	245
<i>Song Qiang and Lingxia Liu</i>	
Application of Multidimensional Databases of Rainfall and Low Pressure Systems on OLAP-Based Model	249
<i>Kavita Pabreja</i>	
Cross-Lingual Information Retrieval Model for Vietnamese-English Web Sites	254
<i>Dang Tuan Nguyen and Chinh Trong Nguyen</i>	

Volume 4: Session 6

Performance Analysis of Rear Rubber Bushing Stiffness of Lower Control Arm on Front Double Wishbone Independent Suspension	261
<i>Liu Xintian, Huang Hu, Wang Jichang, Zhao Lihui, and Wang Yansong</i>	
Effect of Elastic Modulus on the Stress in Single Lap Joints with a Metal Mosaic Block	266
<i>Min You, Dingfeng Zhu, Xiaoling Zheng, Jialing Yan, Nanfeng Xiong, and Wei Luo</i>	
Speed Enhanced Mixed Signal Design-for-Test Using Hybrid Fault Based Testing Algorithms	270
<i>Sushanth Puthiyottil and E. Sureshkumar</i>	
Application of Gray Forecasting Model Optimized by Genetic Algorithm in Electricity Demand Forecasting	275
<i>Yan Xie and Mu Li</i>	
Numerical Modeling of Shock Initiation of PBX by Projectile Impact: Safety Analysis of Structures with HE Under Abnormal Impact Condition	278
<i>Huang Xicheng, Yan Yixia, Hao Zhiming, and Zhu Jianshi</i>	
Research of Key Algorithm in the Technology of Fingerprint Identification	282
<i>Zhang Qinghui and Zhang Xiangfei</i>	
Optimization of Fast Handover in Hierarchical MobileIPv6 Networks	285
<i>Guping Zheng and Hao Wang</i>	
3-D Numerical Simulation of Bending Fracture of Concrete Beam Based on Meso-mechanics Damage	289
<i>Chaohong Li, Hailong Wang, and Guangxing Xu</i>	

Design and Manufacture of Powder Molding Equipment Based on Motion Simulation	294
<i>Qiu Cheng, Xia Wei, and Zhen-xing Zheng</i>	
Research on the Object-Extraction from Aerial LIDAR Dataset	299
<i>Guoning Zhang, Jie Yu, and Qin Yan</i>	
Finite Element Analysis of Shear Behaviors for Steel Fiber Reinforced Concrete Corbels by ANSYS	303
<i>Daoying Gao and Junwei Zhang</i>	
Modeling and Simulation of Vector Control System of Variable Frequency Speed Regulation in Electric Actuator	308
<i>Li Wang and Bo Su</i>	
Volume 4: Session 7	
Performance Comparison Between AVC I-Frame Coding and JPEG2000	315
<i>Runhai Jiao</i>	
Some Methods Used in the Estimation of the Ruin Probability	319
<i>Iulian Mircea and Mihaela Covrig</i>	
From OWL-S to PNML+OWL for Semantic Web Services	326
<i>Bingxian Ma and Nengfu Xie</i>	
Ensemble Learning Frameworks for the Discovery of Multi-component Quantitative Models in Biomedical Applications	329
<i>Valeriy V. Gavrishchaka, Mark E. Koepke, and Olga N. Ulyanova</i>	
Realization of Virtual Campus System and Research of Key Techniques	337
<i>Zhang Yongjun</i>	
Classical, Event-Driven, Mobile Artificial Intelligence Algorithms	340
<i>Haiyan Zhao</i>	
Three-Dimensional Finite Element Analysis of Composite Bolted Joints	344
<i>Yuming Yang, He Qinshu, and Chunyu Fu</i>	
A Fast Algorithm for Query in Heterogeneous Database Systems	348
<i>Jie Li</i>	
An Improved Evolutionary Algorithm in Picture Edge Detection	352
<i>Xuemei You</i>	
A Fast Algorithm for Multi-threaded Database Access	356
<i>Jianfeng Zhu and Yan Yu</i>	
Finite Difference Modeling on the Temperature Field of Substrate in Friction Surfacing	360
<i>X.M. Liu, Z.D. Zou, S.Y. Qu, and J.S. Yao</i>	
Petroleum Lithology Discrimination Based on PSO-LSSVM Classification Model	365
<i>Guojian Cheng, Ruihua Guo, and Wenhai Wu</i>	

Volume 4: Session 8

A Kind of Difference Method for Solving Linear System of Second-Order Boundary Value Problems	371
<i>Cong Huang and Huan-Wen Liu</i>	
An Unconditionally Stable Spline Difference Scheme for Solving the Second 2D Linear Hyperbolic Equation	375
<i>Yu-Yan Hu and Huan-Wen Liu</i>	
Numerical Simulation of Dynamic Ductile Fracture of SS304	379
<i>Zhang Zhongguo and Huang Xicheng</i>	
Numerical Studies on Fire Performances of the Joints in Steel Staggered-Truss Framing System	382
<i>Changkun Chen, Dong Zhang, Guanglin Liu, and Wei Zhang</i>	
A New Statistical Model for Rolling Element Bearing Fault Signals Based on Alpha-Stable Distribution	386
<i>Changning Li and Gang Yu</i>	
AXI Compliant DDR3 Controller	391
<i>Vikky Lakhmani, Nusrat Ali, and Vijay Shankar Tripathi</i>	
Finite Element Analysis for a Two-Layered Spherical High-Pressure Vessel	396
<i>Yu Shaorong, Yin Yihui, Xu Bing, Tan Yun, and Sun Ying</i>	
A New Scale Invariant Optimized Chain Code for Nastaliq Character Representation	400
<i>Muhammad Atique Ur Rehman</i>	
Harmonic Retrieval in Complex Noise Based on Group Delay	404
<i>Lihua Fu, Hongwei Li, and Meng Zhang</i>	
A New and Efficient Algorithm for the Removal of High Density Salt and Pepper Noise in Images and Videos	409
<i>K. Aiswarya, V. Jayaraj, and D. Ebenezer</i>	
Adaptive Weighted Fusion Algorithm for Monitoring System of Forest Fire Based on Wireless Sensor Networks	414
<i>Guang Lu and Wei Xue</i>	
The Influence of Blank-Width Ratio on Stress Field during Heavy Axial Forgings Manufacturing with Horizontal V-Shaped Anvils	418
<i>Li Li, Wang Qian, Yu Suoqing, and Ni Liyong</i>	

Volume 4: Session 9

Software Components Description Based on Ontology	423
<i>Xu Nianfang, Yang Xiaohui, and Li Xinke</i>	
Optimal Path Algorithm Research in V2V2I ITS Architecture	427
<i>Zhongbao Wan, Qing Wang, Yao Xiao, and Zhi-gang Gao</i>	
Design of Pipelined FFT Processor Based on FPGA	432
<i>Bingrui Wang, Qihui Zhang, Tianyong Ao, and Mingju Huang</i>	

A Huffman Codes Based Approach to Achieve Minimum Redundancy	436
<i>J. S. Bhullar, Parvinder S. Sandhu, and Manish Gupta</i>	
Analysis on Single Axis Compression of Mortar Based on Acoustic Emission on Signals Acquisition	440
<i>ShuQing Lv</i>	
Supply Chain Management Based on the Sharing of Inventory Information Analysis Estimates	443
<i>ShuQing Lv</i>	
Fuzzy Logic Based Control and Simulation Analysis for Nonlinear Structure	447
<i>Jinghui Dai</i>	
Simulation Study on the Hierarchical Decentralized Control of Structural Vibration	452
<i>Jinghui Dai</i>	
Weighted Embedding Theorem for (K1, K2) -Quasiregular Mappings	456
<i>Jiantao Gu, Yuxia Tong, and Xianrui Meng</i>	
Research on Location Service System on Mobile Platform	458
<i>Wang Tongzhou</i>	
Analysis and Balanced Mechanism on Free-Rider in P2P Network	462
<i>Yuling Li, Yuhua Liu, Kaihua Xu, and Wei Chen</i>	
Downlink System Performance of Cooperative Multiple Points Transmission with Realistic RRM Structure	467
<i>Wang Xiaoyi, Kou Mingyan, and Qi Xin</i>	
The Collection Mural Protection Application of the Lidar and GIS Technology	471
<i>Hou Miao-le, Wang Yan-min, Fang Ming-zhu, and Guo Hong</i>	
Author Index - Volume 4	475