2011 International Conference on Mechanical Engineering and Technology (ICMET 2011)
London, UK, November 24-25, 2011

Edited by
Garry Lee, Information Engineering Research Institute
Table of Contents

Session 1: Mechanical Design and Manufacture

CALCULATION AND ANALYSIS ON TEMPERATURE FIELD FOR GASOLINE ENGINE
Haibo Chen, Zhaocheng Yuan ................................................................. 1

THREE-DIMENSIONAL SOLID MODELING OF LARGE WIND TURBINE BLADE BASED ON WILSON THEORY
Cheng Jie, Yuan Zu-Qiang, Lu Jin-Gui ..................................................... 7

ENVIRONMENT MODELING FOR MOBILE SERVICE ROBOT
Liu Zhen-yu, Gan Bo ............................................................................... 11

DESIGN AND EXPERIMENTAL STUDY OF THE SEED ROPE DIRECT SOWING MACHINE
Lu Xiao-Rong, Lu Xiao-Lian ................................................................... 17

A WEIGHTED COHESION MEASURE FOR CLASSES IN OBJECT-ORIENTED SOFTWARE SYSTEMS
Yong Cao, Guangzhi Di, Tonglin Zhao, Ning Lu ...................................... 23

CONCURRENT DESIGN MODEL FOR VARIANT PRODUCT DESIGN
Yao-Tsung Ko, Ping-Hong Kuo ................................................................. 29

EFFICIENT MECHANICAL METHOD FOR MANUFACTURING HOMOGENOUS CARBON NANOSHEETS
Saleh Hamada Kaytbay, Medhat Awad El-Hadek .................................... 35

RESEARCH ON THE GENERATION OF TRAIN MOVEMENT AUTHORITY BASED ON PETRI NET
Shuxu Zhao, Ailing Zhang, Jianwu Dang .................................................. 39

A SELF-ADAPTIVE ILLUMINATION CONTROL SYSTEM BASED ON GENETIC ALGORITHM FOR IMAGE MEASUREMENT
Hu Zhou, Zhihui Li, Jianguo Yang .............................................................. 43

KINEMATICS ANALYSIS OF A 2DOF PARALLEL PROPRIOCEPTIVE MECHANISM FOR VEHICLE DRIVING SIMULATOR
Zhang chen, Zhang Liyan ......................................................................... 49

A NEW BOOM MECHANISM DESIGN FOR CORN SPRAYER
Bo Wang, Dong-xing Zhang, Wei Lan ...................................................... 55

RESEARCH OF SEMI-PHYSICAL SIMULATION PLATFORM FOR HYDRAULIC SYSTEM BASED ON EASY5
Jiang Xiaoxia, Lin Fuquan ....................................................................... 59
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDY ON LOAD POSITION SWITCHING OF RADIAL SCATTERING DISPENSER</td>
<td>Chunlan Jiang, Zaicheng Wang</td>
<td>65</td>
</tr>
<tr>
<td>A POINT OF VIEW ON THE IMPROVEMENT OF THE LNG REGASIFICATION PROCESS</td>
<td>Feiza Memet, Daniela Elena Mitu</td>
<td>69</td>
</tr>
<tr>
<td>THE THERMO-MECHANICAL ANALYSIS OF MECHANICAL PACKING (SEAL), USING FINITE ELEMENT METHOD (FEM) - RESULTS AND CONCLUSIONS</td>
<td>Liviu-Constantin Stan, Daniela-Elena Mitu</td>
<td>73</td>
</tr>
<tr>
<td>CUTTING FORCE ANALYSIS OF TURN-MILLING MICRO-MINIATURE PARTS</td>
<td>Zhang Zhi-jing, Wang Cui-can, Jin Xin, Ye Xin, Liu Bing-bing</td>
<td>79</td>
</tr>
<tr>
<td>AUTOMATED CUTTING AND TRANSPLANTING SYSTEM FOR TISSUE CULTURE SEEDLINGS</td>
<td>Li Yang, Tie-zhong Zhang, Liang-ju Wang</td>
<td>85</td>
</tr>
<tr>
<td>STUDY AND CONSTRUCTION OF EXPERIMENT TABLE OF DRILLING AT ANY POSITION OF ROCK SAMPLE</td>
<td>Zhang Nan, Sun You-hong</td>
<td>91</td>
</tr>
<tr>
<td>THEORETICAL BASIS AND TECHNOLOGY DEVELOPMENT OF THE COMBINED PROCESS OF ASYMMETRIC ROLLING AND PLASTIC BENDING</td>
<td>A. Pesin, V. Salganik, V. Tarasov, D. Pustovoytov, D. Chikishev, M. Sverdlik</td>
<td>95</td>
</tr>
<tr>
<td>SYSTEM ADAPTATION BASED ON CHARACTERISTIC PATTERNS</td>
<td>Eva Volna, Martin Kotyrba, Vaclav Kocian, Michal Janosek</td>
<td>99</td>
</tr>
<tr>
<td>HYBRID APPROACH FOR CALCULATION OF CO₂ EMISSIONS IN MANUFACTURING</td>
<td>Horst Meier, Xiangqian Shi</td>
<td>103</td>
</tr>
<tr>
<td>NUMERICAL SIMULATION OF VENTILATION ON MONOMER VERTICAL SHELTER TANKS WITH CFX</td>
<td>Li Jia, Wenjuan Wang, Hongyan Shi, Mei Chu</td>
<td>109</td>
</tr>
<tr>
<td>EXPERIMENTAL RESEARCH OF DYNAMIC PARAMETERS OF STRANDED-WIRE HELICAL SPRINGS UNDER IMPACT LOAD</td>
<td>Shilong Wang, Mingming Zhang, Jie Zhou, Yu Zhao, Zhiqiang Wang, Xiaoyong Li</td>
<td>113</td>
</tr>
<tr>
<td>COMPUTATIONAL MODELING OF BIOMINERAL CARBONATE PRECIPITATION IN POROUS SAND COLUMN AT MICRO SCALE</td>
<td>Li Li, Qian Chun-xiang, Zhu Yun-tian</td>
<td>119</td>
</tr>
<tr>
<td>ONE COMPONENT POLYURETHANE ADHESIVES FOR GREEN WOOD GLUING:CREEP AND TEMPERATURE-DEPENDENT CREEP</td>
<td>Bin Na, A.Pizzi, Xiaoning Lu, Zhiqiang Wang</td>
<td>125</td>
</tr>
</tbody>
</table>
ON TERRITORIAL TOY DESIGN'S FUNCTIONS IN THE DEVELOPMENT AND INHERITANCE OF FOLK GAME CULTURE
Zhou Qi, Li Xiaoying, Tang Hua .................................................................191

STUDY ON WELD-LINE MOVEMENT OF TWBS WITH DIFFERENT THICKNESS IN HYDRO-FORMING DEEP DRAWING OF SQUARE CUP
Cui Hui-Jie, Wang Jian-Min, Zhang Meng-Lei, Zhou Qun-Li ........................................195

MODELING AND GRINDING METHOD OF INDEXABLE INSERTS
Fei Li, Bin Yao, Zheshan Zhang, Boshi Yao .........................................................201

THE IDENTIFICATION OF THE FLAME COMBUSTION STABILITY BY COMBINING PRINCIPAL COMPONENT ANALYSIS AND BP NEURAL NETWORK TECHNIQUES
Bai Xiang, Liu Shi, Huang Yaosong, Wenjing Chen ........................................207

VOCS NATURAL CONVECTION IN PARTIALLY POROUS CAVITY
Baoming Chen, Fang Liu ..................................................................................211

GRAIN REFINEMENT EFFECT OF CORE ALLOY ON FORMING CHARACTERISTICS OF 4343/3003/4343 ALUMINUM CLAD SHEET
Jesik Shin, Sehyun Ko, Kitae Kim .......................................................................217

MATHEMATICAL MODELING OF EFFECTS OF VARIOUS FACTORS ON UNCERTAINTY OF MEASUREMENT IN MATERIAL TESTING
N.K.Mandavgade, Dr.S.B.Jaju, Dr.R.R.Lakhe, Dr.D.J.Tidke ................................221

OPTIMIZATION MODELING FOR ATTITUDE MEASUREMENT OF A TUNNEL BORING MACHINE
Huang Junjie, Zhang Chuncao, Zhu Guoli .............................................................227

DIRECT SELLING THEORETICAL MODEL PREDICTIONS WITH GOMPERTS PRODUCTION CYCLE
Luo Hui, Huang Jingyin, Lang Jijie ......................................................................233

FEATURE EXTRACTION AND CLASSIFICATION OF EEG SIGNAL
Prabin Kumar Padhy, Avinash Kumar, Vivek Chandra, Kalyan Rao Thumula ..........237

A GENERALIZED PROPORTIONAL FAIRNESS SCHEDULER FOR BROADBAND OFDMA SYSTEMS WITH HETEROGENEOUS TRAFFIC
Yaw-Wen Kuo, Nai-Wei Hsueh .........................................................................241

DISTRIBUTED TRAFFIC STATE ESTIMATION AND CLASSIFICATION USING CONSENSUS-BASED EXPECTATION MAXIMIZATION ALGORITHM IN SPATIALLY DEPLOYED TRAFFIC DETECTORS
Amin Ramezani, Behzad Moshiri .................................................................245
THE ANALYSIS ABOUT ASEISMIC POUNDING OF THE HIGH-PIERS BRIDGE  
Qingli Meng, Jian Ye 249

THE RESISTENS OF SUPERFICIAL CORROSION LAYERS OBTAINED THROUGH IMPULSE ELECTRICAL DISCHARGES USING ALUMINIUM ELECTRODES  
Daniela-Elena Mitu, Liviu-Constantin Stan 257

COMBINING FINITE ELEMENTS AND STATIC ENERGY ANALYSIS IN VIBRO-ACOUSTIC STUDIES  
Daniela-Elena Mitu, Paul Bocanete 261

PRINTING MACHINE CONDITION MONITORING BASED ON PRINTING IMAGE TEXTURE  
Ren Linghui, Liu Kai, Zhang Haiyan, Hou Heping 267

BASED ON ETHERNET NETWORK TWO-WAY S7 COMMUNICATION SIMULATION  
Binglin Li, Tao Quan 271

APPLICATION OF PLC AND TOUCH-SCREEN IN THE NETWORK REINFORCED FORMING MACHINES CONTROL SYSTEM  
Binglin Li, Tao Quan 275

STUDY ON THE SIMULATION SYSTEM OF CAM-LINKAGE MECHANISMS BASED ON THE SIMULINK SOFTWARE  
Heping Hou, Kai Liu, Haiyan Zhang, Linhui Ren 279

AN ON-MACHINE MEASUREMENT SYSTEM FOR CYLINDRICITY ERROR  
Guangxia Bei, Peihuang Lou, Xiaoming Qian 285

TRANSIENT ANALYSIS AND CONTROL OF THE REGENERATIVE BRAKING SYSTEM USING HILS OF ELECTRO-HYDRAULIC BRAKE  
Jun-Sang Yun, Jeong Hua Choi, Bae-kyoon Cho, Jaiphun Shin, Sung-Ho Hwang 289

VALIDATION OF COOPERATIVE REGENERATIVE BRAKING CONTROL ALGORITHM USING HARDWARE IN-THE-LOOP SIMULATION FOR ESC  
Jinhyun Park, Bin Wang, Hyun Seok Seo, Jaewook Jeon, Sung-Ho Hwang 297

MODAL ANALYSIS OF A NEW MAGNETIC LEVITATION STAGE BASED ON FINITE ELEMENT SIMULATION  
Qunming Li, Shiwei Zhang 305

PYROELECTRIC PROPERTIES OF NANOCOMPOSITE OF POLYVINYLIDENE FLUORIDE AND BATIO3  
Sh. Ebrahim, S. Ibrahim, M. Soliman, I. Morsi 311
THE ELECTRONIC BLACKBOARD BASED ON MICROENCAPSULATED ELECTROPHORETIC DISPLAY
Tianhua Li, Ying Wu .................................................................317

THE DESIGN OF LED LIFE JACKET LIGHT BASED ON WIRELESS CHARGING TECHNOLOGY
Tianhua Li, Zhen Zhang .............................................................321

ANALYSIS AND CAUCULATION OF PREPARATIVE PLANE TRANSIENT VOLTAGE SUPPRESSOR DIODE
Yu An, Youlin Wu .....................................................................325

APPLICATION OF IMPROVED WAVELET NEURAL NETWORK TO FAULT DIAGNOSIS OF PUMPING WELLS
Chen Xue-Yan ........................................................................329

AUTO-TUNING METHOD OF PIDA CONTROLLER BASED ON GAIN MARGIN AND PHASE MARGIN
Chen Xue-Yan, Xu-Jun ...............................................................333

RESEARCH ON AUTOMATIC CROSS SECTION CUTTING AND FORMING CONTROL IN COAL MINE UNDERGROUND BASED ON OIL CYLINDER STROKE SENSOR AND PCC ELECTRICAL CONTROL SYSTEM
Wang Su-Yu, Gao Feng, Gao Juan, Li Rui, Wu Miao ......................337

STOCHASTIC RESONANCE AND REVERSE-RESONANCE BY TRICHOTOMOUS NOISE
Yong Xu, Genhu Di, Huiqing Zhang ...........................................341

STUDY ON HEAT EMISSION NUMERICAL SIMULATION AND LAYOUT OPTIMIZATION CONCERNING COMPONENTS OF ELECTRONIC EQUIPMENT
Shimei Sun, Jingmin Zhou .........................................................345

NUMERICAL SIMULATION AND EXPERIMENT FOR STRUCTURE OPTIMIZATION OF SMALL GRAVITY HEAT PIPE RADIATORS
Shimei Sun, Jingmin Zhou ........................................................351

HIGH TEMPERATURE DEFORMATION BEHAVIOR AND DYNAMIC RECRYSTALLIZATION LAW OF NEW STEEL 33MN2V FOR OIL WELL TUBE
Wangfuzhong, Fan Hui ..............................................................359

THE EFFECT OF ANTERIOR CRUCIATE LIGAMENT INJURY ON TIBIOFEMORAL JOINT BIOMECHANICS: UNDER DRAW LOAD
Zhixiu Hao, Chao Wan, Shizhu Wen ..........................................363

CONTROL SYSTEM MODELING AND SIMULATION ANALYSIS OF ELECTROLYTIC CELL LIFTER
Su Dong-hai, Wang Wen-chao ....................................................369
NOVELTY DETECTION FOR PREDICTIVE MAINTENANCE SCHEDULING FOR INDUSTRIAL GAS TURBINES
M S Gallimore, Z Yang, C M Bingham, P Stewart, N James, S Watson, A Latimer ................................................................. 373

DESIGN A HYBRID MACHINE TOOL FOR PLANE CURVE FRICTION STIR WELDING
Jing Shi, Yuhan Wang, Xiaohui Han ................................................................................................................................................ 379

SENSOR FAULT DETECTION AND MEASUREMENT RECONSTRUCTION USING AN ANALYTICAL OPTIMIZATION APPROACH
Zhijing Yang, Wing-Kuen Ling, Michael Gallimore, Paul Stewart, Chris Bingham ................................................................. 385

TREND EXTRACTION USING EMPIRICAL MODE DECOMPOSITION AND NONUNIFORM FILTER BANKS, WITH INDUSTRY APPLICATION
Zhijing Yang, Chris Bingham, Paul Stewart, Michael Gallimore, Wing-Kuen Ling ................................................................. 391

INTELLIGENT CONDITION MONITORING VIA SPARSE REPRESENTATION AND PRINCIPAL COMPONENT ANALYSIS FOR INDUSTRIAL GAS TURBINE SYSTEMS
Zhijing Yang, Chris Bingham, Wing-Kuen Ling, Michael Gallimore, Paul Stewart ................................................................. 397

NUMERICAL SIMULATION FOR THE GAS-PHASE ISOTHERMAL FLOW FIELD OF A BIOMASS GASIFICATION CYCLONE BURNER WITH DIFFERENT STRUCTURES
Yu Zhang, Ming Zhai, Bo Zhang, Peng Dong, Qunyi Zhu ........................................................................................................... 401

AN INTELLIGENT STRATEGY USED IN BEYOND-VISUAL-RANGE AIR COMBAT
Liang Xiao, Jun Huang ......................................................................................................................................................... 405

RESEARCH ON THE FUSION OF TACTICAL DATA LINK AND INTELLIGENT FIRE CONTROL SYSTEM
Liang Xiao, Jun Huang ......................................................................................................................................................... 411

MIXED-MODEL ASSEMBLY LINE BALANCING CONCERNING CHOICE COMPLEXITY
Kunpeng Wang, Yunqing Rao, Wei Zhou .............................................................................................................................. 417

ANALYSIS OF STRESS JUMP COEFFICIENT AT A FLUID/POROUS INTERFACE
Fang Liu, Baoming Chen ..................................................................................................................................................... 421

THE SHOCK RESPONSE SPECTRUM OF PACKAGING SYSTEM WITH A KEY COMPONENT UNDER THE ACTION OF PRECEDING PEAK SAW TOOTH PULSE
Jiuhong Jiang, JinZhi Zhou .................................................................................................................................................. 427

RESEARCH ON RESIDUAL VIBRATION SUPPRESSION OF TRAJECTORY GLUE BASED ON ADAPTIVE PULSE RESHAPE FILTER
Shi Wei-Min, Yang Liang-Liang, Peng Lai-hu .......................................................................................................................... 433

THE MOTION ANALYSIS OF THE PROFILE MILLING FLYING SAW
Yin Zhang, Weimin Yang .................................................................................................................................................... 439
OPTIMAL BALANCE OF DEPARTURE QUEUES ON DIFFERENT DIRECTION SUBJECT TO DYNAMIC AIRPORT CAPACITY ENVELOPE
Gao Wei, Zhang Zheng .................................................................445

A VARIABLE-STEP PHOTOVOLTAIC MPPT ALGORITHM BASED ON ADAPTIVE NEURO-FUZZY INFERENCE
Xu Fang, Liu Jie, Zhang Libin, Wu Lebin ........................................449

DESIGN OF ADAPTIVE FUZZY SLIDING MODE CONTROLLER FOR SHIP COURSE CONTROL
Liu Wenjiang, Sui Qingmei, Zhou Fengyu, Xiao Hairong ......................455

THE RESEARCH ON OFF-CENTER WEARS OF SUCKER ROD STRING AND BAR TUBE IN HORIZONTAL WELL
Li Bin, Fan Si-cheng, Zhang Jing ..................................................461

FUZZY LOGIC VOLTAGE FLICKER ESTIMATION USING HILBERT TRANSFORM
H.M. Al-Hamadi ............................................................................467

SPEEDUP RESILIENCE: A PRACTICAL METRIC TO EXPLORE THE PERFORMANCE BOUNDARY OF MULTICORE ARCHITECTURES
Slo-Li Chu, Shiue-Ru Chen ............................................................471

MICRO SENSOR NODE FOR REAL TIME INDOOR TEMPERATURE MONITORING
Hyun-Joong Kim, Hyunho Yang .....................................................477

A MOBILE AGENT FOR LOAD DECISION MAKING BY FUZZY LOGIC CONTROL
Yao-Tien Wang, Chung-Ming Ou, Hsiang-Fu Yu ................................481

APPLICATION OF A VARIABLE-UNIVERSE AND SELF-ADAPTIVE FUZZY PID CONTROLLER IN DC MOTOR SPEED CONTROL SYSTEM
Tundong Liu, Bingwei Chen, Weiqiang Liao ....................................485

RESEARCH OF GENERALIZED LORENZ SYSTEM FAMILY AND CHUA'S CIRCUIT BASED ON SIMULINK
Liangyu Peng, Lei Bao, Manchi Huang ...........................................489

A NONLINEAR MODEL PREDICTIVE CONTROL STRATEGY FOR SUPERHEATER PROCESS IN THERMAL POWER PLANT
Yan Genhui, Zhao Jun, Xu Zuhua, Shao Zhijiang ................................493

A MICROCONTROLLER-BASED SYSTEM FOR SEEDS GRAVITY ANGLE MEASUREMENT
Na Duan, Yongjun Zheng, Feng Kang, ShumaoWang ..........................497
THE DESIGN OF PORTABLE INTELLECTUAL EQUIPMENT MANAGEMENT SYSTEM BASED ON ARM CORTEX-M0
Haisong Chen, Yimin Li, Xiuqing Han ................................................................. 501

DEVELOPMENT OF INTELLIGENT FORCE SENSOR SYSTEM FOR INTERACTIVE ROBOT
Genliang Xiong, Haichu Chen, Ruihua Zhang, Hua Zhang, Jianbin Huang .......................... 505

APPLICATION OF NEURAL NETWORKS IN FAULT CURRENT DETECTION
Yang Zhao, QiYong Wen, Yue Feng ......................................................................... 511

RESEARCH OF OBSERVER FOR THE SENSORLESS CONTROL SYSTEM OF PMSM BASED ON NONSINGULAR TERMINAL SLIDING-MODE
Yanli Liu, Yafei Ji, Ze Cheng .................................................................................. 515

MULTI-CHANNEL CONSTANT CURRENT LED DRIVER WITH PWM BOOST CONVERTER

A NOVEL APPROACH FOR LFC AND AVR OF AN AUTONOMOUS POWER GENERATING SYSTEM
M.Gupta, S. Srivastava, J.R.P. Gupta, Prema Jain .................................................. 523

DESIGN METHODOLOGY FOR RUNTIME SELF-ADAPTIVENESS OF CPS
Giljong Yoo, Hyunsang Youn, Eunseok Lee .............................................................. 529

ELECTRONIC COMMUNICATION: A VIEW FROM THE CLASSROOM
Averianova Irina ...................................................................................................... 533

SPIKING NEURAL NETWORKS ON SELF-UPDATING SYSTEM-ON-CHIP FOR AUTONOMOUS CONTROL
Yimin Zhou, Ludovic Krundel, David Mulvaney, Vassilios Chouliaras, Xu Xia, Guohui Li ................................................................. 537

Session 3 : Computer Science

TASK SCHEDULING STRATEGY BASED ON TREE NETWORK IN CLOUD COMPUTING ENVIRONMENT
Wang Li, Xu Gao-chao, Zhao Jia, Fu Xiao-dong, Dong Yu-shuang, Zhai Yu-nan, Wang Dan ................................................................. 541

SAFETY ANALYSIS AND DESIGN OF FISCAL CASH REGISTER DATA STORAGE SYSTEM
Ying Wu, Sha Yang .................................................................................................. 549

RESEARCH ON VEGETATION INFORMATION EXTRACTION IN THE AREA OF IMPORTANT BUILDINGS BASED ON REMOTE SENSING IMAGE
Guo-qing Qiu, Hong Yin, Wen-bin Xie, Lei He, Zhi-gang AO ....................................... 553
RESEARCH ON EFFECTS OF BUSINESS INTELLIGENCE UPON ENTERPRISE MANAGEMENT
Xiangyang Zhang ...........................................................................................................557

LÉVY FLIGHT SEARCH PATTERNS IN GENETIC ALGORITHM
Huang gang, Zhu Haiping, Li Jinhang, Long yuanming .....................................................561

CELL-BASED LOCALIZATION FOR WIRELESS SENSOR NETWORK
Mantian Xiang, Lihong Li, Chengzhi Long ........................................................................567

STUDY ON SOFTWARE LOCALIZATION TECHNOLOGY AND ITS APPLICATION
Hongyan Shi, Li Jia, Mei Chu ..............................................................................................571

ANALYSIS OF UML-BASED SOFTWARE DESIGN FOR DEVELOPMENT AND APPLICATION
Mei Chu, Hongyan Shi, Li Jia ............................................................................................575

THE CONTRACTIONS INTEGRATED C-SEMIGROUP AND THE ABSTRACT CAUCHY PROBLEM
Fuhong Wang, Man Liu, Jun Zhou .....................................................................................579

DISTRIBUTED WEB GIS RESEARCH BASED ON J2EE
Jingwei Qin, Cheng Shang .................................................................................................583

THE TERMINATION OF THE UNCERTAINTY OF GENETIC ALGORITHM
Wang Aosheng, Zhou Fei .................................................................................................587

RESEARCH ON ARCHITECTURE OF SERVICE-ORIENTED COLLABORATIVE PRODUCT COMMERCE
Ning Qiu, Jinxin Jiang .......................................................................................................591

RESEARCH OF IMPROVED COOPERATIVE CO-EVOLUTIONARY GENETIC ALGORITHMS
Wang Qi, Chen Fa-wei, Huang Bing-da, Wang Yuanbo ....................................................595

BPM AND MTM – CONCEPT FOR CONTINUOUS PROCESS MANAGEMENT TO INCREASE PRODUCTIVITY
Markus Busenbach, Marco Link, Uwe Füssel, Erich Ortner .............................................599

COMPARATIVE ANALYSIS OF SAFE STANDARDS FOR CROWD EVACUATION SIMULATION
Han Xin, Zhou Jun, Cong Beihua ......................................................................................605

THE SIMULATION ANALYSIS OF TRAFFIC CAPACITY FOR A BUILDING
Han Xin, He Xie, Cong Beihua ..........................................................................................609

DETECTING THE WATERMARKED IMAGE IN VISUAL CAPTCHA FORMAT AND GETTING ITS ENCRYPTED INFORMATION
Saba Joudaki, Mehdi Raftari .............................................................................................613
ANALYSIS FOR WIMAX UPLINK SCHEDULING ALGORITHMS AND PROPOSING THE MTD UPLINK SCHEDULING ALGORITHM
Hatem Mohamed, Mohamed Ashour .................................................................621

ON THE EQUILIBRIUM POINTS, BOUNDEDNESS AND POSITIVITY OF A SVEIRS EPIDEMIC MODEL UNDER CONSTANT REGULAR VACCINATION
M. De la Sen, S. Alonso-Quesada, A. Ibeas, R. Nistal ........................................627

THE CRITIQUE OF MONOLOGICAL RATIONALISM AGAINST UNLIMITED RELATIVISM
Emilia Nercissians ......................................................................................637

SEGMENTATION OF CHINESE TEXT FOR WEB CONTENT FILTERING
S.C. Hui, A.C.M. Fong, G.Y. Hong .................................................................641

THE INTERACTIVE ENVIRONMENT: A BLOG-BASED CHARACTER EDUCATION PLATFORM
Hsin-Hung Kuo, Szu-Wei Yang, Yu-Chin Kuo .................................................645

EXPERIMENTAL INTELLIGENT MOBILE CLOUD COMPUTING PLATFORM OVER FIRST PROJECT (THE KOREAN FUTURE INTERNET TESTBED PROJECT WITH MOBILE CLOUD COMPUTING)
Sungwon Lee, Hyunjun Kim ........................................................................649

BIT ERROR RATE IMPROVEMENT USING SOFT OUTPUTS OF MAP DECODER AND AVALANCHE EFFECT OF BLOCK CIPHERS
Ayyaz Mahmood, Natasa Zivic .......................................................................655

IMPROVING THE HIT RATES OF LEVEL-0 DATA CACHE FOR ENERGY-EFFICIENT EMBEDDED PROCESSORS
Seung Gu Kang, Hong Jun Choi, Jin Woo Ahn, Dong Oh Son, Hyung Gyu Jeon, Cheol Hong Kim, Jong-Myon Kim, Sung Woo Chung ..................................................659

IMPROVE THE SUCCESS OF SERVICE BY ADOPTING A NOVEL EXPERIENCE FEEDBACK ORIENTED SERVICE ENGINEERING PROCESS
Yu-Tso Chen, Wu-Hsien Chou .......................................................................663

DYNAMIC VARIABLES IMPLEMENTATION IN SQL SERVER INTEGRATION SERVICES
Anish Bhat, Manoj Kumar .............................................................................667

A NEW TIME AND FREQUENCY SYNCHRONIZATION SCHEME FOR DISTRIBUTED MIMO-OFDM SYSTEMS
Guo Yi, Liu Gang, Ge Jianhua, Ding Haiyang ................................................671

EFFECT OF CD ADDITIONS ON MICROSTRUCTURE AND PROPERTIES OF MG-CD BINARY MAGNESIUM ALLOY
Shan Gao, Lanting Xia, Zhisheng Wu .............................................................675
RESEARCH OF MILLING CONTROL TECHNOLOGY FOR PERMANENT PACKER IN PRACTICE
Luo Fan, Yang Jin, Guo Shubin, Yu Xiaolong, Tan Zhanglong, Zhou Rongxin ......................................................... 679

EFFICIENT RATE-COMPATIBLE PUNCTURING SCHEME FOR LOW-DENSITY PARITY-CHECK CODES
Fuli Ma, Lijun Zhang ................................................................................. 683

ENERGY-EFFICIENT ROUTING ALGORITHM CLUSTER-BASED FOR WIRELESS MULTIMEDIA SENSOR NETWORK
Li Peng, Zheng Yanbin ............................................................................. 687

MODELING OF FSO LINK AND ERROR PERFORMANCE ANALYSIS UNDER WEAK TURBULENCE
Hu Hao, Liu Min, Wang Hongxing, Li Tingjun .................................... 691

AN IMPROVED SCANNING METHOD BASED ON VARIABLE-SHAPE BLOCK PARTITION
Fang Wanli, Xin Yun, Wu Cheng, Zhang Yang ........................................ 695

PRE-LAYERING AND ESTIMATION OF IMAGE DISTORTION BASED OPTIMAL MGS BIT STREAM EXTRACTION
Yanling Xu, Jianhai Su ................................................................................ 699

TARGET DETECTION USING COMBINED GAUSSIAN MODEL AND CORRELATION COEFFICIENTS
Ting Rui, Jian-chun Xing, Jing-wei Zhu, Jin-lin Zhang, Hua-bing Li ........................................................................... 703

THE APPLICATION OF GENETIC ALGORITHM IN THE IMPULSE VECTOR CONTROL
Yu Jianqiao, Hu Wenbin ............................................................................ 707

THE STUDY OF REMOVING IMAGE NOISE WITH MEDIAN FILTER AND WAVELET TRANSFORM
Liangyu Peng, Lei Bao, Manchi Huang ................................................... 713

IMPROVING THE RETRIEVAL OF DOCUMENTS WITH ITS TAGS BY TAG LANGUAGE MODEL
Qi Li, Daqing He ....................................................................................... 717

HYDRATE PREDICTION ANALYSIS AND CONTROL TECHNOLOGY OF HP-HT WELL TEST
Li Zhong, Zhang Laibin, Fan Jianchun, Luo Fan, Huang Yi ..................... 721

THE RESEARCH OF CHANNEL ESTIMATION ALGORITHM FOR MIMO-OFDM SYSTEMS
Hailang He, Tongcheng Huang ................................................................. 725

FLEXIBLE PLAN DATABASE MODEL
Wenxiang Gu, Zhiwei Quan, Nenggao Yu, Minghao Yin ....................... 729

THE STUDY OF THE INTERNATIONAL TRADE BUSINESS COLLABORATION SYSTEM STRUCTURE
Lihui, Wangxifu, Wuxiandan ................................................................. 733
PAX-BASED JOIN PROCESSING FOR FLASH MEMORY
Jae-Uk Lee, Tae-Sun Chung .................................................................737

SUPPORTING EFFICIENT QUERY PROCESSING ON COB*-TREE
Rize Jin, Tae-Sun Chung .................................................................741

P2P CONTENT DISTRIBUTION MODEL BASED ON NETWORK CODING
Hu Jing-De, Wang ze, Yu chao .........................................................747

SMALL TARGET DETECTION IN SEA CLUTTER BASED ON CHAOS
Huizhu Ma, Chengxiang Li ..............................................................753

FUZZY CLUSTERING BASED ON CULTURE ALGORITHM FOR IMAGESEGMENTATION
Huizhu Ma, Qiuju Zhang .................................................................757

SMALL TARGET DETECTION IN SEA CLUTTER BASED ON LS-SVM
Huizhu Ma, Ying Li .........................................................................761

LINK PREDICTION IN SOCIAL NETWORK BY SNA AND SUPERVISED LEARNING
Prajit Limsaiprom, Panjai Tantatsanawong ....................................765

MULTIPLE KERNELS PRECISE TRACKING
Wenzhe Zhao, Shiyan Qin ...............................................................771

APPLICATION OF THE ERGODIC ALGORITHM FOR SOLVING NONLINEAR EQUATIONS AND
TRIDIAGONAL LINEAR EQUATIONS
Liu Hongwei ..................................................................................775

REMOTE MONITORING SYSTEM OF PRESSURE VESSEL BASED ON GPRS
Deng Shiyang ................................................................................779

THE INNERMOST AREA CALCULATION OF THE INVERSE STOKES FORMULA IN ALTIMETRY
GRAVITY INVERSION
Huang Xiao-ying, Li Hou-pu, Bian Shao-feng ...................................783

OIL & GAS WELL GROUND TESTING DATA ACQUISITION AND MANAGEMENT SYSTEM
RESEARCH AND IMPLEMENTATION BASED ON WIRELESS NETWORK
Xu Lin, Fang Yu, Zhang Qin ..........................................................787

ARTIFICIAL BEE COLONY ALGORITHM FOR MULTIMACHINE POWER SYSTEM STABILIZER
DESIGN
H. Alkhatib, J. Duveau .................................................................791

A NEW SPEED SIGN RECOGNITION ALGORITHM BASED ON STATISTICAL CHARACTERISTICS
Fu Xianping, Huang Lianzhong, Qin Peng ........................................795
AN ANALYSIS OF EYE MOVEMENT BASED AUTHENTICATION SYSTEMS
Yun Zhang, Zheru Chi, Dagan Feng ................................................................. 799

THE METHOD OF TYPICAL PROCESS FORMATION OF GARMENT TECHNOLOGY BASED ON GROUP TECHNOLOGY
Shigang Wu ........................................................................................................ 803

JGROOVY - AN EXPERIMENTAL OF EXTENSIBLE JAVA COMPILER
Siwadol Sateanpattanakul, Aranya Walairacht ......................................................... 807

SAMPLE SELECTION METHOD OF NEURAL NETWORK BASED ON FCM AND NN METHOD
Zhenning Zhao, Su Ling, Qinfeng Zhang ................................................................. 811

A FRAMEWORK OF MOBILE AGENT-BASED BIKE LOCATION AND INFORMATION PUSHING SYSTEM
Yun-Yao Chen, Yueh-Yun Wang, Chun-Wei Lin ...................................................... 815

RESEARCH OF LUNG SOUND ANALYSIS
Wu Songcheng, Zhou Jianyang, Liao Lingyu, Wei Songlin ....................................... 819

ADAPTIVE ALGORITHM OF MANEUVERING TARGETS TRACKING BASED ON MANEUVERING FREQUENCY ADJUSTMENT
Huaming Qian, Liang Chen, Junwei Yang, Guojing Man .............................................. 821

RECOGNITION OF PARITY CHECK MATRIX USING PARITY ELIMINATION
Yasser Karimian, Mahmoud Ahmadian Attari ......................................................... 829

RATE SECRECY OF NETWORKS WITH GAME THEORY APPROACH
S.B. Chafjiri, M.A. Tebbi, Y. Karimian .................................................................. 833

AN INTUITIVE WEBCAM-BASED INTERACTIVE ADVERTISING SYSTEM
Fong-Ming Shyu, Yi-Ru Juo .................................................................................... 839

FAULT DETECTION AND LOCALIZATION BASED ON RUNTIME STATE MODEL GENERATION
Hyunsang Youn, Taehwan Kim, Eunseok Lee ............................................................ 843

SMS CONTEXT VISUALIZATION BASED ON DECISION TREES
Shinwook Gahng, Jehwan Oh, Eunseok Lee ............................................................ 847

A NOVEL HYBRID ARQ SCHEME WITH COOPERATIVE CODING FOR WIRELESS SENSOR NETWORKS
Inwhee Joe, Jachyung Lee ...................................................................................... 851
HISTORY-BASED DYNAMIC QUORUM FOR HANDLING SPLIT-BRAIN SYNDROME IN DISTRIBUTED COMPUTING
Inwhee Joe, Tak-Kiel Shim ................................................................. 855

BIOLOGICAL MOBILE SENSOR CHANNEL MODELING, SIMULATION AND ANALYSIS
N. S. Salim, S. A. Aljunid, R. B. Ahmad, M. F. Abd Malik, Abid Yahya ......................................................... 859

SHA-1 AND ARNOLD TRANSFORM BASED DATA PROTECTION ALGORITHM FOR RFID CARD
Ming Sze Angela Wong, Weidong Liu ...................................................... 863

A SERVER LOAD BALANCING DESIGN FOR PEER-TO-PEER NETWORK
Der-Cherng Liaw, Cheng-Hsiang Chiu, Hsiao-Jen Hsieh ....................................................... 867

TBA BACKOFF ALGORITHM TO ENHANCE THE QUALITY OF SERVICE IN MANETS
Sasan Zhalehpour, Samira Niafar, Hadi Shahriar Shahhoseini .................................................... 871

HOST BASED INTRUSION DETECTION SYSTEM
Sandip Kothari, Hemant Parmar, Eshan Das, Neroja Panda, Afrin Ahmed, Jims Marchang ......................... 875

A CONTROL MODEL FOR DELEGATION IN CLOUD COMPUTING
Liliana Rosero, Jesus Aranda, Michel Riguidel .................................................. 879