Wei Deng (Ed.)

Future Control and Automation

Proceedings of the 2nd International Conference on Future Control and Automation (ICFCA 2012) - Volume 2

Springer
Contents

Mathematical Modeling, Analysis and Computation

A Construction Algorithm of Target Model for Moving Object ............... 1
Junxiang Gao, Hao Zhang, Yong Liu

Adjacency List Based Multicast QoS Routing Problem Optimization with Advanced Immune Algorithm .................................................. 9
Shanshan Wan, Ying Hao, Dongwei Qiu

Simple and Efficient Direct Solution to Absolute Orientation .............. 19
Huaien Zeng, Qinglin Yi

Information System Attribute Reduction Parallel Algorithm Based on Information Entropy ................................................................. 27
Chunlin Yang, Zhonglin Zhang, Jun Zhang

Research of the Optimal Wavelet Selection on Entropy Function ........... 35
Hong-feng Ma, Jian-wu Dang, Xin Liu

Designing an Efficient Scheduling Algorithm for P2PTV System .......... 43
Kai Zhang, Kan Li

A Timely Occlusion Detection Based on Mean Shift Algorithm ............ 51
Ai-hua Chen, Ben-quan Yang, Zhi-gang Chen

Niche Particle Swarm Algorithm and Application Study ..................... 57
Chao-li Tang, You-rui Huang, Ji-yun Li

The Design and Analysis of Logistics Information System Based on Data Mining .............................................................................. 67
Xiaoping Wu, Juming Liu, Hongbin Jin, Lejiang Guo

An Overview of Dynamic Balanced Scorecard ................................. 75
Tiezhu Zhang
Joint Waveguide Invariant and Moving Target Parameters Estimation
Yun Yu, Anbang Zhao, Jingwei Yin, Junying Hui

Multicore-Based Performance Optimization for Dense Matrix Computation
Guoyong Mao, Xiaobin Zhang, Yun Li, Yujie Li, Laizhi Wei

Research on the Quantifying and Calculating Model of the Software Component Reusability
Qi Wang

The Application of Sequential Indicator Simulation and Sequential Gaussian Simulation in Modeling a Case in Jilin Oilfield
Xiaoyu Yu, Xue Li

Research on the Multi-classifier Fusion Model Based on Choquet Integral
Tie-song Li, Cheng Jin, Yong-hua Cai, Yong Mi

Application of Cashmere and Wool Drawing Machine by Using PLC
Yunhui Yang, Yiping Ji

Reliability Assessment of Carbon Sequestration Market Simulation
Bo Tang, Jianzhong Gao

A Customer Requirements Rating Method Based on Fuzzy Kano Model
Lei Xie, Zhongkai Li

The State of Solution for a Nonlinear Age-Dependent Population System Based on Weight
Dai Lili

Mining Max Frequent Patterns over Data Streams Based on Equal Weight Clique
Zhufang Kuang, Guogui Yang, JunShan Tan

UAV Path Re-planning of Multi-step Optimization Based on LRTA*
Li Fu, Kun Zhu

Research and Implementation on the Three-Dimensional Modeling of Interior Building Component
Hongjuan Wang, Ximning Lu

Preplanned Recovery Schemes Using Multiple Redundant Trees in Complete Graphs
Wei Ding, Yi Shi
Three-Dimensional Numerical Simulation of Duct Conveying Using Smoothed Particles Hydrodynamics .................................................. 189
Peigang Jiao

A New Data Mining Approach Combing with Extension Transformation of Extenics ............................................................. 199
Honghai Guan

Control Engineering

Iterative Learning Control with Initial State Learning for Non-affine Nonlinear System ................................................................. 207
Jingcai Bai, Xiao Yang, Junxiao Wu

Non-Additivity Effects Analysis on Risks of Construction Schedule .......................................................... 215
Junyan Liu, Huifeng Chen

Water-Saving Irrigation Intelligent Control System Based on STC89C52 MCU ................................................................. 223
Jiang Xiao, Danjuan Liu

Strength Properties of Structural FJ Chinese Fir Lumber ............. 231
Haibin Zhou

Experiment Study on Grinding Force of 65Mn Steel in Grinding-Hardening Machining .................................................. 239
Judong Liu, Jinkui Xiong, Wei Yuan

Thought Intervention through Biofield Changing Metal Powder Characteristics Experiments on Powder Characterisation at a PM Plant ... 247
Mahendra Kumar Trivedi, Shrikant Patil, Rama Mohan R. Tallapragada

Analysis of Influencing Factor on Fracture Energy of Concrete Containers for Nuclear Waste .................................................. 253
Li Yi, Zhao Wen, Qujie

A Line Segment Based Inshore Ship Detection Method .................. 261
Jiale Lin, Xubo Yang, Shuangjiu Xiao, Yindong Yu, Chengli Jia

A Novel Fault Diagnosis Method for the Plant with Min-Disturbance .... 271
Yongqi Chen, Xiangsheng Yang

Adaptive Wireless Network Routing Strategies for City Illumination Control System .................................................. 277
Yang Wang
Reliable Networks Design

Development and Application of Chinese Hamster Information Management System .................................................. 283
Bing Kou, Tianfu Liu, Guohua Song, Zhaoyang Chen

Management System Design Based on Mobile Terminal for Fire Supervision and Inspection ................................. 291
Zhang Hui

Analysis and Design of Third-Party Logistics Information System ........ 297
Ying Jiang, Li-jun Zhou

A Design of Multi-temperature Monitoring System Based on GSM .......... 307
Jingjing Wu, Luqian Wang, Jinping Li

The Design of Deep Web Search Engine Based on Domain Knowledge .... 315
Deng Rong, Wang Hao, Zhou Xin

Based on Multi-Agent Systems (MAS) of the Prototype Selection System of Virtual Enterprise Partner ........................... 323
Ke Su, Wei Zhou Song

Application of Information Management System in the Marine Environment Monitoring Laboratory ............................ 329
Xiaohui Gao, Yanmin Zeng, Xiangyu Zhao

BGA Device Detection System Based on Frame Integral Reducing Noise Method .................................................. 335
Wen Zhang, Xin Long Zhang

Design of Structure and Function of Spatial Database on Digital Basin .... 341
Quanguo Li, Fang Miao

Research on Modeling Design of Numerical Control Machine Tool .......... 349
Xiaowei Jiang, Xianchun Cheng

Transient Sensitivity Computations for Large-Scale MOSFET Circuits Using Iterated Timing Analysis and Adaptive Direct Approach ............. 355
Chun-Jung Chen

UML-Based Design of University Course-Selective Information System .... 365
Shan Peng, Haisheng Li, Qiang Cai

Study of Energy Performance Contracting Project Risk Based on Fuzzy Neural Network ........................................... 373
Hui Shi, Dongxiao Niu, Hanmei Wang
The FPLP Evaluation Model Based on FNN Optimization Design
Algorithm ................................................................. 383
Xinfa Lv

Evaluation on Multi-path Routing Protocol of Ad Hoc Networks .......... 393
Yang Yan

A Novel Network Communication Model Utilizing Windows Sockets ...... 401
Quanyong Yu

Vehicular Communications and Networking

A Novel Background Dynamic Refreshing in Road Traffic Monitoring ...... 409
Zhu Cheng, Meichen Zhou, Fei Zhu

The Accessibility Assessment of National Transportation Network and
Analysis of Spatial Pattern ...................................................... 415
Xiao Fan, Shufang Tian, Tiyan Shen, Jinjie Zhang

Public Traffic Intelligent Dispatch Algorithms Based on Immune Genetic
Algorithm ................................................................. 425
Xu Hai Yan

Analysis of the Over-Current Phenomena While the EMU Passing
Neutral Section ................................................................. 431
Xin Li, Qun-zhan Li, Fu-lin Zhou, Yan-kun Xia

Investigation of the Sympathetic Inrush Influence While the EMU
Passing Neutral Section ................................................................. 439
Xin Li, Qun-zhan Li, Fu-lin Zhou

A Vehicle Identification System Based on the Ultrasonic Technology ...... 447
Wenhong Lv, Jifen Zhang, Youfeng Chen, Antiang Li, Yanxia Wang

Computing Stability for Autopilots Based on Vector Margin ............. 455
Jiang Wang, De-fu Lin, Jun-fang Fan

Research on Recycling-Oriented Automotive Design ........................ 461
Y.Z. Yu

Influence Factors Analysis and Study of Emotion Absence in Distance
Education ................................................................. 467
Yahui Sun, Jian Zhang, Jing Li, Guoliang Ma, Lisheng Zhang

Research of Mobile Location Estimation with Reducing NLOS Errors ...... 471
Ning Liu, HaoShan Shi, Jie Wang, ShuXia Guo

Effect of Car Length in the Biham-Middleton-Levine Traffic Model ...... 479
Wei Huang, Rui Jiang, Mao-Bin Hu, Qing-Song Wu
Automation and Mechatronics

Spin Current in a GaAs 2DEG with the Coexistence of Rashba Spin-Orbit Coupling and Magnetic Field .................................................. 489
Xi Fu

Application of Switched Reluctance Motor to a Mechanical Press .......... 499
Wanfeng Shang

Determining the Suitability of FPGAs for a Low-Cost, Low-Power Underwater Acoustic Modem .................................................. 509
Ying Li, Lan Chen, Bridget Benson, Ryan Kastner

The Application of Multi-media Surveillance Systems in the Open Nursing Training .................................................. 519
Haiyang Zhang, Guanghui Li, Junlei Zhang, Fengxia Wang, Rong Li

PDM Technology and Its Application in Manufacturing .................. 525
Junming Zhang

Research of Analysis Method Based on the Linear Transformation of the Hinge Four Bar Mechanism Motion .................................. 531
Ming-qing Wu

Study on Model Building for Fast Seismic Disaster Assessment Based on the Habitation .................................................. 537
Dongping Li, Yao Yuan

Detection and Location of Transient Power Quality Disturbances in White Noise Using Wavelet Techniques .................................. 545
Ronghui Liu, Erbin Yang, Xiu Yang

Application of Pocket PC in Marine Fishery Survey .......................... 555
Yangdong Li, Zhen Han, Guoping Zhu, Siquan Tian

Author Index .................................................. 561