CONTENTS

Volume 5

44 Sensor, Measurement and Intelligent Instruments

XML-Based Complex Lab Data Representing, Storing and Publishing

Zhijiang Shao, Yongming Wang .............................................. (3791)

Research on Intelligent Supervising System for Roof Abscission Layer of Roadway

Xuewen Yan, Zisheng Lian, Xishan Lu ...................................... (3796)

Displacement measurement of A Thermally Actuated Polymer Micro Robotic Gripper Using the optical focus method

Lei Miao, Zaili Dong, Hoyin Chan ........................................... (3800)

Determination of Gasoline Octane Number Using Raman Spectroscopy and Least Squares Support Vector Machines

Xusong Qin, Liankui Dai ....................................................... (3805)

Rapid Detection of Chemical Oxygen Demand Using Least Square Support Vector Machines

Jun Fang, Liankui Dai .......................................................... (3810)

Research on Long-Distance Monitoring of Oil Theft in Buried Pipeline

Qiang Wang, Hanling Chen, Zekui Zhou, Ruichang Xiong, Yihu Huang .................................................. (3814)

Precision Analysis on White-light Fiber Measurement System

Wei Ye, Kejiang Zhou .......................................................... (3818)

The Study of Pulp Thickness Signal De-noise Method Based on Translation Invariance Wavelet Transform

Peng Jiang, Xiaohua Dai, Zhi Wang, Youxian Sun ......................... (3822)

Error Analyses of Filling Control Systems for Liquid Amount-Given

Yaqing Tu, Haitao Zhang, Yongzhi Li ........................................ (3826)

Study on MFL Defect Inspection and Defect Image Process Technology

Maoao Wei, Shijiu Jin, Likun Wang, Yingying Li, Qian Cui ................ (3830)

Development of The Intelligent Isotope level Gaug

Yaogeng Tang, Song Gao, Huibin Ouyang .................................. (3834)

The Method Research of Non-Contact Thickness Measurement of Transparent Object with Free-Form Surface

Wei Wang, Zaili Dong, Changyou Liu ....................................... (3837)

A Novel Nonuniform Sampling Method and Processing System to Overcome the Nyquist Limit and Suppress the Noise

Anmin Wang, Shu Wang, Mingxin Chen ..................................... (3842)

Moving Object Tracking Research Based on Active Vision

Feng Pan, Xuanyin Wang, Quanqiang Wang .................................. (3846)

Choice and Fabrication of Micro Spectrometer Components

Chengmei Zhang, Tao Mei, Deyi Kong ....................................... (3850)

Simulated Annealing Algorithm and Optimization Criteria for Multisensor Fusion System

Guixi Liu, Wenjie Ling, Wenjin Chen ....................................... (3853)


Lilian Shi, Zekui Zhou, Shapu Ren .......................................... (3858)

Acousto-Optic Modulation In An Optical Fiber Sensor And Its Electric Model

Li Zhou, Nina Zhuang, Ping Gu .............................................. (3862)

Influence of Temperature Rising on the Control Accuracy of A Magnetic Suspended Spindle

..............................
Measurement Technique of In-Plane Motion for MEMS Based on Blur Image Synthesis

Research on Chaos Performance of Vortex Signal

Multi-Sensor Multi-Spectrum Pattern Recognition and Its Application in Chemical Process Test

A Detecting and Analyzing Method of The Alloy Wetting Property Based on Computer Vision

Study on Consistent CFAR Detection of a Linear Signal With Unknown Parameters

The Studies on Dynamic Monitoring System of Rotary Cutter Based on Digital Images

Development of DSP-based Measurement System of Balancing Machines

Automatic Sensor Registration Using Stochastic Optimization Methods

A Machine Vision System for Inspecting Bearing-diameter

Control Strategy of Hot Blast Stove's Combustion System --Fuzzy Self-adaptive Control

45 Computer Technology and its Applications

View Synthesis Based on Texture Mapping

Research Reform on Real-time Operating System Based on Linux

XR-Lock: Locking XML Data for Efficient Concurrency Control

An Efficient Method for XML Queries Optimization Based DTD Abstraction and Classification

Research on Product Design Patents Retrieval Technology for Hex-vision Images and Three-dimensional Models

Communicating FSM Partitioning for Front End Embedded Software Synthesis

Automatic Schema Matching for Data Warehousing

Quasi-Euler Representation and Attitude Reachability Criteria of Camera Motion for Computer Vision

Using Extended Fuzzy-Timing Petri Nets to Model Role-Based and Agent Oriented Collaborative Virtual Environment

A Hybrid Multicasting for Large Scale Data Dissemination Applications

Automatic Block Split Pyramidal Motion Estimation for MPEG-4 Video Encoder

Model of Product Color Evaluation Based on Esthetics Principle
Research and Design of Cooperative Engagement System Based on Multi-Agent
Bo Yang, Xiaohong Su, Yadong Wang ................................................................. (3967)

Memory Organization in a Real-time Database Based on Red-black Tree Structure
Jianwei Li, Yubin Xu, Hong Guo ........................................................................... (3971)

Construction and Compression Analysis of a Kind of Biorthogonal Wavelets
Gang He, Yuzhuo Zhang, Yonghong Wu, Jianghong Li ....................................... (3975)

Frontal Motion Automatic Tracking based on Scaled Prismatic Model
Tao Hong, ShenKang Wang ................................................................................. (3978)

Complexity Analysis of Supply Chains
Changrui Ren, Yueting Chai, Yi Liu .................................................................... (3981)

Catching Potential Customers: An Example of Web-mining-aided E-commerce Decision-making
Qingzhang Chen, Keji Mao, Yin Zhang, Lingyan Lv .......................................... (3986)

A Study of Using Automatic Text Indexing to Analyze Web Browsing Behavior
Chenghsien Yu, Chungyuan Huang, Chungmin Wu ........................................... (3991)

Research on a Personalized Expert System Explanation Method Based on Fuzzy User Model
Bofeng Zhang, Na Wang, Sheng Li, Gengfeng Wu ............................................. (3996)

Buffer Allocation Algorithms for Embedded Real-time Streaming File System
Shapu Ren, Hanfei Chen, Jingxiang Dong, Youxian Sun .................................... (4001)

Design of COTS-based Fault-tolerant Multiprocessor Real-time Operating System
Hanfei Chen, Jingxiang Dong, Youxian Sun ......................................................... (4006)

A New Task Model for COTS-based N-modular Redundant Systems
Hanfei Chen, Jingxiang Dong, Youxian Sun ......................................................... (4011)

46  Pattern Recognition and Image Processing
A Human Vision Inspired Optical Wavelet Filter for Image Data
Fengchun Tian, Yunhong Liu, Xiujian Chen, Simon X. Yang .................................. (4016)

An Efficient and Robust Corner Detection Algorithm
Dongxiang Zhou, Xuanping Cai, Yunhui Liu ....................................................... (4020)

Perceptual Completion of Occluded Boundaries and Illusory Contours
Yan Wang, Zengfu Wang .................................................................................... (4025)

Face Recognition Based on Independent Gabor Features and Support Vector Machine
Wanle Chi, Guang Dai, Lin Zhang ....................................................................... (4030)

Edge Detection of Pulp Fibre Image Based on Directional Wavelet Transform
Beiping Hou, Ping Li, Zhihuan Song .................................................................. (4034)

A Method Based on Rough Set And SOFM Neural Network for The Car’s Plate Character Recognition
Min Fang, Chaojiong Liang, Xiaoxia Zhao ......................................................... (4037)

Robust Feature Extracted by the Generalized Optimal Discriminant Vectors for Face recognition
Guang Dai, Yuntao Qian, Sen Jia ........................................................................ (4041)

Zernike Moment-based Image Registration Scheme Utilizing Feedforward Neural Networks
Jianzhen Wu, Jianying Xie ................................................................................ (4046)

A New Segmentation Method for Image Sequence of Traffic Scenes
Jiwei Yuan, Zhongke Shi ..................................................................................... (4049)

A New Car Plate Recognition Method Based on Fuzzy Entropy
Qingchuan Tao, Xiaohai He, Daishen Luo, Wei Wu ........................................... (4054)

A Computer Vision Based Train Boxcar Transfer State Real-Time Detection System
Chunlai Feng, Hong Zhu, Wei Xin, Gang Liang, Fengchun Yang ....................... (4057)

Robust Container Code Recognition System
Wei Pan, Yangsheng Wang, Hongji Yang ................................................................. (4061)
Steganalysis Based on Wavelet Texture Analysis and Neural Network
Shaohui Liu, Hongxun Yao, Wen Gao ................................................................. (4066)
Image Object Recognition Based on Radon Transform
Jun Zhang, Erke Mao, Xiyuan Zhou ................................................................. (4070)
Pairwise Classifier Combination and Its Application on Chinese Character Recognition
Yijiang Jin, Shaoping Ma ................................................................. (4075)
A Tomographic SAR Image Formation Based on 3D Target
Bin Sun, Kui Jia ................................................................. (4079)
Lane Boundary Detection Using an Adaptive Randomized Hough Transform
Qing Li, Nanning Zheng, Hong Cheng ................................................................. (4084)
A Target Recognition of Wavelet Neural Network Based on Relative Moment Features
Yongzeng Shen, Qicong Wang, Shiming Yu ................................................................. (4089)
A New Method of Conceptual Design Based on the Theory of Fuzzy Sets Pattern Recognition and Its Application in the Electrical Apparatus Design Expert System
Lingling Li, Zhigang Li, Chunlai Zhou, Xiuping Su, Lei Guo, Jiannan Wang ................................................................. (4092)
Image Segmentation and Scale-invariable Feature Extraction for Level Bars Calibration
Changjun Wang, Shanran Zhu, Ping Xu ................................................................. (4097)
A Wavelet Transform and SOFM Based Certificate Image Compression Method
Xueming Qian, Hong Zhu, Ruirui Ji, Qieshi Zhang, Kun Yang ................................................................. (4101)
A Fast Eye Location Algorithm Based on Geometric Complexity
Weijun Li, Jian Xu, Shoujue Wang ................................................................. (4105)
A Real-Time Algorithm for Moving Objects Detection in Video Images
Hong Song, Feng Shi ................................................................. (4108)
The Fast Image Fusion Based on A Lifting Wavelet Algorithm
Fuxong Sun, Dong Sun, Zhixin Yu, Tianshu Huang ................................................................. (4112)
Using Multi-Layer Morphological Neural Network for Color Images Retrieval
Yun Zhang, Ling Zhang, Yimin Yang ................................................................. (4117)
Research on Reconstruction of Equal Diameter Pipe Surface Based on Voronoi Diagram
Dunwei Gong, Deli Zhao ................................................................. (4120)
Application of Pattern Recognition on Classifying Texture Images
Yang Cui, Zekui Zhou ................................................................. (4124)
Multi-objects Real Time Recognition Based on Color Information
Liang Zhang, Rong Xiong, Jian Chu ................................................................. (4127)
Intelligence Image Fusion Recognition Algorithm Based on Dempster-Shafer Evidence Reasoning
Yongmei Cheng, Quan Pan, Hongcai Zhang, Gang Wang ................................................................. (4132)
A Study of Object Detection Based on Fuzzy Support Vector Machine and Template Matching
Yongjun Ma, Bin Kong ................................................................. (4137)
A Survey On Grey Image Processing
Miao Ma, Chongyang Hao, Xinwu Li ................................................................. (4141)
Multifocus Image Restoration and Fusion Method Based on Genetic Search Strategies
Xinman Zhang, Jiuliang Han, Xuebin Xu ................................................................. (4146)
Human Facial Recognition Based On Multiple Feature Domains
Zhongqiu Zhao, Deshuang Huang, Bingyu Sun ................................................................. (4150)
A Selective and Adaptive Image Filtering Approach Based on Impulse Noise Detection
Xiaowei Han, Junsheng Li, Xinhe Xu, Yanping Li ................................................................. (4156)
Non-parametric Generation Techniques of Example-based Human Facial Sketch
A New Approach for Off-line Handwritten Chinese Character Recognition Using Self-adaptive HMM

Jie Li, Jiaxin Wang, Yunnan Zhao, Zehong Yang

The Vehicle's Classification Recognition System Based on DTW Algorithm

Guoqing Weng, Tongneng He, Mingjun Chen, Yongzeng Shen

Extracting Linear Road from TM Image

Binghan Liu, Weizhi Wang, Minchen Zhu

Feature Extraction Based on the Expanded Triangular Episode and Its Application in Pattern Recognition

Yuan Cao, Fang Li, Binghui Zhang, Hongbo Shi

Ellipse Detection Based on Improved-GEVD Technique

Zhonggen Yang, Guixiang Jiang, Lei Ren

3D Object Recognition with Image Gradient

Dong Xu, Wenli Xu

Study of An Algorithm For Face Pose Adjustment Based On Eye Location

Wenming Cao

Study of Human Face Recognition Based on Principal Component Analysis (PCA) and Direction Basis Function Neural Networks

Wenming Cao

Multiple Faces Detection Based on Chaos-Mutation Niche Genetic Algorithms

Hui Chen, Jiashu Zhang

A Localized Thresholding Method Based on Boundary Detection

Siyu Guo

Voice Recognition

Robust Speech Recognition Directed by Extended Template Matching in Dialogue System

Guoliang Zhang, Hui Sun, Fang Zheng

Speech Conversion from Clean Conditions to Telephone Ones

Guoyu Zuo, Xiaogang Ruan, Wenju Liu

Genetic Algorithm Based RBF Neural Network for Voice Conversion

Guoyu Zuo, Xiaogang Ruan, Wenju Liu

Integrating Confidence Scores for Utterance Verification

Binfeng Yan, Xiaoyan Zhu

Speech Stream Detection Based on One and Half Spectrum

Liran Shen, Xueyao Li, Qingbo Yin, Huaiqiang Wang, Rubo Zhang

Data Mining

Metadata Management Technology in Date Warehouse

Li Zhao, Chunjie Yang, Bailin Hang

Performance Analysis and Comparison of Neural Networks and Support Vector Machines Classifie

Enhui Zheng, Ping Li, Zhihuan Song

A DBN Inference Algorithm Using Junction Tree

Fengzhan Tian, Yuchang Lu

Theoretical Foundations of Sequential Patterns

Tianrui Li, Ning Yang, Jun Ma, Yang Xu

Gaussian Mixture Density Modeling and Decomposition with Weighted Likelihood

Xiaobing Yang, Fansheng Kong, Weihua Xu, Bihong Liu

Mining of Condensed Sequential Pattern Bases

Tao Wang, Yansheng Lu
gMPIS: Maximal-Profit Item Selection Based on Generalized Cross-Selling Considerations
Bihong Liu, Fansheng Kong, Xiaobing Yang ...........................................................................(4255)
A comparatively Research in Incremental Learning of Bayesian Networks
Hao Huang, Hantao Song, Fengzhan Tian, Yuchang Lu, Quande Wang .........................................(4260)
A Model Design for Process Knowledge Discovery of Product Lifecycle Based On Multi-agent Technology
Qike Shao, Guoding Chen, Yurong Nan ......................................................................................(4265)
An Improved Algorithm of Decision Tree Based on Attribute Entropy
Zuqiang Meng, Zixing Cai ...........................................................................................................(4268)
The Data Mining Research of Time-Series of Flow Supply Chain
Chen Peng, Dong Yue ..................................................................................................................(4273)
A New Clustering Algorithm
Xinbin Yang, Dao Huang .............................................................................................................(4278)
Fuzzy Hierarchical Clustering Algorithm Facing Large Databases
Yihong Dong, Yueting Zhuang ......................................................................................................(4282)
A Rough Set Based Clustering Algorithm and the Information Theoretical Approach to Refine Clusters
Qingdong Wang, Huaping Dai, Youxian Sun ................................................................................(4287)
Using Genetic Algorithm for Weighted Fuzzy Rule Based System
Minggui Teng, Fanlun Xiong, Rujing Wang, Zhenglong Wu ..........................................................(4292)
An Efficient Algorithm for Mining Frequent Closed Itemset
Lei Wen ............................................................................................................................................(4296)
A Rough Sets & Genetic Based Approach for Rule Induction
Binbin Qu, Yansheng Lu ................................................................................................................(4300)
An Efficient Reduction Algorithm of High-Dimensional Decision Tables Based on Rough Sets Theory
Ning Xu, Yun Zhang .....................................................................................................................(4304)
Incremental Rules Mining for Information Compression Matrix Algorithm
Zhiqiang Geng, Qunxiong Zhu ....................................................................................................(4309)
Research On the Application of Data-mining For Quality Analysis in Petroleum Refining Industry
Jiang Chen, Quanyi Fan, Bowen Xu ...............................................................................................(4314)
Extraction Method of Decision Rules for Fault Diagnosis from Incomplete Data Based on Rough Set
Wentao Huang, Xuezeng Zhao, Weijie Wang, Lihou Dai ...............................................................(4319)
The Study of Naive Bayes Algorithm Online in Data Mining
Chunyiue Song, Zhihuan Song, Ping Li, Wenyuan Su .................................................................(4323)
A Method of Outliers Detection Based on Amend Sequential Probabilistic Ratio Analysis
Tianqi Yang ......................................................................................................................................(4327)

49 Network Security
Distributed Intrusion Detection System Based on Data Fusion Method
Yong Wang, Huihua Yang, Ruixia Zhang, Xingyu Wang ...............................................................(4331)
A New Role-Based Access Control Model Using Attribute Certificate
Dongqing Xie, Yongqing Wang, Huayong Chen ............................................................................(4335)
An Induction Learning Approach for Building Intrusion Detection Models Using Genetic Algorithms
Jian Guan, Daxin Liu, Binge Cui ......................................................................................................(4339)
Design and Implementation of Independent Agents-Based Distributed Intrusion Detection System
Ye Du, Huiqiang Wang, Yonggang Pang .......................................................................................(4343)
A Hidden Markov Models-Based Anomaly Intrusion Detection Method
Ye Du, Huiqiang Wang, Yonggang Pang .......................................................................................(4348)
Study on the Applications of Hidden Markov Models to Computer Intrusion Detection
Anming Zhong, Chunfu Jia

A New Adaptive Audio Watermarking Algorithm
Xueyao Li, Min Zhang, Rubo Zhang

An Intrusion Detection System Based on FReTe Net Algorithm
Fei Yu, Renfai Li, Bin Jiang, Miaoliang Zhu

An Intrusion Detection System Model Based on Self-Organizing Map
Jianhong Gao, Lixin Xu, Yaping Dai

A New Intrusion Detection Method Based on Behavioral Model
Qingbo Yin, Liran Shen, Rubo Zhang, Xueyao Li

An Auto-Configuration Cooperative Distributed Intrusion Detection System
Xiaoping Yang, Yu Dou

50 Motion Control

Design and Control of a Novel Plane Maglev System Based on Analyzing Magnetic Force
Mingchiuan Shiu, Meiyung Chen, Shinguang Huang, Lichen Fu

A Linear Synchronous Motor Drive Using Robust Fuzzy Neural Network Control
Faajeng Lin, Pohung Shen

Inductances and Resistance Measurement of a Permanent Magnet Synchronous Motor
Shyh-Jier Wang, Shir-Kuan Lin

On Combining Adaptive Estimation and Robust Control for Friction Compensation
Jyh-Ching Juang, Jeng-Shi Chen

Fuzzy Logic Direct Torque Control for Permanent Magnet Synchronous Motors
Dun Sun, Yi Kang He, Jianguo Zhu

The Stability Analysis for the Control Strategy of a Rotor-transformed Brushless Doubly-Fed Induction Motor
Zude Zhou, Ming Xie, Yuqing Liu, Cheng Xu

Study on State-Space Averaging Method for Theodolite PWM Servo Control System
Hongwen Li, Yuanchun Li, Tao Chen

Sensorless Control of Surface Permanent Magnet Synchronous Motor Using a Structural Adaptive Flux Observer
Junyou Yang, Zhengqiang Song, Xingping Ding, Huibiao Yang

Analysis of Direct Thrust Force Control for Permanent Magnet Linear Synchronous Motor
Jiefan Cui, Chengyuan Wang, Junyou Yang, Lifeng Liu

Torque Ripple Minimization in PM Synchronous Motors Based on Backstepping Neural Network
Xiaodong Zhang, Jiang Wang, Huiyan Li

Limited Memory Filter for 3D Relative Position and Orientation Estimation of Maneuvering Target
Feili Hou, Feng Zhu

Observer-Based Differential Algebraic Neural Network Nonlinear Control of PM Synchronous Motor
Huiyan Li, Jiang Wang, Pile Zheng

Robust Control Methods for PM Synchronous Motor
Booming Ge, Hongtao Zheng, Ling Yan, Jingping Jiang

DSP-based Microstep Controller of Stepper Motor
Tieluo Liu, Jiansun Zhang

High Power Electronic Device Measurements of Four IGCTs (4.5kV/4.0kA) in Series Connection
Qingguang Yu, Lili Li, Qirong Jiang

Simulation Study of SRM Stator Pole Structure with FEM
Lili Li, Qingguang Yu, Yagang Yang

Fuzzy Control Method for A Special Motion System
Zhongke Shi
Rotor Speed Testing and Closed-loop Control for Switched Reluctance Motor Drive Based on Fuzzy Logic

Hao Chen, Zuo Shao, Yifeng Zhu .................................................................(4458)

Applying Generalized Predictive Control to PM Synchronous Motor

Guoliang Wang, Hexu Sun, Lianbing Li ......................................................(4463)

Sensorless-Speed Control Strategy of Induction Motor Based on Artificial Neural Networks

Dazhi Wang, Renyuan Tang, Jie Yang, Hui Jin ..............................................(4467)

Online Squirrel Cage Induction Motors’ Rotor Mixed Fault Diagnosis Approach Based on Spectrum Analysis of Instantaneous Power

Zhenxing Liu, Xiaolong Zhang, Xianggen Yin, Zhe Zhang ............................(4472)

Space Voltage Vector PWM Control of Three-level Rectifiers Based on Single Neuron

Ming Li, Shaogang Zhao .................................................................................(4477)

Application of Neuron Speed Observer and Dead-time Compensation Method in Direct Torque Control System

Yurong Nan, Xiongxiang He, Qike Shao, Congda Lu, Gang Wang, Zhipang Wu .................................................................(4482)

A Slip-Current Control System of Asynchronous Motor Based on FOC Model

Jingjing Wang, Xiaodong Wang, Guoqing Xu, Zhouyun Zhang .....................(4487)

Fuzzy Logic Direct Force Control of Surface Permanent Magnet Linear synchronous Motors Without Speed Sensors

Jihao Zou, Shan'an Zhu ..............................................................................(4491)

An Optimal Design on Decoupling Variable Structure Fuzzy Controller For Induction Motor

Xiuhua Li, Ying Li, Qinruo Wang ..................................................................(4496)

Improving Performance Method for Fuzzy Control AC Speed Drive

Jin Zhao, Shuyun Wan, Jinhang Xu ...................................................................(4500)

Multi-region Fuzzy Tracking Control for a Pneumatic Servo Squeezing Forces System

Ruihua Li, Qingyu Yang, Weixiang Shi ...........................................................(4504)

The Research of Static De-coupled Contour Control Technique of the Ultra-precision Machine Tool

Lisong Wang, Jing Zhang ............................................................................(4508)

Position Tracking Control of Permanent Magnet Synchronous Motor Servo System

Jiajun Wang, Guangzhou Zhao, Jun Qiu, Donglian Qi .....................................(4512)

Precise and Robust Control of Permanent Magnet Linear Synchronous Motors in a High-Speed Feeding System

Yuetong Xu, Jianzhong Fu, Zichen Chen ........................................................(4516)

A Hybrid Control Strategy for the GPCM Electro-hydraulic Position Servo Control System

Rong Liu, Xuanxin Wang .............................................................................(4521)

Elastic Object Modeling in a VR-Based Telerobotic System

Hsinechu Chung, Kuuyoung Young ..............................................................(4526)

Design of Submarine Depth Controller Near Surface

Yangling Hao, Donghui Shen, Zhilan Xiong ..................................................(4530)

Optimal Design of Liquid Dampers for Torsionally Coupled Vibration of Structures

Linsheng Huo, Hongnan Li ......................................................................(4534)

Control of Hybrid Direct-drive Motor Using Non-linear Nominal Model Tracking Method

Baoquan Kou, Liyi Li, Shukang Cheng, Fanrong Meng, Junyun Shang ............(4539)

A New On-Line Rule Self-Regulating Fuzzy Control Method and Its Application to an AC Frequency Control Experiment System

Shengping Li, Yan Huang ............................................................................(4545)

The Vector Control Based On MRAS Speed Sensorless Induction Motor Drive

Shoudao Huang, Yaonan Wang, Jian Gao, Jianqiao Lu, Sihai Qiu .................(4550)

A Simple Direct-Torque Fuzzy Control of Permanent Magnet Synchronous Motor Driver

Jun Wang, Hong Peng, Jianhua Yu ................................................................(4554)

The Power Control and Performance Simulation for an Electric Transmission System of Tracked Vehicle

Yunan Zhang, Yunshan Ge, Hua Li, Nanming Yan ..........................................(4558)

The Research of Contour Error With PID Control Based-on Disturbance Observer
51 Modeling and Analysis of Robots

- Modeling and Evaluation of the Joint's Mechanical Flexibility of a Humanoid Robot
  Qiang Huang, Di Zhang, Yongjin Dong, Xiaojun Zhao, Jie Yang
- Driving Principle and Dynamic Analysis of a Micro Swimming Robot
  Yi Zhang, Xiaohua Wang, Tao Mei, Qimin Wang, Peiqiang Zhang
- Nano-scale Mechanical Test of MEMS Structures by Atomic Force Microscope
  LoMing Fok, KarMan Fung, YunHui Liu, WenJung Li
- Study on the Simulation System in an AR Robot Operating Platform
  Quanyu Wang, Shouyi Zhan, Fengxia Li
- Digital Control of a Manipulator Handling Flexible Objects
  Ru Lai, Fujio Okkawa
- Simulation and Execution of Event-Driven Robot Teaching in a Virtual Environment
  Maoyuan Cui, Yantao Tian, Zaili Dong
- Using Hybrid Simulation for a Quadruped Standing Leap
  Wei Hu, Duane Marhefka, Darren Krasny, David Orin
- Design of a New Current Sensing Device for Joint Torque Force Control of the Precision Assembly Robot
  Chunshan Xu, Jianping Wang, Guangyi Cao, Xifang Zhao
- A Study and Simulation of Dual-arm Coordination Mechanism
  Di Wang, Yimin Chen, Mingjun Fang, Yongyi He
- Incremental Environment Modeling Method Based on Approximate Voronoi Diagram
  Xiaobing Zou, Zixing Cai
- Study on Multi-Sensor Data Fusion for the Wheeled Mobile Robot
  Yan Li, Tingqi Lin, Feng Gao, Jianming Zheng
- Design of Move-in-mud Robot and Kinematics Modeling
  Qingmei Yang, Zhixing Wang, Jianmin Sun, Qingxin Meng
- A Genetic Methodology for Reachability Evaluation of Manipulators
  Mingyao Liu, Dalong Tan, Jianhua Wang
- A Novel Cobot and Control
  Yuhong Dong, Lixun Zhang, Dunmin Lu, R. Bernhardt, D. Surdilovic
- General Software Architecture for Multi-sensor Information Fusion System
  Kefen Zhang, Jianbo Su

52 Intelligent Robot

- 3D Object Reconstruction from Multiple Controlled Viewpoints
  S. Y. Chen, Y. F. Li
- Automating Crystal Harvesting and Mounting for High-Throughput Macromolecular Crystallography
  Weidong Chen, Avinash Peddi, Yuan J. Zheng, Martin Caffrey
- Intelligent Obstacle Avoidance for an Autonomous Mobile Robot
  Xiaochuan Wang, Simon X. Yang, Max Q.-H. Meng
- An Intelligent Human-Robot Interface Using a Probability Approach
  Shaidah Jusoh, Simon X. Yang, Fangju Wang
Multiple Vehicle Systems for Sensor Network Area Coverage

Jindong Tan, Oscar Mateo Lozano, Ning Xi, Weihua Sheng .........................................................(4666)

Risk and Efficiency: A Distributed Bidding Algorithm for Multi-robot Coordination

Weihua Sheng, Qingyan Yang, Jindong Tan, Ning Xi .................................................................(4671)

Frontier-I: An Autonomous Mobile Robot for Multi-Robot Tasks

Weidong Chen, Jianqiang Jia, Bo Sun, Qixin Cao, Yugeng Xi .......................................................(4676)

VPH: A New Laser Radar Based Obstacle Avoidance Method for Intelligent Mobile Robots

Dong An, Hong Wang ..................................................................................................................(4681)

A Fast Contour-Based Approach to Circle and Ellipse Detection

Wenchao Cai, Qian Yu, Hong Wang ...........................................................................................(4686)

Developmentally Cognitive Robot Vision

Tao Jiang, Fuchun Sun, Xingzhou Jiang ......................................................................................(4691)

The Design of an Open Controller for an Industrial Robot

Jinyu Zuo, Yanan Zhao, Jiaxin Wang, Zehong Yang, Peifa Jia ...................................................(4696)

Research on Local Path Planning of AUV under Ocean Environment

Ge Yang, Rubo Zhang, Guochang Gu, Yizun Guo, Xiaoning Feng .............................................(4701)

Multi Mobile Robot Path Planning Based on Genetic Algorithm

Shuhua Liu, Yantao Tian, Jinfang Liu .............................................................................................(4706)

Research on Location System of Move-in-mud Robot Based on Kalman Filter

Qingmei Yang, Zhixing Wang, Jianmin Sun, Qingxin Meng, Zhixing Wang ..............................(4710)